











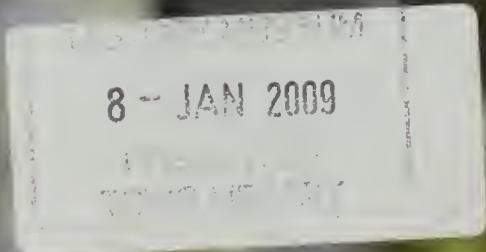


OS 104



# British Birds

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Swallows and climate change

Cape Verde Warbler



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# British Birds

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Front-cover photograph: Rufous-tailed Robin *Luscinia sibilans*, Fair Isle, October 2004.

Hugh Harrop

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# British Birds

8 - JAN 2009

Volume 102 • Number 1 • January 2009

- 2 Editorial *Roger Riddington*
- 3 Climate change: a Swallow's eye view *Angela Turner*
- 17 The Cape Verde Warbler: distribution, density, habitat and breeding biology on the island of Fogo *Jens Hering and Elmar Fuchs*

## Regular features

- 24 Request  
Photographs of rare breeding birds
- 25 Letters  
Pronunciation of scientific names  
*A. G. Blunt*  
Madeiran Storm-petrels in the Bay of Biscay *Russell B. Wynn and Ken D. Shaw*  
European Rollers in France  
*Georges Olioso*  
Blyth's Reed Warblers in Estonia  
*Trinus Haitjema*
- 31 Notes  
Hybrid *Aythya* showing features of Redhead *Paul Larkin*  
Difference in shape of bill-base feathering between Common and Black Scoters in non-adult-male plumage *Alexander Hellquist*  
Identification of Citrine and Yellow Wagtails – a possible identification pitfall *Ian Fisher and Ross Ahmed*  
Slime and algae ingestion by Ospreys  
*Felipe Siverio, Manuel Siverio and José J. Hernández*  
Whiskered Terns feeding on the ground *Alan Vittery*
- Lesser Crested Tern feeding at night  
*Pete and Susan Combridge*
- 38 Reviews  
*Birdwatching in Azerbaijan: a guide to nature and landscape*  
*A Guide to Birdwatching in Skåne, Southern Sweden*  
*Gardening for Birdwatchers*  
*Barn Owls in Britain: phantoms of the farmyard*  
*Birds of Eastern Brazil*  
*Birdwatching in Norfolk*  
*The Atlas of Breeding Birds in Poland 1985–2004*  
*Rare Birds Yearbook 2009*
- 42 News and comment  
*Adrian Pitches*
- 45 Announcement  
Bird Photograph of the Year 2008
- 46 Recent reports  
*Barry Nightingale and Eric Dempsey*



*British Birds* aims to: ❖ provide a forum for contributions of interest to all birdwatchers in the Western Palearctic; ❖ publish material on behaviour, conservation, distribution, ecology, identification, movements, status and taxonomy; ❖ embrace new ideas and research; ❖ maintain its position as the respected journal of record; and ❖ interpret good scientific research on birds for the interested non-scientist.

# Editorial

Many readers may be somewhat puzzled by the choice of photograph for the cover of the first issue of Vol. 102, but it marks the first of twelve front covers chosen to highlight the ambitious project for a new bird observatory on Fair Isle. Twelve photographers and artists have generously agreed to donate the usual fee for a *BB* front cover to the Fair Isle appeal (see [www.fairislebirdobs.co.uk](http://www.fairislebirdobs.co.uk)), and a top-up donation from *British Birds* will be made at the end of the year. Hugh Harrop's image of the Rufous-tailed Robin *Luscinia sibilans* in October 2004 is an appropriate beginning to the series in many ways – an iconic first record for the Western Palearctic sums up what Fair Isle means to many birdwatchers. It was Hugh who first suggested to me that photographers might donate covers to the FIBO appeal; I might have been even more grateful had he had the tact to choose a bird that I had seen on the island, but no matter...

Many readers will know that I have strong connections with Fair Isle, having been warden there in the mid 1990s and being a current member of the board of trustees charged with replacing the existing observatory building. Nonetheless, I feel that it is highly appropriate for *BB* to support this appeal, both in monetary terms and through the publicity generated. To its credit, the network of British and Irish bird observatories has maintained its relevance for birdwatchers in the twenty-first century, and the importance of long-term data on migrants has been highlighted in recent years, including in *BB* by Dick Loxton (*Brit. Birds* 95: 328–333) and by some of the papers referred to in Angela Turner's summary in this issue of how climate change is affecting Barn Swallows *Hirundo rustica*. Migration studies are undergoing a more general resurgence at the present time, partly as the result of improvements in tracking technologies such as satellite tagging. This was emphasised at the BTO's annual conference in December, where a stimulating talk by Phil Atkinson confirmed that, 45 years after Ken Williamson (the first Fair Isle warden) moved from Migration Research Officer to Populations

Research Officer at the BTO (and the journal *Bird Migration* ceased to be published), migration is firmly back at the forefront of the BTO's priorities. Projects such as BirdTrack have been showing us the value of co-ordinating observations on a wide scale for a few years now (see [www.birdtrack.net](http://www.birdtrack.net) and also the opportunity described on p. 44) – and we can all look forward with real optimism to projects in the BTO pipeline to look at migration on an international scale.

As well as a fine variety of Fair Isle-related covers, there is a great deal more to look forward to in Vol. 102 of *BB*. The recent series on Important Bird Areas has proved extremely popular and several excellent contributions are in the pipeline for 2009. A new series of short articles on conservation priority species in the UK will provide a domestic counterpoint to the mostly international flavour of the IBA series, while a strong line-up of individual papers will support regular reports such as those of BBRC and the Rare Breeding Birds Panel. One report missing from recent volumes has been that for scarce migrants; Pete Fraser is busy accumulating data, however, and we plan to publish a five-year summary covering 2003–2007 sometime in 2010. This will mean that, for some species (those initially considered as rarities by BBRC), we can assess changes over a remarkable 50-year period.

Two key milestones of particular relevance to *BB* will be reached in 2009, which you will read more about as the year progresses. The British ringing scheme, administered by the BTO since the 1930s, dates back to 1909, when the vision of Harry Witherby and others led to the formation of the *British Birds* ringing scheme. As alluded to above, 2009 is also the half-centenary of BBRC, which will be marked in a variety of ways in the journal, among them a celebration of memorable rarity events, a special category in this year's 'Bird Photograph of the Year' competition and, in particular, by a wide variety of papers and notes which bear the 'From the Rarities Committee's files' banner.

Roger Riddington

# Climate change: a Swallow's eye view

Angela Turner



Alan Harris

**ABSTRACT** Climate change is affecting birds in a number of ways, including their breeding biology, summer and winter distributions and population sizes.

The effects on Barn Swallows *Hirundo rustica*, explored in this paper, are mixed: survival has decreased because of poor environmental conditions in North Africa (through which they migrate) while hotter, drier summers may increase chick mortality; but warm springs have extended the breeding season. This paper was originally presented as the 57th Bernard Tucker Memorial Lecture to the Oxford Ornithological Society and the Ashmolean Natural History Society, in November 2007.

Climate change is now a major global issue. Even if governments succeed in reducing emissions of greenhouse gases such as carbon dioxide, the world will still become warmer. For Britain, climate predictions include milder, wetter winters and, at least in southern England, hotter, drier summers. But the weather is also likely to become more extreme. Storms will become more frequent and of greater intensity. Globally, temperatures are predicted to rise by about 2–5°C by 2100; in terms of rainfall, northern Europe and central Africa will be wetter than at present, whereas southern Europe and northern Africa will prob-

ably become drier (Met Office Hadley Centre 2005).

Not surprisingly, these changes in climate have ramifications for wildlife (reviewed in Crick 2004). For example, birds can start breeding earlier in warm springs, and data from the BTO's Nest Record Scheme show that many species are laying earlier than 30 years ago. Crick *et al.* (1997) found that, on average, 51 of 65 British species had tended to advance their laying dates over the period 1971–1995 and there are similar findings from data on North American birds (e.g. Dunn & Winkler 1999). This may cause problems if the birds' breeding

schedule falls out of step with their food supply. Caterpillars of the Winter Moth *Operophtera brumata*, for example, grow very quickly in warm weather and a study in The Netherlands found that the larvae were pupating by the time Great Tits *Parus major*, for which they are an important food source, had chicks to feed, resulting in food shortages for the tits (Visser *et al.* 1998).

Some birds seem to be changing their wintering areas. Many Blackcaps *Sylvia atricapilla* from the Continent now fly west to winter in the UK rather than undertaking a longer migration to southern Europe or North Africa (Berthold *et al.* 1992). Waders and wildfowl breeding in northern areas, in contrast, are wintering closer to home rather than migrating to the UK (Eaton *et al.* 2007).

Distributions of breeding birds are also changing (Huntley *et al.* 2007). For example, it is predicted that Snow Buntings *Plectrophenax nivalis* in Scotland will soon find little, if any, suitable habitat and may become locally extinct. Areas where snow cover persists all year provide wet sites for the insects on which they feed; yet snow is becoming less frequent and there are fewer feeding sites for the birds in summer. For

species breeding in southern Britain, such as Dartford Warbler *Sylvia undata*, their range is likely to move northwards if they can find suitable habitat, and some new species such as Black Kite *Milvus migrans*, Hoopoe *Upupa epops* and Serin *Serinus serinus* are likely to colonise from the Continent.

Climate change affects bird populations too. In the marine environment, sea-surface temperatures affect the abundance and composition of plankton and hence the abundance of fish that feed on the plankton. In turn, seabirds such as Kittiwakes *Rissa tridactyla* have had disastrous breeding seasons in northern Britain in recent years, mainly because warmer waters have caused a severe reduction in prey populations, notably Lesser Sandeels *Ammodytes marinus* (Arnott & Ruxton 2002; Frederiksen *et al.* 2004). Recent declines in populations of migrants such as Spotted Flycatchers *Muscicapa striata* may be at least partly caused by deteriorating feeding conditions in their wintering areas or along migration routes (Eaton *et al.* 2007).

Finally, birds' habitats are changing. Rising sea levels will inundate coastal habitats such as saltmarsh and mudflats, affecting both wintering and breeding populations of birds.



Markus Varesvuo

1. Among the potentially significant effects that climate change may have on the Barn Swallow *Hirundo rustica* are environmental changes in regions on the birds' migration routes to and from their African wintering grounds.

Wetland areas will dry out in hot summers, reducing habitat for breeding waders and others. Some nature reserves that have been created for breeding birds may no longer be suitable for them. In the hot summer of 2005, for example, up to 80% fewer Northern Lapwings *Vanellus vanellus*, Common Snipes *Gallinago gallinago* and Common Redshanks *Tringa totanus* bred at five RSPB reserves in Sussex and Kent than in previous years (RSPB 2007).

In this paper, I have used the Barn Swallow *Hirundo rustica* (hereafter simply the 'Swallow') as a model species to illustrate some of the problems that birds are facing in a changing climate. For Swallows, there are implications for the timing and duration of moult, for their survival over winter and during the long migration back to their breeding grounds, for how well they can catch insects, for where they can breed and for how successfully they can rear their chicks.

#### *Effects of climate change in Africa*

The amount of rain on their wintering grounds is critical for Swallows for several reasons. First, it affects the availability of roost sites (van den Brink *et al.* 2000). When the weather is wet, numerous roost sites are available in and around waterbodies; in dry weather there are fewer roost sites. When Swallows have to crowd into a small number of roosts, they have further to travel during the day to find food and back again to the roost site. They may also face more competition for food. Second, the amount of rain affects the abundance of insects on which Swallows feed. Rain boosts vegetation growth and this leads to a long-term increase in insect numbers. Rain also triggers swarming in ants (Formicidae) and termites (Isoptera), providing a feast for aerial-feeding birds. Consequently, the weights of wintering Swallows depend on the weather (e.g. Møller *et al.* 1995b, A. P. Møller pers. comm.). Van den Brink *et al.* (1997, 2000) weighed Swallows at roosts in Botswana over several years and discovered that the birds, especially juveniles, lose weight during dry periods and put on

weight when it rains. As well as weight, rainfall also affects the progress of moult. Birds in good condition, with plenty of food available, can afford to put more energy into growing new feathers rather than just eating to survive. In van den Brink's studies, both adults and juveniles grew their tail feathers faster in wet than in dry years and wing moult took 120–130 days in years with plenty of rain but 155–190 days when there was little or no rain. Swallows also grow longer tails in winters with good feeding conditions (Møller 1994b; Saino *et al.* 2004).

Winter droughts thus result in Swallows having low body weights and slow feather growth. So the moult takes longer and as a consequence birds may be forced to delay their departure. For example, Saino *et al.* (2004) found that Swallows arrived back on the breeding grounds in Italy later when feeding conditions were poor in the winter quarters of west and central Africa.

Overwinter survival is also poor during droughts. Anders Møller, who has studied Swallows in Denmark since the early 1970s, showed that survival is related to rainfall on



2. Barn Swallows *Hirundo rustica* often hunt insects over waterbodies.

the wintering grounds in South Africa (Møller 1989). Studies of British Swallows have also found a relation between survival and rainfall on the wintering grounds, as well as with rainfall in the Sahel, on the birds' migration route (Robinson *et al.* 2003, 2008). A more recent study of the Danish birds also showed that survival correlated well with an index of the abundance of vegetation in the Sahel region (Szép & Møller 2005).

Scientists nowadays use satellite images to see how abundant vegetation is in different parts of the world and at different times. The data from satellite images are used to create an index of vegetation density called the Normalized Difference Vegetation Index (NDVI). For the past 20 years or so, this index has been declining in Algeria where Danish Swallows stop off to replenish fat reserves after crossing the Sahara. Møller & Szép (2005) looked at the vegetation index in Africa, on the wintering grounds and elsewhere on the migration route, but they found that it had declined significantly only in the extreme north of Africa. So this may be the critical place for Swallows in terms of survival. Møller & Szép found that the Swallows' survival rate improved considerably as the vegetation index increased: the more vegetation, the more insects there are for the birds to eat. As the vegetation density index has declined in northern Africa, so has the survival rate in this population of Swallows.

The importance of good feeding conditions on migration can be seen from a study of Swallows caught in North Africa and in central

Europe (Schwilch *et al.* 2002). Birds trapped just after they had crossed the Sahel region weighed less than 14 g, with less than 1 g of fat reserves, whereas birds that had recuperated and returned to their breeding areas weighed nearly 18 g, with around 4 g of fat. Because the body condition of Swallows is so poor by the time they reach the northernmost part of Africa, they need to have a good supply of insects to put on the weight they have lost. Droughts in the Sahel region deprive the birds of the food they need and, if the desert area becomes more extensive, Swallows will also find it more difficult to make the crossing at all. Birds that do survive may take longer than usual to restore their fat reserves. The arrival time of Swallows in Spain, for example, depends on precipitation in the Sahel region; as this region gets hotter and drier, the birds arrive in southern Europe later (Gordo *et al.* 2005).

#### *Effects of climate change on morphology*

As a consequence of poor survival along migration routes, the morphology of Swallows is changing. Swallows have long outer tail feathers and males have longer ones than females. But tail length is also variable in males and some birds have much longer tails than others. Having a long tail is an advantage to males because females prefer to mate with long-tailed males (Møller 1988). Anders Møller changed the length of the tail of some males by cutting out or gluing on pieces of feather and showed that females mate sooner with males with long tails. Long-tailed males also engage in more

extra-pair copulations and are less likely to be cuckolded than short-tailed males (Møller & Tegelström 1997; Møller *et al.* 2003). Various studies have also shown that long-tailed males have a good immune system and are resistant to parasites such as mites (Acari) and lice (Phthiraptera) (Møller 1990; Saino *et al.* 1997). This resistance is passed on to the male's offspring, so that females mating with these long-tailed males benefit by having healthier chicks (Møller 1994a). Because of their good health, long-tailed males may be better able to survive adverse conditions and



3. The Barn Swallow's *Hirundo rustica* tail fork is longest in males (generally 47–80 mm), shorter in females (generally 27–57 mm) and very short in juveniles (less than 32 mm – as shown by the bird here).

more likely to make it back to their breeding grounds (Møller 1991; Saino *et al.* 1997). The short-tailed males may be more likely to die, especially after attempting to cross the Sahara. Consequently, the average tail length in male Swallows in Denmark increased from 103.5 to 112.9 mm between 1984 and 2004 (Møller & Szép 2005; A. P. Møller pers. comm.). In contrast, the tail length of females is shorter and less variable and has not shown a recent increase (Møller & Szép 2005). Males are not particular about their partner's looks, but long-tailed males that arrive early tend to mate with longer-tailed females just because these females arrive first on the breeding grounds. Longer-tailed females are generally large birds in good condition, so long-tailed males get a good-quality mate as a result of the females' preferences (Turner 2006).

#### Effects of climate change on arrival dates

For Swallows that survive the African part of their migration, progress northwards depends on how warm the European spring is. High temperatures in March in southern Europe and



Markus Varesvuo

4. Male Barn Swallows *Hirundo rustica* with long tails are particularly attractive to females. There are genetic advantages in choosing to mate with long-tailed males, as they have been shown to have a good immune system. As a consequence, females that choose to mate with a long-tailed male produce healthier offspring.

in April in northern Europe hasten the migration (Huin & Sparks 1998). The arrival of Swallows in Britain is related to the temperature in England between February and April.

The first arrival dates of Swallows in the UK have been getting earlier and earlier in recent decades. In Scotland, for example, mean arrival date for the first three birds recorded was 9th April for the period 1968–78 but was 22nd March for 1990–2000 (Forrester *et al.* 2007). Both spring temperatures and arrival dates of Swallows vary considerably from year to year but, in the last decade or so,

temperatures in March and April have tended to increase and the arrival dates of Swallows match these temperature changes quite closely (Sparks *et al.* 1999; Sparks & Loxton 2003; fig. 1).

Male Swallows tend to arrive at their breeding sites a few days before females (Møller 1994b). It is normally risky coming back very early because a sudden cold snap could be fatal. There are many cases of hirundines dying during short spells of cold weather in spring on the breeding

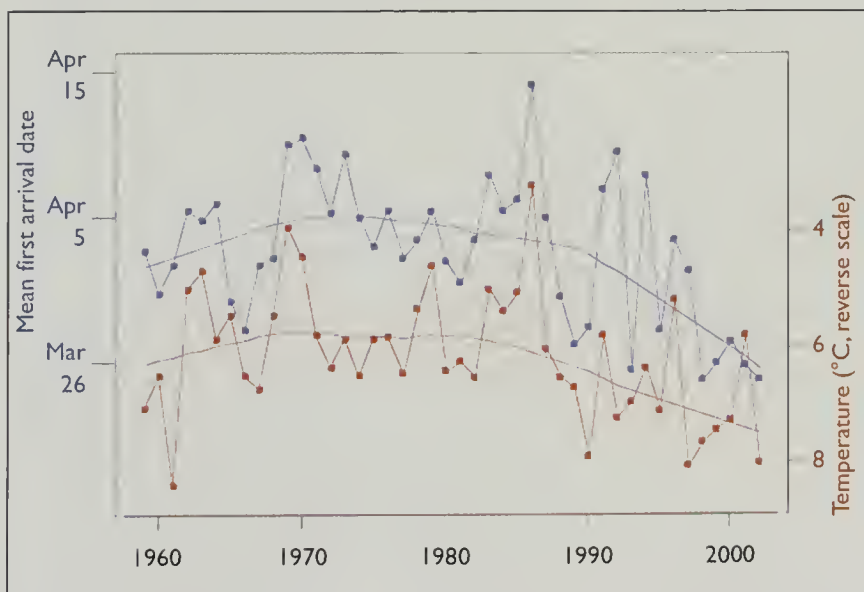


Fig. 1. Arrival dates (upper line) of Barn Swallows *Hirundo rustica* in Britain since 1959 (first sightings at coastal observatories) and the average February–April temperature in central England ( $^{\circ}\text{C}$ , lower line). Smoothed lines are also shown. Graph courtesy of Tim Sparks, CEH Monks Wood.

grounds, but there are also significant benefits for males that arrive early, in terms of getting a high-quality mate and of siring as many chicks as possible (Turner 2006). Early males have the pick of females for extra-pair activities, whereas the late males are more likely to be cuckolded. With spring temperatures increasing, it is becoming safer for males to arrive on the breeding grounds even earlier. Females are in less of a hurry, as they wait for males to settle at nest-sites before choosing their mates; they also want better weather for egg-laying. Climate change may thus increase the difference in arrival time between the sexes and, indeed, Anders Møller found this to be the case in Denmark (Møller 2007a): males have been arriving earlier over the past few decades but females have not. In the early 1970s males were only a couple of days ahead of females but now they are coming back a week or so before them.

#### Effects of climate change on egg-laying

In recent years, Swallows that arrive in Britain early have generally had plenty of food as insects are also appearing earlier. In Scotland, for example, aphids (Aphididae) are appearing, on average, 16 days earlier, moths five days earlier and butterflies (Lepidoptera) eight days earlier than in the 1970s (Sparks *et al.* 2006). Because food is available earlier, female Swallows can start laying eggs earlier too. Nest record data from the BTO show that laying dates of Swallows have been variable over the past few decades, but there has been a trend for

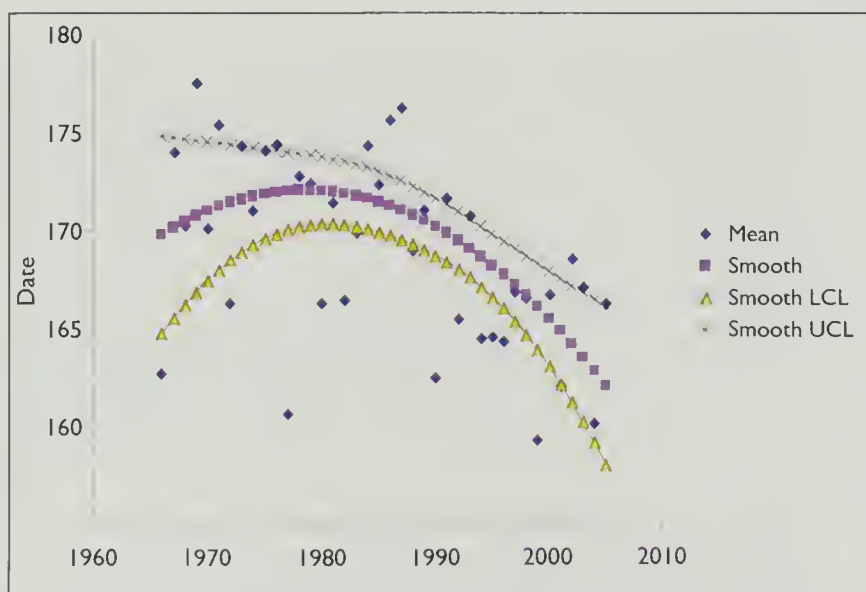
earlier laying since the late 1980s (Crick & Sparks 1999; Baillie *et al.* 2007; fig. 2). Swallows normally start laying eggs a week or more after arriving at the breeding site (Turner 2006), but the better the feeding conditions, the sooner they can start. The temperature is important because females form the eggs from their daily diet rather than from fat reserves (Ward & Bryant 2006). If the weather is warm and insects are abundant, females can get plenty of energy and nutrients for the eggs. Ward & Bryant (2006) found that females have larger clutches when it is warmer during egg-laying. In addition, clutches are largest early in the breeding season, because feeding conditions are ideal then (Turner 2006). So warmer springs and early egg-laying are likely to lead to females producing large first clutches.

#### Effects of climate change on feeding behaviour

Although warm springs are good for Swallows, hot dry summers are less welcome for several reasons. Rain is necessary to encourage vegetation growth and the availability of insects, so dry summers may mean fewer insects. Also, because insects are more active at high temperatures, they become more difficult to catch. Swallows prefer to hunt large insects, and their favourite prey items are large flies such as hoverflies (Syrphidae), horseflies (Tabanidae) and bluebottles (Calliphoridae) (Turner 2006). They tend not to take large, fast-flying insects when it is very hot, however, perhaps because these

insects are then too difficult to catch. For example, in the hot summers of Spain, Swallows regularly catch smaller prey than do those in northern Europe, even though larger insects are available (Møller *et al.* 1995a).

The outer tail feathers of Swallows make them more manoeuvrable and help them pursue fast-flying insects. However, the very long tails of males are not necessarily ideal from an aerodynamic point of view, perhaps because of the increase in drag. During their experiments to manipulate



**Fig. 2.** Egg-laying dates for Barn Swallows *Hirundo rustica* from BTO nest record data. Lines show smoothed means and upper and lower confidence limits (UCL, LCL). BTO Nest Record Scheme data (Baillie *et al.* 2007). Day 1 = 1st January, day 170 = 19th June.



Markus Varesvuo

5. Barn Swallows *Hirundo rustica* catch large insects, such as dragonflies and damselflies (Odonata), to feed to their young.

tail length, Møller *et al.* (1995a) found that males with elongated tails caught smaller prey than normal whereas males with shortened tails caught larger prey. Small insects contain much less energy than large ones, so are less profitable to hunt. In a cool climate, insects are fairly easy to catch, so it may not matter as much if a male has a long tail; the mating advantages of having that long tail are likely to outweigh the costs incurred while foraging. But in a hot climate, insects are more active and difficult to chase, so in this case it may be better to have a shorter tail to improve foraging ability. Indeed, tail length in male Swallows is inversely related to latitude, so that Spanish Swallows have shorter tails than north European ones (Barbosa & Møller 1999). Males in Spain have tails that are only about 5% longer than those of females; in Finland, males' tails are 20% longer than those of females. The tail length of Spanish Swallows may be optimal for foraging; shortening the already short tail appears to make flying energetically more costly (Cuervo & de Ayala 2005). As the British climate warms up, our Swallows may eventually evolve shorter tails too.

Of course, a trend towards hotter and drier summers does not mean no rain at all, but meteorologists predict that what rain there is will occur in less frequent but more intense events. Rain tends to suppress the activity of large insects and on a rainy day the only food available for Swallows may be the swarms of small insects such as midges over areas of water (Waugh 1978). In addition, very heavy rain makes it difficult for the birds to fly and they will often just sit out a downpour and resume feeding when the rain eases off.

#### *Effects of climate change on habitat availability*

Swallows must have good feeding sites close to the nest. Early in the breeding season they will feed 300 m or more from the nest but when they have chicks to feed, and they have to return to them every few minutes with food, they tend to forage closer to the nest (Turner 2006). In addition, the weather affects the distribution of insects: in sunny weather insects may be abundant in the fields, farmyards and other habitats around the nest but in wet weather, the birds

often have to travel further to find localised sources of food (Bryant & Turner 1982; Turner 2006).

The best habitat for Swallows is grazed grassland with cattle (e.g. Møller 2001, Evans & Robinson 2004, Turner 2006). Cattle are a good source of insects for several reasons. Insects are attracted to cattle and especially to their large dung pats. Cattle also disturb insects from the grass while they walk, and they don't eat the grass right down to the ground, so the pasture has a long sward which is good for insects. On cattle farms there is also the bonus of having manure heaps close by the barns where the birds nest. These can attract a lot of the large insects favoured by Swallows. Horse-grazed pasture is also good for Swallows but sheep-grazed pasture less so, because of the harder, smaller pellets of dung and because sheep grazing maintains a very short sward that is less attractive to insects.

Arable crops are far less suitable for Swallows, although they are not a complete loss; flowering rape and legumes, for example, provide a source of insects. Flying insects are more abundant over pasture than over silage or cereal crops; moreover, they remain abundant in areas of pasture *throughout* the Swallow's breeding season, whereas later in the season they become scarce over silage and cereal (Evans *et al.* 2007). Consequently, Swallows forage more over pasture than over silage and cereals (Evans *et al.* 2003, 2007), while a recent BTO survey also revealed their preference for

cattle pasture and the importance of livestock as a factor influencing where Swallows feed (Henderson *et al.* 2007; fig. 3). Hedgerows and other field boundaries with wild flowers and trees, and sources of water, are also better feeding sites than arable fields per se, especially when the weather is poor (e.g. Evans *et al.* 2003, Henderson *et al.* 2007). So it is possible to improve arable areas for Swallows but pasture is still best.

Climate change may mean that cattle-grazed pasture becomes scarcer in the UK, however. There is already a deficit of grazed grassland in parts of southern and eastern England, especially where cattle are kept indoors. This practice deprives Swallows of the benefits of cattle dung and of the disturbance of insects in the fields. Cattle tend to be more common in the wetter western and northern regions of Britain whereas eastern areas tend to be dominated by arable crops (Robinson & Sutherland 2002). This division is likely to become more pronounced if our summers become hotter and drier and more of central and southern Britain becomes less suitable for grazing cattle. Farmers in Britain were formerly paid subsidies depending on the number of livestock they had or their acreage of crops, but since reform of the Common Agricultural Policy, they now get a single payment that is not related to production. The new system has lots of environmental benefits, as farmers are encouraged by an agri-environment support scheme (Environmental Stewardship) to improve their farms for wildlife, for example by planting hedgerows. However, it also means that it can be more economical to rear sheep in the uplands rather than cattle. A long-term fall of about 10% in cattle numbers has been predicted (Oglethorpe 2005).

What farmers will grow in the future will be affected by climate change, not just directly but indirectly as well. Our zeal for converting fossil fuels to carbon dioxide means that we are running out of oil and need new sources of energy, as well as ways to reduce carbon



Dawn Balmer

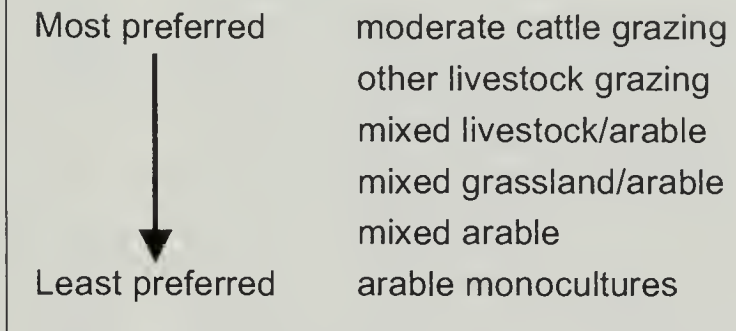
6. Farm buildings provide good nest-sites for Barn Swallows *Hirundo rustica*; farms with livestock are better than those without.

dioxide emissions. One possible partial solution is biofuels made from cereals, oilseed rape and sugar beet, as well as crops such as *Miscanthus*, willow, poplar and canary grass, which can be burnt directly to generate energy. In September 2008, the EU confirmed a target of 10% of renewables in transport fuel by 2020, including biofuels (European Parliament 2008), but using agricultural land for biofuel crops at the expense of food crops and pasture could be bad news for Swallows looking for good feeding sites.

#### Effects of climate change on nests

Hot, dry summers will have other effects on Swallows. First, when a breeding site has been found, the birds need to build their nests or repair old ones. This requires mud, which may be in short supply in a drier climate. Second, nesting inside buildings in a warm climate can be disadvantageous, because older chicks may overheat and die. Nests built close to a metal or wooden roof become very hot in sunny weather. Hyperthermia is often reported as a cause of chick mortality in southern Europe, but it can occur even in northern Britain in warm summers (Turner 2006). So what constitutes a good nest-site may also change. In

### Swallow crop preferences



**Fig. 3.** A recent BTO survey showed that Barn Swallows *Hirundo rustica* forage most over cattle pasture and least over arable crops; other types of livestock grazing and mixed rotations are better than pure arable but not as good as cattle-grazed fields (Holt & Henderson 2005).

northern Europe, the majority of nests are built inside buildings (Turner 2006). In Scotland, for example, less than 1% of nests around Stirling are on the outside of buildings (Thompson 1992). This use of internal nest-sites is probably to avoid the extremes of climate found outside. Because the female incubates by herself in an open nest, she needs a warm environment so that the eggs do not get cold when she is away foraging. By contrast, in southern parts of Europe, nearly a quarter of pairs nest on the outside of buildings (Turner 2006). Swallows may also find outside sites more attractive in the north in future.



Markus Varesvuo

**7.** Barn Swallows *Hirundo rustica* collect wet mud and vegetation to build their nests.

### Effects of climate change on the breeding season

As well as arriving on the breeding grounds earlier, Swallows are also leaving on migration later. In Scotland, most have gone by late September or early October but they are now often recorded into November and even December. The mean last date for the last three birds recorded between 1968 and 1978 was 12th November and in 1990–2000 it was 25th November (Forrester *et al.* 2007).

Since Swallows are both arriving earlier and leaving later, they have more time to devote to chick rearing. About two-thirds of Swallows have two broods a year and some manage three (Turner 2006). In Denmark, in 1971, Swallows started their second broods about 45 days after starting their first. Since then, the time between broods has increased by an average of eight days (Møller 2007b; fig. 4): birds are laying their first clutch earlier *and* their second clutch later. The change in laying schedule is related to the average temperature during April, which has risen by more than 2.2°C in the study area since 1971. As the temperature has increased, so has the interval between clutches. The longer the interval between clutches the more successful are the parents at rearing at least one fledgling. There are probably two reasons for this. First, females have to regain their body condition

before embarking on a second brood. Second, parents have to look after fledglings until they can feed efficiently for themselves. So the longer the interval they can have between broods the better.

The interval between clutches depends in part on how long the parents continue to feed their fledglings. A study of radio-tagged fledglings in Switzerland found that they were fed by their parents for 12 days on average, but there was a wide range: some broods had only six days of care after fledging and one brood was fed for 24 days (Grüebler & Naef-Daenzer 2008). Fledglings from first broods were fed for about nine days only, in contrast to those from single and second broods, which were fed for nearly two weeks. Presumably this difference is because parents that have two broods need to give themselves time to rear the second one after their first. Parents also spent more time looking after the fledglings when they had their first brood early. So an early start to egg-laying in warm springs will allow Swallows to spend more time caring for each brood.

Since early egg-laying allows Swallows to lay large clutches and to spend more time looking after their offspring, it is not surprising that pairs that have long intervals between clutches also rear more fledglings. Pairs that laid clutches close together in Møller's (2007b) study had



8. Parent Barn Swallows *Hirundo rustica* feed their young for about two weeks after they fledge.

only about six fledglings a year but pairs with a long interval between clutches could rear ten or eleven fledglings. This is not so good for male Swallows, though, as they tend to survive less well when the interval between clutches is long. Møller (2007b) suggested that this is because they have less time for migrating and for moulting their long tail feathers.

#### Effects of climate change on populations

In the UK, the Swallow population is not declining, in fact it has been increasing since the mid 1990s (Baillie *et al.* 2007). However, there have been local declines and regional differences exist, with increases in western Britain but declines in the more arable east (Evans *et al.* 2003; Robinson *et al.* 2003). The European population as a whole underwent a moderate decline between the 1970s and 1990s and has not fully recovered (BirdLife International 2004) and there have been some dramatic declines in some parts of Europe, including Anders Møller's study population in Denmark (Engen *et al.* 2001). Most mortality occurs outside the breeding season (Møller 1989). Worsening environmental conditions in North Africa have certainly increased mortality and this has coincided with population declines, for example in Denmark (Møller & Szép 2005; Szép & Møller 2005).

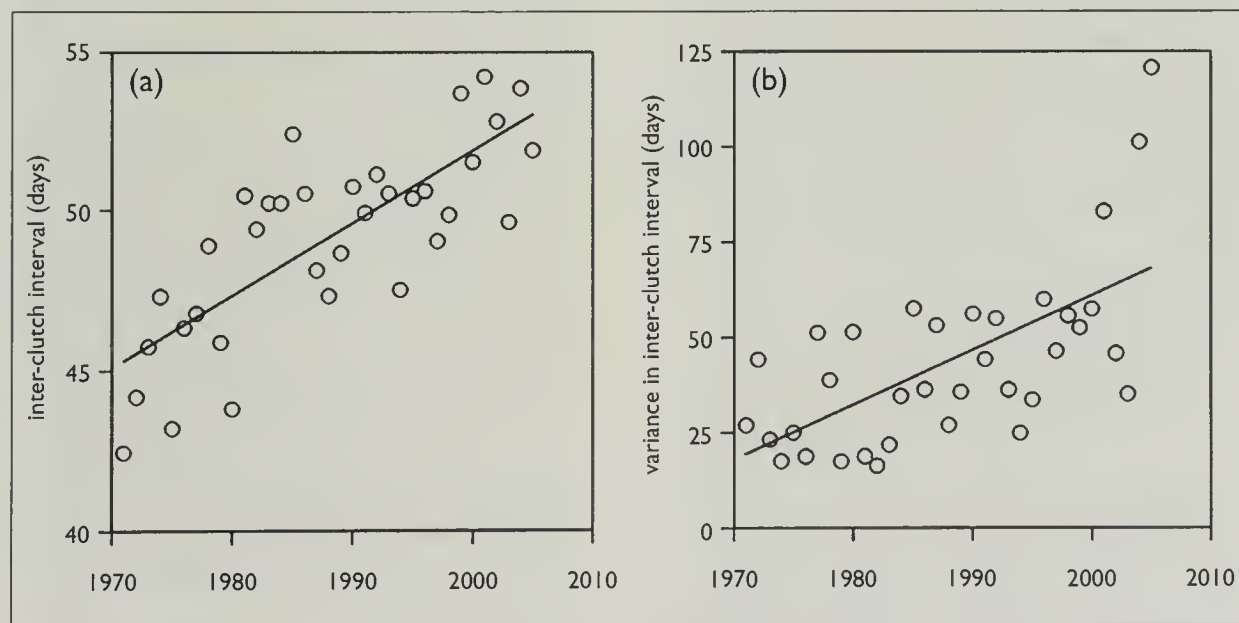
Poor conditions over winter will also increase the moult period, delay migration and potentially lead to birds having smaller broods

if they start breeding late. This effect of winter conditions has so far been seen most clearly in Italian Swallows, which winter in western Africa (Saino *et al.* 2004). In northern Europe generally, however, better spring conditions are leading to earlier egg-laying, longer breeding seasons and more fledglings. Many recruits to breeding populations come from early broods, so favourable springs may lead to more recruits. However, if summers get hotter and drier, chick mortality later in the year may increase because of overheating and a poorer food supply.

Whether Barn Swallow populations increase or decrease because of climate change will depend on a combination of factors such as how they cope with drought in the Sahel region and how much their reproductive rate is increased in an extended breeding season. The critical factor will be whether summer weather remains good for breeding. Some southern areas of Europe may become too hot and dry for breeding but the species' range may expand northwards (Huntley *et al.* 2007).

#### Conclusions

A progressively warming climate has the potential for both negative and positive effects on Swallows. On the downside, they lose weight and grow new feathers more slowly in droughts. Migrating across North Africa will become increasingly difficult as the Sahara expands, and more individuals will die as a result. In hot, dry summers, insects may be scarcer and chicks



**Fig. 4.** (a) The annual mean duration (in days) of the interval between clutches of Barn Swallows *Hirundo rustica* in Kraghede, Denmark, increased significantly between 1971 and 2005. (b) The interval between clutches also became more variable over this period. The lines are linear regression lines (both significant,  $P < 0.0001$ ).

Reprinted from Møller (2007b) by permission of Oxford University Press.



9. Adult and juvenile Barn Swallows *Hirundo rustica* gather in flocks before starting the trip south to African wintering grounds.

may not thrive. In addition, the lack of good feeding habitats may compound the shortage of insects. Conversely, in warmer springs Swallows can start breeding sooner and a longer breeding season may allow them to produce more fledglings and perhaps more recruits. There are also effects on morphology: long-tailed males survive better than short-tailed ones and arrive back earlier, increasingly sooner than females as climate warms. But later in the season, when insects are difficult to catch, it may be shorter-tailed males that have the advantage.

Climate change is inevitable, even if greenhouse gas emissions are reduced, and it is easy to take a bleak view of how it will affect wildlife. Some changes probably will be more obviously negative than positive, but even so some species may benefit. In the UK, as montane habitats shrink, the Snow Bunting will probably disappear from Scotland along with its habitat. This, and other northern species, may end up having nowhere to go. But more southern species will be able to spread into new areas, provided their

habitat needs can be met. Long-distance migrants may be severely affected by drought along their migration route and their populations may decline because of this. Short-distance migrants, on the other hand, may benefit from a long breeding season combined with short migration routes. Some species may be able to adjust their migration strategy, as Blackcaps have done in changing their wintering area; others, with a poor ability to disperse and with small population sizes, are likely to suffer.

So we need not be completely pessimistic about the effects of climate change on Swallows and other wildlife, though it is hard to be too optimistic. As this paper has illustrated, the effects of climate change can be complex and subtle. Clearly, more research is needed to understand the details of how species and ecosystems will be affected, as well as action to mitigate these effects.

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Markus Varesvuo

10. The Barn Swallow's *Hirundo rustica* forked tail makes it highly manoeuvrable, helping it catch fast-flying insects.

# The Cape Verde Warbler:

## distribution, density, habitat and breeding biology on the island of Fogo

*Jens Hering and Elmar Fuchs*

**ABSTRACT** An expedition to the newly discovered breeding grounds of the Cape Verde Warbler *Acrocephalus brevipennis*, on the island of Fogo, Cape Verde, in October 2006, established that the species is widespread in the northern part of the island. Some 129 territories were mapped and the mean regional population density was 6.5 territories per 100 ha. A total island population of at least 500 breeding pairs is estimated. An analysis of the species' habitat preferences showed that it occurs predominantly in coffee plantations, especially those intermixed with large fruit trees and bushes, and other introduced crops, especially maize. Spanish Flag *Lantana camara* is also an important habitat element, especially at higher levels and in inaccessible gorges. Cape Verde Warbler was not found in areas of introduced trees above the cultivation zone, although it breeds in similar habitat on Santiago island. Nine nests were found and described, and breeding behaviour at the nest studied. The species probably bred on Fogo prior to human settlement and has subsequently adapted to coffee plantations. If coffee crop management remains unchanged, the long-term survival of the Cape Verde Warbler on Fogo appears not to be under threat.

Prior to 2006, the breeding population of Cape Verde Warbler *Acrocephalus brevipennis*, which is endemic to the Cape Verde archipelago, was estimated at a maximum of 500 pairs, and thought to be restricted largely to the island of Santiago, where it is declining owing to habitat loss (BirdLife International 2004; Clarke 2006). In 1998, the species was rediscovered on the island of São Nicolau, where it had last been recorded in 1924 (Hazevoet *et al.* 1999). The eight pairs found there led to hopes that a healthier population may exist, but further studies in 2001 and 2003 showed that the species probably occurs at only three sites on the island, with a maximum of ten pairs (Hazevoet 2003; Donald *et al.* 2004). On Brava, the only other island that Cape Verde

Warbler was known from, it was last sighted in 1969 (Frade 1976; Hazevoet 1993, 1995), a victim of desertification, habitat destruction and increased predator pressure (from rats – both Black *Rattus rattus* and Brown Rats *R. norvegicus* occur on the island – and domestic cats *Felis catus*).

With this as a background, the discovery of Cape Verde Warbler on the island of Fogo in October 2004 was all the more surprising. During a three-day visit, 32 breeding territories were found in the northeast of the island, with males responding well to playback of song. One concentration was located in the coffee plantations around the town of Pai António, at heights ranging from 490 m to 950 m asl, but a search in the northwest of the island failed to

locate any birds. As only random searches were possible in the short time available, it was thought that more birds could be present in the fertile northern parts of Fogo, which is otherwise characterised by extremely dry conditions (it is the hottest of the Cape Verde islands). Based on this initial survey, a total population for the whole island of more than 50 breeding pairs was estimated (Hering & Hering 2005, 2006). During a short visit to the island in January 2006, the presence of the species was again confirmed near Pai António (Hering unpubl.).

The discovery of Cape Verde Warbler on Fogo prompted a more comprehensive survey in October 2006, and that work forms the basis of this paper. Current distribution, population size and density, and habitat requirements, as

well as threats and possible conservation measures, were key elements of the project, and most effort was focused on territory mapping and recording vegetation and habitat characteristics in breeding areas.

#### Study area and methods

The study area of some 2,000 ha lies in the northern part of Fogo. Cultivated land, with scattered village settlements and isolated habitations, dominates the landscape. The northeast trade winds ensure that this part of the island has a relatively moist climate (annual rainfall at 700 m asl is 1,100–1,200 mm), which creates ideal conditions for coffee cultivation. Coffee plantations, interspersed with fruit trees and bushes, extend from 300 to 1,000 m asl. The area is extremely rugged and a number of steep gorges – the Ribeiras – make it difficult to negotiate.

Line transects through representative sections of potentially suitable habitat were surveyed along passable tracks and existing trails between 19th and 31st October 2006. Singing males or pairs reacting to tape lures were mapped using a hand-held GPS unit, while nests and data on breeding biology were recorded where possible. The distribution of vegetation within each territory was recorded and the degree of coverage for all plant species

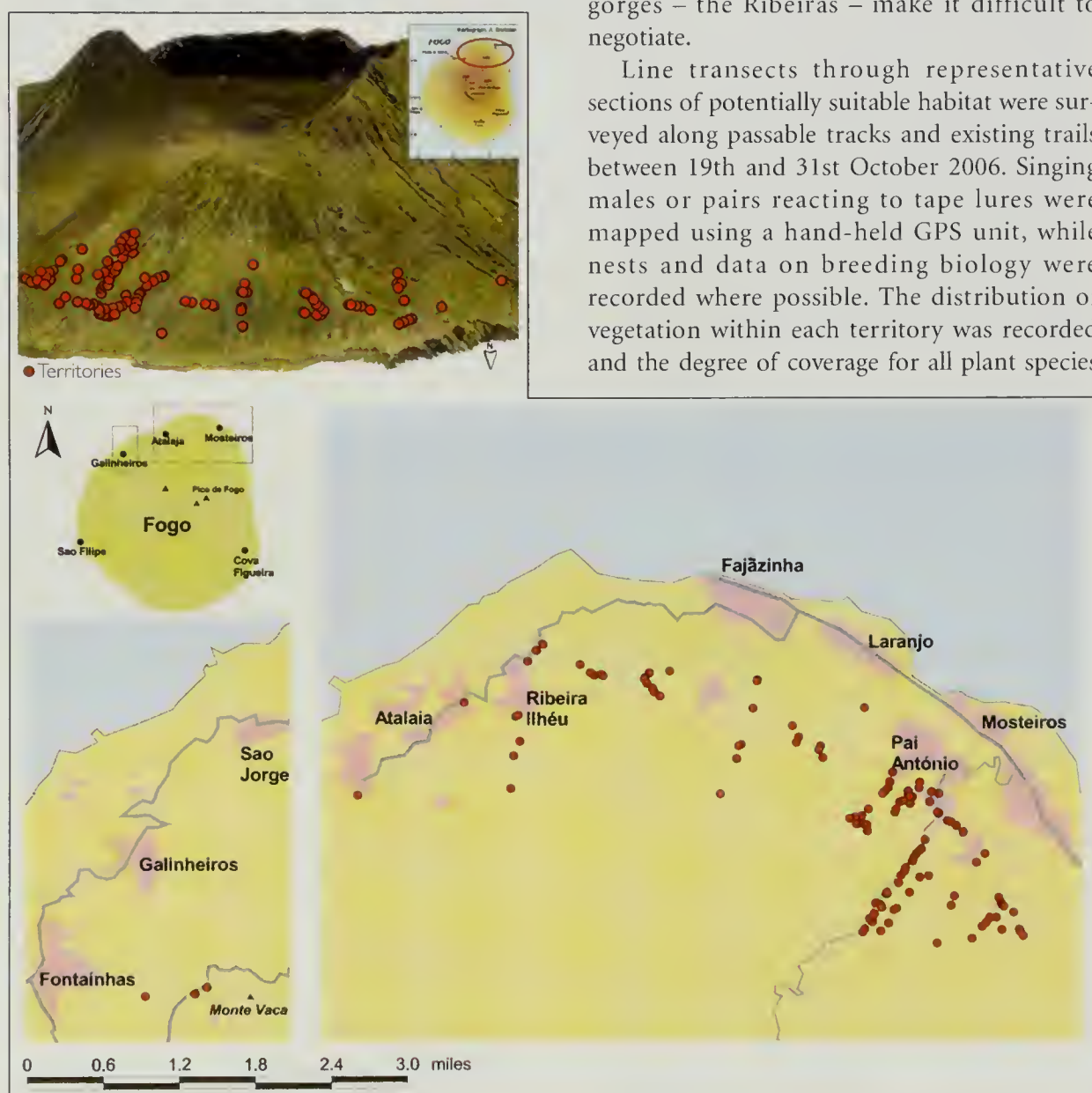


Fig. 1. Location of breeding territories, singing males or paired Cape Verde Warblers *Acrocephalus brevipennis* in the north of Fogo, Cape Verde, October 2006.

was estimated following Braun-Blanquet (1964).

### Population

#### Population distribution

The October 2006 survey established a core area of distribution in the region surrounding Pai António (fig. 1). Particular concentrations were recorded on the Monte Grande, in the environs of Ribeira da Fajãzinha, and around Ribeira Ilhéu. To the southwest of Pai António, birds were recorded as far as Cutelo Alto, and west to Espia de Baixo and the periphery of Ribeira Fonte Gatinha, with a relatively discrete area of distribution some 5 km farther west, above Ribeira Ilhéu. The eastern boundary lies close to Touril and Cova Lima, where a broad, bare tongue of lava stretches from Caldeira to the coast. An intensive search on the far side of the lava flow in the cultivated land around Corvo was unsuccessful. Three further territories, situated between Monte Vaca and Ilhéu das Contendas in the northwest of Fogo, were unexpected and appear to be restricted to an isolated coffee plantation. Otherwise, all searches in the northwest of the island failed to locate any birds (Hering & Hering 2005), although further isolated occurrences in suitable areas cannot be ruled out. This possibility is supported by sightings near Atalaia and close to Ribeira Boga. However, no Cape Verde Warblers were found in apparently suitable habitat in a 200-ha afforestation project on Monte Velha, which lies above the zone of cultivated land.

The altitude of territories found is shown in fig. 2. This reveals a wide altitudinal

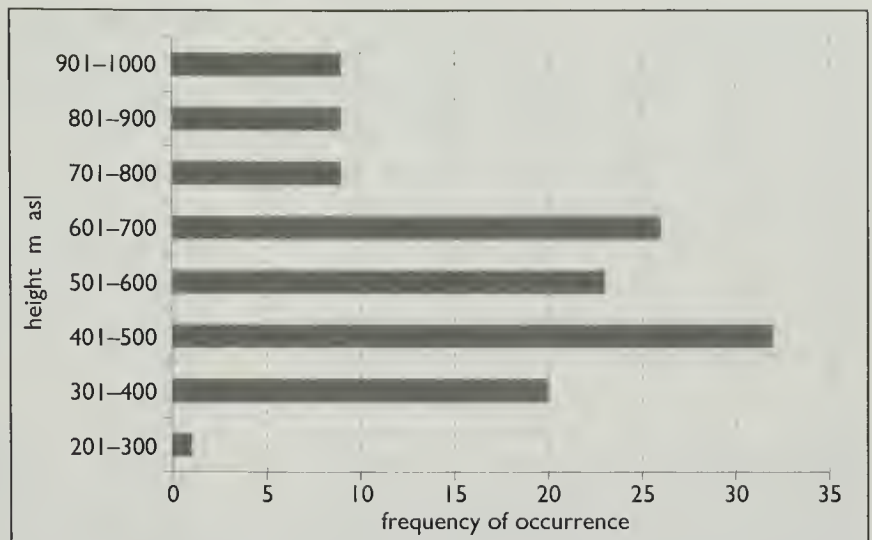


Fig. 2. Vertical distribution of 129 records of Cape Verde Warbler *Acrocephalus brevipennis* on the island of Fogo, Cape Verde Islands, in October 2006.

spread, with the lowest territory at 222 m asl northwest of Feijoal, and the highest in Ribeira Coxo, below Monte Velha, at 973 m asl. Nonetheless, the main concentration of birds occurs between 300 m and 700 m asl.



Jens Hering

11. Singing male Cape Verde Warbler *Acrocephalus brevipennis* in a coffee bush near the nest, Pai António, Fogo, October 2006. Cape Verde Warbler superficially resembles Reed Warbler *A. scirpaceus* but shows distinctly different proportions: a longer tail and bill, rather longer legs and larger feet, and a short rounded wing with a fairly long first primary. Studies by Leisler *et al.* (1997) established that it belongs with a subgroup of closely related Afrotropical *Acrocephalus* which includes the widespread Lesser Swamp *A. gracilirostris* and Greater Swamp Warblers *A. rufescens*. Compared with those of Reed Warbler the upperparts are drab olive-brown with a greyish cast to the crown and neck and a warm tinge to the rump and uppertail-coverts. There is a narrow greyish-white supercilium, which is fairly distinct above the lores and connects with a narrow whitish eye-ring. The chin and throat are creamy-white, contrasting with the olive-brown sides to the head and the light grey-brown wash to the breast and flanks. The species' movements through the trees and bushes recall those of a *Hippolais* warbler rather than an *Acrocephalus*. The sexes are similar in appearance (birds were sexed in our study on the basis of song deliverance).

**Population density**

A total of 129 territories was located. Between Pai António and Ribeira Ilhéu, Cape Verde Warblers occurred at an average density of 2.5 territories/100 ha (39 territories in 1,584 ha). In the core area, in coffee plantations near Pai António and farther east, the average density was 19 territories/100 ha (90 territories on 468 ha). This gave an average density for the whole study area of 6.5 territories/100 ha. The preference for coffee plantations interspersed with fruit trees is highlighted by the distance between nests with broods; the minimum distance between occupied nests in such areas was just 30 m. Extrapolating these figures to all suitable habitat in the cultivated area of northern Fogo gives a conservative estimate of some 500 pairs.

**Breeding habitat**

Bannerman & Bannerman (1968) and Snow & Perrins (1998) described the breeding habitat of Cape Verde Warblers on Santiago and São Nicolau, as well as on the formerly inhabited island of Brava. On Santiago, the species shows a preference for densely overgrown valleys and watered plantations as well as small human settlements with sufficient vegetation (Hazevoet 1995). On São Nicolau, the species formerly bred in orange groves and coffee plantations (Bolle 1856; Alexander 1898) as well as in cultivated sugar cane (Keulemans 1866); now it occurs only in areas with Giant Reed *Arundo donax* and large fruit trees (Hazevoet *et al.* 1999; Donald *et al.* 2004). On Brava, Cape Verde Warbler occurred around human settlements,

**Table 1.** Habitat data for 129 territories of Cape Verde Warbler *Acrocephalus brevipennis*, Fogo, October 2006. Extent of vegetation cover (after Braun-Blanquet 1964): i = records of individual plants; 1 = <6%; 2a = 6–15%; 2b = 16–25%; 3 = 26–50%; 4 = 51–75%; and 5 = 76–100%; figures show no. of territories within each cover class.

Species	No. of territories recorded	Frequency %	Extent of vegetation cover						
			5	4	3	2b	2a	1	i
Coffee <i>Coffea arabica</i>	104	80.6	14	40	36	6	5	2	1
Maize <i>Zea mays</i>	108	83.7	5	5	11	11	34	19	23
Mango <i>Mangifera indica</i>	99	76.7		5	7	3	17	26	41
Banana <i>Musa x paradisiaca</i>	90	69.8			7	14	13	23	33
Orange <i>Citrus</i> sp.	69	53.5			9	2	4	21	33
Papaya <i>Caryca papaya</i>	65	50.4					3	15	47
Australian Silver-oak <i>Grevillea robusta</i>	46	35.7			6	2	10	13	15
Guava <i>Psidium guajava</i>	42	32.6					4	5	33
Physic Nut <i>Jatropha curcas</i>	41	31.8		1	2		3	8	27
Spanish Flag <i>Lantana camara</i>	31	24.0	5	3	10	6	3		4
Mauritius Hemp <i>Furcraea foetida</i>	26	20.2			3	4	2	5	12
Giant Reed <i>Arundo donax</i>	24	18.6		1	11	3	1	3	5
Cassava <i>Manihot esculenta</i>	15	11.6			1	2	2	3	7
Indian Shot <i>Canna indica</i>	6	4.7				2	1	3	

**Table 2.** Details of nine nests of Cape Verde Warbler *Acrocephalus brevipennis*, Fogo, October 2006.

Nest	Date found	Altitude (m asl)	Plant species	Nest height (m) above ground	Aspect, position
1	20th October	569	Mango	5	NW, outer branch
2	20th October	732	Mango	15	NW, outer branch
3	21st October	497	Mango	5	NW, outer branch
4	21st October	437	Coffee	2	Crown
5	24th October	340	Mango	2.3	S, outer branch
6	24th October	346	Guava	2.3	NW, outer branch
7	28th October	417	Mango	6–7	NE, outer branch
8	28th October	409	Mango	8	S, outer branch
9	28th October	395	Mango	6	N, outer branch

in particular Vila Nova Sintra, with well-established cultivation including orange trees, Physic Nut, cassava and coffee bushes (Alexander 1898; Bourne 1955). Breeding habitats on Fogo, first described by Hering & Hering (2005), are supplemented by the present studies.

In October 2006, vegetation characteristics in 129 territories were recorded and analysed (table 1). This showed that Cape Verde Warbler breeds almost exclusively in cultivated areas, particularly in coffee plantations interspersed with large fruit trees,

planted on mountain terraces and in valleys or craters. Apart from coffee, these plantations are dominated by introduced crops including maize, mango, banana, orange and papaya. In lower-lying areas (up to 400 m asl), maize was the key species within the birds' territories. Spanish Flag *Lantana camara*, introduced from Central America, occurred extensively in some areas, especially in the higher mountain regions or gorges with difficult access. Apart from the dominant coffee and maize crops, the breeding habitat of Cape Verde Warbler on Fogo is characterised above all by tropical fruit trees and bushes. Mango is of particular importance as it provides the local human population with a source of shade as well as a fruit harvest. Mango trees also provide convenient and

prominent song-posts for Cape Verde Warblers, and are probably the most important nest-site. Giant Reed, in contrast, was found in less than 20% of territories. The areas of afforestation on Monte Velha, planted with introduced *Eucalyptus*, *Cupressus* and *Pinus* species as well as the Australian Silver-oak *Grevillea robusta*, were searched, but no birds were found. On Santiago, however, Cape Verde Warbler breeds in similar plantations in montane regions (Hering & Fuchs in prep.).



Jens Hering



Jens Hering

12 & 13. Breeding habitat of the Cape Verde Warbler *Acrocephalus brevipennis*, with a typical mix of cultivated plants, including coffee, maize, mango and papaya, near Pai António, in the north of Fogo, October 2006.

*Breeding biology*

Little has been published about the breeding behaviour of Cape Verde Warbler; Cramp (1992) and Snow & Perrins (1998) provided the most detailed summaries, although other workers reported that favoured plant species for the nest include Giant Reed and sugar cane, at heights between 0.6 m and 12 m (Bourne 1955; Hazevoet 1995; Castell 1999; Donald *et al.* 2004).

Our studies on Fogo revealed details of breeding behaviour, nest-site selection and construction that supplement existing knowledge of the Cape Verde Warbler. We found nine nests, seven in mango and one each in guava and coffee bushes (table 2). Nests were situated at heights ranging from 2 m to 15 m above ground level, often inaccessible and always woven into a fork of three vertically growing

twigs in the outer branches. The nest was built with substantial walls and a deep cup, very similar to the nests of Great Reed Warbler *A. arundinaceus*. The outer nest material typically consisted of coarse plant fibres up to 1 cm thick, usually from the leaves and trunks of the banana plant; on one occasion, a Cape Verde Warbler was observed plucking fibres from a banana plant for use as nest material. The nest lining, which could be seen in three of the nests, consisted of fine plant fibres. The dimensions of these three nests were as follows: outer diameter 95–110 mm, height 120–140 mm, cup diameter 50–70 mm and cup depth 40–50 mm.

A nest in the early stages of construction in a coffee bush was being built by both the male and female birds, which brought and wove banana leaf fibres into the structure approxi-

mately every three minutes. During nest-building, the male often uttered short song phrases. Nest construction by males has been recorded previously in only two *Acrocephalus* species: Australian Reed Warbler *A. australis* in Australia and Millerbird *A. familiaris kingi* in Hawaii (B. Leisler pers. comm.). Breeding birds were present at five nests. Three nests into which we could see contained two, three and three eggs respectively, and in one case the female appeared as if about to lay. In another nest, the young had already fledged and the edges and exterior of the nest were heavily contaminated with droppings; four days after fledging both young and adult birds remained in the immediate vicinity of the nest.

For several hours on the morning of 27th October, we observed the behaviour of both adults at a nest with three eggs (nest 5, see table 2). Both male and female took turns to incubate the eggs (as observed by Donald *et al.* 2004). When the male arrived at the nest prior to the changeover, he typically called, with crown and throat feathers raised, whereupon the female immediately left the eggs.



14. Nest with Cape Verde Warbler *Acrocephalus brevipennis* sited among the outer branches of a Mango tree, Pai António, Fogo, October 2006 (nest 5 in table 2).



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15 & 16. Male (left) and female (right) Cape Verde Warbler *Acrocephalus brevipennis*, immediately after brooding changeover, Pai António, Fogo, October 2006.

Incubating birds sat deep in the cup so that often only the head and part of the tail were visible. After leaving the nest, the male almost always remained close by and occasionally gave short bursts of song. When incubating, the sitting bird turned the eggs approximately every 15 minutes.

Several sound recordings were made in this territory and we consider the song similar to that of the population on Santiago (see Hazevoet in Cramp 1992). Blackcap *Sylvia atricapilla* nests were found within a few metres of this Cape Verde Warbler nest, suggesting that the two species co-exist quite happily. We recorded a total of 12 instances in which Blackcap imitates the song of the Cape Verde Warbler (see Hering & Hering 2005).

### Discussion

The cultivated land in the north of Fogo, especially coffee plantations interspersed with fruit trees, is of exceptional importance for Cape Verde Warblers. In the few occupied territories where coffee is almost or completely absent, other crops predominate, while in the almost inaccessible gorges, Spanish Flag grows in dense thickets. These secondary habitats, greatly influenced by human activity, probably resemble the original habitat of Cape Verde Warbler on Fogo. The original vegetation at higher levels was extremely dense, so-called 'feather bush', dominated by *Euphorbia tuckeyana*, *Artemisia gorgonum*, *Echium vulcanorum*, *Periploca laevigata*

subsp. *chevalieri*, *Lavandula rotundifolia* and *Globularia amygdalifolia* and rising to a height of 3 m and more. Before human settlement, it is assumed that about two-thirds of the total land area in the Cape Verde islands was densely clad with trees or large bushes.

We consider that Cape Verde Warbler was probably a common species on Fogo prior to human settlement, and that the remaining birds form a small fragment of a once larger and more widespread population. This is perhaps more likely than a recent colonisation from Brava or Santiago.

### Conclusions and prognosis

Cape Verde Warbler was first described by Bolle (1856) and Alexander (1898) from the islands of São Nicolau, Santiago and Brava. Coffee plantations played a key role then, as now, and Cape Verde Warbler was almost certainly present in the large coffee plantations on Fogo, whose existence can be traced to the mid eighteenth century (Luigino Zanini *in litt.*). Coffee production remains economically important for the island, and connoisseurs consider it to be of exceptional quality. Although the quantities produced are not sufficient to support a share of the international market, local consumption helps to maintain a steady market, while visiting tourists also purchase significant quantities. It thus appears that the basis for preservation of the Cape Verde Warbler's most important habitat on Fogo is safe, at least for

the time being. The extensive management methods, and in particular the preservation of the fruit trees, are of course critical for maintaining the habitat in its present state. Major changes in climate are not predicted for the northern part of Fogo, where the influence of the northeast trade winds should minimise the risk of droughts. Above all, it is to be hoped that the Cape Verde Warbler on Fogo will be spared the fate of the now-extinct population on Brava.

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## Request

### Photographs of rare breeding birds

For forthcoming reports of the Rare Breeding Birds Panel (those for 2006, 2007 and 2008 will be published during the next two years), we invite photographers to submit images of relevant species. A full list of species considered for the main report, and also the triennial report on rare non-native breeders, can be found on the Panel's website (<http://rbbp.org.uk/>). We are looking for birds in the relevant year and, in particular, for images of birds engaged in breeding-related behaviour – not necessarily at the nest, but birds in pairs, displaying, carrying food, waterfowl

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# Letters

## *Pronunciation of scientific names*

James Ferguson-Lees' letter on scientific names (*Brit. Birds* 101: 97–99) and the editorial footnote concerning *BB*'s future intention to expand on its pronunciation are welcome. It has always struck me as odd that the written form of scientific names is so closely regulated yet we are allowed a virtual free-for-all in the way they are spoken. The result is that our scientific names are anything but 'unambiguous and universal' in their spoken form (Jeffrey 1977).

As both classicist and ecologist, I have observed where scientists and naturalists experience greatest difficulties in their pronunciation of scientific names, and given thought to how those difficulties might be mitigated. The following notes derive from this experience, and I hope that they contribute something to the debate opened so ably by James Ferguson-Lees.

First, I think that it is important to correct a misconception. The view that 'we do not know how Latin was spoken, so any pronunciation is as good as any other' is simply untrue. We do in fact have a pretty good idea of the pronunciation of both Greek and Latin in their classical periods (e.g. Allen 1987, Janson 2004). Though historical linguists might quibble over details, the basics are well established. What creates problems is that both Greek and Latin, including their pronunciations, evolved for many centuries after their classical periods. We know much less about these later processes, but their legacies are found in many European languages today.

This situation leads to an understandable practice. In the absence of guidance, those voicing scientific names often assimilate their pronunciations to their own languages. Thus native English speakers tend to pronounce *violaceus* as though it were 'violaceous', *niger* as in the name of the river, *major* and *minor* as if they were the standard English words. Examples are legion. English is notoriously inconsistent in the way individual letters, especially vowels, and groups of letters are sounded, and is a poor model in this context. I feel that Stone's (2005) statement, quoted by Ferguson-Lees, that 'most Latin words have corresponding English word sounds, following the same rules for short and long pronunciation of vowels' should be treated cautiously, as it may encourage too great a con-

fidence in pronouncing scientific Latin as if it were English. Native speakers of classical Latin appear to have voiced letters and letter groups consistently. Such an approach is also found in many languages today. But scientific Latin is no more Spanish than it is English; nor is it Italian, nor any other modern language. Our use of Latin and latinised written forms clearly differentiates scientific names from vernacular ones, and my view is that we should seek to maintain this differentiation in the way we pronounce them.

My conclusion from the above is that we should adopt classical Latin pronunciation for scientific names: its rules are widely agreed, largely simple and easily followed. In a handful of cases, dealt with below, we need also to be aware of pronunciations in classical Greek. To keep things simple, we may for scientific Latin safely ignore the occasional subtle variations in classical Latin pronunciation and stick to basic premises. Ferguson-Lees outlined many of these basics. The following notes are intended to amplify his comments by discussion of further letters and letter combinations, plus issues of stress and the pronunciation of latinised personal and place names.

### *Pronunciation of letters singly and in combination*

*Letters c and g.* Some guides to Latin pronunciation say that these letters should be pronounced as hard consonants *except before e and i*. In classical Latin *c* and *g* were always pronounced hard, and the softening before *e* and *i* represents a later pronunciation shift. Unfortunately, there is no consistency in this later usage: in Italy *ce* and *ci* are pronounced as *cheh* and *chih*, in Castillian Spanish as *theh* and *thih*, in Germanic languages as *tseh* and *tsih*, and in English and French as *seh* and *sih*. Compare how these languages now pronounce Cicero – who would himself have spoken his name as *Kikero*. A further complication is the tendency for some speakers to soften the letters *c* and *g* before *y* as if it were an *i*; see the next paragraph for the origin and pronunciation of the Latin *y*. The simplest solution, therefore, would be to follow classical Latin in retaining a hard *c* and *g* throughout.

**Letter y.** This is infrequent in Latin, where it is a transliteration of the Greek upsilon ( $\upsilon$ ,  $Y$ ). Its pronunciation should be something like the French  $u$  in *tu*. It should never be pronounced as in the English *cycle* or *type*. Thus *cyaneus* should sound something like *koo-an-ey-us*.

**Letter j.** This letter is used instead of  $i$  in a few places, for example when  $i$  is followed by another vowel and when  $i$  occurs between two vowels. In these positions  $i$  and  $j$  can sometimes be found more or less interchangeably. In terms of pronunciation, we can perhaps best render  $j$  by the English  $y$ -sound (the modern  $j$ -sound as in January appears only in the Middle Ages). Thus *Jynx* (a transliteration of a Greek bird name) is pronounced *yoonks* (certainly not like the English word *jinx*) and *major* is rendered *mah-yor*. The interchangeable usage of  $i$  and  $j$  is demonstrated by *Ajaia ajaja*.

**Letter v.** In classical Latin this was written as a  $u$  (except in inscriptions) and pronounced as a  $w$ . Thus *Vanellus* would be pronounced *wa-nell-us*. A good example is *sandvicensis*, where the  $w$  sound of the place name is represented by  $v$ . The letter  $w$  does not exist in Latin.

**Letter x.** In Latin this is a transliteration of the Greek  $\xi$  ( $\Xi$ ) and should always be pronounced as  $ks$ . Thus *Xenus* is pronounced *Ksenus*, and *xanthocollis* as *ksanthocollis*. Modern English usage, which sounds an  $x$  at the start of a word as a  $z$  (e.g. *xylophone*), should not be followed.

**Letter z.** This exists in Latin only in words derived from other languages. It normally represents the Greek letter zeta ( $\zeta$ ,  $Z$ ). Though some textbooks suggest that the zeta was pronounced as  $dz$ , it seems that the Greeks themselves may not have pronounced it in a consistent fashion. My recommendation is therefore the simple solution of pronouncing it as the English  $z$ .

**Letter o.** Latin and English have only one symbol for  $o$ , but Greek has two: the 'small  $o$ ' omicron ( $\omicron$ ,  $O$ ) and the 'big  $o$ ' omega ( $\omega$ ,  $\Omega$ ). In simple terms these approximate to a short and long vowel respectively. In latinised forms of Greek words, the lengths of the  $o$  vowels must therefore be learnt. For example, in *melanopogon* the first  $o$  is omicron, the other two are omegas, and pronunciation should reflect this ('*melano-paw-gawn*'). The biggest pitfall for English speakers is the diphthong  $oo$  pro-

nounced as a single sound. This does not exist as a diphthong in Latin or Greek, and when encountered in a scientific name it may represent a Greek word in which separately voiced omicrons and omegas are found together. Examples include *boops*, in which an omicron is followed by an omega, and the beetle genus *Oodes*, which begins with two omegas. These vowels should be pronounced separately, so that *boops* is something like *boh-awps* (certainly not a rhyme with whoops!), while *Oodes* is pronounced *Aw-aw-des* (not like *oo-des*, or even *oods*). The  $oo$  in a scientific name may, however, indicate a non-Greek origin such as a personal or place name.

**Letter e.** Greek again has two letters whereas Latin and English have only one. In simple terms the epsilon ( $\epsilon$ ,  $E$ ) represents a short  $e$  and the eta ( $\eta$ ,  $H$ ) a long  $e$ . Knowledge of the length of an  $e$  may help speakers to place stress correctly (e.g. *Alopochen* has an eta, which carries a stress). However, the single sound problem of  $oo$  dealt with above appears to be much rarer with  $ee$ : the few examples of  $ee$  I have found in scientific names have a non-classical origin.

**Combined letters  $ch$ ,  $ph$  and  $th$ .** These are transliterations into Latin of the single Greek letters chi ( $\chi$ ,  $X$ ), phi ( $\phi$ ,  $\Phi$ ) and theta ( $\theta$ ,  $\Theta$ ). In classical Greek they represent the aspirated  $k$ ,  $p$  and  $t$ . When absorbed into Latin, however, the  $ph$  and  $th$  letter combinations rapidly became pronounced as  $f$  and  $th$  (as in *thin*, not *then*) but  $ch$  retained its pronunciation as  $kh$  (as in *Khan*). My recommendation is to follow classical Latin for all three combinations. This means that  $ch$  (in names derived from Greek) should always be pronounced  $kh$  (as in *brachyrhynchus*, *schoenobaenus*, *Alopochen*).

**Combined letters  $cc$ ,** as in *Accipiter*. This word in classical Latin would be pronounced *Akkipiter*, not *Aksipiter*.

**Combined letters  $sc$ ,** as in *rufescens*. In classical Latin these two letters would be sounded separately as *ru-fes-kens*, not *ru-fes-sens*.

#### **Words derived from personal and place names**

There are very many of these. Some are genuine Latin words, e.g. *aegyptiacus*, and can be pronounced accordingly. In addition, some of non-Latin origin can be adequately rendered by following the pronunciation rules for classical Latin, e.g. *naumanni*. For some, however, this

approach is less satisfactory: for example, *brucei* pronounced *bru-kay-ee* and *leschenaultii* pronounced *les-khen-owl-ti-ee*, as they would be in classical Latin pronunciation, obscure the origins of their names. As far as I can see, the only satisfactory solution is for such pronunciations to follow the sounds of the personal or place names from which they are derived. Ferguson-Lees' example is *Cettia cetti*. In some cases the only implication would be a minor one of shifting stress from one syllable to another. Thus *dougallii*, *hemprichii* and *stewartii* in my approach would be stressed on the first syllable, as are the names from which they are derived, whereas classical Latin rules would expect a stress on the second syllable.

A major drawback of this approach, however, is that the speaker needs to be conversant with pronunciations in several modern languages. Thus *vaillantii*, from *Levaillant*, would be rendered *vai-awnt-iee* and *audouinii* becomes *oh-dwan-iee*. So far so good; but how about *mlokosiewiczii* or *przewalskii* (*mlo-koh-she-vich-ee* and *pshe-val-ski-ee*)? Or what do we do about *Fuchsia* (*Fewks-ia* when used as a scientific name)? I suspect that *Bulwer* (as in *Bulweria bulwerii*) pronounced his name without a w-sound in the middle, but how can we verify this? Name derivations may also be hard to spot at times: in reading an account of Kaempfer's Woodpecker *Cealeus obrieni* recently, I failed to realise for some time that its specific name is derived from O'Brien.

I offer these comments to *BB*'s Editorial Board for their consideration. A solution to pronouncing latinised personal and place names needs to be found, and the rules of classical Latin pronunciation do not on this occasion offer us an adequate solution.

### Stress and vowel length

In my experience, the correct placing of stress is one of the commonest difficulties that face those voicing latinised scientific names. Classical Latin has consistent rules for where to apply stress: on a monosyllable, the first syllable of a disyllabic word, and the penultimate syllable of a polysyllabic word if that syllable is 'long' (which is the commoner situation). However, learning these rules may not be a great help, as problems arise:

a) when the penultimate syllable of a polysyllable is 'short'. In this situation the stress

should fall on the *antepenultimate* syllable. Learning what constitutes 'long' and 'short' syllables is not without its complications as it may involve learning specific vowel lengths in specific words;

- b) in compound words derived from classical Greek rather than Latin, of which there are many. To place stress accurately requires breaking down the compound word into its component parts and knowing where stress would be placed on each of the components in classical Greek;
- c) in latinised forms of personal and place names, where the rules for stress in classical Latin may be irrelevant – I have given examples above.

My suggested solution would be for the editors of *BB* to issue an index of scientific names of Western Palearctic birds using diacritical marks to show where stress should fall. In similar vein, vowel lengths can also be indicated by the use of such marks. Conventional marks widely used in grammars and dictionaries are  $\acute{}$  for a stressed syllable,  $\bar{}$  for a long vowel and  $\breve{}$  for a short vowel.

### Final thoughts

I have tried to suggest ways in which the pronunciation of scientific names may be standardised and made more widely intelligible. For some the adoption of my suggestions will mean abandoning personal usages of long standing; for many, especially those who anglicise their pronunciations, the results will sound odd. But there are clear gains to be made. One of the least significant, though personally satisfying, would be the rescue of *Circus*. This genus is not, in fact, derived from the Latin word *circus* at all, but is a latinised transliteration of the Greek *κιρκος* – a bird of wheeling flight. Pronouncing it *keer-kus* in the classical Latin way would help to separate the genus from any associations with places of public entertainment!

More importantly, I believe that we need a standardised system of pronunciation because I suspect that a lack of clear guidance on this issue is confusing to many and may act as a deterrent from the use of scientific names. The aim of scientific nomenclature is to adopt a unique, unambiguous and universal name for every organism, and its oral transmission is just as important as its written one. For a science

with such a large amateur following as the study of birds, a high level of accessibility is particularly important. That the 'unique, unambiguous and universal name' is, for birdwatchers in many countries nowadays, often the English vernacular name is a trend which upholders of the traditional system may wish to ponder.

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## Madeiran Storm-petrels in the Bay of Biscay

Madeiran Storm-petrel *Oceanodroma castro* has always had a tenuous hold on the British List (the only presently accepted record being one found dead at Milford-on-Sea, Hampshire, in November 1911), and for a long time many seawatchers put the species on the mental 'back burner', especially given the difficulties involved in rare seabird claims. However, British interest in Madeiran Storm-petrel has recently been invigorated by two multi-observer sightings in 2007 (one at sea off the Isles of Scilly in July (Flood 2007), and one off Pendeen, Cornwall, in September; both records are still under review), and also by proposed splits to the species (Robb *et al.* 2008). Traditionally, Madeiran Storm-petrel has been regarded as an extremely rare vagrant to west European waters away from the Portuguese coast, although detection rates of this highly pelagic species are likely to be low. For example, there are just three records from French waters (Flood & Thomas 2007). This contribution highlights the recent occurrence of Madeiran Storm-petrels in the Bay of Biscay, relatively close to British waters.

From 5th August to 3rd September 2008, we participated in an oceanographic research expedition on the RRS *James Cook*, in deep waters off the west European margin between the Canary Islands and southern England. The location and timing of the cruise ensured that observations of rare and scarce seabirds were high on the agenda and throughout the expedition we 'chummed' for at least one hour every day while the ship was stationary, using a rubby-dubby bag filled with mackerel, vegetable oil and various kitchen scraps. All seabirds observed during daylight hours were recorded, whether the ship was stationary or not.

During the expedition, we recorded at least 21 certain Madeiran Storm-petrels, as well as over 60 Wilson's Storm-petrels *Oceanites ocean-*

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*icus* and one presumed Swinhoe's Storm-petrel *Oceanodroma monorhis*. Full details of observations during the expedition can be found at [www.seawatch-sw.org](http://www.seawatch-sw.org). Interestingly, all but one of the Madeirans were recorded during chumming, highlighting the importance of this method for attracting the species close to the ship (supporting Flood & Thomas 2007, and *contra* Harrison 1983). Most records came from expected areas, well offshore of the coasts of northwest Africa and west Iberia, but on the evening of 29th August, two Madeiran Storm-petrels were seen at 45°14.29'N 12°12.08'W, a deep-water site c. 700 km southwest of Scilly, on the southwest edge of the Bay of Biscay. On 30th August, the final chumming session of the trip took place in the western Bay of Biscay at 46°24.55'N 11°16.18'W, some 650 km southwest of Scilly and with a water depth of 4,800 m. We started chumming at 19.05 hrs in calm conditions, and after 25 minutes the first Wilson's Storm-petrels arrived over the extensive slick. We had counted a minimum of six Wilson's when, after 45 minutes, two Madeiran Storm-petrels arrived together. They subsequently approached to within about 25 m of the ship (although not as close as the Wilson's) and were present for at least ten minutes, at one point chasing each other just behind the ship. Unfortunately, no decent photos were obtained as light levels were fairly low.

The flight of the Madeirans was unlike that of other species we encountered. The first impression was of a much larger and longer-winged bird than Wilson's, with a more direct, powerful flight on slightly bowed wings. Typically, a series of rapid wingbeats was followed by short glides, while in breezy conditions they frequently sheared, with vertical banking. They were never seen to foot-patter like Wilson's, instead favouring a more direct plunging 'head-

dip' to seize food items. When the birds approached us head-on, as they moved up the slick, the white 'band rump' was often very difficult to see, especially in poor light conditions. For a more detailed discussion of identification, see Flood & Thomas (2007).

No tail fork or wing moult was visible on any of the birds we saw well, and they appeared relatively large, making it unlikely that they were Azores hot-season birds (Monteiro's Storm-petrel *Oceanodroma monteiroi*; Bolton *et al.* 2008). They were most likely from one of the cold-season breeding populations, which occur throughout the Macaronesian islands (see Friesen *et al.* 2007, Smith *et al.* 2007 and Robb *et al.* 2008 for more discussion of taxon-specific issues, which present a whole new dimension to the challenge of identifying what we presently call Madeiran Storm-petrel).

In summary, our observations show that Madeiran Storm-petrels are occurring in the Bay of Biscay in late summer, that the species can certainly be attracted close to vessels by 'chumming' and that, with practice, separation from other storm-petrels is relatively straightforward.

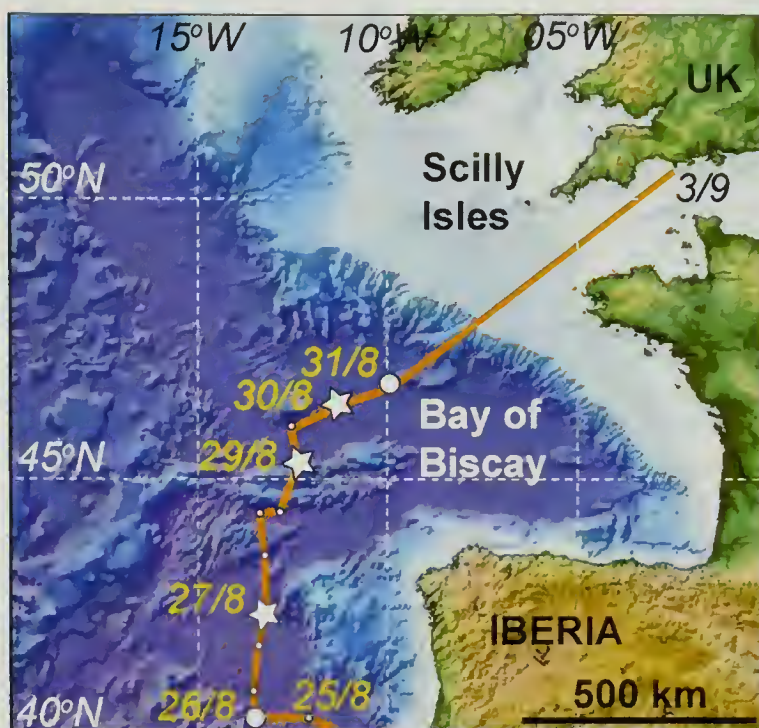
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**Fig. 1.** Ship track of RRS *James Cook* with dates (all 2008); white stars indicate chumming locations where Madeiran Storm-petrels *Oceanodroma castro* were recorded, large white circles show chumming locations where they were not recorded. Colour-shaded seafloor bathymetry shows the contrast between deep basins at >4,500-m water depth (purple colours) and the shallow continental shelf at <200-m water depth (white and pale blue colours).

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## European Rollers in France

Having recently read the BBRC annual report for 2007 (Hudson *et al.* 2008), I am prompted to write on the subject of the European Roller *Coracias garrulus*. Since 2000, the breeding population of this species has expanded markedly in southern France. The French population was estimated at 450–540 pairs in 1986, 520–620 pairs in 1998 and 700–1,000 pairs in 2006

(Dubois *et al.* 2008). In Vaucluse department, fewer than five pairs bred in the 1990s, but more than 50 did so in 2007, while the species bred for the first time in Drome department in 2005.

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**EDITORIAL COMMENT** A recent paper in *Ornithos* (Tron *et al.* 2008) also noted the population increase of the Roller in France. Reasons for the increase are uncertain, although both improved census methodologies and a significant increase in its range along the Rhône Valley may be important factors. Rollers regularly breed semi-colonially, and thus census methods particular to this species are necessary for accurate estimates of the number of breeding pairs and population trends. Given the species' 'Vulnerable' conservation status, the development and implementation of a specific monitoring scheme is recommended as a priority by the French 'Roller Working Group'.

Tron, F., Zenasni, A., Bousquet, G., Cramm, P., & Audevard, A. 2008. Réévaluation du statut du Rollier d'Europe [*Coracias garrulus*] en France. *Ornithos* 15(2): 84–89.

### Blyth's Reed Warblers in Estonia

The BBRC annual report for 2007 (Hudson *et al.* 2008) stated that the breeding population of Blyth's Reed Warblers *Acrocephalus dumetorum* in Estonia was 2,000–3,000 pairs (Hagemeijer & Blair 1997). This figure is now badly out of date, and a more recent estimate put the population at some 15,000–30,000 pairs. This population estimate, together with those of other Estonian breeding birds, was published in a

paper in *Hirundo* in 2003, an English summary of which may be found at [www.eoy.ee/hirundo/English/index.htm](http://www.eoy.ee/hirundo/English/index.htm)

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## Looking back

### *One hundred years ago:*

'THE JUBILEE OF THE BRITISH ORNITHOLOGISTS' UNION. THE meeting to celebrate the Jubilee of the foundation of the B.O.U. in 1858 was held at 3, Hanover Square, on December 9th, 1908. Dr. F. Du Cane Godman, the President, was in the chair, and the proceedings commenced by the reading of a number of congratulatory messages from other Ornithologists' Unions. Dr. Godman then gave a short address, which showed how intimate had been the relation between the progress of ornithology and the progress of the B.O.U. Dr. P. L. Sclater gave a history of the Union, its journal, the "Ibis", of which he has for so many years been editor, and its founders, chief amongst whom was the much-lamented Alfred Newton. Mr. A. H. Evans spoke very briefly of the life and work of some of the founders.

'Mr. Henry Upcher, as the earliest (surviving) elected member (1864), then took the chair, and presented on the behalf of the members of the Union, a gold medal to each of the four (surviving) founders,

viz., Dr. F. Du Cane Godman, Dr. P. L. Sclater, Mr. Percy Godman, and Mr. W. H. Hudleston. The medal bears on the obverse the well-known figure of the Ibis, on the reverse the name of the recipient.

'A facsimile of the original list of the twenty founders, written by Newton and corrected by Dr. Sclater in 1859, was handed round. Amongst the names famous in ornithology, besides those already mentioned, may be noted Lieut.-Col. H. M. Drummond (first President), T. C. Eyton, J. H. Gurney (Senr.), Hon. T. Lytton Powys (afterwards Lord Lilford), Osbert Salvin, Rev. (afterwards Canon) H. B. Tristram, and John Wolley.

'In the evening a largely attended commemorative dinner was held.

'A special volume of the "Ibis" commemorating the Jubilee and containing a history of the Union, with lives of the founders and principal members, together with portraits, will be published shortly.' (*Brit. Birds* 2: 274, January 1909)

# Notes

All Notes submitted to *British Birds* are subject to independent review, either by the Notes Panel or by the BB Editorial Board. Those considered appropriate for BB will be published either here or on our website ([www.britishbirds.co.uk](http://www.britishbirds.co.uk)) subject to the availability of space.

## Hybrid *Aythya* showing features of Redhead

On 9th December 2007, at a private site near Cliffe, north Kent, I came across an unusual drake *Aythya*. Although asleep and partially hidden, it caught my attention because the upperparts looked a shade darker than those of the accompanying male Common Pochards *A. ferina* (hereafter 'Pochard'). During the next two weeks, better views of the same individual enabled a written description and photographs (e.g. plate 17) to be obtained. Although it superficially resembled a drake Redhead *A. americana*, two key features suggested that it was in fact a hybrid: its small size (it appeared slightly smaller than drake Pochard) and the degree of contrast between the mantle/scapulars and flanks.

### Description

**Bare parts** Bill blue, apart from a black border to the nostrils, a clear-cut black band across the tip (this showed little protrusion along the cutting edge but a slight extension at the nail was apparent) and a pale band behind the black tip. According to light conditions, the iris varied from yellow/orange to orange/yellow.

**Head** Similar in shape and colour to that of Redhead, with a longer neck than Pochard. No permanent hint of a tuft.

**Body** Slightly smaller than drake Pochard; also more

compact, with a more vertical front end. In full sunlight, the flanks and upperparts looked similar to but slightly darker than those of Pochard. In dull light, the mantle/scapulars looked darker than the flanks and, with good views, showed very fine vermiculations. Apart from the breast and stern, the tertials were the darkest area of the bird – at all times they appeared darker than those of Pochard and this was often the best feature with which to locate the bird when asleep. The breast was black with no hint of rufous. The flank panel was a different shape from that of Pochard and slightly darker, and showed some contrast with the white belly.

**Wings** The wing-coverts were similar to the mantle/scapulars, i.e. darker than on Pochard. The wing-bar was grey on the secondaries merging into brown-grey on the primaries and appeared more contrasty than on Pochard, owing to the darker coverts. As a whole the wing was strikingly similar to that of Redhead.

**Tail** The rear was black with no pale areas apparent on the undertail; the tail feathers appeared similar to those of Pochard.

This bird raised issues that may be relevant to the identification of Redhead-like hybrids, especially at a time when BBRC has pledged to review all British records of Redhead (*Brit. Birds* 100: 759). Firstly, with regard to size, measurements of total length from American sources (e.g. Sibley 2000, [www.birds.cornell.edu](http://www.birds.cornell.edu))

suggest that Redhead may be slightly smaller than stated in literature more commonly available to British observers (e.g. Madge & Burn 1988, Ogilvie & Young 1998). Although measurements of total length are not an ideal way of comparing size, as Redhead is proportionately longer-necked than Pochard, the prevailing view that a drake Redhead should always be larger than Pochard may not necessarily be correct. Sibley's (2000) comparative illustrations portray Redhead



17. Hybrid *Aythya*, Cliffe, Kent, December 2007.

as similar in size to Greater Scaup *A. marila*; given that the Nearctic race of the latter *A. m. mariloides* is slightly smaller than the nominate Palearctic race (Madge & Burn 1988), this also suggests that differences in size between at least some Redheads and Pochard may be less significant than generally assumed. Secondly, it was surprising how the degree of contrast between the upperparts and the flanks of the Cliffe bird varied with the angle of view and lighting conditions; in particular, it was virtually impossible to separate from Pochard (and probably Redhead) on this feature alone when asleep. Internet footage suggests that this variation in tone and contrast may also be the case with Redhead (e.g. see [http://ibc.hbw.com/ibc/phtml/votacio.phtml?idVideo=17596&Aythya\\_americana](http://ibc.hbw.com/ibc/phtml/votacio.phtml?idVideo=17596&Aythya_americana)). Finally, several field guides (e.g.

Harris *et al.* 1989, Svensson *et al.* 1999) suggest that many drake Redhead-like hybrids can be identified by more extensive areas of black on the bill (as well as head shape and mantle contrast). I have examined many photos taken in the USA, and the bill pattern of the Cliffe bird appeared to be within the range of variation exhibited by Redhead.

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## Difference in shape of bill-base feathering between Common and Black Scoters in non-adult-male plumage

During a visit to the American Museum of Natural History (AMNH), in New York, I examined the specimens of female and juvenile or first-winter male Common *Melanitta nigra* and Black Scoters *M. americana*. Although my sample was limited to 26 Common and 19 Black Scoters, I gained the impression of a slight but consistent difference in the shape of the bill-base feathering between the taxa in these plumages. I am not aware that this feature is

described in existing literature (see Collinson *et al.* 2006 for a comprehensive review of the genus *Melanitta*).

When the head is viewed in profile, the feathering across most of the base of the upper mandible appears to be straight or slightly convex (bulging) on Common Scoter, whereas it is concave on Black Scoter (see fig. 1). The shape echoes that of adult males but is usually less pronounced. In both taxa, the feathering gives way to a 'smiling' gape just above the cutting edge of the upper mandible. On Black Scoter, the concave shape above this often results in a rather pointed angle to the feathering – this appears to be unusual on Common Scoter.

Since visiting the AMNH, I have checked this feature on the skins at the Zoological Museum of the University of Copenhagen (ZMUK), on live birds in the USA and



18. First-summer female Common Scoter *Melanitta nigra*, Denmark, July. A bird showing typically bulging bill-base feathering. Note also the slight knob at the base of the bill.

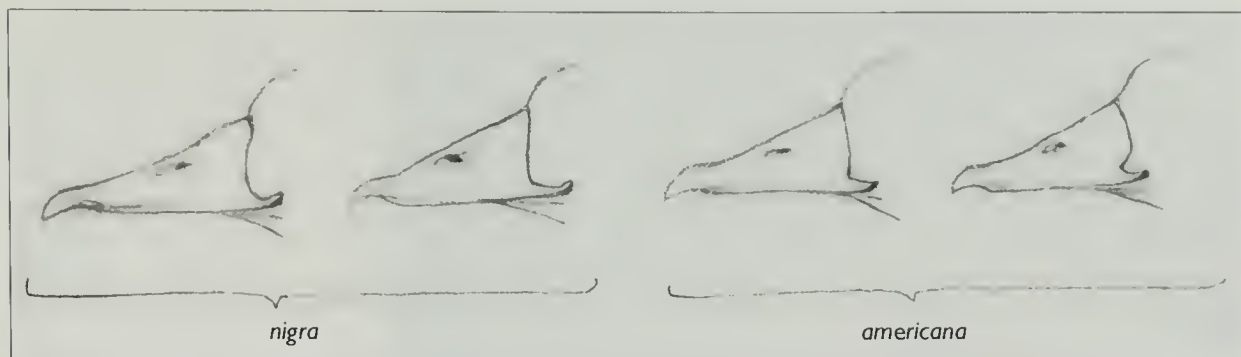


Fig. 1. Variation in shape of bill-base feathering in Common *Melanitta nigra* and Black Scoter *M. americana*.

Sweden, and on photos published on the internet. It still seems useful, even though a few individuals with an almost straight edge to the feathering are perhaps best left unidentified. Some Common Scoters show slightly concave feathering immediately below the culmen, which creates an impression approaching that of Black Scoter, especially when viewed head-on. However, the feathering below this is typically bulging, resulting in a sigmoid profile to the bill base as a whole. No consistent age-related differences (i.e. between juveniles and adult females) in shape of bill-base feathering were apparent on the material examined.

Inevitably, it requires extremely good views (or photographs) to evaluate the shape of the feathering properly. The area around the bill base frequently lies in shadow, which makes detail hard to establish. At this stage, the low number of individuals examined prevents any firm conclusions on the scope for identifying extralimital birds based on this feature alone, but further studies may reveal the extent of variation within, and pos-



19. Female/first-winter Common Scoter *Melanitta nigra*, The Netherlands, November. The bill-base feathering of this individual is essentially straight, which was the case in approximately half of the Common Scoters examined in this study. Note the gently rounded feathering just above the gape. Such a shape has not yet been found in Black Scoter *M. americana*.



20. Female Black Scoter *Melanitta americana*, Kentucky, USA, January. This bird shows the typical concave bill-base feathering seen on most Black Scoters (the shape is slightly exaggerated due to the angle of the bird's head). Also note a slightly swollen basal half of the upper mandible.



21. Female Black Scoter *Melanitta americana*, Maine, USA, January. Some Black Scoters have straighter bill-base feathering, and are more similar to Common Scoters *M. nigra* in this respect, but the pointed angle to the feathering just above the gape may be a useful feature.

sible overlap between, the two species. Nonetheless, this feature may prove a useful addition to those listed by Garner (2008) in the quest to identify females/immatures of the two species.

In addition to the shape of the feathering, the shape of the culmen may help to identify certain individuals. Some female Common Scoters have a poorly defined knob at the base

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## Identification of Citrine and Yellow Wagtails – a possible identification pitfall

On 10th September 2005, on Inner Farne, Northumberland, RA heard what he thought was a Yellow Wagtail *Motacilla flava* calling. He located the bird as it called a second time, flying towards him then circling quite low overhead. He could see the underwing pattern well and identified the bird as a first-winter Citrine Wagtail *M. citreola* based on the grey-and-white plumage, the white bar across the underwing and the slightly hoarser call compared with that of Yellow Wagtail. The bird flew off without landing, however, and was not relocated. Later that day, a first-winter Citrine Wagtail was found at Alnmouth, Northumberland, about 25 km to the south along the coast, which might possibly have been the bird seen over Inner Farne earlier in the day.

A description of the Inner Farne bird was submitted to the Northumberland and Tyneside

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of the upper mandible, creating a shape that approaches that of males. In a few (older?) birds, this knob can be as conspicuous as on males. Conversely, some female Black Scoters have a slightly swollen basal half of the upper mandible, faintly resembling that of males (see also Waring 1993). It seems unlikely that these extreme bill shapes overlap between the species. The value of this character is limited, however, as the culmen is essentially straight along its entire length on most birds.

Bird Club and was assessed by their records committee in March 2006, prior to being sent to BBRC. Since no details of the head or upperwing pattern were supplied, however, the local committee felt that a Yellow Wagtail with a Citrine-like call could not be fully excluded and the record was not accepted.

When informed of this decision, RA drew the committee's attention to a feature that he had seen on the bird which he believed established the identification as Citrine: a fairly broad white wing-bar running more or less across the middle of the underwing which, according to Alström & Mild (2003), is diagnostic of Citrine. Alström & Mild stated (on p. 315) that: 'In all plumages, it is separated from White [*M. alba*] (except subspecies *leucopsis* and some *lugens*) and Yellow by showing a rather broad white bar along the centre of the

underwing, created by white bases of the secondaries and inner primaries (less clear-cut and slightly narrower than in Grey Wagtail [*M. cinerea*]).

This potentially diagnostic feature was new to all members of the local records committee, who then examined photographs and additional literature to establish whether Yellow Wagtail, in particular those from the eastern part of the species' range, could be fully excluded using this feature alone. Two plates in Sibley (2000), depicting Yellow Wagtail of the northeast Siberian and Alaskan breeding form *M. f. tschutschensis*, illustrate a white bar extending across the underwing, inferring that Yellow Wagtail can also show this feature. Then, on 20th April 2006, a Yellow Wagtail in an unfamiliar plumage was present at the Beehive Flash, Earsdon, Northumberland, and was photographed by several observers. One photograph showing the bird as it was about to take flight clearly shows the underwing, which features a white stripe extending across some of the underwing-coverts and pale bases to the secondaries, giving the impression of a broad underwing bar. Further evidence that Yellow Wagtail can show a white wing-bar on the underwing was provided when IF caught two juvenile Yellow Wagtails at East Chevington, Northumberland, on 16th August 2006. Photographs of the underwings of both birds clearly show a paler (whitish) base to the primaries and secondaries which, combined with the broad white tips to the underwing-coverts, gives the impression of a large white wing-bar on the underwing.

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22. Adult male Citrine Wagtail *Motacilla citreola*, showing the underwing pattern, Israel, March 2006.

The Inner Farne record was reviewed, but both the local committee and BBRC felt that it was still not acceptable as a Citrine Wagtail. Clearly, it would appear that Yellow Wagtails can show a whitish bar across the middle of the underwing, perhaps not dissimilar to that shown by Citrine Wagtail in some cases. Further observations by birders at home and abroad would help to clarify whether this feature is shown consistently by all Yellow Wagtails, or whether it occurs only in certain races or age categories.

#### Acknowledgments

We would like to thank Bob Proctor and Mike Hodgson for commenting on an earlier draft of this note and the Northumberland and Tyneside Bird Club Records Committee for valuable discussions. We also thank Colin Bradshaw and BBRC for allowing IF to read the BBRC file on this bird.

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**EDITORIAL COMMENT** Adam Rowlands, BBRC Chairman, commented: 'It would be very unlikely for a record of a flight-only first-winter Citrine Wagtail to be acceptable without definitive evidence of diagnostic plumage features (i.e. a convincing photograph of the head pattern). Such evidence would clearly make a very good candidate for the Carl Zeiss Award! There is a precedence for a virtually flight-only adult (the male at Salthouse, Norfolk, on 24th April 2004, which was seen only briefly on the ground, had much of the plumage detail confirmed in flight views), but it is clear that first-winters provide an even greater challenge than spring adults in this respect.'

## Slime and algae ingestion by Ospreys

For more than a decade we have been aware of Ospreys *Pandion haliaetus* visiting an irrigation reservoir in southwest Tenerife, Canary Islands. The birds, which probably originate from a nearby area where the species breeds (Teno Massif), were presumably first attracted by fish in the reservoir. Now, with fish stocks depleted

at this site, birds visit the reservoir mainly to bathe, drink and preen. During August and September 2007, at least three adults visited regularly, and apart from bathing, drinking and preening, they were also observed ingesting, and with a certain assiduity, the slime and algae *Rhizoclonium* sp. (Cladophoraceae) present near the banks of the reservoir. This aspect of their behaviour, displayed especially by one individual, occurred in three different ways: (1) the bird, in flight, would take slime and algae from the banks with its claws, carrying the material to a nearby perch to ingest; (2) immediately after bathing near the bank of the reservoir, the bird would take the algae from a few centimetres below the surface and carry it (plate 23) to the same perch to ingest; and (3), on only one occasion, the bird stood on the edge of the bank ingesting slime and algae directly (as in plate 24, taken more recently, in October 2008).

Although we are unaware of the reasons for this consumption (for example, we checked for the presence of invertebrates in the algae, but found none), these observations explain the curious behaviour of Ospreys watched at the same reservoir in 2006. Bibliographic searches and enquiries to several raptor workers have failed to locate any reference to similar behaviour in Ospreys or other birds of prey. The challenge that arises now is to ascertain whether this

deliberate ingestion of slime and algae is related to any special neutralising or laxative properties that these substances may possibly contain.

### Acknowledgments

We would like to thank Richard O. Bierregaard, Greg Clancy, Luis Palma, Pertti Saurola, Rafel Triay and Rolf Wahl for their prompt replies to our request for information. Helen Parr assisted with the translation, and María C. Gil and Rubén Barone with the identification of the algae.

José J. Hernández



23. Osprey *Pandion haliaetus* carrying algae *Rhizoclonium* sp. in its claws, southwest Tenerife, Canary Islands, September 2007.

José J. Hernández



24. Osprey *Pandion haliaetus* ingesting slime on the bank of the reservoir, southwest Tenerife, Canary Islands, October 2008.

Felipe Siverio, Manuel Siverio and José J. Hernández

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## Whiskered Terns feeding on the ground

In November 2007, I paid several visits to an estuarine channel in the Odiel Marshes, just north of the coastal town of Punta Umbria (Andalusia, Spain) and immediately adjacent to the large salt pans which form part of the Marismas del Odiel Reserve. The muddy banks of the channel were almost completely submerged at high tide.

On 7th November, several metres of mud were exposed below the wall of the salt pans, and I noticed two Whiskered Terns *Chlidonias hybrida* at the water's edge, among feeding waders. It soon became obvious that they were behaving in a similar way to the waders, albeit less actively. They were walking short distances to pick food items from the surface of the mud or, less frequently, the water. Both terns fed in this manner for about ten minutes, remaining close together. One of them then flew off to the salt pans and was seen 'patrolling' back and forth in more typical fashion, but the second bird remained feeding on the mud for at least another half an hour. From my vantage point on the other side of the channel, it was impossible to see what prey items were being taken, but they were almost certainly 'Calidris-fodder' (Dunlin *C. alpina* was one of the wader species

close by) rather than the sub-surface invertebrates being sought by Common Redshanks *Tringa totanus* and Bar-tailed Godwits *Limosa lapponica*.

What were presumably the same two individual terns were seen feeding in identical fashion in the same place on both 15th and 16th November, although on these dates the observation times were much shorter.

Weather conditions did not seem to be responsible for this behaviour as it was calm, warm (25°C) and bright on 7th and 15th, but cooler and windier with some cloud cover on 16th. Judging from the numbers of Sandwich Terns *Sterna sandvicensis* and Little Egrets *Egretta garzetta* fishing over and beside the channel respectively, there was no shortage of 'small fry' available, and there were still some flying insects over the salt pans and weedy banks.

BWP describes four different feeding methods but all involve prey items being taken from the air. This accords with my own previous experience of the species in winter. In February 1998, I watched Whiskered Terns feeding over a tidal lagoon in Sri Lanka almost daily for three weeks and never saw birds taking food while on the ground.

Alan Vittery

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## Lesser Crested Tern feeding at night

Phil Palmer's recent note on a White-winged Black Tern *Chlidonias leucopterus* feeding at night in Namibia (*Brit. Birds* 100: 755) recalled the following incident. After dark on 1st February 2002, at Khor Kalba in the United Arab Emirates, we saw a Lesser Crested Tern *Sterna bengalensis* fishing by plunge diving into that part of the nearby tidal creek which was artifi-

cially illuminated by lights from the shore. The tern was seen to fish on several occasions between (roughly) 19.00–20.00 hrs as it patrolled parallel to the shore; although we did not certainly see it catch any food, it is possible that any such items were small and that we failed to detect them.

Pete and Susan Combridge

16 Green Close, Whiteparish, Salisbury SP5 2SB

# Reviews

## BIRDWATCHING IN AZERBAIJAN: A GUIDE TO NATURE AND LANDSCAPE

By Sebastian Schmidt, Kai Gauger and Nigar Agayeva. Michael Succow Foundation, Germany, 2008. 224 pages; colour photographs; maps. Comes with Audio CD, 74 minutes running time. ISBN 978-3-000-24158-1. Paperback, £19.99.

The Caucasian republic of Azerbaijan is not a frequent holiday destination for birders, but with the publication of this well-ordered book, that could easily change. Copiously illustrated, this is not a conventional 'Gooders-type' site-by-site bird-finding guide, but a natural history ramble, focused primarily on birds, through the various regions of this small, but diverse and hospitable country. An annotated checklist of the 394 species of bird recorded to date is provided, along with a suggested itinerary for a two-week tour.

## A GUIDE TO BIRDWATCHING IN SKÅNE, SOUTHERN SWEDEN

Skåne's Ornithological Society (SkOF), 2008. 192 pages; 50 maps; 120 colour photos. ISBN 978-91-86572-47-6. Paperback, SEK 250.00 + postage of SEK 70.00 (about £20.50 + £5.75). Available from <http://www.skof.se/>

Skåne is the most southerly region of Sweden, with Malmö (the country's third-largest city) as its economic capital. Getting there is not as easy as you might think but the rail link with Copenhagen takes just 20 minutes and is perhaps your best bet. Skåne is effectively a peninsula which pro-

trudes into the Baltic Sea and has much to offer birders, particularly during migration periods and in the breeding season. Details any visitor or visiting group would necessarily need are provided: accommodation (with frank assessment of its standard), car hire, public transport, useful web addresses, contacts for wildlife organisations and other essential literature. Brief accounts are given, amongst other facets, of the country's history, geography and ecosystems, biodiversity, protected areas, local cuisine, oil and development.

A section on 'Top Species' helpfully gives greater detail and site information for serial birders' target species, which invariably includes mountain species such as the snowcocks *Tetraogallus*, Caucasian Black Grouse *Tetrao mlkosiewiczzi* and Great Rosefinch *Carpodacus rubicilla*. Hotspots, often protected areas, in each of seven 'regions' are highlighted, along with a list of birds you might be able to find (for yourself), and also where to stay locally. The hotspot maps look detailed enough, but, coupled with directions in the text, really need to be

tested in the field. From personal experience, it is probably best to hire a car and driver, or engage the services of a local naturalist guide.

One unusual touch is the inclusion of a CD, 'Listening Landscapes', of 75 minutes' duration. 'Sound Excursions to Nature in Azerbaijan' comprises 35 atmospheric tracks, again divided by region and habitat, with the fauna being ably identified in the text.

Would that more guides of this type followed the authors' example in including more than just birds (mammals feature especially prominently). Anyone planning to visit or heading to Azerbaijan to work should buy this book. The naturalist Radde explored the country in the late nineteenth century and, armed with this field-friendly guide, I'd recommend you do the same. One word of warning, though, if you do decide to head for the mountains, Caucasian sheepdogs make Cerberus look like the Andrex puppy.

Simon Aspinall

Simon Aspinall

This book, originally published in Swedish, provides a good level of detail on 50 of the main bird sites in a wide range of habitats – most of them within 30 km of Malmö. It is well illustrated and, in particular, the maps are very good. Some typical birds are listed for each site, but many of these are relatively common. For UK birders searching for resident species and summer visitors, the likely targets include Hazel Grouse *Bonasa bonasia*, Tengmalm's Owl *Aegolius funereus*, Black *Dryocopus martius* and Three-toed Woodpeckers *Picooides tridactylus*, Red-breasted Flycatcher *Ficedula parva* and Penduline Tit *Remiz pendulinus*. Owing to its position at the

southern tip of Scandinavia, huge numbers of migrants flood through the region. Most exciting is the spectacle of raptor migration at Falsterbo, which provides a big draw for birders from around the world from mid August to late October.

All the information you need on the available birds is provided, with an excellent monthly chart indicating your chances of seeing around 280 species that occur in the area at various times during the year – plus a further 130 vagrants. At around £26 (including postage), this is quite an expensive book, but the detail it provides is not easily obtained elsewhere, so in a way the price is irrelevant.

Keith Betton

### GARDENING FOR BIRDWATCHERS

By Mike Toms, Ian and Barley Wilson. BTO, Thetford, 2008. 96 pages; many photographs, charts and diagrams. ISBN 978-1-906204-30-3. Paperback, £9.99.

Garden birds are now big business. Long gone are the days of the coconut from the greengrocer: drink the milk, cut it in half, half for you to eat and half hung up for the Blue Tits *Cyanistes caeruleus*. Unheard of then were niger seeds and sunflower hearts, the latter now overtaking peanuts as avian favourites. Add in the feeding equipment, nestboxes and wide range of shrubs and other plants that we are encouraged to buy for birds, mammals, butterflies and other insects and it really *is* big business. Then, of course, there are the countless books to tell us how to do it, and it was rather in the

vein of 'oh, not another one' that I opened this book. Was I going to be as disappointed as I thought I would be?

Apparently, some 60% of British gardens provide supplementary food for birds and it is claimed that feeding garden birds helps a significant number to survive. But let's admit it – the main reason we feed birds in our gardens is because we enjoy having them around and seeing them on a regular basis. Some of the surveys in which we participate are based on a single day each year – not a particularly helpful set of results, even though the number of observers participating may be huge. By far the most useful, informative and, dare I say it, scientific is the BTO's Garden Bird-Watch scheme, with some 16,500 observers submitting weekly records of birds in their gardens throughout the year. So, at the very least, the BTO's *Gardening for Birdwatchers* should be based on sound knowledge and facts accu-

mulated during the 13 or so years that Garden BirdWatch has been operational.

So was I disappointed? I certainly was not. Of all the gardening and wildlife books I have cast my eyes over during the past years, this is without doubt one of the most practical (if not *the* most practical), informative and accurate volumes I have seen. The book is divided into sections dealing with: birds and gardens (including daily cycle and seasonal patterns); garden basics (including pests and disease and selecting plants); design elements (including walls and ponds); plants for birds (including nesting cover and attracting insects); and miscellaneous items including nestboxes, predators and feeding.

So my advice, if you are not one of the Garden BirdWatch participants, is start now! And if you have any interest in the birds in your garden, get hold of a copy of this excellent little book.

Bob Scott

### BARN OWLS IN BRITAIN: PHANTOMS OF THE FARMYARD

By Jeff Martin. Whittet Books, Yatesbury, 2008. 288 pages; many black-and-white illustrations. ISBN 978-1-873580-75-2. Hardback, £15.99.

This book is, in many ways, a rather untypical monograph, by someone inspired by watching Barn Owls *Tyto alba* in his native Suffolk. It represents the results of many years of local observations and discussions with fellow Barn Owl devotees, together with wider investigations into the history of the bird in Britain. The book was originally to be titled *Barn Owls in East Anglia* and there is a strong bias towards information from this part of the country.

There are chapters on diet, breeding behaviour and movements, but the core of the book deals with the changing status of

the Barn Owl, from its arrival in Britain after the end of the last ice age through to the present day. The likely impact of changes in agriculture, climate and urbanisation are all covered in considerable detail. Much of the discussion about historical change is speculative and contains a good deal of personal opinion rather than hard fact, but this is to some extent inevitable given the nature of the subject and the timescales involved. A number of the author's favoured themes recur regularly throughout the book. For example, the suggestion that Barn Owls in the past would have taken a far wider range of prey than is the case today, and the belief that their current dependence on Field Voles *Microtus agrestis* in many areas could lead to problems for their future conservation.

Sources of information are listed at the end of each chapter but individual references are usually not given in the main text. This means that the origin of many of the statements made is unclear and it is dif-

ficult for readers to follow up references to derive further information on subjects of particular interest. The book is not lavishly illustrated, with no colour illustrations and no photographs, and the quality of reproduction of some of the figures is a little disappointing.

If you are looking for a comprehensive overview of all aspects of the natural history, population status and conservation of the Barn Owl, then this is perhaps not the best place to start. As the author readily acknowledges, this species has already been well catered for in this respect by other writers. But this is a worthwhile and, at times, thought-provoking account by someone who has clearly invested considerable time and effort in trying to better understand the history of the Barn Owl in Britain. Those with an interest in this popular species, particularly residents of East Anglia, will find much to enjoy in Jeff Martin's book.

Ian Carter

AVES DO BRASIL  
ORIENTAL/BIRDS OF  
EASTERN BRAZIL

By Tomas Sigrist. *Avis Brasilis*,  
2007. 448 pages; 181 colour  
plates; several line-drawings;  
numerous colour maps.  
ISBN 978-85-60120-02-4.  
Paperback, £34.99. Available  
in the UK exclusively from  
[www.nhbs.com](http://www.nhbs.com)

Brazil's avifauna is the largest on our planet bereft of a quality field book. Bad news for birders but equally gloomy for birds, given that a well-produced field guide, at the right price, can help to stimulate interest in bird conservation. Self-deprecatingly termed by its citizens as 'the land of the future (which never comes)', Brazil is apparently now set to be a major economic power. The already-growing middle class should burgeon and, by Keynesian 'laws', seek new leisure opportunities. And, arguably, nowhere in the world is this more important. Time really is preciously short to save the Amazon.

This book, derived from the author's *Birds of Brazil: an artistic view*, treats the over 1,000 species of the Atlantic Forest, Caatinga and

Cerrado biomes. 'Texts' and maps face the plates, but the first cover only Brazilian, English and scientific names, body length (including sexual differences), and mass for some species. Relevant habitats are coded and principal identification features marked on a silhouette of each bird, whose colour indicates the species' conservation status (in the Brazilian, not global, context). The maps are tiny, though well drawn and conveying much information, including range throughout Brazil. Restricted-range species are usually mapped at a larger scale.

The 3–10 species depicted per double-page spread are mainly reproduced from the earlier work, but 21 plates (mostly raptors and antbirds (Thamnophilidae)) are by Eduardo Brettas. Sigrist's illustrations range from poor (waders and seabirds) to adequate (the majority), but Brettas's are a delight. Raptors in flight, females, many subspecies and even young are illustrated, though my experience of young male Araripe Manakins *Antilophia bokermanni* is at variance with the illustration. Sigrist's shapes, in particular, will not garner awards; pity the poor Point-tailed Palmcreeper *Berlep-*

*schia rikeri*, not only for its posture but uprooted from its palm!

Sigrist's is the third field guide to Brazilian birds, one of them not widely available (and much the weakest). Its main competitor is Souza's *All the Birds of Brazil*, which only ostensibly covers *all* the birds (even some endemics are omitted) and has the definite plus of describing vocalisations from reliable sources. However, to learn vocals necessitates using recordings. Despite the absence of text, Sigrist's guide transmits as much information, albeit in code, while the consistently superior illustrations depict more plumages. Most birders visit just one region during a single trip, and Sigrist will fill the gap left here with a forthcoming volume to Amazonia. Therein, I'd encourage him to make greater use of Brettas *and* the facing pages (much white space went begging here!). Sigrist's guides should become those of choice, but this work is not cheap and, amazingly, is marginally pricier in Brazil. Several additional works are also in production; to adapt a phrase currently beloved by UK politicians, 'bring them on'.

Guy M. Kirwan

BIRDWATCHING  
IN NORFOLK

Filmed and narrated by  
Paul Doherty. Bird Images,  
Sherburn in Elmet, 2008.  
162 species. Single DVD;  
running time 127 minutes.  
£12.95.

If asked to name the premier county for birds in England, most birders would probably agree on Norfolk. This new Bird Images DVD, filmed and narrated by Paul Doherty, goes a long way to explain why so many birders fall under its spell. Starting in January, Paul takes you on a two-hour tour of Norfolk's top reserves, as well as a few lesser-known sites, showing what you might see on a typical birdwatching day

throughout the year.

Many of Norfolk's exciting breeding birds are featured, including Eurasian Bittern *Botaurus stellaris*, Common Crane *Grus grus*, Honey-buzzard *Pernis apivorus* and Golden Oriole *Oriolus oriolus*. But it is not all about birds. With many birders also holding a deep interest in mammals, butterflies and dragonflies, Paul's bonus footage of several species including the stunning Swallowtail *Papilio machaon* and the rare Norfolk Hawker *Aeshna isosceles* provides greater depth to what may be expected during a visit at the right time of year.

Having lived and enjoyed birding in Norfolk all my life, watching this DVD became a pleasant stroll down memory lane,

reminding me of many great days out in the field at these locations. If you have never visited Norfolk, or only explored one corner of it, then I thoroughly recommend buying the DVD as it will open your eyes to the avian spectacles within the county. Huge skeins of Pink-footed Geese *Anser brachyrhynchus*, massive wader roosts and the exciting raptor and crane roost at Stubb Mill, all of which will probably have you planning your next holiday. Even if you live in Norfolk, this DVD will remind you of the many gems right on your doorstep.

So, just sit back and relax with the sights and sounds of the birds, spectacular sunrises and sunsets, plus the stunning Norfolk landscapes.

Paul Nichols

THE ATLAS OF BREEDING  
BIRDS IN POLAND  
1985–2004

Edited by A. Sikora, Z. Rohde,  
M. Gromadzki, G. Neubauer  
and P. Chylarecki. Bogucki  
Wydawnictwo Naukowe,  
Poznan, 2007. 639 pages;  
234 distribution maps.  
ISBN 978-83-61320-01-2.  
Hardback, £30.50.

This A4 volume, in the style of the BTO Atlas, gives full-page distribution maps for each of the 234

RARE BIRDS  
YEARBOOK 2009

Edited by Erik Hirschfeld.  
MagDig Media,  
Shrewsbury, 2008. 276 pages;  
400+ colour photographs.  
ISBN 978-0-9552607-5-9.  
Paperback, £18.95.

It's a select band. A list of 190 species that includes four albatrosses, 17 parrots and two crows. The roll-call includes six Western Palearctic species: Balearic Shearwater *Puffinus mauretanicus*, Bald Ibis *Geronticus eremita*, Sociable Lapwing *Vanellus gregarius*, Slender-billed Curlew *Numenius tenuirostris*, Raso Lark *Alauda razae* and Azores Bullfinch *Pyrrhula murina*. All of these birds are Critically Endangered, one step away from extinction. But this book is designed to prevent that fate. The *Rare Birds Yearbook* is a digest of all that is known about the world's 190 rarest birds – and it puts your money where its mouth is. For every copy sold, £4.00 is donated to BirdLife's Preventing Extinctions Programme. When you buy this book, you make a difference.

This is the second *Rare Birds Yearbook* and was published exactly one year after the *RBV 2008*; the third will be published in May 2010. So what's changed since last year's edition? Well, the number of birds on the Critical list has edged upwards from 189 to 190. That's a function of eight species being upgraded from Endangered but,

species breeding in the country, together with a full page of discussion and a thumbnail portrait of the bird. Importantly, pages 531–597 contain English-language summaries, together with a small-scale map, making the volume accessible to non-Polish speakers. This section also contains a summary of the census methodology. It is interesting to note that there are 11 Polish 'specialities', defined as a population in Poland constituting 10% or more of the European population, namely: White Stork *Ciconia ciconia* (22.6%), Grey Partridge *Perdix*

happily, six species have been downgraded to that lesser threat level; one species is no longer recognised.

The *Rare Birds Yearbook* is a photographic celebration of the world's rarest birds arranged in taxonomic order and the editor, Erik Hirschfeld, has striven to find different photographs of the birds from those used in *RBV 2008*. That's no mean feat when these birds are, by definition, very difficult to encounter, let alone photograph. There are some stunning images in this edition, of species like Philippine Eagle *Pithecophaga jefferyi* and Giant Ibis *Pseudibis gigantea* and the editor has clearly striven to obtain up-to-date images from 2007 or 2008. What did puzzle me was the inclusion of a 2007 Bald Ibis photo from Jersey Zoo when wild birds in Morocco are pretty accessible, as the smaller second photo proved. My other quibble was the number of literals in the book (Morocco also appearing as 'Morrocco' in the same species account, for example). But I imagine that this is a function of the speed of production – and the latest *Rare Birds Yearbook* has certainly appeared commendably quickly after the first edition.

Besides the 130 illustrated species accounts (a mixture of double- and single-page spreads, all containing photos, Google Earth range maps and an up-to-the-minute population-status report), there is a list of the other 60 Critically Endangered species

*perdix* (19.1%), Aquatic Warbler *Acrocephalus paludicola* (17.6%), Common Crane *Grus grus* (12.1%), Black Stork *C. nigra* (12.0%), Yellowhammer *Emberiza citrinella* (12.0%), Lesser Spotted Eagle *Aquila pomarina* (11.0%), Marsh Warbler *Acrocephalus palustris* (10.5%), Grasshopper Warbler *Locustella naevia* (10.4%), Eurasian Bittern *Botaurus stellaris* (10.4%) and Tawny Owl *Strix aluco* (10.1%). The publisher's website is: [www.bogucki.com.pl](http://www.bogucki.com.pl)

Michael Thomas

for which new information has not been forthcoming in the past year. There is also a series of very readable articles covering subjects as diverse as the reintroduction of the California Condor *Gymnogyps californianus*, religion and bird conservation, and the history of the British Birdwatching Fair, which has raised in excess of £2 million for threatened birds in its 20-year history. *RBV 2008* also included personality profiles of some leading tropical-bird conservationists and I would have liked to have seen such a feature repeated in the 2009 issue, although an interview with BirdLife's Nigel Collar was suitably enlightening.

*RBV 2009* concludes with an 'editor's pick' of Endangered species that may be on the slippery slope to critical status. Worryingly, he selects Saker Falcon *Falco cherrug*, Red-breasted Goose *Branta ruficollis* and Canary Islands Stonechat *Saxicola dacotiae* on his shortlist of Birds to Watch. As he says, let's hope they don't feature in the main species accounts in *RBV 2010*. A selection of bird news items from the past year underlines the topicality and relevance of this annual health check on our rarest birds. At £18.95 this is a very affordable – and attractive – compendium of information about the world's Critically Endangered birds. If you buy it, more than 20% of the cover price will go straight to bird conservation. I recommend that you do.

Adrian Pitches

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

## Final quest for Europe's rarest bird

It could be the first European bird species to become extinct since the Great Auk *Pinguinus impennis* in 1844. Indeed, it may already be extinct as there have been no verified sightings for more than a decade. But in 2009 the RSPB and other BirdLife partners are making one final effort to rediscover the Slender-billed Curlew *Numenius tenuirostris*.

'Although the situation for Slender-billed Curlew does look gloomy, the fact that other species have risen from the "dead" recently does fuel our optimism. We are encouraging people not to give up on this bird,' said RSPB's Nicola Crockford, chair of the Slender-billed Curlew Working Group. She added: 'It was known to inhabit remote areas – so it is just possible that small numbers may still be wintering in an isolated part of North Africa or the Middle East, or that some unknown nesting site may be discovered in the depths of Central Asia. But our quest is defi-

nately a race against time.'

Regarded as very common in the nineteenth century in some areas of the Mediterranean, Slender-billed Curlew declined dramatically during the twentieth. It migrated from its (presumed) breeding grounds in Central Asia, across central and eastern Europe to wintering grounds in North Africa and the Middle East. Flocks of over 100 were recorded in Morocco as recently as the 1960s and 1970s. However, there were only 103 records in the 1980s, and 74 in the 1990s, with most recent verified records being of one to three birds.

In 1994, the population was estimated at only 50–270 individuals, but the paucity of recent confirmed records suggests that it may now be less than 50. However, Slender-billed Curlew is easily overlooked, challenging to identify and may still persist in countries such as Iraq and Iran that have been relatively inaccessible to

experienced birdwatchers in recent years.

RSPB and BirdLife hope that technological advances will help their quest. Satellite tags are now small enough for use on Slender-billed Curlews so that, if any birds can be found and caught, sites used during the birds' migration could be determined. In addition, scientific analysis of feather samples, from museum skins, may soon enable researchers to narrow down the search area for the breeding grounds and moult sites. The only nesting records date from 1909–24, in the Tara area of the Omsk-Novosibirsk region, southwest Siberia.

'This is the last chance to find Slender-billed Curlew. If we lose this species, it will be the first extinction of a Western Palearctic bird since Canary Islands Oystercatcher *Haematopus meadewaldoi* in 1981,' said Richard Grimmett, BirdLife's Head of Conservation. 'We've launched the BirdLife Preventing Extinctions Programme to save the world's most threatened birds. For many species – such as Slender-billed Curlew – the first step is to see whether they still survive, and then to identify and protect the sites that they use.'

The most recent accepted record of Slender-billed Curlew in Europe was the first-summer bird at Druridge Bay, Northumberland, in May 1998 (see *Brit. Birds* 95: 272–278). The last confirmed sighting (accepted by the country's records committee) was three juveniles in Oman in August 1999.

The SBC Working Group has developed a 'tool kit' to help people identify and report Slender-billed Curlews in the field. You can find an identification leaflet, a downloadable MP3 file of the call and a map of all recent sightings by season at [www.slenderbilledcurlew.net](http://www.slenderbilledcurlew.net)



Chris Gomersall

25. Slender-billed Curlew *Numenius tenuirostris*, Merja Zerga, Morocco, February 1995.

## Power lines removed to protect Imperial Eagles

Two million euros are being spent on raptor conservation in Bulgaria to secure the country's populations of Saker Falcon *Falco cherrug* and Eastern Imperial Eagle *Aquila heliaca*. Both species face a number of threats, including direct persecution, the loss of nesting sites, accidental electrocution from power lines, and a reduction of suitable habitat. Three-quarters of the project has been funded through the European Commission's Life+ programme. Key aims of the project include: preventing the extinction

of the Bulgarian Saker population; increasing the Bulgarian population of Eastern Imperial Eagle by 20%; removing the most dangerous power lines within a 5-km radius of all Imperial Eagle nests; and building 30 artificial nests for Imperial Eagles, and 80 for Sakers, within designated Natura 2000 sites.

The largest beneficiary of the project is the Bulgarian Society for the Protection of Birds. Nada Tosheva, Executive Director of BSPB, said: 'Joining the EU in 2004 gave Bulgaria fantastic opportuni-

ties to protect its threatened species and protect sites for nature. However, [it also] presented Bulgaria with many challenges, including rapid development and intensification of agriculture. This funding will help us to provide a secure future for some of Europe's most threatened species.' Eastern Imperial Eagle and Saker are both on the IUCN's Red List, the former listed as Vulnerable (a high chance of becoming globally extinct), the latter as Endangered, meaning it has a very high chance of global extinction.

## Iceland's seabirds are suffering

After a dreadful breeding season for seabirds in Scotland (home to three million seabirds or 45% of the EU's breeding population), it's not surprising that elsewhere in the North Atlantic the news is grim too. Fuglavernd (BirdLife in Iceland) reports that many seabirds have had extremely bad breeding seasons over the last four years. Icelandic seabird declines have coincided with a period of rapid increases in sea temperature – especially in southern and western Iceland, which are most exposed to the warming waters of the Gulf Stream.

As in the UK, species which have suffered most include Fulmar *Fulmarus glacialis*, Kittiwake *Rissa tridactyla*, Arctic Tern *Sterna paradisaea* and Puffin *Fratercula arctica*. Konstantin Kreiser, BirdLife's EU Policy Manager, commented: 'This is an especially shocking example, showing how urgently we have to strengthen our complex ecosystems in times of climate change. If governments do not take action against overfishing, pollution and greenhouse gases, we will face many more terrible surprises.'

Although direct evidence is still lacking, increased sea-surface temperatures are thought to be driving seabird declines by disrupting the food chain. Douglas Gilbert, an ecologist with RSPB Scotland, said: 'RSPB reserves are acting as an indicator of the wider fortunes of seabirds around our coasts. The outlook for some species such as Arctic Skua *Stercorarius parasiticus*, Kittiwake and Arctic Tern is dire, and there are problems with other species like Guillemot *Uria aalge* and Puffin in some areas too. Unless conditions change to allow these birds the chance of successful breeding, the long-term future for them is bleak. The evidence that this is linked to changes in sea-surface temperatures is growing.'

## But England's seabirds are thriving

Meanwhile, breeding seabirds at arguably England's most important colony – on the Farne Islands, in Northumberland – have bucked the gloomy trend elsewhere, perhaps because of a healthy local population of sandeels *Ammodytes*. The Farnes are home to more than 80,000 pairs of breeding seabirds, including four internationally important species. Productivity data show that, during 2008, four of the six key species on the islands – Common Eider *Somateria mollissima*, Shag *Phalacrocorax aristotelis*, Guillemot and Razorbill *Alca torda* – had an excellent year.

David Steel, National Trust Head Warden on the Farne Islands, said: 'It's been a reasonably trouble-free summer for the Farnes, with a good supply of sandeels around the islands, and the seabirds have managed to come through the poor weather conditions. The islands witnessed a year-on-year increase in the population of several species but, importantly, Eider and Shag both experienced their best breeding seasons in over ten years.'

Matt Parsons, Co-ordinator of the UK Seabird Monitoring Programme for JNCC, said: 'Seabirds around the UK had a mixed breeding season in 2008. While Shags bred very successfully, many species fared poorly, especially Kittiwakes, Arctic Terns, Arctic Skuas, Guillemots and Fulmars. In the Northern Isles, home to a high proportion of the UK's seabirds, the season was particularly poor; Kittiwakes there raised few chicks and their breeding numbers continue to fall. Censuses of two of the UK's largest Puffin colonies – on the Farne Islands and the Isle of May – showed declines of about one-third compared with counts five years ago. Research from the Centre for Ecology and Hydrology showed that winter survival of breeding adult Puffins has been low in 2007 and 2008.'

Puffins on the Farnes had a rollercoaster year.

Results from the major count this summer showed that the number of breeding pairs on the Islands

was down, although over 86% of all monitored nests were successful. More research is needed into what

is happening to Puffins during the winter months and why fewer birds are returning to the islands.

## White-tailed Eagle reintroduction for Norfolk?

Natural England is pressing ahead with plans to reintroduce White-tailed Eagles *Haliaeetus albicilla* to eastern England but its preferred location is now Norfolk, and not Suffolk. This reflects concerns that the reintroduced eagles could decimate the Eurasian Bittern *Botaurus stellaris* population at Minsmere, which is largely responsible for the Bittern boom elsewhere in England.

White-tailed Eagles were wiped out in England more than 200 years ago but they could be soaring along the north Norfolk coast by next summer if the proposed reintroduction scheme receives the requisite licence. Natural England, the RSPB and Anglian Water have been conducting a public consulta-

tion exercise in Norfolk. This needs to address any concerns that landowners and farmers will have about possible impacts of the eagles on livestock. In a recent opinion poll, held in north Norfolk, 91% of the 500 members of the public who were asked indicated that they would like to see a bird like this in Norfolk.

Natural England's Chief Scientist, Tom Tew, said: 'Before attempting to return a species that has been lost for so long, it is important to understand its potential effect on both wildlife and people. We are consulting widely in order to make a fully informed judgement as to whether, through this ambitious project, there is an opportunity to return one of the

UK's rarest and most spectacular birds to England.'

Rob Lucking, RSPB Area Manager for The Wash and North Norfolk, said: 'England has been without these magnificent birds for too long. Such a reintroduction must be done properly and with due regard to the people and wildlife nearby but, if it can be done, then the sight of eagles soaring over Norfolk would give a huge lift to people's spirits and to the local economy.'

It is hoped that a firm decision will be made in spring 2009 on whether the project should proceed. If approved, the first releases could take place in summer 2009.

## RSPB chairman is a Darling

The RSPB has a new chairman, the first Scot appointed to the position in half a century. Ian Darling is a chartered surveyor with a long history of active involvement with conservation organisations. A keen ornithologist and ringer, he's been an RSPB trustee since 2000 and chairman of the RSPB's conservation committee, which oversees

reserve purchases and key policy matters, for the past five years. He has also served on the Council of the BTO, is currently Chairman of the Isle of May Bird Observatory Trust, is a past president of the Scottish Ornithologists' Club, and a former non-executive director of British Waterways.

The RSPB has more than one

million supporters, 80,000 of which are resident in Scotland, and Ian said: 'In these unsettled economic times, it's vital that nature has a voice which isn't drowned out by competing pressures. We know that people value the environment, and that they trust us to work to protect it. Our challenge over the next five years is to carry on growing our support.'

## BirdTrack job vacancy

The BTO is looking for a birder to take up an exciting challenge! It's looking to recruit a dynamic, enthusiastic and knowledgeable birder to take on the running of one of its most popular surveys. The BTO/RSPB/Birdwatch Ireland BirdTrack project [www.birdtrack.net](http://www.birdtrack.net) is the online bird recording scheme designed to increase the personal, local and national value of your sightings. Participants are asked to enter lists of birds recorded on a birding trip or

outing, and can also use the system to enter casual records. The records can then be used by individuals for their own personal use, or by county bird recorders, or to feed into national monitoring and conservation efforts. Key attributes for the successful candidate include an excellent background knowledge of birds and birding, the ability to enthuse other birders to make full use of BirdTrack, ideas for developing the scheme in the future, and experience in using a wide range of

computing technology, especially database systems and website design.

The job will be based at the BTO's headquarters in Thetford, and the full job particulars can be found at [www.bto.org/vacancies/index.htm](http://www.bto.org/vacancies/index.htm) For an informal chat about what the job might entail, contact Andy Musgrove or Mark Grantham at the BTO on 01842 750050 (please quote ref BT/BB-01 in any correspondence).

## Around the world in 32 pittas

It has to be the best New Year's resolution ever. Chris Gooddie has given up his job and is spending 2009 on a fabulous quest: tracking down all 32 of the world's pittas (Pittidae). These gems of the rain-forest are also known as 'jewel-thrushes' and Chris aims to have a full set of these jewels before the

year is over. His pitta quest will take him to Uganda, Zambia, Borneo, India, Sri Lanka, Thailand, Vietnam, the Philippines, peninsular Malaysia, across Indonesia to Australia via the Solomon Islands – and then he might have to pop back to pick up any pittas he's missed! You can see the full list of

target species, study the map of their locations and enjoy some wonderful photographs on Chris's website [www.pittasworld.com](http://www.pittasworld.com). He'll also be blogging as he journeys across Asia, Africa and Australia. And the final version of the quest will be published in his book *The Jewel-thrush Diaries* in 2010.

### Global bird recordings to download

Chris might wish to visit [www.xeno-canto.org](http://www.xeno-canto.org) before he sets out on his pitta quest. This website is a repository for bird recordings from the Americas, Africa and Asia (including Papua New Guinea). Anyone who has recorded bird sounds in the field is encouraged to upload their recordings to the growing database – and visitors to the site can listen, discuss the identities of mystery songsters and download recordings for use in the field. Responsible use of recordings, particularly when 'taping out' endangered species, is urged by the team behind the website, the Xeno-Canto Foundation and the Dutch Natural History Museum.

[www.xeno-canto.org/asia](http://www.xeno-canto.org/asia) is funded by the University of Leeds; [www.xeno-canto.org/africa](http://www.xeno-canto.org/africa) is run in co-operation with the African Bird Club.

### African Bird Club annual meeting

A date for your brand new 2009 diaries is the African Bird Club's Annual Meeting at York House, Richmond Road, Twickenham on Saturday 4th April. Doors open at 10.30 hrs and talks will cover a multitude of subjects including conservation projects affecting Africa such as Wings over Wetlands and Worldbirds. There will be an update on the RSPB's work in the Gola Forest, Sierra Leone. Talks on African birding destinations will include Madagascar by Guy Eldridge, the Comores by Michel Louette and Ethiopia and the Horn of Africa by Nigel Redman. ABC sales goods will be available and Wildsounds will be offering a wide range of birding books, CDs and other equipment. Admission is free; visit [www.africanbirdclub.org](http://www.africanbirdclub.org)

## Announcement

### Bird Photograph of the Year 2008

The 34th *British Birds* Bird Photograph of the Year competition is free to enter and, as usual, seeks to recognise the best and/or the most scientifically interesting bird photographs. Preference is given to images taken in the Western Palearctic (Europe, North Africa and the Middle East), but those of species on the Western Palearctic List taken anywhere in the world are also eligible. Up to three images, each taken during calendar

year 2008, may be submitted by each photographer. For full details of the rules, visit [www.britishbirds.co.uk/bpy.htm](http://www.britishbirds.co.uk/bpy.htm)

Final details of sponsorship are being finalised as we go to press, but will be announced as soon as possible. Regular sponsors A&C Black, Collins and the Eric Hosking Trust have already committed their support for the competition.

As well as the main category, there will again be a prize for the

best digiscoped entry, which should also aim to show interesting behaviour. The winning entries will be exhibited at the British Bird-watching Fair in August, where the awards will be presented.

Entries should be submitted to Peter Kennerley, 16 Coppice Close, Melton, Woodbridge, Suffolk IP12 1RX; e-mail [peterkennerley@onetel.net](mailto:peterkennerley@onetel.net)

The closing date for entries will be 15th April 2009.

# Recent reports

Compiled by Barry Nightingale and Eric Dempsey

This summary of unchecked reports covers November and early December 2008.

**Headlines** A late pulse of rarities in the Outer Hebrides included a Brown Shrike, an 'American Black Tern' and a Long-billed Dowitcher; elsewhere, Ivory Gull in Shetland, 'Black-throated Thrush' and 'Steppe Grey Shrike' in Lincolnshire, three new Desert Wheatears (joining several long-stayers) and two new Hume's Warblers, a Sardinian Warbler in Devon and Dark-eyed Juncos in Somerset and Cornwall caught the eye. Cornwall also played host to a (presumed returning) Pacific Diver, while the remains of an American Bittern were found in Pembrokeshire.

**Red-breasted Goose** *Branta ruficollis* Keyhaven Marshes/Pennington Marshes/Normandy Marsh (Hampshire), long-stayer to 7th December; Martin Mere (Lancashire & N Merseyside), 11th November. **Blue-winged Teal** *Anas discors* Back Saltholme Pool (Cleveland), 14th–15th November. **Ferruginous Duck** *Aythya nyroca* Long-stayers in Buckinghamshire and Hertfordshire, and new arrivals in Leicestershire & Rutland, to 17th November, and Glamorgan, to 7th December. **Lesser Scaup** *Aythya affinis* Long-stayers at Hogganfield Loch (Clyde) to 7th December, Helston (Cornwall) to 6th December and Holme Pierrepont (Nottinghamshire) to 7th December; plus Lough Ennel (Co. Westmeath) 9th–30th November, with two on 14th; Lydney, 11th–17th November, presumed same Frampton (both Gloucestershire), 23rd November to 7th December; Clea Lake

(Co. Down), 15th November; Lough Rea (Co. Galway), 16th November; Quoile (Co. Down), 29th–30th November. **King Eider** *Somateria spectabilis* Appledore (Devon), long-stayer to 17th November; Hartlepool (Cleveland), 12th November; Bluemull Sound (Shetland), 28th November.

**Hooded Merganser** *Lophodytes cucullatus* Tayport (Fife), long-stayer to 15th November. **Pacific Diver** *Gavia pacifica* Marazion (Cornwall), presumed returning bird, 3rd December at least. **White-billed Diver** *Gavia adamsii* South Ronaldsay (Orkney), long-stayer to 7th December; Bluemull Sound (Shetland), 16th November.

**American Bittern** *Botaurus lentiginosus* St David's (Pembrokeshire), found dead, 30th



John Malloy

26. Snow Goose *Anser caerulescens*, with Greylag Geese *Anser anser*, Old Hartley, Northumberland, November 2008.

November. **Night Heron** *Nycticorax nycticorax* West Hythe (Kent), 22nd–23rd November. **Cattle Egret** *Bubulcus ibis* Up to six long-stayers in Somerset, singles in Buckinghamshire, Cleveland, Co. Cork, Hampshire, Kent, Co. Kilkenny, Oxfordshire, Pembrokeshire and Staffordshire, and up to two in Lancashire & N Merseyside and three in Cumbria. **Great White Egret** *Ardea alba* Long-stayers in Co. Galway, Greater Manchester and Hampshire, with others in Essex, Kent, Co. Louth and Norfolk. **Glossy Ibis** *Plegadis falcinellus* Long-stayer at either Marshside RSPB or Warton Marsh (Lancashire and N Merseyside) to 7th December; Pennington Flash (Greater Manchester), 7th December.

**Gyr Falcon** *Falco rusticolus* One taken into captivity on a trawler west of Co. Kerry on 25th November was released from care in early December; on Scilly, one over St Martin's on 7th December was seen over St Mary's on 8th.

**American Golden Plover** *Pluvialis dominica* East Harling (Norfolk), long-stayer to 13th November; Blackrock (Co. Kerry), 5th–9th November; Omey Strand (Co. Galway), 5th–13th November; The Cunnigar (Co. Waterford), 8th November; Hamford Water (Essex), 16th November; Barleycroft GP (Cambridgeshire), 14th–16th November; Port Meadow (Oxfordshire), 14th November; Cockersands (Lancashire & N Merseyside), 19th November; North Duffield Carrs (Yorkshire), 20th



Mark Caunt

27. Female Hooded Merganser *Lophodytes cucullatus*, Tayport, Fife, November 2008.

November. **White-rumped Sandpiper** *Calidris fuscicollis* Alkborough Flats (Lincolnshire), 23rd November; St John's Lake (Cornwall), 7th December. **Long-billed Dowitcher** *Limnodromus scolopaceus* A long-stayer in Co. Louth (to 15th November) and one on South Uist on 16th–23rd November. **Spotted Sandpiper** *Actitis macularius* Tittesworth Reservoir (Staffordshire), 22nd November to 7th December; Gyles Quay (Co. Louth), 24th–26th November. **Lesser Yellowlegs** *Tringa flavipes* Clonakilty (Co. Cork), 12th–16th November; Southwold (Suffolk), 5th–6th December. **Grey Phalarope** *Phalaropus fulicarius* A high count of 262 past Kilcummin Head (Co. Mayo) on 11th November.



Darren Chapman

28. First-winter Spotted Sandpiper *Actitis macularius*, Tittesworth Reservoir, Staffordshire, November 2008.



Tom Tams

29. Red-flanked Bluetail *Tarsiger cyanurus*, Holy Island, Northumberland, November 2008.



Gary Thoburn

30. Female Pied Wheatear *Oenanthe pleschanka*, Bempton, Yorkshire, November 2008.



Mark Caunt

31. Male Desert Wheatear *Oenanthe deserti*, Girdle Ness, North-east Scotland, November 2008.

Bonaparte's Gull *Chroicocephalus philadelphia* Roscarberry (Co. Cork), 1st December. Ivory Gull *Pagophila eburnea* Lerwick (Shetland), 21st November. 'American Black Tern' *Chlidonias niger surinamensis* South Uist, 17th November. Forster's Tern *Sterna forsteri* Returning adult, Nimmo's Pier (Co. Galway), from 5th November.

Snowy Owl *Bubo scandiacus* St Mary's (Scilly), long-stayer to 12th November, and again 5th December; North Uist (Outer Hebrides), 20th November.

Waxwing *Bombycilla garrulus*  
The influx continued, with most of the large flocks in Scotland and peak counts as follows: Inverness (Highland), 200, 13th November; Dundee, 200, 13th–15th November and Montrose (both Angus & Dundee), 200, 14th November; Glasgow (Clyde), large flocks from 13th November onwards, including 650 on 24th and 500 on 27th November; Motherwell, 200, 23rd November and Hamilton (both Clyde), 200, 30th November; Invergowrie (Perth & Kinross), 200, 15th November; Saltcoats, 200, 16th November and Ayr (both Ayrshire), 350, 6th–7th December; Edinburgh, 220, 17th November and 400 4th–7th December, 380 Musselburgh (both Lothian), 28th–29th November; Dumfries (Dumfries & Galloway), 150, 20th November; Aberdeen (North-east Scotland), 300, 21st November, with 250 there 25th November, and

Dunblane (Forth), 200, 21st–22nd November. In England, Hemlington, 120, 17th November and Middlesbrough (both Cleveland), 190, 19th November; Jarrow (Durham), 150, 19th November and 350 on 21st November; Penrith, 100, 21st November and Dalston (both Cumbria), 210, 26th November. Many small flocks were seen farther south and west. In Ireland, small numbers were also widely reported, with 80 in Portstewart (Co. Derry) on 24th November, 100 in Lisburn (Co. Down) on 1st December and 70 in Foxrock (Co. Dublin) on 5th December.

Red-flanked Bluetail *Tarsiger cyanurus* Holy Island (Northumberland), long-stayer to 14th November. Pied Wheatear *Oenanthe pleschanka* Reighton Sands, long-stayer to 15th November, with same Bempton Cliffs (both Yorkshire), 16th–18th November. Desert Wheatear *Oenanthe deserti* Long-stayers at Sandwich Bay (Kent) to 11th November, Saltfleet (Lincolnshire) to 14th November, Lynemouth (Northumberland) to 11th November and Easton Bavents (Suffolk) to 10th November; new birds were at Newbiggin (Northumberland), 11th–12th November; Instow (Devon), 12th November; and Donmouth, 15th November, with same Girle Ness (both North-east Scotland), 24th–30th November. 'Black-throated Thrush' *Turdus ruficollis atrogularis* Skegness (Lincolnshire), 22nd November.



David Land

32. Female Sardinian Warbler *Sylvia melanocephala*, Berry Head, Devon, November 2008.



Hugh Harrop

33. Hume's Warbler *Phylloscopus humei*, Bressay, Shetland, November 2008.



Iain Leach

34. First-winter 'Steppe Grey Shrike' *Lanius meridionalis pallidirostris*, Grainthorpe Lincolnshire, November 2008.

Colin Bradshaw



35. Male Two-barred Crossbill *Loxia leucoptera*, Bilsdale, Yorkshire, November 2008.

Rob Laughton



36. Male Dark-eyed Junco *Junco hyemalis*, East Coker, Somerset, November 2008.

Barred Warbler *Sylvia nisoria* Late records in Co. Wexford involved birds at Fethard On Sea on 25th–28th and Kilmore on 29th November. Sardinian Warbler *Sylvia melanocephala* Berry Head (Devon), 12th–21st November. Hume's Warbler *Phylloscopus humei* St Mary's Island (Northumberland), long-stayer to 15th November; Bressay (Shetland), 11th–12th November; Loch of Strathbeg (North-east Scotland), 15th November.

Penduline Tit *Remiz pendulinus* Greylake RSPB (Somerset), 25th November; Attenborough (Nottinghamshire), 28th–29th November; Rainham Marshes (Greater London), two, 6th December. Brown Shrike *Lanius cristatus* North Uist, 18th and 24th November. 'Steppe Grey Shrike' *Lanius meridionalis pallidirostris* Grainthorpe (Lincolnshire), long-stayer to 26th November. Rose-coloured Starling *Sturnus roseus* Newquay (Cornwall), 12th–15th and 26th November to 1st December.

European Serin *Serinus serinus* At Rainham Marshes, seen throughout the period with a peak of seven on 13th November; also singles at Sandy Point (Hampshire), 9th November and Margate (Kent), 14th November. Arctic Redpoll *Carduelis hornemanni* Thorndon Country Park (Essex), 1st–2nd December. Two-barred Crossbill *Loxia leucoptera* Bilsdale (Yorkshire), long-stayer to 23rd November. Dark-eyed Junco *Junco hyemalis* East Coker (Somerset), 16th–18th November; Hayle (Cornwall), 26th November.

BB wishes to thank all the photographers who submitted images of rare and scarce birds in 2008 for possible publication. Photographs are always welcome and can be e-mailed to [editor@britishbirds.co.uk](mailto:editor@britishbirds.co.uk) or posted to the editorial office. Guidelines for submission are available on our website [www.britishbirds.co.uk](http://www.britishbirds.co.uk) A standard reproduction fee is paid for all images published.



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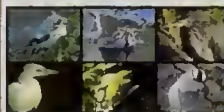
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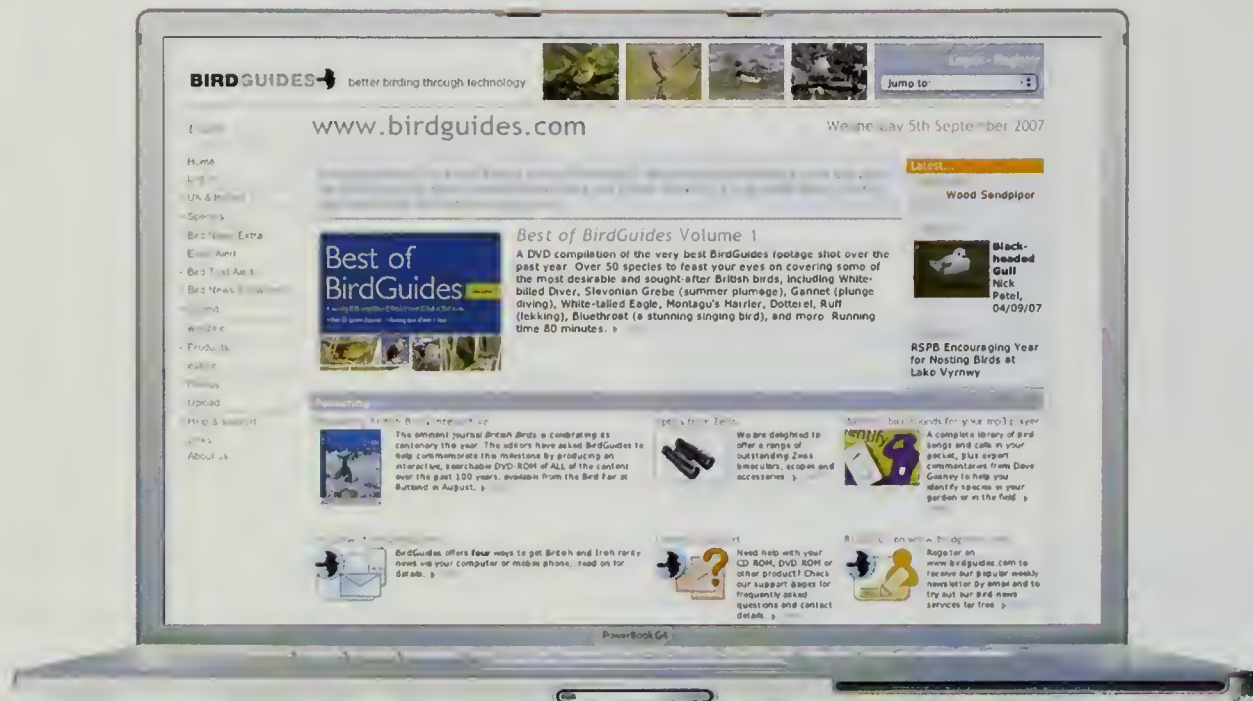
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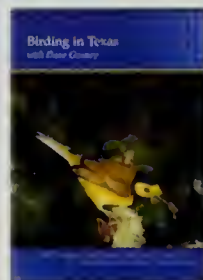
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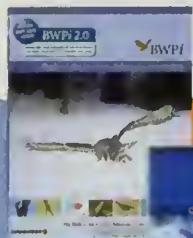
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# British Birds

February 2009 • Vol. 102 • 51–108

5 - FEB 2009



Birds and habitat change in Britain

Great Black-headed Gull

Identification of Ehrenberg's Redstart



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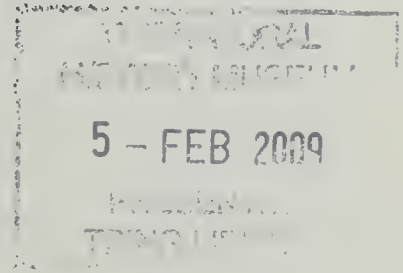
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# British Birds

Volume 102 • Number 2 • February 2009



- 52 Birds and habitat change in Britain  
Part 2: past and future conservation responses  
*Malcolm Ausden and Robert J. Fuller*
- 72 The social and communication behaviour of the Great Black-headed Gull  
*Evgeniy N. Panov*
- 84  From the Rarities Committee's files  
The identification of male 'Ehrenberg's Redstart', with comments on  
British claims *Brian J. Small*
- 98 The BB/BTO Best Bird Book of the Year 2008  
*Roger Riddington, Dawn Balmer, Andrew Gosler, Peter Hearn,  
John Marchant, Robin Prytherch and Bob Scott*

## Regular features

- |   |  |
|---|--|
| 101 Letter<br>The distribution of Bulwer's Petrel<br><i>W. R. P. Bourne</i> | 105  Rarities Committee news<br>BBRC seeks new member |
| 101 News and comment<br><i>Adrian Pitches</i>                               | 106 Recent reports<br><i>Barry Nightingale and<br/>Eric Dempsey</i>  |

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# Birds and habitat change in Britain

## Part 2: past and future conservation responses

*Malcolm Ausden and Robert J. Fuller*

**ABSTRACT** Since the middle of the twentieth century, the conservation of bird habitats has developed enormously, in response to increasing habitat loss and deterioration. The approaches to conservation have been varied, including national and international designations, nature reserves, agri-environment schemes and large-scale habitat creation. In this paper, we outline the history, successes, limitations and challenges of habitat conservation. Important recent trends have been: increasingly refined approaches to habitat management on reserves and other protected areas; a growing emphasis on conservation in the wider countryside (i.e. outside reserves); and the emergence of large-scale habitat creation initiatives. Protection and management of habitats on reserves, especially for scarce species, has been broadly successful but it has proved far more difficult to reverse major declines in the populations of many farmland, woodland and upland bird species in the wider countryside. Climate change and the potential for further intensification of farming represent two major challenges ahead. Future approaches to habitat conservation will need to embrace several lines of thinking, including enhancing habitat complexity at different scales; taking more of a landscape-scale outlook to conservation efforts; exploring the potential of 'ecosystem service' approaches; and, especially for wetlands, the creation of extensive new habitats.

### *Introduction*

The spectacular growth of the conservation movement in Britain in the twentieth century was largely a response to an increasing awareness that mankind was becoming capable of altering habitats rapidly and on a massive scale, with a correspondingly enormous impact on biodiversity. Part 1 of this article described how many of these changes have affected British birds (Fuller & Ausden 2008), but conservation itself is now a major force determining the availability of habitats for birds in Britain. In this paper, we chart key stages in the evolution of habitat conservation for birds. Traditionally, the focus has been

on protecting valuable existing habitats and on using a variety of management techniques to improve habitat quality for species of high conservation value. In recent decades, an exciting new dimension to habitat conservation has emerged, with many opportunities being taken to create new habitats. We will outline several broad approaches to habitat conservation, each of which makes a distinctive contribution:

- nature reserves, which principally aim to protect existing, important, semi-natural habitats and their associated species;
- conservation designations, which are aimed at preventing damaging activities on land of

conservation importance and, increasingly, to encourage positive, active management;

- agri-environment schemes, which aim to benefit wildlife and provide other environmental benefits in the wider countryside;
- 'habitat networks', which are established mainly through increasing the connectivity between existing habitat patches;
- large-scale habitat creation on land of previously low conservation value;
- 'ecosystem service' approaches where habitat benefits to biodiversity are linked with other services provided to society by particular ecosystems or habitats.

### A brief history of habitat conservation in Britain

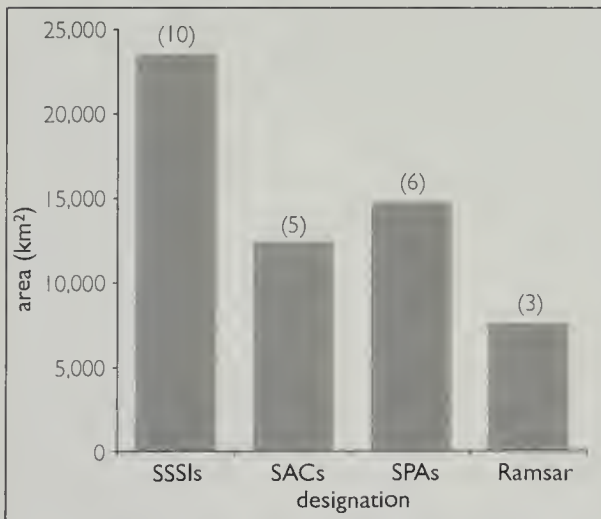
#### Site protection

The beginnings of formal nature conservation in the UK were rooted in the late nineteenth and early twentieth centuries. The Society for the Protection of Birds (later the RSPB) was founded in 1889, the National Trust in 1895 and the Society for the Promotion of Nature Reserves in 1912, followed by the first county Wildlife Trust (Norfolk) in 1926. As the twentieth century progressed, increasing efforts were made to protect important sites and habitats, both through the establishment of large numbers of nature reserves and through the development of complex legal designations. Below, we summarise the key elements of this

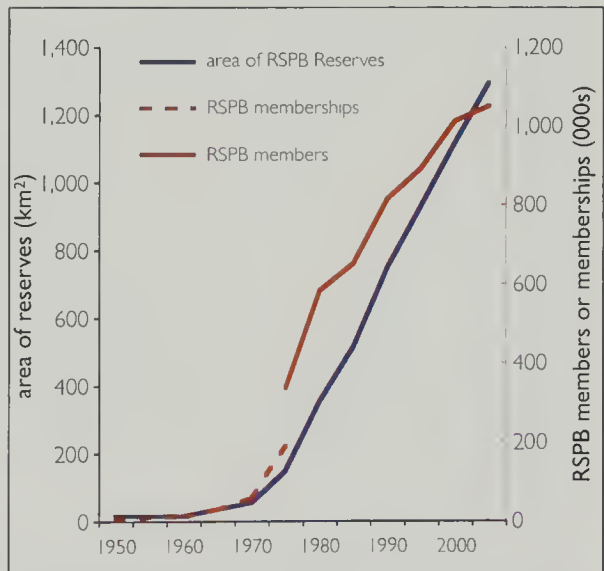
process and some major landmarks.

In 1949, an Act of Parliament created the first official national conservation body, the Nature Conservancy. Over time, the Nature Conservancy evolved through various stages into the current statutory bodies responsible for nature conservation: Natural England, Scottish Natural Heritage and Countryside Council for Wales. The 1949 Act brought into being National Nature Reserves (NNRs), Local Nature Reserves (LNRs) and Sites of Special Scientific Interest (SSSIs). These designations continue to form the backbone of protected areas for nature conservation. The powers to protect wildlife through the SSSI network have been especially crucial and the legislation conserving SSSIs has been progressively strengthened. This has involved a shift from merely protecting SSSIs from development, to actively encouraging positive management through management agreements.

International designations have played an increasingly important role in site protection since the 1970s. 'Ramsar sites' (so named because the first international conservation treaty, the *Convention on Wetlands*, was adopted at Ramsar, in Iran, in 1971) form a worldwide list of wetlands of international importance. Britain has designated 146 Ramsar sites, covering 7,500 km<sup>2</sup>. The EU Birds Directive (1979) provides conservation measures for wild birds, including the designation of Special Protection Areas (SPAs) for rare and vulnerable birds and



**Fig. 1.** Areas of land currently covered by different forms of conservation designation intended to benefit birds and other wildlife in Britain. The values in parentheses are the percentages of the total land surface of Britain protected under these designations. SSSIs = Sites of Special Scientific Interest, SACs = Special Areas of Conservation, SPAs = Special Protection Areas. All Ramsar sites and non-marine SACs and virtually all SPAs are also SSSIs.



**Fig. 2.** The rise in RSPB membership (red) and of the area of land managed as nature reserves by the Society (blue). There is only information on total numbers of memberships (hatched line), rather than of total numbers of members, before 1975. Numbers of members will be slightly higher than the number of memberships.

for regularly occurring migratory species. The EU Habitats Directive (1992) enables the designation of Special Areas of Conservation (SACs) for certain habitat types. Taken together, SPAs and SACs form the Natura 2000 network. The current areas of land covered by some of these designations are shown in fig. 1.

Equally significant has been the remarkable emergence of non-governmental organisations (NGOs) committed to conservation. This phenomenon really accelerated in the 1970s, in line with increasing public interest in the environment and growth in membership of these organisations (fig. 2). The RSPB and the Wildlife Trusts were in the vanguard, although the National Trust's huge land holdings are also of immense conservation importance, and this is increasingly true of the Woodland Trust's sites. Collectively, these organisations now own and manage very substantial areas of land, much of it notified as SSSIs. This has been accompanied by an increase in the range and complexity of habitat management undertaken, with the aim of providing suitable conditions for priority bird species. The success of these methods is reviewed later in this article.

### *Conservation trends in the last decade of the twentieth century*

The early 1990s saw the beginning of a change in thinking regarding nature conservation in the UK, with the adoption of more specific conservation targets. This change was initiated following the Convention on Biological Diversity, signed at the Earth Summit in Rio de Janeiro in 1992, and enshrined in the UK through the Biodiversity Action Plan (BAP) process. Although conservationists regularly debate the usefulness of action plans and targets, their adoption has, in many cases, helped to focus action and resulted in increased levels of accountability.

The 1990s also saw an increase in the priority given to birds in the wider countryside, following the large-scale declines of many widespread farmland birds since the 1970s. Considerable research into the cause of these declines took place, and measures aimed at benefiting farmland birds were incorporated within agri-environment schemes. Subsidies which had encouraged damaging activities, such as drainage of wetlands and planting of forestry in the Flow Country, had already been removed in the mid 1980s. The next stage was the introduc-



Chris Knights

37. Stone-curlew *Burhinus oedicnemus*, Norfolk, August 2007. Targeted agri-environment schemes have been successful in reversing declines in numbers of breeding Corn Crakes *Crex crex*, Stone-curlews and Cirl Buntings *Emberiza cirlus*. Agri-environment measures have not, however, so far been applied on a sufficient scale, or for long enough, to reverse the declines of more widespread farmland bird species.

tion of positive incentives for land management through agri-environment schemes. These schemes contain a range of objectives (e.g. the maintenance and enhancement of wildlife and landscape, promotion of public access to the countryside and, increasingly, protection of natural resources) and were first introduced in 1987. The priority afforded to birds in the wider countryside was demonstrated by the UK Government adopting an index of wild bird populations as an indicator of the sustainability of its policies and of the quality of life in the UK (Anon 1999). In 2000, the Government set a Public Service Agreement target to reverse the decline of farmland birds in England by 2020.

There have been two main types of management agreement within agri-environment schemes. The first offers a selection of pre-set management agreements (tiers), in return for fixed payments. Each tier contains a set of prescriptions that the landowner agrees to, such as permissible levels of fertiliser use. The second involves landowners choosing from a menu of prescriptions, again in return for fixed payments. The process is usually competitive and applications are selected that offer the greatest

potential benefits. This menu-based system is generally considered better, because it offers landowners greater flexibility, while also allowing management for wildlife to be more closely tailored to the needs of individual sites.

More recent schemes, such as Environmental Stewardship in England, have used menu-based systems. The higher levels of these schemes (those aimed at providing greater environmental benefits) involve increased targeting of management agreements to areas of the countryside where they are likely to achieve the greatest benefits. Agri-environment schemes include an increasingly wide range of measures aimed at benefiting farmland birds (Vickery *et al.* 2004), together with improved advice, guidance materials, farm visits and demonstrations, all of which are thought crucial to maximising the wildlife benefit of these schemes (Smallshire *et al.* 2004).

The end of the twentieth century and the beginning of the twenty-first were marked by an increasing number of ambitious attempts to re-create semi-natural habitats important for bird conservation. These have included the creation of freshwater and intertidal wetlands on



Rob Fuller

38. The fabric of the countryside will undoubtedly change substantially during the next few decades, in response to changes in climate and global agriculture. The introduction and expansion of new crops, e.g. sunflowers, and increased demand for land for energy crops are both likely. Since we cannot predict how species will respond to climate change, it will be essential to provide habitat heterogeneity at different spatial scales to maximise the chances of retaining a diverse avifauna. This farmed landscape in southwest France, in August 2007, contains a variety of uncropped habitats, which contribute greatly to high levels of biodiversity.

former arable land and agriculturally improved grassland; large-scale removal of plantations from afforested lowland heathland and blanket bog; restoration of wetlands on lowland raised bogs following the cessation of peat cutting; and long-term reforestation projects, including the regeneration of native Scots Pine *Pinus sylvestris* forest in Scotland. The concept of habitat networks has also gained considerable popularity (Jongman 1995; Peterken *et al.* 1995; Peterken 2000). Discussion of the potential for habitats of biodiversity value to provide

wider 'ecosystem services' has started to develop in the last few years but is yet to be fully integrated into the various approaches to habitat conservation; we return to this subject at the end of the article.

### *The success of habitat-based conservation measures for birds*

#### *Site designation*

Although most terrestrial and freshwater areas that satisfy the criteria of the conservation designations described above are now formally

#### **Box 1.** Examples of land management techniques used to improve the conservation status of birds in the UK: farmland, grassland, heath and bog. (continued right)

Habitat	Management: aim and approach	Target species	Where undertaken
Farmland	<i>Aim:</i> Increasing the quantity of food for birds, especially invertebrates in the breeding season and seeds in the non-breeding season. <i>Approach:</i> Increasing the extent of winter stubbles, especially weedy stubbles, and under-sown spring cereals; also creation of conservation headlands, wild-bird cover and grass margins around arable fields.	Grey Partridge <i>Perdix perdix</i> and seed-eating songbirds potentially benefit from all measures to increase seed resources <sup>1,2</sup> . Cirl Bunting <i>Emberiza cirlus</i> has benefited from specific measures in south Devon to enhance winter and summer food <sup>1,6</sup> .	In the wider countryside through agri-environment schemes; some measures undertaken specifically to benefit Grey Partridge and Cirl Bunting.
	<i>Aim:</i> Creation of suitable nesting habitat on arable land for species that avoid tall vegetation. <i>Approach:</i> Establishment of nesting plots, which are ploughed but unsown to maintain bare ground. Individual nesting pairs can be protected from damaging agricultural operations.	Breeding Stone-curlew <i>Burhinus oedipnemus</i> and Northern Lapwing <i>Vanellus vanellus</i> have benefited from ploughed but undrilled plots in Wessex and Breckland <sup>1</sup> . Small (4 x 4 m), undrilled patches in cereal fields ('Sky Lark plots') provide feeding areas for Sky Lark <i>Alauda arvensis</i> throughout the breeding season <sup>1</sup> .	Virtually entirely in the wider countryside, principally through advice from dedicated teams, and measures included in agri-environment schemes.
Machair and Hebridean hay meadows	<i>Aims and Approach:</i> Provision of early and late vegetation cover, and Corn Crake-friendly mowing systems <sup>7</sup> .	Breeding Corn Crake <i>Crex crex</i> <sup>1,5</sup> .	Both on reserves (e.g. Coll) and in the wider countryside through agri-environment schemes.
Lowland heath <sup>a</sup>	<i>Aim:</i> Maintenance of open heathland – of ericaceous shrubs, gorse <i>Ulex</i> and scattered trees. <i>Approach:</i> Tree, scrub and bracken removal, coppicing to provide dense stands of gorse, and introduction/manipulation of grazing.	European Nightjar <i>Caprimulgus europaeus</i> , Wood Lark <i>Lullula arborea</i> , Common Stonechat <i>Saxicola torquatus</i> and Dartford Warbler <i>Sylvia undata</i> , mainly by preventing loss of heathland; gorse coppicing benefits Dartford Warblers.	Principally on nature reserves/SSSIs (virtually all substantial areas of lowland heath are SSSIs).
	<i>Aim:</i> Re-creation of heathland. <i>Approach:</i> Wholesale removal of conifer plantations from afforested heathland.	As above.	Forestry Commission plantations (e.g. Thetford Forest, Norfolk/Suffolk); commercial plantations acquired by conservation bodies (e.g. Farnham Heath, Surrey).

recognised, it could be argued that the designation of SPAs is incomplete, especially for cropped habitats such as feeding areas for wintering geese, and in-bye land for breeding waders. However, the major shortfall has been the slow progress in achieving protection of marine areas. Two official Marine Nature Reserves have been designated in Britain: Lundy (Devon) and Skomer (Pembrokeshire), with a third site in Northern Ireland (Strangford Lough). Marine SACs are more numerous, though most are coastal rather than truly marine, but so far there is only one marine SPA designated specifically for birds – that for

Common Scoters *Melanitta nigra* in Carmarthen Bay. There are currently no SPAs designated as feeding areas for Britain's internationally important populations of seabirds.

The legislation for protecting SSSIs, and maintaining them in, or returning them to, favourable condition, has improved considerably, although there are still some flaws in its practical application for birds. In particular, even though many important sites for breeding waders in lowland wet grassland were notified, they were not notified as SSSIs specifically for their breeding wader assemblage. This makes it impossible to set con-

**Box 1.** farmland, grassland, heath and bog *continued*

Habitat	Management: aim and approach	Target species	Where undertaken
Lowland calcareous and acid grassland <sup>a</sup>	<i>Aim:</i> Maintenance of short, open grassland and bare and sparsely vegetated ground. <i>Approach:</i> Heavy grazing by livestock and encouragement of Rabbits <i>Oryctolagus cuniculus</i> . Ploughed plots provide bare and sparsely vegetated ground.	Stone-curlew, Wood Lark and Northern Wheatear <i>Oenanthe oenanthe</i> .	Principally on reserves, with ploughed plots especially on military land on Salisbury Plain (Wiltshire) and in Breckland.
	<i>Aim:</i> Re-creation of short, open grassland on former arable land. <i>Approach:</i> Natural regeneration, and in some cases soil acidification and seeding, followed by ongoing management as above.	Stone-curlew and Wood Lark.	Minsmere (Suffolk) and encouraged through agri-environment schemes.
Maritime heathland and grassland <sup>a</sup>	<i>Aim:</i> Maintenance of short swards. <i>Approach:</i> Heavy grazing and rotational burning of heathland.	Red-billed Chough <i>Pyrrhocorax pyrrhocorax</i> , which selects areas of short vegetation for foraging.	Nature reserves (e.g. Ramsey Island, Pembrokeshire); and in parts of western Scotland, Wales and Cornwall through agri-environment schemes.
Upland heath and blanket bog	<i>Aim:</i> Creation of structurally complex grass and Heather <i>Calluna vulgaris</i> swards, and re-wetting of blanket bog. Retention and restoration of Heather is important. <i>Approach:</i> Relaxation of grazing, especially by reducing sheep stocking and removal of Red Deer <i>Cervus elaphus</i> . Moderate grazing levels to maintain open habitats with spatial variation in structure. Blocking of grips (artificial drainage ditches) on blanket bog. Re-seeding with Heather.	Black Grouse <i>Tetrao tetrix</i> benefits from restoration of vegetation complexity <sup>3</sup> . Potentially a range of other ground-nesting birds can benefit, including breeding waders, Hen Harrier <i>Circus cyaneus</i> , Merlin <i>Falco columbarius</i> and Meadow Pipit <i>Anthus pratensis</i> .	Mainly on reserves. High stocking levels of sheep have been a widespread issue in the uplands, but especially in Wales, the Pennines and southern Scotland. Red Deer populations have been reduced on several reserves in the Scottish Highlands. Restoration of Heather moorland in the Peak District.

Key: <sup>a</sup> Difficulty in locating reliable graziers with suitable livestock, usually cattle, can be an impediment to achieving the desired management in these habitats. This is especially true in parts of eastern England where agriculture is predominantly arable.

References: <sup>1</sup> Aebischer *et al.* 2000; <sup>2</sup> Bradbury *et al.* 2004; <sup>3</sup> Calladine *et al.* 2002; <sup>4</sup> Morris *et al.* 2004; <sup>5</sup> O'Brien *et al.* 2006; <sup>6</sup> Peach *et al.* 2001; <sup>7</sup> Tyler *et al.* 1998

servation targets for this group of breeding waders through the SSSI system.

The system for defining the condition of SSSIs for breeding birds (typically upland breeders such as waders and raptors, heathland species, woodland species, heronries, wildfowl or seabirds) for which they were notified also allows for substantial declines in their populations to occur before the SSSI is considered to be in unfavourable condition, and hence in need of remedial action. SSSIs are considered to be in unfavourable condition only if the breeding population of a designated species declines by 25% or more from the baseline population (usually that at the time of designation). For birds whose populations increase or decrease slowly, accepting a 25% decline in numbers before taking any action does not make for effective conservation.

#### *Habitat management measures on nature reserves and in the wider countryside*

The main, specific, habitat-based measures that we consider to have been successful in improving the conservation status of birds in Britain during the twentieth century are listed in Boxes 1–4. This paper outlines the broad approaches adopted – for more detail see Sutherland & Hill (1995) and Ausden (2007).

There may be much fine-scale variation in approach from site to site and even from year to year. In addition, provision of artificial nest-sites has increased the total population, or productivity, of a number of bird species. For example, virtually the entire British breeding population of Common Goldeneye *Bucephala clangula* is dependent on nestboxes, while around a quarter of British breeding Black-throated Divers *Gavia arctica* nest on specially constructed, floating rafts. Raft-nesting Black-throated Divers have higher productivity than birds on natural islands, because natural sites are more often flooded (Hancock 2000).

A wide range of habitat management methods have been used successfully to benefit birds on nature reserves. Particularly successful measures have been the raising and manipulation of water levels to benefit birds in shallow, nutrient-rich wetlands, principally wet grasslands, reedbeds and associated waterbodies. Much of the ongoing management of these and other early successional habitats has involved removal of vegetation to help maintain the characteristic bird and other fauna of open habitats, and to provide suitable vegetation structure for feeding and nesting. Management undertaken specifically to benefit birds has also involved modifying grazing and mowing regimes to



Rebecca Nason

39. Black Guillemot *Cephus grylle*, Fair Isle, June 2008. Although Britain's important seabird colonies are protected on land, a major shortfall in the site designation system is the lack of protection afforded to important feeding areas for seabirds.

**Box 2.** Examples of land management techniques used to improve the conservation status of birds in the UK: woodland.

Habitat	Management: aim and approach	Target species	Where undertaken
Lowland broad-leaved woodland	<i>Aim:</i> Maintenance of a diversity of growth stages, especially areas of scrub or dense, young-growth vegetation. <i>Approach:</i> Continuation or reinstatement of coppice management. Also management of ride margins, either effectively as strips of linear coppice or by creating and maintaining scalloped margins.	Common Nightingale <i>Luscinia megarhynchos</i> , Garden Warbler <i>Sylvia borin</i> , Willow Warbler <i>Phylloscopus trochilus</i> and other songbirds characteristic of earlier stages of young woodland regrowth. Other measures, especially retention of old trees, may benefit hole-nesting birds.	Mainly reserves in England, e.g. Monks Wood (Cambridgeshire), Blean Woods (Kent), Bradfield Woods (Suffolk).
Upland broad-leaved woodland	<i>Aim:</i> Maintenance of stands of Sessile Oak <i>Quercus petraea</i> and birch <i>Betula</i> with open understorey structures but ensuring adequate long-term regeneration. <i>Approach:</i> Maintenance of moderate grazing levels, usually by sheep and deer, sometimes together with temporary patch-level exclusion of large herbivores to encourage local regeneration.  <i>Aim:</i> Encouragement of regeneration of scrub and woodland on lower moorland slopes. <i>Approach:</i> Large reduction of grazing pressure by sheep and deer.	Tree Pipit <i>Antlius trivialis</i> , Common Redstart <i>Phoenicurus phoenicurus</i> , Wood Warbler <i>Phylloscopus sibilatrix</i> and Pied Flycatcher <i>Ficedula hypoleuca</i> all benefit from maintaining an open understorey structure.  Black Grouse <i>Tetrao tetrix</i> initially benefits from regeneration, but in the longer term diverse communities of songbirds develop.	Mainly reserves in western Britain, from Devon to northern Scotland.  Mainly reserves in central and eastern Highland, e.g. Corrimony, Creag Meagaidh.
Native Scots Pine woodland	<i>Aim:</i> Increasing the area of old-growth Scots Pine <i>Pinus sylvestris</i> woodland and improve habitat quality for key species. <i>Approach:</i> Three potential mechanisms are (i) expansion of existing native pinewoods through natural regeneration, often involving reduced grazing levels; (ii) planting 'new native pinewoods'; (iii) promoting silvicultural techniques in managed forest to create attributes of old-growth <sup>2</sup> . Creation of rotten stumps, reduction of Red Deer <i>Cervus elaphus</i> impacts and manipulation of tree density to enhance bilberry <i>Vaccinium myrtillus</i> -rich field layers are specific treatments <sup>1,3</sup> .	Capercaillie <i>T. urogallus</i> , Great Spotted Woodpecker <i>Dendrocopos major</i> , Tree Pipit, Common Redstart, Crested Tit <i>Lophophanes cristatus</i> and crossbills <i>Loxia</i> all potentially benefit from expansion of old-growth <sup>2</sup> . Nest-site creation in cut stumps can benefit Crested Tit, while Capercaillie benefits from measures aimed at enhancing the field layer.	Nature reserves in the Scottish Highlands, notably Abernethy (Highland).

References: <sup>1</sup> Denny & Summers 1996; <sup>2</sup> Summers 2007; <sup>3</sup> Summers *et al.* 2004.

reduce nest and chick loss, and the provision of safe nesting islands. While there have been many successes, there have been some failures too. A notable example has been the failure to increase breeding Common Snipe *Gallinago gallinago* populations on wet grassland (Ausden & Hiron 2002). Breeding Snipe are associated with soils that are wet and soft enough for them to probe for earthworms (Lumbricidae) and other invertebrate prey (Green 1988; Green *et al.* 1990). Raising water levels has successfully made the upper soil softer during the breeding season at many sites, but this has been accompanied by an increase in numbers of breeding Snipe at only some sites, e.g. the Nene Washes (Cam-

bridgeshire) and West Sedgemoor (Somerset). This suggests that lowland wet grassland populations of Snipe might be limited by other aspects of habitat quality at some breeding sites, or by factors operating outside the breeding season (Smart *et al.* 2008).

Many opportunities are now being seized to create and restore habitats, some of which were outlined in Fuller & Ausden (2008). Although in many cases it is too early to evaluate the conservation outcome, especially in situations where vegetation takes a long time to develop, there is an increasing number of successful initiatives. The creation of lowland wet grassland on formerly arable and agriculturally improved

grassland has resulted in rapid increases in numbers of breeding Northern Lapwings *Vanellus vanellus*, Common Redshank *Tringa totanus* and wintering wildfowl. Intertidal habitat created through managed realignment is readily used by a range of wildfowl and waders, although many of the earlier sites are relatively small and enclosed, and tend to support low densities of species that prefer large expanses of open mudflats (Atkinson 2003; Atkinson *et al.* 2004). Many of the more recent managed realignment sites are much larger. Some newly created reedbeds have been colonised by breeding Eurasian Bitterns *Botaurus stellaris*, Marsh Harriers *Circus aeruginosus*, Bearded Tits *Panurus biarmicus*, and, at one site, by nesting Common Cranes *Grus grus*. Lowland acid grassland has been colonised by breeding Stone-curlews *Burhinus oedicephalus* at Minsmere (Suffolk) eight years after the cessation of arable cropping. Lowland heathland is particularly straightforward to restore by removing plantations, whose soils and seed bank remain similar to those of heathland (Walker *et al.* 2004; Allison & Ausden 2006). Wood Larks *Lullula arborea* and European Nightjars *Caprimulgus europaeus* have colonised some of this heathland following tree removal, although

the success of colonisation appears to depend on levels of human disturbance and the developing vegetation structure.

Many of the measures aimed at improving the status of birds in the wider countryside through agri-environment prescriptions are relatively recent. So far, only precisely targeted measures focused on quite localised species (Corn Crake *Crex crex*, Stone-curlew and Cirl Bunting *Emberiza cirlus*) have shown unequivocal benefits (Aebischer *et al.* 2000; Peach *et al.* 2001). The success of schemes aimed at commoner and more widespread species has been mixed (e.g. Kleijn & Sutherland 2003, Bradbury *et al.* 2004, Wilson *et al.* 2007). Although conventional agri-environment schemes probably deliver important benefits for many common species, they may be less effective at conserving species with more exacting requirements, for which bespoke conservation measures are needed (Kleijn *et al.* 2006). There is strong evidence that the EU Birds Directive has been successful at improving the conservation status of species listed within it (Donald *et al.* 2007).

#### Successes and failures at the species level

In part 1 of this paper, we summarised which species are likely to have increased or decreased



Malcolm Ausden

40. This photograph shows an area of heathland re-created just three years after the felling of a conifer plantation at RSPB Farnham Heath Reserve, Surrey. In 2008, the 60-ha area which was felled in 2004/05 supported six pairs of breeding Wood Larks *Lullula arborea*, six pairs of Tree Pipits *Anthus trivialis*, three pairs of European Nightjars *Caprimulgus europaeus* and three pairs of Common Stonechats *Saxicola torquatus*. Disturbance to ground-nesting birds, especially by dogs, is a potential issue at heathland creation sites. Recreational pressures need to be taken into account when designing and managing these areas.



Hugh Harrop

41. Black Grouse *Tetrao tetrix* have benefited from a range of habitat management techniques which have improved habitat heterogeneity in the uplands, and the birds have also increased during the early stages of native woodland regeneration on the lower slopes of moorlands.

in Britain during the twentieth century largely as a result of habitat-related changes (Fuller & Ausden 2008; see Boxes 1 & 2 in particular). The majority of species that increased are those associated with lowland wetlands (particularly reservoirs and former mineral workings) and conifer plantations. In contrast, many formerly common birds associated with farmed land in both upland and lowland regions are faring less well now than 100 years ago, mainly due to agricultural intensification. Lowland heathland species have also suffered long-term declines.

There has been a marked contrast in the fortunes of birds on nature reserves and in the wider countryside. Many, possibly most, species that were rare in Britain at the end of the nineteenth century had a more favourable conservation status at the end of the twentieth, largely through a reduction in persecution together with the protection and management of fragments of semi-natural habitats on nature reserves and other protected areas. For some species, such as Marsh Harrier and Avocet *Recurvirostra avosetta*, nature reserves supported all, or virtually all, of the breeding population during the early stages of their recovery, enabling them to expand beyond reserves as populations grew. For other species, such as breeding Lapwings and Snipe in many lowland

areas, populations have become increasingly confined to nature reserves as those in the wider countryside have declined.

Despite the large-scale declines of many formerly widespread birds, Britain undoubtedly supported more breeding bird species in 2000 than it did in 1900. The small number of species lost (Kentish Plover *Charadrius alexandrinus*, Wryneck *Jynx torquilla* and Red-backed Shrike *Lanius collurio*) have been more than compensated for by the number of colonists and re-colonists. Relatively few of these gains can be attributed directly to changes in habitat conditions, although in some cases (e.g. Avocet) habitat management has aided expansion. Three colonists, Little Ringed Plover *Charadrius dubius*, Black Redstart *Phoenicurus ochrurus* and Firecrest *Regulus ignicapilla*, are dependent on recently created, 'artificial' habitats, although other factors may have been involved in their colonisation. Other gains during the twentieth century have been due to recolonisation of species previously eradicated (largely) through persecution (e.g. Common Crane, Avocet and Black-tailed Godwit *Limosa limosa*), introduction of non-native species (e.g. Ruddy Duck *Oxyura jamaicensis* and Rose-ringed Parakeet *Psittacula krameri*) and species colonising Britain as a result of wider, in some cases pos-



42. The decline of Eurasian Bitterns *Botaurus stellaris* in Britain has been successfully reversed through habitat management of reedbeds by conservation organisations. Not only have existing reedbeds been restored to provide suitable conditions for Eurasian Bitterns and other reedbed species, but a strategic network of reedbeds has been created away from areas of the coast where a number of important existing reedbeds are threatened by sea-level rise.

sibly climate-related, shifts in distribution (Little Egret *Egretta garzetta*, Mediterranean Gull *Larus melanocephalus* and Cetti's Warbler *Cettia cetti*). One of the most spectacular colonisation events has been that by Collared Doves *Streptopelia decaocto*, following their rapid expansion across Europe. The reasons for this change in distribution are unclear.

#### *The next 50 years: challenges and opportunities*

As we see it, the future provides both great opportunities and great challenges in our small, heavily populated island. The key challenges are how to maintain habitats in suitable condition for priority bird species and diverse bird communities in the face of climate change, increased demand for water, development of new energy sources, increases in recreational activity and the possibility of further intensification of agriculture. The big opportunities are the potential to increase the area of high-quality habitat for birds and other wildlife through habitat creation, both to replace habitat previously lost and to help mitigate damaging effects of climate change.

As described earlier, much semi-natural

habitat of high conservation value for birds now has some form of conservation designation. The strengthening of SSSI legislation should ensure that these areas are both protected from damaging operations and managed in ways that benefit the wildlife for which they were notified. Despite this, we can still expect pressure on protected areas to grow as societal demands increase. It is, however, important to recognise the ecological reality of nature reserves and other protected areas in Britain. Especially in the inland lowlands, most of these 'special places' are just small fragments of habitat. They are often isolated from other patches of similar habitat, and lie within intensively managed and increasingly developed landscapes. Hence, the habitat quality within reserves is vulnerable to problems that have their sources beyond the reserve boundary. These include, for example, effects from agricultural chemicals, eutrophication and atmospheric pollution, while much ancient woodland is under growing pressure from deer, (*Cervidae*), which use the landscape on a scale far larger than individual woods. Part of the solution to these problems is to create reserves on as large a scale as possible (see below).

**Box 3.** Examples of land management techniques used to improve the conservation status of birds in the UK: freshwater wetlands.

Habitat	Management: aim and approach	Target species	Where undertaken
Reedbeds	<i>Aim:</i> Maintenance of open reedbeds with summer-wet reed and open water. <i>Approach:</i> Scrub removal, raising water levels and excavating waterbodies, and creation of new reedbeds.	Birds characteristic of reedbeds and the reed/open-water interface. Eurasian Bittern <i>Botaurus stellaris</i> in particular <sup>2</sup> , also Marsh Harrier <i>Circus aeruginosus</i> , <i>Acrocephalus</i> warblers and Bearded Tit <i>Panurus biarmicus</i> .	Principally on reserves in lowland and coastal England, e.g. Leighton Moss (Lancashire) and Minsmere (Suffolk) all receive ongoing, intensive management.
	<i>Aim:</i> Creation of open reedbeds with summer-wet reed and open water on land of low conservation value. <i>Approach:</i> Establishment of Common Reed <i>Phragmites australis</i> , landforming and manipulating water levels on former mineral extraction sites, peat diggings and former arable land.	As above.	On reserves; newly established, large-scale reedbeds include Avalon Marshes (Somerset) and Lakenheath Fen (Suffolk).
Wet grasslands and associated shallow water <sup>a,b</sup>	<i>Aim:</i> Provision of suitable grassland swards in winter – sward height and vegetation type important. <i>Approach:</i> Manipulation of grazing levels and in some cases fertilising of swards.	Wintering geese and Eurasian Wigeon <i>Anas penelope</i> .	Principally on reserves in lowland and coastal areas, e.g. Slimbridge (Gloucestershire), Loch Gruinart (Islay).
	<i>Aim:</i> Provision of shallow, winter flooding on grassland. <i>Approach:</i> Raising water levels and grazing to maintain suitable vegetation structure.	Wintering waterbirds, especially dabbling ducks including Eurasian Wigeon, Eurasian Teal <i>A. crecca</i> and Shoveler <i>A. clypeata</i> .	Principally reserves in lowland and coastal areas, e.g. Berney Marshes (Norfolk) and West Sedgemoor (Somerset).
	<i>Aim:</i> Creation and maintenance of grassland with high spring water levels and suitable sward structure on wet grasslands. <i>Approach:</i> Manipulating (principally raising) water levels and grazing/mowing regimes, and excavation of shallow waterbodies.	Breeding wildfowl, Northern Lapwing <i>Vanellus vanellus</i> , Common Snipe <i>Gallinago gallinago</i> , Black-tailed Godwit <i>Limosa limosa</i> , Common Redshank <i>Tringa totanus</i> and Yellow Wagtail <i>Motacilla flava</i> .	Both on reserves and in the wider countryside through agri-environment schemes; generally far more successful on reserves <sup>1,3</sup> , e.g. Nene Washes (Cambridgeshire) and Holkham (Norfolk).
	<i>Aim:</i> Creation of wet grassland on former arable land. <i>Approach:</i> Sward establishment through natural regeneration or seeding, landforming, raising water levels; then ongoing management as described above.	Breeding waders and wintering waterbirds (see above)	Principally on reserves, e.g. Berney Marshes (Norfolk) and Otmoor (Oxfordshire).

Key: <sup>a</sup> Difficulty in locating suitable graziers may be an issue (see Box 1). <sup>b</sup> Prevention of disturbance on these wetlands has also been essential to increasing bird numbers.

References: <sup>1</sup> Ausden & Hirons 2002; <sup>2</sup> Gilbert *et al.* in prep.; <sup>3</sup> Wilson *et al.* 2007.

Many species that occur in protected sites have far larger populations outside them. The state of the wider countryside is therefore crucial to the status of many species. Here, the situation is much less satisfactory and the future is uncertain. The carrying capacity of much of our farmland for breeding birds has been greatly reduced in recent decades. Agri-environment measures and set-aside may have

stemmed the declines but, as yet, there is little prospect of widespread restoration of populations to pre-1970 levels. Several specialised woodland birds are also declining, and those that tend to be doing well are widespread residents (Hewson *et al.* 2007). Although hedgerow planting is now widespread and growing demand for woodfuel could result in large-scale expansion of coppicing (with potential benefits



43. There are great opportunities for creating large, new wetlands in Britain. This photograph shows reedbed and open water created on carrot fields at RSPB Lakenheath Fen Reserve in Suffolk. This wetland has been colonised by breeding Common Cranes *Grus grus*, Marsh Harriers *Circus aeruginosus* and Bearded Tits *Panurus biarmicus* within 12 years of the start of habitat creation.

for several declining woodland birds), we remain a long way from achieving an integrated, landscape approach to conservation (Adams 2003; Lindenmayer *et al.* 2008). The tendency is still to think in terms of conserving particular habitat types rather than developing approaches that recognise the importance of landscapes consisting of rich mixtures and gradients of habitats. This is important because many species depend on transitional zones between different habitats or use several habitat types within landscapes.

The future direction of agriculture will be determined by events on a global scale. World food shortages will result in ever more production being squeezed out of our farmland. The end of the set-aside era in late 2007 signalled that over-production of cereals no longer requires regulation. Moreover, energy crops are also now competing with food crops for land. The pressures on global food production will intensify as a consequence of climate change coupled with growing human populations. A new era of habitat loss and increasingly intensive agriculture is not implausible. It is therefore questionable whether agri-environment schemes can be sustained at high levels under such scenarios of large economic and political change. Most schemes rely on costly management techniques to soften the impacts of intensive farming. Some farmers may want to continue managing their

semi-natural habitat.

In a thought-provoking paper, Sutherland (2004) suggested that agri-environment schemes may be increasingly unable to compensate for ever more efficient farming. This could result in the emphasis of government support switching to restoration of semi-natural habitats. The UK Biodiversity Action Plan postulates that conservation should seek to create larger areas of habitat, and there are signs of this approach emerging on the ground, delivering not only biodiversity, but also wider benefits for society (i.e. ecosystem services). We conclude this article by discussing issues surrounding the future of nature reserves and large-scale habitat creation which would be central to the development of such a strategy. Before doing so, however, it is important to consider climate change, which is currently dominating much of our thinking about the future of habitat conservation in Britain.

#### *The overarching implications of changing climate*

The effects of climate change will be fundamental to bird conservation (and much else besides) during the twenty-first century. Predictions suggest that a 3°C rise in global temperatures above those of pre-industrial times will result in an average northeasterly shift in *potential* distributions of European bird species of

cropped land in ways that are broadly beneficial to wildlife, either by continuing with the sort of measures applied through agri-environment schemes, or through organic farming. But for the majority, agri-environment schemes could become an economic non-starter as commodity prices rise. In the medium and longer term, it may be that greater conservation gains can be made by attempting to restore and create areas of more permanent



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44. Current predictions suggest that Britain will become climatically suitable for a number of breeding bird species which currently have more southerly distributions. Examples of these include Purple Heron *Ardea purpurea* (shown here), Short-toed Eagle *Circaetus gallicus*, Tawny Pipit *Anthus campestris* and Woodchat Shrike *Lanius senator*. However, although the climate may become suitable for them, these species will only colonise Britain if there is also suitable habitat for them, and sufficient 'surplus' of individuals to colonise Britain from the Continent.

nearly 550 km (Huntley *et al.* 2007). In Britain, these changes in distribution are predicted to cause the extinction or large-scale decline of many more-northerly bird species, the potential colonisation of those with more-southerly distributions, and changes in the British range of many other species (Huntley *et al.* 2007).

Whereas a loss of 'climate space' (the area with suitable climatic conditions) for a species will inevitably result in its disappearance from that area, it does not follow that a corresponding gain in climate space will necessarily result in colonisation. This is because colonisation requires appropriate habitat within the new climate space. Most European bird species are themselves relatively mobile and able to colonise new areas as they become suitable, although there are variations in dispersal ability among species. The same is not true for plants and other animals that make up their habitat. For example, although the climate space of Dartford Warblers *Sylvia undata* may shift northwards, the species will not be able to

exploit those new areas unless there are tracts of acceptable heathland or other suitable habitat already present there. Similarly, although the climate space of Little Bustards *Tetrax tetrax* may in future include southern England, Little Bustards are only likely to colonise southern England if it contains suitable areas of low-intensity managed farmland and open, dry grasslands for them to inhabit. Colonisation of Britain by southern species also assumes that the species has the behavioural capacity to disperse across the sea and that there are sufficient 'surplus' individuals to expand out of the existing range.

The need to embrace change more fully, both to minimise its negative consequences and to maximise its positive ones, will necessitate a fundamental shift in thinking within conservation. Until now, the aims of conservation have usually been to perpetuate, or seek to re-create, existing habitats and assemblages of species. This has effectively been done by looking to the past to help define what we want to achieve in

**Box 4.** Examples of land management techniques used to improve the conservation status of birds in the UK: coastal habitats.

Habitat	Management: aim and approach	Target species	Where undertaken
Saline lagoons	<i>Aim:</i> Creation and maintenance of semi-permanent saline waterbodies and nesting islands. <i>Approach:</i> Excavation, control of water levels and salinity, and vegetation management on islands.	Breeding Avocet <i>Recurvirostra avosetta</i> , other wintering and breeding waterfowl.	Principally on coastal reserves, mainly eastern England, e.g. Havergate Island and Minsmere (Suffolk).
Saltmarsh <sup>a</sup>	<i>Aim:</i> Creation of variation in vegetation structure on saltmarsh. <i>Approach:</i> Manipulation of grazing.	Breeding Common Redshank <i>Tringa totanus</i> .	Principally on reserves, e.g. Snettisham (Norfolk).
	<i>Aim:</i> Provision of short- to medium-length, grassy swards. <i>Approach:</i> Manipulation of grazing.	Wintering geese and Eurasian Wigeon <i>Anas penelope</i> .	Principally on nature reserves.
	<i>Aim:</i> Re-creation of saltmarsh and mudflat. <i>Approach:</i> Breaching of existing seawalls, usually with new seawalls built further inland (managed re-alignment).	Sometimes involves excavation of creeks, infilling of existing ditches and creation of islands. Wintering waterfowl and breeding Redshank.	As part of flood defence schemes, with the subsequent habitat managed as a nature reserve, e.g. Tollesbury (Essex), Freiston Shore (Lincolnshire), Nigg Bay (Highland).

Key: <sup>a</sup> Difficulty in locating suitable graziers may be an issue (see Box 1).

the future. For example, two of the three criteria for defining the highest level of conservation concern afforded to birds in the UK are (i) whether they have suffered a large recent population decline, and (ii) whether they have declined historically and not shown a substantial recent recovery (Gregory *et al.* 2002). Similarly, objectives for SSSIs aim to conserve, or restore, the interest for which SSSIs were originally notified. Eventually, this change in thinking will have to involve the re-evaluation of conservation priorities. These will need to assess for which species, assemblages of species, and habitats the UK is likely to remain, or become, important.

The uncertainty of climate-change predictions, and the response of wildlife to them, increases the difficulty of planning future management of existing habitats and the creation of new ones. Hence, a fundamental principle in planning for climate change is to plan for uncertainty, in other words to try to maintain a range of options both within protected areas and within the wider countryside. For example, a case for maintaining diverse forest structures through different management approaches in different locations was made by Fuller *et al.* (2007b). Because we cannot be certain how species will respond to climate change, maintaining habitat heterogeneity at different scales will be essential.

As the climate changes, species will have to move longer distances to colonise climatically suitable habitat. There are two possible strategies to aid the spread of desirable species: increase the 'permeability' of the landscape by providing 'stepping stones' or 'corridors' of suitable habitat (e.g. Donald 2005, Crooks & Sanjayan 2006); or translocate species between areas of suitable habitat. Increased permeability should assist the dispersal of more mobile species within the matrix of the wider countryside. An example of a strategic network of stepping stones already in place is the network of reedbeds suitable for Bitterns created away from vulnerable areas of the coast through two EU Life Bittern Projects. However, the scale of creation of semi-natural habitats necessary to significantly increase the dispersal of most non-avian species confined to many semi-natural habitats seems unrealistic. A more practical option will be to create large blocks of semi-natural habitat where possible, and accept the greater need for translocations of less mobile species (mainly plants and other non-avian fauna) between existing and new blocks of habitat.

#### *Reserves and protected areas – future roles* *Managing existing nature reserves and other protected areas*

The management of nature reserves will need to

play an increasingly important and complex role in helping to maintain suitable habitat, both for existing species where Britain remains within their climate space, and for potential future colonists. There is some evidence that many species, especially plants and insects, show more exacting patterns of habitat use towards the edges of their climatic range (e.g. Bourn & Thomas 2002, Gaston 2003). Clear examples for birds are less easy to identify, but it seems likely that being close to the edge of the range does affect the habitat use and population dynamics of some species (Fuller *et al.* 2007a), and this may have significant implications for reserve management.

The changing distributions of wildlife will become an increasingly difficult issue for our systems of protected areas, which have generally aimed to maintain existing wildlife interest rather than cater for colonising species. The overall aims of the Birds and Habitats Directives are well suited to meeting the challenges of site protection in the face of climate change (e.g. Sutherland *et al.* 2005). These Directives will have to be applied in ways that allow particular sites to change in importance for many of the species for which they were originally notified, as the climate becomes unsuitable for them, without compromising the integrity of the site network as a whole. For example, some populations of wintering waders have declined on estuaries in southwest Britain, as more birds remain on the (increasingly mild) east coast (Rehfishch *et al.* 2004; Austin & Rehfishch 2005). How should the number of birds that these sites aim to support be redefined, yet still inform us as to whether they are subject to other unfavourable changes in conditions, such as an increase in human disturbance? Sites should not be denied protection merely because perceived 'key species' decline or disappear from them. The network of protected sites constitutes the core of high-quality semi-natural habitat in Britain, which will remain important in the future, even though the biological communities may be rather different.

Decision-making on individual reserves will also have to establish for which species suitable conditions should be maintained, and when to cease providing these conditions, as climate becomes increasingly unsuitable for them. The idea of 'giving up' on a species as it heads towards extinction at a particular site is one that many conservationists might find difficult to

come to terms with.

In some cases, habitat management has the potential to mitigate damaging effects of climate change on birds. One of the most likely examples involves the management of lowland wet grassland in southern England for breeding waders, which require high water levels in spring and early summer. Water levels are predicted to fall more rapidly in southern England in late spring and summer owing to decreased rainfall and increased evaporation and transpiration caused by higher temperatures. However, water can be abstracted in winter and stored in specially constructed reservoirs, then used to maintain high water levels in late spring and early summer.

#### *Creating new habitat: a wetland perspective*

The greatest opportunities for creating valuable habitat for birds in lowland Britain are currently through wetland creation. These new wetlands can replace previously lost freshwater wetlands, compensate for loss of intertidal and coastal freshwater habitats due to sea-level rise, and provide sufficient habitat to enable birds to exploit their future climate space.

A large proportion of freshwater reedbeds important for birds are in coastal areas of East Anglia, where most are already threatened by seawater incursion. Replacement freshwater reedbeds need to be, and are currently being, created at less threatened sites, to provide replacement habitat before existing areas are lost. Saline lagoons will also be lost because of sea-level rise. In this case, in terms of creating new habitat it is difficult to find suitable coastal areas that are not themselves imminently threatened by sea-level rise.

There is considerable potential to create bird-rich wetlands through careful design of mineral extraction sites, as for example at the RSPB-Hanson wetland project at Ouse Fen, Cambridgeshire. There is also potential to create large-scale wetlands on arable and agriculturally improved grassland. The high soil fertility of such agriculturally improved land is a major constraint in restoring botanically rich meadows and fen, but valuable wetland habitats for birds can still be created on relatively nutrient-rich soils.

Areas of newly created wetland need to be large and, where practical, to extend the size of existing wetlands. There are already a number of medium- to large-scale wetland projects

underway (see [www.wetlandvision.org.uk](http://www.wetlandvision.org.uk)). Larger areas of wetland have the potential to attract species currently absent from, or rare in, our usually small fragments of remaining wetland. Beneficiaries could include breeding Little Bittern *Ixobrychus minutus*, Night Heron *Nycticorax nycticorax*, Great White Egret *Ardea alba*, Purple Heron *A. purpurea*, Eurasian Spoonbill *Platalea leucorodia*, White-tailed Eagle *Haliaeetus albicilla*, Common Crane and Great Reed Warbler *Acrocephalus arundinaceus*. Areas of lowland wet grassland need to be sufficiently large that they are not intensively hunted over by Red Foxes *Vulpes vulpes*, which are supported in high numbers by adjacent farmland. Red Foxes can be important nest predators of breeding waders on these wet grasslands (Bolton *et al.* 2007). Importantly, larger blocks of habitat are also far cheaper to manage per unit area than smaller blocks of habitat (Ausden 2007). Larger areas of habitat should also be more inspiring and capture the public imagination.

There are two main practical constraints to the creation of large wetlands. The first is securing suitably large areas of land that are free of existing infrastructure, outside of airport bird-strike safeguarding zones, and which have

a sufficient current and predicted future water supply. The second is obtaining sufficient funding for the high costs of land acquisition and future management. There may also be constraints in terms of soil type, for example creation of wet grassland suitable for breeding Common Snipe and Black-tailed Godwits is far more successful on peat soils. Locating suitable areas with relatively undegraded peat is a major constraint to creating suitable conditions for these species in the lowlands. Despite the lower unit costs of managing larger sites, their long-term management costs will still be high. Hence there is a need to design wetlands so that they will be cheap to manage.

#### 'Cultural' or 'naturalistic' approaches to habitat creation?

There are two extremes of approach to the management of re-created wetlands and most other habitats, and these will influence how the habitat is designed. The first is to re-create cultural habitats – those created and maintained by human resource use, such as reedbeds managed by reed-cutting. Maintaining suitable conditions for birds and other wildlife using such 'traditional' forms of land management is



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**45.** Large areas of intertidal habitat will have to be created to compensate for the areas predicted to be lost as a result of sea-level rise. At RSPB Exe Estuary Reserve, Devon (above), a diverse mix of permanent brackish water, intertidal mud and saltmarsh has been created on a uniform area of dry grassland. This site, although small, supports impressively high densities of wildfowl, Little Egrets *Egretta garzetta*, Eurasian Curlews *Numenius arquata* and a variety of other waders.

often expensive, since these types of management are rarely economic. The other approach is to introduce the key natural processes that influence habitat conditions, principally naturalistic grazing by large herbivores and, in the case of wetlands, near-natural fluctuations in water levels, and then manage these areas with minimal further human intervention and little or no preconceived outcome. This naturalistic approach is highly alluring (e.g. Whitbread & Jenman 1995, Kampf 2000) and is exemplified by management of the Oostvaardersplassen in the Netherlands.

In considering the merits of a more naturalistic approach, it is useful to distinguish between 'original-natural' conditions and 'future-natural' conditions (see Peterken 1981). Original-natural conditions are the state that existed early in the current post-glacial period prior to human influence and represent the conditions that many would like to attain. There is, however, debate about what these landscapes actually looked like. Were they more or less continuous forest, or did they more frequently take the form of dynamic mosaics of forest and open patches (Vera 2000; Svenning 2002; Kirby 2004; Hodder *et al.* 2005)? Future-

natural conditions are those that would eventually develop if human influence was permanently removed. Future-natural conditions will in most cases be quite different from original-natural conditions, because of changes to the underlying conditions and differences in the complement of species already present in a given area. Arable or agriculturally improved grassland usually lacks the variation in soil conditions and micro-topography that probably existed under original-natural conditions. Nutrient levels and hydrology would be substantially different and potential plant and animal colonists will have been grossly modified by millennia of human activity. Hence, the habitats that develop on such land, even though using a naturalistic approach, will be quite different from those that occurred under original-natural conditions. There is a considerable risk that relatively uninteresting habitat of limited value for birds and other wildlife would be created, unless sites were chosen where the initial levels of topographic and habitat diversity were reasonably high.

Given the high costs of land acquisition, and limited opportunities for large-scale habitat creation, it is important that created wetlands



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46. Shifts in the distribution of birds as a result of climate change will require the re-evaluation of conservation priorities. For example, Britain is predicted to become increasingly important for its population of Dartford Warblers *Sylvia undata*, while large areas of their existing range in Spain become climatically unsuitable for them.

provide suitable conditions for a diverse range of birds and other wildlife. This can be achieved by managing sites more extensively, mainly through grazing, and by avoiding labour-intensive, 'traditional' forms of vegetation management. Importantly, these sites need to be actively designed to maximise the benefits of extensive management. In the case of wetlands, this involves landforming to create variation in topography and thereby in hydrological conditions. This variation can be used to accentuate differences in grazing intensities and hence in vegetation composition and structure. Engineering this variation will create a diversity of conditions that are different from, but nonetheless mimic, the habitats that we think would have existed under original-natural conditions. If suitably designed, these wetlands have the potential to be cheap to manage – a pre-requisite if large-scale wetland restoration is to be realised.

Even though it is possible to reduce the unit costs of managing newly created habitats, very large-scale (re-)creation of wetlands will still cost large sums of money, especially for land acquisition – although these costs are likely to be small compared with the biodiversity and potential ecosystem service benefits of these sites. These funds are only likely to be available through partnerships, and especially by integrating wildlife conservation with other benefits to people associated with habitat creation (Sutherland 2004). These 'ecosystem goods and services' include increases in human spiritual and physical well-being, carbon sequestration, flood alleviation, water purification and production of commodities. Although it is widely claimed that near-natural, and semi-natural, habitats, especially wetlands, can deliver ecosystem services of high financial benefit, there is little good-quality information to substantiate this. In practice, the financial benefits of ecosystem services will vary greatly from site to site, making it difficult to generalise on the value of ecosystem benefits of any one type of habitat. For example, the flood alleviation benefits of a wetland will vary depending on whether or not it is connected to a river floodplain, its size, and whether or not there is a large downstream habitation at risk of flooding. Defining the potential financial and social benefits that could accrue from large-scale habitat creation will be vital for gaining the wider support essential for turning visions into reality.

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# The social and communication behaviour of the Great Black-headed Gull

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Martin Elliott

**ABSTRACT** The social behaviour and vocalisations of the Great Black-headed Gull *Larus ichthyæetus* were studied at breeding colonies in northern Kazakhstan and in Turkmenistan, along the southeast shore of the Caspian Sea. These are described in this paper, and related to the unusual social organisation at breeding colonies, where intraspecific predation and infanticide are widespread. Aspects of signalling behaviour are also discussed in relation to the taxonomic position of the species.

This paper describes the social and communication behaviour of the Great Black-headed Gull *Larus ichthyæetus* at breeding colonies, with particular reference to the rather peculiar social organisation of the species. For example, the typically high density of birds at breeding colonies leads to a consid-

erable reduction in breeding success owing to a number of density-dependent factors such as intraspecific predation and infanticide (Panov *et al.* 1980; Kostina & Panov 1982; Panov & Zykova 1982, 1987, 2001; Zykova & Panov 1988). The suggested phylogenetic affinities of the species are also examined.

### Study areas and methods

Data were collected in spring (between late March and early June) in the years 1978–80, 1983–84 and 1986–87 at Lake Tengiz (northern Kazakhstan) and in the southeast Caspian Sea area (Kara-Bogaz-Gol Bay and Ogurchinskiy Island, Turkmenistan).

In parallel with other studies, ethological data were gathered to describe the signalling behaviour and communication systems of the species. Observations were conducted and photographs taken from a hide overlooking breeding colonies. A portable tape recorder was used to record both observations and acoustic signals. Some adults in the study colonies were individually marked, and many of the chicks were colour-ringed at these colonies too. In total, 185 hours of observation time was accumulated. Sonograms made from tape recordings were analysed at the Laboratory of Comparative Ethology and Biocommunication of the Severtsov Institute of Ecology and Evolution, using the software A-PC Avisoft-Sonograph. A catalogue of the birds' behavioural repertoire was created using the photographs obtained. All mean values are given with their standard deviations.

### General breeding ecology

The Great Black-headed Gull is one of the world's largest gulls, with a mean weight of c. 1,600 g for males and c. 1,220 g for females. Nesting colonies are almost invariably situated on islands, in flat, bare areas, often only slightly above the water level and sometimes in flooded areas. Nests are distributed unevenly within colonies, the size of which varies greatly, from 20–30 up to 600–700 pairs. Densely populated sections (subcolonies) within large colonies usually occupy slightly elevated places and may number from several nests to many dozens. A negative correlation between the number of nests in a subcolony and the mean minimum distance between them is apparent; in subcolonies with 100 or more nests, the distance between nests is 0.4–0.5 m, while in small clusters of <10 nests it is 1.4–3.2 m (Panov &



Evgeniy Panov

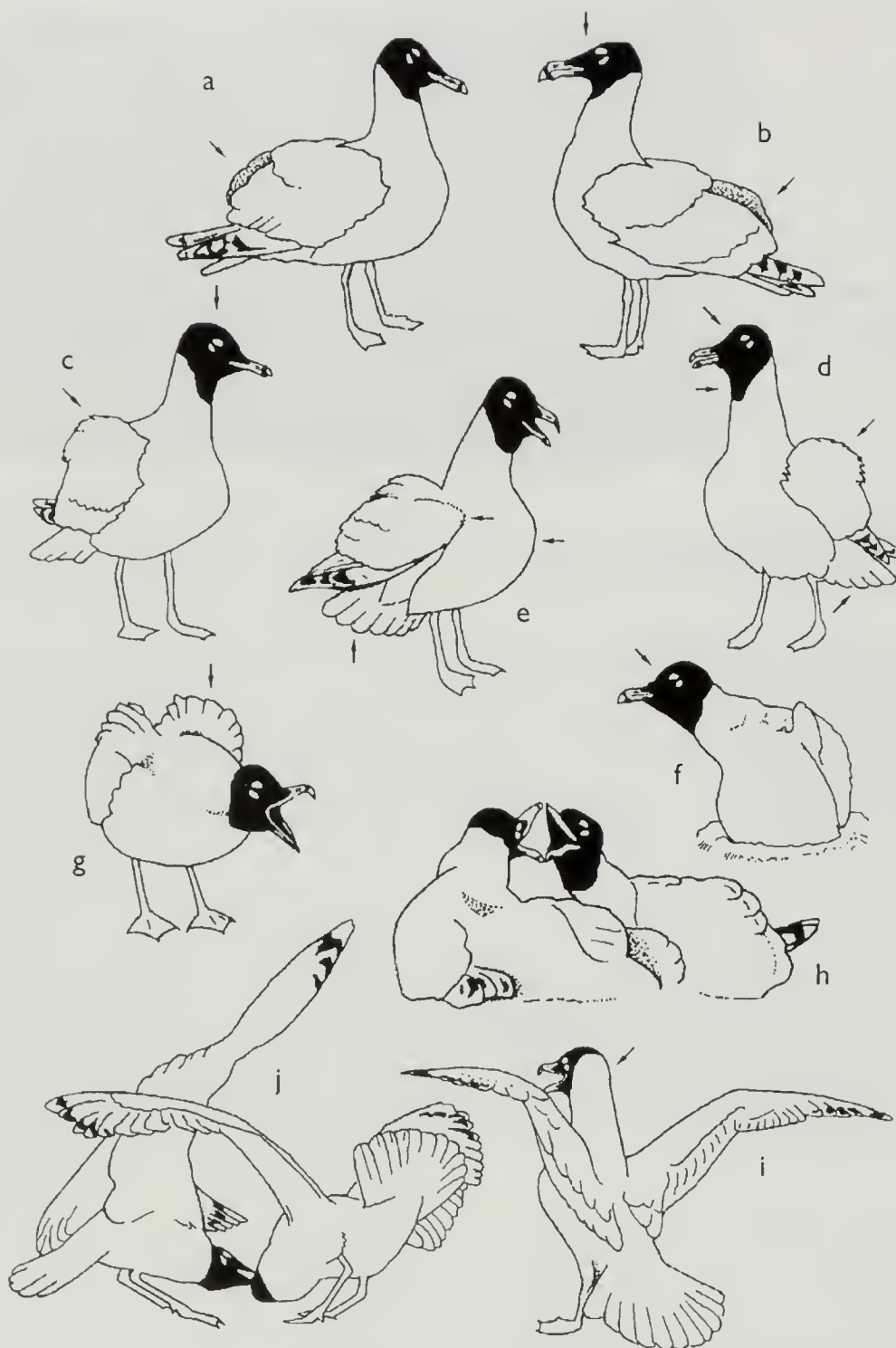
47. Great Black-headed Gull *Larus ichthyaetus* breeding colony, Lake Tengiz, northern Kazakhstan, May 1978.

Zykova 1982). Only very rarely do Great Black-headed Gulls breed in solitary pairs, and these generally occur in colonies of other large gulls, such as Caspian Gull *L. cachinnans*.

Large colonies can be detected from a great distance by the loud chorus of sound produced, while the gulls' plumage also makes the colony conspicuous at long range. On a closer approach, clusters of nests are clearly visible since the nest edges rapidly become white with the droppings of incubating birds. Defecation on the nest edge and the nearly white, non-cryptic coloration of the chicks suggest a lack of adaptation for concealment of the nest and the colony as a whole.

Most clutches are of 2–3 eggs, and a clutch usually hatches over 4–5 days, occasionally up to 7 days (mean  $4.3 \pm 0.5$  days,  $n=15$ ). Breeding pairs in small, less dense subcolonies tend to lead their chicks away from the colony as soon as possible, i.e. 1–4 days after all the eggs have hatched, occasionally even on the day the last egg hatches (mean  $2.3 \pm 1.4$  days,  $n=13$ ). As broods leave, the number of birds remaining in these small subcolonies declines quickly and these groups cease to exist 1–2 weeks after hatching begins. Families from small subcolonies usually move to larger and denser subcolonies, swelling the density of both adults and chicks at the latter. An increase in abundance and density, together with the growing mobility of resident and immigrant broods, leads to a higher rate of aggressive interactions among adults and to a gradual breakdown of social organisation.

When family broods disintegrate and the chicks intermingle, a so-called crèche may form in large subcolonies, often near the centre. Several adults surround the dense group of



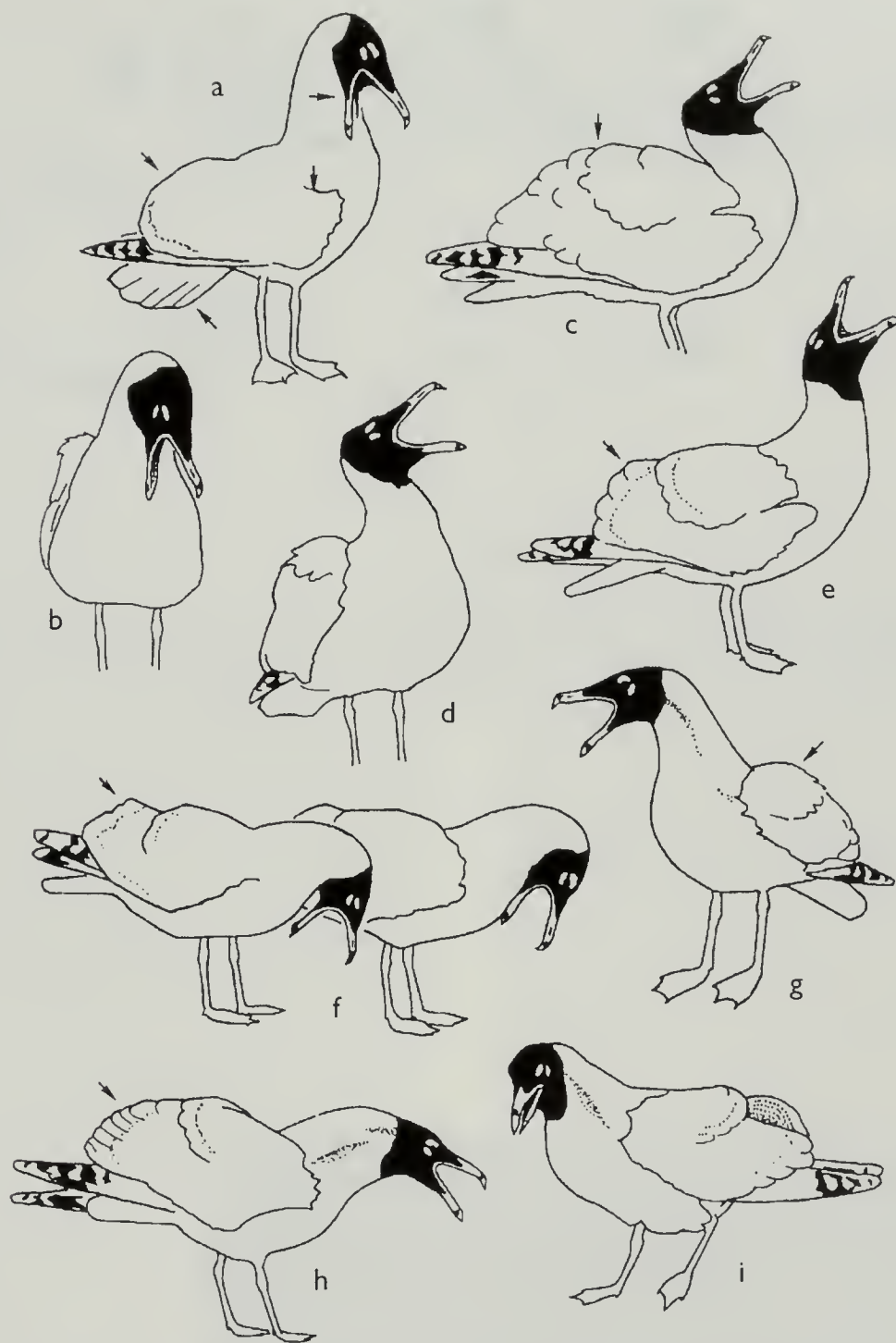
**Fig. 1.** Motor components of the signalling behaviour of Great Black-headed Gull: (a–d) Upright-posture ((a) female, (b) male); (c–e) increasing aggressive motivation; (f) transition to Jabbing (g); (h) mutual threat-behaviour of two incubating birds in adjacent nests; (i) threat with raised wings; (j) fighting (one of the two rivals holds its opponent by the bill). Arrows indicate typical features of display-postures ([variable] ruffling or raising of feathers, etc.).

chicks at these sites, although there is regular interchange of such adults. In due course, such crèches may start to move slowly towards shallow-water areas, and the chicks will enter the water in an emergency. Broods from different subcolonies may join the crèche as the juveniles grow older. Crèches, like breeding colonies themselves, are characterised by a high density of birds and a large number of antagonistic contacts (Kostina & Panov 1982).

Great Black-headed Gulls thus tend to remain in compact aggregations throughout the breeding cycle. This constant high density governs the social climate, which itself provides the background for communication in breeding colonies.

#### *The mating stage of the breeding cycle*

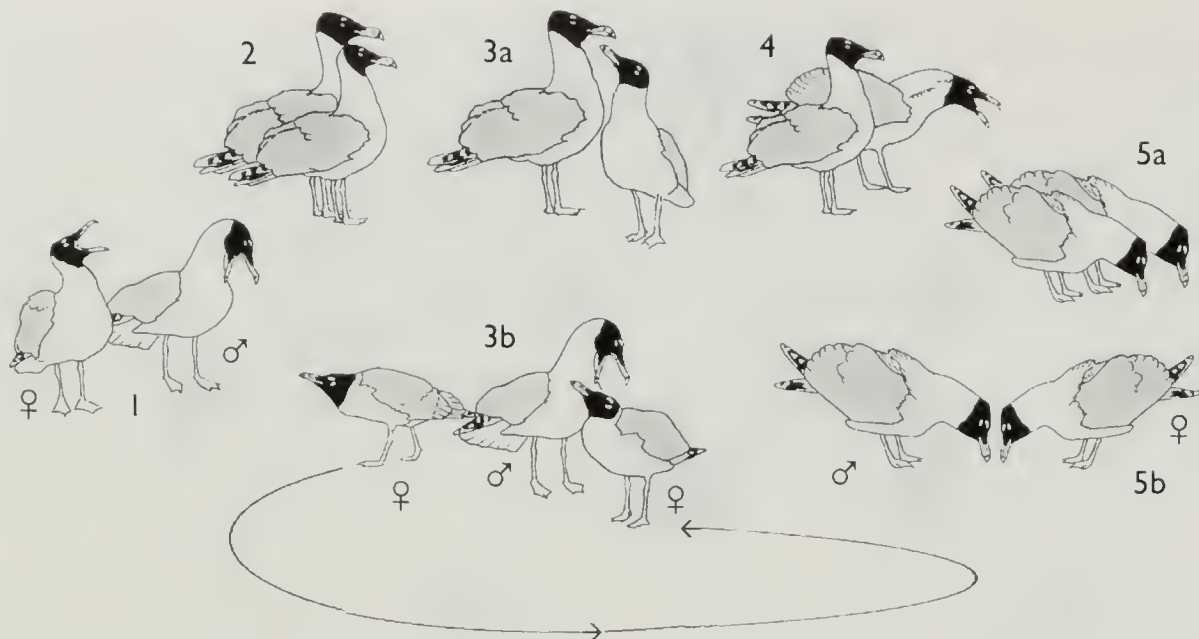
Great Black-headed Gulls are often already paired when they arrive at spring 'club' (pre-



**Fig. 2.** Motor components of Long-call and Mew-call displays in Great Black-headed Gull: (a, b) first phase during typical Long-call; (c, d) second phase; (e) third phase; (f) untypical variant of Long-call display with elements of Mew-call (given simultaneously by a male (in background) and a female (in foreground)); (g) Mew-call with body in vertical position; (h, i) typical Mew-call. Arrows indicate typical features of display-postures, as fig. 1.

breeding) sites, before moving to the breeding colony proper, so it can be assumed that pair-formation begins in late winter. In 1980, between 22nd March and 6th April, compact groups of 10–20 individuals and loose aggregations of up to 150 gulls were observed in Kara-Bogaz-Go! Bay. A few single birds were also observed in clubs of Caspian Gulls. Birds in a compact aggregation often maintained the Upright-posture (fig. 1) for long periods. Con-

stantly given Long-calls (fig. 2) sometimes merged into a continuous chorus resembling a loud roar, which could be heard in the evenings, even in complete darkness. Passing conflicts often arose between group members and followed in series as a chain reaction. The successful attacker occupied the place of the victim, the latter moving within the group and thus provoking another conflict. Attempts at aggression are sometimes observed in birds



**Fig. 3.** Behaviour of male and female during pair-formation: (1) mutual performance of Long-call display; (2) pair-members in identical Upright-postures (female shows white nape and back of head); (3) female walks around male while Head-tossing from (a) Upright- or (b) Hunched-posture; (4) male gives Mew-call; (5) two variants (a, b) of nest-site selection ceremony. In the upper row the female is always in the foreground.

sitting in isolation and appearing to be a pair. Another type of interaction in clubs is copulation. On 6th April, between 07.10 and 08.10 hrs, at least 15 copulations were recorded in one club. Those few pairs that spent at least some time isolated, away from the dense groups, were also seen to copulate.

During this period, we observed no prolonged interactions that could be treated as mating ceremonies and nest-site selection. The schematic representation of the presumed succession of events during pair-formation (fig. 3) is deduced from two observation periods at a more advanced stage of the breeding cycle.

These presumed episodes of pair-formation were observed in a colony at the incubation stage (Ogurchinskiy Island, 26th April 1984) and in another colony where most pairs already had young (in the same area, 19th May 1983). In both cases, the male and female involved were individually recognisable and observed for 2 hrs 20 min and 55 min, respectively (for details, see Panov & Zykova 2001).

#### Formation of breeding colonies

When selecting the site for a future colony, birds keep in twos and show no signs of wanting to be isolated from other similar 'pairs', instead gathering in close groups of perhaps 6–8 birds. For birds in such aggregations, Upright-postures and interactions including synchronous Ground-touching with the bill by two birds are characteristic (fig. 3: 5a, 5b). During such a ceremony, a third gull, or more individuals, will try to join the main participants. This causes constant conflicts, which are unpredictable and chaotic. The aforementioned displays are prob-



**48.** Great Black-headed Gull *Larus ichthyæetus* breeding colony, Kara-Bogaz-Gol, northwest Turkmenistan, May 1979.

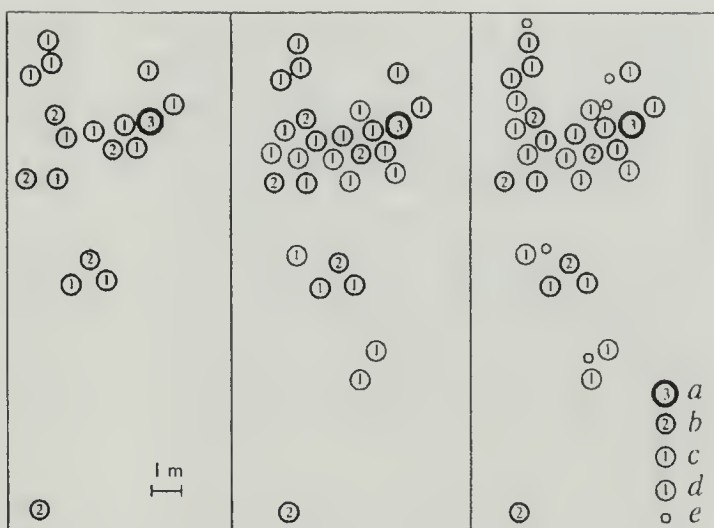
ably aimed at nest-site selection. Their quasi-collective character leads to the first nests in a colony typically being grouped in dense clusters; nests built later are situated on the periphery of such clusters and/or between them (fig. 4; see also fig. 2 and p. 890 in Panov & Zykova 1987).

A high degree of laying synchrony is probably due in large part to the fact that copulation is stimulated in several pairs in a type of chain reaction, these interactions often occurring in sequence among adjacent pairs in the colony. Some males will copulate with a female while she is sitting on the nest. Copulation is prolonged and is accompanied intermittently by the male's energetic wing-flapping and muffled rhythmic calls. During copulation, the female jerks her head upwards. At this stage, mutual threats and short conflicts are frequent in the colony (e.g. c. 30 episodes in a colony of 25 nests on 6th April 1979 between 15.00 and 17.00 hrs).

Breeding pairs construct the nest by bringing in aquatic plants such as seaweed but also by stealing material from neighbours. Both partners participate in nest-building and, on arrival at the colony, a bird will pass seaweed to its partner or toss it aside at some distance from the nest, which other pairs will then use for their own nests. Those females which come into breeding condition a little later than others will lay their eggs in an unlined depression, after which the pair gradually adds material to the nest. This means of adjusting laying date to match the timing of breeding of pioneer pairs enhances breeding synchronisation in a dense cluster of nests.

#### Incubation and hatching

In those clusters of nests where breeding is highly synchronised, the general social situation stabilises with the onset of incubation. Typically, only a small proportion of off-duty birds



**Fig. 4.** Temporal pattern of nest-site occupation by Great Black-headed Gull pairs, Ogurchinskiy Island, southwest Turkmenistan, 15th April 1987: (a) nest of 'founding pair', with three eggs; (b, c) nests with material, with two eggs and one egg, respectively; (d) unlined nests with one egg; (e) empty nest-scrapes with no lining or eggs. This colony was abandoned on 14th April 1987, and re-established on 15th, when the order of nest establishment was mapped carefully at three intervals during the day.

(at most 10–20% of those incubating) are present in the colony. These are potential troublemakers, however. Open conflicts usually begin only at the moment when incoming gulls arrive to take over from their incubating partner, and when these birds walk across the colony. These changeovers are comparatively infrequent during the incubation phase; on average, 3.0–3.7 arrivals per 10 minutes in colony N5 (large), 1.3–1.4 arrivals in colonies N7.2 and N7.3 (small; table 1). When a gull



Evgeniy Panov

**49.** Great Black-headed Gull *Larus ichthyæetus* breeding colony, Ogurchinskiy Island, southwest Turkmenistan, May 1984.

walks past close to the nests of others, the owners will threaten it by attacking with open bill (Jabbing; fig. 1). Non-incubating birds may attack a newcomer and so provoke short fights (fig. 1j). These bursts of aggression are usually accompanied by Long-calls from several birds, both participants in the conflict and others. The behaviour varies during changeovers at the nest. The most typical variant is the following: the incoming partner approaches the nest in the Upright-posture – both birds give a Long-call – the male adopts the Mew-call posture – the female starts Head-tossing. Subsequently, the partner that has arrived may regurgitate. If the

female is begging, tossing her head and walking around the male in the Hunched-posture, she may try to take the food directly from the male's throat just when he regurgitates.

The rate of Long-call performances in a colony may be an indicator of the level of social tension in the group and of the intensity of the communication process. If the dynamic density is high, practically all members of a particular sector in the colony participate in the process. Counting Long-calls at different stages of the breeding cycle in colonies with different structural characteristics provides support for this suggestion (table 1, based on 28 hours of

**Table 1.** Rate of aggressive encounters and Long-calls in Great Black-headed Gull *Larus ichthyaetus* colonies of different size and density; Kara-Bogaz-Gol, Turkmenistan, 1979.

No. <sup>1</sup> and type of colony	Number of nests	Mean minimum distance between nests (m)	Stage of breeding cycle <sup>2</sup>	Overt aggression <sup>3</sup> (mean ± SD and range)	Long-calls <sup>4</sup> (mean ± SD and range)
N5 Dense	102	0.44	Incubation (n=19)	3.4 ± 2.0 (0–9)	6.8 ± 4.4 (0–15) **
			Onset of hatching (n=12)	2.0 ± 1.3 (0–4)	13.3 ± 6.9 (3–22) *
			Mass hatching (n=18)	1.9 ± 2.1 (0–6)	27.9 ± 13.6 (9–55)
N1B Dense	63	0.45	Incubation (n=12)	2.4 ± 1.9 (0–6)	8.3 ± 4.1 (3–17)
			Onset of hatching (n=6)	5.0 ± 5.0 (0–13)	3.7 ± 1.8 (2–7)
			Mass hatching (n=6)	9.7 ± 2.5 (5–12)	38.5 ± 11.3 (21–51)
N7.2 Dense	26	0.49	Incubation (n=34)	0.5 ± 0.7 (0–3)	4.7 ± 3.7 (0–14) ***
			Onset of hatching (n=12)	2.5 ± 2.5 (0–8)	15.7 ± 11.6 (2–39) ***
			Mass hatching (n=9)	–	3.1 ± 3.3 (0–7)
N7.3 Dispersed	31	0.61–1.46 (in different subcolonies)	Incubation (n=27)	0.3 ± 0.5 (0–2)	0.8 ± 1.0 (0–3)
			Onset of hatching (n=6)	0.5 ± 0.8 (0–2)	1.2 ± 1.9 (0–5)
			Mass hatching (n=9)	0.7 ± 2.0 (0–6)	0.9 ± 1.6 (0–5)

Notes:

<sup>1</sup> See Panov & Zykova (1982) for more details.

<sup>2</sup> Figures in parentheses are number of 10-minute observation periods.

<sup>3</sup> Aggressive encounters measured as attacks by off-duty birds on other colony members.

<sup>4</sup> \* P<0.5; \*\* P<0.1; \*\*\* P<0.001 (Mann-Whitney U-Test).

observations); general trends are clear, even though not all the differences are statistically significant. In dense colonies, the rate of Long-call performances increases from incubation to hatching, whereas in loose breeding groups it does not vary with time. The increasing rate of Long-call performances in dense colonies is caused by more frequent arrivals of gulls bringing food for their chicks (e.g. 4.3 arrivals in 10 minutes in colony N7.2 cf. 1.9 arrivals during incubation), and by the increasing aggression of parents striving to maintain the integrity of their brood, both by defending their chicks from neighbouring adults and by preventing unrelated chicks from joining their family group.

#### *Broods in the colony*

The brood stage is characterised by a high rate of interactions, not infrequently with the participation of more than two individuals. In general, the social situation in dense colonies is unstable, with a high level of destructive behaviour. The latter becomes apparent in the high frequency of mutual threats with open bill (mean 11.4 but up to 25 episodes of such Jabbing in 10 minutes, in colony N5), and by attacks, usually on strange chicks, but sometimes on the attacker's own offspring (see Panov *et al.* 1980 and Kostina & Panov 1982 for more detail). In loose, less dense colonies, similar instances of growing social tension and disorganisation are recorded only locally, for example in sectors where intruding Great Black-headed Gulls appear temporarily (such as birds leading their young to a crèche).

The key components of infanticide behaviour are the same as those constituting the standard antagonistic behaviour (Upright-posture with ruffled head and 'back' feathers, and lunges with wide-open bill). The posture of a gull attacking a nestling suggests a high level of aggressive motivation. This aggression is often

intermingled with actions from the repertoire of sexual, nest-building and parental-behaviour patterns. Of 40 documented cases of attacks on chicks, seven were accompanied by a Long-call given just before or after the aggression (i.e. in 4% of 174 situations in which the context of the Long-call was ascertained reliably).

Apart from spontaneous attacks on strange chicks, systematic attacks on a juvenile by the adults tending it were observed frequently. Many such attacks resulted in the death of the chick; in rare cases, it survived (for further details, see Kostina & Panov 1982). The chick may have been either a stranger adopted by the pair or the adults' own offspring. Even though in such situations adults will brood the chick and feed it from time to time equally with other brood members, there are instances when this parental behaviour suddenly becomes aggressive. A typical sequence of the aggressor's actions in such cases is as follows: Stare-down – incipient pecking movement – touching the chick's head with closed bill (all these are analogues of movements during nest-site selection) – seizing the chick's head in the open bill – shaking the chick and throwing it in the air (as in cases of open, spontaneous aggression against young mentioned above). Sometimes, having pecked at the chick's head, the attacker unexpectedly follows this by performing movements that normally precede the feeding of a nestling. For further discussion of this 'mosaic structure' of parental and aggressive behaviour in



Evgeniy Panov

50. Great Black-headed Gull *Larus ichthyaetus* chicks with unhatched egg, Ogurchinskiy Island, southwest Turkmenistan, May 1984. Note the uniformly light plumage of the downy chicks, which is a distinctive character of this species. A similar appearance is found only in Ross's Gull *Rhodostethia rosea*, kittiwakes *Rissa*, and Relict Gull *L. relictus*.

Evgeniy Panov



51. Adult Great Black-headed Gull *Larus ichthyaetus* feeding chicks, Ogurchinskiy Island, southwest Turkmenistan, May 1984.

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52. Adult Great Black-headed Gull *Larus ichthyaetus* killing small chick, Ogurchinskiy Island, southwest Turkmenistan, May 1984. Note dead chick lying to the right of the chick being attacked.

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53. Great Black-headed Gulls *Larus ichthyaetus* jabbing, Ogurchinskiy Island, southwest Turkmenistan, May 1984. Note two dead chicks lying in the foreground.

Evgeniy Panov



54. Great Black-headed Gull *Larus ichthyaetus* crèche, Ogurchinskiy Island, southwest Turkmenistan, May 1984. Note that some chicks are marked with dye for research observations.

Great Black-headed Gulls towards their own offspring, see Kostina & Panov (1982, p. 1535 and fig. 4). Aggression of adults towards the young may be combined with 'altruistic' acts, for example when an adult attempts to protect a neighbour's chicks from aggression and thus leaves its own brood unguarded. Such behaviour frequently causes chaotic conflicts, with the participation of four or five adults; such encounters proceed as a chain reaction.

#### *The crèche*

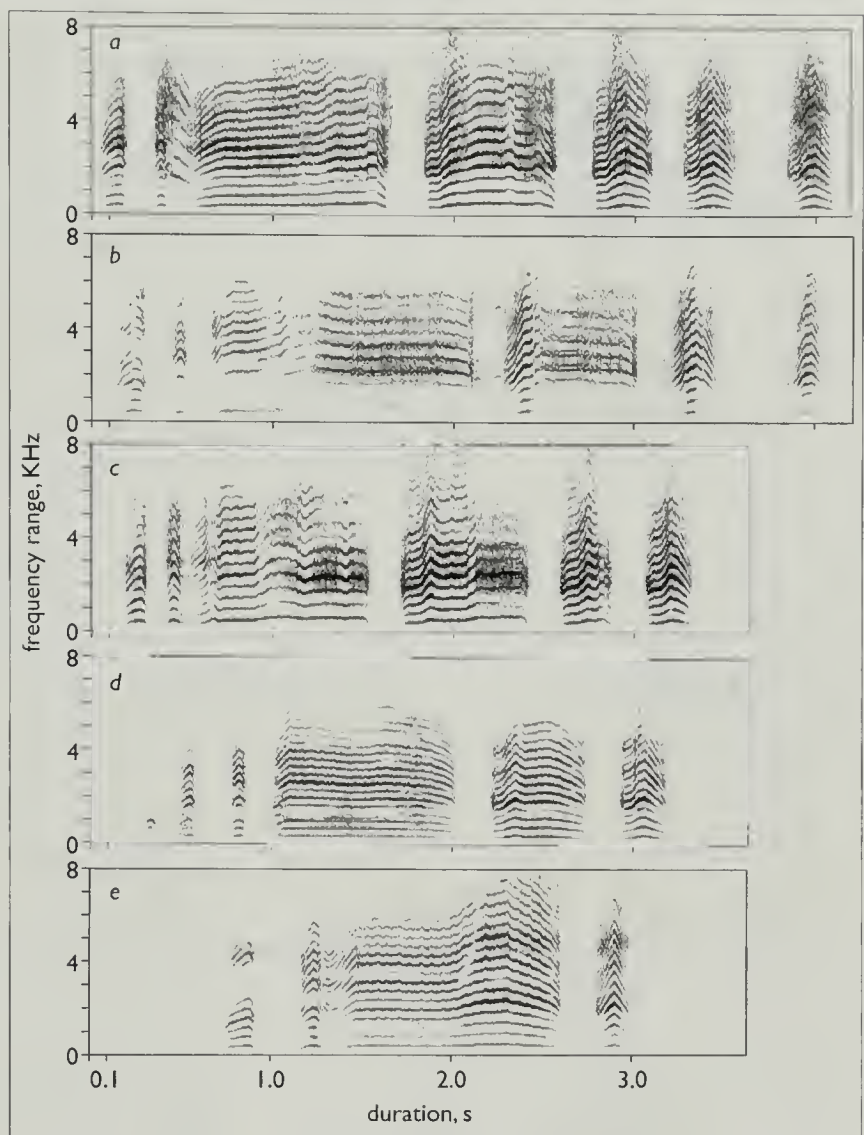
At the crèche stage, the rate of antagonistic encounters increases still further (Kostina & Panov 1982). Whereas at the brood stage the number of conflicts between adults was 1.9–9.7 per 10 minutes (table 1) in the densest colonies, up to several dozen aggressive acts were recorded in crèches during the same time interval. For example, in a group comprising seven juveniles and varying numbers (13–26) of adults, the rate of confrontations among the latter varied between 18 and 69 per 10 minutes (mean  $37.6 \pm 15.6$ ,  $n=9$ ). Attacks on chicks by adults were even more unevenly distributed: in four 10-minute intervals such attacks were absent, in five others they varied between 2 and 29 (mean  $6.3 \pm 10.0$  over the

whole observation period). A prolonged outbreak of aggression towards the young (55 attacks in 40 minutes) coincided with the maximum number of adults in the group, as well as with an increased number of confrontations among them (197 episodes during the same period).

The reason for this high level of aggressive contacts is the generally unpredictable situation in crèches. As the control of adults over their juveniles weakens, the latter tend to gather in compact, temporary groups, with juveniles of other broods. Then, when a parent/guardian tries to regain control of its brood, confrontations with guardians of other chicks prevent the parent from approaching the crèche. Such conflicts often cause redirected aggression towards young birds, both strange chicks and the aggressor's own offspring. Precisely the same outcomes arise from competition among adults for the role of guardians. Birds that have lost clutches or broods will try to take chicks from genuine parents or foster-parents (Panov & Zykova 1981).

The break-up of family units, the links of which become progressively weaker from the moment when crèches are formed, is an important cause of disorganisation. The colony as a conglomerate of families, each one keeping its integrity and relative autonomy owing to those familial ties, evolves into an amorphous group with rather anonymous composition at the crèche stage. It then consists of a constantly changing contingent of adults and a great number of juveniles which gradually gain independence from their guardians.

The repertoire of signals used in parental and antagonistic behaviour patterns does not change significantly compared with the previous stage, when the broods remain in the colony. In a crèche, adults often maintain the

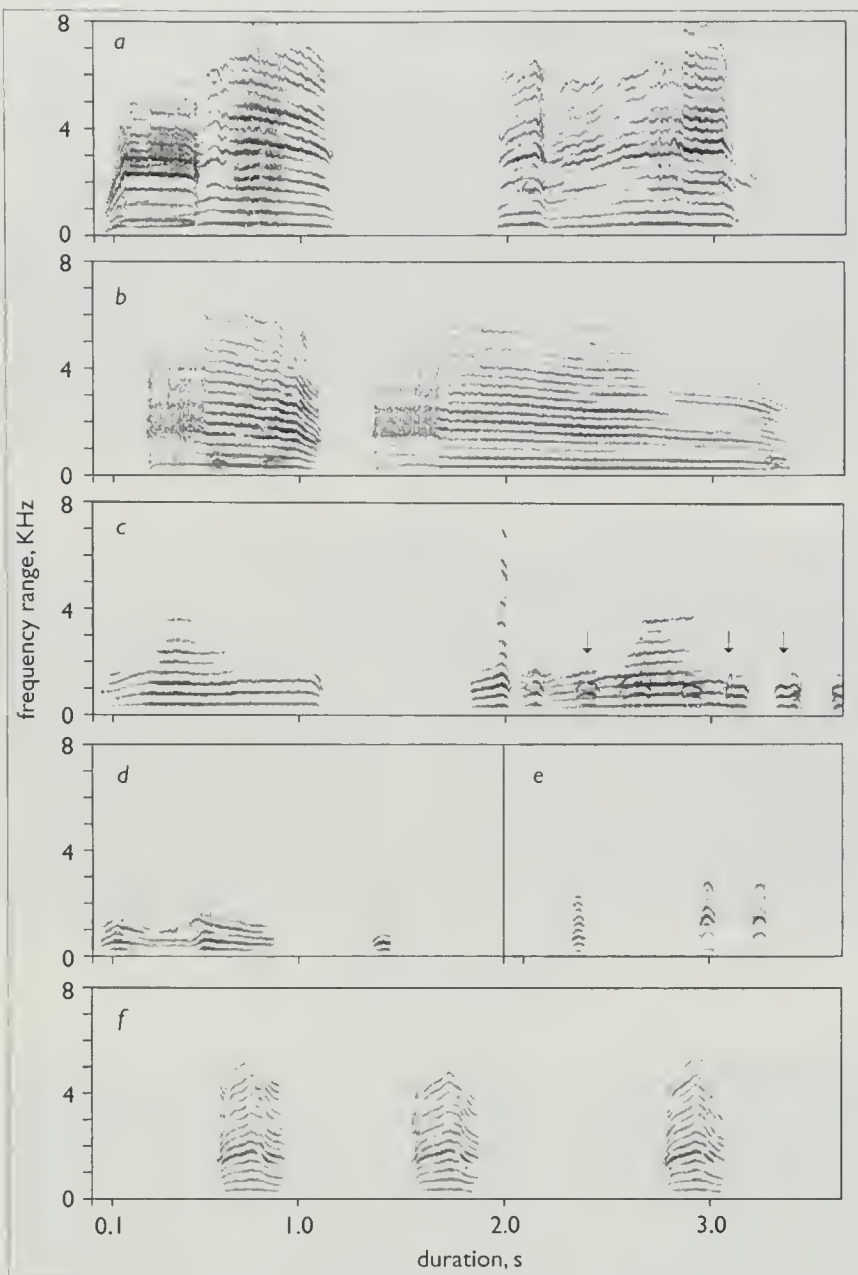


**Fig. 5.** Variation in Long-call of Great Black-headed Gull. Sonogram (e) shows variant intermediate between Long-call and Mew-call.

Upright-posture for a long time and often give Long-calls. Conflicts between juveniles of the same 'brood' may be seen for the first time when adults are feeding them.

#### *The signalling behaviour of the Great Black-headed Gull as an indicator of taxonomic position*

In general terms, the signalling behaviour of the Great Black-headed Gull is essentially similar to that of other, ethologically well-studied gull species, such as those of the 'large white-headed gull' group. This basic similarity is true of the configuration of most display-postures and the vocal components of most principal displays, such as Long-call and Mew-call. However, among the most characteristic features of the Great Black-headed Gull's signalling behaviour is the absence of Choking (found in the vast majority of gulls whose behaviour has been well studied; see Cramp & Simmons 1983, fig. G and



**Fig. 6.** Components of vocal repertoire of Great Black-headed Gull. (a–e) different variants of Mew-call ((d) 'bass' variant); (c) simultaneously with Mew-call of one individual, another bird gives a rhythmic 'gouh' call (shown by arrows); (e) alarm-call; (f) common (everyday) call.

full description in Herring Gull *L. argentatus* account, p. 826). There is also no Head-flagging, which is present in more-or-less pronounced form in a number of so-called 'hooded gulls' (although note that actions reminiscent of the classical Choking and Head-flagging occurred in the antagonistic behaviour of a two-year-old Great Black-headed Gull raised in semi-natural conditions).

There are other unusual features of the signalling behaviour of this species. The components of the Long-call display (fig. 2, a–e) are characterised by a lack of the 'Throw-forward', with head jerked down to the level of the breast or lower (Cramp & Simmons 1983; see fig. D in

Herring Gull account, p. 825); these movements are typical of most gull species. During virtually all the antagonistic displays of the Great Black-headed Gull, the back plumage is raised, whereas the carpal joints are not held away from the body. Tinbergen (1953) believed that that part of the display when the carpal joints are held away from the body showed a high level of aggressive motivation in the Herring Gull. This cannot be true of the Great Black-headed Gull, because in this species, even in the most aggressive encounters, rivals keep their wings pressed to the body, with carpal joints hidden under the body feathers (fig. 3). As for vocalisations, the typical feature is a high level of variation in the Long-call of the Great Black-headed Gull (fig. 5). Data on the behaviour of an immature bird (see Panov & Zykova 2001) suggest that such variation may be a result of the long maturation of this reaction as the young bird develops, so that individually acquired components modify the species-specific hereditary matrix to a considerable extent.

Other components of the Great Black-headed Gull's vocal repertoire are shown in fig. 6.

Only three other species included in Moynihan's 'primitive hooded gulls' group (Moynihan 1959) have been well studied in ethological terms: Laughing Gull *L. atricilla*, Mediterranean Gull *L. melanocephalus* and Relict Gull *L. relictus* (Beer 1975; Zubakin 1979; Buzun & Mierauskas 1987). Similarities with the signalling behaviour of Great Black-headed Gull can be found in only one of these, Relict Gull.

It is interesting to measure these comparative ethological findings against a recent study

on gull phylogeny based on molecular data (Pons *et al.* 2005). This concluded that Moynihan's 'primitive hooded gulls' group is an artificial category, based more on morphological and plumage characters than behavioural data (and plumage characters are often an unreliable indicator of phylogenetic affinities in birds; e.g. Panov 2005, Pons *et al.* 2005). For example, Laughing Gull appears to belong to another clade, that of 'hooded' gulls, rather than to the 'black-headed' clade to which Great Black-headed Gull is assigned.

Wolters (1975) placed Great Black-headed Gull in the monotypic genus *Ichthyaetus* but Pons *et al.* proposed a polytypic genus of that name incorporating six species, although they admitted that 'the relationships among these "black-headed" species are not well established'. In particular, the position of Mediterranean Gull is in doubt, given that its behaviour differs sharply from that of Great Black-headed Gull. Other comparisons are difficult since the behaviour of Sooty *L. hemprichii* and White-eyed Gulls *L. leucophthalmus* in particular, and also that of Audouin's Gull *L. audouinii* (though see Cramp & Simmons 1983), has not been fully documented.

In conclusion, my data, at least in part, support distinguishing the Great Black-headed Gull as a member of a separate genus *Ichthyaetus* within the family Laridae. I predict that future studies, both ethological and molecular, will point to a subdivision of the rather large 'black-headed' gull group, to show a closer relationship between the two species showing the greatest similarity of signalling behaviour, Great Black-headed and Relict Gulls.

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From the Rarities Committee's files

# The identification of male 'Ehrenberg's Redstart', with comments on British claims

*Brian J. Small*



*Brian J. Small*

**ABSTRACT** A BBRC review of British claims of 'Ehrenberg's Redstart' *Phoenicurus phoenicurus samamisticus* found that the degree of variation within both *samamisticus* and the nominate form of Common Redstart *P. phoenicurus* was poorly understood. The review established the degree of overlap between males of these taxa and the findings are presented here. The prominent and extensive white wing-panel is unique to adult *samamisticus* and is not shared with either first-winter *samamisticus* or adult *phoenicurus*. The plumage of first-winter *samamisticus* appears more advanced than that of first-winter *phoenicurus*, and can closely match the appearance of adult *phoenicurus* in autumn. Those adult *phoenicurus* which show a white wing-panel on the tertials and inner secondaries may be safely separable from first-winter *samamisticus* only by loreal colour (solidly black in the former, fringed paler in the latter) and the absence of moult contrast in the greater coverts. This paper will form the basis for reviewing past claims and assessing current ones.

**ZEISS**

Common Redstart *Phoenicurus phoenicurus* of the form *samamisticus*, also known as 'Ehrenberg's Redstart' (and referred to hereafter simply as *samamisticus*), breeds in the mountains of central Turkey and the Caucasus region, and has been reported from western Europe on several occasions. It is currently on the British List on the basis of two long-standing records, although two other, previously accepted, records were recently reviewed and found to be inadequately documented, and no longer form part of the national record (see below). In addition, BBRC has received several claims in recent years that are still under review. As part of the assessment process, it became apparent that our lack of understanding of the appearance of *samamisticus* was preventing accurate record assessment. With a view to establishing criteria by which *samamisticus* could be separated from the nominate form (hereafter referred to as *phoenicurus*), BBRC carried out a detailed investigation to establish whether *samamisticus* is diagnosable, and also to what extent the appearance of *phoenicurus* can vary and overlap with *samamisticus*.

The *samamisticus* review has been a lengthy process, in part due to the Committee feeling that published material was not sufficiently detailed to allow proper assessment of the various submissions. BBRC members made several visits to the Natural History Museum, Tring, to examine specimens, which resulted in a number of potential criteria being established. It may be argued that applying criteria from work done in a museum setting to the assessment of field claims

is fraught with danger, so we have tried to test them in the field whenever possible. The criteria have also been assessed extensively against photographs of *samamisticus* on the breeding grounds and on migration, and discussed with other observers with experience of this form.



David Pearson



David Pearson

**55 & 56.** First-winter male Ehrenberg's Redstart *Phoenicurus phoenicurus samamisticus*, Azerbaijan, 25th August 2008. Aged as first-winter by the extent of pale fringing across the lores and the clear moult contrast in the greater coverts. All median and six inner greater coverts have been replaced, the new feathers being quite grey with a tawny tip, contrasting markedly with the narrow, rich buff fringes of the retained juvenile greater coverts. Such a large number of new greater coverts would be unusual in first-winter *phoenicurus*. The narrow white (or off-white) edges to the two outermost tertials and the three inner secondaries clearly flare at the base of each feather (on the open wing). This bird is quite fresh and still retains the broad, warm-brown fringes to the upperparts although the grey bases are showing in places.

Initial examinations of specimens at least partly supported an earlier BBRC statement (*Brit. Birds* 88: 379) that female *samamisticus* is extremely similar to female *phoenicurus* in appearance, and that the two are not safely sep-

arable based on current knowledge. Rather than delay assessment of all pending claims, which all involve birds reported in autumn, BBRC has opted to assess only records of males, of which there are a number of claims in circulation, in addition to the two currently accepted records. Although we remain of the opinion that it is unsafe to separate females of the two forms in the field, we now consider that adult males have well-defined characters and are easily distinguished, and that some first-winter males are identifiable with care.

In autumn 2008, several unconfirmed reports of possible or probable male *samamisticus* were received via the various bird information services, although none has yet been submitted to BBRC. We had intended to delay this paper until decisions had been made on the outstanding claims, so that an analysis of all British reports could be included, but with the interest that the 2008 birds have generated, it seems



Mike Lawrence

**57.** First-winter male Common Redstart *Phoenicurus phoenicurus phoenicurus*, Norfolk, 16th September 2008. Readily aged as a first-winter by the extensive pale fringes to the black fore-crown, loreal, chin and throat feathering, and the contrast between the single innermost adult-type greater covert and the remaining buff-tipped juvenile coverts. Compared with those of the first-winter male *samamisticus* in plates 55 & 56, the fringes to the tertials and inner secondaries are distinctly paler, appearing creamy-white. Note, however, that on nominate *phoenicurus* these fringes are broadest towards the feather tips and become narrower and less distinct towards the feather bases, whereas on *samamisticus* there is a distinct whitish blob at the base of the longest tertial and two inner secondaries where the fringe widens and becomes more conspicuous.



Arie Ouwerkerk

**58.** First-winter male Common Redstart *Phoenicurus phoenicurus phoenicurus*, Terschelling, the Netherlands, 29th September 2004. This first-winter male shows relatively warm and brown distal fringes to the tertials and secondaries, which match those of the *samamisticus* in plates 55 & 56 but, as those of the male *phoenicurus* in plate 57, these fringes become narrower and slightly less contrasting towards the feather bases. Also compare the distinctly greyish appearance to the median and lesser coverts at the bend of the wing of the first-winter *samamisticus* in plates 55 & 56 with those of this bird. It is possible that *samamisticus* begins its post-juvenile moult earlier than *phoenicurus*, and that first-year male *samamisticus* appears more advanced in autumn for this reason. The brown upperparts are typical of *phoenicurus*, lacking the grey hues of late August *samamisticus* – the apparent cold tone to the upperparts of the male in plate 57 is an artefact of light.

pertinent to publish our findings now. Decisions on the outstanding claims will appear in a future BBRC annual report. We are confident that we now have a suite of robust criteria which will enable us to analyse all submissions fairly, and come to conclusions that will be open to scrutiny and which will represent a realistic assessment based upon the submitted evidence.

### Ageing males

Adult Common Redstarts have a complete post-breeding moult prior to autumn migration, while first-winters have a partial post-juvenile moult that includes replacement of body feathers and a variable number of greater and median coverts. Most frequently, all the median coverts and two or three inner greater coverts are replaced but the first-generation remiges, rectrices and tertials are retained until the following summer. Occasionally, some or all of the tertials may be moulted and, very rarely, an inner secondary may also be replaced (see plate 61). Adult males thus appear very fresh in early autumn, while the tertials, greater coverts and

wings of the majority of first-winter males may be up to three months older than those of adults and appear less pristine.

Early in the review process, it appeared that *samamisticus* in their first autumn had a slightly more extensive moult of the greater coverts than *phoenicurus*, and perhaps also moulted all the median and lesser coverts. From the limited number of specimens of this age available, it would be inappropriate to draw too many conclusions at this point. However, photographs of young male *samamisticus* from Azerbaijan (plates 55 & 56) also seem to support this. It is also possible that colour contrasts in the new coverts of *samamisticus* make the moult appear more extensive; this is an area that requires further study.

### Identification

Fundamental to the process of identifying *samamisticus* is the need to establish the correct age of the bird. In the case of autumn males, the first step is to determine the extent and colour of pale feather tips obscuring the black facial mask (forehead, lores, chin, throat and sides to



Mike Pope

59. First-winter male Common Redstart *Phoenicurus phoenicurus*, probably *samamisticus*, Kuwait, 29th August 2008.

This first-winter redstart (note the moult contrast in the greater coverts) may well be *samamisticus*, based upon the relatively grey upperparts, extent of black on the ear-coverts and throat and a fairly prominent whitish wing-panel. However, close examination of the exact pattern of white on the edges of the tertials raises a little doubt: the white seems to begin to 'bleed' from the edge at the base of the longest tertial, but the extent is negligible. As the photograph was taken in Kuwait, there is a strong likelihood that the bird is *samamisticus* but the amount of white may not be sufficient for a positive identification of such an individual in Europe away from the breeding range.

the head). On adult males of both *phoenicurus* and *samamisticus*, the loreal and chin feathers lack pale fringes, leaving these areas solidly black. Note, however, that the pale tips to the throat feathering, particularly on nominate *phoenicurus*, can be broad and extensive. On

some individuals this creates the appearance of a white 'bib' along the lower throat, separating the solid black throat and mask from the orange breast. First-winters differ from adults in having pale fringes to the loreal and chin feathering. These fringes are dull grey-brown or creamy-

buff, rather than white-tipped as shown by some adults along the lower throat; the appearance of the entire mask is thus uniformly drab rather than crisp and blackish, and shows only subdued contrast with the grey-brown crown and mantle. This pale fringing is evident on specimens of *samamisticus* into mid October, and later on *phoenicurus* specimens, but has largely worn off by the following spring. The second key step to correct ageing involves the appearance of the greater coverts, which should be examined for both colour and moult contrast. The presence or absence, and the extent, of moult contrast in the greater coverts (between worn, brown-fringed, juvenile coverts and adult-type feathers, which have darker centres with distinctly grey fringes) is significant as, with good views, this is visible in the field and is a clear pointer towards age.

Further pointers towards age include the broader pale, almost whitish, tips to the inner primaries that first-winter birds of both races often seem to show; and tail-feather shape (adult rectrices are rounded and fresh, while those of first-winters are distinctly pointed and more worn). Tail-feather shape cannot be used in isolation since, if a first-winter loses its tail, it will be replaced by adult-type



Gidon Perimon

**60.** First-summer male Ehrenberg's Redstart *Phoenicurus phoenicurus samamisticus*, Israel, 7th March 2006. This bird is arguably indistinguishable from nominate *phoenicurus*, although the edges to the four greater coverts moulted the previous autumn are quite grey. In addition, on the spread wing, first-summer male *samamisticus* would be expected to show a small area of white at the base of the outer tertial/innermost secondaries. A first-summer *phoenicurus* would appear almost identical to this bird.



Gidon Perimon

**61.** First-summer male Ehrenberg's Redstart *Phoenicurus phoenicurus samamisticus*, Israel, 21st March 2006. Although clearly a first-summer, this interesting individual appears to have replaced the tertials and two innermost secondaries, as those visible here clearly show much more white than is present on 'normal' first-generation feathers. Furthermore, the distal portions of the narrow fringes to these replaced feathers are also grey, compared with the dirty white edges of the retained juvenile remiges. At least two new greater coverts contrast with the retained, first-generation coverts.

feathers. The two main characters – the presence or absence of pale fringing on loral and chin feathering and moult limits in the greater coverts – will always override tail shape if an apparent contradiction is noted.

#### White wing-panel

At all ages, the most conspicuous feature of male *samamisticus* is the white edges to the remiges. It is less widely appreciated that freshly moulted adult male *phoenicurus* can also show a surprisingly obvious pale panel in the closed wing in autumn. As a consequence, a number of claims of



Pekka Fagel

**62.** Adult male Ehrenberg's Redstart *Phoenicurus phoenicurus samamisticus*, Kuwait, 22nd September 2008. Aged as an adult by the solidly black lores (and extent of black on the neck sides) and the complete moult of the wing coverts. The prominence and extent of white on the edges of the remiges is particularly obvious, and extends as far as the emargination on P3. Note that the appearance of the greater coverts differs from that of first-winters in being black-centred with neat grey edges and pale or off-white tips; and that black bases to the scapulars are visible.

**63.** Adult male Common Redstart *Phoenicurus phoenicurus phoenicurus*, Kuwait, 16th September 2008. At first sight, this appears to be an adult *samamisticus* but, in comparison with the bird in plate 62, it shows much less black on the neck sides and significantly less white in the edges of the remiges, with none in the edges to the primaries. The white fringing seems to expand towards the base of the tertials and secondaries (and in this respect it is similar to that of first-winter *samamisticus*), but only slightly and not to the extent shown by adult *samamisticus*. In addition, the tertials and greater coverts show buff tips. The bird is clearly an adult (note the uniform greater coverts and solid black lores/chin), so this combination of features points to it being a nominate *phoenicurus* with an exceptionally prominent wing-panel; furthermore, there is more white on the outer secondaries than would be shown by first-winter *samamisticus*. Such extreme examples are likely to be mistaken for *samamisticus* in Europe, and this individual closely resembles a previously accepted *samamisticus* (at Southwold, Suffolk, in 1991).



Pekka Fagel

apparent *samamisticus* showing a pale wing-panel have proved to be *phoenicurus* on closer examination. The presence of pale edges to the secondaries is not, in itself, diagnostic of *samamisticus*, and very careful attention must be paid to the precise extent and shape of the white, particularly (in the case of first-winters) on the inner secondaries and outer webs of the tertials. Detailed examination of specimens and photographs of adult *phoenicurus* have shown that these fringes, if present and contrasting, are never as extensive, nor do they appear solidly white, as on adult *samamisticus*. Any putative *samamisticus*, whether trapped or observed in the field, should be supported by detailed notes on this crucial character and by photographs if possible.

**Adult**

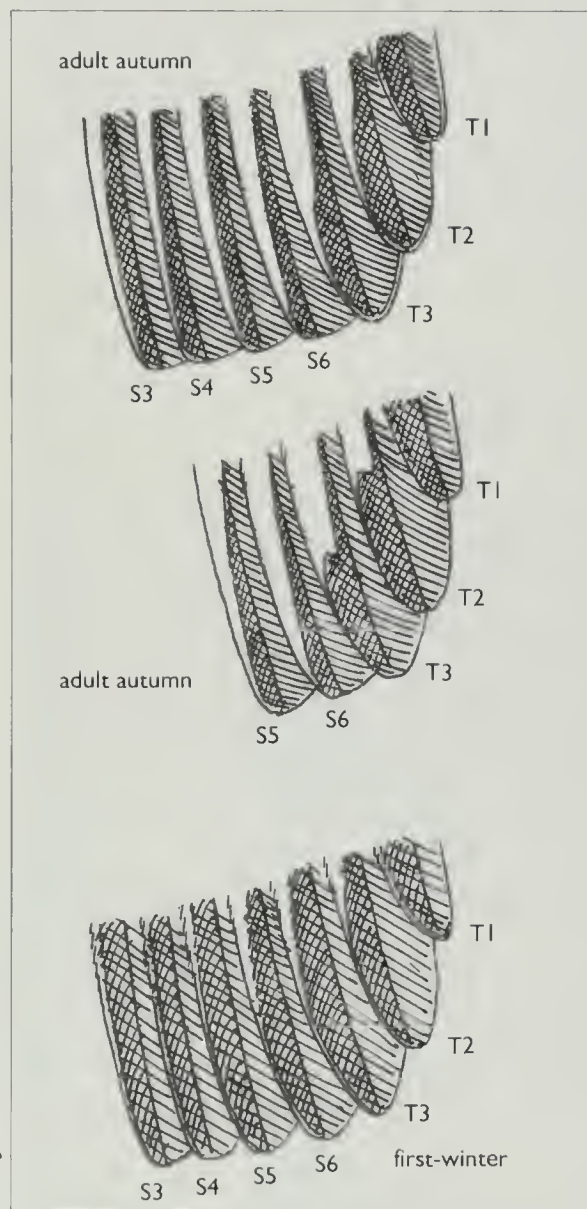
On adult male *samamisticus* in autumn, the panel in the closed wing is brilliant white, extending from the edges of the two outermost tertials, right across the edges of the secondaries (the width of the white decreasing from 4 mm on the innermost to 2 mm on the outermost), and onto the edges of the primaries. When fresh, it may stretch as far as P3 but, from September onwards, wear may reduce it to P5/P6 (primaries numbered ascendantly). There is often a large white notch (in other words the white expands towards the base of the feather) on the outermost tertials and innermost secondaries. Importantly, there is never any hint of a buff tone to this panel, and there is never a pure white fringe to the innermost tertial.

By spring, the wings of adult males are comparatively worn and faded, but the wing-panel is no less obvious on *samamisticus*; this can appear as a solid white block across the secondaries of the closed wing but is usually a little less obvious on the primaries. In addition, the white notches at the base of the tertials can often be seen. The extent and brilliance of the wing-panel is immediately obvious in the field and, in extending right across the secondaries and inner primaries at least, it is far more extensive and contrasting than that on adult male Black Redstart *P. ochrurus*. The wing-panel continues to wear and by midsummer may be lacking on the edges of the primaries and proximal fringes of the outer tertials (see plate 65).

In addition, the newly moulted greater coverts of adult *samamisticus* in autumn have dark, sooty-black centres that contrast with a frosty-grey fringe and an almost white tip which, on some individuals, extends along the distal edge. This enhances the contrast with the extensive white flash across the closed wing. By spring and early summer, these tips will have worn to a varying extent, being absent on some individuals although others retain narrow white tips to the greater coverts.

**First-winter**

In comparison with adults, first-winter *samamisticus* shows dramatically less white on the edges to the tertials and secondaries. Understanding the precise pattern of white on the tertials and remiges is extremely important. The great majority of first-winter *samamisticus* retain juvenile tertials in autumn, the outermost one



**Fig. 1.** Variation in the extent of white on the tertials and inner secondaries of adult male and first-winter male Ehrenberg's Redstart *Phoenicurus phoenicurus samamisticus* in autumn.

Brian J. Small

or two showing narrow white edges slightly obscured by narrow buff fringes, particularly near the tip. Similarly, the inner secondaries also show white edges, but these too are often subdued by narrow buff outer fringes. As with adults, the extent of white along the edge of the outermost tertial(s) and innermost secondaries expands towards the base; the outer secondaries have minimal pale buff or creamy-white edges, and the primaries show no white. This pattern gives the effect of a narrow triangle of white on the outer tertial and inner secondaries, with the apex towards the wing-tip. Rarely, first-winters may have moulted their tertials, in which case the extent of white is comparable with that of an adult.

First-winter male *phoenicurus* shows little contrast between the fringes and centres to the tertials and lacks any hint of contrastingly paler edges to the remiges. Consequently, the closed wing appears uniform, with the buff tips to the greater coverts being the most contrasting feature. Birds which have replaced their tertials show a similar uniform pattern.

The most significant obstacle to the identification of first-winter *samamisticus* is the appearance of an occasional adult *phoenicurus* with extensive whitish fringing on the tertials and inner secondaries – such a pattern may be identical to that of well-marked first-winter *samamisticus*. Rarely, first-winter *phoenicurus* can show pale edges to the tertials and secondaries, but they are often pale cream or brown and extend across all secondaries.

By spring, first-year *samamisticus* has extremely worn remiges (perhaps the feathers are, on average, older than those of *phoenicurus*?), and often all that is left of the white on the juvenile remiges is a white blob at the base of the two innermost secondaries. Though usually visible in the hand, this can be hard to



Mike Pope

64. Adult male Ehrenberg's Redstart *Phoenicurus phoenicurus samamisticus*, Kuwait, 8th March 2008. A stunning adult male, showing the diagnostic brilliant white flash on the wings, extending from the middle tertial to the outermost visible primary – and bear in mind that these feathers are six months old! Other features of *samamisticus* include the black bleeding onto the neck sides and upper mantle, and the grey-edged greater coverts. Such a bird in western Europe should not cause any confusion.

see in the field, and it may be that first-summer *samamisticus* and *phoenicurus* are indistinguishable in the field.

### Upperparts

#### Adult males in autumn

In *samamisticus* there is some variation in the colour of the upperparts, but the appearance is generally greyer and sometimes darker than that of *phoenicurus*, with some showing blackish bases to the mantle feathers, obscured by slate-grey fringes. With wear, these blacker bases begin to show through, bleeding across the neck sides onto the upperparts – thus the black mask might appear more extensive than that of *phoenicurus*. On one or two specimens (and in photos of birds from Sudan) orange-brown fringes are just visible on the mantle, and would probably be apparent in the field, but the greyer hues are still stronger, darker and more prominent than on *phoenicurus* at an equivalent time of year – although this may be subtle and difficult to quantify on a lone individual. By the following spring and summer, the mantle often looks rather dark, the black being only partially obscured by grey fringes.

Adult *phoenicurus* in autumn has grey feather bases, variably obscured by broad, warm-brown fringes. Consequently, the upper-



65. Adult male Ehrenberg's Redstart *Phoenicurus phoenicurus samamisticus*, Armenia, 4th June 2005. By early summer, the amount of white visible on the edges of the remiges is much reduced, particularly on the tertials and primaries, although it remains an obvious feature. Wear has reduced the greater coverts to a more or less even charcoal black, and the upperparts also look dark grey – often much darker than nominate *phoenicurus* would appear. On *samamisticus*, the black of the ear-coverts can merge to form an indistinct charcoal rear collar, as this individual shows. Although the primaries on this bird are quite brown and might be indicative of a first-summer, the wings can still be aged as those of an adult by the extent of the white flash and the uniformly adult-type coverts.

part colour is variable, with some birds appearing quite brown above, and others distinctly greyer in tone.

#### First-autumn males

On the specimens examined, first-winter *samamisticus* shows grey feathers to the mantle, broadly fringed with warm brown, most notably on the lower mantle. These are distinctly greyer than those of first-autumn *phoenicurus*, which shows more or less totally brown feathering above (the greyish feather bases are often, although not always, completely hidden). Although this is variable, and some first-winter *samamisticus* may look browner than expected, first-year *samamisticus* tends to appear greyer above than *phoenicurus* in autumn (see plate 71).

The BBRC review tentatively suggests that some first-winter *samamisticus* can even approach the general appearance of adult *phoenicurus* in autumn. However, no first-winter male *phoenicurus* were found that approached first-winter *samamisticus*, in terms

of the greyness of the upperparts, or the extent of white on the outer tertial and inner secondaries. That first-winter *samamisticus* can appear more advanced in autumn than first-winter *phoenicurus*, and more like adult *phoenicurus*, may be due to the earlier breeding season of *samamisticus*. Birds of this race depart from the breeding grounds much earlier than *phoenicurus* in southern Europe, and pass through Sudan 4–6 weeks earlier than *phoenicurus*, from late August onwards (D. J. Pearson pers. comm.).

#### Voice

There appear to be slight differences between the calls and songs of *phoenicurus* and *samamisticus*. The call of *samamisticus* is subtly different from that of *phoenicurus*, being a less drawn-out 'whi' (as at the beginning of the word 'whistle'), compared with the 'huit' of *phoenicurus*. Chris Bradshaw has discussed the subject of calls of birds in Armenia with Vasil Ananian, who commented that nominate *phoenicurus* (a common passage migrant

through Armenia) is 'easily detected by its *huit* call, which is clearly different from the calls typically given by local breeding *samamisticus*.'

There may also be differences in song, based upon comparison of the song of *samamisticus* recorded in Armenia in May 2007 with that of *phoenicurus* in Europe. This suggested that, after an initial *phoenicurus*-like start, the song of *samamisticus* has a more protracted series of end phrases. Further, Magnus Robb (*in litt.*) commented that 'we actually considered writing about *samamisticus* [in Constantine *et al.* 2006] in the section on systematics. I think the reason we did not was that we had only two recordings, which we considered to be too small a sample to make claims about differences in vocalisations... Nevertheless, I do think that *samamisticus* sings differently (both birds I recorded suggested this), and the whistle calls seem to be less inflected.'

#### Comments on British claims

There are currently two accepted records of *samamisticus* in Britain, both from Norfolk: at Heacham on 26th October 1975 and at Holkham Meals on 12th September 1989. Previously accepted records from Fife Ness, Fife, on 23rd September 1976 and Keynsham, Avon, on 22nd September 1989 were considered unacceptable during the initial part of this review (*Brit. Birds* 100: 754). There are also four claims of male *samamisticus* under review by BBRC: two from Scilly (St Agnes on 22nd October 1994 and Tresco on 10th–12th October 2004); one from Hartlepool Headland, Cleveland, on 25th September 2001; and one from Grutness, Shetland, on 23rd–26th September 2000. Of



Peter R. Kennerley

**66.** Adult male Ehrenberg's Redstart *Phoenicurus phoenicurus samamisticus*, Armenia, 28th May 2007. This Armenian *samamisticus* has extensive, broad white fringes to the outermost tertial, secondaries and inner primaries – extending onto the emargination of P3, though it is lighter grey above than the bird in plate 65.

All the greater coverts are worn, adult-type feathers, lacking moult contrast, though again the primaries and primary coverts look quite brown. Perhaps some early breeding adult *samamisticus* complete their post-breeding moult earlier than nominate *phoenicurus* and consequently appear more worn by the following summer. First-summer *samamisticus* have extremely worn outer greater coverts and remiges that contrast with the newer inner greater and median coverts, while the white on the base of the outer tertial and inner secondary is usually reduced to a small blob, sometimes hidden by the greater coverts.

these, the claims from Shetland and Scilly (2004) are particularly well documented and include good photographs.

Other claims submitted to BBRC have not been adequately described, having lacked both correct ageing and sufficient evidence to confirm the exact pattern of the white in the wing. In one or two cases, the birds described are clearly *phoenicurus* (e.g. totally brown above). It is unlikely that these 'odd' birds are intergrades, and they probably represent just the extreme end of the extent of variation within male *phoenicurus*. The two accepted British records and all the current and former claims are currently being re-examined by BBRC, and will be reviewed against the evidence presented here.

#### Other reports from Europe

Vagrant *samamisticus* have been reported from Europe on several occasions. There are currently four accepted records from Sweden, comprising two males and two females observed

between 21st September and 20th October, spanning the period 1988–96 ([www.sofnet.org/index.asp?lev=4594&typ=1](http://www.sofnet.org/index.asp?lev=4594&typ=1)). In Finland, a record of a first-summer at Korppoo, Jurmo, on 29th April 2000 was supported by video evidence ([www.birdlife.fi/havainnot/rk/rk-data4.shtml](http://www.birdlife.fi/havainnot/rk/rk-data4.shtml)), and this remains the only accepted record. A claim of a male from Texel, the Netherlands, on 10th September 2005 remains under review (van der Vliet *et al.* 2006), while details of a second male, also photographed on Texel on 10th September 2005, and initially thought to be *samamisticus*, have not been submitted (Wassink & Ebels 2005).

In southern Europe, *samamisticus* has occurred as a vagrant in France on seven occasions. A male trapped in the Camargue on 5th April 1959 represented the first record (Crochet *et al.* 2006), and other spring males were recorded in March 2005 and April 2006. In autumn, four males were reported from Hérault département between 19th September and 12th October 2005 (Marc Duquet and Amine Flitti *in litt.*). There is also an Italian record of an adult male on Lampedusa Island, Pelagie, on 26th September 2007 (A. Corso *in litt.*). A recent claim from Spain, involving a male

trapped on Cabrera, Balearic Islands, on 16th October 2008 ([www.rarebirdspain.net/arbsr000.htm](http://www.rarebirdspain.net/arbsr000.htm)) remains under review.

#### *Eastern birds and the possibility of intergrades*

The breeding range of *samamisticus* extends from Bolu and the Middle Taurus Mountains in Turkey, east to encompass the Crimea and Caucasus Mountains, and southeast into northern Iran. *BWP* states that the exact boundaries between *samamisticus* and *phoenicurus* are difficult to establish, and suggests that in the northern Caucasus (but not in Crimea), many breeding birds are inseparable from *phoenicurus*, while others are intermediate in appearance and show a small wing-patch. Furthermore, *BWP* states that birds showing characters of *samamisticus* occasionally occur west to eastern Bulgaria and southern (former) Yugoslavia, indicating a wide intergradation zone. This extension into Bulgaria is supported by comments that a second breeding locality had been discovered in the country at Krumovgrad in the 1980s (*Brit. Birds* 88: 40). During examination of specimens at NHM, Tring, as part of the present review, no evidence of intergradation was found.



David Hutton

67. Adult male Common Redstart *Phoenicurus phoenicurus phoenicurus*, Staffordshire, 14th June 2008. A spring adult male *phoenicurus*, typical of breeding birds in western Europe. This bird lacks white on the edges of the remiges, which tend to look quite uniformly grey and show no contrast with the uniformly aged greater coverts. The centres to the coverts are often less dark than on *samamisticus* and the upperparts are an even grey, slightly paler and bluer than those of *samamisticus*.

It has been suggested that *phoenicurus* showing pale wing-panels may have originated from the east of the species' range. There is, however, no evidence to support this; breeding males near Almaty in southeast Kazakhstan (J. A. Rowlands pers. obs. and [www.birds.kz/Phoenicurus%20phoenicurus/indexe.html#6](http://www.birds.kz/Phoenicurus%20phoenicurus/indexe.html#6)) and *phoenicurus* photographed from Irkutsk in central Siberia, Russia, clearly lack this feature. It seems likely that this pale wing-panel is quite typical of some adult male *phoenicurus* in northern Europe following the complete post-breeding moult. Such a pale panel is quite variable in both colour and extent, but can appear particularly prominent when the viewing angle foreshortens the apparent wing width, so that the fringes seem to combine to form a solid pale panel; however, it becomes less obvious when viewed from behind (see [http://orientalbirdimages.org/search.php?p=4&action=searchresult&Bird\\_ID=2597&Bird\\_Family\\_ID=&pagesize=1](http://orientalbirdimages.org/search.php?p=4&action=searchresult&Bird_ID=2597&Bird_Family_ID=&pagesize=1) photographed in western Russia in September). In Scandinavia, traces of a pale panel may be retained in spring, when breeding males with small white wing-panels have been observed in

southern Sweden (Nils Kjellén *in litt.*).

Although the issue of intergradation clearly requires further study, there is no evidence to suggest that intergrades between *phoenicurus* and *samamisticus* may account for the appearance of these (apparent nominate) birds with pale wing-panels in Britain. BBRC is confident that the criteria described here are sufficiently robust to enable male *samamisticus* and *phoenicurus* to be separated with confidence.

#### Phylogenetic relationships

It is interesting to speculate about the circumstances which led to the isolated *samamisticus* population inhabiting eastern Turkey and the Caucasus Mountains, while breeding birds adjacent to this region are undoubtedly *phoenicurus*. The distinct lack of evidence of hybridisation where it meets *phoenicurus* suggests that isolating mechanisms, such as voice, different migration timings and route may be involved, although further research is needed. There is no doubt, however, that adult males of the two forms are morphologically diagnosable, and there are also genetic differences between the two.



68. Adult male Common Redstart *Phoenicurus phoenicurus phoenicurus*, Norfolk, 14th September 2008. Aged as an adult by the solidly black lores and extensive black on the ear-coverts and chin, combined with the uniformly adult-type greater coverts. This bird shows clear white edges to the tertials and innermost secondary, a pattern reminiscent of first-winter *samamisticus*. In addition, the greyer upperparts are suggestive of *samamisticus*, but a first-winter of that race would have less white on the two innermost tertials and the white would be broader at the base.



69. Adult male Common Redstart *Phoenicurus phoenicurus phoenicurus*, Norfolk, 15th September 2008 (same individual as in plate 68). In this image, the pale edges to the tertials, particularly on the far wing, appear a much browner/buff colour; an example of how light and viewing angle can affect colours. Of course, the white wing-panel is not sufficiently extensive for adult *samamisticus*, but is too prominent for first-winter *samamisticus*, where it would be restricted to the base of the tertials and secondaries. Note also the paler grey centres to the greater coverts (black on fresh adult *samamisticus*) and the less rich, paler grey edges and browner tips.

Neil Khande

Steve Gantlett



Hugh Harrop

70. Adult male Common Redstart *Phoenicurus phoenicurus phoenicurus*, Shetland, 10th September 2008. Another adult from September 2008, which shows extensively pale edges to the tertials and inner secondaries. Such features were noted on quite a few adults throughout the country and some were mooted as possible *samamisticus*. As with this individual, these birds are readily aged as adults by the combination of the black loreal feathering, lacking pale fringes, and adult greater coverts. Such birds clearly lacked the brilliant white edges to the secondaries and primaries that would be apparent on adult *samamisticus*.

Ertan (2006) investigated the evolutionary history of Eurasian redstarts using the mitochondrial cytochrome-*b* gene sequence in an attempt to resolve their phylogenetic relationships. The results showed a close link between *samamisticus* and *phoenicurus*, despite the white in the wing of the former being similar to that of adult male Black and Hodgson's Redstarts *P. hodgsoni* (which, as the female, immature and non-breeding plumages of both suggest, are relatively closely related to each other). Ertan established that *samamisticus* from eastern Turkey has a 2.3% sequence divergence from *phoenicurus* in Europe. This compares with 2.3%–4.0% divergence among races of Black Redstart, and species-level distances of 4.9%–11.3% found by the same study. Moreover, 2.3% is just below divergence values of 2.5–3.1% found between Green Warbler *Phylloscopus nitidus* and Greenish Warbler *P. trochiloides* (Helbig *et al.* 1995), a closely related species pair with a similar distribution to that of Common Redstart, and in which a similar level of vocal and morphological variation occurs. Furthermore, compare these values with those

from studies of the American seed-eaters *Sporophila*, in which divergences between eight southern species, with consistent and stable morphologies, are put at 0–1% (Lijtmaer *et al.* 2004).

#### Concluding comments

The distinctive appearance of adult male *samamisticus* should enable it to be readily separated from adult male *phoenicurus*, even those individuals of the latter race that show conspicuous pale fringes to the tertials and inner secondaries. The white edges to the tertials, secondaries and primaries of adult

*samamisticus* present a startlingly obvious white wing-panel, extending onto the edges of the primaries and contrasting with the dark grey to blackish mantle and scapulars. First-winter male *samamisticus* in autumn shows a less extensive white panel in the wing, and compares more closely with adult *phoenicurus* in both general plumage colour and, occasionally, the extent of the wing-panel. First-winter *samamisticus* is, however, greyer above than first-winter *phoenicurus*, and can be aged by the presence of pale fringes on the loreal and chin feathering and moult contrast in the greater coverts.

As the autumn of 2008 showed, some adult male *phoenicurus* in autumn can, from some angles, show distinct white or buffy-white edges to the tertials and inner secondaries, forming a narrow but contrastingly pale lozenge along the closed wing. That such a relatively large number of adult *phoenicurus* showing this pale panel appeared along the north and east coasts of Britain was surprising (plates 68–70). Careful examination of the precise extent and position of white on the inner secondaries is essential to identify such birds correctly.

**Acknowledgments**

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Brian J. Small © NHM, Tring

**71.** Comparison of upperpart colour of first-winter Common Redstart *Phoenicurus phoenicurus*. The three birds on the left show the brown upperparts typical of first-winter nominate *phoenicurus*; the three birds on the right show a grey hue typical of first-winter *samamisticus*. However, as the early autumn images from Azerbaijan in plates 55 & 56 illustrate, first-winter *samamisticus* can also be 'sienna-brown' above, but perhaps the fringes wear quickly making them appear greyer.



Brian J. Small © NHM, Tring

**72.** Comparison of upperpart colour of first-winter and adult Ehrenberg's Redstart *Phoenicurus phoenicurus samamisticus* in autumn. Three first-winter birds (left), and three adults (right). Note the variable maroon-brown fringes on the first-winters obscuring the grey feather bases, particularly on the crown and lower mantle, which may be hinted at on the adults. In comparison, the adults are greyer above, but note also the darker, more smoky-grey upperparts of the right-hand bird.



# The *BB/BTO* Best Bird Book of the Year 2008

*British Birds* and the British Trust for Ornithology announce the winner of the Award for BEST BIRD BOOK OF THE YEAR.

All books reviewed in *British Birds* or the BTO publications *BTO News* and *Bird Study* during the year 2008 were eligible for consideration for this Award.



It is inevitable with long-running awards such as this that there are year-to-year variations in overall quality, but the seven judges who gathered at the BTO's 75th Anniversary conference in December were agreed that the crop of books eligible for the 2008 award was a particularly good one, in terms of both quality and diversity. This is reflected in the number of 'special mentions' we felt obliged to refer to, once the business of the main shortlist was settled. On this evidence, the growing importance of the internet has apparently not affected book publishing adversely.

Over 90 titles were eligible for this year's competition, and the initial shortlist comprised 16 books. After three rather protracted rounds of voting that took up most of an afternoon, 11 of these books received at least some points in the final vote. We remind readers that there are no formal judging criteria for the award – the diversity of style and content makes formal comparisons difficult and subjective. Our aim is therefore to highlight books of special merit that we feel will be appreciated widely among the *BB* readership and BTO members.

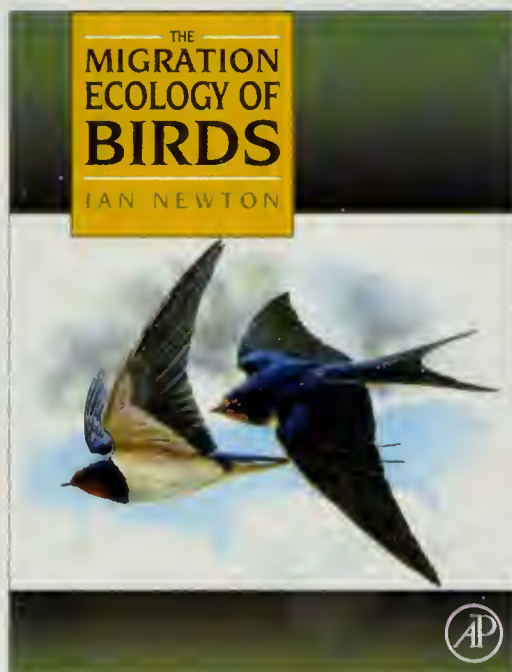
## WINNER:

*The Migration Ecology of Birds*

By Ian Newton. Academic Press, London, 2008. Reviewed in *BB* by Mike Pennington (*Brit. Birds* 101: 268).

Having stressed the depth and variety of the contenders, it may come as a surprise that the winner was in fact one of the clearest winners for some years (five judges ultimately placed it

in first place, and the other two in second). Ian Newton has won this award twice before (most recently in 2004 with *The Speciation and Biogeography of Birds*, before that in 1980 with *Population Ecology of Raptors*) and this book surely cements his position as one of the world's leading authors in terms of the ability to communicate bird-related science and ecology. This is quite simply a fantastic book. Its subject matter fascinates everyone to some degree (a good start) but it is Ian's ability to convey information in a way that can be used by students at all levels, from casually interested amateurs to post-doctoral workers, that marks it out. It is comprehensive, thoroughly researched and beautifully written; the science reported and the



literature summarised are bang up to date, treating major research and less mainstream ideas and theories equally well. This book is (another) tour de force and we recommend it unreservedly.

**2nd:**

**Birds of Wiltshire**

Compiled by James Ferguson-Lees, Paul Castle, Peter Cranswick, Stephen Edwards, Pete Combridge, Rob Turner and Linda Cady for the Wiltshire Ornithological Society. WOS, Devizes, 2007. Reviewed in BB by John Clark (Brit. Birds 101: 100–101).



The clutch of exceptionally high-quality county avi-faunas on the initial shortlist for this award has perhaps never been bettered. Choosing between them was not at all straightforward, yet *Birds*

*of Wiltshire* emerged eventually as a unanimous choice to be singled out. The maps of distribution and relative abundance for regularly occurring birds in both summer and winter are perhaps the most obvious feature that marks it out from the others; these, combined with the habitat overlays, are particularly fascinating for the county's breeding birds. Added to that, it is nicely published, and extremely well written and edited. The fact that it picked up sufficient votes (being on the final shortlist of each of the seven judges) to edge into second place is a tribute to the editors of this book in particular, but also more generally to the quality of the other county avifaunas we considered and which are listed below.

**3rd:**

**Birds and People: bonds in a timeless journey**  
By Nigel Collar, Adrian Long, Patricio Robles Gil and Jaime Rojo. CEMEX-Agrupación Sierra Madre-BirdLife International, Mexico City, 2007. Reviewed in BB by Paul Harvey (Brit. Birds 101: 266–267).

In some ways perhaps a surprising choice for

the top three, since it is unmistakably a coffee-table book (that term is intended to be descriptive rather than value-laden). However, most judges were impressed with its combination of stunning photographs and an elegant, insightful text that deals with an important issue in a world where the human influence is now so prominent – the relationship between birds and people.



**4th:**

**Petrels Night and Day**

By Magnus Robb, Killian Mullarney and The Sound Approach. *The Sound Approach*, Poole, Dorset, 2008. Reviewed in BB by Bob Flood (Brit. Birds 101: 628–629).

The second offering from The Sound Approach stable (following *The Sound Approach Guide to Birding*, which won this award in 2006) is another cracker. It is characterised by its unusual shape, extremely high-quality production and superb illustrations. We enjoyed Magnus Robb's narrative of his travels around the petrel hotspots of the Western Palearctic in particular, yet it is the two CDs of vocalisations that represent the heart of the project. We anticipate more good things from this team in due course.

**5th:**

**The Birds of Scotland**

Edited by R. W. Forrester and I. J. Andrews, with C. J. McInerney, R. D. Murray, R. Y. McGowan, B. Zonfrillo, M. W. Betts, D. C. Jardine and D. S. Grundy. Scottish Ornithologists' Club, Aberlady, 2007. Reviewed in BB by Martin Collinson (Brit. Birds 101: 162–163).

Some readers might be surprised that 'BS3' is in fifth place and not higher, perhaps even a winner. As with *Birds and People*, the judges' ranking ranged from top to unlisted and these two books polarised opinion more than any others. In many ways this book is monumentally impressive, it is bigger and heavier than anything else on our shortlist, it is magnificently produced, with a multitude of (generally)

excellent photos. The difficulties of managing an editorial project on this scale clearly presented some difficulties, however, and the restrictive nature of the guidelines presented to authors created a set of texts which are not uniformly impressive; nonetheless, we felt that it was entirely appropriate that this milestone of Scottish ornithology was placed on our final shortlist.

#### 6th:

**Lost Land of the Dodo: an ecological history of Mauritius, Réunion and Rodrigues**

By Anthony Cheke and Julian Hume. T. & A. D. Poyser, A&C Black, London, 2008. *Reviewed in BB by Ian Carter* (*Brit. Birds* 101: 629–630).

One of two 'Poyser' on our final shortlist – the other being *The Greater Flamingo*, by Alan Johnson and Frank Cézilly, see *Brit. Birds* 101: 630–631 – both of them entirely worthy additions to this landmark series. In terms of this award, they may have suffered slightly from dealing with areas or species somewhat removed from British ornithology in general, yet both will be essential reading for birders with an interest in the subject matter. In *Lost Land of the Dodo*, the history of the Mascarene Islands, researched so well by the authors, has important lessons for the conservation of threatened bird species.

With the top six decided, a number of books remained that we felt we must refer to. First of all, the other county avifaunas considered this year were (in alphabetical order of county/region): *Birds of Argyll* (Tristan ap Rheinallt, Clive Craik, Paul Daw, Bob Furness, Steve Petty and David Wood – see *Brit. Birds* 101: 449); *The Birds of Gwent* (W. A. Venables, A. D. Baker, R. M. Clarke, C. Jones, J. M. S. Lewis, S. J. Tyler, I. R. Walker and R. A. Williams – see *Brit. Birds* 101: 633); *The Birds of Lancashire and North Merseyside* (Steve White, Barry McCarthy and Maurice Jones – see *Brit. Birds* 101: 330–331); *Essential Guide to Birds of the Isles of Scilly* (Bob Flood, Nigel Hudson and Bryan Thomas – see *Brit. Birds* 101: 216–217); and *Birds of Surrey* (Jeffery J. Wheatley – see *Brit. Birds* 101: 448). These are all extremely fine books, each one essential reading for anyone with an interest in the areas concerned, and it would be

Roger Riddington, Dawn Balmer, Andrew Gosler, Peter Hearn, John Marchant, Robin Prytherch and Bob Scott

c/o Spindrifft, Eastshore, Virkie, Shetland ZE3 9JS

invidious to attempt to rank them further here. In each case, the *BB* review (as listed) will provide a useful reference.

*Rare Birds Yearbook 2008*, edited by Erik Hirschfeld and published in collaboration with BirdLife (see *Brit. Birds* 101: 218–219), is the first of a planned series of annual publications to highlight the world's most threatened birds. Important and fascinating, albeit somewhat dispiriting according to the *BB* reviewer, this is a timely, laudable and well-executed concept. In anticipation of seeing it on a yearly basis, we opted to draw attention to it here rather than include it in the main voting process.

Two other, very different, books made the initial shortlist and are worth mentioning briefly here. *A Climatic Atlas of European Breeding Birds*, by Brian Huntley, Rhys E. Green, Yvonne C. Collingham and Stephen G. Willis (see *Brit. Birds* 101: 329), plots where birds might occur at the end of this century according to current best estimates of climate change. Perhaps likely to be read more avidly by academics than by birdwatchers, it will give much food for thought to its readers and deserves highlighting simply for the approach and the subject matter. *Frontiers in Birding*, by Martin Garner and friends (see *Brit. Birds* 101: 689), will be enjoyed by all those keen on keeping abreast of the latest advances in bird identification in Britain and includes some excellent and wide-ranging introductory chapters on various aspects of birding.

*Finding Birds in Ireland*, by Eric Dempsey and Michael Clery (see *Brit. Birds* 101: 103–104), was perhaps a rarity in itself, in being one of the multitude of 'Where to Watch' guides to make the initial shortlist for this award. Those judges familiar with Ireland were especially impressed with its treatment of sites they knew, the maps in particular coming in for special praise; other, novel features, such as an excellent map summarising seawatch points and the best weather conditions for a visit, will surely be widely copied.

Last but not least, Vol. 12 of *HBW (Handbook of Birds of the World)*; see *Brit. Birds* 101: 265–266 arrived on schedule (an aspect of the series that continues to impress) and we salute another tome in this remarkable project.



# Letter

## The distribution of Bulwer's Petrel

Harrop (2008) stated that 'Bulwer's Petrel [*Bulweria bulwerii*] is a monotypic species of tropical waters, which breeds on islands of the eastern North Atlantic, Indian and Pacific Oceans between 10°S and 40°N (Onley & Scofield 2007). In the Atlantic it breeds on the Azores, Madeira, the Desertas, Great Salvage, the Canary Islands and Cape Verde. Most of those which breed in the Atlantic are believed to move south and west into the tropical Atlantic outside the breeding season'. In fact, it is quite a strong migrant, moving between 40°N and 40°S in the Atlantic (Bourne 1995), where it may also have bred on St Helena, at 16°S (Ashmole *et al.* 1999). It seems likely that most birds in the Indian Ocean are migrants from the Pacific, but an egg was found on Round Island, off Mauritius (20°S), in 1994 (Merton & Bell 2003). It breeds on the Marquesas at 9°S and bones have been found on Henderson Island at 24°S (Wragg 1995) in the central-south Pacific. This is hardly an entirely tropical distribution.

In terms of the British claims, Bulwer's Petrel is not a species that often occurs wrecked or on ships, so there are not many sources for imported specimens, especially in the days before refrigeration. Since John Gould seems to have been more interested in obtaining birds to

figure than in where they came from, it is not surprising that there is little information about the supposed 1837 Yorkshire specimen, although it is not unusual for stray seabirds to turn up far inland. It is more surprising to see no comment on the likely reason for the multiple reports in the southwest in 1897, for there may have been an influx. Finally, it is not unusual for vagrant seabirds to occur out of season when the weather deteriorates (Bourne 1967), and the date seems a poor reason to dismiss the February 1908 bird, eventually reported by a very good, conscientious, authority (W. E. Collinge) some time after no-one else did so.

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# News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

## Natural England highlights Hen Harrier nest failures on grouse moors

It won't be a revelation to many, but Natural England has finally highlighted the plight of Hen Harriers *Circus cyaneus* on grouse moors – and its response is a plan to reintroduce the species to lowland England. The agency's report *A Future for the Hen Harrier in England?* provides compelling evidence of illegal Hen Harrier persecution in the country.

Detailed monitoring work by

Hen Harrier Recovery Project workers since 2002 has shown that the critically low breeding numbers and patchy distribution of the Hen Harrier in England is a result of persecution (both in the breeding season and at communal roosts in winter), especially on areas managed for Red Grouse *Lagopus lagopus* or with game-rearing interests.

During 2002–08, the compara-

tively tiny area of Bowland, in Lancashire, accounted for over two-thirds of all the 127 Hen Harrier breeding attempts recorded by Natural England. Throughout the rest of England, only 19 breeding attempts were recorded on grouse moors, in spite of the suitability of the habitat. The report shows that, away from Bowland, persecution and systematic disruption of Hen Harrier breeding attempts explain

the species' absence from areas with great tracts of suitable habitat.

Of the 72 successful nests where Hen Harriers fledged young during the last seven years, 50 were in Bowland. Nesting attempts on grouse moors elsewhere were more than twice as likely to fail. In areas managed for Red Grouse, only 26% of nests produced fledged chicks, compared with Bowland where 65% of nests were successful. During one 12-month period, six birds fitted with satellite transmitters have been tracked

from Bowland into parts of the North Pennines managed principally as driven grouse moors, and have not been recorded subsequently – they have simply disappeared off the map. In a separate incident in one confined geographical area, three signals 'went dead' during 2007–08.

Sir Martin Doughty, Chair of Natural England, said: 'The Hen Harrier has unfortunately become the emblem of man's callous disregard for the spectacular and majestic wildlife that we have in

England. Following seven years of intensive monitoring and detailed research, the picture is unequivocal – Hen Harriers are being persecuted while they attempt to nest and birds are simply not returning to their breeding areas the following spring... Natural England is now looking to improve the fortunes of this species by examining the feasibility of reintroducing Hen Harriers to the lowland part of its former range. We will be working with stakeholders to take this work forward in 2009.'

## Suspended jail term for gamekeeper who targeted birds of prey

A head gamekeeper has been given a three-month suspended jail sentence for illegally targeting protected wildlife on the Shropshire shooting estate where he worked. Roger Venton, 33, was also ordered to perform 250 hours of community service and to pay £2,000 in costs when he appeared at Telford Magistrates' Court.

At an earlier hearing, Venton had admitted using a pole trap and permitting his 19-year-old underkeeper, Kyle Burden, to use an illegal cage trap. Burden received a six-month suspended sentence in September last year after he pleaded guilty to shooting Common Buzzards *Buteo buteo* and clubbing to death Badgers *Meles meles* at the Kempton Estate in Aston on Clun. Magistrates

heard how he kept a coded diary, which witnesses said contained a tally of the animals Burden had killed, including 102 Buzzards, 40 Common Ravens *Corvus corax* and 37 Badgers. He was also ordered to perform 150 hours of community service and pay £200 costs.

Both men were caught after fellow gamekeepers, horrified by the slaughter they witnessed, alerted the RSPB. The case prompted the RSPB to launch a confidential hotline for people wanting to report crimes against birds of prey. Mark Thomas, RSPB Investigations Officer, said: 'This was a horrifying case and a significant one. It is clear from the sentences handed out that the court has dealt with it as such. This has to serve as a wake-up call to the

game-shooting industry. They have to put their house in order and root out the minority who would break the law and discredit them in the eyes of the public. The RSPB's hope is that other good men will follow the example of the witnesses in this case and come forward to report crimes against wildlife. If they do, then 2009 could be a watershed in the protection of our birds of prey.'

One further indication of a more progressive attitude by the shooting community came in October 2008 when the chief executive of the British Association for Shooting and Conservation, John Swift, signed the RSPB's pledge to protect birds of prey (*Brit. Birds* 101: 694).

## Peter Holden MBE

Four decades inspiring public enthusiasm about birds has earned the RSPB's Peter Holden an MBE in the New Year Honours. Peter, who started working for the Society in 1969, was responsible for driving the RSPB's youth membership. In 1975, he became the national organiser of the Young Ornithologists' Club. Now known as Wildlife Explorers, it has grown to 168,000 members, making it the largest wildlife club for children in the world. More than one million children have been members, including many of

today's foremost conservationists.

Graham Wynne, the RSPB's Chief Executive, led the tributes. He said: 'Peter's career with RSPB has spanned nearly 40 years. His passion for birds and for inspiring people about birds remains to this day – this award is richly deserved.'

Peter Holden was instrumental in developing and promoting the first 'citizen science' project in the UK – Big Garden Birdwatch – in 1979. Although it was initially created for children, Peter's vision enabled him to see the potential in extending the project to people of

all ages. Now established as the world's largest mass birdwatching event – involving up to half a million participants every year – it connects people with the wildlife outside their windows. (The 30th anniversary Big Garden Birdwatch took place over the weekend of 24th/25th January this year.)

Peter has written nine books, including (with Tim Cleeves) the *RSPB Handbook of British Birds* and the recently published *RSPB Handbook of Garden Wildlife*.

## Some of our raptors are missing

The development of progressively lighter satellite transmitters has enabled even the smallest birds of prey to be tagged and tracked on their intriguing migrations. The latest 'firsts' are Hobby *Falco sub-buteo* and Sooty Falcon *F. concolor*. German raptor specialists B.-U. Meyburg and K. D. Fiuczynski used a 5-g solar satellite transmitter to track an adult female Hobby, from its nest-site northwest of Berlin, to Bulawayo in Zimbabwe. Before arriving in Zimbabwe, the bird spent some time in southern Angola. The researchers are now anxious to see 'their' bird return to Germany in spring 2009; see [www.Raptor-Research.de](http://www.Raptor-Research.de)

Meanwhile, the German team have requested help in retrieving their expensive satellite transmit-

ters after several of the birds they were tracking went 'missing in action'. Requests to find the carcass of an Osprey *Pandion haliaetus* that expired in Senegal and a Red Kite *Milvus milvus* that died in Portugal have been made on e-mail newsgroups with the instruction to mail the transmitters (but not the corpses) home to Germany.

The first satellite-tracking of Sooty Falcon was carried out by the Environment Agency of Abu Dhabi (EAD). The EAD fitted the falcon with a satellite transmitter at its nest on islands in the Sila Peninsula, one of only six known breeding pairs remaining in the Emirate. The bird, known as 'Ibn Battuta', departed the UAE in October and was recorded flying 6,700 km over Saudi Arabia,

Ethiopia, Kenya, Tanzania and Mozambique before crossing into Madagascar, its final destination for the winter.

Sooty Falcon has recently been upgraded to Near Threatened, owing to concerns that its population may be much smaller than previously thought, and in decline. A recent EAD breeding survey revealed a decline of 64% since 1994. 'In the Arabian Gulf the situation appears to have reached a critical stage for nesting Sooty Falcons,' said Ibrahim Al-khader, BirdLife's Director for the Middle East. 'BirdLife is extremely concerned about this rare falcon. In biological terms, the UAE Sooty Falcon population is now critically close to extinction and requires immediate conservation action.'

## House Sparrows and unleaded petrol

An interesting note from our foremost expert on sparrows, Denis Summers-Smith:

'In 2000, I had the idea that the introduction of unleaded petrol might be a factor in urban House Sparrow *Passer domesticus* decline. This was primarily based on the temporal correlation between the introduction of unleaded petrol in the EU in 1989 and the start of the urban decline over a large part of northwest Europe, which my investigations suggested was about 1990. This speculative hypothesis needed experimental testing, beyond my ability, and I thought the best way to bring it to the attention of the scientific community was through the media (I doubted that it would be accepted by a scientific journal) but my attempts met with no response. Eventually, having tried and failed to publish a paper in a UK journal (including *British Birds*), and at the suggestion of its Editor, I tried a "Letter to *British Birds*", which was published after review and constructive comments from the Editorial Board in September 2007.

'The result was miraculous. "Atmospheric pollution by exhaust

gases from unleaded petrol" was included in January 2008 in the ongoing RSPB research project into the urban House Sparrow decline. Shortly after, I was approached by two US publishers to write chapters on my idea for two books and then the Yamashina Institute of Ornithology asked if I would write a paper for their Journal (one of the most respected ornithological journals in Japan). Hopefully, this will stimulate Japanese ornithologists to look at the situation of the Tree Sparrow *P. montanus* in Japanese towns, where that species takes over the role of the urban sparrow in the absence of the House Sparrow, and is presumably subjected to much the same conditions as our sparrows in European towns.

'I am a scientist (though not a biologist) and feel strongly that informed speculation is the bedrock of science, but speculative papers are not favoured by the Editors of peer-reviewed scientific journals and, but for the intervention of *BB* (largely thanks to its Editor!), my ideas would have probably just gone by default. This means that I can now look forward

to them being put to the test. This may seem little more than a trivial matter, but it helps to illustrate the immense role *British Birds* plays in ornithology and should be a matter of pride. Thank you *BB* for your help.'

Happy to oblige, Denis.

## Gulls on Film

Northumberland birder Alan Tilmouth has launched just the website for the laridist (laridophile?) community. When it's just too dark to scan those flocks of gulls coming in to roost any longer, go home and log on to the selection of videos he's compiled at <http://laridae.blogspot.com> The most recent addition is footage of Glaucous-winged Gull *Larus glaucescens*, not filmed in Britain but in North America. As Alan says: 'Not the Teesside bird but rather some from Skagway, Alaska (a slightly less hostile environment...)' (Birders of a certain age will remember that Duran Duran had a hit with *Girls on Film* in 1981.)

## Six species added to the British List

The latest report from the British Ornithologists' Union Records Committee (the 37th), published in January, has added six species to the British List (and deleted one) resulting in a new total of 583. Following the recommendations of the BOURC's Taxonomic Subcommittee, Naumann's Thrush *Turdus naumanni* has been split from Dusky Thrush *T. eunomus*, and Red-throated Thrush *T. ruficollis* has been split from Black-throated Thrush *T. atrogularis*. Likewise, Green Warbler *Phylloscopus nitidus* has been split from Greenish Warbler *P. trochiloides*. In addition, Wilson's Snipe *Gallinago delicata* is now regarded as distinct from Common Snipe *G. gallinago*, and the record of the former on St Mary's, Isles of Scilly, from October 1998 to April 1999 is recorded as the first for Britain. Further firsts are the Hooded Merganser *Lophodytes cucullatus* on North Uist, Western Isles, in October/November 2000 and the one-day Great Blue Heron *Ardea herodias* on St Mary's on 7th December

2007 (accounts of both birds are in press for *BB*).

The one debit from the British List is Madeiran Storm-petrel *Oceanodroma castro*, following a review of the sole British record in Hampshire, in November 1911. However, the elite seabirders of Scilly recorded an apparent Madeiran Storm-petrel in July 2007 so the species may soon be readmitted to the British List; that record is presently under consideration by BOURC. And the same team's record of 'Scopoli's Shearwater' *Calonectris diomedea diomedea* off St Mary's in August 2004 has been accepted as the first record of this form of Cory's Shearwater. In due course, the BOURC may also add this bird to the British List as a full species. A revised *British Birds* list of birds of the Western Palearctic has been prepared, taking account of all the latest changes proposed by the BOU, and is available at [www.britishbirds.co.uk/bblist.htm](http://www.britishbirds.co.uk/bblist.htm)

As well as the additions and deletions given above, note also

new scientific names for the following species: Black-billed Cuckoo *Coccyzus erythrophthalmus*, Rose-coloured Starling *Pastor roseus*, Citril Finch *Carduelis citrinella* and Corsican Finch *Carduelis corsicana*.

### 600th species sweepstake

As a result of the changes outline above, there's now feverish activity (all right, mild interest) in the N&c sweepstake to name the 600th species added to the British List. Recent nominations include Dark-sided Flycatcher *Muscicapa sibirica* (also known as Siberian Flycatcher), hot on the heels of two Brown Flycatchers *M. dauurica* in two years. Thanks to Steve Holliday for that tip. And Mike Diment has rather cheekily gone for Bulwer's Petrel *Bulweria bulwerii* following its recent ejection from the British List by BOURC (*Brit. Birds* 101: 676–681).

## Vaila's Fund

It will be THE book for all birders who are crime fiction fans when it's published in 2010 – and it could have your name in it! The fourth book in the Shetland quartet written by Ann Cleeves will be set on Fair Isle and she's auctioning one of the characters in aid of a fund that's close to many Shetlanders' hearts.

Vaila's Fund was launched by former Fair Isle warden Paul Harvey and his wife Elizabeth in memory of their 16-year-old daughter, who died last year after a brave fight against cancer. As Ann says on her website: 'Paul and Liz set up the fund to allow Shetland young people to have the adventures Vaila would have enjoyed. Travel from Shetland can be complicated and expensive. Vaila's Fund would make it possible for a student of Vaila's age to explore the

world away from the islands. The fund will be administered by teachers from the Shetland High Schools and will be the best possible memorial for the young woman we, who knew her, remember so fondly.

'To support the fund, I'm offering you the chance to have your name (or that of a friend or relative) in the fourth book in the Shetland quartet, which has the working title of *Homecoming Blues*. Of course, you'd get a signed first edition and an invitation to the launch party!' The book will be published in 2010, which is also when the new Fair Isle Bird Observatory is scheduled to open.

The first book in Ann's Shetland quartet, *Raven Black*, was the winner of the prestigious Duncan Lawrie Dagger Award of the Crime Writers' Association in 2006. The

£20,000 prize is the world's largest award for crime fiction. The second instalment was called *White Nights* and the third book, *Red Bones*, is published later this month. The winner of the character auction for the fourth and final book will be announced in Lerwick on 10th March at the Shetland launch of *Red Bones*. The deadline for bids is 8th March and when N&c went to press the current top bid was £300.00. There's more on Ann's website [www.anncleeves.com/vaila.html](http://www.anncleeves.com/vaila.html)

## New Devon Recorder

Mike Langman has taken over the role of Devon Recorder. His address is 38 Brantwood Drive, Paignton, Devon; e-mail [devon-birdrecorder@lycos.com](mailto:devon-birdrecorder@lycos.com).

## Lifetime Achievement Award for BB

Most recipients get their Lifetime Achievement Award long before they're centenarians but we had to wait until we were 101. At the BTO Conference in December, Ian Wallace gave an entertaining talk entitled 'Back to the Future', which included a short awards ceremony where he lauded three organisations for their long-term contributions to British birdwatching. His nominations for a Lifetime Achievement Award were the RSPB, for their lifetime of conservation in the UK and abroad; the BTO, for their lifetime of directed surveys and production of highly respected and credible bird-related data; and *BB*, for recording and directing 'The continuum of British Birdwatching for 100 years – and counting'.

And the winner was... *British Birds*. Ian then presented *BB* Editor Roger Riddington with a painting, inscribed on the back 'For your exemplary touch in difficult times'. A great honour for Roger and for *BB*. Many thanks, Ian.

## Wanted – records of Wood Duck

BOURC is putting together a review of records of Wood Duck *Aix sponsa*, to try to establish whether or not a change of category is needed. We need information about credible records of:

- established or occasional breeding populations
- records of potential vagrants
- records of proven escapes at times/locations which might otherwise have suggested vagrancy

All responses should be sent to BOURC Secretary Andrew Harrop, e-mail [andrew.harrop@virgin.net](mailto:andrew.harrop@virgin.net)

# Rarities Committee news

## BBRC seeks new member

BBRC is seeking to recruit a new member to join the Committee, to replace our longest-serving member, Brian Small, in April 2009. We particularly encourage nominations of individuals with knowledge of birds and birding in eastern England, and we would ideally wish to continue representation of voting members in the important rarity-finding counties of Norfolk and Suffolk. The criteria for nominations include:

- a widely acknowledged expertise in identification;
- proven reliability in the field;
- a track record of high-quality rarity submissions;
- experience of record assessment;
- the capacity to work quickly and efficiently;
- easy access to and knowledge of IT; and
- regional credibility.

BBRC's nominee is Richard Millington, who lives at Cley, in Norfolk. Richard is well known on the British birding scene as the voice of *Birdline* and Assistant Editor of *Birding World*. He has been chasing rarities in the UK for

nearly 40 years and has been involved in finding some first-class birds, most notably Britain's only Rock Sparrow *Petronia petronia*, at Cley in 1981. Richard regularly birds the north Norfolk coast and has also travelled widely (to, for example, North and South America, Africa, India, Bhutan, China, South Korea and Southeast Asia). Geese, cormorants, godwits and gulls are among his fascinations, but migrant birds are a major passion. He serves on the Norfolk records committee and is a current member of BOURC.

While Richard enjoys the support of BBRC, we strongly welcome any alternative nominees. The nominee's name should be sent to the BBRC Chairman before 15th February 2009, with details of a proposer and seconder, and the written agreement of the nominee. After this date, a voting slip and list of candidates with relevant details will be sent to all County Recorders and bird-observatory wardens.

The successful candidate will replace Brian, who has been a member since 2000. Brian was ini-

tially from Hampshire but moved to Suffolk a number of years ago. Brian's contribution to the work of the Committee cannot be underestimated. He has employed his extensive identification skills to the assessment of records with a sense of humour and continued enthusiasm throughout his term of office. He has also found time to research numerous identification topics as part of his committee work, many of which have resulted in the publication of identification papers in *BB* (see, for example, pp. 84–97) and other journals. Brian will retain his involvement with BBRC as our museum consultant, a role he has occupied for the past few years, and we hope that his input on some of the more taxing identification challenges will continue to support our work.

For more information, contact Adam Rowlands (see below).



**The British Birds Rarities Committee is sponsored by Carl Zeiss Ltd.**

Chairman: Adam Rowlands, East Walks Bungalow, Minsmere RSPB Reserve, Westleton, Suffolk IP17 3BY  
Secretary: Nigel Hudson, Post Office Flat, St Mary's, Scilly TR21 0LL; e-mail: [secretary@bbrc.org.uk](mailto:secretary@bbrc.org.uk)

# Recent reports

Compiled by Barry Nightingale and Eric Dempsey

This summary of unchecked reports covers early December 2008 to early January 2009.

**Headlines** Easily the rarest bird of this midwinter period was an adult Glaucous-winged Gull in Cleveland, only the second record for Britain. Other highlights included a female Canvasback on Islay, an Ivory Gull in Shetland and, more surprisingly, a midwinter Killdeer in Norfolk, a Desert Wheatear in Highland and a Pine Bunting in Cornwall. A Gyr Falcon moved between Scilly and Cornwall, and a Snowy Owl, previously in Scilly, was a popular attraction in Cornwall. Increasing reports of Cattle Egrets in the southwest and Ireland suggested that another influx may be underway.

Red-breasted Goose *Branta ruficollis* Normandy Marsh to 21st December, then Keyhaven Marshes (both Hampshire), long-stayer, 28th December to 11th January; Tollesbury (Essex), 2nd January. Black Duck *Anas rubripes* Ventry (Co. Kerry), long-stayer to 3rd January. Canvasback *Aythya valisineria* Islay (Argyll), 6th–8th January. Ferruginous Duck *Aythya nyroca* Wroxham Broad (Norfolk), 14th and 20th–21st December; Westbere Lake (Kent), 29th December; Girton GP (Nottinghamshire), 3rd January; Eagle Lane GP (Lincolnshire), 5th–11th January; Cheddar Reservoir (Somerset), 7th January. Lesser Scaup *Aythya affinis* Long-stayers at Hogganfield Loch (Clyde), to 31st December, Clea Lake (Co. Down), to 30th December, Quoile (Co. Down), to 7th December, and Holme Pierrepont (Nottinghamshire), to 6th January. Coton Pools and Lea Marston Lakes (Warwickshire), 20th November to 17th December; Stourhead NR (Wiltshire), 21st and 29th December; Torr Reservoir (Som-

erset), 22nd December; Cosmeston Lakes CP, 26th December to 2nd January, then Cardiff Bay Wetlands (Glamorgan), 3rd–11th January; Lough Arrow (Co. Sligo), 24th December, then two on 26th; Lough Ennel (Co. Westmeath), three, 26th–27th December; Racecourse Lough (Co. Fermanagh), 26th December; Lough Owel (Co. Westmeath), 28th December to 1st January. King Eider *Somateria spectabilis* Mullet Peninsula (Co. Mayo), 10th–13th December; Earlsferry (Fife), 25th December to 11th January; Mousa Sound (Shetland), 1st January; Drumcliffe Bay (Co. Sligo), two, 2nd–5th January; Pett (Sussex), 11th January.

Pacific Diver *Gavia pacifica* Marazion (Cornwall), presumed returning individual, 11th–13th December at least. White-billed Diver *Gavia adamsii* Long-stayers at Burra (Orkney), to 14th December and Kirkabister (Shetland), on 1st January; John O'Groats (Highland), 2nd–3rd January.



Gary Thoburn

73. Adult 'Black Brant' *Branta bernicla nigricans*, Wells, Norfolk, December 2008.

Night Heron *Nycticorax nycticorax* West Hythe (Kent), long-stayer, 9th December to 11th January. Cattle Egret *Bubulcus ibis* In Cork, 12 birds at five sites between Clonakilty and Rosscarberry, late December to early January, with one Cuskinney, 6th December to 3rd January. Many records in Cornwall, including from: St Ives/Halsetown, Stithians Reservoir, Gannel Estuary (max. four), Sennen/Pol-

gigga area (max. six), Nanjizal (three) and Sancreed/Drift Reservoir area (max. three). In Pembrokeshire, maximum count of five near Strumble Head, with regular reports from the Hubberton and Sandy Haven/Marloes areas. On Scilly, on various islands, with a maximum of five on Tresco. Several reports from Somerset, with a maximum of six at Walton, 24th December. Other records from Devon, including eight at Kingsbridge 3rd January; Co. Waterford, with up to four at Drumlohan in late December; and (mainly singles) Buckinghamshire, Cheshire, Dorset, Essex, Hampshire, Kent, Lancashire & N Merseyside, Oxfordshire and

Wiltshire. Great White Egret *Ardea alba* Long-stayers in Co. Galway and Hampshire; Shapwick Heath (Somerset), 9th and 19th–20th December, and 6th January; Glasson (Lancashire & N Merseyside), 28th December; Lewes Brooks (Sussex), 31st December and 10th January; Capel (Surrey), 3rd January; Welney (Norfolk), 5th January; Fen Drayton (Cambridgeshire), 8th January. Glossy Ibis *Plegadis falcinellus* Long-stayer in Lancashire & N Merseyside, at Marshside RSPB to 10th December, then Warton Marsh 11th–12th December; Tacumshin (Co. Wexford), 26th December.

Gyr Falcon *Falco rusticolus* St Martin's, 7th December, same St Mary's (both Scilly), 8th–10th December, with same Land's End/Sennen area, 15th–17th December, and Marazion (all Cornwall), 18th December, before returning to Scilly, when it was on various islands, 27th December to 5th January.

Killdeer *Charadrius vociferus* Saddle Bow (Norfolk), 11th January. American Golden Plover *Pluvialis dominica* Unst (Shetland), 18th December. White-rumped Sandpiper *Calidris fuscicollis* St John's Lake (Cornwall), 8th–11th December. Long-billed Dowitcher *Limnodromus scolopaceus* Long-stayers on South Uist (Orkney), to 17th December, and at Dundalk (Co. Louth), to 5th



Reston Kilgour

74. Adult Night Heron *Nycticorax nycticorax*, West Hythe, Kent, December 2008.

January. Spotted Sandpiper *Actitis macularius* Tittesworth Reservoir (Staffordshire), long-stayer to 18th December. Lesser Yellowlegs *Tringa flavipes* Southwold (Suffolk), sporadically between 13th and 23rd December.

Glaucous-winged Gull *Larus glaucescens* Saltholme Pools/Cowpen Bewley/Dorman's Pool areas (Cleveland), 31st December, intermittently to 10th January. American Herring Gull *Larus smithsonianus* Nimmo's Pier (Co. Galway), long-stayer to 8th January. Ivory Gull *Pagophila eburnea* Fetlar (Shetland), 14th–15th December. Forster's Tern *Sterna forsteri* Nimmo's Pier, long-stayer to 4th January.

Snowy Owl *Bubo scandiacus* Zennor area (Cornwall), 21st December to 10th January (same as previously in Scilly); Foxford (Co.



Richard Stonier

75. Cattle Egret *Bubulcus ibis*, Sandy Haven, Pembrokeshire, December 2008.



Paul Hackett



Stef McElwee

76 & 77. Adult Glaucous-winged Gull *Larus glaucescens*, Saltholme, Cleveland, January 2009.



Brydon Thomason

78. First-winter Ivory Gull *Pagophila eburnea*, Fetlar, Shetland, December 2008.

Mayo), 31st December; Westray (Orkney), 9th January.

**Buff-bellied Pipit** *Anthus rubescens* Lough Beg (Co. Derry), 11th–19th December. **Waxwing** *Bombycilla garrulus* In early December, larger flocks were mainly restricted to Scotland, but most dispersed by mid to late December, when many smaller, widespread groups, generally of less than 50, spread progressively farther south and west. Some of the larger gatherings included 250 Ayr (Ayrshire), 8th December, increasing to 300 by 12th, with 200 still there 6th January; 300 Edinburgh, 9th December, and 176 Musselburgh (both Lothian), 17th December; 250–300 Glasgow and 250 Renfrew (both Clyde), mid December; and, in Ireland, 206 at Lisburn (Co. Down) on 10th and 211 at Castleknock (Co. Dublin) on 27th December. In England, 100 Kirklevington, 10th December, and 127 Ingleby Barwick (both Cleveland) 11th January. In second half of December, 230 Hunslet, 100 Ilkley, 150 Huddersfield, 250 Leeds, 100 Sheffield (all Yorkshire); 103 Washington (Durham); and 80 Chasewater (Staffordshire). In January, 95 Bredbury (Hampshire) on 3rd and 80 Newport (Gwent) on 4th. **Desert Wheatear** *Oenanthe deserti* Balnakiel (Highland), 24th–28th December.

**Pallas's Leaf Warbler** *Phylloscopus proregulus* Kenwith NR (Devon), 2nd January. **Penduline Tit** *Remiz pendulinus* Rainham Marshes (Greater London), two, presumably long-stayers, to 11th January; Slapton Ley (Devon), 7th–8th January. **Two-barred Crossbill** *Loxia leucoptera* Bircher Common (Herefordshire), 11th December. **Pine Bunting** *Emberiza leucocephalos* Nanjizal, 9th January.



# Classified advertising

Payment for all classified advertisements must be made in advance by VISA, Mastercard or by cheque payable to British Birds. Copy deadline: 10th of the month.

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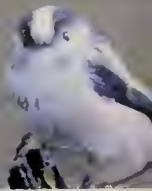
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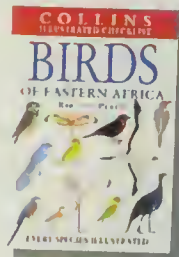
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Alternative venues to Morden at which you can try and buy our equipment in the field are given below. We aim to show our full range of equipment but it helps us to help you if you let us know your interests before each Field Day. Repairs can also be handed in/collected. 10.00am to 4.00pm usually.

Field Days	Alternative Venues	Equipment
Wentworth	Canon, Helios, Kowa, Leica, Manfrotto, Miyachi, Nikon, Opticron, Optolyth, Sentinel, Swarovski, Zeiss, etc.	
Wentworth	Canon, Helios, Kowa, Leica, Manfrotto, Miyachi, Nikon, Opticron, Optolyth, Sentinel, Swarovski, Zeiss, etc.	
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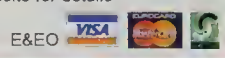
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10 days – £1,895  
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10 days – £1,595  
Departs 6 Mar, 4 Sep

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S 104



# British Birds

March 2009 • Vol. 102 • 109–156

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Red-necked Nightjar

Olivaceous warblers

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## Ecuador –

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# British Birds

Volume 102 • Number 3 • March 2009

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- 110 Should Red-necked Nightjar be on the British List?  
*Tim Melling*
- 116 Olivaceous warblers in southeast Morocco  
*Volker Salewski, Herbert Stark and Bernd Leisler*
- 122 Hooded Merganser on North Uist: a return to the British List  
*Brian Rabbitts*
- 132 The Portsmouth Group *Eddie Wiseman*
- 137  From the Rarities Committee's files: An unusual Common Stonechat  
*Andy Stoddart*

## Regular features

- |   |  |
|---|--|
| <p>130 Conservation research news<br/><i>Jenny Bright and Steven Ewing</i></p> <p>139 Letters<br/>Recording areas of Great Britain<br/><i>David K. Ballance and A. Judith Smith</i><br/>Iran and the Western Palearctic<br/><i>Magnus Ullman</i></p> <p>142 Notes<br/>Green Woodpecker drumming on metal plate surrounding nestbox entrance <i>David Kramer</i><br/>Green Woodpecker feeding behaviour<br/><i>Angela Walker</i><br/>Great Spotted Woodpecker nesting in natural tree hole <i>Alan D. Prowse</i><br/>Sounds made by Common Swift chicks <i>Ulrich Tigges, Andrea Dege and Hilde Matthes</i><br/>Blackbirds eating fuchsia seeds<br/><i>Ken Spencer</i><br/>Blackcaps eating fuchsia fruits<br/><i>Brian Madden</i></p> | <p>Blue and Great Tits foraging on Bracken <i>Bryan Sage</i><br/>Great Tits attacking young rat<br/><i>Sheila M. Mason</i><br/>Second excavation causes Willow Tit nest failure <i>Alex J. G. Lewis and Laura Daniells</i><br/>Eurasian Jay taking peanuts in flight<br/><i>Peter Oliver</i></p> <p>147 Reviews<br/><i>Grouse</i><br/><i>Southern England</i><br/><i>Birds in Cheshire and Wirral</i><br/><i>The Wisdom of Birds</i><br/><i>The Breeding Birds of Cleveland</i><br/><i>Birds in our Life</i></p> <p>151 News and comment<br/><i>Adrian Pitches</i></p> <p>154 Recent reports<br/><i>Barry Nightingale and Eric Dempsey</i></p> |
|---|--|

*British Birds* aims to: ❖ provide a forum for contributions of interest to all birdwatchers in the Western Palearctic; ❖ publish material on behaviour, conservation, distribution, ecology, identification, movements, status and taxonomy; ❖ embrace new ideas and research; ❖ maintain its position as the respected journal of record; and ❖ interpret good scientific research on birds for the interested non-scientist.



# Should Red-necked Nightjar be on the British List?

Tim Melling



Alan Harris

**ABSTRACT** A Red-necked Nightjar *Caprimulgus ruficollis* shot near Killingworth, Northumberland, on 5th October 1856 represents the sole record of this species in Britain. BOURC recently examined the circumstances surrounding the collection and documentation of the preserved specimen. Although in first-winter plumage, it still retains juvenile wing and tail feathers, and this combination is compatible with that expected of a first-winter in early October. The possibility of a fraudulent origin was considered extremely unlikely; the bird was fresh when discovered, and transporting a freshly killed specimen from Iberian breeding grounds to Britain in the 1850s and retaining it in this condition is considered most improbable. After reviewing the available documentation and the reputation of John Hancock, who published the details, BOURC dismissed the possibility of fraud and agreed unanimously that the record should remain on Category B of the British List.

The sole British record of Red-necked Nightjar *Caprimulgus ruficollis* is of a bird shot near Killingworth, Northumberland, on 5th October 1856. As part of an ongoing review of historical records, BOURC recently examined this record to assess whether there was any reason to doubt its provenance and to determine, if possible, the subspecies

involved. Such historical records often generate scepticism, especially when the species has not appeared subsequently, despite the massive increase in the number of skilled observers. Although Red-necked Nightjar is a migratory species, it has a restricted world distribution, its breeding range being limited to the Iberian Peninsula and North Africa (Morocco, Algeria

and Tunisia). It winters in tropical West Africa, perhaps mainly in southern Mali (Snow & Perrins 1998), although some North African birds appear to be sedentary. Two subspecies are recognised: nominate *ruficollis* (hereafter 'ruficollis') breeds in Spain, Portugal and north-west Morocco, while the paler, sandier *C. r. desertorum* (hereafter 'desertorum') breeds in a discrete area of northeast Morocco, Algeria and Tunisia.

The historical background of this record is well documented and the specimen is still held in the Hancock Museum, Newcastle upon Tyne. This enabled BOURC to evaluate all the evidence during the review.

### Specimen details

The bird was prepared as a mounted specimen (specimen catalogue number NEWHM.1999.H1071) and has been on display at the museum for many years (plate 79). As a consequence, it is considerably faded and the main criterion for determining subspecific identity – the overall plumage tone – is now largely invalid. Ernst Hartert examined the specimen in 1912 and identified it as *ruficollis* (Hartert 1912). However, by the time he contributed to *A Practical Handbook of British Birds* (Witherby 1924) he had changed his mind, believing that the subspecies involved was in fact *desertorum* (see also Vaurie 1965). Note that, even in 1912, Hartert suggested that the specimen was 'rather faded'. Bannerman (1955) was clearly surprised at Hartert's identification as *desertorum*, perhaps understandably so given that *ruficollis*, being a longer-distance migrant, would be expected to be the more likely vagrant to Britain.

### Subspecies identity, age and sex

The Hancock Museum kindly agreed to loan the Killingworth specimen to BOURC for comparison with other skins of Red-necked Nightjar. Ian Lewington visited the Natural History Museum (NHM) at Tring and took photographs of both forms. He confirmed the existence of a consistent

difference in the wing pattern between *ruficollis* and *desertorum*, present in all age classes, which was tentatively suggested in *BWP*. On the proximal section of the inner primaries, *ruficollis* has a predominantly dark ground colour with narrow orange bands, while *desertorum* shows dark and orange bands of approximately equal width. Thus, on *ruficollis*, the proximal area of the inner primaries is predominantly dark, quite different from the strikingly contrasting appearance of *ruficollis* (plate 80). Plate 81 shows the inner primaries of the Killingworth specimen, which match those of *ruficollis* perfectly. This confirms Nigel Cleere's earlier view that the British specimen was *ruficollis* (Cleere 2001).

Andrew Lassey established that the Killingworth specimen was in first-autumn plumage, based on the rounded tail-feather tips and the uniform age of all flight feathers. Adult Red-necked Nightjars undergo a complete post-breeding moult, beginning with the innermost primary between late June and late August (*BWP*), and normally suspend moult prior to autumn migration. Juveniles moult head and body feathers before autumn migration, but retain their juvenile wing and tail feathers until reaching the wintering grounds. The Killingworth specimen showed no evidence of active or suspended primary moult or tail moult, which is consistent with juvenile plumage. Adults have square-ended tail feathers and show extensive white tips to T4 and T5 (where T1 is the innermost rectrix), whereas juveniles show reduced pale tips to more rounded tail feathers, and the tips are usually pale grey or buff rather than white. The size and colour of the pale



79. The Killingworth Red-necked Nightjar *Caprimulgus ruficollis* specimen held in the Hancock Museum, Newcastle upon Tyne, December 2006.

Tim Melling © Hancock Museum

Ian Lewington © NHM, Tring



80. A comparison of the primary pattern of the two forms of Red-necked Nightjar *Caprimulgus ruficollis*. Nominate *ruficollis* (below) shows a predominantly dark basal area to the inner primaries, with just narrow orange bands, whereas *C. r. desertorum* (above) shows dark and orange bands of approximately equal width.

spots on the tail feathers (especially T5) of the Killingworth specimen are consistent with juvenile plumage. Juveniles also have smaller, and rather more buff-tinged primary spots compared with adults, although adult females and juvenile males are very similar. The white spots on P1 and P2 (primaries numbered ascendant, thus P1 is the outermost) suggest that the Killingworth bird was probably a male, as these spots are usually sullied with buff on juvenile females (though sexing juveniles is not clear-cut and it is not possible to be certain).

Ian Lewington © Hancock Museum



81. The primaries of the Killingworth Red-necked Nightjar *Caprimulgus ruficollis*; comparison with the primary patterns shown in plate 80 confirms that the Killingworth bird is of the nominate race.

### Provenance of the British specimen

Establishing the origin of the Killingworth Red-necked Nightjar was fairly straightforward. It was bought from a local game dealer called Mr Pape by John Hancock (of Hancock Museum fame) on 6th October 1856, the day after it was shot. It was freshly killed when Hancock received it; he commented that he could not determine the sex from dissection, but he tentatively identified it as a male because of the white primary spots. Ovaries are usually more visible

than undeveloped testes, so if Hancock could not see any gonads, it is likely that the bird was a male in non-breeding condition. Hancock waited six years before announcing the discovery (Hancock 1862a,b), giving his reasons for the delay thus: 'I have delayed until now making this announcement for I found, on comparison, that the bird in question differed slightly from a Hungarian specimen in my collection, and I was consequently anxious to see others before doing so. I have now had an opportunity of referring to a specimen in the

British Museum, and find that it quite agrees with my bird. I have therefore no hesitation in stating that it is the true *C. ruficollis* of authors, and I have much pleasure in adding this fine species to the British list...

### The 'Hungarian specimen'

Hancock's reference to a 'Hungarian specimen' is mysterious, since Hungary lies well beyond the breeding range of Red-necked Nightjar. The single skin

in Hancock's collection at that time is labelled only with the date (1847) and name of the collector (A. H. Cochrane) and gives no indication of locality. Archibald Hamilton Cochrane was an Army Officer whose private collection of European birds, eggs and Lepidoptera was donated to Kelvingrove Art Gallery and Museum in 1912 (R. Sutcliffe pers. comm.). Cochrane lived in Co. Durham during the mid to late 1800s and John Hancock, who had a high reputation as a skilled taxidermist, was employed to prepare many of his bird specimens. The relatively few data available for his bird collection suggest that Cochrane was not particularly punctilious about recording provenance – many specimens have either vague or incorrect data (for example, a Savi's Warbler *Locustella luscinioides* labelled 'Labrador, Canada'). Such a lax approach to collection data was not uncommon in private collections at this time, many of which often tended to be rather unscientific in nature. In a letter dated 20th October 1902 to the Scottish naturalist J. A. Harvie-Brown, Cochrane alludes to his extensive collecting activities around 1848 on the Continent, specifically 'Germany, Hungary and the borders of Turkey' (Harvie-Brown archive in NMS Library, File 10/162, Box 10). Given the close acquaintance of the two men, Hancock would have been aware of Cochrane's collecting trips to Hungary and may simply have assumed that the specimen that lacked locality data was from this area. There are 23 other specimens in Hancock's collection that were collected by Cochrane, nine of which are labelled as collected in Hungary, although others lack location data.

Cochrane also obtained many specimens from Spain, which now appears a far more plausible origin for his Red-necked Nightjar. Since Red-necked Nightjar was not formally described until 1820, its restricted distribution is unlikely to have been fully known or appreciated by Hancock when assessing the Killingworth specimen. Cochrane's 1847 skin (still in the Hancock collection, specimen catalogue number NEWHM: B026.45) is correctly identified as Red-necked Nightjar and the pattern of the primaries accords well with the nominate race. It appears, however, to be a juvenile, unlike the first-winter Killingworth bird. The Cochrane specimen shows a very indistinct rufous collar, much sullied with grey, and has less distinct streaks on the crown. This is

quite different from the Killingworth bird, which had recently moulted its juvenile head and body feathers to show the brighter collar and boldly streaked crown of adult-type plumage. As the Killingworth specimen is now greatly faded, it is impossible to know the extent to which the original appearance of the two specimens differed. However, some of these plumage differences must have been apparent to Hancock, and this seems a plausible reason for the delay in publishing the details of his discovery.

This Killingworth specimen was acquired on 5th October, which accords perfectly with the bird being in first-autumn plumage. A juvenile collected on the breeding grounds earlier in the year would surely have retained juvenile head and body feathers, given the time necessary to transport a specimen to Northumberland by early October (in the 1850s). Hancock's assessment that the bird was freshly killed also accords with it being a natural vagrant. Red-necked Nightjars have left their breeding grounds in Spain and Portugal by late October and so the timing and state of moult of the Killingworth bird fit our expectation of a natural vagrant.

One remaining weakness is that we do not know precisely who shot the specimen, although, as outlined above, it is difficult to construct a scenario whereby a freshly killed first-autumn bird could appear in Northumberland in early October other than through natural vagrancy. BOURC rejected the Cheshire Kermadec Petrel *Pterodroma neglecta* because of a lack of provenance (Melling 2008), but there are a number of key differences between these two records. The opportunities and potential for fraud were greater with Kermadec Petrel, since it is well established that unusual seabirds were frequently brought back by sailors (and BOURC treats records of potential vagrant seabirds a little differently because of that). Moreover, Hancock did not sell this specimen so did not profit financially, while it also seems unlikely that a game dealer would have charged much for a bird presumably being sold as a European Nightjar *C. europaeus* – a not uncommon local breeding bird at that time. One other significant difference between Red-necked Nightjar and Kermadec Petrel is that the former species has an established track record of vagrancy within the Western Palearctic and the latter does not.

*Is the Killingworth record genuine?*

It has been suggested that, because Hancock already had a specimen of Red-necked Nightjar from a 'suspicious' location, he might have inadvertently swapped the Killingworth bird with Cochrane's specimen (Mitchell & Vini-combe 2008), or perhaps even perpetrated a fraud. However, from Hancock's original account, such a mix-up appears impossible: the 1847 specimen was a preserved skin, whereas the Killingworth bird was mounted by Hancock himself. Although there is no precise date when Hancock acquired Cochrane's specimen, the wording of his announcement in *Ibis* (Hancock 1862b) indicates that it was already in his possession before he acquired the Killingworth specimen. The Hungarian connection seems to be a red herring as it is clear from Cochrane's original specimen label that no collection locality was provided for this bird, as was the case for many others in Cochrane's collection.

Hancock was a well-respected man, who has never been implicated in any fraudulent records. There is no evidence that he was ever tempted to 'create' provenance for specimens lacking such detail. On the contrary, if information was lacking, this was recorded on the specimen label, as shown by the catalogue entry for an Alpine Swift *Apus melba* which read: 'No locality for this specimen which has been in the collection of J. Hancock for many years' (Hancock 1874; Howse 1899). He was amassing a collection of British and European birds at that time, and had representatives of most species. He even had a specimen of the recently extinct Great Auk *Pinguinus impennis*, and it might even be more surprising if Hancock had *not* possessed a specimen of Red-necked Nightjar. No other major authority on British birds has questioned this record (e.g. Seebohm 1884, Saunders 1899, Bannerman 1955, Brown & Grice 2005) and, even today, Hancock's reputation remains untarnished (Eric Morton pers. comm.).

It perhaps appears suspicious that Hancock waited six years before announcing his dis-

covery, particularly since most ornithologists at that time were keen to publish promptly to ensure that they were first to declare information on rare and unusual birds. However, Hancock did not appear to share this mindset and, in fact, he did not publish much at all. It is worth remembering that Hancock was one of the first people in Britain to fully appreciate that Bewick's Swan *Cygnus columbianus bewickii* was a separate species from Whooper Swan *C. cygnus*, yet allowed others to publish and take the credit (Embleton 1894)<sup>1</sup>. Hancock was magnanimous about this in his catalogue of birds, stating under the account of Bewick's Swan that 'by some unaccountable inadvertency my specimen was not alluded to' (Hancock 1874). Hancock also pioneered an innovative taxidermy technique that provided an alternative to the use of arsenic, yet details of this procedure were not published until four years after his death (Embleton 1894). According to Pat Morris (pers. comm.), Hancock left the impression of having been a keen observer and field ornithologist rather than a publisher of papers and books. Consequently, the delay in publishing the Red-necked Nightjar note seems quite in keeping with Hancock's character, and BOURC has no reason to suspect John Hancock's integrity concerning this record.

*Other extralimital records of Red-necked Nightjar*

Outside its usual range, there are nineteenth-century records of Red-necked Nightjar from southeast France, Malta, Canary Islands, Croatia, Israel and Sicily (Seebohm 1884; Whitaker 1905). More recently, an adult male was killed by a car on 4th October 1991 at Skagen, Jutland, Denmark (Christensen 1996; Rasmussen 1996). This bird was originally identified as a European Nightjar *C. europaeus*, and was not correctly identified until 1995, when it was exhibited at a taxidermy show in Norway. It was reported as an adult, but it is not known whether the flight feathers were examined and

<sup>1</sup> The discovery of Bewick's Swan was a little more complicated than this (Mearns & Mearns 1988). John Latham (1824) first described a 'Lesser Swan' from a specimen in the collection of the Reverend Kerr Vaughan but, having only a single skin, Latham was unwilling to say whether this was a distinct species or not. Five years later (in October 1929), Newcastle taxidermist Richard Wingate read a paper to the Natural History Society of Northumberland concerning his discovery of a new species of swan, but failed to give it a name (Wingate 1830). It appears that John Hancock provided Wingate with a specimen but was overlooked in the paper. A name was subsequently provided by P.J. Selby, who called it 'Cygnus Bewickii of Wingate' (Selby 1830). Selby's paper acknowledged the help of William Yarrell, who had been drawn into the discussion, but Yarrell then published yet another account of the species (Yarrell 1830), which happened to be published before Selby's description, so Yarrell received the credit for its discovery. Yarrell did, however, state that he had dissected a wild swan in the winter of 1823/24 and that he noticed that the bird possessed peculiarities never seen in the Whooper Swan. This would make Yarrell the first person to notice that Bewick's Swan was a distinct species.

the age of these confirmed to match the body plumage, so perhaps it too was a first-winter. This record is just one day earlier (but 135 years later) than the Killingworth specimen. This bird also appears to be *ruficollis*, and the coincidence of dates is supportive of the British record. Jutland lies at a similar latitude to northern Scotland and is even farther from the nearest Red-necked Nightjar breeding areas than Killingworth, so this record demonstrates that the species is capable of autumn vagrancy to the north of the breeding range.

### Summary

The BOURC review established that the Killingworth specimen is a Red-necked Nightjar of the nominate form *ruficollis*, the more migratory of the two races. The plumage confirms that it is a first-year with retained juvenile remiges and rectrices, consistent with it being collected in October. There is nothing in John Hancock's original account that suggests that either a mix-up of specimens had been made or a fraud had been perpetrated; his reference to Cochrane's Red-necked Nightjar as being of 'Hungarian' origin seems most likely to have been a genuine mistake. BOURC voted to uphold this record, which remains on Category B of the British List.

### Acknowledgments

I am particularly grateful to Ian Lewington, who examined specimens at NHM, Tring, and established criteria that enabled the racial identity of this bird to be confirmed. I would also like to thank the following past and present members of BOURC for their detailed involvement, help and comments: Colin Bradshaw, Andrew Harrop, Chris Kehoe, Andrew Lassey, Bob McGowan, Eric Meek, Tony Prater, Steve Votier and Grahame Walbridge. Steve Dudley (BOU Administrator) provided many helpful comments and suggestions. Eric Morton at the Hancock Museum, Newcastle, kindly agreed to this historic specimen being loaned for comparison, and also supplied information about Hancock and his collections. Pat Morris also provided useful insights into Hancock's character. Robert Prÿs-Jones, Mark Adams and Katrina Cook allowed access to the Natural History Museum at Tring, and also supplied information on A. H. Cochrane. Frank Steinheimer provided the lead to Cochrane's collections at Kelvingrove, and Richard Sutcliffe (Kelvingrove Art Gallery and Museum) contributed valuable biographical information.

Ian Dawson supplied references and useful discussion, and Ken Spencer provided helpful comments and researched the weather conditions for 1856.

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# Olivaceous warblers in southeast Morocco

*Volker Salewski, Herbert Stark and Bernd Leisler*



Dan Powell

**ABSTRACT** Both Western Olivaceous Warbler *Hippolais opaca* and Eastern Olivaceous Warbler *H. pallida*, of the form *reiseri*, occur in Morocco. The distribution of Western Olivaceous Warbler in the northern parts of the country is well known. Eastern Olivaceous Warbler has been recorded from the southeastern parts of Morocco, but its status, range limits and the degree of sympatry with Western Olivaceous Warbler are still not fully understood.

A semi-quantitative survey of both species was carried out in the Erfoud/Merzouga area of southeast Morocco in May 2007 using visual observations and tape recordings. Both species were observed regularly in tamarisk *Tamarix* trees at various sites, often occurring together. Eastern Olivaceous Warblers were often singing intensively in this habitat. Western Olivaceous Warblers, however, did not show signs of territoriality or breeding activity here, except in a densely vegetated oasis. Our results suggest that Eastern Olivaceous Warbler may be a common breeding species in at least some sites in this area, whereas Western Olivaceous Warbler is mainly a passage migrant, breeding farther north but also in some densely vegetated parts of southeast Morocco.

**T**he olivaceous warblers were recently split into the monotypic Western Olivaceous Warbler *Hippolais opaca* and the polytypic Eastern Olivaceous Warbler *H. pallida*, which has four subspecies: *pallida*, *reiseri*,

*laeneni* and *elaica* (Svensson 2001; Parkin *et al.* 2004; Ottosson *et al.* 2005). Owing to the challenge of separating the two species and the various subspecies of olivaceous warblers in the field, the exact breeding ranges and migration

routes often remain inconclusive (Urban *et al.* 1997; Thévenot *et al.* 2003). Western Olivaceous Warbler breeds in the Iberian Peninsula and in northwest Africa, from southwestern Morocco to Tunisia (Cramp 1992; Svensson 2001; Parkin *et al.* 2004). This species migrates from mid July to October to its sub-Saharan wintering grounds, which range from Senegal to northern Cameroon (Urban *et al.* 1997; Svensson 2001; Thévenot *et al.* 2003), returning between late March and May. Information about the North African subspecies of Eastern Olivaceous Warbler *H. p. reiseri* (from here on, mention of 'Eastern Olivaceous Warbler' refers to this subspecies unless otherwise specified) is scarce. It seems that, until a few years ago, breeding was confirmed only for Algeria (Isenmann & Moali 2000), although maps in Svensson (2001) and Parkin *et al.* (2004) indicate a distribution from Morocco to Libya. Recent breeding records have been confirmed for both Morocco (Dally 2003; Bergier & Thévenot 2006) and Tunisia (Jiguet 2003). The precise extent of the winter quarters remains inadequately known, owing to confusion with the other subspecies, although Senegal, the Gambia, Niger and Nigeria are suspected non-breeding grounds for northern populations whereas southern populations may be resident (Svensson 2001). Note, however, that according to Baker (1997) northern popu-

lations winter in southern areas of the range. The migration of both Western and Eastern Olivaceous Warblers through Mauritania was described by Salewski & Herremans (2006), and wintering birds have been discovered in northern Senegal (Salewski 2008).

In Morocco, Western Olivaceous Warbler is a common breeding migrant in the north and a variably common or uncommon passage migrant in the south (Thévenot *et al.* 2003). The Eastern Olivaceous Warbler has traditionally been recognised as a breeding migrant from the Figuig area and possibly farther west, but its occurrence is poorly documented and needs to be confirmed, according to Thévenot *et al.* (2003). However, in recent years, there have been reports of Eastern Olivaceous Warbler from the Figuig area, the Dadès-Draa area near Ouarzazate and, especially, from the Erfoud/Merzouga area (Dally 2003; Delapré *et al.* 2005; Bergier pers. comm.), all of which suggest that the species may not be too rare in the desert areas of Morocco. The species is included in the recent list of the birds of Morocco as a breeding migrant (Bergier & Thévenot 2006). Therefore, both Western and Eastern Olivaceous Warblers may co-exist in southeast Morocco, but further fieldwork is needed to establish range limits and possible overlap (Thévenot *et al.* 2003).

In May 2007, about two weeks were spent in



Volker Salewski

82. Erg Chebbi, from Café Yasmina; a minimum of 13 Western Olivaceous Warblers *Hippolais opaca* were observed in tamarisks *Tamarix* around the settlements at the northern end of Erg Chebbi on 1st–2nd May 2007.

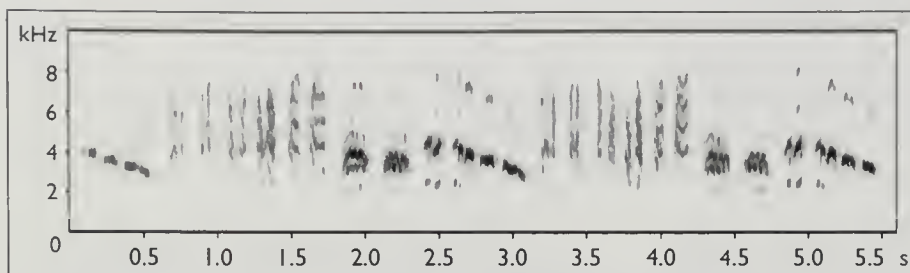


Fig. 1. Sonogram of Eastern Olivaceous Warbler *Hippolais pallida reiseri*, Rissani, Morocco, 7th May 2007. Note the repeated motifs of the song.

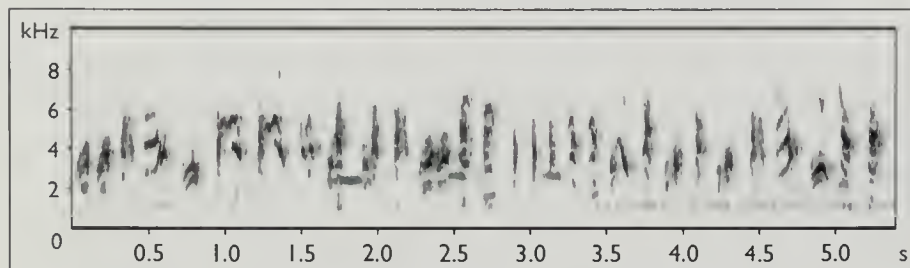


Fig. 2. Sonogram of Western Olivaceous Warbler *Hippolais opaca*, Oualed Chakeur, Morocco, 8th May 2007.

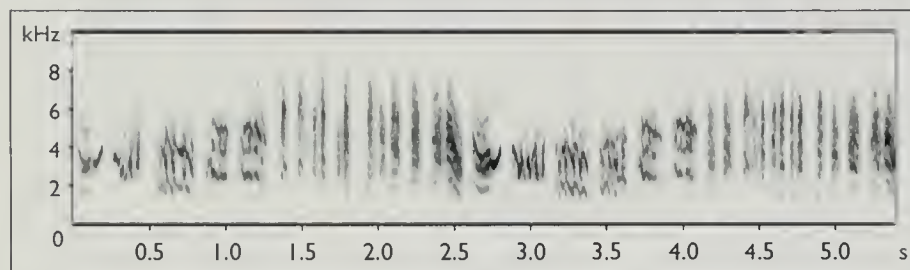


Fig. 3. Sonogram of Eastern Olivaceous Warbler *Hippolais pallida reiseri* from Constantine & The Sound Approach (2006).

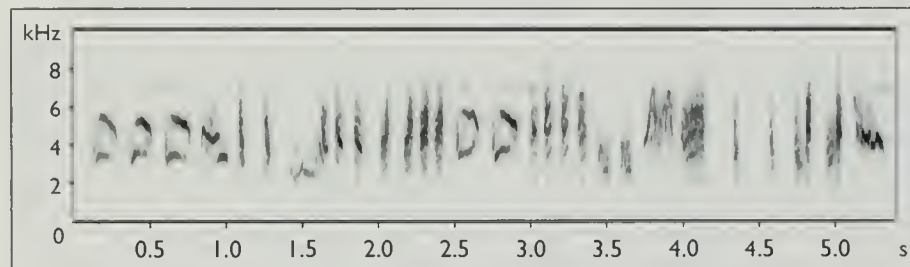


Fig. 4. Sonogram of Western Olivaceous Warbler *Hippolais opaca* from Constantine & The Sound Approach (2006).

Morocco to carry out observations on habitat choice and general behaviour of olivaceous warblers for a more general project about the ecology of *Hippolais* and *Acrocephalus* warblers (Leisler & Schulze-Hagen in prep.). In this paper, we report on the results of a semi-quantitative search of Western and Eastern Olivaceous Warblers in the Erfoud/Merzouga area of southeast Morocco and discuss the findings with respect to the possible sympatry of the two species.

#### Study area and results

The area searched for olivaceous warblers ranged from Bouanane to Taouz (see below for

exact co-ordinates). Habitat patches thought to be suitable for *Hippolais* warblers were searched opportunistically, but especially those where there were previous observations of Eastern Olivaceous Warbler (Bergier pers. comm.). Initially, we relied on visual characters to identify the two species of olivaceous warbler, which can be separated with care using the criteria outlined by Svensson (2001). We found that the size and shape of the bill (Western Olivaceous has a much broader, heavier bill, with slightly convex edges, while that of Eastern Olivaceous is much slimmer, with the sides of the bill straight or concave when viewed from above) was an important character, while tail movements (repeated downward tail-flicking is obvious in Eastern, but generally not shown by Western) were also found to be useful. In terms of jizz, when Western Olivaceous Warbler is

observed moving through vegetation, the long bill, elongated body and neck, together with the rather longer tail, which is kept 'virtually "cemented" to the rear body' (Svensson 2001), gives the impression of a stretched and flattened profile compared with Eastern, which is more reminiscent of a small *Sylvia* warbler in appearance and behaviour. However, the density of the tamarisks *Tamarix* in which most birds were observed meant that it was often impossible to view certain individuals long enough for identification. Therefore, we quickly switched to sound-recording singing birds with a portable dictaphone. The songs of the two species are distinctly different: whereas Eastern repeats

motifs which are several seconds long, Western repeats only individual notes (see figs. 1 & 2). The identity of the species making the recorded songs was later confirmed by comparison with the data from The Sound Approach project (Constantine *et al.* 2006; figs. 3 & 4).

The following sites were visited and checked for olivaceous warblers:

- Hotel Tizini, Erfoud: 31.429°N 04.250°W  
1st May, 06.30 hrs: one Eastern Olivaceous Warbler singing in a tamarisk in the north-east corner of the hotel compound, with a second individual also present. Heard again and tape-recorded on 7th May (15.30 hrs).
- Auberge Derkaoua, along road to Merzouga and Erg Chebbi: 31.288°N 04.093°W  
1st May, 10.00–10.50 hrs. Seven Western Olivaceous Warblers observed in tamarisks, subsong heard; one Eastern observed.  
3rd May, 17.30–19.00 hrs. Four Westerns observed, two with short subsong, plus three unidentified olivaceous warblers.  
4th May, 06.20–06.40 hrs. Two olivaceous warblers, possibly Easterns, observed in trees around the hotel, but strong wind prevented species identification.
- Auberge Dune d'Or, at northern end of Erg Chebbi: 31.202°N 04.028°W  
1st May, 11.40–12.20 hrs. Three Westerns observed in tamarisk near hotel, subsong heard.
- Café Yasmina, at northern edge of Erg Chebbi: 31.213°N 03.989°W  
2nd May, 11.25–12.35 hrs. Ten Westerns observed in tamarisk bushes adjacent to pool behind the café (plate 82), probably many more in the dense vegetation, some giving subsong.
- Auberge Camping l'Oasis, Hassi Labied: 31.142°N 04.024°W  
2nd May, 17.05–18.50 hrs. Four Easterns singing and one of these observed in tamarisks; at least three Westerns observed, plus many olivaceous warblers that were not singing and could not be identified in dense tamarisks. One attack of a Western directed towards a probable Eastern.
- Wadi west of Taouz: 30.929°N 03.976°W  
4th May, 17.25–19.00 hrs. Four Westerns observed and three unidentified olivaceous warblers; probably many more olivaceous warblers present in dense tamarisks.



Volker Salewski

83. Tamarisk *Tamarix* trees along the river in Rissani, Morocco, May 2007. Thirteen singing Eastern Olivaceous Warblers *Hippolais pallida reiseri* were recorded here on 7th May 2007 along a stretch of river of approximately 800 m.



84. The oasis near Oualed Chakeur, Morocco, May 2007. Three singing Western Olivaceous Warblers *Hippolais opaca* were heard here around Camping Tissirt on 8th May 2007.

- Hotel Portes du Desert, Merzouga: 31.079°N 04.009°W  
5th May, 05.45–07.00 hrs. Two Westerns (one with subsong) and one Eastern observed in the trees behind the hotel.
- Tamarisk trees near a village east of Merzouga: 31.021°N 03.994°W  
5th May, 10.20–12.30 hrs. Six Westerns and two olivaceous warblers observed; one Western with subsong; aggressive behaviour was shown by one Western Olivaceous towards a Western Bonelli's Warbler *Phylloscopus bonelli* and a Common Whitethroat *Sylvia communis*, and by one olivaceous warbler towards a Spotted Flycatcher *Muscicapa striata*.
- Hotel Kasbah Amaa, Rissani: 31.307°N 04.285°W  
7th May, 05.30–06.30 hrs. Two singing Easterns sound-recorded in fields next to the hotel.
- Bridge in Rissani, 31.278°N 04.280°W  
7th May, 07.00–09.45. Thirteen singing Easterns sound-recorded in tamarisks on both sides downstream from the bridge (plate 83) for a distance of about 800 m.
- Camping Tissirt, Oualed Chakeur: 31.785°N 04.230°W  
8th May, morning. Two singing Westerns sound-recorded, and another singing Western not sound-recorded; three more Westerns observed in the fields and plantations of the oasis (plate 84).
- Wadi 20 km west of Bouanane: 31.975°N 03.270°W  
8th May, 13.40–14.50 hrs. At least six Westerns observed in dense tamarisk and Oleander *Nerium oleander* bushes, some with subsong.

#### Discussion

Either Western or Eastern Olivaceous Warblers were observed regularly in suitable habitat in the Erfoud/Rissani/Merzouga area during May 2007, almost wherever we searched for birds. At various places (Auberge Derkaoua, Hassi Labied, Merzouga) both species were recorded, so we can confirm that the two species occur in sympatry, at least temporarily, in southeast Morocco. Both species were found almost exclusively in tamarisk bushes. An exception was the oasis near Oualed Chakeur, where Western Olivaceous Warblers occurred in Senegal Date Palms *Phoenix reclinata*

surrounding barley fields and in riverine vegetation; Eastern Olivaceous Warblers were not found in this densely vegetated oasis.

Eastern Olivaceous Warblers were recorded singing intensively at some sites (Erfoud, Hassi Labied) and especially at the river in Rissani, where the density of singing birds was surprisingly high (with 13 individuals within about 800 m). In contrast, during our study period, Western Olivaceous Warblers sang only tentatively or sporadically, although short/faint subsongs were more often heard. The exception was again at the oasis of Ouâled Chakeur, where some Westerns were singing intensively. Although the exact limits of the breeding range of both species remain insufficiently understood in Morocco, our observations suggest that Eastern Olivaceous is probably at least a locally common breeder in the Erfoud/Rissani/Merzouga area in habitats with tamarisk trees. In contrast, the majority of Western Olivaceous Warblers seem to migrate through the area giving few or no signs of territorial behaviour. This species may, however, breed in more densely vegetated areas of some oases. In this context it seems worthwhile to mention that many Westerns were heard singing intensively at the Oued Moulouya estuary (35.111°N 02.360°W), near Saidia, northeast Morocco, on 10th May, suggesting again that the birds observed farther south were only passage migrants en route to more northern breeding sites.

The recorded densities of Eastern Olivaceous Warblers at some sites contrast with the scarcity of previous observations and the fact that the species was confirmed for the country only in recent years. However, Heim de Balsac & Mayaud (1962) and Smith (1968) mention this species from the Figuig area, and suggested that 'the breeding range of *reiseri* may extend further west than is at present known' (Smith 1968). The question of whether Eastern Olivaceous Warbler was previously under-recorded or whether it colonised the area relatively recently remains, but careful observations should reveal whether it will extend its range further in Morocco.

#### Acknowledgments

We thank P. Bergier for sharing the detailed and partially unpublished information about the occurrence of Eastern Olivaceous Warbler in Morocco, and Magnus Robb from The Sound Approach for discussing the identity of birds that had produced the recorded songs and for giving permission to include the sonograms of The Sound Approach's recordings in this paper. C. Black and J. Dewhurst kindly improved our English.

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# Hooded Merganser on North Uist: a return to the British List

*Brian Rabbitts*



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**ABSTRACT** A first-winter or female Hooded Merganser *Lophodytes cucullatus* was discovered at Oban Trumisgarry, North Uist, Outer Hebrides, on 23rd October 2000, where it remained until 1st November. The location, arrival date, weather conditions and the bird's behaviour suggested that it could be a transatlantic vagrant, and it was included by BOURC in Category D of the British List. Following subsequent records in Northumberland in March 2002, and Shetland in April–May 2006, together with others from the Azores and Canary Islands, BOURC reviewed the North Uist record as a potential first for Britain and accepted that the evidence was sufficiently persuasive to admit it to Category A of the British List.

The term 'New to Britain' is hardly appropriate for the Hooded Merganser *Lophodytes cucullatus*, a species that has maintained a tenuous position on the British List for almost 180 years. During this period, it has resided in various categories of the British List, initially on the strength of a first-winter male shot in the Menai Straits, Anglesey, in winter 1830/31 and, more recently, a sight record of a female at Willen Lake, Bucking-

hamshire, on 28th–29th December 1983, although this was subsequently reviewed by BBRC and thought to be probably an escape (*Brit. Birds* 86: 465). Following review by BOURC, the Anglesey bird was considered inadequately documented (BOU 2001) and this led to the species being removed from the British List in 2001.

At almost exactly the same time that BOURC was preparing its report, a female

Hooded Merganser arrived on North Uist, Outer Hebrides, in October 2000 in circumstances which strongly suggested that it was a wild bird. Following this bird's acceptance by BBRC, the file for the record was passed to BOURC for investigation into the likelihood of captive origin. Hooded Merganser is commonly held in captive waterfowl collections, which placed BOURC in the unenviable position of determining the provenance of a single individual. Establishing beyond doubt that it was a wild bird was impossible, but it was acknowledged that the circumstances, including timing, location and associated species, suggested the potential for natural vagrancy. Hooded Merganser was added to Category D in 2002, thus acknowledging the possibility of a wild origin for the North Uist bird (BOU 2003).

The North Uist bird was followed by two more Hooded Mergansers in Britain with strong credentials for natural vagrancy: a first-winter female at Newbiggin, Northumberland, on 7th–25th March 2002 (*Brit. Birds* 96: 606), and a male on Unst, Shetland, from 15th April to 2nd May 2006 (*Brit. Birds* 100: 752), which were both accepted by BBRC. These two new records, supported by four from the Azores since 2001, together with evidence of an increase in numbers recorded during North American Christmas Bird Counts, particularly along the eastern seaboard of Canada, prompted a review of records by BOURC. This time it concluded that the evidence for wild vagrancy was sufficiently compelling, and the species was added to Category A of the British List, with the North Uist bird being accepted as the first British record (BOU 2009).

#### The North Uist bird

On 23rd October 2000, I decided to visit the small plantation at Clachan Farm on North Uist

in the hope of finding some migrants. On the way, I stopped in a passing place close to Oban Trumisgarry, a small, shallow, tidal loch with barely perceptible ebb and flow, to check the birds present. After looking through the usual small flock of Eurasian Wigeons *Anas penelope*, I noticed a small, dark duck with a prominent crest that was obviously of the merganser family, diving repeatedly close to the islet in the loch. The duck disappeared behind the islet but soon reappeared, and I was pleasantly surprised to confirm my initial suspicion that it was a Hooded Merganser. After taking some notes, I made a couple of telephone calls from the nearby phone box, and was later joined by Lyn and Brian Lowe, Andrew Stevenson and Gwen Evans. Although the identification was straightforward, and the bird's behaviour suggested that it may have recently arrived (diving regularly, a little preening and a few short flights), we were mindful of the escape potential.

On returning home, I released the news to *Birdline Scotland*. Predictably, because the bird was a duck, the response from the birding community was mixed but, for many, given the location and time of the year, a trip north was most definitely on. However, the discovery of a Siberian Blue Robin *Luscinia cyane* at Minsmere, Suffolk, during the late afternoon of 23rd October (*Brit. Birds* 99: 517–520) put things on hold for most. The following day, 24th October, the Hooded Merganser was still present and I watched it for about two hours. Once again, the bird was actively feeding and successfully catching many prey items, including what appeared to be several small eels and small flatfish.

An invasion of birders was now scheduled for 25th October, and during a visit soon after first light it was with some consternation that I found the Oban devoid of any ducks, owing to



**85 & 86.** First-winter or female Hooded Merganser *Lophodytes cucullatus*, Oban Trumisgarry, North Uist, Outer Hebrides, October 2000 – the first British record.

the presence of three wildfowlers. One of the wildfowlers I recognised as having the shooting rights for the area and out of courtesy I approached him with the news of the Hooded Merganser. Suffice it to say that this was met with a less than enthusiastic response! In the meantime, those planning to travel over on the morning ferry from Skye were temporarily stranded, as the sailing was cancelled because of high winds. The bird was still in the area, however, and during a search of other suitable waters I had a flight view of it with a few Eurasian Wigeon about 2 km from Oban Trumisgarry. On the morning of 26th, all was peaceful at the Oban and, to the relief of the arriving birders, the Hooded Merganser had returned. Perhaps to further strengthen the claims of it being a genuine vagrant, there was also now a change in its behaviour: after feeding voraciously for the previous couple of days, it now spent long periods loafing.

Over the next few days the bird continued to show well and eventually, after waiting for several days, I was able to confirm that it carried no rings. Initially, the merganser was on its own but was later seen diving on the edge of the Eurasian Wigeon flock. It was absent again on 30th as there was further shooting activity. Thankfully, the wildfowlers' only bag appeared to be a Greylag Goose *Anser anser* and, on greeting them again, I was rewarded with advice that I was to be reported to various bodies for inviting birders and spoiling the shooting! With no disturbance the following day, the merganser was back and was last seen on 1st November.

### Description

#### General appearance

A rather uniform and dark diving duck with a noticeable crest. When it dived, the tail was fanned before submerging, and on one occasion the bird was noted swimming with its longish tail held erect. Flight views, apart from the one away from Oban Trumisgarry, were over short distances, when the bird showed quite a distinctive shape, with its fairly narrow, dark wings (though with some white on the secondaries) and rather large-looking head.

#### Head

Most of the head and crest were browner than the rest of the plumage and at close range there was a fairly thin, elongated pale area on the ear-coverts. The forehead was steep and the crown

flat, and there was a bushy crest, which was rather square-ended with a peak at the top. This was compressed into a thick mane during active feeding.

#### Upperparts

The back and upperside of the tail were dark greyish. There were some narrow white stripes on the tertials, but these were obscured more often than not.

#### Underparts

The neck, breast and flanks were all uniform brownish-grey, being much lighter than the upperparts, with a slightly paler area of demarcation between the neck and the breast. The belly was white and the undertail-coverts were whitish and marked with some large, greyish spots.

#### Bare parts

The bill was a typically thin sawbill shape with some orange-yellow at the base of both mandibles, which was slightly more extensive on the lower mandible. On the one occasion that I saw the bird out of the water, its greyish legs were clearly unringed. During my initial observations, I noted the eye as brownish but on some later days an orange or yellowish tinge was detectable.

#### Age and sex

At the time, there was much speculation on the age and sex of the merganser, with a general consensus that it was a first-winter owing to the overall darkness of the plumage and the relatively small size of the crest. Several observers were, however, of the opinion that it could have been an adult female. In November 2000, Andrew Stevenson, one of the original observers, visited New Jersey, USA, where he was able to study a total of 37 Hooded Mergansers, most of which were in female-type plumage. Particular attention was paid to the size and shape of the crest but this proved inconclusive for separating first-winter females from adult females. Three first-winter males were seen and these showed paler, yellowish eyes and some signs of adult plumage (Andrew Stevenson *in litt.*).

The discovery of the Northumberland bird in March 2002 provoked similar discussions, and Keith Vinicombe subsequently studied birds held in captivity at the Wildfowl and Wetlands Trust at Slimbridge, Gloucestershire.

These revealed that, in adult females, the breast and 'face', together with the upperparts, are blackish with prominent white tertial lines and a thick white greater-covert bar. Juvenile and first-winter females were characterised by faint tertial lines, although one bird, probably already moulted into first-winter plumage, had a greyer breast and flanks with better-defined tertial lines. These young females had dark eyes. Juvenile males showed a similar brown plumage with faint tertial lines, but had a noticeably pale (orange) iris. Compared with adult females, juveniles had much less white on the wing, especially the greater-covert bar, which was short, broken and restricted to just three feathers. Bill coloration of juvenile males was found to be quite variable: the bill was entirely black on one individual but showed a pale base on two others. This illustrated the variable timing of the acquisition of black on the bill of the male, and the more adult-like first-winter plumage. One juvenile or first-winter female had a particularly long crest, so this feature would appear to be of doubtful value in determining age (Keith Vinicombe *in litt.*). These findings led to a well-argued case for looking again at Hooded Merganser as a natural vagrant and, in particular, explained these previously unknown aspects of ageing (Vinicombe 2002).

#### *Weather conditions and associated arrivals*

October 2000 was notable for a persistent westerly airstream. If the Hooded Merganser was newly arrived, the weather situation immediately preceding its discovery was ideal for rapid transatlantic vagrancy. The trajectory of the air mass over the Outer Hebrides on 23rd October shows a rapid movement across the Atlantic from Newfoundland during the preceding 48 hours. A deep depression over eastern Canada on 19th October moved ENE to become centred near the Faeroe Islands on 23rd. To its south lay a powerful cold west to WNW airstream along a latitude of 50°N. As this depression approached Ireland on 22nd, a bird entrained in this airflow would have entered strong southwesterly winds to the southeast of the depression and would have been swept northeast towards western Scotland. It should be borne in mind, however, that the merganser could easily have landed on the sea, and that its arrival and discovery may not have been related to the passage of this depression.

In the weeks preceding 23rd October 2000, a

series of Atlantic weather systems had brought a good selection of American birds to the Outer Hebrides. These included American Wigeon *A. americana*, American Golden Plover *Pluvialis dominica*, three White-rumped Sandpipers *Calidris fuscicollis*, Baird's Sandpiper *C. bairdii*, at least two Buff-breasted Sandpipers *Tryngites subruficollis* and a Red-eyed Vireo *Vireo olivaceus*.

#### *The escape scenario*

With so many ducks and geese being kept in open collections, it is inevitable that some will escape. Many are readily recognised as likely escapes by the timing of their appearance, damage to their plumage, presence of plastic colour rings on the legs, or wing tags. But not all wildfowl carry such clues to their past and, even for those that do, it can often be extremely difficult to establish them. Consequently, many wildfowl records come under suspicion of being escapes from captivity. In Britain, most reports of Hooded Mergansers have occurred since the species became common in captivity, after the 1970s. This escape scenario is considered much more likely to apply to Hooded Merganser than (for example) to Redhead *Aythya americana* or Lesser Scaup *A. affinis*, species that are more numerous in North America and much rarer in captivity in Britain and Europe.

Although it is not within the remit of this article to go into the difficulties that face records committees when attempting to distinguish between vagrant and escaped waterfowl, it may be of interest to highlight some of the circumstances surrounding the acceptance of these three Hooded Mergansers. The arrival of the North Uist bird coincided with an influx of Nearctic ducks into Britain; the appearance of the Northumberland bird coincided with the discovery of three Hooded Mergansers during the same season which have been accepted as being wild vagrants (two on the Azores and one in the Canary Islands); while the timing of the Unst bird fitted well with the theory of spring migrants overshooting from the eastern seaboard of North America (Vinicombe & Cottridge 1996). Interestingly, the Unst Hooded Merganser follows two spring records of Nearctic ducks in the Outer Hebrides, both concerning birds flying north past Balranald, North Uist, and later appearing on the east side of Lewis: three Surf Scoters *Melanitta perspicillata* in May 2000 and a Bufflehead *Bucephala albeola* in May 2004.

### Status in North America

Hooded Merganser has two breeding populations in the forested regions of northern North America. Western birds breed from southern Alaska through western Canada to Montana and Oregon. A more extensive eastern population is found from southern Canada and northern USA south to the Great Plains and along the Mississippi valley. In winter, Hooded Mergansers occur along the Pacific coast from southeastern Alaska to northern Baja California, Mexico, and along the Atlantic coast from Nova Scotia, Canada, and southern New England to Florida and west along the Gulf of Mexico into northern Mexico.

Although precise trends on population status are difficult to determine for this secretive species, it is thought that at the present time numbers are stable or increasing slightly. Modern forest conservation programmes, including the creation of freshwater marshes and the widespread placement of artificial nesting boxes, have certainly benefited Hooded Mergansers. On the other side of the coin, it is estimated that approximately 80,000 are killed by hunters each year. The North American population is thought to be in the region of 350,000 individuals, making it one of the least numerous ducks on the continent. This compares with population estimates of several million Lesser Scaups and a million or more Redheads.

In Nova Scotia, the closest regular breeding area to Europe, the status of Hooded Merganser has changed significantly in recent years. Nesting was first recorded here during the 1960s and today, although not common enough to be properly monitored by breeding bird surveys, scattered pairs nest widely throughout the province near woodland ponds and river slacks. In winter, small flocks form on unfrozen fresh waters, small bays and harbours (Ian McLaren *in litt.*). Numbers on Christmas Bird Counts have increased sharply here since the late 1990s.

### Historical background

For many years, the first-winter male in the Menai Straits during the winter of 1830/31 was widely accepted as being the first British record of this North American duck. In *The Handbook* (Witherby *et al.* 1940), this record was accepted as being wild without question, together with three from Ireland, but caution was expressed

regarding claims from Norfolk (1837–38), Gloucestershire (1909), Meirionnydd (1864) and another from the Menai Straits (1911). Prior to 2000, Hooded Merganser was restricted to Category B of the British List, having occurred prior to 1950, but it appeared briefly in Category A on the basis of a record from Buckinghamshire. It reverted to Category B when the Buckinghamshire bird was deemed to be an escape, before being removed from the British List in 2001 and placed in Category E by virtue of these records and other known escapes.

### Occurrences within the Western Palearctic

This brief summary presents occurrences of Hooded Merganser in Britain, Ireland, Iceland, Norway and the Atlantic islands, all these being locations that appear to be best suited to receive genuine vagrant Hooded Mergansers. However, many of those recorded in Britain & Ireland are undoubtedly escapes from captivity. Apart from some old British and Irish records, all other Western Palearctic records have occurred since the species became common in captivity, from the 1970s.

### Britain

Witherby *et al.* (1940) accepted three records (four individuals) of Hooded Merganser for Britain & Ireland (a privilege which the editors of *British Birds* then enjoyed, there being no official rarities committee in the early part of the twentieth century). These are as follows:

Anglesey: first-winter male, Menai Straits, winter 1830/31

Co. Cork: pair, Cobh Harbour, December 1878

Co. Kerry: female, Shannon Estuary, January 1881

Additional reports from Norfolk (1837/38), Meirionnydd (1864), Gloucestershire (1909), and another from the Menai Straits (1911) were treated by Witherby with caution and not accepted, presumably since the possibility of escape or fraud was considered to be high. Subsequently, a female at Willen Lake, Buckinghamshire, on 28th–29th December 1983 was accepted by BBRC (*Brit. Birds* 81: 550–551), with the caveat that ‘the origins of this one must remain suspect, but perhaps no more or less so than many other wildfowl noted in this report.’ This is now suspected of being an escape and has been removed from the list of accepted records (*Brit. Birds* 86: 465).

In Britain, there were ten occurrences, involving 11 birds, between 1829 and 1911, but no further reports until 1971. Since the early 1970s, there has been a dramatic rise in the number of Hooded Mergansers recorded in Britain (table 1), with 36 known occurrences involving 38 birds. Apart from the three birds

now included in Category A, and two records in 2008, which have yet to be reviewed, the circumstances surrounding the remainder suggest that they may have escaped from captivity, some having been ringed birds and others exceptionally tame.

**Table 1.** Reports of Hooded Mergansers *Lophodytes cucullatus* in Britain, 1829–2009.

Date	Location
Winter 1829	Norfolk
1830/31	Anglesey
1838	Glamorgan
1845	Bristol
Winter 1854	Dorset
1864 (two birds)	Meirionnydd
July 1884	Shetland
January 1891	Sussex
March 1909	Gloucestershire
March 1911	Caernarfonshire
12th November to at least 15th December 1971	Surrey
28th–29th December 1983	Buckinghamshire
19th September to 23rd December 1989	Yorkshire
2nd–15th June 1990	Norfolk
At least 3rd–4th January 1992	Hampshire
18th May 1992	Gwent
13th June to 18th July 1993	Durham
5th July 1993	Wiltshire
16th October 1993 to at least September 1997	Bedfordshire
June–July 1994	Yorkshire
30th June to 13th August 1994	Northumberland
May 1996	Lincolnshire
13th November 1996 to at least 27th January 1997	Sussex
16th November 1996 to 18th December 1997	Nottinghamshire
21st December 1996	Somerset
25th January to 10th April 1997	Norfolk
April 1998 to at least 13th March 1999	Cumbria
20th–25th June 2000	Norfolk
23rd October to 1st November 2000	Outer Hebrides
28th October 2000 to at least January 2004	Anglesey
22nd September 2001	Yorkshire
2nd–4th November 2001	Greater Manchester
7th February 2002 (pair)	Essex
7th–25th March 2002	Northumberland
2nd April 2002	Nottinghamshire
26th–30th June 2002	Norfolk
At least 22nd July 2002	Borders
At least 4th August 2002	Essex
At least 1st May to 25th June 2004	Warwickshire
4th–10th September 2005	Kent
At least 12th February to 15th March 2006	Warwickshire
15th April to 2nd May 2006	Shetland
At least 4th–6th January 2008	Dorset
29th February until at least 5th March 2008 (pair)	Derbyshire
From 5th June 2008 into 2009	Dorset
At least 26th October to 4th November 2008	Fife

### Ireland

There are three accepted records, involving four birds, from Ireland. Nineteenth-century records are of a male and female in Cobh Harbour, Co. Cork, in December 1878, and a female shot on the Shannon estuary, Co. Kerry, in January 1881 (both accepted by Witherby *et al.* 1940). A female/immature at Acton Lake, Co. Armagh, on 21st December 1957 is also accepted as being a wild bird. Other nineteenth-century reports from Ireland are not acceptable because specimens could not be traced and 'the authenticity must remain in doubt' (Kennedy *et al.* 1954).

More recently, a female/immature was found on 21st November 1996 in Co. Kerry, where it remained until 28th January 1997. Being in the extreme west of Ireland, it was thought to be a good candidate for transatlantic vagrancy, but it turned out to be wearing a green colour ring. Inquiries made at the time showed that there was no ringing scheme in North America using such rings (D. McAdams *in litt.*). A long-staying bird in Co. Wicklow, which arrived in July 2001 and remained until December, was also found to be ringed. Both birds are presumed to be escapes from captivity – even the most promising records need to be treated with caution. Perhaps because of the possibility of it being considered an escape, details of a bird in Co. Donegal on 1st–2nd September 2002 have not been submitted for assessment (D. McAdams *in litt.*).

### Iceland

Seven records have been accepted up until the end of 2005, with singles in February, April and November, and four in the period spanning late May and early June (<http://www3.hi.is/>



87. First-winter Hooded Merganser *Lophodytes cucullatus*, Newbiggin, Northumberland, March 2002 – now accepted as the second British record.

~yank/status\_lopcuc.html). A further two records, involving single males from 2007 and 2008, are under review. A captive-ringed bird occurred on the Westmann Islands, Iceland, in June 1988, which apparently did not originate from Iceland.

#### Norway

Until 1996 there were three records in Norway but it has not been established that any of these were of wild origin. The species remained in Category D of the Norwegian List in March 2007 (<http://www.birdlife.no/organisasjonen/norsk/norgeslisten.pdf>).

#### Azores

Since 2001 there have been four records from the Azores: a female on Flores 10th–11th February 2001, another female on Flores for several months from 4th April 2002, a male on Corvo on 8th April 2002 and a female on São Miguel from 27th February to 22nd March 2008 (<http://azores.seawatching.net/index.php?page=rarebirdref&id=81#NotFirst>).

#### Canary Islands

A female or first-winter was recorded on Tenerife on 11th–12th December 2001 and again on 5th–9th January 2002.

#### Elsewhere

In addition to the above records, there are many reports from elsewhere in Europe. Most are dismissed as being of captive origin, although some may be genuine vagrants. For example, single female or first-winter birds in the Netherlands (Flevoland, 27th November 2007 to at

least 13th January 2008 and Schiermonnikoog, from 24th November 2008 to at least 24th January 2009) and Portugal (the estuary of the Rio Cávado in January 2009) occurred on dates which are compatible with natural vagrancy. Decisions on these particular records have not yet been published by the respective national records committees, while the first Dutch bird above perfectly illustrates the diffi-

culties faced in determining natural vagrancy; in addition to this bird there were 12 others (mostly seen to be ringed) scattered across the country during the same winter and a pair bred in the wild for the first time in the following summer and raised five young. Many other records from Europe may never be submitted or assessed, making it difficult to establish whether any patterns are emerging in the timing of European occurrences.

#### Acknowledgments

My thanks go to Keith Vinicombe for providing photographs and notes on Hooded Mergansers in captivity, and to Lee Evans for supplying a detailed list of reports from Britain. Edward Rickson provided details of records in Iceland and Ian McLaren supplied updated information on the status of the Hooded Merganser in Nova Scotia. Killian Mullarney and David McAdams kindly commented on the status of Irish records. I am also grateful to Norman Elkins for providing a summary analysis of the North Atlantic weather systems in late October 2000; and to Bob McGowan and Adam Rowlands for clarifying the status of Hooded Merganser in Britain.

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**EDITORIAL COMMENT** Bob McGowan, Chairman of BOURC, commented: 'There are sound reasons for the Hooded Merganser's particularly troubled route through various categories of the British List. Of scarcely a dozen occurrences in Britain between 1829 and 1911, only the Menai Straits (1830/31) record was, until recently, considered acceptable. A lack of occurrences between 1911 and 1970 was followed by a striking post-1970 increase (38 birds to date), although this was considered a manifestation of the number of escapes from wildfowl collections. With only a few accepted European records to 2000, it was impossible to determine any vagrancy pattern for this North American species.

'In a recent review, the Menai Straits bird was considered insufficiently documented, was deleted from Category B, and restricted to Category E (BOU 2001). The North Uist bird did receive considerable support when it was considered by BOURC in 2001, though the very large numbers in captivity and the large number of previous and contemporary records of escapes led to justifiable caution in admitting it to the List. With this reasonable doubt over its natural occurrence, the North Uist bird was placed in Category D.

'When two new records became available for assessment (from Northumberland and Shetland), not only had there been a change in the British context but there had also been a transformation from the standpoint of recent transatlantic records, with occurrences in the Canaries, the Azores and Iceland. In addition there was evidence of an increase in the Hooded Merganser population in the USA. All three birds were included in the review of categorisation, and the species' tendency towards increasing vagrancy and its better fortune in North America were the main factors in the unanimous admission of Hooded Merganser to Category A.'

Adam Rowlands, Chairman of BBRC commented: 'The one thing that never troubled BBRC during the assessment of this record was any doubt over the identification. Hooded Merganser is an easy species to identify and the decent description and supporting photographic evidence made acceptance straightforward. Ageing proved more difficult. Whilst Keith Vinicombe's efforts to improve our knowledge of ageing criteria were much appreciated, the Committee felt that the criteria could not be applied with confidence to the images of the bird that were available. So it was accepted as a first-winter or female. The effort of the finder to document this record also illustrates the value of submitting claims of potential vagrants to the Committee. In the absence of documentary evidence, the opportunity to review identification and vagrancy potential is lost. When species are consigned to Category D, there often appears to be a reluctance to submit records, but this case demonstrates the value of such records and BBRC continues to request that all occurrences of Category D species that are considered to relate to potential vagrants are forwarded to the Secretary for assessment. In all cases where the identification is proven, the records will be forwarded to BOURC to enable an assessment of provenance.

'Now that Hooded Merganser has once again broken the credibility barrier, BBRC will be faced with attempting to distinguish between vagrants and escapes. In many cases this will be no easy task and BBRC requests that observers make every effort to accurately age birds and establish that no signs of a captive origin are present. This should include determining if the bird has rings of any kind and establishing that it is fully winged, both of which can be challenging in field conditions. Individual records will be dealt with on a case-by-case basis, but we would be grateful if observers and County Recorders could provide as much evidence as is possible to assist the Committee with its future deliberations.'



Mike Pennington

88. Male Hooded Merganser *Lophodytes cucullatus*, Haroldswick, Unst, Shetland, April 2006 – now accepted as the third British record.

# Conservation research news

Compiled by Jenny Bright and Steven Ewing



## Windfarms and wintering farmland birds

To help minimise the threats posed by climate change, the European Union has set stringent targets to increase the amount of energy derived from renewable sources, and this has resulted in increasing numbers of proposals for onshore windfarms. Although climate change is widely considered to pose the single biggest long-term threat to birds and other wildlife, poorly located windfarms can have adverse effects on bird populations, predominantly through collisions and disturbance displacement.

It is likely that many new windfarm proposals will be on farmland sites, given that farmland is the major land-use type in Europe. Widespread declines in farmland bird populations, which have occurred as a result of agricultural intensification, have in recent decades led to the implementation across the EU of agri-environment schemes. Consequently, there is a potential conflict between sustainable, renewable energy production and nature conservation interests. However, recent work at Newcastle University suggests that at least some species of wintering farmland birds are not displaced by windfarms.

Claire Devereux and colleagues studied the distributions of farmland birds at two eight-turbine windfarms in East Anglia. Surveys were conducted during January and February 2007, and distribution with respect to wind turbines was recorded for all species or functional groups that were present in sufficient numbers. They then investigated whether abundance increased with increasing distance up to 750 m from the turbines, while controlling for other factors such as crop type and the presence of

boundary features. They found that proximity to turbines did not affect the distribution of granivorous farmland birds, corvids, gamebirds as a whole, or Sky Larks *Alauda arvensis*. However, a displacement effect was found for Common Pheasants *Phasianus colchicus*, the largest and least manoeuvrable of the species studied.

As the authors suggest, this is good news for both nature conservationists and wind-energy developers. It should be noted that collision risk was not assessed by the study, although the authors consider this unlikely to be a major threat to many of the species studied. Perhaps more importantly, only the effects on wintering birds were investigated, and the authors acknowledge that further studies need to be carried out during the breeding season. Many previous studies of the effects of windfarms on birds have focused on geese, waders and raptors, groups which tend to be concentrated in upland and coastal areas (where most onshore windfarms have, so far, been located). This is part of the reason why there are an increasing number of windfarm proposals on lowland farmland. However, agricultural land around estuaries may be used by large numbers of feeding waders and wildfowl, while some rare species of raptor breed on farmland. Such areas will need to be identified and their suitability for windfarms, or the necessary mitigation measures, determined during site-specific assessment.

Devereux, C. L., Denny, M. J. H., & Whittingham, M. J. 2008. Minimal effects of wind turbines on the distribution of wintering farmland birds. *J. Appl. Ecol.* 45: 1689–1694.

## Climate change, migration schedules and population declines of European migratory birds

To maximise the likelihood of rearing young, birds must try to synchronise their reproductive attempts with peaks in food availability during the breeding season. However, global climate change has already resulted in marked changes in spring weather patterns, which have necessitated changes in the breeding cycles of many organisms. Although most plant and insect populations appear to have advanced their reproductive phenology in line with changes in spring climate, some birds appear unable to alter their breeding cycles sufficiently to track temporal changes in prey availability. In particular, those long-distance migrants wintering south of the Sahara Desert may find it especially difficult to alter their breeding cycles appropriately. Where climate change disrupts the synchrony of birds and their prey, it is quite possible that a decrease in reproductive success will occur, perhaps followed by population decline.

Until recently, a lack of knowledge of such population-level consequences prevented a clear understanding of the severity of the threat posed to migrant birds by the temporal mismatch of breeding cycle and food peaks. However, research by Anders Møller and colleagues now suggests that such mismatches may underlie the recent population declines of many European migrants. They predicted that migrants differ in their capacity to alter their migration schedules adaptively in order to track food peaks; and that species with a greater temporal mismatch may be more likely to show population declines.

They tested this hypothesis as follows. By using information on changes since 1960 in the mean/median timing of spring migration, they derived an index representing the phenological response of 100 European migrants to recent climate change. The use of this index assumes that those species which have altered their migration timing to a greater extent are better able to track shifts in prey availability. Next, while controlling for potentially confounding variables, they assessed whether this index accounted for significant variation in the Euro-

pean population trends of migrants. The population trends employed in the analysis were those published by BirdLife International (2004), who derived a qualitative assessment of the population trend of all European bird species during two periods, 1970–1990 and 1990–2000.

Results confirmed that the index of response to climate change showed a significant negative association with population trend during 1990–2000. In other words, species that altered their migration timings more were presumably better able to track resource shifts during the breeding season, and this resulted in stable or increasing population trends. Those species lacking the capacity to alter their migration schedules became less synchronised with prey populations and declined. Interestingly, population trend was not significantly associated with the index of response to climate change during the earlier period, 1970–1990. Instead, breeding habitat type, migration status and northernmost breeding latitude were the important predictors. This implies that ecological factors affecting population trends can change over time and that the relevance of climate-mediated phenological changes on population trends has increased recently.

This study is a valuable contribution to our understanding of the potential repercussions of global climate change for migratory birds. However, while able to assess whether migrants have altered their migration timing in recent decades in response to climate change, it does not address the extent to which any changes have been sufficient to track shifts in resource abundance. Ecological studies of the timing of breeding in model species relative to peaks in food availability, and its consequences for breeding success and population growth, are clearly priority areas for further research.

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Populations of migratory bird species that did not show a phenological response to climate change are declining. *Proc. Nat. Acad. Sci. USA* 105: 16195–16200.

## The Portsmouth Group

This short article continues *BB*'s occasional series to celebrate notable characters of the British birding scene. It is an account of the collective endeavour of a group of young men who some 60 years ago banded together to study and document the birds of a single area. The origins of what became known as the 'Portsmouth Group' date from the late 1940s, when Dave Billett and the late Colin Tubbs (*Brit. Birds* 91: 155–156) were, quite independently, watching and recording birds at Farlington Marshes and Langstone Harbour, Hampshire. Their paths crossed in March 1951, by which time Colin was already contributing to the National Wildfowl Count scheme. Later that same year, Dave Billett encountered Dr Canning Suffern – inevitably known as 'Doc' – at nearby Titchfield Haven. Suffern's influence encouraged Dave's belief that a systematic approach to recording bird populations was both desirable and necessary to support initiatives to conserve Langstone Harbour. By 1952, other observers, including George Clay, John Conchie, Cliff Henty, Graham ('Taff') Rees and the late Bryan Renyard were regularly watching various sites around the harbour. They decided to co-ordinate their observations and submit a joint annual report to Hampshire's then bird

recorder, Edwin Cohen. It was Cohen, describing this 'young and energetic band' in the 1952 Hampshire Bird Report, who dubbed them the 'Portsmouth Group'. The group was not in any sense a formal bird club – people became 'members' simply by visiting the area regularly to watch birds. By the mid 1950s, other birdwatchers, including John Bowers, Michael Bryant, Michael Burnop, the late Peter Le Brocq, John Simons, Bill Truckle and Alan Walker, had also 'discovered' the marshes.

I grew up close to Portsmouth Harbour's north shore, just 15 minutes by bicycle from Langstone Harbour. As school contemporaries, I already knew three PG members, including George Clay. George's father hailed from nearby Hambleton where, with George and others, I spent much of my early teens bird-nesting, camping, and watching cricket. After leaving school, I began visiting Farlington Marshes more frequently in late 1954, although the few other birdwatchers I met were wary and gave me a wide berth. Some time later I learnt that they were unsure as to whether I had given up egg-collecting. Egging was still rife in those days and bird-catchers also frequented relatively quiet areas such as Farlington Marshes, where often they were seen setting mealworm-baited

spring-nets to catch migrants such as Northern Wheatears *Oenanthe oenanthe*.

In March 1955, I met Graham Rees at Farlington and was invited to join him for the day. Within minutes he had drawn my attention to a small group of Garganey *Anas querquedula*. This was a new species for me and I still vividly recall the drakes' conspicuous head pattern and rattling call. A little later we met Peter Le

Tony Marr



89. The PG at Farlington Marshes, summer 1955; from left John Simons, Dave Billett and Graham Rees; Roger Brown, far right, was a Titchfield Haven regular. Portsdown Hill is visible in the background.

Brocq; he had been watching Firecrests *Regulus ignicapilla* nearby and soon I had seen my second new bird of the day. It was hard to believe that such birds occurred in Hampshire, let alone so close to home. Thus began my association with the PG, and Farlington and Langstone became my local stamping grounds for the following decade. My horizon had truly widened and I soon began to subscribe to *BB*, the cost at that time being 3 shillings per copy and 30 shillings for an annual subscription. I remember being particularly excited by the front cover of the 1955 February issue, a C. W. G. Paulson photograph of the Farlington Marshes Lesser Yellowlegs *Tringa flavipes* of September 1954.

The PG put Farlington Marshes and Langstone Harbour on the ornithological map and other birdwatchers from both within the county and farther afield began to visit. We were always delighted to see our West Sussex counterparts and the PG yearbooks, maintained assiduously by Dave Billett, chronicle the 1950s visits of many well-known Sussex characters, including Roger Charlwood, the late Graham des Forges and Denzil Harber, Tony Marr, Roger Ruston and Roger Wilmshurst. Much good-natured rivalry existed between east Hampshire and West Sussex birdwatchers in those days, and the PG's rendering of 'Sussex by the Sea', one verse of which alluded to a lack of birds in Sussex, was both irreverent and perhaps even today unprintable.

The post-war improvement in working conditions meant that many enjoyed steady employment and increased leisure time. The PG, taking advantage of newly found opportunities, channelled their energies into countryside pursuits, particularly ornithology. With one or two exceptions, we all lived in the Portsmouth area and worked in factory or enclosed conditions – a common catalyst was a desire to abandon everyday surroundings and spend time in more congenial environments. Farlington Marshes became a second home and many of the PG spent every spare hour there. My memories of the marshes, the group members and the birds are many, diverse and inevitably nostalgic. It is now difficult to appreciate the relative remoteness of the area just 60 years ago, considering the close proximity of a city of 200,000 souls. Situated on the northeast outskirts of Portsmouth, it consisted principally of about 120 ha of grazing marsh, originally

embanked in the latter half of the eighteenth century. Access from public roads was by a rough, unmade track, bordered by bramble and hawthorn scrub. We saw few people, even at weekends, though its reputation as a prime blackberry-picking area meant an influx of folk in late summer and early autumn. There were few access restrictions, although the seawall footpath remained the best vantage point from which to view the harbour's surrounding mudflats and islands. However, care was required at times as the Royal Navy used the marsh as a weekday explosives detonation area until well into the 1950s.

Youthful enthusiasm soon broadened our activities to include other areas of Hampshire, not least the New Forest, where we watched and recorded breeding raptors, waders, Common Stonechats *Saxicola torquatus* and Dartford Warblers *Sylvia undata*, as well as contributing to Dr John Ash's Red-backed Shrike *Lanius colurio* study. It was here that Colin Tubbs initiated his long-running Common Buzzard *Buteo buteo* survey and Peter Le Brocq, acting upon immediate pre- and post-war information, 'rediscovered' Honey-buzzards *Pernis apivorus*. John Bowers and Bill Truckle introduced me to Titchfield Haven and Woolmer Forest, and together we began to visit the Isle of Wight regularly, where much time was devoted to sea-watching and migrant hunting at prominent headlands, particularly at St Catherine's Point. Here we sometimes encountered spectacular falls of migrants, these on occasions being attracted in huge numbers to the lighthouse. Attempting to combat the number of casualties, the lighthouse keepers were then still in the habit of erecting wooden-framed perches around the lighthouse balcony at peak migration periods. We were also lucky to find several rarities, including Britain's eighth Pallas's Leaf Warbler *Phylloscopus proregulus*, on 27th October 1963, the first of (what was then) an unprecedented six birds that autumn (*Brit. Birds* 57: 508–513). Back in the 1950s, few people owned cars and weekend expeditions (even to places such as St Catherine's Point) often involved complicated journeys by public transport, much walking and overnight bivouacs.

Tales concerning PG characters, particularly Peter Le Brocq, one of British ornithology's great eccentrics, became enshrined in our folklore. Out of deep concern of lightning strike

Tony Marr



90. Peter Le Brocq, using the LeBrocquar (Barr & Stroud 15x60, with rubber objective extensions) and an early monopod, Farlington Marshes, 1955.

and adder *Vipera berus* bite, he always carried a rubber-encased walking stick. On one occasion an adder struck at his stick and he distinctly heard the sound of fangs penetrating the covering. He immediately bought a new pair of sea boots lest his current pair were wearing a trifle thin! One Saturday evening in the mid 1950s, when he and others were returning home from birdwatching in West Sussex, the topic of conversation was differences in calls and display flights of Common Buzzards and Honey-buzzards. Showing not the slightest inhibition, Peter ran up and down the central aisle of a packed bus imitating calls of both species while waving and clapping his hands above his head!

Good-quality optical equipment was very expensive in the early 1950s and first binoculars were usually an 8x25 or 8x30 from the cheaper end of the market. Also popular among the PG were second-hand Ross 5x40 and 7x50, later upgraded to either Barr & Stroud 10x42s or 12x50s, or Kershaw 12x40s or 12x50s. However, self-confessed binocular fanatic Peter Le Brocq's early favourite was the Barr & Stroud 15x60. Complete with homemade rain-guard and long rubber objective extensions to combat extraneous light, this monstrous weapon soon became known as the 'LeBrocquar' and saw constant service throughout the 1950s and 60s. Peter was also fond of a porro-prism 10x50 Hendsolt, which, following a Le Brocq field

trial, led to a difference of opinion between Peter and a certain renowned binocular manufacturer at that time. The wire strops on a distant telephone pole were discernible through the Hendsolt but not with the other firm's 10x50. This led to Peter phoning the managing director in the early hours of the morning to complain about their binocular's shortcoming!

My primary recollections of Farlington's birds do not necessarily revolve around the rare or exotic; the bread-and-butter

species were an equally exciting prospect. In early March the PG watched eagerly for the return of displaying Northern Lapwings *Vanellus vanellus* and, later in the month, for the first Yellow Wagtails *Motacilla flava* and breeding Common Redshanks *Tringa totanus*. Groups of courting Common Shelducks *Tadorua tadorua* displaying on the marshes on spring evenings were always a delight to watch. Calm evenings in April and May provided some of the most evocative spectacles – especially when groups of waders, often in summer plumage and including Dunlins *Calidris alpina*, Black-tailed Godwits *Limosa limosa*, Common Redshanks and Turnstones *Arenaria interpres*, would leave the mudflats, calling constantly, circle high around the harbour steadily gaining height and leave northwards over Portsdown Hill. Black-necked Grebe *Podiceps nigricollis* and dark-bellied Brent Goose *Branta bernicla bernicla* were two Langstone Harbour specialities at that time with up to 58 of the former and 200 of the latter, the harbour then being the sole Hampshire wintering site for both species. Many thousands of Brents now winter in Langstone and elsewhere in Hampshire, making the 1950's counts seem especially paltry.

The PG was responsible for adding several words and phrases, now in general use, to the birdwatcher's vocabulary. For example, Dave Billett introduced the terms 'seen off' and

'dipped out' to Farlington Marshes in 1954 during his service in the Royal Navy, where they were commonly used slang. Peter Le Brocq was the first person I heard using the expression 'dude' to describe a certain type of birdwatcher. The original dude was a birdwatcher from Kent who was renowned for wearing yellow gloves in the field. Peter also introduced the term 'good value' – the ultimate value for him was a dusk-hunting Merlin *Falco columbarius*, a Hen Harrier *Circus cyaneus* or Short-eared Owls *Asio flammeus* quartering the marshes on a winter's afternoon.

Little did we realise in the early 1950s just how much time and effort would be required by so many people to ensure the survival of both marsh and estuarine habitats and that the tradition of data gathering begun by the earliest members of the PG would prove so crucial. Development rumours (including a seaplane base, a new city to be built on stilts, and marina and recreational development) abounded in the early 1950s. As early as 1954 the Nature Conservancy, in the teeth of much opposition by local councils, was involved in attempting to have the marsh and harbour's natural history importance recognised by local nature reserve declaration. Chilling remarks by local councillors in favour of development included 'If the harbour isn't there when the Eider Ducks [*Somateria mollissima*] return, they'll have to go elsewhere' and 'The Brent Geese will have to move over a bit.' This last remark was made to Colin Tubbs by a proponent of a marina scheme that involved massive infilling and excavation in Langstone Harbour. The Hampshire & Isle of Wight Naturalists' Trust (now Wildlife Trust), which had already entered into a reserve

agreement with the marsh owner in 1962, finally secured a lease from Portsmouth City Council following its purchase in 1970 and declaration as a Local Nature Reserve. International designations, including that of Wetland of International Importance and Special Protection Area for Birds, were conferred on Langstone Harbour and the marshes in 1987. Among those who worked tirelessly to amass the waterfowl data on which the Langstone Harbour's conservation case was established was Bryan Renyard. For half a century he cycled (riding the same bike) the shores of Langstone and the Hampshire section of Chichester Harbour collecting information. Meanwhile, Dave Billett, having been closely involved in Farlington's affairs from the beginning, was appointed to oversee the marsh's management in a voluntary capacity, before becoming full-time warden from 1982 until his retirement in 1992. During his service there he almost lost his life on one occasion from a severe shotgun wound to the chest while attempting to apprehend a 'marsh cowboy'. Others deserving specific mention for their sterling work behind the scenes in those early years include Graham Rees and Michael Bryant.

In spite of what was achieved, the Farlington and Langstone area did not survive unscathed.



Tony Marr

91. The Desert Wheatear *Oenanthe deserti* at Selsey Bill, Sussex, on 30th October 1960, was one of the first 'big twitches', involving mostly Hants and Sussex observers. Here, from left, Peter Le Brocq, John Bowers, Martin Port, Graham Rees (partly hidden) and Bill Truckle discuss the bird – all but Port were members of the PG.

Much rough pasture and scrubland across the north end of the marshes, as well as similar habitats to the west, was lost to major road-building schemes. Storehouse Lake, a beautiful creek with its attendant eighteenth-century barn on the north shore of the harbour, was infilled and disappeared under a local council refuse tip. Another adjacent area of rough pasture, which had earlier been lost to playing-field development, was later the preferred site for Portsmouth Football Club's replacement stadium. Fortunately, this development was rejected at the eleventh hour, though playing fields remain there to this day.

British ornithology has changed dramatically since the 1950s, and in particular the lack

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*Postscript* As one of the Sussex 'characters' referred to by Eddie Wiseman, I might perhaps add a few personal memories of the PG as seen by an outsider. As a fourteen-year-old, I was introduced to Langstone Harbour and Farlington Marshes in November 1954 by Roger Ruston. I next visited 'The Marsh', as Farlington was affectionately known, in 1955 and met some of the PG lying semi-prone against the harbour wall, counting waders and wildfowl. This posture was to become a familiar one, adopted to ease long-distance watching over Langstone Harbour ('The Harbour') with their heavy binoculars and brass-and-glass three-draw telescopes. I recollect that I was wearing Hood Bullseye rubber boots and a Grenfell windcheater and using Barr & Stroud binoculars. By a happy coincidence, so were they, and I was immediately accepted as being okay and allowed to be considered as one of the lads.

To a schoolboy, the principal members of the PG were rather daunting field men and companions. They were older and very knowledgeable, especially at recognising small dots at great distance from their jizz. They taught us a lot and kept us on our toes. They were utterly dedicated to regular watching and meticulous recording at 'The Harbour' and 'The Marsh'. In the summer they visited 'The Forest' (the New

*Tony Marr*

*Two Hoots, Old Hall Farm Barns, Cley, Norfolk NR25 7SF*

of mobility and access to near-instant information on rare birds must seem strange to many of today's birders. The PG's 'heyday' spanned a period of perhaps 20 years, although Dave Billett maintained the Farlington yearbooks for another two decades or more. For more than a decade, I was privileged to share the marshes and mudflats of Farlington and Langstone with the PG. While its members are now scattered, or in some cases sadly no longer with us, the PG laid a solid foundation for the birdwatchers, both amateur and professional, who followed. The skill and dedication of those early pioneers, and those who came after, ensured that the area has one of the longest-running waterfowl datasets of any comparable European site.



Forest) and in migration seasons, 'The Point' (St Catherine's Point). At times they joined in more distant jaunts, to Scotland and in later years to Turkey, with the LMOS – the Long Men Of Sussex, as three of us who were over six feet in height were known. This was an allusion to the Long Man of Wilmington, the famous chalk figure carved on the East Sussex Downs.

They were ahead of the game in identification, fieldcraft, birding slang, birding clothing and even camping gear. It was a privilege to be able to raise one's own game to new levels by following their example. They loved the 'value' in birding and its followers, and enjoyed endless banter and leg-pulling, much of which they instigated. They were fearless in taking to task anyone they regarded as incorrect, self-righteous or pompous, although it was always done with light-hearted irony and without malice (see *Brit. Birds* 96: 132–134).

The PG was a fine example of how much can be achieved when a common interest and purpose brings together a group of enthusiastic birdwatchers from widely different backgrounds. Their contributions to the Hampshire report (and occasionally to the Sussex report) illustrate how much they added to local ornithology, establishing high standards, setting the pace and, above all, enjoying themselves.

# From the Rarities Committee's files: An unusual Common Stonechat

On 24th March 2005, Nick Senior came across a striking adult male stonechat *Saxicola* at the London Wetland Centre, Greater London. The bird differed from 'typical' Common Stonechats *Saxicola torquatus* in having strikingly pale, almost wholly white, underparts, with just a faint and restricted apricot wash to the upper breast. Furthermore, the bird showed extensive white neck-side patches, described as extending and broadening towards the rear of the neck, large white patches on the inner wing-coverts and a large area of white on the rump and uppertail-coverts. The underwings were described as grey with 'sooty black' lesser underwing-coverts and axillaries. The observer considered these features to fall outside the known range of plumage variation of even the brightest or palest Common Stonechat. Photographs were taken which show just how striking this bird looked (plate 92). The bird was tentatively identified as showing characters of 'Siberian Stonechat' *S. t. maurus* and the record was submitted as such to BBRC.

During the record's initial fast-track circulation<sup>1</sup>, all members were as impressed as the observer had been with the striking appearance of the bird and, in particular, with the pale and weakly flushed underparts. Opinions varied, however, on how this should be interpreted. Although spring male Siberian Stonechats can indeed show a restricted orange patch on the breast, the extremely weak coloration of the underparts of the London bird was not considered typical of this form. Furthermore, while the neck-side patches appeared extensive, they were from some angles less impressive: they were perhaps not sufficiently extensive for Siberian Stonechat and possibly fell within the range of Common Stonechat. The same was true, as far as could be judged from the description, of the extent of white on the rump and uppertail-coverts and on the inner wing-coverts. The description of 'sooty black' lesser underwing-coverts and axillaries, contrasting with grey undersides to the remiges was also felt to be consistent with Common Stonechat. On

adult male Siberian, the whole of the underwing-coverts and axillaries are solidly black and contrast with silvery undersides to the remiges. Ultimately, the Committee decided that the possibility that it was a strikingly marked Common Stonechat could not be completely excluded. The identification as Siberian Stonechat was thus deemed 'not proven'.

Given the undoubtedly striking appearance of this bird, however, and the interesting debate triggered by the record's submission, the details were recirculated to all voting members. This endorsed the initial conclusion that an exceptionally bright Common Stonechat could not be ruled out definitively. Following further correspondence with the observer, the record was, finally, circulated a third time, with the same result.



C. Wilkinson

92. Apparent Common Stonechat *Saxicola torquatus*, London Wetland Centre, Greater London, 24th March 2005.

In reaching its 'not proven' conclusion, the Committee was mindful of an increasing case history of bright spring stonechats in Britain which, by virtue of their striking difference from the dark, saturated, 'burnt' colours of familiar British Common Stonechats (*S. t. hibernans*), are often taken to be Siberian Stonechats. These birds typically show a restricted, though still bright, orange patch on the breast, often more 'peachy' than 'burnt orange'; extensive white neck-sides and inner

<sup>1</sup> The term 'fast-track' or 'motorway' refers to the system whereby more-regular rarities and more 'straightforward' records (such as long-staying, well-photographed birds) are assessed by half of the full panel (of ten voting members). If the bird is accepted or rejected by all five members, it is not assessed further; if it is pending or the vote split, it will be reviewed by all ten voting members.

Peter Royle



93. Apparent Common Stonechat *Saxicola torquatus*, Marloes Mere, Pembrokeshire, 21st April 2006.

wing-covert patches; and large areas of white on the rump and uppertail-coverts. However, increasing knowledge of the variation shown by continental Common Stonechats (*S. t. rubicola*) has shown that these are the closest match to many such birds and that *rubicola*-type birds are in fact not uncommon in Britain (though note that *rubicola* has yet to be formally admitted to the British List). It should be mentioned here that the validity of *hibernans* and *rubicola* as distinct taxa has been questioned. For example, Urquhart (2002) preferred to treat the variation in European Common Stonechats as clinal, from the dark birds in the north and west to the pale birds in the south and east. Nonetheless, the traditional distinction is perhaps still useful when referring to plumage types towards opposite ends of the cline. It is surely significant that the majority of these bright '*rubicola*-type' birds occur in early spring, typically between late February and April, coinciding with peak Common Stonechat passage into and through southern Britain. Such individuals may well represent 'overshooting' birds from the more southern parts of the range, although it is now also clear that some birds breeding in southeast England and East Anglia are not 'classic' dark *hibernans* and may also represent more southerly stock (Walker 2001).

BBRC has recently completed a review of spring Siberian Stonechat records (see *Brit. Birds* 97: 596–597). This exercise upheld the majority of claims but five were regarded as 'no longer proven'. The peak time for spring Siberian Stonechats was confirmed as being between late April and early June, distinctly

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later than peak Common Stonechat passage (see above). With this in mind, the Committee considered that the date of the London bird as well as the description were, on balance, perhaps more consistent with Common Stonechat. The undoubted pallor of the underparts was not typical of most 'stonechat pitfalls', however, and it was considered that the London bird may represent an aberrant (or at least extreme) example of Common Stonechat.

The Committee is aware of another recent example of an apparently 'aberrant' Common Stonechat. Although the record has not been submitted to BBRC, photographs of a bird at Marloes Mere, Pembrokeshire, on 21st April 2006 show a highly contrasting 'black and white' bird with extensive white neck-side patches, rump/uppertail-coverts and inner wing-coverts, combined with apparently white underparts with little or no orange on the breast (plate 93). Although this set of features is not compatible with Siberian Stonechat, neither is it typical of Common Stonechat.

In this context, the London bird is particularly instructive, adding to the evidence that Common Stonechat may present a wider range of plumages in spring than previously recognised. It is also possible, of course, that our knowledge of the full range of variation of Siberian Stonechat is incomplete. Most Common and Siberian Stonechats are relatively easy to identify in autumn, but a complete understanding of their appearance in spring, and hence their true status in Britain, remains elusive. For this reason, it will be necessary to maintain a 'watching brief' on such bright or pale spring stonechats and keep an open mind on whether future re-evaluation might be necessary. The Greater London record does, however, underline the usefulness of the term 'not proven'!

#### Acknowledgments

BBRC is grateful to Nick Senior for his co-operation and support in the preparation of this short paper.

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# Letters

## Recording areas of Great Britain

As a consequence of our paper on this subject (*Brit. Birds* 101: 364–375), we have received some feedback from Recorders and from national committees. We therefore suggest that the following conventions might be adopted for the areas named.

39. Yorkshire The Recorders for the Yorkshire Naturalists' Union would prefer all records to be described simply as 'Yorkshire', leaving the matter of subdivisions to their own discretion.

40. Cleveland Although this remains two Areas of Double Recording (with Co. Durham and Yorkshire), records should be quoted in national summaries simply as 'Cleveland'. The other County Recorders have not abandoned

their claims to ancient territories, but they can extract such records as they please to satisfy their interest.

W2 Glamorgan This area has long been reported on by two societies, with no overlap. Nonetheless, the Welsh Ornithological Society considers it a single area and would prefer that records from one vice-county should not be separated into 'Gower' and 'East Glamorgan'. We might also point out that parts of the county are not exactly described by these titles; the citizens of Port Talbot do not live in Gower and those of Porthcawl would be surprised to learn that they were in East Glamorgan.

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## Iran and the Western Palearctic

Defining zoogeographic regions is a complex issue and there are several possible approaches. One is to consider the number of endemic species, assuming that high levels of endemism indicate close zoogeographic affinity among different parts of a potential region. With reference to this approach, I contend that Iran is best regarded as part of the Western Palearctic because of the high number of bird species endemic to an area comprising the Western Palearctic (as generally defined) and Iran. Moreover, the Iranian avifauna is closer to the European one than it is to that of some other parts of the Western Palearctic (e.g. Syria and Iraq; see below). This has been largely over-

looked for several reasons, including a lack of information on the birds of Iran (since it is familiar to so few western ornithologists) and the fact that Iran falls outside the Western Palearctic as defined in *BWP*.

In addition to about 90 species that are



Magnus Ullman

94. Spotted Flycatcher *Muscicapa striata*, Iran, April 2007. This is one of several common and widespread European species that breed across much of Iran but are rare or absent from Syria, Iraq and Jordan.



Magnus Ullman

95. Dead Sea Sparrow *Passer moabiticus*, Iran, April 2007. Dead Sea Sparrow is one of more than 20 Western Palearctic near-endemics; it also breeds in Iran and there is a small population in Afghanistan.



Magnus Ullman

96. Green Warbler *Phylloscopus nitidus*, Iran, April 2008. Now recognised as a full species, Green Warbler is another taxon breeding in both the Western Palearctic and Iran but not elsewhere. Birds in Iran tend to be strikingly yellow.

endemic to the Western Palearctic<sup>1</sup>, there are approximately 39 species which are 'near-endemic'<sup>2</sup>, i.e. which breed mainly in the Western Palearctic but which also have small

Wheatear *O. xanthopyrmyna*, Basra Reed Warbler *Acrocephalus griseldis* and Dead Sea Sparrow *Passer moabiticus*. But there are also some 'very European' birds that are endemic to

populations beyond its borders (see table 1). This is an approximate figure since what qualifies as 'near-endemic' is to some extent subjective.

As defined here, four Western Palearctic near-endemics also breed in the Nearctic, while seven also breed in western Siberia (table 1). However, a much larger number of the Western Palearctic near-endemics occur in Iran than in other regions. A minority of these – including Levant Sparrowhawk *Accipiter brevipes* and Black-eared Wheatear *Oenanthe hispanica* (Kazakhstan), and Ring Ouzel *Turdus torquatus* (Turkmenistan) – also breed in other areas, but for the majority, the populations that occur in Iran are the only ones beyond the Western Palearctic. A large proportion of these near-endemics are typical Middle Eastern birds, including Hume's Owl *Strix butleri*, Kurdistan

<sup>1</sup> The 'Western Palearctic' is here treated as including the Arabian Peninsula, which seems more in accordance with zoogeographical reality (e.g. see Roselaar 2006), although the bulk of the Peninsula was excluded by the editors of *BWP*. However, this does not affect Iran's affinity to the Western Palearctic.

<sup>2</sup> Here, the term 'near-endemic' refers to breeding distribution, which is most appropriate when using birds to consider zoogeographical affinity at latitudes where many species are migratory.

the Western Palearctic and Iran, including Green Woodpecker *Picus viridis*, Wood Lark *Lullula arborea*, Dunnock *Prunella modularis* and Blue Tit *Cyanistes caeruleus*. The total number of Western Palearctic near-endemics also breeding in Iran is 25 (64% of the total as defined here). This indicates a strong zoogeographical affinity between the Western Palearctic and Iran. Furthermore, the relationship is reinforced by the fact that there are some species almost endemic to Iran, with just minor populations in the Western Palearctic, such as Grey Hypocolius *Hypocolius ampelinus*, Radde's Accentor *Prunella ocularis* and Pale Rock Sparrow *Carpodospiza brachydactyla*.

The European avifauna is much closer to that found in Iran than it is to that found in most other parts of the Middle East. Some of Europe's most typical species are common in parts of Iran but absent (or largely so) from Iraq and Syria, including Sky Lark *Alauda arvensis*, Tree Pipit *Anthus trivialis*, White Wagtail *Motacilla alba*, Dipper *Cinclus cinclus*, Wren *Troglodytes troglodytes*, Robin *Erithacus rubecula*, Northern Wheatear *O. oenanthe*, Song Thrush *Turdus philomelos*, Common Whitethroat *Sylvia communis*, Spotted Flycatcher *Muscicapa striata*, Coal Tit *Periparus ater*, Common Starling *Sturnus vulgaris*, Common Chaffinch *Fringilla coelebs*, Greenfinch *Carduelis chloris* and Linnet *C. cannabina*.

In summary, there is a close association

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**Table 1.** Western Palearctic near-endemics, with their breeding distribution beyond the Western Palearctic. Of the 39 species, 25 breed in Iran.

	+ Iran	+ other areas
Pink-footed Goose <i>Anser brachyrhynchus</i>		Greenland
Barnacle Goose <i>Branta leucopsis</i>		Greenland
Caucasian Black Grouse <i>Tetrao mlokosiewiczi</i>	✓	
Caspian Snowcock <i>Tetraogallus caspius</i>	✓	
Manx Shearwater <i>Puffinus puffinus</i>		Canada
Levant Sparrowhawk <i>Accipiter brevipes</i> ✓	✓	Kazakhstan
Lesser Spotted Eagle <i>Aquila pomarina</i>	✓	Indian subcontinent
Sooty Falcon <i>Falco concolor</i>		Tropical Africa
Lesser Black-backed Gull <i>Larus fuscus</i>		West Siberia
Hume's Owl <i>Strix butleri</i>	✓	
Green Woodpecker <i>Picus viridis</i>	✓	
Syrian Woodpecker <i>Dendrocopos syriacus</i>	✓	
Middle Spotted Woodpecker <i>Dendrocopos medius</i>	✓	
Thekla Lark <i>Galerida theklae</i>		Tropical Africa
Wood Lark <i>Lullula arborea</i>	✓	
Meadow Pipit <i>Anthus pratensis</i>		Greenland, West Siberia
Dunnock <i>Prunella modularis</i>	✓	
Black-eared Wheatear <i>Oenanthe hispanica</i>	✓	Kazakhstan
Kurdistan Wheatear <i>Oenanthe xanthopyrmyna</i>	✓	
Ring Ouzel <i>Turdus torquatus</i>	✓	Turkmenistan
River Warbler <i>Locustella fluviatilis</i>		West Siberia
Aquatic Warbler <i>Acrocephalus paludicola</i>		West Siberia
Marsh Warbler <i>Acrocephalus palustris</i>	✓	West Siberia
Basra Reed Warbler <i>Acrocephalus griseldis</i>	✓	
Green Warbler <i>Phylloscopus nitidus</i>	✓	
Semi-collared Flycatcher <i>Ficedula semitorquata</i>	✓	
Iraq Babbler <i>Turdoides altirostris</i>	✓	
Blue Tit <i>Cyanistes caeruleus</i>	✓	
Crested Tit <i>Lophophanes cristatus</i>		West Siberia
Sombre Tit <i>Poecile lugubris</i>	✓	
Western Rock Nuthatch <i>Sitta neumayer</i>	✓	
Palestine Sunbird <i>Cinnyris osea</i>		Tropical Africa
Woodchat Shrike <i>Lanius senator</i>	✓	
Masked Shrike <i>Lanius nubicus</i>	✓	
Dead Sea Sparrow <i>Passer moabiticus</i>	✓	Afghanistan
Arabian Golden Sparrow <i>Passer euchlorus</i>		Tropical Africa
Golden-winged Grosbeak <i>Rhynchostruthus socotranus</i>		Tropical Africa
Parrot Crossbill <i>Loxia pytyopsittacus</i>		West Siberia
Black-headed Bunting <i>Emberiza melanocephala</i>	✓	

between the avifauna of Iran and that of the Western Palearctic, and there seems no biological basis to include Iraq or Syria in the region and not Iran (or at least the majority of it). Several oriental species breed in southeast Iran, and the border between the Palearctic and Oriental regions is beyond the scope of this letter (but see Roselaar 2006).

Reference

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# Notes

All Notes submitted to *British Birds* are subject to independent review, either by the Notes Panel or by the BB Editorial Board. Those considered appropriate for BB will be published either here or on our website ([www.britishbirds.co.uk](http://www.britishbirds.co.uk)) subject to the availability of space.

## Green Woodpecker drumming on metal plate surrounding nestbox entrance

On 1st March 2008, at Priory Country Park, Bedford, I heard a loud, irregular tapping noise, which, on further investigation, I discovered was made by a Green Woodpecker *Picus viridis* tapping on the metal plate surrounding the entrance hole of a nestbox (of the sort used by tits). The nestbox was acting as an amplifier, which resulted in the sound being heard over 100 m away. This behaviour was noted fairly regularly during the following six weeks. There are 25 nestboxes of this type situated fairly close together in this section of the park and, during a three-week period, at least two were used in this way.

On 25th March, I heard the same irregular tapping and waited about 30 m away to observe the behaviour and record the sound. The woodpecker then started drumming, using the same technique of utilising the metal plate. It drummed four times in a ten-second period, followed by irregular tapping, before drumming again. I observed a Green Woodpecker drumming in this way on five subsequent dates, the last being on 20th April. Each period of drumming lasted for about one second and usually consisted of 12–14 strikes but eight were recorded on one occasion. The frequency slowed down for the last 2–3 strikes. Although on most occasions the bird drummed three or four times, on 27th March it

drummed seven times in a minute followed by a further three times several minutes later. The sound was quite dramatic, the amplification producing a sound that one might expect to have a mechanical source, and the drumming could be heard well over 200 m away. As the woodpecker drummed only on the metal plate, it seemed to me that this was selected for the purpose of sound amplification. Three recently excavated nest holes were found in a tree about 8 m away from the most frequently used nestbox. BWP states that drumming is ‘inadequately studied owing to its rarity’ and suggests that, although drumming can be loud, it is usually weaker than that of the Lesser Spotted Woodpecker *Dendrocopos minor*.

Great Spotted Woodpeckers *D. major* have regularly been recorded drumming on metal objects, but the only record that I can find for a Green Woodpecker doing this is of one recorded drumming on the metal cap of an electricity pylon (*Brit. Birds* 42: 122–123).

It is interesting to speculate why drumming is a common feature of the behaviour of Great and Lesser Spotted Woodpeckers but seemingly rare in the Green Woodpecker. Perhaps the ‘yaffle’ call of the Green Woodpecker is sufficiently loud and far-carrying for the activity of drumming to be made largely redundant.

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## Green Woodpecker feeding behaviour



97 & 98. These photographs show an adult male Green Woodpecker *Picus viridis* feeding a fledged juvenile on a garden lawn in Farnham, Surrey, in August 2008. In the same way as for chicks in the nest, this occurred by regurgitation rather than direct feeding.

Angela Walker

Angela Walker

## Great Spotted Woodpecker nesting in natural tree hole

On 30th May 2007, at Bookham Common, Surrey, I heard young birds calling from a hole in a Pedunculate Oak *Quercus robur*. A few minutes later, a male Great Spotted Woodpecker *Dendrocopos major* arrived at the hole, and fed young which came to the entrance (plate 99). At one stage, three young could be seen.

The hole was a natural one, with healed wood surrounding a central oval cavity, 11 m up on the underside of a slightly sloping main branch. From one of the photographs taken, the bill of the male was measured to the estimated forehead. Using this as a baseline of approximately 30 mm, the width of the hole was about 60 mm, and the vertical measurement, subject to angular bias, about 90 mm. It is not known, of course,

how much internal modification the birds had made (although it seems likely that the interior timber was soft/rotting, so presumably the woodpeckers had excavated it to some degree).

I can find no mention in the literature of such a nest-site for this species. The young fledged successfully several days later.



Alan D. Prowse

99. Male Great Spotted Woodpecker *Dendrocopos major* at natural nest-hole, Surrey, May 2007.

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## Sounds made by Common Swift chicks

Common Swift *Apus apus* nestlings produce a range of sounds that are emitted predominantly, but not exclusively, after the arrival of a parent at the nest with food. The basic sounds (see fig. 1) are not unlike the purring of a small kitten, and are made at a higher frequency (7–9 kHz) than the main components of the well-known screams of the adults (4–7 kHz). These sounds may provide a signal to the parents as, after successful feeding, the sounds tend to either decrease in volume or cease temporarily. These calls may also signal the health and vigour of the chicks and/or reinforce parent–offspring bonds, but seem unlikely to be

related to identification (since adults will feed introduced chicks without hesitation; E. Kaiser *in litt.*).

Hand-reared chicks appear to emit two additional types of sound, quite different from the normal ‘purring’ calls. The first (fig. 2) appears impulsive and may be rendered phonetically as ‘si’ or ‘tzi’; in a sonogram the calls appear similar to

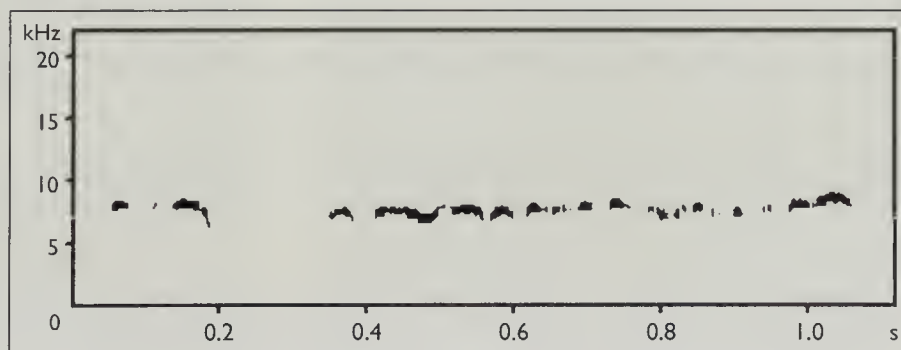
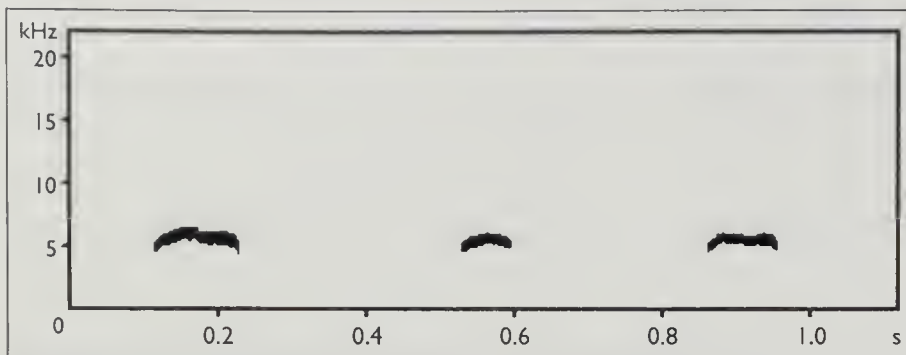


Fig. 1. ‘Purring’ sounds emitted by Common Swift *Apus apus* nestlings.



**Fig. 2.** Single impulsive sounds of a hand-reared Common Swift *Apus apus* nestling.

those of adults (frequency 5.5–7.5 kHz), although the human ear will not identify them as such. The second, uttered by only some hand-reared chicks, may be heard after feeding and seems to be of non-vocal origin, made somewhat irregularly with intervals of about 0.5 seconds between each sound unit. The human ear can hear this sound from a

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distance of c. 1 m, and it is reminiscent of soft bill-clicking (although the bill does not move). One of us (HM) rescues and raises c. 35 chicks each year, and of these on average 2–3 per year emit the mechanical ‘clicking’ call. The origin of this sound is unknown, but

#### Acknowledgment

We are grateful to Edward Mayer for his help in translating the text into English.

## Blackbirds eating fuchsia seeds

Further to the observations of John Stewart-Smith (*Brit. Birds* 101: 328), I can report that I watched a Blackbird *Turdus merula* eating fuchsia *Fuchsia magellanica* seeds in my garden

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in Burnley, Lancashire, in July 2007 and again in November 2008. This is something that I have not seen before, and perhaps this is a relatively new food source in Britain.

## Blackcaps eating fuchsia fruits

Each winter I observe Blackcaps *Sylvia atricapilla* feeding on the ripened fruit of fuchsia *Fuchsia magellanica* in my garden in Co. Wicklow. This occurs mainly when birds first arrive, in mid or late November, and continues through December (after which few berries remain). The fruit of fuchsia is a relatively large, cylindrical (long axis c. 20 mm), blackish-purple berry which contains a large number of very small seeds. The Blackcaps typically peck vigorously at the attached berry, removing the pulp, while perched on the bush. Blackcaps take a wide range of both native and non-native fruits. Fuchsia, however, is not mentioned as a food item in *BWP*, or by Leach (1981) or Snow & Snow (1988).

I also regularly record Blackbirds *Turdus merula* taking fuchsia berries from early August onwards (as noted by John Stewart-Smith in

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Pembrokeshire (*Brit. Birds* 101: 328).

Fuchsia is a widespread garden species in Ireland and is frequently planted in hedgerows along the western seaboard. However, nearly all the fuchsia hedges in western Ireland are composed of var. ‘*Riccantonii*’, a horticultural cultivar and possibly of hybrid origin, which hardly ever sets fruit (Webb *et al.* 1996). The typical variety, which is the commonest in eastern Ireland, readily produces fruit and this is likely to provide a local food source for Blackcaps, Blackbirds and perhaps other fruit-eating birds.

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## Blue and Great Tits foraging on Bracken

The extensive accounts in *BWP* of the food and feeding behaviour of both Blue Tit *Cyanistes caeruleus* and Great Tit *Parus major* do not include any mention of the utilisation of Bracken *Pteridium aquilinum* as a foraging medium. Since July 2003, I have encountered just five examples of this behaviour during the summer months.

On 31st July 2003, while on the edge of Dartmoor above Scorrison, North Devon, a party of 6+ Blue Tits were watched foraging on both the upper and lower surfaces of Bracken leaves. Identical behaviour involving at least nine of these tits was noted on Lamb Down, Dartmoor, on 2nd August 2006. On 30th August 2006, on the edge of Swanton Novers Wood, Norfolk, a loose flock of 11 Blue Tits were foraging in the tops of tall, dense Bracken.

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The records involving Great Tits were on 17th August 2007, by the Sloden Inclosure, New Forest, Hampshire, when a flock of 20–25 were so engaged, and on 26th July 2008 near Llanwrthwl, Breconshire, which involved 14 Great Tits and five Willow Warblers *Phylloscopus trochilus*. At both Swanton Novers and the Sloden Inclosure, the birds were observed close to woodland edge, so they had the arboreal foraging alternatives close at hand; in the other examples, the nearest trees were 150–200 m away. During the summer, Bracken is frequented by a wide range of invertebrates including flies (Diptera), beetles (Coleoptera), small moths (Lepidoptera) and spiders (Araneae), and this type of foraging by tits may be more frequent than these few records suggest.

## Great Tits attacking young rat

At 16.00 hrs on 2nd June 2006, a young Brown Rat *Rattus norvegicus*, about a quarter of adult size, ran across the lawn of a garden in Ramsey, Essex, between two sections of rockery planted with conifers. The rat was screaming, and clinging to its back was a pair of Great Tits *Parus major*, pecking it vigorously. As the rat

entered the shelter of the rockery, the tits flew away. There was no nest in the vicinity but the immediate area contained a feeding site and a bird bath. It is possible that fledgling Great Tits were close by but they were neither seen nor heard.

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Strome, Top Common, East Runton, Cromer, Norfolk NR29 9PR

## Second excavation causes Willow Tit nest failure

On 11th March 2005, we found a Willow Tit *Poecile montana* nest in a dead Elder *Sambucus nigra* in the scrub surrounding the decommissioned reservoir of Thrybergh Country Park, Yorkshire. Internal inspection (which was possible by eye and without the use of an endoscope) showed a sitting adult. The excavation was typical of the species, consisting of a hole just large enough for the adults to pass through, which led to a vertical, cylindrical chamber c. 10 cm deep.

We revisited the nest on 18th March and found it to have been abandoned. A hole equivalent in size to the entrance was found at the base of the chamber, at the level of the nest

itself (plate 100). Seven eggs were intact and seemingly undisturbed in the lining material. Although Great Spotted Woodpeckers *Dendrocopos major* frequently predate Willow Tit nests, their excavations produce a large hole with markedly jagged edges and many wood chip-pings on the ground below. They also tend to begin their excavations at the existing hole and work downwards (plate 101). It thus seemed unlikely that the hole was made by this species. Weasels *Mustela nivalis* are also Willow Tit nest predators. However, a previous observation showed this species using the existing hole to retrieve the nest contents rather than creating a new one. Moreover, no claw or teeth marks

David Morris



100. Willow Tit *Poecile montana* nest-site, as described in the text, showing two entrance holes, Yorkshire, March 2005.

were evident around the hole. Any predator that had been disturbed in its attempt to obtain the Willow Tits' eggs would have been expected to return to retrieve them. However, the eggs were still in the nest on a third visit, on 25th March.

Alex J. G. Lewis and Laura Daniells

RSPB Willow Tit Project, The Lodge, Sandy, Bedfordshire SG19 2DL

Alex Lewis



101. Willow Tit *Poecile montana* nest-site predated by Great Spotted Woodpecker *Dendrocopos major*, Sutton Gravel-pits, Retford, Nottinghamshire, May 2006.

Between 2004 and 2006, we found and observed over 60 Willow Tit nests as part of the RSPB's Willow Tit Project. Given the striking similarity between the second hole and the others, we believe that it was made by another Willow Tit.

### Eurasian Jay taking peanuts in flight

On 30th January 2008, in St James's Park, London, I saw a Eurasian Jay *Garrulus glandarius* flutter up from some bushes, apparently take something in the air and fly back to the bush. On investigation, I found a lady standing on a secluded path with bushes on both sides, throwing peanuts a metre or so into the air for the Jay, which flew up and took them in flight, recalling exactly the flycatching behaviour of a Spotted Flycatcher *Muscicapa striata*. I then saw a second Jay behave in the same way, while a third was perched nearby. All three were within a couple of metres of the lady. On enquiry, the lady told me that she had been feeding the Jays in this way for about five years and that sometimes they would perch on, and take nuts

directly from, her hand.

There are a number of instances of Jays taking peanuts, including of one flying up to a bird feeder and taking the nuts in flight (e.g. *Brit. Birds* 69: 105–106, 79: 342), while *BWP* refers to Jays hovering 'for 1–2 s to pull off seed-heads' of cereals and to them pursuing insects in the air 'in manner of shrike *Lanius*'. It also states that the species will take cicadas *Cicada orni* in flight. These apart, I have traced no account of similar behaviour, which is evidently relatively unusual and this instance seems worth putting on record, not least because of the tameness of what is normally, even in St James's Park, a rather wary species.

Peter Oliver

The Briar Patch, Limpsfield Chart, Oxted, Surrey RH8 0TL

# Reviews

## GROUSE

By Adam Watson and Robert Moss. Collins, New Naturalist 107, London, 2008. 529 pages; 199 colour photos; many diagrams. ISBN 978-0-00-715097-7. Hardback, £50.00. ISBN 978-0-00-715098-4. Paperback, £30.00.

It was an interesting choice that the founders of *British Birds* made in 1907 when they decided upon the Red Grouse *Lagopus lagopus*, then considered the only bird endemic to Britain, as the emblem of the journal. That was a century ago and now we treat this bird as the British race of the wide-ranging Willow Grouse. But let's not forget that grouse are important. They have had a significant influence on land use in our uplands and they play an important role in the economies of many people in the countryside. They also stimulate passionate debates between conservationists and landowners – in fact, it is hard to think of another bird family of this small size that could warrant a book of this nature. Both authors are renowned experts in their field and have written important contributions on grouse

ecology for this journal over the years including, in 1980, the unforgettable 'Why are Capercaillie cocks so big?' (*Brit. Birds* 73: 440–447).

This is the 107th New Naturalist title to have appeared since the series started in 1945 and it is also one of the largest volumes. It deals exclusively with the four grouse species to be found in Britain & Ireland: Red Grouse (although referred to in the book as Willow Ptarmigan when non-British & Irish populations are discussed), Ptarmigan *L. muta*, Black Grouse *Tetrao tetrix* and Capercaillie *T. urogallus*.

An introductory chapter acquaints us with the family and another discusses nomenclature (and reveals some of the more bizarre names that have been awarded to these species over the years). Chapters on each of the four species contain sections on plumage, behaviour, systematics, distribution, numbers, habitat, diet, metabolism, longevity, survival, breeding, movements, population trends and conservation, and run to 151 pages in total. Nine other chapters focus on some of the important aspects of their lives, including threats from a range of sources. The book is well illus-

trated with 199 well-chosen colour photographs, making it pleasant to browse through, and although thoroughly authoritative it is written in a readable style, in short sections, which make it easy to navigate.

So how are the grouse faring? Although the Ptarmigan is currently surviving well, it is sometimes a victim of ski wires and is bound to be affected by climate change, while future farming policies may bring a (detrimental) reduction in grazing by sheep and deer. However, the other three species are declining. While the artificially maintained population of Red Grouse fluctuates depending on a huge range of factors, Black Grouse and Capercaillie are both red-listed, threatened by elements of habitat change and management, and face future difficulties through changing climate.

This is an excellent book and a real demonstration of the New Naturalist series at its best. Although titles in this long-running series have been appearing more frequently in the last few years, this is the first to focus on a bird family since 1992.

Keith Betton

## SOUTHERN ENGLAND

By Peter Friend. Collins, New Naturalist 108, London, 2008. 416 pages; many colour photos, maps and figures. ISBN 978-0-00-724742-4. Hardback, £50.00. ISBN 978-0-00-724743-1. Paperback, £30.00.

This volume discusses the geology and landscapes of southern England, which is here defined (very roughly) as England below a line from the Severn Valley to the Wash. Five of the book's nine chapters are devoted to regional discus-

sion (of the southwest, the south coast, the Severn Valley, London and the Thames Valley, and East Anglia), while the other four deal with broader issues. The story is well told, as the text is lucid, the maps mostly good ('mostly' because a few do not please my eye, and on one Salisbury is mislabelled as 'Winchester'), the figures clear and the photos well chosen.

So far so good, but I have to admit to a nagging question: leaving aside slavish collectors of the hardback edition, at who exactly is this volume aimed? The way in which certain terms are italicised and explained on first mention caused my mind to

wander back several decades, to idle hours spent in school geography class; in short, *Southern England* has the air of a (rather superior) school and college textbook, and is, I suppose, none the worse for that. In that role and as a reference work it is admirable, but whether many people (other than conscientious reviewers) will read it in its entirety is questionable. One final point: I cannot fathom why the right-hand margin of the text has not been justified; the resulting appearance does not suit a publication of this nature and is simply a distraction.

Pete Combridge

**BIRDS IN CHESHIRE  
AND WIRRAL: A BREEDING  
AND WINTERING ATLAS**

By David Norman, on behalf  
of Cheshire and Wirral  
Ornithological Society.

Liverpool University Press,  
Liverpool, 2008. 708 pages;  
over 300 colour photographs;  
vignettes and line-drawings;  
over 500 maps.

ISBN 978-1-84631-152-9.

Hardback, £44.99.

This is the second tetrad atlas of Cheshire, this one including winter distribution as well as breeding range, and the degree of change since the first atlas is fascinating. The surveyors who completed the first atlas in 1984 could hardly have predicted the developments revealed and, importantly, quantified, by this second atlas. Who would have thought, for example, that Peregrine Falcon *Falco peregrinus* and Common Raven *Corvus corax*, two species still absent in 1984, would be fighting over the last few suitable nest-sites in the county by 2008?

Something else has changed in the last two decades – our ability to collect, handle and publish data. The first atlas required seven years of fieldwork, the second, just three. It took eight years for the first atlas to be published; this book has appeared just 18 months after the last data were collected. The first book was modest in size and pres-

entation; this volume is in full colour throughout and weighs over 2 kg – it is another book that will have purchasers considering reinforced bookshelves. After a short introduction explaining how the atlas was organised, there are 18 pages devoted to habitats, dominated by annotated colour photos and augmented by maps of habitat distribution. An excellent analysis of the bird data, including tables which clearly show the winners and losers over the last two decades, is followed by an analysis of the possible reasons for change.

The species accounts comprise the bulk of the book. For most species there are two accounts (where appropriate), for breeding and wintering populations, and four maps, illustrating breeding distribution, changes in breeding distribution since the first atlas, winter distribution and differences between summer and winter distribution. The accounts are quite brief and chatty, helping to point out what the maps show, rather than providing detailed analysis. They are accompanied by a mixture of colour photographs (all, I assume, taken in Cheshire & Wirral) and either colour or black-and-white illustrations.

Overall, Cheshire & Wirral seems to have had more winners than losers over the last two decades. Twelve species have been gained as breeders, compared with six lost, although only ten species have a net gain of over 100 tetrads compared with 17 with the same

net loss. The declining birds include most of the expected species, dominated by farmland birds and trans-Saharan migrants. Common Cuckoo *Cuculus canorus* shows the greatest decline (a net loss of 305 tetrads), but the biggest winner is Common Buzzard *Buteo buteo*, present in 560 tetrads compared with just 12 a mere 20 years ago!

There are population estimates for the commonest breeding species, which reveal that, while Barn Swallow *Hirundo rustica* is the most widespread species, House Sparrow *Passer domesticus* is still numerically the commonest. This is despite a previously unnoticed and unexplained retreat from the eastern hills above 350 m, a distributional change shared with Common Starling *Sturnus vulgaris*. These small-scale changes are particularly revealing. For example, Sky Lark *Alauda arvensis* and Linnet *Carduelis cannabina* still breed in every 10-km square in Cheshire, yet they show net losses of 150 and 161 tetrads respectively, and the maps reveal an increasingly patchy distribution.

This atlas, beautifully produced and presented, is an excellent example of what a local atlas adds to the national picture. By showing bird distributions in finer detail and incorporating comparisons with the earlier survey, the data become even more valuable.

Mike Pennington

**THE WISDOM OF BIRDS:  
AN ILLUSTRATED HISTORY  
OF ORNITHOLOGY**

By Tim Birkhead.  
Bloomsbury, London, 2008.

433 pages; many colour  
illustrations.

ISBN 978-0-7475-9256-3.

Hardback, £25.00.

At first sight, a book covering the history of ornithology and running to some 400-odd pages may seem a somewhat daunting prospect to

many *BB* readers. Yet this work is entertaining, fascinating, thoroughly researched and beautifully written, just as we might expect from Tim Birkhead. Unlike other recent titles that have also explored the history of ornithology, this work focuses much more on bird behaviour itself and how human knowledge in this area has advanced over the past 400 years, rather than concentrating on the lives of the individuals responsible for those advances.

Birkhead cleverly breaks down

a huge subject into a series of chapters, each focusing on a different aspect of the day-to-day lives of birds. These chapters take us on a fascinating journey, where we investigate conception and the development of the egg, the breeding cycle, instinct and intelligence, migration, territory, bird-song, sex, infidelity and reproduction, and longevity. Each chapter weaves an entertaining route through its particular theme, referring to the earliest relevant remarks or references – these often

dating back to the deeply entrenched ideas of the great Greek philosophers – through the exploration of evidence and testing of ideas, eventually bringing us right up to date with modern thinking and current theories on the subject matter. I wager that even the most well-read ornithologist will find something new, surprising, even inspiring, in every chapter. As early as page 10, I was surprised to learn that in the highly promiscuous Aquatic Warbler *Acrocephalus paludicola* the male can copulate for as long as 30 minutes! This prevents other males from mating with its female at a critical time, and introduces sufficient sperm to swamp those of any previous (or subsequent) males.

Strong superstitions, prejudices and/or deeply held religious beliefs have at times impeded progress in some fields of ornithology for long periods. These, and the tension between reconciling the results of museum studies, experiments and latterly field observations with such entrenched beliefs, are a constant theme throughout the book. Equally entertaining are the arguments of the day – the self righteousness and arrogance of some

authors in the face of quite overwhelming evidence to the contrary. Slightly more shocking are the rather extreme experiments undertaken to enhance understanding of, or to disprove, widely held myths. Was it really necessary to hold Barn Swallows *Hirundo rustica* underwater until they drowned to test whether they could survive there for a winter during the early debates on migration?!

The book is illustrated throughout with contemporary artwork. Some paintings date as far back as the sixteenth century and many plates were first produced for some of the greatest biological works of their time. The detail of Henrik Gronvold's Garden Warblers *Sylvia borin* published in Howard's famous *British Warblers* in 1912 is on a par with anything produced since, but in many cases it is hard to believe that the artists had even seen their subject matter, let alone been familiar with it! Even the production of the book has a contemporary feel about it – look no further than the front cover.

I was fascinated by the book's preface, for which Birkhead, as part of an international team studying Aquatic Warblers, asked his col-

leagues who they considered to have been the most influential ornithologist of all time. As he describes, each member of the team was staunchly patriotic, with the Germans nominating Erwin Stresemann, the Americans Ernst Mayr and the British David Lack. Birkhead's own choice was John Ray, a seventeenth-century biologist and philosopher, and throughout this book Birkhead mounts a very persuasive case that Ray is indeed the equal of his more recent and more widely known counterparts. The book's title, *The Wisdom of Birds*, is a play on the culmination of Ray's lifetime's work *The Wisdom of God*, published in 1691.

This is one of the best and most enjoyable reads that I have had in a long time. I found it hard to put down, just like a good novel; yet this is a factual book and in it there is simply so much to learn. Tim Birkhead has successfully bridged the gap between scientist and birder and I thoroughly recommend this book. It will surely be a contender for the *BB* Best Bird Book of the Year award in 2009!

*Paul Harvey*

#### THE BREEDING BIRDS OF CLEVELAND

Edited by Graeme Joynt,  
Ted Parker and Vic Fairbrother.  
Teessmouth Bird Club, 2008.

428 pages;

114 colour photographs;

135 line-drawings;

127 distribution maps.

ISBN 978-0-905482-01-9.

Hardback, £24.99.

This new breeding bird atlas is a great example of dedicated teamwork from the northeast of England. The Teessmouth Bird Club came into being in 1960 during a period of great change to local environments, particularly within the Tees Estuary. It is not surprising that much early recording effort was concentrated along the

coast, where 'reclamation' of marshes and poor habitat management occurred. With better environmental planning today, and a new RSPB reserve in the offing at Saltholme Pools, it is hoped that the remaining wetlands will survive and improve.

A product of the local government reorganisation in 1974, Cleveland survived until 1996, when it was replaced by the unitary authorities of Redcar & Cleveland, Middlesbrough, Stockton-on-Tees and Hartlepool. However, Cleveland remains a current bird recording area, the external boundaries being the same as those of the former county and covering some 59,000 ha. Between 1999 and 2006, some 50 members of Teessmouth Bird Club carried out the fieldwork which forms the basis of this book.

This Atlas survey differs from

most others in that surveyors covered each tetrad throughout April, May and June, effectively 'adopting' tetrads as their local patch. Coverage was more thorough than the usual timed, fixed route, with considerable time spent gathering evidence of breeding. A total of 127 breeding species was noted during the survey, and this large total reflects the varied habitats found within Cleveland. The vegetation, land-use and physical characteristics section of the book is particularly interesting, helping to set the context for the species accounts. The percentage of habitat type is displayed in a series of tables so that readers can see at a glance which of the four authorities has, for example, the most conifer or semi-natural broad-leaved woodland. Fieldworkers are acknowledged by name, together

with the tetrads they covered, providing a possible conservation benefit – in that, if any threat or opportunity should arise, there is a named source of local expertise who might be consulted.

The individual species accounts follow the format adopted by many county avifaunas and atlas projects. This includes information on national and local trends, together with some excellent references to historical information, the survey results, and comments on the factors that might have affected their accuracy. Each species has a map, with a legend giving the estimated number of breeding pairs, the total number of occupied

tetrads and the percentage of occupied tetrads. The maps are of unusually high quality for the scale/size. Not surprisingly, farmland and woodland birds are declining here, as in other parts of Britain: possibly as few as 319 pairs of Grey Partridges *Perdix perdix* remain; just 23 pairs of Corn Buntings *Emberiza calandra* remain, in 13 tetrads; and the Hawfinch *Coccothraustes coccothraustes* is nearing local extinction. On the plus side, the Common Snipe *Gallinago gallinago*, Reed Warbler *Acrocephalus scirpaceus* and Common Chiffchaff *Phylloscopus collybita*, together with other species, are

apparently increasing.

Although most of the line-drawings are good, about 10% did not properly capture the species, in my view. By contrast, the 114 colour photographs are, without exception, excellent. This book is an absolute must for any birder, conservationist, or local authority environment staffer living in or around Cleveland. It shows what can be achieved by relatively few dedicated birders with a zeal not just for fieldwork, but for seeking sponsorship and achieving professional production standards.

Tim Cleeves

#### BIRDS IN OUR LIFE

By David Snow.  
William Sessions,  
The Ebor Press, York, 2008.  
233 pages, many photographs,  
sketches and colour paintings.  
ISBN 978-1-85072-381-3.  
Paperback, £12.99.

This delightful book comprises a series of autobiographical notes of David Snow's life, from childhood to the present. The latter half of the book is influenced strongly by his late wife Barbara, as much of their studies were shared or made in parallel, hence the 'our' in the title. Birds, of course, form the binding thread, but less so in the first two chapters, which cover David's early life, schooling and Second World War service in the RNVR.

The next couple of chapters follow a progression through his ornithological life as an undergraduate at Oxford, moving seamlessly to the EGI and expeditions to North Africa and Lapland (looking for geographical variation in tits, including an account of his lone journey on a motorbike from England to North Africa and back), migration studies and Blackbirds *Turdus merula*. He was fortunate to be at the EGI when the senior members were W. B. Alexander,

David Lack and Reg Moreau – he makes some interesting comments about all three, and other ornithologists he met over the years.

He then recounts a variety of jobs and appointments which took him to Central and South America, as well as marriage to Barbara, in Trinidad. His various posts included a spell as the third Director of the Charles Darwin Research Station on the Galapagos Islands. The Research Station was relatively new and small then, as was the BTO when he became Director in 1964, and the bird section at the British Museum (Natural History), to where he subsequently moved. All of this makes fascinating reading and includes much about the history of these establishments. David considered himself lucky to get these appointments as it meant that he could still get involved in fieldwork. He further comments that these jobs were offered to him – he did not have to compete for them. Indeed, throughout the book the reader is quickly won over by his modesty.

There were further expeditions to Central and South America by Barbara to study tropical forest birds – bellbirds (Cotingidae) and Oilbirds *Steatornis caripensis* – the latter also studied by David in Trinidad. All of the accounts of the

various expeditions fill in the background to the serious scientific work being carried out and should appeal to the non-specialist reader. Some of the results of the studies are given but for more detail the reader is directed to their published papers and books. Only some are referenced so a bibliography of their main works would have helped and been of interest.

The text is enlivened by many photographs as well as sketches and watercolours by the author; he is an excellent artist. David Snow shows that he and Barbara have been highly talented in all the fields of ornithology that they have embarked upon (including, for David, spells of editing the journals *Ibis* and *Bull. B.O.C.*).

This lively account should appeal to anyone who has the slightest interest in the Snows or, indeed, in the history and development of ornithology in Britain since the 1940s, in which David Snow has played a significant role.

Robin Prytherch

As this issue of *BB* was being put together, we were sad to learn of the death of David Snow, in mid February 2009. An obituary is in preparation and will appear in *BB* shortly. *Eds*

# News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

## Government 'not interested' in conservation of Overseas Territories

The UK Government is dodging its responsibilities to the wildlife of the UK's Overseas Territories, which includes 34 bird species threatened with extinction. This is the view expressed by the RSPB in a hard-hitting commentary on the latest gloomy status report from the South Atlantic. It appears that the Northern Rockhopper Penguin *Eudyptes moseleyi* – which occurs principally on UK territories in the South Atlantic – has declined by 90% over the last 50 years.

Historical records estimate that millions of penguins used to occur on Tristan da Cunha and Gough Island, but huge declines have dramatically reduced their numbers in the last half century. 'Historically, we know that penguins were exploited by people, and that wild dogs and pigs probably had an impact on their numbers. However, these factors cannot explain the staggering declines since the 1950s, when we have lost upwards of a million birds from Gough and Tristan. The declines on Gough since the 1950s are

equivalent to losing 100 birds every day for the last 50 years,' said Richard Cuthbert of the RSPB. 'With more than half the world's penguins facing varying degrees of extinction, it is imperative that we establish the exact reason why the Northern Rockhopper Penguin is sliding towards oblivion. Understanding what's driving the decline of this bird will help us understand more about other threatened species in the Southern Oceans.'

Possible factors in the decline of the Northern Rockhopper include climate change, shifts in marine ecosystems and overfishing. There is, however, concern that the Government will not put any great effort or resources into wildlife conservation for the UK's overseas territories. Meetings held so far between ministers from the Foreign and Commonwealth Office, the Department for Environment, Food and Rural Affairs, and the Department for International Development have failed to reach agreement. 'They are completely disinterested,' Sarah

Sanders, the RSPB's Overseas Territories Officer, said. 'It's ridiculous and embarrassing. We are meant to be world leaders in biodiversity conservation and we can't even decide who is responsible for [these] overseas territories.'

As described by Peter Ryan in *BB* recently (*Brit. Birds* 101: 586–606), the twin strongholds of Tristan da Cunha and Gough account for more than 80% of the world population of the Northern Rockhopper Penguin; the rest are found on two French-administered islands, St Paul and Amsterdam in the Indian Ocean, and are declining just as rapidly. The UK's Overseas Territories are home to one-third of the world's penguin and albatross species. Indeed, Sarah Sanders reports: 'In addition to the variety of species, the concentrations of seabirds, in particular, are staggering. There could be up to 50 million pairs of seabirds nesting on our territories, making the UK one of the most important nations for marine wildlife.'

## 21st Birdfair seeks world's 'lost' birds

The 21st British Birdwatching Fair will once again fund BirdLife's Preventing Extinctions programme, and this year the focus is on those 'lost' species that may yet be rediscovered. Among their number is the Western Palearctic's rarest bird, the Slender-billed Curlew *Numenius tenuirostris*.

Last year's Birdfair delivered a huge boost to the Preventing Extinctions campaign with a record-breaking donation of £265,000. This is the largest sum raised by the fair in its 20-year history and represents a £39,000 increase on the sum raised in 2007. This year will be the third year running that the Birdfair has supported the global Preventing

Extinctions programme rather than a specific project in a single country.

Birdfair organisers Martin Davies and Tim Appleton have announced that the theme of the 2009 Birdfair will be 'Lost and Found'. Of the 190 species classified as Critically Endangered, 45 have no known population and require intensive searches to establish whether they still exist. The 2009 Birdfair aims to raise the profile of these 'lost species' and to fund expeditions to find them. 'Preventing the extinction of species is a test of whether we are delivering conservation. As the extinction crisis continues to grow, it is fantastic to note that British birdwatchers are continuing to square

up to the challenge – we hope that we can rely on even more support in future years,' said Martin Davies.

The flagship bird for the 2009 event will be the Cebu Flowerpecker *Dicaeum quadricolor*, an example of a lost species that has only recently been rediscovered. This species is endemic to the island of Cebu, in the Philippines, and was feared extinct for much of the twentieth century. In 1992, it was rediscovered in forest fragments, but it remains Critically Endangered. Twenty thousand people visited the Birdfair at Rutland Water in 2008. This year's Rutland Birdfair will be the 21st and will take place over the weekend of 21st–23rd August. [www.birdfair.org.uk](http://www.birdfair.org.uk)

## 'Robinson Crusoe' birds on the brink

It may be an anniversary that went unremarked in his native Scotland, but 300 years after the real-life Robinson Crusoe was rescued, BirdLife reminded the world of his story – and the looming fate of the birds he left behind on his 'desert island'.

Most people have heard of Robinson Crusoe, the castaway of Daniel Defoe's famous novel, who spent 28 years on a remote tropical island off South America, encountering indigenous natives and mutineers before being rescued. But how many have heard of Alexander Selkirk, the real-life character on whom the story is

believed to be based? On 2nd February 2009, it was the 300th anniversary of Alexander Selkirk's rescue from the island of Más a Tierra (also known as Robinson Crusoe Island) in the Juan Fernández archipelago, 700 km off the coast of Chile. Selkirk spent four years and four months marooned on the island, surviving by killing and eating goats that had been introduced by earlier passing sailors.

His tale is a remarkable one of survival against the odds. Unfortunately, another story of survival from this archipelago hangs in the balance. Those goats – and other

alien species – have caused untold damage to the fragile ecosystems of these islands. The archipelago is home to three endemic bird species, making the Juan Fernández islands one of only 221 endemic bird areas in the world. Two of these species, Juan Fernández Fire-crown *Sephanooides fernandensis* and Masafuera Rayadito *Aphrastura masafuerae*, are classified as Critically Endangered, the highest threat category. This puts them on the brink of extinction and unless conservation measures are implemented quickly, their fate may be rather different from that of Alexander Selkirk.

## Long-term changes in the timing of breeding at seabird colonies

There is compelling evidence that the timing of breeding of many species has changed substantially in recent decades. The tendency among bird species in the northern hemisphere is for breeding seasons to become earlier, generally thought to reflect higher temperatures in late winter or spring. Most studies so far have looked at terrestrial species, but a recent paper in *Ibis* (by Sarah Wanless, Morten Frederiksen, John Walton and Mike Harris; *Ibis* (2009) doi: 10.1111/j.1474-919x.2008.00906.x) looked at data on the laying dates of ten seabird species at two major breeding colonies, the Isle of May and the Farne Islands, during the last 35 years. For a given species, timing of breeding was positively correlated between the two

colonies, suggesting that factors affecting the phenology of these species operate at a regional rather than colony scale. Comparison of time trends among the ten species revealed contrasting patterns, however, with some showing no systematic change (e.g. Fulmar *Fulmarus glacialis*), some becoming earlier and others later. The clearest species groupings appeared to be among the terns, with arrival and/or first-egg dates becoming earlier in Arctic *Sterna paradisaea*, Common *S. hirundo* and Sandwich Terns *S. sandvicensis*; and among the auks (Common Guillemot *Uria aalge*, Razorbill *Alca torda* and Puffin *Fratercula arctica*) and Kittiwake *Rissa tridactyla*, where the trend was in the opposite direction, towards later breeding. This general

trend towards later breeding in the latter group contrasts with correlational evidence from many other organisms indicating that breeding phenology is advancing in response to climate change. Given that sea temperatures are increasing particularly rapidly in the North Sea, and that several studies have indicated earlier peaks in both phyto- and zooplankton, progressively later breeding in some North Sea seabirds is unexpected and worrying. At present the reason(s) for delayed breeding remains unclear but these contrasting trends highlight the increasing risk of trophic mismatch (in other words, predators (seabirds) becoming out of synch with their prey), with potentially serious consequences for some seabird populations.

## World bird names update

In my review of *Birds of the World: recommended English names* by Frank Gill and Minturn Wright (*Brit. Birds* 101: 264–265), I mentioned that the work should be considered as a first edition and work in progress. Anyone interested in further developments should consult the authors' website at [www.worldbirdnames.org](http://www.worldbirdnames.org), where amendments up to version

2.0 are posted, the latest in January 2009 (which lists 10,331 species classified in 42 orders, 226 families and 2,199 genera). In addition to downloadable lists in various formats, there is a line-by-line comparison with 'Clements', itself online and downloadable at [www.birds.cornell.edu/clementschecklist](http://www.birds.cornell.edu/clementschecklist). Gill & Wright are also keeping an eye on develop-

ments at BirdLife International ([www.birdlife.org/datazone](http://www.birdlife.org/datazone)) with their 'under review' taxa and adding them in anticipation that they may be raised to full species. Of interest to British birders, the official English name for *Aegithalos caudatus* has reverted to Long-tailed Tit (not Long-tailed Bush Tit) in deference to long-established usage. (Contributed by Martin Gauntlett)

## Vacancy at British Birds

As part of its ambition to be the most respected and widely read ornithological journal in the UK, *British Birds* is recruiting a Business Development Officer.

The focus of the job will be to deliver marketing and promotional campaigns to attract new subscribers to the magazine. The part-time role will help to establish partnerships that are beneficial for *British Birds* readers – and see the journal reach new audiences.

Over the past 100 years, *British Birds* has established itself as a highly regarded source of birding information. The next 100 years pose significant new challenges, and *BB* is developing its plans to meet them head-on.

The successful applicant will bring enthusiasm to the post, and will be able to develop and implement a wide-ranging and innovative marketing strategy for the magazine. Experience in marketing and communications is desirable, and a passion for *BB* is essential!

*British Birds* is in good health, and we want to take that message to a larger audience than ever before. We have plenty of ideas about how we'll develop the magazine. We are now on the hunt for the people to help us develop these ideas, and make them a reality.

For more information on this post, please contact Roger Riddington at [editor@britishbirds.co.uk](mailto:editor@britishbirds.co.uk)

## Kent County Recorder

Following Don Taylor's resignation in late 2008, Barry Wright has now taken on the role of County Recorder. Barry can be contacted at Hatton Cote, 6 Hatton Close, Northfleet, Kent DA11 8SD; tel. 01474 320918; e-mail [barrybirding@tiscali.co.uk](mailto:barrybirding@tiscali.co.uk)



Chris Grady [www.wildlife-imaging.co.uk](http://www.wildlife-imaging.co.uk)

102. Male Hawfinch *Coccothraustes coccothraustes*, ringed at Brierley, Forest of Dean, in April 2006 and photographed near Cinderford (some 3 km from the ringing site) on 8th April 2008.

## Colour-ringed Hawfinches

During the last few years, over 150 Hawfinches *Coccothraustes coccothraustes* have been ringed in the Forest of Dean, in Gloucestershire. This represents some 10% of all Hawfinches ever ringed in the UK. In addition to a metal ring, most birds also have a single plastic colour ring, and resightings are beginning to give a clearer picture of numbers and movements. If you are one of the many birders who visit the Dean to look for Hawfinches (and the other specialities of the Forest), Jerry Lewis would be grateful if you could look for any birds with a colour ring. It's not easy to get a good view, but April is probably the best month, when birds come down to the ground to feed. Jerry needs to know the colour of the plastic ring (which indicates the ringing site) and which legs have rings (the two rings may be on the same or different legs and their position represents the season when ringed). Any sightings should be sent to [jerrylewis@monmouthshire.gov.uk](mailto:jerrylewis@monmouthshire.gov.uk) Seven colours have been used so far: red, yellow, pale green, sky blue, dark blue, black and white. The next report of the Rare Breeding Birds Panel, which will be published in next month's *BB*, will highlight the apparent decline in the UK's Hawfinch population, so the more we can learn about this shy but stunning finch the better.

## African Bird Club annual meeting

The ABC's Annual Meeting and AGM will be held in southwest London on Saturday 4th April. The meeting is open to both members and non-members. And the speakers include Vickie Jones (Wings over wetlands), Ian Fisher (Worldbirds... putting the region's bird sightings on the map), Alex Hipkiss (Bird conservation challenges in Gola Forest, Sierra Leone), Guy Eldridge (A video tour of Madagascar), Michel Louette (Birds of the Comores), Herbert Byaruhanga (An update on Ugandan birds and communities) and Nik Borrow (Birds of the Horn of Africa). The venue is York House, Richmond Road, Twickenham TW1 3AA, and doors open at 10.30 hrs.

## Rare birds in Portugal website

A new website that records sightings of Portuguese rarities has been launched. Raridades Online is bilingual (Portuguese and English) and provides information about recent sightings of rare birds in mainland Portugal. Pictures of the birds are included whenever available. See <http://raridades.avesdeportugal.info>

# Recent reports

Compiled by Barry Nightingale and Eric Dempsey

This summary of unchecked reports covers early January 2009 to early February 2009.

**Headlines** The main focus was on Scotland, with the reappearance of the Canvasback on Islay, three new Lesser Scaups, a Franklin's Gull in Ayrshire, a Bonaparte's Gull in Angus & Dundee and an Ivory Gull in the Outer Hebrides. Elsewhere there was a Gyr Falcon in Pembrokeshire, and a widespread increase in sightings of Great White Egrets.

Red-breasted Goose *Branta ruficollis* Long-stayer in Hampshire to 5th February. Black Duck *Anas rubripes* Ventry (Co. Kerry), long-stayer to mid January. Canvasback *Aythya valisineria* Islay (Argyll), seen again on 22nd January. Ferruginous Duck *Aythya nyroca* Eagle Lane GP (Lincolnshire), long-stayer to 14th January; Oxford Island (Co. Armagh), 13th–29th January; near Spalford (Nottinghamshire), 17th January; Wistow Pool (Leicestershire & Rutland), 21st–23rd January. Lesser Scaup *Aythya affinis* Long-stayers at Racecourse Lough (Co. Fermanagh), to 17th January; Cardiff Bay Wetlands and Cosmeston Lakes CP (both Glamorgan), to 19th January; Holme Pierrepont (Nottinghamshire), to 5th February; Lough Ennel, three, to 24th January and Lough Owel (both Co. Westmeath), to 24th January. New birds on Islay, 22nd–24th January; at Lough Sheelin (Co. Cavan), 25th January; Loch Leven (Perth & Kinross), two, intermittently from 26th January to 8th February. King Eider *Somateria*

*spectabilis* Long-stayers at Earlsferry (Fife) to 8th February, Mousa Sound (Shetland), 23rd–26th January, Drumcliffe Bay (Co. Sligo), two, to 28th January, and Pett Level/Rye Harbour (Sussex), 17th–18th January, then Dungeness (Kent), 20th January; St Austell (Cornwall), 18th January; Fidra (Lothian), 4th and 7th February.

White-billed Diver *Gavia adamsii* Kirkabister (Shetland), long-stayer seen intermittently throughout.

Night Heron *Nycticorax nycticorax* West Hythe (Kent), long-stayer to 21st January; St Mary's (Scilly), 15th January. Cattle Egret *Bubulcus ibis* In Ireland, many records in Co. Cork, with up to 16 between Timoleague and Roscarberry on 4th February, three at Great Island from 13th January, two at Lissavard on 31st, and singles at Garinish and Youghal. In Co. Waterford, three at Ballyduff on 10th January and four at Dungarvan from 27th. At least two in Co.



103 & 104. Cattle Egret *Bubulcus ibis*, with Little Egret *Egretta garzetta*, Powderham, Devon, January 2009 (left) and sheltering in a greenhouse on St Mary's, Isles of Scilly, February 2009 (a sign that inclement weather in early February reached all parts of Britain).

Rob Laughton

Rob Flood

Wexford and one in Co. Kerry. In England, during the second half of January, several records from Devon, with up to four at Kingsbridge, three at Powderham and three at Colyton; many records from Cornwall, including up to nine at Newtown-in-St Martin, five Veryan, four Polgigga, four Sennen, three Drift and two St Breock, with some movement between the

sites; and records also in Norfolk, Scilly and Somerset. Great White Egret *Ardea alba* Long-stayers at Blashford Lakes (Hampshire) to 24th January, and Shapwick Heath, 17th–23rd January and 5th–8th February, same Ham Wall, 24th–29th January and Meare Heath, 31st (all Somerset); Sheepy Parva (Leicestershire & Rutland), 16th–23rd January, possibly same Kingsbury WP, 24th–25th January and Middleton Hall (both Warwickshire), 30th January to 8th February, and Drayton Bassett (Staffordshire), 25th January; Dunwich, 17th January, presumed same Minsmere, 20th January and Castle Marsh (all Suffolk), 31st January, and 3rd–8th February; Pymore / Ouse Washes (Cambridgeshire), 17th–27th, with two 28th January to 4th February; Holland Haven, 17th January, perhaps same Feering, 25th January and Felixstowe (all Essex), 26th; Stubb Mill, 17th January, possibly same Marston Marsh, 18th January, and Holkham (all Norfolk), 27th; Dunsby Fen, 24th–26th January, pre-



Steve Duffield

105. Adult Ivory Gull *Pagophila eburnea*, North Uist, Outer Hebrides, January 2009.

sumably same Thurlby Fen (both Lincolnshire), 31st January to 7th February; Tralee (Co. Kerry), 30th January; Aberlady Bay (Lothian), 3rd February; Collycroft Lake (Derbyshire), 6th–8th February; Merryton (Clyde), 7th February; Stockcross (Berkshire), 8th February.

Gyr Falcon *Falco rusticolus* Hakin, 25th January, then Cleddau Estuary (both Pembrokeshire), 2nd February.

Long-billed Dowitcher *Limnodromus scolopaceus* Dundalk (Co. Louth), long-stayer to 2nd February. Lesser Yellowlegs *Tringa flavipes*



Richard Stonier

106. Waxwing *Bombicilla garrulus*, Newcastle-under-Lyme, Staffordshire, January 2009.

Steve Young/Birdwatch



**107.** Penduline Tits *Remiz pendulinus*, Rainham Marshes, Greater London, January 2009.

Southwold/Walberswick (Suffolk), long-stayer, 19th January to 8th February.

Franklin's Gull *Larus pipixcan* Barassie (Ayrshire), 16th–18th January. American Herring Gull *Larus smithsonianus* Nimmo's Pier (Co. Galway), long-stayer to 25th January; Bantry

Stephen Menzie



**108.** Female European Serin *Serinus serinus*, Woolston Eyes NR, Cheshire & Wirral, January 2009.

(Co. Cork), 6th–19th January. Bonaparte's Gull *Chroicocephalus philadelphia* Ferryden (Angus & Dundee), 7th February. Ivory Gull *Pagophila eburnea* North Uist (Outer Hebrides), 21st–22nd January. Forster's Tern *Sterna forsteri* Nimmo's Pier, long-stayer to 2nd February.

Snowy Owl *Bubo scandiacus* Zennor area, long-stayer to 6th February, also near Morvah, 28th January, Goonhilly Down, 3rd February, and Amalveor Downs (all Cornwall), 7th February; Loch of Harray (Orkney), 27th January.

Waxwing *Bombycilla garrulus* Maximum counts in Yorkshire included 238 Barnsley, 150 Leeds, 150 Wath-upon-Deerne, 120 Huddersfield, 100 Keighley, 100 Sheffield. Elsewhere in Britain, there were peaks of 162 Brownhills (West Midlands), 150 Birtley and 100 Washington (both Durham), 150 Ingleby Barwick (Cleveland), 150 Nottingham (Nottinghamshire), 140 Motherwell (Clyde), 120 Hyde (Greater Manchester), 102 in Birstall (Leicestershire & Rutland), 100 Newcastle-under-Lyme and 100 Stoke-on-Trent (both Staffordshire), while smaller flocks were widespread. In Ireland, 180 in Dublin city centre on 14th January was the highest count, while a colour-ringed bird at Dundalk (Co. Louth) in mid January had been ringed in Scotland in November.

Yellow-browed Warbler *Phylloscopus inornatus* Chessington (Greater London), 17th January; Southampton (Hampshire), 6th February.

Penduline Tit *Remiz pendulinus* Rainham Marshes (Greater London), two long-stayers to 14th January, and again 7th February; Clennon Valley (Devon), 14th January to 8th February; Lakenheath Fen (Suffolk), 26th–29th January; Strumpshaw Fen (Norfolk), 4th–8th February. Rose-coloured Starling *Pastor roseus* Newquay (Cornwall), presumed long-stayer again 15th January to 2nd February. European Serin *Serinus serinus* Woolston Eyes (Cheshire & Wirral), 31st January. Arctic Redpoll *Carduelis hornemanni*, Woodwalton Fen (Cambridgeshire), 31st January to 1st February.



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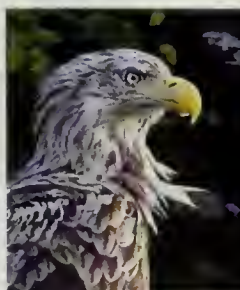
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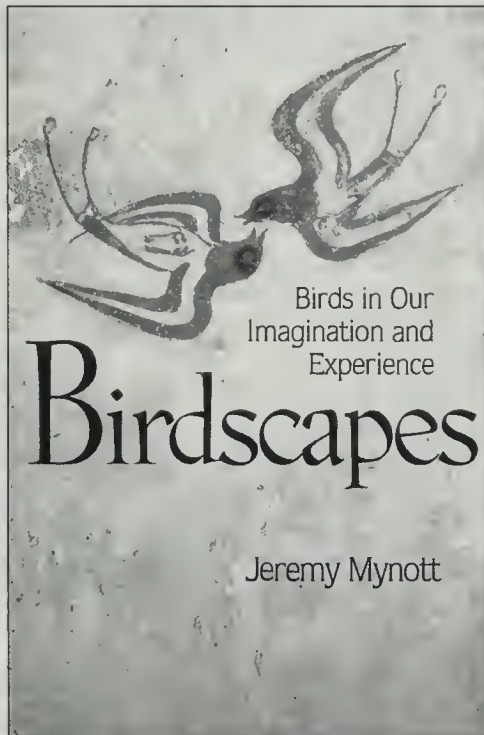
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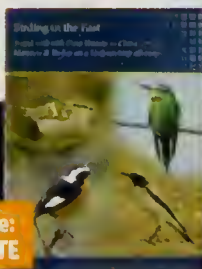
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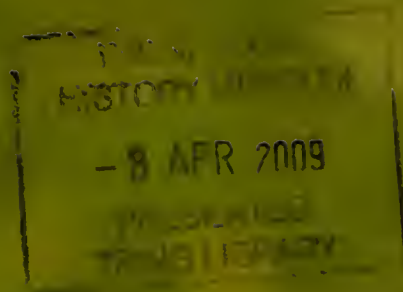
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# British Birds

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April 2009 • Vol.102 • 157–228



Rare breeding  
birds in the UK  
2006

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Breeding  
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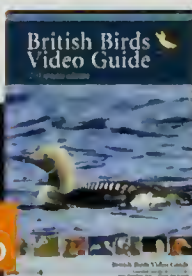
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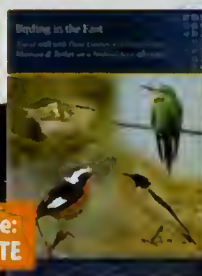
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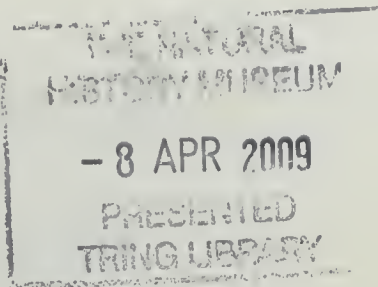
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Volume 102 • Number 4 • April 2009



- 158 Rare breeding birds in the United Kingdom in 2006  
*Mark Holling and the Rare Breeding Birds Panel*
- 203 A 25-year study of breeding Greenshanks: territory occupancy, breeding success and the effects of new woodland  
*Nick Christian and Mark H. Hancock*

## Regular features

- |  |  |
|--|--|
| <p>211 Obituary<br/>Eric Simms (1921–2009)</p> <p>213 Letters<br/>Black Brants and the problem of intergrades <i>Andrew Bloomfield</i><br/>The curious case of the disappearing storm-petrel <i>Pete Combridge and Eddie Wiseman</i></p> <p>216 Notes<br/>Morph ratio of Eleonora's Falcons in Sicily <i>Andrea Corso and Marco Gustin</i><br/>Corn Crake pair-bonding and nesting behaviour <i>Jamie Graham</i><br/>A procession by a Common Snipe and its chicks <i>W. R. P. Bourne</i><br/>Great Black-backed Gull killing rival and stealing mate <i>Elaine Prince and John Wilson</i></p> | <p>Red-rumped Swallow nesting in sea cave <i>Francesco Mascia</i><br/>Common Chiffchaffs and whirligig beetles <i>John Webley</i><br/>Eurasian Jay catching a Blue Tit in mid-air <i>David Agombar</i></p> <p>220 Reviews<br/><i>Consider the Birds: who they are and what they do</i><br/><i>Feathered Dinosaurs: the origin of birds</i><br/><i>Neuroscience of Birdsong</i><br/><i>Top 100 Birding Sites of the World</i></p> <p>222 News and comment<br/><i>Adrian Pitches</i></p> <p>226 Recent reports<br/><i>Barry Nightingale and Eric Dempsey</i></p> |
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# Rare breeding birds in the United Kingdom in 2006

*Mark Holling and the Rare Breeding Birds Panel*



Red-throated Diver *Gavia stellata* with chick

Dan Powell

This, the thirty-third report of the Rare Breeding Birds Panel (RBBP), presents details of the status of the rarest breeding birds in the UK in 2006.

## *Data sources*

Records are collated from all counties of England, Wales, Scotland and Northern Ireland, and also the Isle of Man, but not from the Channel Islands. Most of the information presented is submitted by county and regional bird recorders (hereafter 'county recorders') and we are extremely grateful for their support. The Panel also receives information from a number of other sources, some of which provide data not otherwise available easily. These include returns from Schedule 1 licence holders, Raptor Study Groups, information from national surveys, counts from RSPB reserves, and other single-species studies (see Acknowledgments).

## *Coverage*

In 2006, coverage was broadly similar to that in 2005, with at least minimal data available from all counties and regions (fig. 1). Neither detailed submissions for all relevant species nor copies of local bird reports were available for Angus & Dundee, Caithness, Clyde Islands, Cornwall, Northamptonshire, Perth & Kinross and West Midlands. Data were available for all Welsh vice-counties, although for three recording areas (Glamorgan, Montgomeryshire and Radnorshire) the only information came from summaries published in the Welsh Bird Report (Green *et al.* 2008), which reduces the completeness of the Welsh record for 2006. Data were available from Northern Ireland but not from the Isle of Man. Readers should take into account these potential gaps in the coverage when reviewing the data presented in this report.

### Data inclusion

There have been no changes to the acceptance criteria for records since the last report (Holling *et al.* 2008). It is our policy where possible to follow the opinions of the relevant county recorder. All potential breeding records of species on the Panel's list are welcomed, and will be archived, but we do not normally publish records of birds that appear to be passing migrants. Singing passerines are generally included only if they remain at a site for a week or longer, unless there is evidence that the site was a former breeding location. Similarly, spring records of wild-fowl, such as pairs or males present at a site for less than a week early in the breeding season, and which appear not to indicate a breeding attempt, are excluded.

Records of species considered by the Panel for which only minimal indications of breeding, or very limited data, were received are listed separately in Appendix 1. Appendix 2 contains details of species that normally appear in the report but for which no records were received for 2006.

### Changes to the RBBP list

In 2006, the Panel has considered for the first time the following three species: Shoveler *Anas clypeata*, Water Rail *Rallus aquaticus* and Hawfinch *Coccothraustes coccothraustes*. The full species list and guidelines on submitting records are available on the Panel's website [www.rbbp.org.uk](http://www.rbbp.org.uk).

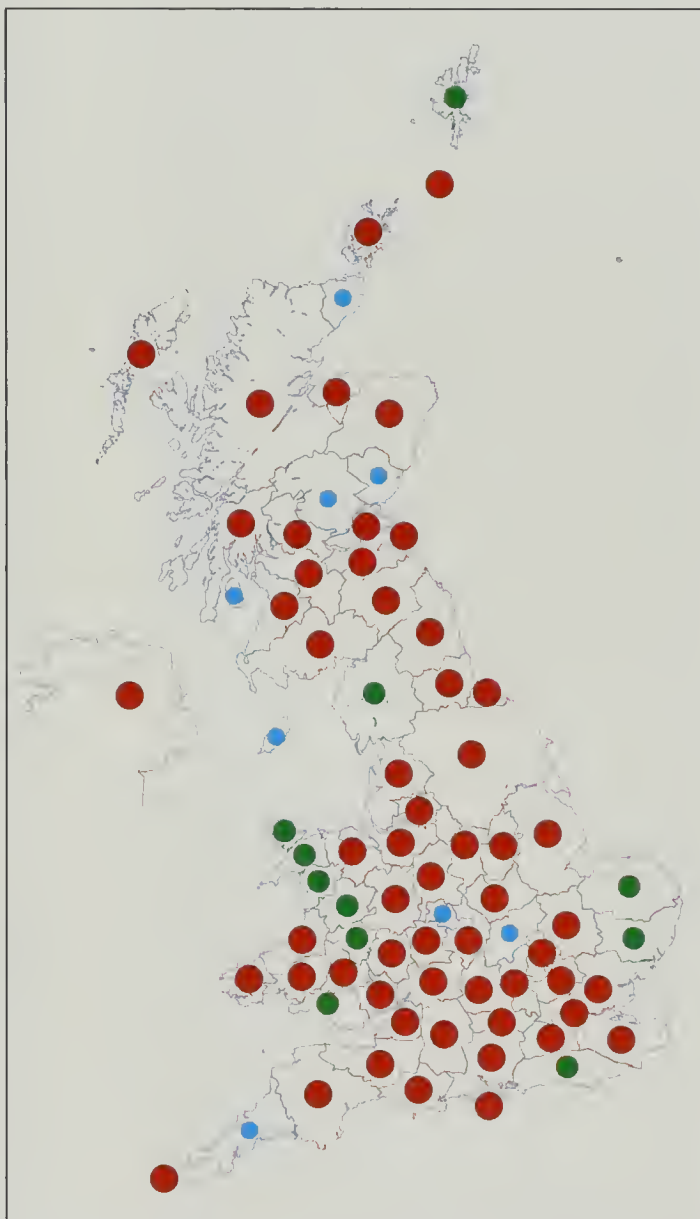
### Review of the year 2006

This report includes details of 79 species breeding or showing indications of breeding in 2006, the same number as in 2005, though with a different mix. A further four species are noted in Appendix 1.

Compared with recent years, 2006 was colder than normal during the early part of the year, and April was very dry, but there were flash floods and storms in some areas in mid May leading to failures for some species, such as Black-tailed Godwits *Limosa limosa* in Cambridgeshire and a pair of European Serins *Serinus serinus* in Devon. Condi-

tions after that were more settled, with June being the driest and sunniest since 1995, and mid July breaking temperature records. Persistent rain at times in August affected some late nesters, and thwarted a late attempt by a pair of European Bee-eaters *Merops apiaster* in Dorset.

We include three species that, although they have occurred in the breeding season in the UK in previous years, have not previously appeared in these reports: Black Kite *Milvus migrans*, Eurasian Scops Owl *Otus scops* and Iberian



**Fig. 1.** Data submission to the Rare Breeding Birds Panel, 2006.

This shows the level of detail provided, by recording area. Large (red) dots indicate full submission for all species from county/regional recorder, with supplementary data from other sources where applicable; medium-size (green) dots indicate data extracted from local bird reports for all species, with supplementary data from other sources where applicable; small (blue) dots indicate limited species coverage – data extracted from Schedule 1 licence returns, local raptor study group reports, RSPB reserve logs or single-species submissions only. A blank indicates that no data were submitted.

Chiffchaff *Phylloscopus ibericus*. A Black Kite paired with a Red Kite *M. milvus* fledged two young in Highland, and a hooting male Scops Owl took up residence in Oxfordshire. There were two well-separated male Iberian Chiffchaffs on territory, in Devon and Lothian, but no evidence of females at either site.

In addition, three species are being considered by the Panel for the first time: Shoveler, Water Rail and Hawfinch. Collation of all potentially breeding Shoveler records reveals that up to 930 pairs were present in 2006, close to the lower end of the most recent population estimate and suggesting that Shoveler is perhaps less numerous than Gadwall *A. strepera*, which was added to the Panel's list in 1996. Numbers of Water Rails across the UK exceeded 1,200 territories at almost 300 sites, proving the worth of using the Panel's networks to build an inventory of sites and supporting the belief that this species is more numerous than published figures have suggested. In contrast, the Hawfinch has a very restricted distribution and, although this species is difficult to locate in the breeding season and is probably under-reported, it is hard to imagine that the difference between the figure of 3,000–6,500 pairs estimated in the last national atlas (Gibbons *et al.* 1993) and the 67 pairs reported to the Panel does not, at least in part, reflect a steep decline in the numbers of breeding birds in the last 20 years.

There was a survey of breeding divers in 2006 and the results show increases for both Red-throated *Gavia stellata* and Black-throated Divers *G. arctica* since the last full survey in 1994. The survey resulted in a welcome increase in the number of casual records of Red-throated Divers submitted, but this is one of those species for which annual reports from well-defined and well-monitored sites provide the best information for the Panel's archives. Black-throated Diver is much scarcer and all records of this species from occupied lochs, as well as negative records from known breeding lochs, are required.

Little Egrets *Egretta garzetta* continue to increase within their core range in the south and west of England and Wales, with yet another record number of nesting pairs counted (425), and speculation that the actual population is nearer 600 pairs.

Most birds of prey continue to do well, with high numbers of Honey-buzzards *Pernis*

*apivorus*, and Red Kites also reaching a new record number of pairs since the RBBP was formed, in 1973, when just 26 pairs nested, all in Wales. It was also the most successful breeding season for the re-established population of White-tailed Eagles *Haliaeetus albicilla*. Hen Harriers *Circus cyaneus* nested in Derbyshire for only the second time in 136 years but, in northern England, the numbers of pairs nesting outside protected areas are still far lower than the extent of habitat would suggest is possible; this is also the case in eastern Scotland, where the habitat supports fewer pairs than expected. For Montagu's Harrier *C. pygargus*, however, the 13 confirmed breeding pairs was the highest total since 2000.

As in 2005, there was another breeding attempt by Black-winged Stilts *Himantopus himantopus*, this one also unsuccessful. Avocets *Recurvirostra avosetta* continue to spread, breeding in Durham for the first time in 2006. The two calidrid sandpipers which occasionally nest in northern Scotland, Temminck's Stint *Calidris temminckii* and Purple Sandpiper *C. maritima*, were recorded as present but no more. A pair of Ruffs *Philomachus pugnax* nested in England, which is unusual these days, but that was the only confirmed breeding record of this species in the UK.

Two passerines of the southern heathlands were the subject of surveys in 2006 – Wood Lark *Lullula arborea* and Dartford Warbler *Sylvia undata* – and both registered increases in numbers and range. However, there were again lower numbers of Black Redstarts *Phoenicurus ochruros* and Redwings *Turdus iliacus*, continuing the overall decline in these species. Numbers of breeding Firecrests *Regulus ignicapilla* were the highest ever in this report, yet the total of up to 341 pairs is still regarded as an underestimate, following significant increases since the start of this decade. Like populations of Little Egrets, Wood Larks, Cetti's Warblers *Cettia cetti* and Dartford Warblers, those of Firecrests are increasing, perhaps related to the sequence of milder winters, helping the survival of sedentary species and encouraging partial migrants to overwinter. Contrast their fortunes with those of the migratory Golden Oriole *Oriolus oriolus* and Red-backed Shrike *Lanius collurio*, which have almost disappeared from the UK as breeding species, and the European Scrin, yet to register a regular presence.

### The Panel

The current membership of the Panel (April 2009) is Mark Eaton, Ian Francis, Simon Gillings, David Norman, Judith Smith, David Stroud and Mark Holling (Secretary). Humphrey Crick retired from the Panel in summer 2008, when he left the BTO to take up a new post with Natural England. His position was taken by Simon Gillings, who had hitherto been co-opted onto the Panel for the period of the BTO/BirdWatch Ireland/SOC Bird Atlas 2007–11. Humphrey had been a member of the Panel since 1995 and had ensured that, where possible, data from the many BTO surveys were made available for the Panel's archives. He also helped harness the expertise of BTO staff in the running of the Panel and in exploiting the BTO's data resources. We thank Humphrey for his considerable support for, and inputs to, the work of the Panel during the last 13 years. All of the members of the Panel serve in a personal capacity, but some members also reflect the interests and requirements of the funding partners, JNCC (on behalf of the country conservation agencies) and RSPB, as well as BTO and the Association of County Recorders and Editors. The Panel membership aims to achieve broadly representative geographic coverage and to include members who have active involvement in monitoring schemes and specialist research groups, or who participate in various external groups, to facilitate liaison between the Panel and researchers, ringers, surveyors and conservation practitioners.

### Recording Standards

New guidance on recording standards for rare breeding birds has been developed by the Panel, and a copy is included with this issue of *British Birds*. We hope that this guidance will aid collection of the most valuable information and promote the submission of records. We seek to maximise the quality of the data collected by highlighting what is most useful in determining the number and status of each species. We welcome feedback and comments on this leaflet, which is also available on the Panel's website [www.rbbp.org.uk](http://www.rbbp.org.uk).

The key messages behind these standards are (1) that birdwatchers should be encouraged to record and report the location and numbers of rare breeding birds using standardised terminology and accepted definitions of breeding status, and (2) that the use of precise locations

maximises the value of the data collected and ultimately the national archive of rare breeding birds held by the Panel.

The confidential archive of records of rare breeding birds in the UK has been maintained by the Panel since 1973, and is the only national source of data for many species, most of which are not well monitored by other schemes. Where possible, the archive contains full details of sites and the number of pairs of each species at each site. These data are thus robust and reliable, and of significant value for conservation. Maintaining this archive helps to fulfil the UK Government's legal responsibilities and assists in the protection of the breeding sites and amendments to legislation to protect rare breeding birds.

There are instances of sites being lost, and of prosecutions for wildlife crime failing, owing to the lack of information available on sites and occupancy. In 2008, investigation of an alleged egg-collecting incident was hampered by lack of detailed information on Honey-buzzard territories in one southern county and, in western England, a consultation on a proposed wind-farm site was unable to take into account any impact on Honey-buzzards believed to be in the area, because accurate locational data were lacking. In contrast, knowledge of the nesting locations of Montagu's Harriers in eastern England has helped to protect pairs breeding in those areas.

For more widespread species, the accuracy of the figures presented in this report is compromised if the records are submitted without reference to the area surveyed. Thus, for breeding ducks, grebes and Water Rails (for example), a knowledge of the proportion of waterbodies or known sites for a species covered in a county in a year would help in making comparisons with other counties and with data for other years. The same applies to species such as the Hobby *Falco subbuteo*, which occurs widely in some counties but is poorly monitored in most.

Only records of rare breeding birds submitted directly to the Panel or, preferably, via the county recorder can be included in the archive and only then can they form part of any analysis or reporting, such as that presented here. All data received from supplementary sources must be matched with those from the recorder network to identify and remove duplicates, allowing the most accurate available figures to be compiled for this report; this can

be done only if sufficient detail is supplied.

It is these records that help to build the picture of the changing status of rare birds and help with species conservation and site protection. We strongly encourage all birdwatchers to heed the advice given in the Panel's Recording Standards and thus make their recording more valuable.

### *Conservation uses of RBBP data*

It is our policy to make data available for relevant conservation uses, with appropriate controls to ensure the safety of the birds and their breeding sites. Site-specific information is used by JNCC and the country conservation agencies, and national datasets by RSPB for survey planning. In the last 12 months, RBBP data have been used in the compilation of a wind-farm sensitivity map for England, which will help to protect areas holding concentrations of breeding raptors and other rare breeding species likely to be affected.

### *Future reporting plans*

This report follows the Panel's review of rare breeding birds in 2005, published in June 2008 (Holling *et al.* 2008). As part of the process of making the reports more contemporary, our aim is to publish an annual report each spring/summer covering the breeding season of two years before. Thus the report for 2008 will appear by summer 2010. To complete the catch-up process, it is the intention of the Panel and *British Birds* to publish the report for 2007 before the end of 2009.

Part of the desire to publish this review promptly is because the report has a high conservation value. It is used by UK conservation organisations to assess population trends and direct necessary conservation measures. The recent review of species and races of birds on the UK Biodiversity Action Plan list ([www.ukbap.org.uk](http://www.ukbap.org.uk)) relied heavily on RBBP data, as do the regular *Birds of Conservation Concern* reviews (e.g. Gregory *et al.* 2002; the next review will be published in *BB* shortly) and the annual *State of the UK's Birds* reports (e.g. Eaton *et al.* 2008).

Many of the data presented here come from county recorders and we recognise that earlier publication of our report will rely on their co-operation. Many counties are already on board, collating and submitting their annual records soon after the year concerned, and we extend

our grateful thanks to recorders who support the Panel in this way. Most county bird reports are now appearing within 12–18 months of the year they are reporting on. Data from national and local surveys are also generally available within 6–12 months of the end of the survey. We hope that those counties which still aspire to such efficiency will continue to make improvements and perhaps will be able to prioritise the extraction of rare breeding bird records, in a similar way that submissions to BBRC are prioritised to allow inclusion in the annual 'Report on rare birds in Great Britain' (e.g. Hudson *et al.* 2008, which covered the year 2007).

### *Terminology*

With one exception, the recording areas used in this report are the same as in previous reports (see Holling *et al.* 2007 and [www.rbbp.org.uk](http://www.rbbp.org.uk)); these match the bird recording areas used by county recorders across the UK. Following Balance & Smith (2008), records for Gower and East Glamorgan are now combined into the single Welsh vice-county of Glamorgan. The Panel attempts to collate all breeding records by bird recording area ('county') wherever possible, and we ask that contributors submit records in the same manner, via county recorders. In some cases, this is not yet possible, and records are presented under different area groupings, for instance by Raptor Study Group (RSG) area. Thus the Central Scotland RSG covers an area roughly equivalent to the Upper Forth recording area; the South Strathclyde RSG area includes both Ayrshire and Clyde and some of the Clyde Islands; and the Tayside RSG area equates approximately to the recording area of Angus & Dundee together with Perth & Kinross.

The definitions of 'Confirmed breeding', 'Probable breeding' and 'Possible breeding' follow those recommended by the European Bird Census Council (Hagemeijer & Blair 1997). Within tables, the abbreviation 'Confirmed pairs' means 'Number of pairs confirmed breeding'. Where tables show the number of occupied territories, these are the sum of probable and confirmed breeding pairs, as territorial birds are classed as being probably breeding, unless a nest has (at least) progressed to the stage where eggs have been laid, in which case the pair is classified as a confirmed breeding pair. It is important to note that con-

firmed breeding is *not* the same as successful breeding; nests that fail with eggs or with young still fall into the confirmed category. A successful breeding pair is one that fledges at least one young bird from a nesting attempt.

Where possible, the Panel is now collating figures of young in the nest separately from young fledged, as the latter figure is not always available for some species. Thus, some tables now show the number of territories *believed* to have fledged young (based on the evidence presented to the Panel), rather than territories *known* to have fledged young.

The reader should note that in all cases the

identity of the birds has been confirmed; it is only breeding *status* that is possible/ probable/confirmed. Probable breeding is as defined by EBCC (e.g. a pair holding territory), and does not mean that a breeding attempt 'probably' (i.e. almost certainly) took place.

Within each species account, numbers given in the format '1–4 pairs' indicate (in this case) one proven breeding pair and a possible maximum total of four breeding pairs. In the tables, zeroes mean that there were no birds recorded in that area in that year, whereas a rule (–) indicates that no data were received.

## Whooper Swan *Cygnus cygnus*

Five sites: 2–5 pairs. The regular sites in Scotland and Northern Ireland were occupied again, with fewer confirmed pairs but similar numbers overall. In addition to the five breeding sites, birds were present elsewhere, but without any evidence of breeding, as follows: in Argyll, pairs summered at two sites and six birds were present at a third; in Highland, 2–3 birds summered at three sites; and other summering birds were reported from Dumfries & Galloway, Lancashire & North Merseyside, Moray & Nairn and North-east Scotland.

Scotland, S

Ayrshire One site: one pair possibly bred.

Scotland, N & W

Outer Hebrides One site: one bird paired with a Mute Swan *C. olor* was seen by an empty nest in late June.

Shetland Two sites: (1) one pair bred, four young hatched and at least two fledged; (2) one pair probably bred.

In addition, 16 summering birds were present at four other sites.

Northern Ireland

Co. Londonderry One site: seven adults present, one pair bred, seen with two young in June.

## Eurasian Wigeon *Anas penelope*

81 sites: 57–146 pairs. The numbers of sites and pairs reported here are similar to those of recent years. However, the UK population is estimated to exceed 300 pairs (Gibbons *et al.* 1993), and the numbers reported to the Panel fall well short of full coverage; consequently, we reiterate our plea to recorders to encourage the checking of regularly used sites on an annual basis. The Eurasian Wigeon colonised Britain as a breeding species during the cooler climatic phase of the 1800s (Hagemeijer & Blair 1997) and is predicted to be lost from all but northwest Scotland later this century, as climate change takes effect (Huntley *et al.* 2007). Its predicted northward shift should be monitored.

The main population is currently in northern England and north and west Scotland. Just three counties, Durham, Northumberland and Orkney, had ten or more confirmed breeding pairs and between them held over 25% of the total number of pairs. Where possible, summering non-breeders, typically in southern counties such as Cambridgeshire, Hertfordshire and Suffolk in 2006, are excluded from the totals presented here.

England, SW

Somerset One site: two pairs possibly bred.

England, SE

Bedfordshire One site: one pair possibly bred. Essex Three sites: three pairs possibly bred. Kent One site: one pair bred. Oxfordshire One site: three pairs possibly bred.

England, E

Lincolnshire Two sites: two pairs possibly bred. Norfolk Two sites: three pairs possibly bred.

England, N

Cheshire & Wirral Three sites: four pairs possibly bred. Cumbria Two sites: one pair bred and one probably bred.

Durham 12 sites: 12 pairs bred (broods seen) but the county population is thought to be 20–25 pairs.

Northumberland Three sites: ten pairs bred. Yorkshire Four sites: eight pairs bred and three pairs possibly bred.

Wales

Anglesey Two sites: four pairs possibly bred.

Scotland, S

Borders Three sites: four pairs possibly bred. Clyde One site: one pair possibly bred.

Dumfries & Galloway Four sites: eight pairs probably bred.

Scotland, Mid

Fife One site: one pair bred. Moray & Nairn One site: one pair bred. North-east Scotland Two sites: two pairs probably bred. Perth & Kinross One site: five pairs possibly bred. Upper Forth One site: one pair bred.

Scotland, N & W

Argyll Four sites: one pair bred and six pairs possibly bred. Caithness One site: one pair possibly bred. Highland Seven sites: three pairs bred and 23 pairs possibly bred. Orkney Eight sites: ten pairs bred and seven pairs possibly bred. Outer Hebrides Five sites: two pairs bred, three pairs probably bred and one pair possibly bred. Shetland Three sites: six pairs bred.

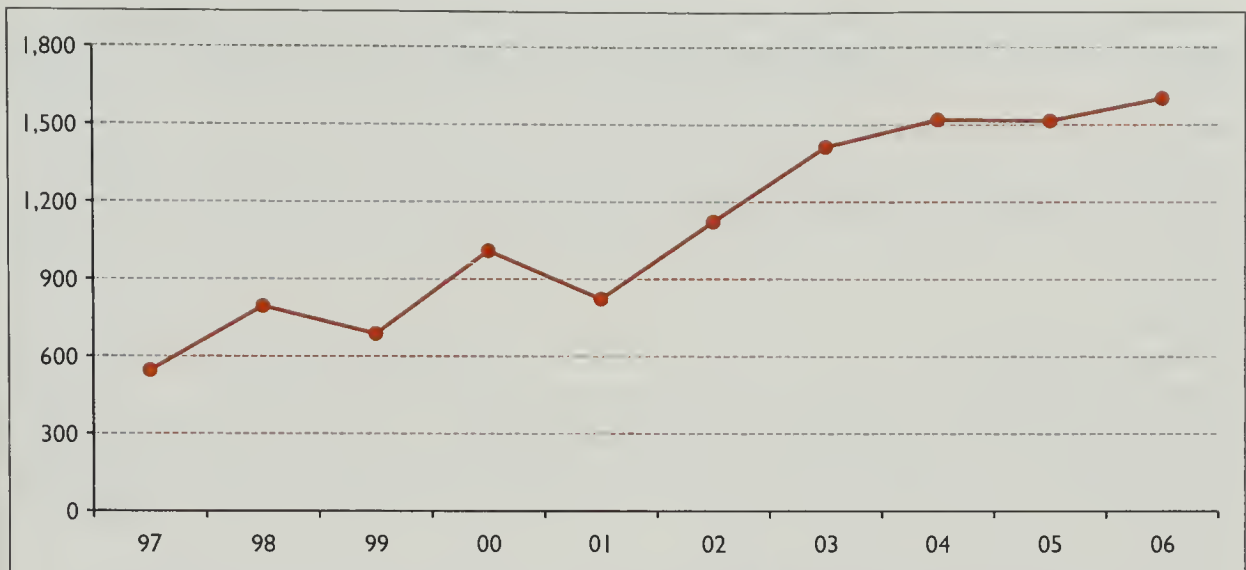
Northern Ireland

Co. Down One site: one pair possibly bred. Co. Tyrone One site: one pair possibly bred.

### Gadwall *Anas strepera*

705–1,603 pairs. The UK Gadwall population continues to rise, with another new maximum total reported here, although there is some indication that numbers are levelling off (fig. 2). In the last ten years, the total number of pairs reported has seen a three-fold increase, with a high proportion being confirmed breeding pairs through observations of females with broods. The species has spread from its original stronghold of East Anglia (Fox 1988) to breed in every county of England except for Cornwall and Scilly in the far southwest, and England holds more than 90% of the population, with many of these birds being on artificial waters such as reservoirs, sand- and gravel-pits. In 2006, numbers

Gadwall					
	Confirmed pairs	Total pairs			
England, SW	99	226	West Midlands	4	4
Avon	10	10	Worcestershire	4	4
Devon	5	10	England, N	249	366
Dorset	40	42	Cheshire & Wirral	27	37
Gloucestershire	1	5	Cleveland	8	8
Hampshire	17	32	Cumbria	0	2
Isle of Wight	0	1	Durham	2	2
Somerset	26	126	Greater Manchester	15	15
England, SE	163	307	Lancashire & N Merseyside	38	38
Bedfordshire	4	4	Northumberland	11	11
Berkshire	9	9	Yorkshire	148	253
Essex	3	33	Wales	2	32
Hertfordshire	40	98	Anglesey	0	27
Kent	104	143	Caernarfonshire	0	2
Oxfordshire	0	16	Gwent	2	2
Surrey	0	0	Pembrokeshire	0	1
Sussex	3	4	Scotland, S	9	19
England, E	105	461	Borders	2	4
Cambridgeshire	40	167	Clyde	7	14
Lincolnshire	1	30	Dumfries & Galloway	0	1
Norfolk	52	148	Scotland, Mid	4	33
Suffolk	12	116	Angus & Dundee	0	3
England, C	61	119	Fife	1	13
Derbyshire	8	22	North-east Scotland	3	3
Herefordshire	1	1	Perth & Kinross	0	10
Leicestershire & Rutland	9	9	Upper Forth	0	4
Nottinghamshire	5	12	Scotland, N & W	13	40
Shropshire	0	1	Argyll	0	3
Staffordshire	17	26	Orkney	13	32
Warwickshire	13	40	Outer Hebrides	0	5
			TOTALS	705	1,603



**Fig. 2.** Number of breeding Gadwalls *Anas strepera* in the UK, 1997–2006 (max. total pairs); the breeding population was almost three times greater in 2006 than it had been ten years earlier.

again increased in northern England, with 253 pairs in Yorkshire alone. Gadwalls remain much scarcer and more localised in Scotland and Wales. The first confirmed breeding for Gwent, two pairs at one site, occurred in 2006.

### Pintail *Anas acuta*

18 sites: 10–26 pairs. The number of sites and pairs remains much as in recent years, although this species continues to show poor site tenacity, with only Argyll and Orkney regularly holding breeding pairs.

England, SE

Kent Three sites: three pairs possibly bred.

England, E

Cambridgeshire One site: one pair present until 31st May did not breed. Norfolk Two sites: (1) one pair bred (brood of six seen in July); (2) two pairs probably bred.

England, N

Cheshire & Wirral One site: three pairs present in May were seen displaying but did not breed. Yorkshire One site: one pair bred (clutch of nine eggs predated).

Scotland, S

Dumfries & Galloway One site: one pair probably bred.

Scotland, Mid

North-east Scotland One site: one pair probably bred.

Scotland, N & W

Argyll One site: two pairs bred (broods of seven and six) and one pair possibly bred. Highland One site: one pair bred. Orkney Six sites: (1) three pairs bred; (2) two pairs bred (broods of six and five); (3)–(6) one pair possibly bred at each site.

### Garganey *Anas querquedula*

57 sites: 6–85 pairs. Proof of breeding was recorded in just five counties, all in the south and east: Kent, Norfolk, Suffolk, Sussex and Yorkshire. Since 1980, the number of confirmed breeding pairs has exceeded 20 in only three years: 1998, 1999 and 2000. Owing to the species being a summer visitor and passage migrant, pairs frequently stay for several days at potential breeding sites early in the season but are not then seen again and are assumed to have moved on. In calculating the totals, single birds or pairs present for less than a week during this period are excluded. However, singles or pairs present for at least a week in April and May, and any birds in suitable habitat in June or July are included, which may inflate the total numbers.

England, SW

Dorset One site: one pair possibly bred. Gloucestershire One site: one pair possibly bred. Hampshire Three sites: one pair probably bred and two pairs possibly bred. Somerset Three sites: one pair probably bred and six pairs possibly bred.

England, SE

Bedfordshire One site: one pair probably bred. Essex Two sites: two pairs possibly bred. Kent Six sites: two pairs bred, eight pairs probably bred and six pairs possibly bred. Sussex Three sites: one pair bred and two pairs possibly bred.

England, E

Cambridgeshire Four sites: eight pairs probably bred and three pairs possibly bred. Norfolk Four sites: one pair bred, one pair probably bred and five pairs possibly bred. Suffolk Four sites: one pair bred and three pairs probably bred.

England, C

Nottinghamshire One site: one pair possibly bred. Shropshire One site: one pair possibly bred. Warwickshire One site: one pair possibly bred.

England, N

Cheshire & Wirral Two sites: two pairs possibly bred. Cleveland One site: one pair probably bred, at a site where breeding occurred in 2004 and 2005, but land drainage in April resulted in the loss of the site. Lancashire & N Merseyside Two sites: one pair probably bred and one pair possibly bred. Yorkshire Five sites: one pair bred, four pairs probably bred and four pairs possibly bred.

Wales

Anglesey Two sites: one pair probably bred and one pair possibly bred. Ceredigion One site: one pair possibly bred. Gwent One site: one pair possibly bred. Pembrokeshire One site: one pair possibly bred.

Scotland, S

Clyde One site: one pair possibly bred. Dumfries & Galloway One site: one pair probably bred.

Scotland, Mid

North-east Scotland One site: one pair probably bred. Perth & Kinross One site: one pair possibly bred.

Scotland, N & W

Argyll One site: one pair possibly bred. Orkney One site: one pair possibly bred.

Northern Ireland

Co. Londonderry One site: one pair possibly bred.

### Shoveler *Anas clypeata*

401–930 pairs. This is the first year that the Panel has collected data on this species, so this is the first opportunity to compare totals, collected largely via the county recorder network, with the national estimate of 1,000–1,500 breeding pairs in 1988–91 (Gibbons *et al.* 1993). Returns produced a

Shoveler	Confirmed pairs	Total pairs			
			Greater Manchester	0	2
			Lancashire & N Merseyside	31	31
England, SW	18	48	Northumberland	6	6
Dorset	10	12	Yorkshire	22	36
Hampshire	5	7	Wales	6	38
Somerset	3	26	Anglesey	0	25
Wiltshire	0	3	Ceredigion	1	3
England, SE	146	196	Meirionnydd	0	3
Essex	51	66	Montgomeryshire	1	1
Hertfordshire	2	15	Pembrokeshire	4	6
Kent	84	93	Scotland, S	0	19
Oxfordshire	0	10	Borders	0	3
Surrey	0	1	Clyde	0	7
Sussex	9	11	Dumfries & Galloway	0	9
England, E	113	422	Scotland, Mid	2	20
Cambridgeshire	74	177	Angus & Dundee	0	6
Norfolk	34	183	Fife	1	5
Suffolk	5	62	North-east Scotland	1	3
England, C	7	11	Perth & Kinross	0	6
Leicestershire & Rutland	1	1	Scotland, N & W	46	81
Nottinghamshire	2	4	Argyll	5	29
Shropshire	0	2	Highland	0	1
Staffordshire	4	4	Orkney	41	41
England, N	63	95	Outer Hebrides	0	7
Cheshire & Wirral	3	17	Shetland	0	3
Cumbria	1	3	TOTALS	401	930

maximum count close to the lower end of this range, suggesting that coverage was good. Over 86% of confirmed breeding pairs in 2006 nested in England, largely in the south and east, with Cambridgeshire, Kent and Norfolk apparently being the main centres. Brown & Grice (2005) summarised the historical status of the Shoveler in England and suggested that up to 150 pairs in the Lower Derwent Valley, Yorkshire, made this the most important site for this species. With just 36 pairs reported from Yorkshire, and only one of these in the Lower Derwent, either this situation no longer applies, or the returns from this important site were incomplete. It is not known how thoroughly the area was searched in 2006.

### Common Pochard *Aythya ferina*

322–519 pairs. The UK population of Common Pochards seems to have been remarkably stable in the last five years, varying between 461 and 540 pairs, and the maximum total for 2006 is somewhat greater than the ten-year mean of 454 (see fig. 3 in Holling *et al.* 2008). Over 98% of confirmed breeding pairs occur in England, with Essex and Kent being the strongholds.

Common Pochard		England, N	84	105
		Cheshire & Wirral	14	17
		Cleveland	14	14
		Cumbria	0	2
		Greater Manchester	4	5
		Lancashire & N Merseyside	13	15
		Northumberland	6	6
		Yorkshire	33	46
		Wales	4	27
		Anglesey	3	25
		Breconshire	0	1
		Carmarthenshire	1	1
		Scotland, S	0	4
		Borders	0	4
		Scotland, Mid	0	4
		Perth & Kinross	0	4
		Scotland, N & W	2	2
		Orkney	2	2
		Northern Ireland	0	5
		Co. Antrim	0	1
		Co. Down	0	1
		Co. Tyrone	0	3
		TOTALS	322	519
England, SW	Confirmed pairs 26	Total pairs 54		
Avon	4	4		
Dorset	12	12		
Hampshire	5	8		
Somerset	5	30		
England, SE	175	230		
Bedfordshire	1	1		
Essex	40	54		
Greater London	32	32		
Hertfordshire	13	37		
Kent	87	94		
Oxfordshire	1	12		
Sussex	1	1		
England, E	26	82		
Cambridgeshire	1	5		
Norfolk	8	52		
Suffolk	17	25		
England, C	5	5		
Nottinghamshire	3	3		
Worcestershire	2	2		

### Common Scoter *Melanitta nigra*

Four sites: 9–16 pairs. Only low numbers of pairs are monitored on an annual basis, representing a fraction of the 95 pairs estimated in the 1995 survey (Underhill *et al.* 1998). Results of a repeat survey, carried out in 2007, will be included in the next report.

Scotland, Mid

Perth & Kinross Three sites: seven pairs possibly bred. In a survey of suitable Perthshire lochs in late May, a total of 17 adults, seven pairs and three single birds, were located.

Scotland, N & W

Argyll No information was available from the regular nesting site on Islay. Highland One site: nine pairs bred.

### Common Goldeneye *Bucephala clangula*

Approximately 200 laying females were found in two regions of Scotland, and summering birds were present in at least six other areas of England and Scotland. Details received from the Goldeneye Study Group indicate that 121 clutches were laid in northern Scotland. Assuming that two-thirds of clutches laid involved more than one female leads to an estimate of c. 200 egg-laying females in total, about 25% more than in recent years.

England, C

**Derbyshire** A female summered, as in 2004 and 2005, and a male was also seen in July. The female bird, however, was injured and could not fly.

England, N

**Cumbria** One female in May in suitable habitat may have summered. **Greater Manchester** Up to five birds summered and displayed in suitable habitat. A displaying pair was seen in early June. **Northumberland** A first-summer female was recorded from July into September at a potential breeding site.

Scotland, S

**Borders** A female was at a potential breeding site in mid August. **Lothian** Two females and a first-summer male were recorded at a potential breeding site.

Scotland, Mid

**North-east Scotland Deeside:** a minimum of 18 pairs bred, with 15 clutches hatching.

Scotland, N & W

**Highland** In the nestbox study in Badenoch & Strathspey, a minimum of 103 clutches were laid, with 64 of these being incubated. Of the total of 581 eggs, 458 hatched from 56 nests (87.5% of clutches) and the mean brood size was the same as in 2005, at 8.2 young (range 1–19).

### Capercaillie *Tetrao urogallus*

93 leks were visited, and a total of 206 displaying males counted, a slight decrease on 2005. All known lek sites across Scotland are checked at dawn during April; although not an accurate measure of the population, this figure does enable trends at these leks to be monitored. Eaton *et al.* (2007a) estimated the population in winter 2003/04 to be 1,980 individuals (95% confidence limits 1,284–2,758; counts included both males and females, of all ages).

Scotland, S

**Clyde** One lek: two males.

Scotland, Mid

**Moray & Nairn** 14 leks: 20 males. **North-east Scotland** 20 leks: 40 males. **Perth & Kinross** Eight leks: 10 males.

Scotland, N & W

**Highland** 50 leks: 134 males.

### Common Quail *Coturnix coturnix*

5–416 singing males or pairs. This was an average year for Common Quail (ten-year mean 444 singing males or pairs; see fig. 3). Confirmed breeding was recorded in just five counties: Borders, Cambridgeshire, Cleveland, Nottinghamshire and Wiltshire.

Common Quail		Leicestershire & Rutland	3
	Total	Nottinghamshire	1
England, SW	66	Shropshire	8
Avon	5	Staffordshire	3
Gloucestershire	8	Warwickshire	2
Hampshire	7	Worcestershire	9
Somerset	8	England, N	90
Wiltshire	38	Cheshire & Wirral	15
England, SE	46	Cleveland	5
Berkshire	6	Cumbria	5
Buckinghamshire	4	Durham	10
Hertfordshire	1	Greater Manchester	5
Kent	10	Lancashire & N Merseyside	12
Oxfordshire	10	Northumberland	18
Sussex	15	Yorkshire	20
England, E	99	Wales	12
Cambridgeshire	15	Anglesey	1
Lincolnshire	16	Breconshire	1
Norfolk	66	Ceredigion	1
Suffolk	2	Meirionnydd	5
England, C	37	Montgomeryshire	1
Derbyshire	11	Pembrokeshire	3

Common Quail *continued*

Scotland, S	20	Scotland, N & W	19
Borders	12	Argyll	3
Lothian	8	Fair Isle	2
Scotland, Mid	27	Highland	4
Fife	4	Orkney	4
Moray & Nairn	8	Outer Hebrides	5
North-east Scotland	14	Shetland	1
Upper Forth	1	TOTAL	416

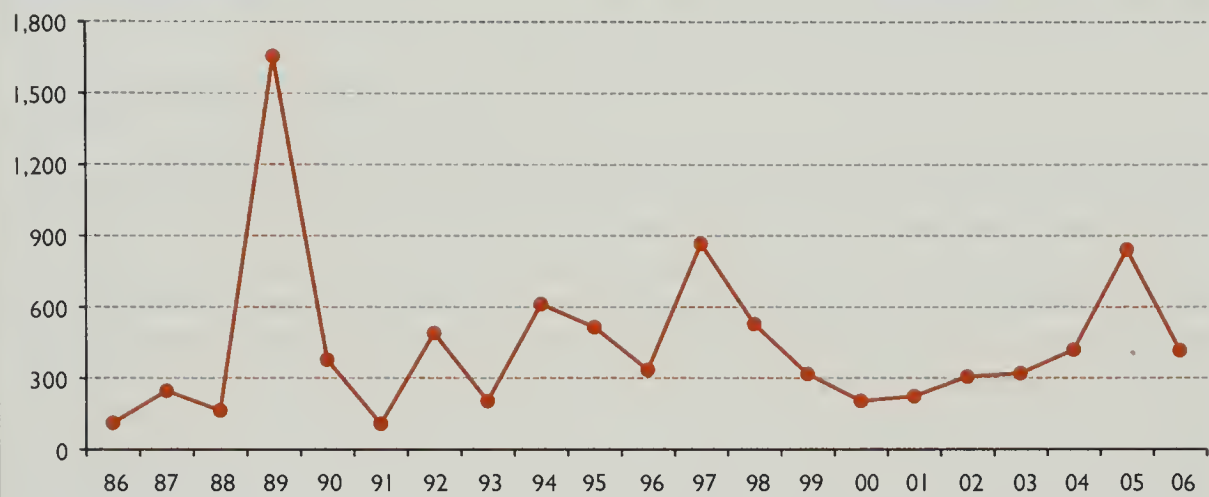


Fig. 3. Maximum numbers of singing males or pairs of Common Quails *Coturnix coturnix* recorded in the UK during 1986–2006, showing the 'quail years' of 1989, 1997 and 2005.

Red-throated Diver *Gavia stellata*

Some 1,255 breeding pairs were estimated during the second national survey of this species, funded by RSPB and SNH under the Statutory Conservation Agency and RSPB Annual Breeding Bird Scheme (Dillon *et al.* in press). This survey achieved full coverage of the important breeding populations on Shetland and Orkney, and a random sample of 5-km squares elsewhere in the range. Estimates were corrected to account for sites where breeding evidence was overlooked, following the findings of



Hugh Harrop

109. Adult Red-throated Diver *Gavia stellata*, with chicks, Shetland, July 2006. A national survey of Red-throated Divers in 2006 estimated a total of 1,255 breeding pairs with Shetland holding the largest proportion of the breeding population.

Red-throated Diver	Total number of adults	Number of occupied lochs	Estimated number of breeding pairs <sup>1</sup>
Mainland Scotland (Argyll/Highland)	931 (612–1,277)	530 (353–739)	227 (130–342)
Inner Hebrides (Argyll/Highland)	815 (303–1,534)	505 (176–1,017)	221 (70–438)
Orkney	280	110	97
Outer Hebrides	893 (450–1,365)	462 (246–704)	317 (164–524)
Shetland	1,286	600	407
<b>TOTALS<sup>2</sup></b>	<b>4,146 (3,430–4,992)</b>	<b>2,177 (1,729–2,744)</b>	<b>1,255 (1,014–1,551)</b>

Figures in parentheses show 95% confidence limits.

<sup>1</sup> Corrected estimate of breeding pairs, after Gomersall *et al.* (1984).

<sup>2</sup> The total population estimate differs from the sum of the census areas and the extrapolated estimates from the sample regions owing to different sampling intensities and small sample sizes in different areas introducing rounding errors.

intensive studies in Shetland in the 1980s (Gomersall *et al.* 1984).

The estimate suggests an increase of around 34% since the first full survey, in 1994. That survey estimated a total of 935 breeding pairs, with approximately 430 (46%) of these in Shetland and 105 (11%) in Orkney (Gibbons *et al.* 1997). Results from the Northern Isles indicate that populations there have remained relatively stable since 1994 (and that the Shetland population has not recovered to the higher levels of the 1980s). It thus seems that other areas are responsible for the overall increase, although Shetland remains the most important area for Red-throated Divers, with around 32% of the national population there. At a regional level, the large confidence limits around estimates restrict our ability to pinpoint where changes have occurred, but there appear to have been large increases in both the Inner and the Outer Hebrides.

### Black-throated Diver *Gavia arctica*

As with the previous species, there was an RSPB/SNH national survey of Black-throated Divers in 2006, the first since 1995. This entailed surveying all known breeding territories (single lochs, parts of larger lochs, or groups of small lochs close to each other), along with a random sample of potentially suitable lochs elsewhere within the breeding range. Given the good knowledge of the range of Black-throated Diver, thanks to previous national surveys (in 1985 and 1995) and other studies including annual RSPB monitoring at many sites, a large proportion of the population was found.

The full, corrected estimate was 217 summering territories (95% confidence limits 190–252). Although proving breeding was not a requirement of the survey, 112 breeding attempts were recorded; this will be an underestimate of the total number. The table shows the regional distribution of the 173

Black-throated Diver	Summering territories	No. sites with birds present	Breeding attempts
Scotland, S			
Ayrshire	1	1	1
Scotland, Mid			
Moray & Nairn	0	1	0
North-east Scotland	1	1	0
Perth & Kinross	9	11	3
Upper Forth	2	2	1
Scotland, N & W			
Argyll	15	16	6
Caithness	5	7	4
Highland	117	149	86
Outer Hebrides	23	39	11
<b>TOTALS</b>	<b>217<sup>1</sup></b>	<b>320<sup>1</sup></b>	<b>112</b>

<sup>1</sup> These totals are not the sum of regional numbers; they include extrapolation from a stratified random sample of sites, and correction for territories missed during surveying.

territories actually located by surveyors. The Scottish Black-throated Diver population has increased by 16% from the newly revised estimate of 187 territories in 1995, which itself was up from the 1985 estimate of 151 territories. This increase appears to have been spread across most of the range, although was most marked in the Outer Hebrides, and may possibly be a response to increased productivity as a result of a large programme of nesting-raft provision (Hancock 2000).

### Red-necked Grebe *Podiceps grisegena*

Three sites: one pair and two single birds. In Northamptonshire, one bird present from May to November was joined by a second from 25th June to 20th July. A single bird was again present in Fife, recorded from 8th June to 2nd July, and in Cambridgeshire, a bird was present until 19th May and then again from 1st July, spending part of the intervening period at another site less than 5 km away.

### Slavonian Grebe *Podiceps auritus*

19 sites: 40–41 pairs. In mainland Scotland, 39 pairs were located and 34 young reared (44 and 23, respectively, in 2005). Productivity was 0.87 young per territorial pair, well above the long-term average of 0.58 and the highest figure since 2000. Seventeen sites in mainland Scotland were occupied by pairs in 2006 but only seven of these produced young, figures which remain a cause for concern. The transitory nature of many sites is demonstrated by the fact that although 16, 14, 16 and 17 sites were occupied by pairs in 2003, 2004, 2005 and 2006, respectively, 29 lochs were occupied in total, eleven were used in just one of those years and only six lochs held pairs in all four years. In 2006, sites within Special Protection Areas (SPAs) held 27 pairs (69%) and these produced 27 young (79%). Since coverage is believed to be complete for this species, this demonstrates the importance of SPAs classified for Slavonian Grebe.

Well away from the normal breeding area of this species, in the English Midlands, a bird paired with a Great Crested Grebe *P. cristatus* but the hybrid young did not survive (Toon 2007).

England, C

Leicestershire & Rutland One site: one hybrid pair. An adult paired with a Great Crested Grebe, four eggs were laid and two hatched, but both chicks were predated by a Great Cormorant *Phalacrocorax carbo*.

Scotland, Mid and N & W

Moray & Nairn/Highland 17 sites: 39 pairs reared 34 young, two singles also present at two other sites. Orkney One site: a pair was seen displaying on a suitable loch in April and by early June one bird remained, but no nest was located.

### Black-necked Grebe *Podiceps nigricollis*

17 sites: 34–60 pairs. Since the publication of a review of breeding Black-necked Grebes in Britain up to 2004 (Martin & Smith 2007), the population has fallen from 44 confirmed breeding pairs in 2004, to 38 in 2005 and 34 in 2006, with the loss of the Scottish breeding population and the small numbers in southwest England. The population seems to be increasingly concentrated into a few main sites in central and northern England. Continuous and careful monitoring of all known sites is essential, and nil returns from former breeding sites are important too. Since Black-necked Grebes are able to colonise new sites rapidly, vigilance in following up records of pairs in early spring is also required.

England, SE

Hertfordshire One site: up to 12 pairs possibly bred; although birds were present from March until October, no nests were built and no young seen. Kent One site: one pair bred.

England, E

Lincolnshire One site: one pair bred.

England, C

Leicestershire & Rutland No breeding: reported from four sites but only in April and July, with none lingering. Two juveniles were seen at one site, but it is known that they were not reared locally. Nottinghamshire Two sites: (1) two pairs bred; (2) one pair bred. Staffordshire One site: one pair probably bred and one pair possibly bred. It is thought that disturbance prevented successful breeding.

England, N

Cheshire & Wirral One site: 15 pairs bred. Durham One site: one pair possibly bred (seen displaying in April). Greater Manchester Two sites: (1) two pairs bred; (2) one pair probably bred. Northumberland One site: four pairs bred and four pairs probably bred. Yorkshire Four sites: (1) five pairs bred and two pairs probably bred; (2) two pairs

bred and one pair possibly bred; (3) one pair bred; (4) one pair possibly bred.

Scotland, S

**Borders** One site: a pair present from late April to late May, with one bird remaining until July, but the lack of emergent vegetation at this site precludes breeding.

Scotland, Mid

**Fife** One site: one pair possibly bred.

## Eurasian Bittern *Botaurus stellaris*

38 sites: 44–63 booming males with 27 breeding attempts at 12 sites. Eurasian Bitterns have been surveyed annually since 1990, the aim being to quantify the minimum and maximum numbers of (i) booming males and (ii) nesting females. Only those males which are known to have been booming for a week or more are counted in the minimum figures for the year. Funded by RSPB and Natural England, the survey relies on both professional ornithologists and amateur birdwatchers. The accuracy and standardisation of the annual survey is extremely important as it helps measure the success of the continuing wetland habitat management, habitat restoration and creation for this species.

In 2006 there was some stabilisation in the UK's Bittern population. The minimum number of 44 booming males was two down on 2005's total. This followed the much larger decline of 16% between 2004 and 2005. Twenty-seven sites were used by booming males, down by just one on 2005. The number of active nests located, at 27, was the same as in 2005.

England, SW

**Cornwall** One site: 0–1 booming male. **Somerset** One site: 0–1 booming male.

England, SE

**Kent** One site: 0–1 booming male; also a bird heard briefly at a second site. **Surrey** One site: one booming male.

England, E

**Cambridgeshire** Three sites: 1–3 booming males. **Lincolnshire** Four sites: 4–6 booming males. **Norfolk** *North Norfolk coast* Five sites: 3–5 booming males; two confirmed nests. *Norfolk Broads* Ten sites: 10–11 booming males; four confirmed nests. **Suffolk** Six sites: 21–27 booming males; 18 confirmed nests.

England, N

**Greater Manchester** One site: 0–1 booming male. **Lancashire & N Merseyside** One site: one booming male and two confirmed nests. **Yorkshire** Three sites: 3–4 booming males; one confirmed nest.

Wales

One site: 0–1 booming male.

## Little Egret *Egretta garzetta*

60 sites: 425–478 pairs. The number of sites where breeding Little Egrets were recorded rose again in 2006 to a new record of 60, with some evidence of breeding reported from 23 counties. It is becoming increasingly difficult to make accurate counts of some larger colonies and the totals here do not include two major colonies, in Dorset (at least 50 nests) and Essex (at least 35 nests). It is also believed that counts from some colonies have not been submitted to the Panel and the UK population in 2006 was probably closer to 600 pairs. Nevertheless, there is again little sign of expansion north of a line from the Mersey to the Humber.

England, SW

**Cornwall** Three sites: 17 pairs bred. **Devon** Five sites: 22 pairs bred and five pairs probably bred. **Dorset** Five sites: 18 pairs bred but no count from the largest colony. **Gloucestershire** One site: seven pairs bred and three pairs probably bred. **Hampshire** Four sites: 49 pairs bred and 13 pairs probably bred. **Isles of Scilly** One site: one pair bred; first breeding for Scilly. **Somerset** Five sites: 22 pairs bred, eight pairs probably bred and one pair possibly bred. **Wiltshire** One site: not counted but estimate of at least 12 pairs probably bred.

England, SE

**Berkshire** Two sites: two pairs possibly bred. **Buckinghamshire** One site: three pairs bred. **Essex** Four sites: 29 pairs bred and five pairs possibly bred, but the count at the largest site is known to have been incomplete. **Kent** Two sites: 70 pairs bred. **Sussex** Six sites: 17 pairs bred.

England, E

**Cambridgeshire** Two sites: at least five pairs bred at one and an unknown number (counted as at least one) probably bred at the other. **Norfolk** Four sites: 72 pairs bred. **Suffolk** Five sites: 34 pairs bred and two pairs possibly bred.

England, N

**Cheshire & Wirral** One site: ten pairs bred. **Yorkshire** One site: one pair built up a nest but not thought to have laid.

## Wales

Caernarfonshire Two sites: seven pairs bred. Carmarthenshire One site: one pair bred, fledging two young; first breeding for the county. Ceredigion One site: four pairs bred. Glamorgan Two sites: 26 pairs bred. Gwent One site: 11 pairs bred.

**Eurasian Spoonbill *Platalea leucorodia***

One site: one pair built a nest. In Norfolk and Suffolk, more than 30 birds summered, being mobile between several coastal sites. One pair built a large nest at a site in Suffolk, but no eggs were laid.

**Honey-buzzard *Pernis apivorus***

23–39 pairs; at least 40 young fledged. Reporting of Honey-buzzards to the Panel continues to improve and the number of young fledged in 2006 (40) was the highest since the survey years of 2000 and 2001 (40 and 41 respectively), when extra efforts were made to monitor and report this species. Despite improvements in the quality of the data being submitted, we are aware that we still do not receive all records, which can have direct and unfortunate consequences. In recent years, the lack of detail on nesting locations has hampered attempts to prosecute egg-collectors, as well as failing to prevent windfarms being built within Honey-buzzard territories.

## England, SW

12 territories occupied in three counties, eight pairs raised a minimum of 15 young.

## England, SE

Seven territories occupied in three counties, seven pairs raised ten young.

## England, E, C &amp; N

Seven territories occupied in three counties, one pair raised three young.

## Wales

Seven territories occupied, six pairs bred, fledging ten young.

## Scotland

One pair bred in Highland, fledging two young, which were radio-tracked. Evidence of occupation or presence of single birds at former breeding sites late in the season was reported from five other sites in four regions.

**Black Kite *Milvus migrans***

One mixed pair. A male was found paired with a six-year-old, wing-tagged female Red Kite from the North Scotland population in late June. This very late nest contained two well-feathered young, which later fledged. The young had the appearance of Red Kites and were last seen during August. Neither the young nor the adults were seen during the following winter or in 2007. This record constitutes the first confirmed breeding by a Black Kite in the UK. Prior to this, a single Black Kite had summered in Highland in 2002, 2003 and 2004, thought to be the same individual in all three years (Forrester *et al.* 2007), and it is possible that it was that bird which bred in 2006.

**Red Kite *Milvus milvus***

669–1,038 pairs. The figures presented here are minima, since not all sites in Wales and southern England are now monitored annually. It seems likely that in 2006 the UK Red Kite population stood at over 1,200 breeding territories. No new release schemes began in 2006, and a review of the existing Red Kite reintroductions will be included in the 2007 report.

England A minimum of 196–508 pairs bred.

## England, SW

Gloucestershire One pair bred. Hampshire One pair fledged two young, one pair probably bred and ten pairs possibly bred. Wiltshire Two pairs bred, one fledging two young, two pairs probably bred and one pair possibly bred.

## England, SE

Bedfordshire One pair probably bred. Berkshire Three pairs fledged four young and two pairs possibly bred.

Buckinghamshire/Oxfordshire Minimal information was received on the important population in the Chilterns, although 68 nesting pairs were monitored. This population was thought to number around 350 breeding pairs, with c. 600 young reared. Hertfordshire One pair probably bred and five pairs possibly bred. Surrey No breeding but reported from 20–25 sites in summer, including parts of Greater London. Sussex Two pairs bred fledging two young.

## England, E

Cambridgeshire Two pairs bred with two chicks in each nest. Lincolnshire One pair bred and one pair possibly bred.

Norfolk No breeding records, but birds reported from 18 sites in summer. Northamptonshire 67 pairs with 118 young in 57 nests.

England, C

Derbyshire Up to two birds summered in one area. Herefordshire Two pairs bred, one fledging two young. Leicestershire & Rutland Two pairs produced five chicks in total and two pairs possibly bred. Shropshire One pair fledged two young. This is the first successful breeding in the county since 1876.

England, N

Durham Four pairs bred, two pairs probably bred and two pairs possibly bred. At least three young fledged from two nests, the first successful breeding in the county for almost 200 years. Yorkshire 40 pairs fledged 75 young.

Wales A minimum of 387–433 pairs bred, but it is estimated that the total population in 2006 lay between 500 and 600 pairs, fledging 420–504 young. The 2006 distribution of known territorial pairs (numbers of pairs confirmed in brackets) by recording area was as follows:

Breconshire 52 (48), Caernarfonshire 4 (3), Carmarthenshire 72 (67), Ceredigion 162 (147), Denbigh & Flint 1 (1), Glamorgan 15 (15), Gwent 2 (2), Meirionnydd 5 (2), Montgomeryshire 29 (24), Pembrokeshire 7 (5) and Radnorshire 84 (73).

Scotland 86–97 pairs bred.

Scotland, S

Dumfries & Galloway 17 pairs fledged 27 young and two pairs probably bred.

Scotland, Mid

Perth & Kinross (Tayside RSG) 11 pairs fledged 18 young and four pairs probably bred. Upper Forth (Central Scotland RSG) 19 pairs fledged 27 young and five pairs probably bred.

Scotland, N & W

Highland 39 pairs fledged 79 young.

## White-tailed Eagle *Haliaeetus albicilla*

36 territorial pairs, of which 31 pairs laid eggs and 17 pairs were successful, fledging 29 young. This was the most successful breeding season since the re-establishment programme began. Breeding occurred in three Scottish recording areas: Argyll, Highland and Outer Hebrides.

## Marsh Harrier *Circus aeruginosus*

209–370 breeding females (noted as 'pairs' in the county details below). The maximum total presented here is the highest ever in this report with the exception of 2005, when a full national survey recorded a minimum of 363 confirmed breeding pairs. Nevertheless, apart from the key county of Norfolk, most county totals here are comparable to those reported in the survey.

England, SW

Devon One site: one pair bred but failed. This is the first breeding for the county since the nineteenth century.

England, SE

Essex 11 sites: 18 pairs bred, one pair probably bred and four pairs possibly bred. Kent Estimate of 70 pairs, with at least nine pairs confirmed breeding. No formal survey but numbers were believed to be similar to those in 2005, when the whole population was counted.

England, E

Cambridgeshire 13 sites: 25 pairs bred. Lincolnshire 72 pairs bred and 30 pairs probably bred. Norfolk A minimum of 77 pairs bred or probably bred, with at least 19 pairs confirmed breeding. Nesting occurred in three main areas (35 pairs in the Broads, 32 pairs along the north coast and 10 pairs around the Wash). Suffolk Eight sites: 48 pairs bred.

England, N

Lancashire & N Merseyside Two sites: two pairs and a third female bred, fledging ten young. Two females also summered at a third site. Yorkshire Seven pairs bred and five pairs possibly bred.

Scotland, Mid

Fife/Perth & Kinross One extensive site: six pairs bred fledging 18 young, with one further territorial pair. Moray & Nairn One site: one pair bred fledging two young.

Scotland, N & W

Highland One site: a pair built a nest at a new location but deserted before eggs were laid. A male was present in April and May at the 2005 breeding site but no female was seen.

Single birds were also reported at potential breeding sites in Hertfordshire and Wiltshire (counties where breeding is yet to occur) and from sites in Anglesey, North-east Scotland, Orkney and Somerset (where breeding has occurred in the past); but there was no evidence of breeding in these counties in 2006.

## Hen Harrier *Circus cyaneus*

265–412 pairs fledged a minimum of 453 young. The first breeding birds in Derbyshire since 1997, and only the second since 1870, were reported. No confirmed breeding or territorial behaviour was reported from south or east England, but presence was again recorded in two counties.

Hen Harrier	Occupied territories	Confirmed breeding pairs	Territories believed to fledge young	Min. no. young fledged
England, C	1	1	1	5
Derbyshire	1	1	1	5
England, N	22	20	12	40
Cumbria	4	4	4	10
Lancashire & N Merseyside	11	11	6	22
Northumberland	4	4	1	3
Yorkshire	3	1	1	5
Isle of Man	n/a	–	–	–
Wales	34	21	12	27
Breconshire	3	1	0	0
Caernarfonshire	3	0	0	0
Denbigh & Flint	7	7	7	12
Meirionnydd	10	7	3	8
Montgomeryshire	5	5	2	7
Radnorshire	6	1	0	0
Scotland, S	71	40	23	56
Clyde Islands	24	15	13	26
Dumfries & Galloway	19	10	5	14
Lothian & Borders	4	2	2	6
S Strathclyde (Ayrshire/Clyde)	24	13	3	10
Scotland, Mid	64	48	36	101
Angus & Dundee	5	2	1	3
Central Scotland	2	1	1	3
North-east Scotland	14	6	5	12
Moray & Nairn	10	10	8	26
Perth & Kinross	33	29	21	57
Scotland, N & W	220	135	85	224
Argyll	91	42	24	63
Highland (incl. Caithness)	23	17	10	31
Orkney	71	46	28	72
Outer Hebrides (Uists)	35	30	23	58
Northern Ireland	n/a	–	–	–
TOTALS	412	265	169	453

## Montagu's Harrier *Circus pygargus*

2006 13 sites: 13–17 pairs fledged a minimum of 24 young. This was the highest number of sites since 2000 and the highest-ever number of confirmed breeding pairs in this report. In recent years, this species has become faithful to certain areas of southern and eastern England, helping the regular monitoring and protection of Montagu's Harriers.

England, S

Three sites: four pairs bred, one pair possibly bred, and two singles. Of the nesting pairs, two pairs failed at the egg stage, one pair fledged two young from a clutch of four, and one pair fledged four young.

England, E

Lincolnshire Four sites: three pairs bred, fledging six young, and one pair possibly bred. Norfolk Five sites: six pairs bred, fledging 12 young, and one pair possibly bred.

England, N

One site: one pair probably bred: a male and two females present on 10th May, with a pair remaining to late May. A breeding attempt was strongly suspected but the male was not seen after 11th June.

## Northern Goshawk *Accipiter gentilis*

272–411 pairs. Following increases in recent years (see fig. 4 in Holling *et al.* 2008), the number of pairs reported in 2006 was similar to that in 2005. Most reports are of monitored nests in study areas. Fewer reports of territorial birds are received, which means that the population figures here are probably underestimates. We encourage birdwatchers who find Goshawks in breeding habitat to provide county recorders with the details, to enable more accurate assessments of local populations.

Northern Goshawk					
	Confirmed pairs	Total pairs			
			Lancashire & N Merseyside	0	4
			Northumberland	24	27
England, SW	37	42	Yorkshire	18	29
Devon	7	7	Wales	80	107
Gloucestershire	22	24	Breconshire	7	12
Hampshire	5	6	Caernarfonshire	1	2
Somerset	0	1	Carmarthenshire	15	16
Wiltshire	3	4	Ceredigion	8	16
England, SE	1	4	Denbigh & Flint	4	5
Bedfordshire	0	1	Glamorgan	10	15
Essex	1	2	Gwent	21	23
Surrey	0	1	Meirionnydd	5	7
England, E	3	7	Montgomeryshire	8	8
Norfolk	2	5	Pembrokeshire	1	3
Suffolk	1	2	Scotland, S	40	58
England, C	41	78	Ayrshire	0	3
Derbyshire	18	18	Dumfries & Galloway	15	17
Herefordshire	12	38	Lothian & Borders	25	38
Nottinghamshire	2	4	Scotland, Mid	22	31
Shropshire	7	10	Moray & Nairn	0	7
Staffordshire	1	5	North-east Scotland	22	24
Warwickshire	1	3	Scotland, N & W	2	2
England, N	46	81	Highland	2	2
Cleveland	0	3	Northern Ireland	0	1
Cumbria	3	8	Co. Down	0	1
Durham	1	10	TOTALS	272	411

## Golden Eagle *Aquila chrysaetos*

Results of Golden Eagle monitoring by Scottish Raptor Study Groups (Etheridge *et al.* 2008) and the Northern England Raptor Forum are presented below. The first table shows that 290 home ranges were checked in total, against the population of 443 pairs estimated following the 2003 national survey (Eaton *et al.* 2007b). The second table provides a breakdown of monitored home ranges by recording area. In the Uists, a comprehensive survey of known eyries was carried out. Golden Eagles also breed elsewhere in the Outer Hebrides, on the islands of Lewis & Harris, but in 2006 there was no monitoring of this important population. In England, a single male at Haweswater, Cumbria, remained unpaired for the second year running.

Although recent surveys of Golden Eagles have shown a stable population across Scotland as a whole, detailed analysis of the performance of breeding pairs in different areas of Scotland by Whitfield *et al.* (2008) demonstrates that only parts of western Scotland hold populations that are stable or expanding. Elsewhere, in the central and eastern Highlands, where the main land use is grouse-moor management, their study showed that less than half the known territories are occupied and existing

Golden Eagle						
Home ranges checked	Home ranges occupied by a pair	Pairs monitored	Pairs laying eggs	Pairs hatching eggs	Min. young fledged	Mean no. fledged per monitored nest
290	233	218	149	91	84	0.39

## Golden Eagle

	Singles	Probable breeding (pairs)	Confirmed breeding (pairs)	Total pairs	Min. no. young fledged
England, N & Scotland, S	1	4	1	5	1
Angus & Dundee	3	1	4	5	4
North-east Scotland (incl. E Moray)	2	5	12	17	7
Perth & Kinross	8	2	9	11	11
Upper Forth	0	2	6	8	2
Argyll	4	18	44	62	21
Highland (incl. W Moray & Nairn)	8	41	60	101	32
Outer Hebrides (Uists only)	2	11	13	24	6
TOTALS	28	84	149	233	84

populations continue to decline. Based on the numbers of young produced by the remaining pairs, however, these populations should be expanding markedly. Instead, Whitfield *et al.* found that their numbers are declining and they are failing to produce young birds which could settle in other parts of Scotland. These results are consistent with several other published studies showing that Golden Eagles have been subjected to illegal persecution in these areas.

Osprey *Pandion haliaetus*

147–161 pairs. Fewer pairs were reported in 2006 than in recent years, which reflects reduced monitoring of the larger populations in the core areas of Highland and Tayside in particular. There was a further small increase in the population in southern Scotland (to eight breeding pairs), but numbers in England (two pairs) and Wales (one pair) remain the same as in 2005.

## England, C

Leicestershire & Rutland One pair fledged three young at Rutland Water. A second pair at another site was seen displaying and carrying nest material.

## England, N

Cumbria One site: one pair fledged three young at Bassenthwaite Lake.

## Wales

Meirionnydd One site: one pair fledged two young at Glaslyn. This is the third year that young Ospreys have flown from this site.

## Scotland, S

Dumfries & Galloway Two pairs fledged one young each, and a third pair summered and was seen mating. Also one single bird present. Lothian & Borders Six pairs laid eggs and five pairs fledged ten young. Single birds were present at five other sites.

## Scotland, Mid

Central Scotland 18 pairs and one single bird present: 16 pairs bred fledging 34 young. North-east Scotland 19 pairs laid eggs and 16 pairs fledged 34 young. Tayside 25 pairs present: 20 pairs laid eggs and 15 pairs fledged 31 young.

## Scotland, N &amp; W

Argyll 12 pairs present, 11 pairs laid eggs and nine pairs fledged 17 young. Highland 74 pairs and two single birds present: 70 pairs laid eggs and 48 pairs fledged 97 young.

Merlin *Falco columbarius*

321–461 pairs. The following table is based on sample monitoring areas only and the figures, especially for England and Wales, are incomplete, although comparable with those of previous years. No data were available for Northern Ireland. This total is less than half the estimated population in the UK of 1,300 pairs (95% confidence limits 1,100–1,500), based on the 1993–94 survey (Rebecca & Bainbridge 1998). A repeat survey took place in 2008.

The diver survey in Shetland gave an opportunity to check known Merlin sites and 22 out of 75 home ranges were found to be occupied, producing higher totals than usual from that county. Note that the totals for 2005 (in Holling *et al.* 2008) were incorrect: 198 territories were occupied in northern England and 112 of these fledged at least 303 young. This means that the overall figures for 2005 were 294–533 pairs breeding with a minimum of 870 young fledged.

Merlin	Territories occupied by pairs	Confirmed breeding pairs	Territories believed to fledge young	Min. no. young fledged
England, SW	3	1	0	0
England, C	25	25	21	83
Derbyshire	21	21	17	66
Shropshire	3	3	3	14
Staffordshire	1	1	1	3
England, N	116	113	93	[285]
Cumbria	18	18	12	n/a
Durham	28	28	28	97
Lancashire & N Merseyside	11	10	6	23
Northumberland	23	22	12	36
Yorkshire	36	35	35	129
Wales	32	11	7	24
Breconshire	2 <sup>a</sup>	1	1	3
Caernarfonshire	2	0	0	0
Denbigh & Flint	2	2	2	6
Meirionnydd	10	7	3	12
Montgomeryshire	6	1	1	3
Pembrokeshire	1	0	0	0
Radnorshire	9	0	0	0
Scotland, S	46	28	22	63
Dumfries & Galloway	8	8	5	12
Lothian & Borders	28	16	15	45
South Strathclyde	10	4	2	6
Scotland, Mid	126	75	61	184
Angus & Dundee	17	8	7	22
Moray & Nairn	17	11	9	28
North-east Scotland	42	33	28	92
Perth & Kinross	50	23	17	42
Scotland, N & W	113	68	50	155
Argyll	5	4	4	10
Highland	41	22	18	50
Orkney	21	18	12	41
Outer Hebrides	24	7	4	12
Shetland	22	17	12	42
TOTALS	461	321	254	794

### Hobby *Falco subbuteo*

258–846 pairs. The figures here represent only a sample of the population, thought to be c. 2,200 pairs (Clements 2001). The overall numbers are similar to those of recent years, and with a similar distribution, largely south of a line between the Wirral and the Humber. In Wales, the majority of pairs are in the southeast of the country, but 2006 saw the first confirmed breeding in Carmarthenshire, a welcome westward extension of range.

The level of coverage and the method of calculating county populations differ widely among counties. Most receive few confirmed breeding records, yet for some this is all that is available and leads to a gross underestimate of the county population (e.g. Northamptonshire, Nottinghamshire and Oxfordshire). Other county recorders include sites where Hobbies are seen regularly in the total, but even then the figures are believed to be underestimates. In counties such as Kent, where there have been methodical surveys over several years, a better estimate can be calculated. Hobbies are elusive when breeding, many nesting in hedgerow trees in poorly covered agricultural landscapes, and the young do not fledge until late July onwards, after most breeding bird survey work is complete. The Panel is working on standard guidelines for assessing numbers of this species, and would welcome contributions from those familiar with the falcon. In the meantime, the chapter on Hobby in Hardey *et al.* (2006) provides useful guidance on the monitoring of this species.

Hobby	Confirmed pairs	Total pairs			
			England, E	56	109
			Cambridgeshire	13	18
			Lincolnshire	5	9
England, SW	49	190	Norfolk	12	27
Avon	4	10	Northamptonshire	5	5
Devon	11	15	Suffolk	21	50
Dorset	3	23	England, C	83	127
Gloucestershire	11	15	Derbyshire	41	41
Hampshire	5	52	Herefordshire	1	10
Isle of Wight	1	1	Leicestershire & Rutland	6	20
Somerset	3	23	Nottinghamshire	6	6
Wiltshire	11	51	Shropshire	1	10
England, SE	39	350	Staffordshire	4	4
Bedfordshire	1	5	Warwickshire	23	35
Berkshire	4	7	Worcestershire	1	1
Buckinghamshire	6	15	England, N	26	53
Essex	6	30	Cheshire & Wirral	14	21
Greater London	0	8	Greater Manchester	0	2
Hertfordshire	3	51	Lancashire & N Merseyside	0	3
Kent	0	200	Yorkshire	12	27
Oxfordshire	7	7	Wales	4	16
Surrey	8	23	Scotland	1	1
Sussex	4	4	TOTALS	258	846

### Peregrine Falcon *Falco peregrinus*

731–990 pairs. The following summary information was received, representing around 65% of the population estimated in the 2002 national survey (Banks *et al.* in press). That survey estimated 1,514 occupied territories, comprising 1,441 pairs and/or single birds confirmed and an estimated 73 extras (5% of total occupied territories) that were not visited.

Peregrine Falcon	Territories occupied by pairs	Confirmed breeding pairs	Territories believed to fledge young	Min. no. young fledged
England, SW	150	103	80	192
Avon	15	15	7	13
Cornwall	10	10	10	28
Devon	71	41	41	102
Dorset	25	13	13	32
Gloucestershire	7	4	2	4
Hampshire	6	4	3	6
Somerset	13	13	3	6
Wiltshire	3	3	1	1
England, SE	41	31	[21]	[47]
Bedfordshire	1	0	0	0
Berkshire	1	0	0	0
Essex	6	4	2	2
Greater London	3	2	1	3
Kent	7	5	n/a	n/a
Oxfordshire	1	1	1	n/a
Surrey	1	1	0	0
Sussex	21	18	17	42
England, E	1	0	0	0
Cambridgeshire	1	0	0	0
England, C	88	76	[44]	[91]
Derbyshire	24	21	14	28
Herefordshire	11	10	n/a	n/a
Leicestershire & Rutland	8	6	5	13

Peregrine Falcon <i>cont.</i>	Territories occupied by pairs	Confirmed breeding pairs	Territories believed to fledge young	Min. no. young fledged
Nottinghamshire	6	6	3	3
Shropshire	19	19	11	31
Staffordshire	6	5	4	n/a
Warwickshire	5	4	2	5
West Midlands	3	0	0	0
Worcestershire	6	5	5	11
England, N	203	150	[102]	[232]
Cheshire & Wirral	7	4	2	5
Cleveland	2	2	4	4
Cumbria	85	70	57	127
Durham	5	4	n/a	n/a
Greater Manchester	6	5	3	11
Lancashire & N Merseyside	50	20	18	46
Northumberland	25	22	18	39
Yorkshire	23	23	n/a	n/a
Wales	150	99	[26]	[129]
Anglesey	2	1	1	1
Breconshire	17	12	8	11
Caernarfonshire	7	7	5	9
Carmarthenshire	13	7	n/a	n/a
Ceredigion	1	1	1	2
Denbigh & Flint	10	10	10	26
Glamorgan	35	15	n/a	25
Gwent	7	3	n/a	8
Meirionnydd	7	6	n/a	10
Montgomeryshire	4	1	1	1
Pembrokeshire	46	36	n/a	36
Radnorshire	1	0	0	0
Scotland, S	161	134	98	237
Dumfries & Galloway	61	55	39	93
Lothian & Borders	62	50	38	99
South Strathclyde	38	29	21	45
Scotland, Mid	130	92	70	132
Central Scotland	25	19	14	26
North-east Scotland	46	29	27	52
Tayside	59	44	29	54
Scotland, N & W	64	46	37	73
Argyll	25	21	16	33
Highland	16	14	10	20
Orkney	11	5	5	9
Outer Hebrides	12	6	6	11
Northern Ireland	2	0	0	0
Co. Antrim	2	0	0	0
TOTALS	990	731	478	1,133

### Water Rail *Rallus aquaticus*

296 sites: a minimum of 1,293 territories. The most recent population estimate for the Water Rail in Great Britain is 450–900 pairs, though with nearly twice as many as this in Ireland (Gibbons *et al.* 1993). There is, however, a general feeling among many county recorders that the figures will be too low, given the secretive habits of the species and the low recording rate, unless there is a specific survey of likely sites using taped calls. Since Water Rails are not adequately monitored by current annual schemes such as BBS and WeBS, the species was added to the RBBP list to help expand our knowledge of its status and distribution. A major benefit of this approach is that a comprehensive list of Water Rail sites can be established, which also has conservation benefits. Even without any co-ordinated survey effort in most

	Sites	Territories		
Water Rail			Durham	6
			Greater Manchester	16
England, SW	30	162	Lancashire & N Merseyside	2
Devon	3	12	Northumberland	4
Dorset	6	7	Yorkshire	18
Hampshire	13	24	Wales	12
Isle of Wight	4	4	Anglesey	3
Somerset	3	113	Breconshire	2
Wiltshire	1	2	Caernarfonshire	2
England, SE	56	131	Ceredigion	2
Bedfordshire	3	5	Glamorgan	2
Buckinghamshire	2	2	Pembrokeshire	1
Essex	15	57	Scotland, S	23
Greater London	1	1	Borders	7
Hertfordshire	5	8	Clyde	11
Kent	18	45	Dumfries & Galloway	5
Oxfordshire	2	3	Scotland, Mid	13
Surrey	4	4	Angus & Dundee	1
Sussex	6	6	Fife	7
England, E	37	396	North-east Scotland	3
Cambridgeshire	12	29	Perth & Kinross	2
Lincolnshire	1	1	Scotland, N & W	25
Norfolk	11	37	Argyll	13
Suffolk	13	329	Highland	6
England, C	20	65	Orkney	3
Derbyshire	2	2	Outer Hebrides	1
Leicestershire & Rutland	3	3	Shetland	2
Nottinghamshire	1	3	Northern Ireland	10
Staffordshire	3	35	Co. Antrim	2
Warwickshire	10	20	Co. Armagh	1
Worcestershire	1	2	Co. Down	5
England, N	70	283	Co. Fermanagh	1
Cheshire & Wirral	15	15	Co. Tyrone	1
Cleveland	3	37	TOTALS	296
Cumbria	6	10		1,293

counties, the total of 1,283 territories in Britain alone is considerably higher than the top figure of 900 given in Gibbons *et al.* (1993).

Returns from the majority of counties were received, but some recorders may have omitted this newly listed species by accident. The results therefore reflect a minimum that we hope to build upon in the coming years. It would be useful if, in future, recorders could indicate whether their returns reflect casual records only or the results of partial or complete surveys of known sites. Without this knowledge, it is premature to highlight particular counties, although Suffolk held over 25% of the Water Rails reported in 2006, despite the suggestion that fewer records than normal were received that year in that county.

### Spotted Crake *Porzana porzana*

22 sites: 0–26 singing males. These are the highest numbers of both sites and calling birds since 2001. The record from Co. Down is the first record of a singing bird in Northern Ireland since 1992, when one was reported from Co. Fermanagh. Birds calling on single dates are included because many are from traditional nesting sites and the elusive nature of the species means that it tends to be overlooked. All records below refer to single calling birds unless specified.

England, SW

Dorset One site: 11th–14th May. Somerset One site.

England, E

Cambridgeshire Two sites: (1) three, 5th May to 14th June; (2) one, possibly two, 23rd–28th May. Norfolk One site: 15th and 17th April.

England, C

Staffordshire One site: 30th April to 13th May.

England, N

Cleveland One site. Yorkshire Three sites: (1) four dates in April; (2) two dates in May; (3) four dates in June.

Wales

Anglesey One site: 18th–24th April. Ceredigion One site: 3rd–4th June.

Scotland, S

Dumfries & Galloway Two sites: (1) several dates in July; (2) single date in July.

Scotland, N & W

Argyll Three sites: (1) two; (2) one, 30th May to at least 7th July; (3) one. Highland One site. Orkney One site: 8th June. Outer Hebrides One site: one from 19th June with a second in early July. Shetland One site: 18th June only.

Northern Ireland

Co. Down One site: 9th–15th May.

## Corn Crake *Crex crex*

1,157 singing males. Fieldwork by the RSPB provides most of the records of this species and the total continues to increase at a moderate rate, especially in Argyll. There were no data from Northern Ireland or the Isle of Man, which between them had five singing birds in 2005. The reintroduced population in Cambridgeshire increased from two to six, although it is possible that two birds moved site and may have been double-counted.

England, E

Cambridgeshire One site: six singing males. Suffolk One site: one singing male.

England, N

Cumbria One site: one singing male.

Scotland, S

Clyde One site: one singing male.

Scotland, Mid

Angus & Dundee One site: one singing male. North-east Scotland One site: one singing male in set-aside from 8th June to 7th July, with a second bird elsewhere heard for one day only.

Scotland, N & W

Argyll Total 665: mainland 1, Coll 171, Colonsay 40, Garvellachs 1, Gigha 0, Iona 39, Islay 59, McCormac Isles 2, Mull 7, Oronsay 22, Staffa 2, Tiree 316, Treshnish Isles 5. Caithness 2. Highland Total 31: mainland 10, Canna 2, Eigg 0, Muck 3, Rum 0, Skye 16. Orkney Total 17: Burray/South Ronaldsay 1, North Ronaldsay 1, Papa Westray 9, Stronsay 3, West Mainland 3. Outer Hebrides Total 430: Barra 66, Benbecula 26, Berneray 4, Harris 14, Lewis 101, Mingulay 0, North Uist 100, South Uist 110, Vatersay 9.

## Common Crane *Grus grus*

Two sites: 6–10 pairs. The number of confirmed breeding pairs thus increases by just one, but 2006 was significant in that a pair away from the long-established Norfolk Broads population successfully reared one young, after failures in the preceding two years. Given the poor success of the Norfolk birds, this may have been the only young Common Crane fledged in the UK in 2006.

England, E

Norfolk One site: five pairs bred and four pairs probably bred. Of the five nesting pairs, only one was seen with young, a brood of three, but they were predated before fledging.

England, elsewhere

One site: one pair bred, fledging one young.

## Black-winged Stilt *Himantopus himantopus*

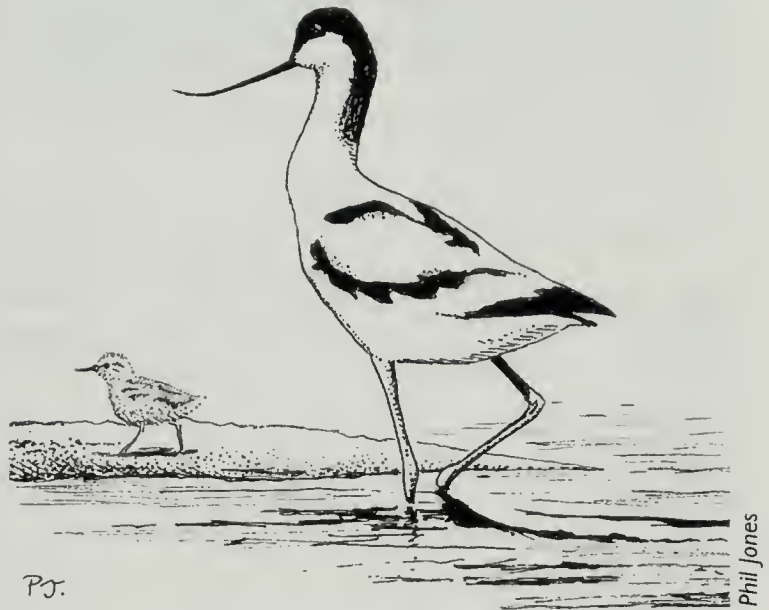
One site: one pair bred. This is the sixth breeding attempt in the UK since the first in Nottinghamshire in 1945, but only that pair and one in Norfolk in 1987 successfully reared young.

England, N

Lancashire & N Merseyside One site: one pair bred but no young fledged. Two males and a female arrived on 5th May and by 19th May had laid four eggs at a site close to a small Avocet *Recurvirostra avosetta* colony. The second male was driven away and left the site on 22nd May. The eggs did not hatch and the birds abandoned the nest on 23rd June and left the site on 28th June.

**Avocet *Recurvirostra avosetta***

66 sites: 1,570 pairs. When Avocets first recolonised England, they nested in coastal wetlands, especially brackish lagoons, but increasingly they have been found nesting in a range of freshwater habitats. The first inland nesting was at Hickling Broad, Norfolk, in 1982 (Brown & Grice 2005) and a number of the sites reported here are away from the sea. A pair that laid two eggs and fledged one young in Durham was also at an inland site, and this constitutes the first breeding for that county. In addition, two sites in Cambridgeshire held three prospecting pairs, which did not stay to breed, and a site in North-east Scotland which has held a single bird for five consecutive years hosted a displaying pair during mid April.

Avocet *Recurvirostra avosetta* with chick

Avocet	No. sites	Confirmed pairs	Min. young fledged
England, SW	1	6	18
Hampshire	1	6	18
England, SE	26	538	163
Essex	13	180	116
Greater London	1	1	2
Kent	10	331	25
Sussex	2	26	20
England, E	29	923	204
Lincolnshire	6	231	80
Norfolk	15	464	108
Suffolk	8	228	16
England, C	1	1	4
Worcestershire	1	1	4
England, N	8	97	115
Cheshire & Wirral	1	1	3
Durham	1	1	1
Lancashire & N Merseyside	3	38	49
Yorkshire	3	57	62
Wales	1	5	1
Gwent	1	5	1
<b>TOTALS</b>	<b>66</b>	<b>1,570</b>	<b>505</b>

**Stone-curlew *Burhinus oedicnemus***

Six counties: 339 confirmed pairs fledged 206 young. Monitoring by RSPB, supported by Natural England, covers most of the population each year, amounting to 288 pairs in 2006. In addition, a large estate in Suffolk held a further 51 pairs, bringing the national total to a minimum of 339 breeding pairs, a continued increase.

Stone-curlew	Confirmed pairs	Young fledged
England, SW	103	73
Hampshire	24	13
Wiltshire	79	60
England, SE	14	9
Berkshire	9	4
Oxfordshire	5	5
England, E	222	124
Norfolk	131	67
Suffolk	91	57
<b>TOTALS</b>	<b>339</b>	<b>206</b>

### Little Ringed Plover *Charadrius dubius*

519–783 pairs. The numbers and distribution of Little Ringed Plovers reported in 2006 was very similar to that in 2005. Information held by the Panel on breeding sites helped to direct the 2007 survey of this species and a summary of the results will be included in the next RBBP report. From the findings of that survey, it would appear that the figures presented here are minima for most areas and under-represent the actual totals.

Little Ringed Plover	Confirmed pairs	Max. total			
			Warwickshire	18	21
			Worcestershire	15	15
			West Midlands	5	5
England, SW	44	57	England, N	167	269
Avon	3	4	Cheshire & Wirral	9	9
Dorset	1	2	Cleveland	6	9
Gloucestershire	9	10	Cumbria	6	6
Hampshire	19	28	Durham	5	8
Somerset	0	1	Greater Manchester	22	36
Wiltshire	12	12	Lancashire & N Merseyside	12	50
England, SE	38	112	Northumberland	5	9
Bedfordshire	0	3	Yorkshire	102	142
Berkshire	13	18	Wales	110	117
Buckinghamshire	1	7	Breconshire	5	6
Essex	3	24	Carmarthenshire	70	70
Greater London	1	2	Ceredigion	1	3
Hertfordshire	7	21	Denbigh & Flint	0	3
Kent	7	21	Glamorgan	16	16
Oxfordshire	0	2	Gwent	4	4
Surrey	1	4	Meirionnydd	5	5
Sussex	5	10	Montgomeryshire	5	5
England, E	47	85	Radnorshire	4	5
Cambridgeshire	14	24	Scotland, S	1	5
Lincolnshire	4	32	Borders	0	1
Norfolk	20	20	Clyde	1	2
Suffolk	9	9	Lothian	0	2
England, C	105	127	Scotland, Mid	7	11
Derbyshire	22	22	Angus & Dundee	2	3
Herefordshire	9	14	Fife	3	5
Leicestershire & Rutland	15	21	North-east Scotland	2	2
Nottinghamshire	5	6	Upper Forth	0	1
Shropshire	5	9	TOTALS	519	783
Staffordshire	11	14			

### Dotterel *Charadrius morinellus*

The Panel aims to cover only those Dotterels nesting outside the main Scottish range, which is the mountainous areas of Highland, Moray & Nairn, North-east Scotland and Perth & Kinross. In 2006, data relating to 20 breeding pairs in Highland and North-east Scotland were received, as well as records from the Southern Uplands of Scotland and the North Pennines. In Borders, a trip of four Dotterels was found on a hilltop where the species formerly bred, although a search of three hilltops in the area later in the season revealed nothing. In Cumbria, a single (unsexed) bird was found on 5th June, possibly hinting at a breeding attempt there.

### Temminck's Stint *Calidris temminckii*

One site: one bird. This is the first report of this species since 2003. The last known successful breeding was in 1993.

Scotland, N & W

Highland One site: one or possibly two birds seen in early June at a former breeding site but no further records.

## Purple Sandpiper *Calidris maritima*

One site: one bird. Purple Sandpipers nest on mountain tops in the central highlands of Scotland, and can be elusive on their breeding grounds. There have never been more than five pairs in any given year. Nevertheless, this is a poor showing and perhaps suggests that we are about to lose this fragile population.

Scotland, N & W

Highland One site: a single bird, possibly a female, reported from likely habitat.

## Ruff *Philomachus pugnax*

Five sites: 1–8 pairs. Most Ruffs showing breeding behaviour are restricted now to the northern and western islands of Scotland, which reported breeding pairs in 2003 and 2004. It is therefore unusual to report breeding from the English mainland. The last confirmed breeding in England was in Sussex, in 1996.

England, N

Lancashire & N Merseyside One site: a female with two small young was seen in mid June. This followed records of up to ten males and two females at a lek, for three weeks between late April and mid May.

Scotland, Mid

North-east Scotland One site: a pair on 11th June followed by one breeding-plumaged bird on 3rd July.

Scotland, N & W

Argyll One site: a male displaying to a female on two dates in mid June, as in 2005. Orkney One site: two breeding-plumaged males chasing each other on 14th June. Outer Hebrides One site: up to two males and one female between 10th May and 25th July.

## Black-tailed Godwit *Limosa limosa*

Ten sites: 68–70 pairs. The numbers of breeding nominate *limosa* increased from 53 in 2005 to 62, with a moderate increase at the sites in Cambridgeshire, Kent and Yorkshire. Numbers of the northern *islandica* population were static, but records came only from the Northern Isles.

*L. l. limosa*

62–63 pairs.

England, SE

Kent Two sites: six pairs bred; two pairs at one site failed and the outcome at the other site is unknown.

England, E

Cambridgeshire One site: 48 pairs fledged only four young. Wet weather and predation reduced productivity.

Norfolk One site: three pairs bred, fledging four young. Suffolk A single male on the coast was seen displaying for the ninth consecutive year, but this time only for its own benefit.

England, N

Lancashire & N Merseyside One site: two pairs bred, one fledging one young and the other failing after the eggs hatched. Yorkshire One site: three pairs bred but all failed because of flooding in late May.

*L. l. islandica*

6–7 pairs.

Scotland, N & W

Orkney One site: four pairs bred. Shetland Three sites: two pairs bred, one of which fledged two young, and a third pair held territory.

## Whimbrel *Numenius phaeopus*

The only record of Whimbrels from outside the species' main range in Orkney and Shetland was of a pair in suitable habitat on North Uist, Outer Hebrides.

## Green Sandpiper *Tringa ochropus*

Two sites: 1–2 pairs. The one regular site, occupied since 1999, continues to hold one or two breeding pairs.

Scotland, N & W

Highland Two sites: one pair bred, fledging two young, and one pair probably bred.



Data received by RBBP reflect only a small proportion of the breeding pairs of Greenshanks *Tringa nebularia* in Scotland and the Panel seeks annual counts from a number of defined areas so that population trends can be established.

### Greenshank *Tringa nebularia*

27 sites: 6–71 pairs. Given the current estimate of the UK breeding population of 780–1,420 pairs (Hancock *et al.* 1997), the figures presented here are a gross underestimate of the numbers of breeding Greenshanks. We have previously appealed for more information on this species, in part to enhance our knowledge of the breeding sites, and would particularly welcome regular counts of breeding pairs from defined areas, which might help us to construct annual population indices.

Scotland, Mid

North-east Scotland One site: one bird in suitable habitat for one date only.

Scotland, N & W

Argyll Three sites: one pair bred, one pair probably bred and one pair possibly bred. Caithness One site: at least one pair possibly bred. Highland 12 sites: three pairs bred, at least 45 pairs probably bred and eight pairs possibly bred. Outer Hebrides Ten sites: two pairs bred and eight pairs probably bred.

### Wood Sandpiper *Tringa glareola*

Six sites: 0–8 pairs. Only limited information was again received for this species, with no details of breeding success. A full survey was conducted in 2007 and this will be summarised in the next report.

Scotland, N & W

Caithness Recorded at one site. Highland Recorded at five sites with three pairs at one of these.

### Red-necked Phalarope *Phalaropus lobatus*

Nine sites: 23–30 breeding males. The increase in numbers shown in the most recent RBBP reports seems to have faltered, with only 12 males at the main site on Fetlar, compared with 20 in 2005 and 19 in both 2003 and 2004.

Scotland, N & W

Outer Hebrides Six sites: two breeding males, two males probably breeding and four males possibly breeding. Shetland Three extensive sites: (1) Fetlar. At least 11 breeding males and one male probably breeding. (2)–(3) Another ten breeding males.

### Mediterranean Gull *Larus melanocephalus*

34 sites: 474–506 pairs, including mixed pairs. A substantial increase occurred in 2006, with up to 500 pairs in England alone. Over half of these are at the important colony in Langstone Harbour, Hampshire, and there are two other large colonies in Kent and Sussex. Together, these three colonies

account for almost 90% of the total breeding population, with the number of pairs increasing from 194 to 423 confirmed breeding pairs in just one year.

Elsewhere, although there are widespread indications of attempted breeding, mainly in Black-headed Gull *Chroicocephalus ridibundus* colonies, many of these attempts are not sustained in subsequent years. After three pairs reported in Wales in 2005, there were none in 2006, just a single adult at a Black-headed Gull colony in Breconshire, in April. Several of the out-of-range records refer to adult or subadult Mediterranean Gulls attempting to pair with Black-headed Gulls. A more unusual record, though, was of an adult Mediterranean Gull apparently paired with a Common Gull *L. canus* in Scotland, where there have previously been few breeding attempts (Forrester *et al.* 2007; plates 110 & 111). Between 1980 and 2004, there were four instances of single adults in Black-headed Gull colonies in Scotland, and two sites where birds held territories in Common Gull colonies. At one, in Orkney, a bird returned for three seasons between 1998 and 2000.



Eric McCabe



Eric McCabe

**110 & 111.** Over 500 pairs of Mediterranean Gulls *Larus melanocephalus* nested in England in 2006, but elsewhere the species is still unusual as a breeding bird. In Scotland, the only record in 2006 was this bird, which formed a mixed pair with a Common Gull *L. canus*, in Perth & Kinross. Away from their main colonies in southern England, Mediterranean Gulls often appear in colonies of Black-headed Gulls *Chroicocephalus ridibundus* and initially form mixed pairs before small colonies of Mediterranean Gulls become established.

England, SW

**Hampshire** Three sites: (1) 264 pairs at Langstone Harbour fledged 204 young; (2) one pair bred at a new site, fledging one young; (3) three pairs probably bred, including one mixed pair (with Black-headed Gull). **Isle of Wight** One site: six pairs fledged two young.

England, SE

**Essex** Five sites: 11 pairs bred. **Kent** Two sites: (1) 84 pairs bred and c. 16 pairs probably bred; (2) two pairs bred. **Sussex** One site: 75 pairs bred, fledging 45 young.

England, E

**Cambridgeshire** Two sites: (1) a pair was seen displaying in a Black-headed Gull colony, but did not establish a territory; (2) a single male held territory in a Black-headed Gull colony. **Lincolnshire** Three sites: three pairs possibly bred. **Norfolk** Two sites: three pairs bred, fledging three young. **Suffolk** Two sites: (1) nine pairs fledged just one young; (2) two pairs bred but failed to rear young.

England, C

**Staffordshire** Two sites: (1) 1–2 subadults displaying in a Black-headed Gull colony; (2) a single bird displaying in a Black-headed Gull colony.

England, N

**Cheshire & Wirral** One site: six pairs bred. **Greater Manchester** One site: one mixed pair (with Black-headed Gull) fledged one young. **Lancashire & N Merseyside** Two sites: six pairs fledged seven young. **Northumberland** One site: a single adult in a Black-headed Gull colony. **Yorkshire** Two sites: three pairs possibly bred.

Scotland, Mid

**Perth & Kinross** One site: one pair probably bred – an adult was paired and seen copulating with a Common Gull in May but it is not known if eggs were laid (plates 110 & 111).

Northern Ireland

**Co. Down** Two sites: four pairs bred. **Co. Tyrone** One site: one pair possibly bred – a single adult in June.

## Yellow-legged Gull *Larus michahellis*

Three sites: 1–4 pairs. There is little indication that this species is gaining a foothold in the UK, but observers should be aware of the possibility when checking colonies of Lesser Black-backed Gulls *L. fuscus*.

England, SW

**Dorset** One site: one pair bred. Two young were hatched but these were soon lost, presumed predated.

England, E

**Cambridgeshire** One site: one adult and a second-summer were displaying between March and May, while a third bird was paired and displaying with a Lesser Black-backed Gull in March and April.

Northern Ireland

**Co. Fermanagh** One site: one bird present in a Lesser Black-backed Gull colony.

## Little Tern *Sternula albifrons*

Minimum of 1,617 pairs at 66 colonies. The table shows the number of occupied Little Tern colonies by county and the minimum number of confirmed breeding pairs at those colonies. Almost all of the colonies in England and Wales, and about half of the Scottish colonies, are monitored as part of the annual JNCC Seabird Monitoring Programme (Mavor *et al.* 2008). The following summary is taken from that source: 'Small to moderate increases occurred in two-thirds of the regions [as defined by the Seabird Monitoring Programme], but declines were noted in southwest Scotland, southeast England and northwest England. Productivity at many sites across the regions was reduced by predation, bad weather and tidal inundation. Additionally, localised food shortages depressed productivity in southwest Scotland and at sites in eastern England.'

Little Tern	No. colonies	Confirmed pairs		
			Sussex	2
			England, E	15
England, SW	3	155	Lincolnshire	3
Dorset	1	33	Norfolk	7
Hampshire	2	122	Suffolk	5
England, SE	11	171	England, N	9
Essex	7	134	Cleveland	2
Kent	2	13	Cumbria	2
				24
				747
				73
				609
				65
				267
				30
				50

Little Tern *cont*

	No. colonies	Confirmed pairs			
Isle of Man	1	17	Moray & Nairn	1	4
Northumberland	2	106	North-east Scotland	1	22
Yorkshire	2	64	Scotland, N & W	22	124
Wales	2	111	Argyll	15	76
Denbigh & Flint	2	111	Caithness	2	10
Scotland, S	1	1	Highland	1	12
Ayrshire	1	1	Orkney	1	3
Scotland, Mid	3	41	Outer Hebrides	3	23
Angus & Dundee	1	15	TOTALS	66	1,617

Roseate Tern *Sterna dougallii*

Nine sites: 108–110 pairs fledged 113 young. The following summary is taken from Mavor *et al.* (2008): 'The colony at Coquet Island, the largest in the UK, continued to increase, reaching the third-highest level since recording began in 1969. On the Farne Islands, Roseate Terns kept a foothold with one nesting pair. One pair more [five] than in 2005 was recorded at the only site in Scotland (1981–2005 mean seven pairs). As in 2005, only one pair nested in southern England. The species returned to Wales, with one nesting pair each at two sites after an absence of two consecutive years. Numbers at the colony in Northern Ireland declined to less than half the long-term mean (1986–2005 mean 11 pairs).'

England, S

Two sites: (1) one pair bred but no young were raised; (2) a pair appeared in a mixed tern colony on 30th May, but not subsequently.

England, N

Northumberland Two sites: (1) Coquet Island: 94 pairs fledged 100 young; (2) Farne Islands: one pair fledged one young.

Wales

Anglesey Three sites: (1) one pair fledged one young; (2) one pair fledged one young; (3) a territorial pair did not nest.

Scotland, Mid

Fife One site: five pairs fledged eight young.

Northern Ireland

Co. Antrim One site: five pairs fledged two young.

Eurasian Scops Owl *Otus scops*

One site: one singing male. Eurasian Scops Owls breed in warm, dry, open areas in southern and eastern Europe and the species is typically a very rare spring vagrant. A bird holding territory such as this one in Oxfordshire is unusual and this is the first time that Eurasian Scops Owl has appeared in the RBBP report. There was, however, a similar instance in 1980, when a male was present in Hampshire from 12th May to at least 14th July (Rogers *et al.* 1981).

England, SE

Oxfordshire One site: one male calling between 12th and 30th June may have been present since 21st April.

European Bee-eater *Merops apiaster*

One site: one pair attempted to breed. There was a long gap between the nesting by three pairs of European Bee-eaters in Sussex in 1955 (Brown & Grice 2005) and the breeding attempts in Durham and Yorkshire in 2002 (Ogilvie *et al.* 2004). A third recent attempt, in Herefordshire in 2005 (Holling *et al.* 2008), and now this record in 2006, suggests that breeding Bee-eaters may become more frequent in the future and birders should be aware of this if the species is seen in summer close to sandy cliffs and quarries.

England, SW

Dorset One site: one pair present at a coastal site from 13th June started to excavate a nest hole in late July. Although the hole was completed in early August, it is not known whether eggs were laid; the birds were driven away from the site after 18th August owing to persistent wind and rain.



Wood Larks *Lullula arborea* were the subject of a national survey in 2006 and an 88% increase in the numbers of territories since the previous survey, nine years earlier, was revealed. There has been a less dramatic extension in range, but a pair in Gwent was the first to nest in Wales since 1981.

### Wood Lark *Lullula arborea*

3,064 territories (95% confidence limits 2,472–3,687) were estimated from the 2006 national survey (Conway *et al.* in press). This estimate accounts for suitable habitat not covered and a correction factor for the number of visits has been applied to the actual numbers detected. A total of 1,771 territories were reported, which are summarised by county in the table below. These include 13 territories in Staffordshire and one in Kent that were not reported through the national survey.

Unsurprisingly, the numbers reported in 2006 are far higher than those in 2005, reflecting the more comprehensive coverage of known breeding sites and high level of coverage of potentially suitable habitat within 10 km of known sites, to detect local range expansion.

A revised estimate of 1,633 territories (95% confidence limits 1,621–1,644) for the 1997 national survey (Wotton & Gillings 2000) has been calculated. There has therefore been a breeding population increase of 88% in the past nine years.

Since 1997, the known breeding range, in terms of occupied 10-km squares, has increased by 48%. The majority of the range expansion has occurred immediately around existing population centres, particularly in East Anglia, Hampshire, Nottinghamshire, Sussex and Yorkshire. However, a number of new sites have been occupied in a modest wave of westward and northward expansion into

Wood Lark	Pairs	Cambridgeshire	1
England, SW	593	Lincolnshire	49
Devon	57	Norfolk	249
Dorset	153	Suffolk	370
Hampshire	379	England, C	78
Wiltshire	4	Nottinghamshire	37
England, SE	389	Staffordshire	40
Berkshire	66	Worcestershire	1
Essex	1	England, N	41
Kent	2	Yorkshire	41
Surrey	213	Wales	1
Sussex	107	Gwent	1
England, E	669	TOTAL	1,771

Cambridgeshire, Gwent, Staffordshire, Worcestershire and Yorkshire, many constituting the first local breeding records in over 25 years. Indeed, the Gwent record represents the first breeding in Wales since 1981. The predominantly farmland population in Devon has shown some increase in numbers but little overall range expansion. However, there were no occupied sites in Bedfordshire and Buckinghamshire and only low numbers still persisting in Kent and Wiltshire.

The traditional habitats of heathland and young forestry plantations still hold the majority of birds, but the biggest change since 1997 has been the increased use of farmland across Britain.

### Black Redstart *Phoenicurus ochruros*

24 sites: 14–29 pairs. The long-term decline in numbers of breeding Black Redstarts during the last 20 years was illustrated in Holling *et al.* (2007), but coverage in 2005 was better, revealing up to 60 pairs from 54 sites, all in southern Britain (Holling *et al.* 2008). Regrettably, coverage in 2006 was less good, with only minimal data received from Greater London, which in 2005 accounted for 12 pairs at 12 sites. Former sites in Lancashire & North Merseyside were searched in 2006 but no birds were found.

England, SE

Berkshire One site: one pair probably bred as a male held territory from May to July. Buckinghamshire One site: one pair possibly bred – a male was at the 2005 site in early spring. Greater London One site: one male present. Hertfordshire Although records were received of three separate birds between May and July, one of which may have been a juvenile, only possible breeding is indicated. Kent Three sites: three pairs bred, plus one other singing male. This represents a significant reduction in numbers from just a few years ago. Sussex Four sites: five pairs bred and one pair probably bred.

England, E

Cambridgeshire One site: one singing male in April and May. Norfolk One site: one pair bred and two pairs probably bred. Suffolk Four sites: two pairs bred, one pair probably bred and one long-staying male.

England, C

West Midlands Five sites in two cities: one pair bred (juvenile seen in July) and four pairs possibly bred.

England, N

Greater Manchester One site: one pair bred.

Wales

Montgomeryshire One site: one pair bred. A recently fledged juvenile was thought to have come from a nearby quarry.

### Fieldfare *Turdus pilaris*

One site: one pair bred. The fortunes of the Fieldfare as a nesting bird in the UK seem to vary from year to year (fig. 4), with no apparent pattern and no site fidelity. The maximum number recorded in any one year has been 13, during a period of relative abundance in the early 1990s. Since the blank year of 1999, there have been four years with only one or two potentially breeding pairs, and two years (2000

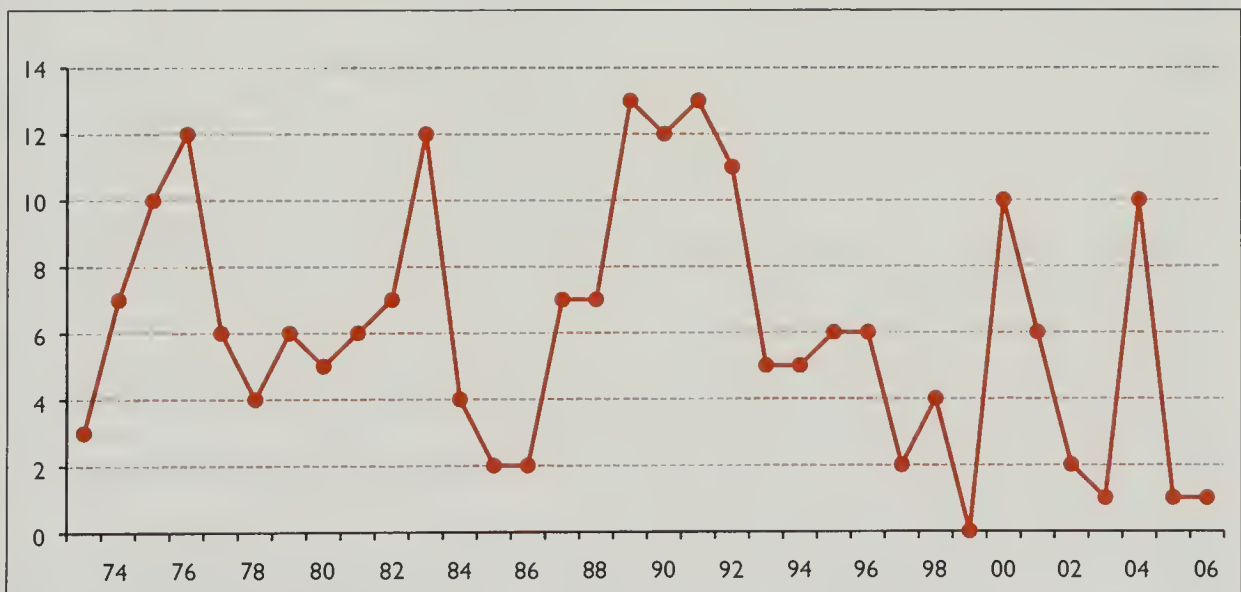


Fig. 4. There is no consistency in the number of potentially breeding Fieldfares *Turdus pilaris* recorded in the UK.

and 2004) with as many as ten. In that seven-year period, breeding has been confirmed in Borders (which has proved to be one of the most regularly used areas by this species), Cumbria, Fife, Highland, Kent, North-east Scotland and Orkney.

Scotland, S

Borders One site: an adult was seen carrying food on 12th June, but despite searches no Fieldfares were found in the area in subsequent weeks.

### Redwing *Turdus iliacus*

Ten sites: 4–12 pairs. Numbers of breeding Redwings apparently remain low, following the decline since the early 1980s (fig. 8 in Holling *et al.* 2008), but annual coverage is variable and the total numbers may be underestimated because they are based only on casual submissions and not from concerted searches.

Scotland, N & W

Highland Nine sites: four pairs bred, five pairs probably bred and two singing males. Outer Hebrides One site: one pair probably bred. A nest was built but deserted before laying.

### Cetti's Warbler *Cettia cetti*

1,422 singing males or territories. This total is another record high, yet even this is reckoned to be an underestimate. Cetti's Warblers are now so numerous in some southern counties that the Panel requests county totals only for those areas with more than ten sites or singing males. They are, however, still a novelty in counties peripheral to the main range and we would like to monitor all sites within these areas, to track the species' range expansion. Notable records in 2006 included the first records in this report from Staffordshire (two singing males at one site) and the first confirmed breeding in Yorkshire, where two pairs, at two sites, each fledged three young.

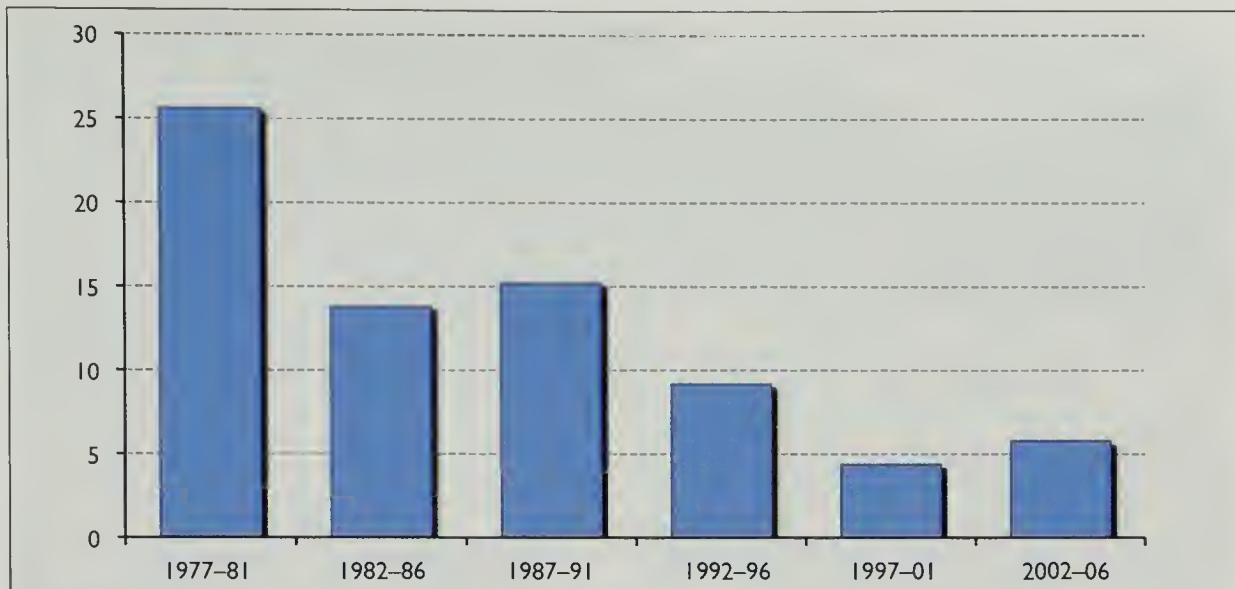
Cetti's Warbler	Total	England, E	323
		Cambridgeshire	6
England, SW	644	Norfolk	176
Avon	32	Suffolk	141
Cornwall	11	England, C	20
Devon	66	Staffordshire	2
Dorset	68	Warwickshire	13
Gloucestershire	14	Worcestershire	5
Hampshire	132	England, N	3
Isle of Wight	24	Yorkshire	3
Somerset	270	Wales	134
Wiltshire	27	Anglesey	6
England, SE	298	Breconshire	1
Berkshire	36	Caernarfonshire	8
Buckinghamshire	2	Carmarthenshire	20
Essex	68	Ceredigion	2
Hertfordshire	6	Glamorgan	52
Kent	124	Gwent	41
Oxfordshire	12	Pembrokeshire	4
Surrey	2	TOTAL	1,422
Sussex	48		

### Savi's Warbler *Locustella luscinioides*

Three sites: at least four singing males. Numbers have remained low, fewer than ten singing males per year, since the early 1990s, as shown in fig. 5. Since they nest in reedbeds, it seems unlikely that Savi's Warblers are limited by a lack of suitable habitat in the UK. It may be that conditions elsewhere – in their breeding areas in continental European strongholds, on migration or in the sub-Saharan African wintering quarters – are limiting their population here.

England, SW

Somerset Two sites: (1) one singing male on 9th–14th April, but not heard subsequently; (2) one singing male on 25th–28th July, included here as this may have been a returning bird from 2005.



**Fig. 5.** Five-year averages of the total number of singing male Savi's Warblers *Locustella luscinioides* reported to the RBBP, 1977–2006. The marked decline from the late 1970s is clear, along with another fall in numbers since the early 1990s.

England, SE

Kent One site: two singing males. One singing from 24th April was joined by a second male on 27th April and both were then seen and heard regularly into May, with occasional records in June and August. A female was also seen on 2nd–4th May. Elsewhere, a male singing on 24th April only may have moved to the main site, and there was an additional record of a singing male at a third site on 3rd July. Note that none of these records has been submitted to BBRC for verification.

In addition to these records, a bird trapped in Wiltshire on 28th May is thought to have been on passage, and a bird was recorded singing on 3rd–4th June in Norfolk.

### Marsh Warbler *Acrocephalus palustris*

Four sites: 1–5 pairs. The maximum total of five pairs is even lower than the total of nine in 2005, itself the lowest for 20 years. After the successful breeding in Shetland in 2005, only passage birds were recorded there, with two singing males on Shetland for just three days each. Another bird singing in northeast England for five days in mid July was also perhaps a late passage bird.

England, SE

Two sites: one pair bred and two pairs probably bred. (1) Four adults and two juveniles were trapped and it is believed that one pair bred and a second pair probably bred; (2) singing male on three dates in May and July with presence of a second bird strongly suspected. In addition, singing males were recorded on single dates at two further sites.

England, E

Suffolk One site: one singing male present from 8th to 15th June.

Scotland, N & W

Orkney One site: one singing male present for a week in mid June.

### Great Reed Warbler *Acrocephalus arundinaceus*

One site: one singing male. In addition, four others were reported in spring, but for one day only, in Kent, Lincolnshire, Suffolk and Yorkshire.

Scotland, Mid

Angus & Dundee One site: one singing male from 11th June to 13th July.

### Dartford Warbler *Sylvia undata*

3,214 territories estimated in a national survey. The fourth national Dartford Warbler survey was undertaken in 2006, organised by BTO, Forestry Commission (England), Natural England and RSPB. The aim was to achieve full coverage of all the 1-km squares ('core squares') occupied during the previous national survey (in 1994) and subsequently, and sample coverage of a random selection of

Ben Green



The fourth national survey of Dartford Warblers *Sylvia undata* revealed the highest total number of territories yet recorded, at over 3,200. Since the previous survey in 1994, there has been a significant range expansion with breeding now recorded in East Anglia, central England and south Wales.

squares from 5-km and 10-km buffers around core squares, stratified by the presence of suitable habitat. In all, 2,575 1-km squares were surveyed in England and Wales. There was further coverage in the Channel Islands, on Alderney, Guernsey, Herm and Jersey.

During the survey, 2,559 territories were located in the UK – 2,518 in England and 41 in Wales – an increase since the 1994 survey, when 1,682 territories were found (all in England). Dartford Warblers were found in 126 10-km squares, a range increase of 117% since 1994. A further 85 territories were recorded in the Channel Islands, with 53 found on Jersey.

The final UK estimate was 3,214 territories (95% confidence limits 2,878–3,591) in the UK in 2006, up by 70% since the previous survey in 1994. This comprises 3,142 territories (2,827–3,491) in England and 72 territories (41–116) in Wales.

The three main counties in 2006 were Dorset (18% increase in numbers since 1994), Hampshire (2% decrease since 1994) and Surrey (169% increase since 1994). There have been some major changes in distribution since the 1994 survey, with 128 territories found on the Suffolk coast heathlands and breeding birds on Cannock Chase, Staffordshire, and Sutton Park, West Midlands. Of interest is the spread into the uplands of southwest England, with 118 territories found on Exmoor and 52 on Dartmoor. The highest recorded territory in 2006 was at around 460 m, on Exmoor.

The county totals in the table show the actual numbers of territories counted in the national survey.

Dartford Warbler	Total	Sussex	106
England, SW	1,783	England, E	131
Cornwall	29	Norfolk	1
Devon	233	Suffolk	130
Dorset	754	England, C	5
Hampshire	631	Staffordshire	3
Isle of Wight	5	West Midlands	2
Somerset	131	Wales	41
England, SE	599	Carmarthenshire	10
Berkshire	21	Glamorgan	12
Buckinghamshire	1	Gwent	4
Surrey	471	Pembrokeshire	15
		TOTAL	2,559

## Iberian Chiffchaff *Phylloscopus ibericus*

Two sites: two singing males. Migrant passerines which sing on passage are included in this report only when they remain, in suitable breeding habitat, for at least a week. This species was first noted in the RBBP report in 1999, when there were two singing males, in Devon and in Dorset (Ogilvie *et al.* 2001). Since then, there have been three other records, all of singing males, which qualify for inclusion, but which have not previously appeared in these reports: Cornwall (13th–31st May 2000), Oxfordshire (27th April to 15th May 2001) and Devon (19th May to 17th June 2003). Records of Iberian Chiffchaff are verified by BBRC, and Collinson & Melling (2008) reviewed all British records, and commented on identification criteria.

England, SW

Devon One site: one singing male from 1st May to 6th June.

Scotland, S

Lothian One site: one singing male on 6th–13th May, having being located originally 2 km away on 5th May.

## Firecrest *Regulus ignicapilla*

At least 64 sites, including several extensive sites: 5–341 pairs. Although the maximum total of 341 pairs is the highest yet in this report, it is still thought to be an underestimate, as the data submitted depend heavily on the search effort for this species. In 2006, targeted effort in some counties, such as Hampshire and Sussex, produced high totals, yet only one bird was reported from Kent, where 19 males were found in a survey in 2001. Such variation might explain some of the fluctuations in the number of pairs in RBBP reports since 1973 (fig. 6) but there is no question that the numbers have been increasing dramatically in the last five years.

Firecrests are extremely vocal where they occur at higher densities, but less so at low densities, so some birds may be being overlooked. Surveys of areas away from known hotspots may therefore be productive in identifying new sites. In this report, records of territories (probable breeding) are based on occupation of a site for over a week. Singing males recorded for less than a week are treated as possible breeding records.

England, SW

Gloucestershire Two sites: two territories. Hampshire One extensive site (New Forest) held 78 territories, a second site held 20 territories, and there were ten other territories elsewhere in the county. Somerset Four sites: two pairs bred and six singing males. Wiltshire Four sites: 17 territories and two singing males.

England, SE

Berkshire Ten sites: two pairs bred, 56 other territories and a further five singing males. Buckinghamshire Two sites: five singing males. Essex Two sites: two singing males. Hertfordshire Two sites: one territory and one singing male. Kent Reported from only one site, with one bird on one date. However, as in the previous two years, there was no survey and this is thought to be a gross under-representation. Oxfordshire One site: one territory. Surrey One site: three singing males. Sussex At least three sites: 64 territories identified with 49 at one main site.

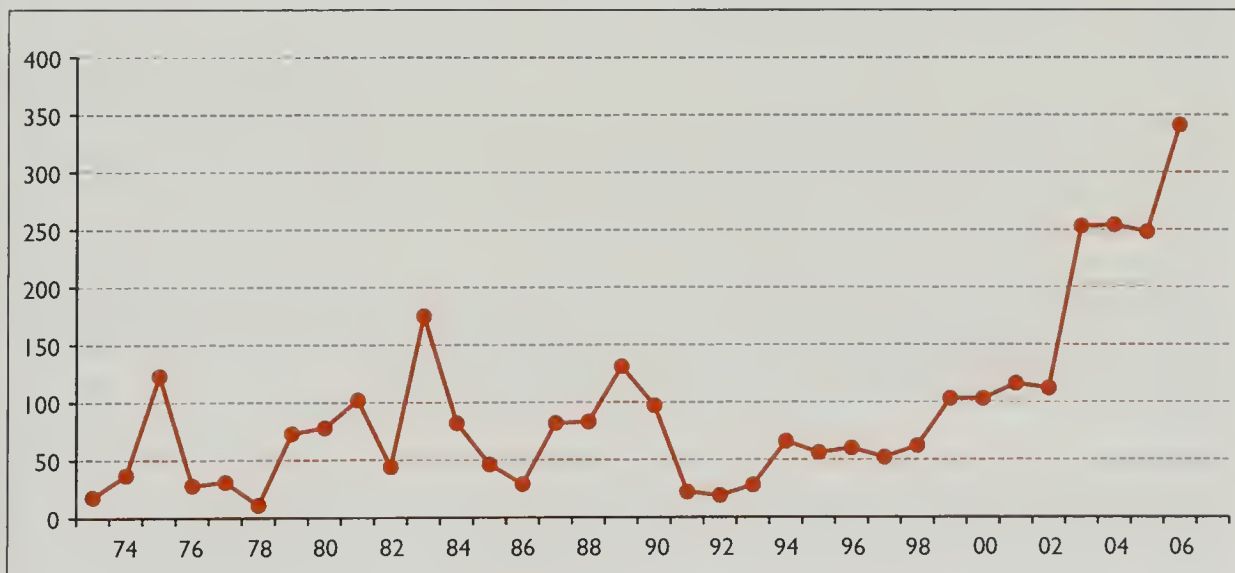


Fig. 6. The total number of breeding pairs of Firecrests *Regulus ignicapilla* reported to the RBBP, 1973–2006.

## England, E

Cambridgeshire One site: one singing male. Norfolk Two extensive sites and two other sites: 45 territories in total.

Suffolk Seven sites: two territories and seven singing males.

## England, C

Derbyshire Two sites: (1) a singing male in June and July, one young seen close to the male on one date may have been a hybrid (with Goldcrest *R. regulus*); (2) one female on one date in July. Staffordshire One site: a pair which had overwintered stayed and bred, but failed at the egg stage. This is the first confirmed breeding for the county.

## England, N

Yorkshire Two sites: one territory and one singing male.

## Wales

Montgomeryshire Three sites: three territories.

**Bearded Tit *Panurus biarmicus***

49 sites: a minimum of 614 pairs. The national survey of Bearded Tits in 2002 produced an estimate of around 650 pairs (Eaton *et al.* 2004), and the total reported here is now close to that figure, especially given that some sites provided minimum counts. The breeding pair in Bedfordshire represents the first breeding for that county, and a pair bred in Gwent for the second year running. Bearded Tits were also reported from sites in Cheshire & Wirral and North-east Scotland, indicating possible breeding in these counties, and from two additional sites in Hampshire in the breeding season.

Bearded Tit	No. sites	Confirmed/ probable breeding pairs			
			England, E	21	296
			Cambridgeshire	1	1
			Lincolnshire	1	5
			Norfolk	11	91
			Suffolk	8	199
England, SW	9	40	England, N	3	138
Dorset	2	11	Lancashire & N Merseyside	1	35
Hampshire	5	17	Yorkshire	2	103
Somerset	2	12	Wales	1	1
England, SE	13	96	Gwent	1	1
Bedfordshire	1	1	Scotland, Mid	2	43
Essex	6	17	Moray & Nairn	1	1
Kent	5	72	Perth & Kinross	1	42
Sussex	1	6	TOTALS	49	614

**Golden Oriole *Oriolus oriolus***

Six sites: 3–6 pairs. After rising to a population of over 40 pairs in the late 1980s, the number of Golden Orioles has continued to decline and the 2006 tally is the lowest since 1974. Jake Allsop of the Golden Oriole Group (GOG) has commented: 'Given that the breeding range of the Golden Oriole in England has now contracted to Lakenheath (Suffolk), with just 2–3 records each year from nearby sites, the Golden Oriole Group has discontinued its survey work. The Lakenheath area continues to be surveyed by Peter Dolton of GOG. 2006 was exceptional in that a research student from the University of East Anglia visited all 60 or so sites that GOG has ever surveyed in Cambridgeshire, Norfolk and Suffolk. This contraction of the breeding range of Golden Orioles is not confined to Britain; the same is happening across northern Europe, including Scandinavia, the Low Countries and northern Germany. As the species remains at normal breeding levels elsewhere in its range (with the possible exception of Turkey), we assume that the decline in the northern part of its range is connected with climate change, in particular increasingly inclement weather at critical points in the breeding cycle, and possibly some changes in the timing and availability of its main invertebrate prey items.'

## England, E

Cambridgeshire 12 sites surveyed but no orioles found. Norfolk 32 sites surveyed but orioles recorded at only one, close to Lakenheath. Breeding not suspected. Suffolk 12 sites surveyed and orioles recorded at five of these: three pairs bred with one pair fledging at least two young; two pairs possibly bred.

## Red-backed Shrike *Lanius collurio*

Three sites: two pairs and a single male. In 2006, Red-backed Shrikes bred in Britain for the third consecutive year, but the numbers present are very small and we have to go back to 1986 to find more than two pairs breeding in a year.

England, SE

Hertfordshire One site: an adult male found on 22nd July remained into August. Red-backed Shrikes were last suspected of breeding in Hertfordshire in 1974.

Wales

One site: one pair fledged four young. This site was the same one occupied in 2005. The male arrived on 8th June and the female on 23rd June. The young were ringed in the nest on 25th July and last seen after fledging on 8th August.

Scotland, N & W

One site: one pair was present throughout the summer but breeding was not proven.

## Red-billed Chough *Pyrrhocorax pyrrhacorax*

Minimum of 296 pairs. The figures here include all the monitored pairs of Red-billed Choughs in the UK, a similar number to 2005, but no data were available from the Isle of Man. The total of 296 pairs is less than 70% of the lower population estimate for the UK (429–497 pairs; Baker *et al.* 2006). In Wales, the first successful breeding in East Glamorgan for approximately 150 years was encouraging, and a pair of Choughs returned to Northern Ireland after an absence in 2005.

In England, two pairs nested in Cornwall. Leigh Lock, RSPB Species Recovery Officer, has commented: 'Red-billed Chough returned naturally to Cornwall in 2001 (the species had been absent since 1973 and had not bred since 1952), with one pair successfully fledging young in 2002, and every year since. A second pair was successful for the first time in 2006, a significant step towards a natural recolonisation of the county and towards linking the fragmented populations of northwest Europe. Habitat restoration is a priority in the county to ensure that there is sufficient habitat to support an increasing population of Red-billed Choughs.'

Red-billed Chough	Pairs	Young reared
England	2	8
Cornwall	2	8
Isle of Man	n/a	n/a
Wales	251	411
Anglesey	40	59
Caernarfonshire	90	151
Ceredigion	27	52
Denbigh & Flint	5	3
Glamorgan	3	10
Meirionnydd	18	25
Pembrokeshire	68	111
Scotland	42	60
Argyll: Colonsay & Oronsay	26	33
Argyll: Islay	15	26
Dumfries & Galloway	1	1
Northern Ireland	1	0
Co. Antrim	1	0
<b>TOTALS</b>	<b>296</b>	<b>479</b>

Note: numbers for Colonsay & Oronsay exclude three prospecting (immature) pairs, and the 33 young reared there were fledged from 17 monitored nests, 13 of which were successful.

## European Serin *Serinus serinus*

Three sites: 1–3 pairs. Although climate change predictions would suggest that European Serins should breed more often in the UK, the species remains only an occasional breeder, and these are the first records since 2003. The most recent confirmed breeding records were in 2003 (Norfolk) and 1996 (Kent).

England, SW

Devon One site: one pair bred. A pair was present from 26th April, and there were two females on 28th and 29th April. One female was seen on a nest on 10th May but the second female left the area. The nest was destroyed in severe storms in mid to late May and neither female was seen again, although the male was still singing on 25th May.

Dorset One site: one singing male at a coastal site lingered but did not attract a mate.

England, SE

Kent One site: one female. Although only seen for one date in mid June, this bird was present in an area where breeding has occurred in the past. In addition, a male was also seen on one date in early June but the habitat was not thought to be suitable and breeding was not suspected.

## Common Redpoll *Carduelis flammea*

Six sites: 2–9 pairs. This species seems to be a regular breeder in the north and west of Scotland and it is likely that it is under-recorded.

Scotland, N & W

**Highland** One site: one pair probably bred. A pair was present and the male was seen song-fighting. Orkney One site: one singing male on two dates in April and May at a former breeding site (from the 1980s). Outer Hebrides Three sites: one pair bred and five pairs probably bred. At the breeding site, a female was seen with a juvenile in late July. Shetland One site: one pair bred. A family, including two juveniles being fed, was seen in late August.

## Scottish Crossbill *Loxia scotica*

Four sites: 2–6 pairs. The records received by the Panel represent just a fraction of the total breeding population and are in no way indicative of the status of this species. More informative figures will hopefully emerge from the 2008 survey of crossbills in Scottish forests.

Although Scottish Crossbill has been regarded as a good species for over 20 years, work by RSPB scientists (Summers *et al.* 2007) confirmed recently that Scottish and Parrot Crossbills *L. pytyopsittacus* are reproductively isolated from each other and from Common Crossbills *L. curvirostra*. This is due in part to the discovery of calls distinct to each species, but also because, despite frequent irruptions of migratory Common Crossbills into the range of sedentary Scottish and Parrot Crossbills, the diagnostic features of each species (calls and bill dimensions) have not been lost through hybridisation and dilution of the gene pool.

Scotland, Mid

North-east Scotland Three sites: two pairs bred, one pair probably bred and two pairs possibly bred.

Scotland, N & W

**Highland** One site: birds present but no further information available.

## Parrot Crossbill *Loxia pytyopsittacus*

Three sites: 2–4 pairs. As with the preceding species, this total represents an unknown fraction of the total numbers of pairs breeding.

Scotland, Mid

North-east Scotland Two sites: (1) two pairs bred; (2) six birds present in mid March but no further information.

Scotland, N & W

**Highland** One site: birds present but no further information available.

## Common Rosefinch *Carpodacus erythrinus*

Two sites: 0–2 pairs. This is a typical showing for this species, which last bred in the UK in 2001.

Scotland, Mid

North-east Scotland One site: one male singing from 22nd June to 16th July.

Scotland, N & W

Caithness One site: one pair holding territory, with singing male present during mid to late June at least and a female seen on 21st June.

## Hawfinch *Coccothraustes coccothraustes*

28 sites: 10–67 pairs. This is the first year that the Panel has collected records for the Hawfinch and it is perhaps surprising how scarce this species actually is in the breeding season. The latest population estimate is 3,000–6,500 pairs (Gibbons *et al.* 1993); the records collected by the Panel for 2006 represent just a tiny fraction of this figure. This is an elusive bird, and greatly under-recorded, but it does appear to have gone into a sharp decline since the early 1990s, the period on which the population estimate was based. Langston *et al.* (2002), analysing data from county bird reports from across England and Wales, found substantial declines at traditional sites, including those in Derbyshire, Kent, Norfolk, Oxfordshire and Staffordshire. A recent report at [http://www.forestry.gov.uk/pdf/rwbs-full-report.pdf/\\$FILE/rwbs-full-report.pdf](http://www.forestry.gov.uk/pdf/rwbs-full-report.pdf/$FILE/rwbs-full-report.pdf) shows declines of 60% between the original BTO surveys in 1965–72 and the Repeat Woodland Bird Survey in 2003–04, and declines of 73% between RSPB work in the 1980s and the Repeat Woodland Bird Survey in 2003–04.



Dan Powell

The Hawfinch *Coccothraustes coccothraustes* is a new species on the RBBP list and the records received point to a restricted and localised distribution in England and Wales, with the total number of records received falling far short of the latest population estimates based on the last Breeding Birds Atlas (Gibbons *et al.* 1993).

In this analysis, we have included only records of birds seen in breeding habitat after the winter flocks disperse, in early April. It is notable how few Hawfinches are then located by birdwatchers. The records are scattered across central and southern England with an important outpost in southern Cumbria and northern Lancashire. The main site in England seems to be the New Forest (Hampshire), with 22 pairs. Records were received from four Welsh counties, where Gwent, with eight pairs reported, is a stronghold. No breeding-season records were received from Scotland, although the presence of birds in the winter in Borders and in Perth & Kinross suggests that there may still be a breeding population in that country. Hawfinches are absent from Northern Ireland (Gibbons *et al.* 1993).

We encourage all birdwatchers to record the numbers and location of any Hawfinches in the breeding season and to ensure that details are submitted to the appropriate county recorder. It is hoped that fieldwork for the current national atlas project will also assist in the compilation of a contemporary gazetteer of Hawfinch sites.

#### England, SW

Gloucestershire One site: two pairs probably bred. Hampshire Four sites, including one extensive site, the New Forest: three pairs bred, 13 pairs probably bred and nine pairs possibly bred.

#### England, SE

Kent Four sites: one pair probably bred and 11 pairs possibly bred. Surrey One site: one pair possibly bred. Sussex One site: three pairs possibly bred.

#### England, E

Cambridgeshire One site: one pair probably bred. Norfolk One site: one pair probably bred. Suffolk One site: one pair possibly bred.

#### England, C

Derbyshire Three sites: birds present at one site throughout the breeding season, but seen on single dates only, in June and July, at other two sites.

#### England, N

Cleveland One site: one singing male in March at a traditional site. Cumbria Three sites: (1) one pair bred and one pair probably bred. Up to two males and three females present throughout the summer, with two juveniles seen in late June and early July; (2) one pair bred. Two adults and three juveniles seen in July and August; (3) single bird seen in late June. Lancashire & N Merseyside One site: one pair possibly bred based on two birds seen irregularly at a traditional site. Yorkshire One site: one pair possibly bred at a former breeding site.

#### Wales

Caernarfonshire One site: one pair possibly bred. Glamorgan One site: one pair possibly bred, based on a sighting in mid June. Gwent Two sites: five pairs bred and three pairs probably bred. All nests found failed owing to predation by Eurasian Jay *Garrulus glandarius*, Grey Squirrel *Sciurus carolinensis* and Common Dormouse *Muscardinus avellanarius*. Meirionnydd One site: one pair possibly bred.

### Snow Bunting *Plectrophenax nivalis*

13 sites: 4–15 pairs. Snow Buntings inhabit high mountain areas in the breeding season and effective monitoring depends on access to the sites and careful counting of birds found. The records here, collected casually, represent just a small fraction of the probable population. Given the predicted effects of climatic change on the high tops, monitoring of the remaining Scottish population is of high priority, but could be achieved satisfactorily only with a dedicated survey.

Scotland, Mid

North-east Scotland Eight sites: two pairs bred and six pairs possibly bred.

Scotland, N & W

Highland Five sites: two pairs bred and five pairs possibly bred.

### Cirl Bunting *Emberiza cirlus*

No data were submitted for this species in 2006. It continued to be limited to Devon, where 697 territories were recorded in the last survey in 2003 (Wotton *et al.* 2004). The RSPB/Paignton Zoo/Natural England/National Trust scheme to reintroduce Cirl Buntings to Cornwall started in 2006. More information on that project will be included in the Panel's next report.

## Appendix 1. Other species considered by the Panel also recorded in 2006.

The following species were recorded during the breeding season in 2006 but showed no signs of breeding.

**Ring-necked Duck** *Aythya collaris* An unpaired male again remained at one site in Avon.

**Long-tailed Duck** *Clangula hyemalis* In Northumberland, there was a highly unusual record of a pair present for three days in mid June. Records of pairs lingering in May in Scottish coastal waters are not unusual, but Long-tailed Ducks are rare from June to August (Forrester *et al.* 2007).

**Black-browed Albatross** *Thalassarche melanophris* One on Sula Sgeir, Outer Hebrides, recorded from 23rd May to 1st July, was presumably the returning bird from 2005.

The following species was recorded during the breeding season in 2006 but only limited information was available:

**Leach's Storm-petrel** *Oceanodroma leucorhoa* Reported from North Rona and St Kilda in the Outer Hebrides. A full survey of Bearasaigh revealed no birds, and none were found in a brief visit to Haskeir (both Outer Hebrides).

## Appendix 2. Species considered by the Panel for which no records were received in 2006.

**Greater Scaup** *Aythya marila* In 2005 a pair was recorded in Argyll, and a late record (of a long-staying male, published only on the Panel's website) was received from Caithness. No records were supplied to the Argyll recorder in 2006, and no records of Greater Scaups in 2006 have yet been received from Caithness.

**Wryneck** *Jynx torquilla* Disappointingly, given that there were records from ten sites in 2005, no records of Wrynecks were received in 2006.

**Brambling** *Fringilla montifringilla* No records received. A project began in 2007 to visit all sites where Bramblings have been recorded in the breeding season in Highland and Caithness.

## Acknowledgments

This report would not be possible without the willing co-operation of county and regional recorders throughout the UK, as well as many specialist study groups, conservation organisations and numerous individuals. Many recorders have patiently dealt with additional requests or queries and are to be especially thanked for this and the extra work many of them performed in reviewing an early draft of this report. Without exception, all correspondence with county recorders and other data providers has been in good humour with positive, helpful outcomes, for which the Panel is most grateful.

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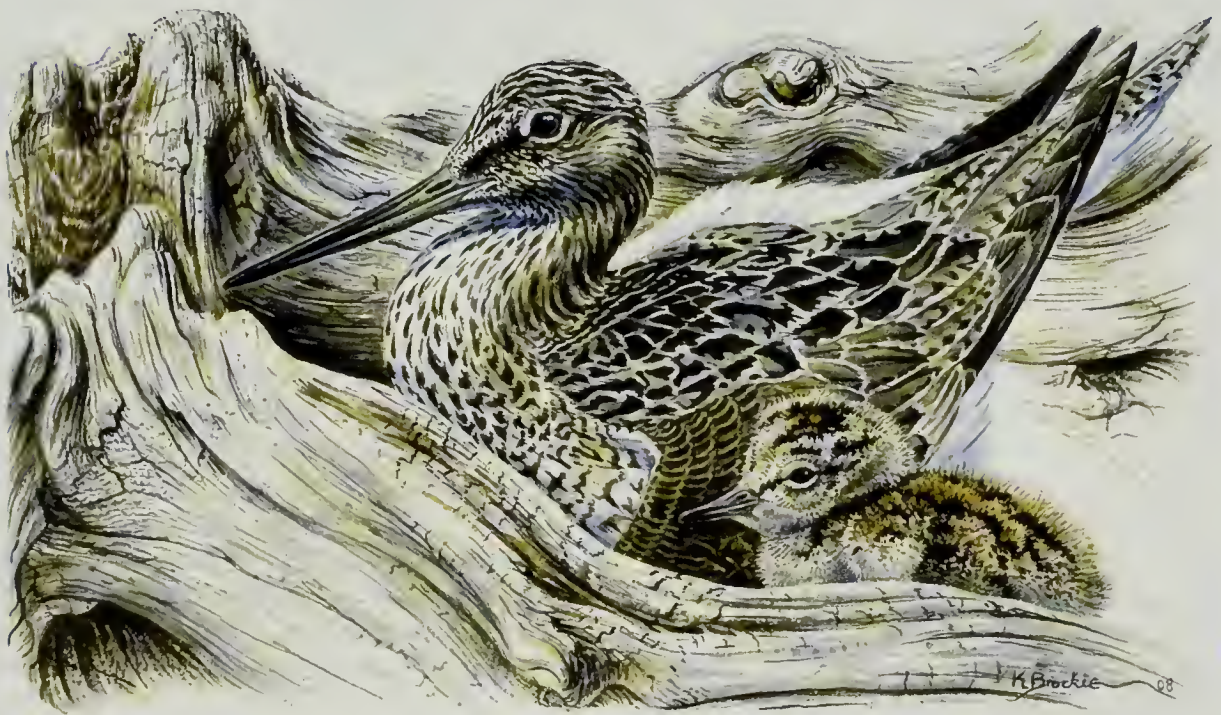
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# A 25-year study of breeding Greenshanks

## Territory occupancy, breeding success and the effects of new woodland

Nick Christian and Mark H. Hancock



Keith Brockie

**ABSTRACT** Breeding Greenshanks *Tringa nebularia* have their British stronghold in Sutherland and Caithness, which hold 44% of the national population. In a 1,200-ha study area in north Sutherland, a 25-year study found a high density of breeding Greenshanks, with up to ten occupied territories each year. Based on 189 territory-years, territory occupancy averaged 52%, with strong variation between years (20–91%) and territories (24–78%). For 51 nests, the mean hatch rate was 59%. Predation accounted for 62% of known nest failures. Territory occupancy and breeding success were not linked to distance from a new, predominantly native, woodland scheme. However, the woodland is still young, and the work should be repeated at a later date.

### Introduction

The lochs, pools and blanket bogs of Sutherland and Caithness – the ‘Flow Country’ – are renowned for their breeding birds (Stroud *et al.* 1987). One of the most characteristic of these is the Greenshank *Tringa nebularia*, whose far-carrying calls can be heard on almost any spring

visit to the area. Many ornithologists first became familiar with the Sutherland haunts of the Greenshank through the evocative books of Desmond and Maimie Nethersole-Thompson (1979, 1986), who based their pioneering long-term Greenshank study on the area.

The ornithological importance of Sutherland

and Caithness led to the designation of 146,000 ha of the two counties as a Special Protection Area (SPA) under the European Birds Directive, in 1999. This is one of the largest such areas, comprising 10% of SPA-designated land in the UK (Stroud *et al.* 2001). Although the Greenshank is included among the key bird species of the SPA, substantial numbers also breed outside it. The SPA was estimated to hold 256 pairs of Greenshanks in 1994–95 (Stroud *et al.* 2001), compared with 480 pairs (44% of the UK population) in the whole of Sutherland and Caithness in 1995 (Hancock *et al.* 1997). Thus nearly half the breeding Greenshanks of these two counties do not benefit from protection under SPA legislation.

In 1983, one of us (NC) first began observing breeding Greenshanks during visits to a study area of approximately 1,200 ha near the north coast of Sutherland (plates 112 & 114). With the support of members of the local community, these annual visits were maintained and, gradually, territory boundaries and nesting areas were discovered. Ultimately, 12 Greenshank territories were located. In peak years, when as many as 10 of the 12 were occupied, this represented a density six times higher than the mean for Sutherland and Caithness (Hancock *et al.* 1997), though about half the highest known densities in Scotland (Thompson 2007).

This study area lies outside the SPA, and when a 103-ha woodland scheme was proposed for the area in 2001, concerns were raised that this might affect breeding Greenshanks. This was in spite of the fact that environmental objectives were important in the design of the

scheme, with much of the area being assigned to open ground, and most of the tree planting being of native broadleaved species. Thus it was quite different from the kind of blanket conifer afforestation that caused so much controversy in Sutherland and Caithness during the 1970s and 1980s (Warren 2000). Such blanket conifer afforestation led to the loss of an estimated 295 pairs of Greenshanks in the region, but it is also true that elsewhere in Scotland some types of open, boggy woodland have been used regularly by breeding Greenshanks (Thompson 2007). Consequently, the impact of the proposed woodland scheme on breeding Greenshanks was uncertain. Ultimately, the scheme was approved, after some alteration of the planting plan to account for concerns over known breeding Greenshank territories. The ground was prepared by digging small mounds (rather than ploughing deep furrows, as was the case with the 1970s and 1980s plantations) and planting and fencing took place in winter 2002/03. Only 4% of the ground was assigned to non-native conifers, the remainder being native broadleaves (54%) and open ground (42%). The long-term Greenshank study was continued, with one of the aims now being to assess any impacts of the new woodland scheme, at least in the short term. Here, we present some key results of the long-term study, and use these data to assess the impact of the woodland scheme in its first five years.

### Methods

The study area, including the woodland area prior to planting, comprises a fine-grained

mosaic of blanket bog, transitional mire, rocky heather-dominated knolls, and numerous shallow, peaty waterbodies, ranging from under 1 m<sup>2</sup> to tens of hectares. The altitude range is 60–120 m, and agricultural use is limited to rough grazing by sheep and cattle, with occasional heather burning. Traditional peat-cutting has not taken

Nick Christian



112. The study area, north Sutherland.

place in the area for a number of years and there is no organised predator control. Owing to one conviction following theft of a Greenshank clutch in the study area, and the continuing threat of egg-collecting, the precise location of the study area is not given.

Bird surveys in 2003–07 were limited to two spring visit periods, one averaging seven days (range 5–11) centred around 5th May, and one averaging nine days (range 7–11) centred around 24th May. A similar pattern of visits took place in earlier years. Visits were timed to coincide with the main period of laying and hatching of first clutches. The initial method of discovering territories and nests was to observe ‘off duty’ birds feeding beside lochs and lochans. Nests were located when the feeding bird flew to the nest to swap incubation duties with its mate. Such changeovers occur most frequently in the morning and the evening, often accompanied by much calling, and with time, the areas of preferred nesting habitat were identified. This made it possible to locate part clutches or incubating birds by careful searching, though unusual nest locations could also occur in any year. Early in the season, much activity took place at the larger lochs, where birds might be observed courting and mating before flying off to prospect for nest-sites, usually 50–900 m from the courtship lochs. This helped both with determining the number of pairs present, and with



Nick Christian

113. Incubating female Greenshank *Tringa nebularia* in the north Sutherland study area. This photograph illustrates the species' excellent camouflage.

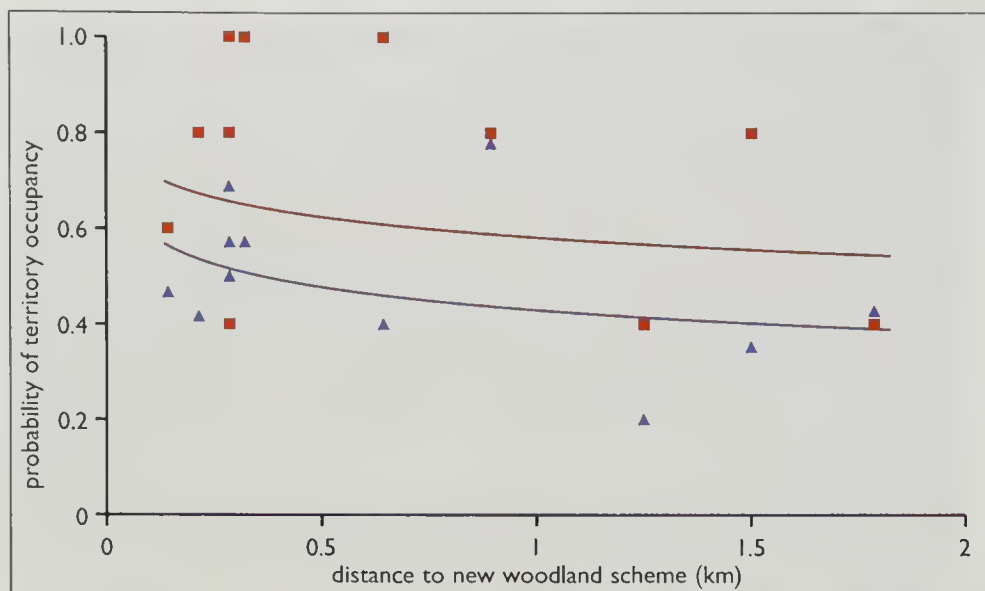
nest finding. Known nests were visited to determine whether or not they were successful. Where shell fragments were present, predation and hatching were distinguished as per Green *et al.* (1987). Owing to the known activity of egg-collectors in the area, the outcome of nests that failed at the egg stage but for which no shell fragments were found was recorded as ‘eggs disappeared’ rather than as predation.

To investigate whether territory occupancy and breeding success were affected by proximity to the new woodland scheme, we carried out two regression analyses. These involved comparing the probability firstly of occupancy and then of breeding success, for each territory, with distance from the scheme. If these



Nick Christian

114. The study area, north Sutherland. This photograph shows a Greenshank *Tringa nebularia* feeding loch and, in the middle distance, fencing for the woodland scheme discussed in the text.



**Fig. 1.** Greenshank *Tringa nebularia* territory occupancy rates, and distance to the woodland scheme. Blue triangles: before the scheme was established (1983–2002); red squares: after the scheme was established (2003–07). The back-transformed fitted relationship is also shown for before the scheme (blue line) and after (red line).

probabilities changed significantly after the woodland was established, in territories closer to woodland relative to other territories, this would be evidence of an effect on breeding Greenshanks. More details of the analytical methods are given in Appendix 1.

### Results

The occupancy rate of individual territories ranged from 78% (territory 4, checked in 23 years) to 24% (territory 5, checked in 25 years). On a year-by-year basis, excluding the first five years of the study, during which new territories were being discovered regularly, the territory

did not show a strong link between the two (fig. 1). In fact, occupancy rates appeared to be somewhat higher nearer the scheme, although this pattern effectively pre-dates the establishment of the scheme (in other words, the woodland was established near to territories with a relatively high occupancy rate).

Statistical analysis of the territory occupancy data, based on 189 territory-years during 1983–2007, confirmed that the relationship between territory occupancy and distance from the new woodland did not change in the first five years after the scheme was established (see Appendix 1).

Fifty-one nests were found during 1983–2007 for which the outcome was known. The most common outcome was the hatching of at least one egg (30 nests, 59%). Of 21 nest failures, most were due to predation (13 nests, 62%), principally by Common Raven *Corvus corax* and Hooded Crow *C. cornix*, which are well distributed throughout the study area. Remaining causes of failure were as follows: eggs disappeared (three nests); nest deserted (two nests); and nest swamped, trampled or adult predated at the nest (one nest each). The predated adult was



**115.** An unusual Greenshank *Tringa nebularia* clutch of six eggs, the product of two different females.

probably killed by a bird of prey (plate 116). This nest was unusually located, within a rock cleft (plate 117). Nests were more typically located on flat ground in short vegetation, often next to a rock or an exposed piece of bog pine. Nest locations were highly clumped within the study area, reflecting the patchy distribution of typical nesting habitat: low ridges with scattered rocks, thin peat soils and short vegetation. Only approximately 16% of the study area was within 100 m of a known nest (though 76% was within 500 m).

The mean distance of successful nests from the woodland scheme's perimeter fence in 2003–07 was 600 m, lower than the mean distance of failed nests (870 m). Distances varied considerably in both groups (standard deviation 350 m and 460 m, respectively), which suggested that a significant effect due to proximity of the woodland was unlikely. This was confirmed by regression analysis (see Appendix 1). One nest was found on open ground inside the forest fence of the woodland scheme (outcome unknown), while activity at another area of open ground inside the woodland scheme suggested a probable additional nesting attempt here.

Occupancy and success rates at individual territories were not correlated ( $r=0.09$ ,  $P=0.78$ ,  $n=12$ , based on territory parameters from the two regression analyses). This implied that territories that were more regularly occupied were no more likely to have successful nests than other territories.

### Discussion

In general terms, the findings from this long-term study were similar to those from the well-known study by the Nethersole-Thompsons (1986). For example, their study found an occupancy rate of 50% (52% in our study), although hatching rate was higher in their study (72%, compared with 59% in ours). One clutch of six eggs was the result of polygamy, which has occasionally been found before (Nethersole-Thompson & Nethersole-Thompson 1986), but the

five eggs in another nest were almost certainly laid by one female.

We found that the new woodland scheme had no measurable effect on territory occupancy or breeding success during the first five years after establishment, although we recognise the limitations of this study as a means of assessing the impact of woodland planting on breeding Greenshanks. The scheme is still only young, and considerable changes in the structure of the



Nick Christian



Nick Christian

**116 & 117.** The remains of a nesting female Greenshank *Tringa nebularia* in 2006, probably taken by a raptor. The unusual nest-site where this dead bird was found is shown in plate 117 (the nest and abandoned eggs can be seen at the base of a cleft in the rock, in the centre of the photograph).



118. Female Greenshank *Tringa nebularia* removing hatched eggshell from a nest in the north Sutherland study area.

woodland and ground vegetation can be expected over the next few years. Greenshanks are highly site-faithful (Thompson *et al.* 1988) and females may remain faithful to particular territories for up to eight years (Nethersole-Thompson & Nethersole-Thompson 1986). Furthermore, birds may continue to nest in territories that have been subjected to major habitat alteration, such as deep ploughing for forestry (Nethersole-Thompson & Nethersole-Thompson 1986). The number of Greenshank records close to and within new forestry was found to be strongly negatively correlated with forest age, in new conifer forests of 1–11 years old (Hancock & Avery 1998). All these factors point to the possibility that, as the woodland within this study area matures, the use of nearby areas by breeding Greenshanks may decline.

Studies involving other wader species include that by Avery (1989), who measured the effects of forestry on three breeding wader species (European Golden Plover *Pluvialis apricaria*, Dunlin *Calidris alpina* and Eurasian Curlew *Numenius arquata*), including some near young forestry in the Flow Country. He found few effects of forest proximity on these species, once vegetation differences were accounted for, but stressed the need to repeat studies when the trees were older. More recently, Hancock *et al.* (in press) found evidence of negative impacts of

forestry on Dunlins, in areas that included some close to the same (now older) forests that were studied by Avery (1989). This illustrates the potential for factors to change over time, as forests mature, and emphasises the need for our results to be followed up in due course, perhaps during the five years leading up to the removal of the woodland perimeter fence.

The potential mechanisms by which forests could affect waders nesting nearby have been reviewed extensively (Stroud *et al.* 1987; Avery 1989; Hancock *et al.* in press). These include increased predator activity, indirect habitat impacts (such as cessation of heather burning near woodland, resulting in a change in vegetation structure), or behavioural avoidance by birds whose instincts or habits predispose them to nesting in open habitats. Set against these are the potential environmental benefits of establishing pockets of new, open woodland, comprising mainly native species, within landscapes that are only treeless because of previous human management. Scattered trees and open woodland, interspersed with open boggy ground, are, indeed, quite typical habitats of Greenshanks and other waders in Fennoscandia and Russia (Cramp & Simmons 1983).

One aspect in which such natural boreal woodland differs from new woodland plantings

in Scotland is that it is unfenced and thus open to low densities of native large herbivores. In Scotland, the absence of large herbivores within areas fenced for forestry has been shown to increase the numbers of voles *Microtus*, which respond to the increased vegetation biomass and cover (Evans *et al.* 2006). In turn, greater vole numbers can lead both to increased damage to young trees and to higher populations of generalist predators. The latter may affect ground-nesting birds and this led Evans *et al.* (2006) to suggest that low-density livestock grazing of new woodland would be advantageous in some circumstances. Similar suggestions, from forestry and livestock-production perspectives, were made by Hester *et al.* (2000) and Pollock *et al.* (2005). However, they also pointed out the need to better understand the grazing regime that allows both grazing and woodland development, before prescriptions can be recommended. Early fence removal could result in benefits to breeding birds (shorter vegetation, reduced populations of voles and associated generalist predators), together with potential gains in livestock production. The timing of fence removal would of course need to be carefully considered, owing to the risk of herbivores damaging the trees.

#### Acknowledgments

The vital assistance of the following fieldworkers is gratefully acknowledged: Bob Christian, Nick Christian (jnr), Sylvia Christian and Steven Cooper. The great generosity and kindness shown by local crofters Ricky, Roberta and Scott Hardman, the late Hugh Gunn and Sinclair Mackay enabled us to recuperate following numerous long, cold days in the field. J. D. Wilson and K. Graham gave valuable support during the later years of the study. We thank them and Pat Thompson for useful comments on this paper in draft.

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## Appendix I.

Within our regression analyses, we wished to account for variation in territory occupancy or breeding success that was not linked to forest distance. For example, breeding success might be lower in some years due to weather conditions, while occupancy might be higher in

some territories because of habitat factors. We carried out regressions using a mixed model (Littell *et al.* 1996), with 'year' and 'territory number' fitted as random effects. This allowed us to make the best use of the data, which were not balanced (i.e. sample size varied between years and territories), provided that additional

assumptions were met (normality of year and territory effects). The dependent variable in each analysis (occupancy, success) was fitted in a logistic model with a binomial error distribution. Each row of data referred to one territory in one year (territory occupancy model) or one nest with a known outcome (breeding success model). It is possible that territories near the woodland scheme differed from other territories before the woodland was planted, in ways that affected occupancy and/or success, and thus were not related to the scheme. In order to account for this, we included data from before and after the scheme was established, and looked for change between these two periods. Nest visits were too infrequent to allow the use of the Mayfield methods in nest success analysis (Mayfield 1975). Thus we make the assumption that the number of 'exposure days' per nest, for failed nests in our sample, did not vary systematically with distance to the woodland scheme.

In the analysis of territory occupancy, the effect of distance to the woodland scheme was low [ $F_{1,12}=0.86$ ,  $P=0.37$ ], as was the effect of time period (before/after the scheme was established) [ $F_{1,39}=1.54$ ,  $P=0.22$ ]. The high P-value of the distance  $\times$  time interaction term [ $F_{1,185}=0$ ,  $P=0.96$ ] indicates that obtaining data under the null hypothesis, which states that there was no difference in the relationship between territory occupancy and distance to the woodland scheme before and after the scheme was established) was likely. The occupancy–distance relationship (fig. 1) shows a slight increase in the fitted occupancy rate in the later period, but this change did not differ according to distance from the woodland scheme, and was not significant in the model ( $P=0.22$ ).

In the analysis of breeding success, the results were essentially similar. The results were as follows for distance [ $F_{1,15}=0.28$ ,  $P=0.61$ ], time [ $F_{1,19}=1.67$ ,  $P=0.21$ ] and time  $\times$  distance interaction [ $F_{1,47}=1.22$ ,  $P=0.27$ ].



Nick Christian

119. Female Greenshank *Tringa nebularia* brooding chicks in the study area.

# Obituary

## Eric Simms (1921–2009)

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Eric Simms, writer, broadcaster, film producer and pioneer of wildlife sound recording, died on 1st March 2009 at the age of 87. Throughout a lifetime dedicated to the study and promotion of wildlife and conservation, Eric deservedly earned his place as an outstanding conservationist. Underlying his prolific output, which included 7,000 radio broadcasts and 700 television appearances, numerous books, papers and articles, was an almost insatiable drive to bring a greater understanding and appreciation of natural history to a wider audience. His undoubted success in stimulating enthusiasm and enjoyment of wildlife in a whole generation is a fitting memorial to his inspiration, dedication and determination. He was unstinting in giving of his time and energy to numerous committees and groups, which benefited enormously from the depth and breadth of his experience.

Eric was born on 24th August 1921, the son of the head gardener of Ladbroke Square, in North Kensington. His youthful birdwatching was carried out in the Square, in the grounds of nearby Holland House, the Royal Parks and Hampstead Heath and later in the Home Counties. As a boy he was greatly encouraged by his botanist father and two outstanding ornithologists of the time: Col. Richard Meinertzhagen, who lived in Kensington Park Gardens, and Arthur Holte Macpherson, then one of London's best-known observers. In 1939 he followed his elder brothers to Merton College, Oxford, where he read history and joined the Oxford Ornithological Society, helping to run the bird-ringing trap on Christchurch Meadows.

He entered the RAF in 1941 and joined Bomber Command in 1943 as a Flight Lieutenant, flying in Lancasters from RAF Wickenby in Lincolnshire as a bomb aimer and second pilot. He flew in 27 operations, and his bravery and unconquerable spirit were recognised when he was awarded a DFC in 1944. His citation states that 'he has displayed cool courage... skill and determination which have been an inspiration to the crew with which he flies... and has shown complete disregard of danger in the face of the heaviest enemy defences'. His wartime experiences undoubtedly had a considerable influence on him. He felt that

he was lucky to survive the war and that, after that, every day was a bonus.

On his release from the RAF, Eric took a Diploma in Education at Oxford and then taught in Rugby and Stratford-upon-Avon. He was sworn in as the first Special Constable for bird protection in Britain and while at Stratford he discovered an important migration route for birds across England from the Wash to the Severn. He also lectured for the Extra-Mural Department of Birmingham University and served on the Research Committee of the West Midland Bird Club.

In 1950 Eric was chosen to succeed Dr Ludwig Koch as director of the BBC's wildlife sound-recording projects, based in London. This marked the start of Eric's long and fruitful career in, and his outstanding contribution to, broadcasting. He became resident ornithologist to the BBC and, between 1950 and 1958, made the first wildlife sound recordings in Britain on magnetic tape, introduced parabolic reflectors and radio links and made the first underwater recordings of fish. With engineer Bob Wade, he added many new animal sounds to the BBC's Sound Archives.

His radio features on the behaviour and



F. R. Elwell

120. Eric Simms recording Common Nightingales *Luscinia megarhynchos* with a midgit recorder and 18-inch parabolic recorder, in Warwickshire in 1962.

vocabulary of individual species such as Peregrine Falcon *Falco peregrinus*, Stone-curlew *Burhinus oedicephalus*, Little Ringed Plover *Charadrius dubius*, Common Crossbill *Loxia curvirostra* and Badger *Meles meles* were made possible only by his pioneering of new recording techniques, and were a milestone in natural history broadcasting. Many British recordings were first broadcast in *The Countryside* programme, which he created in 1952 and which he broadcast over 38 years without break until its end in 1990. He also visited the Camargue, Spain and Switzerland on some of the first BBC sound-recording expeditions in search of wildlife sounds.

In 1961, Eric joined the newly launched BBC Schools' Television service where, with Felicia Elwell, he produced and presented a number of natural history and environmental study programmes for primary schools. He also became Sound Advisor to British Transport Films. He went freelance in 1967, to have greater freedom to express opinions on conservation, but continued to broadcast regularly on national and local radio and on the British Forces Network. From 1967 to 1978, he presented the weekly *Nature Notebook* on the BBC World Service and from 1977 to 1987 he had a weekly spot on London Broadcasting. He was also general editor, producer and announcer for 14 wildlife recordings for BBC Records and, in 1972, he was appointed to the Advisory Committee to the Department for the Environment on Bird Sanctuaries in the Royal Parks.

Eric was a prolific author, writing some 20 books on various aspects of natural history and sound recording, including four in the Collins 'New Naturalist' series: *Woodland Birds* (1971), *British Thrushes* (1978), *British Warblers* (1985) and *British Larks, Pipits and Wagtails* (1991). In 1976, Eric's autobiography *Birds of the Air* was described by David Attenborough as 'a fascinating account of his experiences by one of the pioneers of natural history broadcasting'. Jointly with Myles North, Eric produced *Witherby's Sound Guide to British Birds* (1958, 1969), which was the first sound guide in the world to the avifauna of a region. *Birds of Town and Suburb* (1975) was based on his research, between 1951 and 1970, into the birdlife of his home patch in Dollis Hill in northwest London and *The Public Life of the Street Pigeon* (1979) was the first biography of what was then considered a much exploited and disregarded bird. Eric also

contributed chapters and sections to a number of books including *The Illustrated Encyclopaedia of Birds* (1990), *The Definitive Guide to the Birds of the World* (1990) and *Fauna Britannica* (2002), and to many journals and magazines. One of his own favourite books was *A Natural History of British Birds* (1983), illustrated by Robert Gillmor, in which he sought to bridge the gap between field guides and more scientific works.

Eric was elected a fellow of the Zoological Society in 1953, and served on the Council of the RSPB during 1953–63 and the Council of the World Wide Fund for Nature and its Advisory Panel during 1977–86. He was President of the Skylarks Nature Reserve at Holme Pierrepont in Nottingham, the first nature reserve designed solely for the physically disabled. Eric was also Borough Sites Officer in the London Borough of Brent for the Herts and Middlesex Trust for Nature Conservation, a founder member of the Welsh Harp Reservoir Conservation Group and President of the Lincolnshire Bird Club from 1981. He was also a magistrate in London and Vice Chairman of the South Witham Parish Council in Lincolnshire.

In 1980, Eric moved to South Witham with his wife Thelma to begin a very active retirement. Near the village he discovered a neglected area of roadside verge, recognised its potential, and adopted and so transformed the area that by 1992 it was designated South Witham Nature Reserve, with Eric as manager. He found the work both inspiration and reward as it brought him much pleasure and physical activity, from removing scrub and clearing litter to censusing the birds and photographing the butterflies. Under his stewardship, the reserve won conservation awards and much recognition. Also in Lincolnshire, Eric continued his Blackbird *Turdus merula* studies, making detailed observations on the behaviour of birds in his garden.

Eric had a wide range of other interests, including geology, aviation, local history, architecture and classical music. Eric lived a rich and fulfilling life, always convinced of his good fortune in being able to pursue his fascination with conservation and pioneering wildlife recording while still managing to have 'so much fun'.

Eric is survived by his daughter Amanda and son David. He will be much missed and without doubt his tremendous legacy to conservation will continue to inspire generations to come.

*Leo Batten*

# Letters

## *Black Brants and the problem of intergrades*

In the Recent reports section of the February 2009 issue of *BB*, a photograph of a goose taken at Wells, Norfolk, by Gary Thoburn (plate 73) is captioned as being an adult 'Black Brant' *Branta bernicla nigricans*. From experience gleaned through the years in north Norfolk, I would say that the bird is in fact an intergrade – between a dark-bellied Brent Goose *Branta b. bernicla* and a 'Black Brant'. The bird is too grey on the back and breast/upper belly for a typical Black Brant, despite having a well-marked white neck-collar and flank patch that would suggest that form. In north Norfolk, mixed pairings of Black Brants and dark-bellied Brents with hybrid offspring have been noted at Burnham Deepdale/Burnham Norton in January–February 2001 (with four hybrid juveniles), Wells/Holkham in the winter of 2004/05 (with two hybrid juveniles) and in the winter of 2005/06 (with

three hybrid juveniles) (Bloomfield & McCallum 2001; *Norfolk Bird Reports* 2001–2007). Since then there have been at least three returning birds showing mixed characters such as those depicted in plate 73 (good neck-collars and flank patches but far too grey on upperparts and breast) in the Burnham area and at least two (but maybe more) in the Wells/Holkham area, one of which is the bird portrayed in *BB*. With mixed breeding seemingly occurring more regularly than previously suspected, the pitfall of intergrades is something that certainly needs to be considered when confronted by a likely Black Brant candidate.

### Reference

Bloomfield, A., & McCallum, J. Changing fortunes of the Black Brant. *Birding World* 14: 66–68.

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**EDITORIAL COMMENT** We apologise for the incorrect labelling of the photograph, which was an editorial mistake. As Andrew Bloomfield suggests, the issue of intergrades, which may appear superficially very similar to genuine Black Brants, is potentially a significant identification pitfall, especially in areas where the ancestry of such birds is not as well known as in north Norfolk, and where observers are not able to examine the birds in such detail and in a range of conditions. Andy Stoddart has commented that, in the field, the two Wells intergrades showed marginally weaker black-and-white contrast than a 'pure' Black Brant present in the area at the same time, while the mantle and underparts of these birds lacked the characteristic mahogany/dark earth-brown tones of a typical Black Brant, instead being subtly glazed with grey. Nonetheless, these intergrades could appear extremely similar to Black Brant depending on light conditions and viewing distance. Particularly in areas where such intergrades were not known or suspected to occur, an individual such as this, with striking neck-collar and flank patch, could easily be passed off as the real thing unless examined carefully. This seems a timely reminder to observers and editors for caution over the identification of putative Black Brants!

*Eds*

## *The curious case of the disappearing storm-petrel*

We were disappointed to read of the BOURC's decision to delete the 1911 Hampshire record of Madeiran Storm-petrel *Oceanodroma castro* from the British List (*Brit. Birds* 102: 104; *Ibis* 151: 224–230), not least because it largely fulfils the criteria outlined by them for the acceptance of such records, which they further stated are not judged by modern standards (Collinson *et al.* 2008). We believe that the case for the Hampshire petrel is convincing, and worth

debating in the hope that the decision will be reversed at some future date.

Munn (1912) wrote that the petrel, which had been found dead on the beach at Milford-on-Sea, Hampshire, on 19th November 1911 by Roland Follett, had been passed to him by the Rev. J. E. Kelsall and later identified by W. R. Ogilvie-Grant. Follett was a 17-year-old apprentice butcher living some 4 km from Milford, at Ashley, near New Milton. As a

butcher by trade, he would have been familiar with the various species of wild birds then offered for sale, and thus would have realised quickly that his find was something unusual. Being a local man, Follett would also have known that Kelsall, the rector of New Milton, was an ornithologist of some repute. Kelsall was co-author, with Munn, of the 1905 avifauna *The Birds of Hampshire and the Isle of Wight*, and it is therefore understandable that Follett would take the bird to Kelsall. There is no evidence that money changed hands, though in any event Kelsall was an unlikely target for fraud because, unusually for that era, he did not collect either specimens or birds' eggs (Leach & Pratt 1993); such a dastardly plot is anyway doubtful, given Follett's age and background.

Kelsall and Munn must surely have realised that the corpse, which was fresh and thus suggestive of local death (Kelsall & Coles 1913), was that of a storm-petrel, though it was sent to Ogilvie-Grant for specific identification. Ogilvie-Grant was well qualified for the task, as he worked in the ornithological section of the British Museum and had also visited certain of the Atlantic Islands (Mearns & Mearns 1988; Clarke 2006) in pursuit of Madeiran Storm-petrels and other seabirds (Saunders 1899).

The November date of the Hampshire Madeiran Storm-petrel might seem unlikely, but winter vagrancy has occurred elsewhere: one was found moribund on the surface of a frozen lake in central Finland in January 1993 (Nikander *et al.* 1994). Interestingly, the Secretary of the Finnish Rare Birds Committee, Aleksi Lehikoinen, has commented that most of the (very few) observations of petrels in that country have similarly been of grounded birds in winter.

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**EDITORIAL COMMENT** 'In response to Combridge & Wiseman's final point, we take this opportunity to restate that BOURC has no negative predisposition towards older (Category B) records. We reaffirm that older records are not judged by modern standards (e.g. Collinson *et al.* 2008), though of course these standards (ideally) cover a suite of points relating to all aspects of provenance. Certainly, Category B records do not have to 'jump through all the hoops' but surely few would accept that a record does not have to meet a minimum set of criteria to be acceptable.

'Examples of Category B records recently reviewed and retained on the British List include those of White-faced Storm-petrel *Pelagodroma marina* (a unique record from the Inner Hebrides, 1897), Eskimo Curlew *Numenius borealis* (several records) and Red-necked Nightjar *Caprimulgus ruficollis* (a unique record from Northumberland, 1856; BOU 2004, 2007, Melling 2009). These records do not fully

Two reasons have been given for deleting the Hampshire record (*Ibis* 151: 225): that the identification cannot be verified without a description or specimen; and that there is no indication as to whether the petrel died in British waters. On the first point, even though the Milford petrel cannot be found in any museum collection (which suggests to us that it was retained privately), Ogilvie-Grant's museum and field experience makes misidentification inconceivable, while it is no surprise that, given the era, no description was published. If the BOURC does indeed refrain from judging old records by modern standards, the lack of a description should not tell against it. As for the second point, it is seldom possible to prove that any dead bird died exactly where it was found, and the application of such a requirement effectively consigns all such records to the dustbin of history, whether or not a description or specimen exists.

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meet modern standards but nonetheless they have been retained after review; there is no purge.

'The additional background information relating to Roland Follett is interesting but it does not materially change the specific circumstances of the finding of the Hampshire bird, i.e. that it was found dead on the beach.

'Following the removal of the 'Hastings' records (Littlestone, Kent, 1895; Hythe, Kent, 1906), Madeiran Storm-petrel was formerly on Category B by virtue of an Irish record, in Co. Mayo in 1931 (BOU 1971, 1992). When the Irish and British Lists were separated in 1998, the Hampshire record defaulted to Category D3 (tideline corpses). Taxa allocated to D3 were flagged for a review of status when D3 was subsequently abolished (Holmes *et al.* 1998). The outcome of one such review (of Black-capped Petrel *Pterodroma hasitata*) has already been reported (BOU 2006). This continuing exercise was alluded to in the BOURC Report to which Combridge & Wiseman refer (see statements on Common Eider *Somateria mollissima*, Common Guillemot *Uria aalge* and Little Auk *Alle alle*; BOU 2009).

'It is true that Ogilvie-Grant was a recognised expert on storm-petrels. This point was more than adequately acknowledged in the comments by members of BOURC. Indeed, some members initially argued that his expertise with the genus and declaration of the bird's specific identity was sufficient foundation for the record's continued acceptance as *O. castro*. However, the taxonomy of the 'Madeiran petrel' complex is likely to change (Bolton *et al.* 2008), and we have absolutely no way of checking which taxon was involved. We recognise that although it is unlikely that he made a serious error in his identification, an error by Ogilvie-Grant is not 'inconceivable'. There are precedents for experts making erroneous pronouncements, and the records of Moustached Warbler *Acrocephalus melanopogon* in Britain are a case in point (Melling 2006). Irrespective of this view, we know that Ogilvie-Grant did not notice that the bird he collected on the Azores on 25th April 1903 was different from *O. castro*; it is now the holotype of a different taxon *Oceanodroma monteiroi* (Bolton *et al.* 2008).

'Ogilvie-Grant's credibility notwithstanding, the identification of the Hampshire bird cannot therefore be assumed to be 100% certain.

'We did not suggest that an available description would provide evidence of a bird dying in British waters. The review of (former) Category D3 taxa is to determine whether there is sufficient evidence to justify admittance of these taxa to the British List, considering that this category relates to birds that have only been found dead on beaches. If the evidence is compelling, as in the case of Black-capped Petrel, admittance will follow. There was no such compelling evidence for the Hampshire storm-petrel.

'A number of BOURC members supported this record when it was first considered. The circumstances were debated at length at the Committee meeting in June 2008 and it was eventually unanimously agreed that it could no longer be supported for the following reasons: the identification was not certain, and there was no proof that the bird died in British waters.'

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Bob McGowan, Andrew Harrop and Martin Collinson, on behalf of BOURC

All Notes submitted to *British Birds* are subject to independent review, either by the Notes Panel or by the BB Editorial Board. Those considered appropriate for BB will be published either here or on our website ([www.britishbirds.co.uk](http://www.britishbirds.co.uk)) subject to the availability of space.

## Morph ratio of Eleonora's Falcons in Sicily

The Eleonora's Falcon *Falco eleonora* is a long-distance migrant whose breeding range is concentrated in the Mediterranean, with some colonies on the Atlantic coast of Morocco. The species has a light and a dark morph in both juvenile and adult plumages, although the existence of an intermediate morph (as reported in some field guides, e.g. Clark 1999) is questioned (Ristow *et al.* 1998, 2000; Forsman 1999; Conzemius 2000). In this note, we examine the morph ratio at Sicilian breeding colonies.

We surveyed all the colonies located in the Aeolian Islands, north of Sicily (Panarea, Salina, Alicudi and Filicudi), and the Pelagie Islands, south of Sicily, between Malta and Tunisia (Lampedusa Island), making up to 15 visits per breeding season during 1998–2007. On each visit, we recorded the total number of birds and their colour morph whenever possible, using the classes suggested by Ristow *et al.* (1998, 2000). To calculate the ratio of colour morphs, we considered only the maximum number of adult/second-calendar-year (2CY) birds seen simultaneously at each colony on each visit, apart from at sites where known breeding pairs were identified individually. We did not keep a complete record of the colour morph of fledged juveniles, but we did record the homozygous dark morph (DD – see Ristow *et al.* 2000).

On average, we recorded between 20% and 25% dark-morph adult/2CY birds during the ten-year study period at Sicilian colonies, though up to 35% in some colonies (for example at Alicudi and Lampedusa). The proportion of dark morphs varied at the same colony from year to year, in general by 5–10%. In total, the homozygous dark morph accounted for 1.5–2.0% of fledged juveniles seen, with a maximum of 3.0% at Lampedusa in 2007. This plumage type was thus extremely rare.

In comparison with that in other parts of the breeding range, the morph ratio in Sicilian colonies appears closer to that of eastern colonies than western ones. In Cyprus and Crete, dark morphs accounted for 25–30% of the population, while in Sardinia, Morocco and

the Columbretes Islands (Spain) the figure was 13–18% (Ristow *et al.* 1989, 1998). Other studies have reported the following ratios of dark-morph birds: 4.5% for Salé (Morocco) (Walter & Deetjen 1967); 40% in the Balearic Islands (Majol 1977); 3.1% for the Columbretes Islands (Dolz & Dies 1987); 9–15% for San Pietro island (Sardinia) (Spina 1992); and 21% in coastal Tuscany (Giovacchini & Celletti 1997).

During migration studies at the Strait of Messina in April–May, the proportion of dark birds was 33% in 1997 (n=21), 29% in 1998 (n=24) and 33% in 1999 (n=24) (Corso 2001, 2005, in prep.). The birds migrating over Messina surely belong predominantly to the Aeolian colonies and the morph ratio is similar to that recorded in this archipelago.

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## Corn Crake pair-bonding and nesting behaviour

The courtship and nesting behaviour of the Corn Crake *Crex crex* is difficult to observe in the wild owing to the shy nature of the species and the nature of its breeding habitat. I have worked closely with a captive population for three years and in that time the Zoological Society of London's Whipsnade Zoo has bred over 250 Corn Crakes for release on the Nene Washes, Cambridgeshire, in partnership with RSPB, Natural England and Pensthorpe Conservation Trust. In the wild, the male calls with its well-known rasping song to defend a small territory and attract a female. In captivity, we mimic the same situation by giving each male his own enclosure, from which he calls. When a female is ready to breed, we introduce her to the male's enclosure. There is no guarantee that the female will accept the male but we have noted two specific calls that the male makes to the female which appear to indicate that a pair bond has been formed successfully (see below). Whenever either of these calls has been heard, the pair has gone on to produce fertile eggs.

Observations in captivity have shown that the male will make a number of nests for the female to choose from. The nests vary in quality from male to male but the better nest makers always seem to pair with females easily. Some males build their nests before a female is introduced, some wait until a female joins them in the enclosure. The standard nest is built by

first making a scrape in the ground and then swirling grass and other vegetation into a cup shape around the scrape, using the feet to scrape and the bill to swirl the grass. *BWP* states that nest-building is 'probably by the female only' and I am not aware of any subsequent published accounts that make clear that this activity is undertaken solely by the male.

The female has to be interested in the male before she will inspect the nests he has built. To attract the female, the male initially makes a deep, chesty boom followed immediately by a



Jamie Graham

121. Nest of captive Corn Crake *Crex crex*, Whipsnade Zoo, Bedfordshire, May 2005.

higher-pitched call. A second call, which is a short sound of medium pitch, appears to be used initially to attract the female to the prepared nests so that she can select a nest for laying. It is then heard continually during the period when the female is laying.

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## A procession by a Common Snipe and its chicks

It is not usually easy to see how Common Snipe *Gallinago gallinago* deal with their young, since in Britain they are shy and usually stay in thick cover. On 9th July 1983, I was sitting in the schoolhouse on the island of Grimsay, on the Arctic Circle, looking out of the window during the course of a conference in Iceland. The ground outside was flat with scattered ground

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herbage, and a crouched adult Snipe crept across it, just a few metres from the building, followed closely by three well-grown (crouching) chicks, all in line, rather like a strange snake. I have met many other chicks of ground-nesting birds, but do not remember seeing or learning of any of them behaving like this; perhaps it helps the birds to keep in touch in thick vegetation?

## Great Black-backed Gull killing rival and stealing mate

In March 2006, a pair of Great Black-backed Gulls *Larus marinus* began nesting on a small gravel island at Leighton Moss RSPB reserve, Lancashire, and successfully reared three young. The male (sexed on behaviour) bore a metal ring, and what was presumably the same pair nested successfully in 2007 and again reared three young.

In March 2008, the pair returned for a third year and began nest-building. On the morning of 7th April 2008, a third (unringed) Great Black-backed Gull landed on the island and proceeded to attack the ringed gull. For over two hours the two birds fought ferociously, the intruder eventually gaining the upper hand by pounding the head of its rival with its bill and dragging the gull into the water, where it eventually died. Throughout the attack the mate of the ringed bird stood apart from the combatants and made no attempt to intervene. The only injury that the victorious intruder

showed was a slight drooping of one wing, which was not evident the next day. On 8th April, the successful male was observed courtship-feeding the female with a small fish; the two gulls subsequently paired and reared three young.

The dead gull was recovered on 8th April and examined. The head and upper neck were covered in blood and almost completely lacking feathers, the back of the skull was fully exposed and one eye was missing. It had been ringed as a nestling at South Walney, Cumbria, 30 km west of Leighton Moss, on 27th June 1999.

We presume that both of the combatants were males, and that the same three birds were observed throughout. Observers who witnessed the attack initially assumed that the resident pair had killed a marauding intruder, but this was later proven to be the wrong interpretation when the significance of the ring was noted by later observers.

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## Red-rumped Swallow nesting in sea cave

On 18th July 2005, I discovered a pair of Red-rumped Swallows *Cecropis daurica* nesting in a sea cave on the southwest coast of Sardinia, Italy. The cave was situated in a southwest-facing inlet, some 300 m long and 100 m wide, the slopes of the inlet being clad predominantly in Mediterranean maquis. The cave was located at the base of the northwest-facing slope of the inlet, and was around 3.5 m wide and 5 m high at the entrance, and 12–13 m long. The nest was sited about 4 m from the entrance, and 1.8 m

above the floor of the cave, which was usually dry at this point. I visited the nest until 23rd July, when it contained at least two chicks; the adults were able to feed the young without leaving the inlet. Two pairs of Barn Swallows *Hirundo rustica* were nesting in an adjacent sea cave.

According to BWP and Turner & Rose (1989), Red-rumped Swallows nest in a variety of situations, including cracks, holes or caves in rock faces or walls, but I can find no published record of this species nesting in sea caves

(although nesting on sea cliffs in Cyprus is described in *BWP*). In much of western Europe, the species seems to choose bridges and buildings (even if occupied) with increasing frequency as a nest-site, in preference to natural rocky environments (Martí & Del Moral 2003).

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## Common Chiffchaffs and whirligig beetles

In early spring, a favourite feeding spot for newly arrived Common Chiffchaffs *Phylloscopus collybita* is a reasonably sized pond (about 400 m<sup>2</sup>) on my property in Kent; even during inclement weather, insects flying above the water can be found easily by the birds. Chiffchaffs are regular visitors here and can be observed at close quarters as they dart out from overhanging branches to take insects on the wing. On 24th March 2008, a particularly cold day, I noticed two Chiffchaffs feeding at the level of the water's surface. I assumed initially that the birds were after very low-flying insects but, as plate 122 shows, they were actually picking whirligig beetles (Gyrinidae) out of the water. In subsequent days, as the air temperatures gradually rose and flying insects appeared once more, the Chiffchaffs reverted to more normal behaviour, once again taking insects on the wing.

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122. Common Chiffchaff *Phylloscopus collybita* taking whirligig beetle, Kent, March 2008.

**EDITORIAL COMMENT** A note describing a Common Chiffchaff taking insects from water in this fashion has been recorded before in *BB* (*Brit. Birds* 51: 309, another observation from Kent, this time during early April snowfall in 1958), but it is interesting to see photographic documentation of the feeding behaviour described here.

## Eurasian Jay catching a Blue Tit in mid-air

The note about a Eurasian Jay *Garrulus glandarius* killing an adult Common Chaffinch *Fringilla coelebs* and a Greenfinch *Carduelis chloris* (*Brit. Birds* 101: 385) recalled an incident on 15th June 2008 in Lathkill Dale, Peak District. My son and I heard a chorus of alarm calls and noticed a Jay and a family party of Blue

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Tits *Cyanistes caeruleus* in a small birch *Betula* tree. One of the young tits flew away from the tree, into the open and was followed closely by the Jay. As the Blue Tit approached the next tree, the Jay caught it in mid-air and flew away carrying the tit in its bill.

# Reviews

## CONSIDER THE BIRDS: WHO THEY ARE AND WHAT THEY DO

By Colin Tudge. Allen Lane,  
London, 2008. 482 pages;  
numerous line-drawings; five  
text figures, two as pull-outs.  
ISBN 978-1-846-14097-6.  
Hardback, £25.00.

This was a difficult book to review. It must also have been a difficult one to write, since, in the words of its subtitle, it seeks to tell us who birds are and what they do. In essence, it covers the origins of birds, their classification and their variety (these sections take up almost half of the book) and then deals with most aspects of their daily lives, finishing with a good, short, heartfelt summary of modern conservation concerns and some interesting philosophical thoughts.

All this is done in the author's idiosyncratic and very effective conversational style. Colin Tudge is certainly an excellent communicator, but he is rather more than that. He brings to bear his scientific training too, probing, questioning, explaining, drawing our attention to differing points of view and interpretations, and never being afraid to say 'we don't know' and

that there is an awful lot we still need to learn about birds and how they live. Surprisingly, in this day and age, all this comes in a book of solid text without the copious colour illustrations that have often been the mainstay of other works on this huge subject. Curiously, the rather attractive line-drawings are not attributed, other than on the dust jacket, where Jane Milloy is mentioned in tiny print.

Specialists in the different topics covered will doubtless have their own views on the various chapters and sub-chapters. Someone is bound to point out that there is a sad lack of detail and discussion on all those things which control bird densities, numbers, distribution, and so forth, and I will not be the only one to notice that the sections on feeding pay very little attention to the importance of carrion, and, indeed, general scavenging. But, on the whole, I think that the author has done a good job. I tried to bear in mind the limitations imposed by the need to generalise and summarise, which (although he occasionally wanders into verbosity) Colin Tudge handles well in most cases.

There are, alas, some misleading statements and errors, which may be the result of too

much generalisation, bad advice or sloppy editing – I don't know, but they do spoil the book.

It is not good enough to say that 'Eagle Owls [*Bubo bubo*] among other things catch Hobbies [*Falco subbuteo*]', which may be true in the strict sense but as a bald statement is seriously misleading. Likewise, 'They too [pelicans] dive into the sea after fish' and 'animals who raise only one offspring at a time, like an eagle' are, as they stand, incorrect statements: in both cases, a little qualification would make amends. The comment that 'Lesser Spotted Woodpecker [*Dendrocopos minor*] and the Wryneck [*Jynx torquilla*] no longer breed in Britain' is simply inexcusable. The most irritating and mysterious glitch comes in the long account of the breeding strategy of the Common Cuckoo *Cuculus canorus*, where an important host species is referred to, again and again, as the 'Reed Pipit'!

On balance, however, this is a fine effort. Even if you don't buy it, you should most certainly read this book. Forget the odd niggles: it will interest and inform you, and in places (you'll have to find these for yourselves) will certainly make you think.

Mike Everett

## FEATHERED DINOSAURS: THE ORIGIN OF BIRDS

By John Long and Peter Schouten. Oxford University Press, Oxford, 2008. 191 pages; many colour illustrations.  
ISBN 978-0-19-537266-3.  
Hardback, £19.99.

As a kid growing up in the 1970s, my books portrayed dinosaurs as cold-blooded, lumbering, stupid beasts that ground each other down to extinction through a multi-million-year war of attrition. Then, in the mid 1980s, dinosaur research recast them as sexy, frictionless machines who hunted in packs,

cared for their families, enjoyed a social life that many of us would envy and would still be terrorising wimpy mammals today if that meteor had not fallen on them. Then, a series of new fossil discoveries of feathered dinosaurs, most notably from Mongolia and China, revitalised and finally confirmed the theory that dinosaurs did not die. At least not all of them. One dinosaur family, the birds, survived. And for those unlucky enough to have been living on Mars for the last 20 years, this book goes some way to summarising current knowledge of the breadth of the diversity of different types of feathered dinosaurs that culminated in the

gradual evolution of birds.

There are nine short introductory chapters that trace the phylogeny of the coelurosaurian branch of saurischian dinosaurs from which birds are thought to have arisen. In a simple, narrative style suitable for general readers and students, these chapters explain the evidence that representatives of several of these dinosaur families had feathers at some point during their lives, and how the origin of the osteological and other avian specialisations can be traced to the feathered dinosaurs. The meat of the book, however, is the 150+ pages of artwork by Peter Schouten that attempt to recon-

struct what these feathered dinosaurs and early birds may have looked like in life. The reconstructions are based on a professional knowledge of the biology and ecology of modern animals, including birds, as well as the clues in the fossil record. My criticism of the book is that the artwork is part factual reconstruction, part inference and part artistic imagination, and it is not always made explicitly clear where the facts end and the imagination starts. Perhaps this is

not a problem – this is not a scientific book and ultimately it is not likely to be as misleading as my dinosaur books from the 1970s. However, when the flocking, problem-solving, cow-shredding, go-faster powerhouse *Velociraptor* of *Jurassic Park* fame turns up in this book as a rather effeminate feathered dandy (apparently tickling a *Protoceratops* to death), you have to wonder if we are just swapping one fiction for another.

So, the interpretation of the

evidence as presented in this book is not necessarily the only plausible interpretation, and the book should be read critically. However, it would represent an eye-opening evening's browsing for anyone interested in the evolutionary origin of birds, and is certainly a more effective introduction to dinosaur biology and ecology than sitting through the *Jurassic Park* trilogy. Again.

*Martin Collinson*

**NEUROSCIENCE OF  
BIRDSONG**

Edited by H. Philip Zeigler and Peter Marler. Cambridge University Press, Cambridge, 2008. 550 pages; many black-and-white illustrations. ISBN 978-0-521-86915-7. Hardback, £80.00.

Birdsong has been, and continues to be, intensively studied, both for its own sake and as a model of learned communication that parallels the development of human

speech. This book represents an up-to-date summary of the current state of research into the neurobiological basis of birdsong. Fifty-five authors have written 37 stand-alone chapters on different aspects of the subject, covering the entire field from genes to neuroanatomy to behaviour. It is written, almost throughout, for professionals and specialists, and the interested amateur will find it heavy going. Chapters 3 and 18, which cover learning and 'crystallisation' of song, would be broadly accessible for people who want a bit more

background to the story as presented in more popular texts such as *The Sound Approach to Birding* (Constantine and The Sound Approach, 2006). At the back of the book are a series of lighter, more personal accounts of lives devoted to the study of birdsong. For the general reader, this might be something of a luxury item, to be dipped into as required, but for serious students and professionals it will prove to be a useful handbook.

*Martin Collinson*

**TOP 100 BIRDING SITES  
OF THE WORLD**

By Dominic Couzens. New Holland, London, 2008. 320 pages; over 350 photos. ISBN 978-1-84773-109-8. Hardback, £35.00.

This large-format (33 × 28 cm) book showcases 100 of the top birding sites on the planet. Sites are listed by continent and a brief introduction to each continent outlines important habitats, species richness, major avian spectacles, number of endemic families, etc. Each of the 100 sites receives a two- or three-page account, including between three and five photos. The accounts are brief but well written, giving a summary of the site and its habitats, the key species and, where relevant, threats to the site.

The book contains over 350 colour photographs, many of them stunning and most of the birds themselves. The Steller's Sea Eagles *Haliaeetus pelagicus* on the front cover take some beating but many others are equally eye-catching.

There will inevitably be arguments about the choice of sites. An explanation of how the list was drawn up forms part of the introduction and we are told that the selections were free from commercial pressure, although I can't believe that there was not one eye on the market when the decision was made to include 17 sites from both Europe and North America (indeed, there are 14 sites from the USA alone, while the whole of South America warrants only 13!). A few places, for example Niagara Falls in Canada, and Iguassu on the Argentina/Brazil border, seem to

have been included more for their scenic value than for their avifaunas. I am not convinced that ranking the sites in order from 1 to 100 has any value or fulfils any need; while it might have the largest population of birders on any given Sunday, how can north Norfolk really be the third-highest ranked site of the 17 in Europe?

Nit-picking aside, this is a superb book with some stunning photographs, one to flick through during the long winter nights – whether it be to assist with planning future travels, remind you of past trips, or simply to be inspired by the truly bewildering diversity of birds with which we are still lucky enough to share this planet.

*Paul Harvey*

# News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

## Three-quarters of Europe's common birds affected by climate change

Climate change is already having a detectable impact on birds across Europe. This is the message from a group of scientists who have created the world's first indicator of the impacts of climate change on wildlife at a continental scale. 'We hear a lot about climate change, but our paper shows that its effects are being felt right now,' said lead author Dr Richard Gregory, from the RSPB.

Of the 122 common species included in the analysis, 75% are predicted to experience declines across their ranges if they continue to respond to climatic warming in the way that the models predict. The remaining 25% are projected to increase. Dr Gregory commented: 'Although we have had only a very small actual rise in global average temperature, it is staggering to realise how much change we are noticing in wildlife populations. If we don't take our foot off the gas now, our indicator shows there will be many much worse effects to come. We must keep global temperature rise below the 2°C ceiling; anything above this

will create global havoc.'

The paper and the indicator were produced by a team of scientists from the RSPB, Durham University, the University of Cambridge, the European Bird Census Council, the Muséum National d'Histoire Naturelle, the Czech Society for Ornithology and Statistics Netherlands. Dr Stephen Willis, of Durham University, said: 'Our indicator is the biodiversity equivalent of the FTSE index, only instead of summarising the changing fortunes of businesses, it summarises how biodiversity is changing due to climate change. Unlike the FTSE, which is currently at a six-year low, the climate change index has been increasing each year since the mid 1980s, indicating that climate is having an increasing impact on biodiversity. Those birds we predict should fare well under climate change have been increasing since the mid 80s, and those we predict should do badly have declined. The worry is that the declining group actually comprises 75% of the species we studied.'

The research shows that the

populations of a number of species are projected to increase across Europe. The top ten increasing species are: Collared Dove *Streptopelia decaocto*, European Bee-eater *Merops apiaster*, Hoopoe *Upupa epops*, Cetti's Warbler *Cettia cetti*, Reed Warbler *Acrocephalus scirpaceus*, Subalpine Warbler *Sylvia cantillans*, Sardinian Warbler *S. melanocephala*, Golden Oriole *Oriolus oriolus*, Goldfinch *Carduelis carduelis* and Cirl Bunting *Emberiza cirlus*. Of those species projected to decline across Europe, the top ten worst performers are Northern Lapwing *Vanellus vanellus*, Common Snipe *Gallinago gallinago*, Lesser Spotted Woodpecker *Dendrocopos minor*, Meadow Pipit *Autulus pratensis*, Thrush Nightingale *Luscinia luscinia*, Northern Wheatear *Oenanthe oenanthe*, Wood Warbler *Phylloscopus sibilatrix*, Willow Tit *Poecile montana*, Nutcracker *Nucifraga caryocatactes* and Brambling *Fringilla montifringilla*.

You can download the paper at: [www.birdlife.org/eu/pdfs/cc\\_indicator\\_final\\_paper.pdf](http://www.birdlife.org/eu/pdfs/cc_indicator_final_paper.pdf)

## Bird diversity protects humans from killer disease

Biodiversity is beneficial to bio-security. This is the clear message from a study in the USA where exposure to West Nile virus is reduced in areas of greater bird diversity. The virus affects mainly birds but can be transferred to humans via mosquitoes (Culicidae). It first spread to North America in 2002, and has since become an epidemic, with over 28,000 human cases, including 1,100 deaths. The cost of West Nile virus-related healthcare in the USA was estimated at \$200 million in 2002 alone.

The virus is also an important threat to bird populations. Over 300 species act as hosts, although

American Robin *Turdus migratorius* has been named as largely responsible for transmission from birds to humans. 'West Nile virus may compound existing pressures – like habitat loss – to increase the risk of extinction for species,' commented Dr Stuart Butchart of BirdLife. For example, Yellow-billed Magpie *Pica uuttalli*, which is endemic to California, appears to have declined by almost 50% in the last two years as a consequence of the disease.

Scientists studying the virus looked at areas east of the Mississippi River and compared avian diversity with the number of human cases. They found that high bird diversity was linked with low

incidence of the virus in humans. They reported that about half of the human incidences of West Nile virus could be explained by the differences in local bird populations. The study's results also suggest that bird communities lowered human case numbers even when the epidemic was underway.

The way in which biodiversity and disease rates are linked has been dubbed the 'dilution effect'. Although the exact mechanisms aren't yet clear, scientists believe that increased diversity within an ecosystem reduces – or dilutes – the proportion of suitable hosts for a disease, and therefore reduces transmission rates.

## Reeve-like males are actually rather Ruff

Regular readers of the scientific literature will be familiar with this revelation – but others may be surprised to learn that a European bird is the only avian species in the world to have a ‘third sex’ of permanent female mimics within its population. Three years ago, Dutch researchers Joop Jukema and Theunis Piersma revealed that there are female-like male Ruffs *Philomachus pugnax* with their own mating strategy. They reported in *Biology Letters* that female mimics are known from many species, but that permanent alternative mating strategies are known only from an isopod, a fish, a lizard and now a bird – the Ruff.

It has been known for more than half a century that lekking male Ruffs have two breeding strategies: independent and satellite. Birds which follow the first strategy are called ‘independents’ and comprise 84% of all males; they are larger than satellite males and have black or chestnut ruffs. They stake out a display area on the lekking ground while the smaller satellite males, which have pale ruffs, hover on the fringes looking for opportunistic matings with females (Reeves) attracted to the lek.

But it appears that there is a third morph

of male Ruff, which has a permanent female-type plumage and is slightly larger than females. The Dutch researchers have called these birds ‘faeder’ Ruffs (from the Old Frisian *feder* for ‘father’) and have identified this rare genetic morph as representing a third alternative mating strategy. The theory is that faeders represent an ancestral male care-giving strategy. However, observations in aviaries and in the wild show that faeders combine feminine and masculine behaviours. And their relatively large testes (2.5× the size of normal

males’ testes) suggest that currently they behave as ‘sneaker males’ seeking opportunistic matings. Their cross-dressing plumage may fool other males – or it may not.

A recent paper in *Bird Study* (Vol. 55, part 3, pp. 241–246) shows that faeder Ruffs associate according to sex, not morphology. In other words, contrary to the authors’ predictions, faeder males do not migrate with the similar-sized and -plumaged Reeves but instead they associate with their fellow males, both on the breeding grounds and in the winter quarters.



123. Male Ruff *Philomachus pugnax* at lek.

David Tipling

## Kingfisher killed by factory closure

In what may be the first example of an avian casualty of the credit crunch, a Common Kingfisher *Alcedo atthis* has been found dead in a factory closed because of the economic downturn. Kingfisher SB35872 was ringed in December 2007, at Higham Marshes in Kent.

For the next year it regularly flew through a local factory, using it to roost in at night. Conveniently, the factory was open seven days a week, and the factory workers enjoyed the frequent flashes of cobalt blue as the bird flew through on its regular fishing trips. The

credit crunch has now forced the factory to close for three days every week, and SB35872 became trapped inside. It was found dead at the end of February after the factory’s weekly shutdown – a sad demise for such a stunning bird.

## Last chance for Titchwell?

Rising sea levels could flood large areas of East Anglia in the next half century but the RSPB is not playing King Canute in a hopeless bid to hold back the tide. Instead, the Society is planning to move its sea defences inland at its flagship Titchwell reserve, in north Norfolk.

The £1.4m plan has three stages: breach one of the existing sea walls to allow salt water into parts of the reserve, creating a mix of habitats; build a new sea wall that will protect the freshwater marsh and reedbeds, home to Eurasian Bitterns *Botaurus stellaris*, Bearded Tits *Panurus biarmicus* and Water Voles *Arvicola*

*amphibius*, and create new islands in the freshwater marsh for breeding Avocets *Recurvirostra avosetta* and wintering waders.

The RSPB has secured a funding pledge from the EU LIFE+ fund for 50% of the cost of this project and is now seeking the remaining £700,000 from its members. An appeal to RSPB members has been launched with the underlying message that the EU money will be forthcoming only if the RSPB can find its £700,000 first.

Meanwhile, ten times that sum has been invested in the new RSPB Saltholme reserve on Teesside,

which was officially opened by BBC *Springwatch* presenter (and RSPB vice-president) Kate Humble on 6th March. Saltholme is the RSPB's first visitor reserve in northeast England. It comprises 400 ha of ponds, reedbeds and wet grassland created on former ICI land. The £7m funding to create the reserve and construct the impressive discovery centre included a £2.4m grant from regional development agency One North East in recognition of the reserve's huge potential as an ecotourist attraction. In the first six weeks after it opened in January, 10,000 people had visited Saltholme.

## Seabird relaunched in style

For the past ten years, the Seabird Group (in the UK) and the Dutch Seabird Group jointly published the journal *Atlantic Seabirds*, the last issue of which (Vol. 8, part 3) appeared a year ago. The two groups have now reverted to separately publishing their own former titles, *Sula* in the case of the Dutch group, and *Seabird* in the case of the UK group. *Seabird* 21 (2008) represents a complete makeover from the old format, last seen in

1998, being larger in size, with an impressive colour cover, and colour plates throughout the 112 pages of text. The seven papers and six short notes cover topics as diverse as the identification of giant petrels *Macronectes*, an analysis of the occurrence of Brünnich's Guillemots *Uria lomvia* in Europe and the worrying decline of Leach's Storm-petrels *Oceanodroma leucorhoa* on St Kilda.

*Seabird*, which will appear

annually each autumn, publishes papers and short communications on any aspect of seabird biology, conservation, identification, and status. The geographical focus is the Atlantic Ocean and adjacent seas, but contributions are also welcome from other parts of the world provided they are of general interest. Guidelines for contributors, and membership details for the Seabird Group, are available on their website [www.seabirdgroup.org.uk](http://www.seabirdgroup.org.uk)

## White-eyes evolving faster than Darwin's finches

As the scientific world celebrates the 200th anniversary of Charles Darwin's birth – and the 150th anniversary of the publication of *On the Origin of Species* – yet more evidence of rapid speciation on an isolated island group has been published. But the discovery of a new bird to science is not in the Galapagos, and the bird is not one of Darwin's finches.

The new species has been named Vanikoro White-eye *Zosterops gibbsi* and the formal description was published in *Ibis* by Dr Guy Dutson, a British ornithologist working for Birds Australia who led a recent expedition to the island of Vanikoro. Its scientific name honours the first

person to see the species – David Gibbs. Vanikoro is a small island in the Solomon Islands archipelago, east of Papua New Guinea. The rugged volcanic island with steep, forest-covered hills was visited by Jules D'Urville in 1829 – six years prior to *The Beagle* landing in the Galapagos – who collected specimens of Vanikoro Flycatcher *Myiagra vanikorensis* and Uniform Swiftlet *Collocalia vanikorensis*.

'Genetic research has shown that white-eyes evolve new species faster than any known bird family,' said Guy Dutson. 'Islands only 3 km apart in the Solomons have their own white-eye species, and the Solomon Islands alone have 13 species of white-eye. Like Darwin's

finches, these birds have evolved unique beak structures and feeding behaviours in the absence of competitors.'

White-eyes are small sociable birds of tropical forests. As their common name implies, many have a conspicuous ring of tiny white feathers around their eyes. The Vanikoro White-eye differs from the geographically closest white-eye, the Santa Cruz White-eye *Z. sanctaecrucis*, by having a longer bill, and different leg and eye-ring colour. Vanikoro White-eyes are found in forest habitats, mostly above 350 m, and feed on insects and small fruits. During his expedition, Guy Dutson noted that Vanikoro White-eyes were abun-

## New leader for BirdLife

Dr Marco Lambertini has been appointed as the new Chief Executive of BirdLife International, and took up his post on 1st March. For the last ten years, Dr Lambertini has held a senior role at BirdLife and before that was Director of LIPU (Italian Society for the Protection of Birds). 'To be at the helm of the fantastic conservation alliance that is BirdLife International is a dream come true. This is a great opportunity to continue to strengthen our unique partnership of more than 100 conservation organisations,' he said.

Dr Lambertini, who's 50, was born in Livorno, Italy. During his career, he has been involved in all aspects of conservation – from research, policy and advocacy to site and species conservation. Under his leadership of LIPU there was a major shift in Italian attitudes and practices towards birds and wildlife; the organisation ran ambitious and successful national campaigns to reduce hunting pressure and increase the number of protected areas. During his decade in charge of network development at BirdLife it became one of the most influential non-governmental conservation organisations and now has a presence in more than 110 countries/territories.

Dr Lambertini replaces Dr Mike Rands, who has become the first Executive Director of the Cambridge Conservation Initiative, a coalition of organisations committed to conserving global biodiversity. Members include the RSPB, the BTO, BirdLife, the IUCN and Fauna & Flora International.

## Vaila's fund update

Readers may recall the 'character auction' launched by author Ann Cleeves to raise money for a travel fund for young Shetlanders in memory of Vaila Harvey (*Brit. Birds* 102: 104). Vaila's Fund was launched by former Fair Isle bird observatory warden Paul Harvey and his wife Elizabeth in memory of their 16-year-old daughter, who died last year after a brave fight against cancer.

Ann invited bids from people who wished to see their name used for a character in the fourth instalment of her Shetland Quartet of crime novels scheduled for publication in 2010. The winning bid was a magnificent £2,500 tabled by Douglas Barr. He told Ann's website [www.anncleeves.com](http://www.anncleeves.com) that: 'Over the years I have been lucky enough to go birding on Fair Isle and experienced many wonderful times there. Through birding on Fair Isle and Shetland I obviously met Paul and was aware of the tragic circumstances of Vaila's death, [and]... I could think of nothing more appropriate than to make a donation as a token of my appreciation for what I have been fortunate enough to enjoy.' Well done, Dougie.

## New guidelines for recording of rare breeding birds

With this issue of *BB* you will find a leaflet containing best practice guidelines for the recording of rare breeding birds, prepared by the Rare Breeding Birds Panel. These guidance notes provide important information that, if followed, will improve the quality of records submitted to the Panel and enable its report to be more accurate. This will also further increase the value of the Panel's archive to the ornithological record and enhance conservation uses of the data. You can find more background information within the Panel's report for 2006 in this issue (pp. 158–202).

## Bird Photograph of the Year 2009: Warehouse Express unveiled as new sponsor

We are delighted to confirm that Warehouse Express ([www.warehouseexpress.com](http://www.warehouseexpress.com)) will be sponsoring this year's event, in addition to regular sponsors A&C Black, Collins and the Eric Hosking Charitable Trust. This enables us to offer a cash prize of £1,000 for the winner of the award, now in its 33rd year. So, we invite you to submit up to three entries for this year's competition, which is free to enter and for which the closing date is 15th April 2009.

Full details of the competition can be found on the *BB* website ([www.britishbirds.co.uk/bpy.htm](http://www.britishbirds.co.uk/bpy.htm)). All images must have been taken in 2008 and be of a Western Palearctic species. Entries will be judged not only on technical excellence, but also on originality, scientific interest, aesthetic appeal and artistic composition.

Entries should be submitted to Peter Kennerley either at [peterkennerley@onetel.net](mailto:peterkennerley@onetel.net) or, in the case of CDs or transparencies, posted to 16 Coppice Close, Melton, Suffolk IP12 1RX.

We look forward to hearing from you!

# Recent reports

Compiled by Barry Nightingale and Eric Dempsey

This summary of unchecked reports covers early February 2009 to early March 2009.

**Headlines** In a quiet period, the highlights included an Ivory Gull and an early Great Spotted Cuckoo in Co. Cork, the returning Pacific Diver to Pembrokeshire, a rare English record of American Herring Gull and a Siberian Thrush of debatable provenance in Norfolk.

Red-breasted Goose *Branta ruficollis* East Head and West Wittering (Sussex) 12th February to 8th March, the individual previously in Hampshire. Ferruginous Duck *Aythya nyroca* Old Hall Marshes (Essex), 14th–26th February; Hoveton Little Broad (Norfolk), 15th February; Lynford (Norfolk), 21st February; Staines Reservoir (Surrey), 5th–7th March. Lesser Scaup *Aythya affinis* All long-stayers, at Lough Sheelin (Co. Cavan) to 1st March, Cardiff Bay Wetlands (Glamorgan) to 11th March, Holme Pierrepont (Nottinghamshire) to 11th March, Lough Arrow (Co. Sligo) to 11th February and Lough Ennel/Lough Derravaragh (Co. Westmeath), two, to 1st March. King Eider *Somateria spectabilis* Long-stayers at Earlsferry (Fife) to 10th March, near Lydd (Kent) 14th–15th February, and Drumcliffe Bay (Co. Sligo), two, to 1st March; Musselburgh (Lothian), 21st February; Flamborough Head (Yorkshire), 25th–27th February.

Pacific Diver *Gavia pacifica* Llys-Y-Fran Reservoir (Pembrokeshire), returning individual, 15th–16th February. White-billed Diver *Gavia adamsii* Long-stayer, South Nesting Bay (Shetland), 9th and 14th February; Lewis (Outer Hebrides), 12th February; Bluemull Sound (Shetland), 15th February; Mull (Argyll), 1st and 7th March.

Cattle Egret *Bubulcus ibis* Widespread reports, with multiple sightings in Co. Cork (minimum 15 between Timoleague and Roscarberry to mid February, also seven at Inchydoney and six on Great Island), Cornwall (including nine together at Hayle), Devon (up to seven), Co. Waterford (five Clashmore and two Stradbally) and Co. Wexford (two), and singles in Dorset, Isle of Man, Isle of Wight, Norfolk, Pembrokeshire, Scilly, Somerset, Suffolk and Wiltshire. Great White Egret *Ardea alba* Records from Cambridgeshire (two), Cleveland, Clyde, Derbyshire,

Lincolnshire, Oxfordshire, Somerset, Suffolk, Sussex and Co. Tipperary.

Gyr Falcon *Falco rusticolus* West Dale (Pembrokeshire), presumably long-stayer again, 21st February; Scilly, various islands, presumably same individual as in December/January, again 5th–7th March.

Long-billed Dowitcher *Limnodromus scolopaceus* Dundalk (Co. Louth), long-stayer to 1st March; South Uist (Outer Hebrides), 22nd Feb-



124. Male American Wigeon *Anas americana*, Slimbridge WWT, Gloucestershire, February 2009.

James Lees



Will Wagstaff

125. White-morph Gyr Falcon *Falco rusticolus*, St Mary's, Isles of Scilly, March 2009.

ruary. Lesser Yellowlegs *Tringa flavipes* Walberswick (Suffolk), long-stayer to 16th February.

American Herring Gull *Larus smithsonianus* Nimmo's Pier (Co. Galway), long-stayer to 3rd March; Budleigh Salterton/Otter estuary

(Devon), 13th and 20th February, and 6th–9th March; Castletownberehaven (Co. Cork), 8th March. Bonaparte's Gull *Chroicocephalus philadelphia* Great Island (Co. Cork), 10th–12th February; Cardiff (Glamorgan), 8th–11th March. Ivory Gull *Pagophila eburnea* Baltimore



www.irishbirdimages.com

126. Adult Kumlien's Gull *Larus glaucoides kumlieni*, Nimmo's Pier, Co. Galway, February 2009.

Eric Dempsey



127. First-winter Ivory Gull *Pagophila eburnea*, Baltimore, Co. Cork, March 2009.

(Co. Cork), 3rd–8th March. Forster's Tern *Sterna forsteri* Nimmo's Pier/The Claddagh, long-stayer to 5th March.

Great Spotted Cuckoo *Clamator glandarius* Ringaskiddy (Co. Cork), 15th February. Snowy Owl *Bubo scandiacus* Long-stayer Amalveor Downs/Sperris Quoit area (Cornwall), to 9th March; Shapinsay (Orkney), 19th–21st February.

Siberian Thrush *Zoothera sibirica* Glandford (Norfolk), one of unknown origin, taken into care and subsequently released, 4th March. Penduline Tit *Remiz pendulinus* Long-stayers, Clennon Valley (Devon), to 11th March, and Strumpshaw Fen (Norfolk), one or two to 2nd March; Ingrebourne Valley (London), four, 8th March. Rose-coloured Starling *Pastor roseus* Northam Burrows (Devon), 23rd February.

John Carter



128. Black-bellied Dipper *Cinclus c. cinclus*, Hunworth, Norfolk, March 2009.



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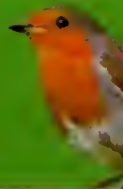
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Woking Harbour 1.45 into Selsey, Ex 11, 31 May	Baugh Beech Nature Reserve/ Reservoir About 4 miles south of the A25/A21 junction (access from B2042 or B2027) near Ide Hill, Kent. Info centre north of reservoir. 19 April, 17 May, 21 June, 19 July	Used items also on our web site.

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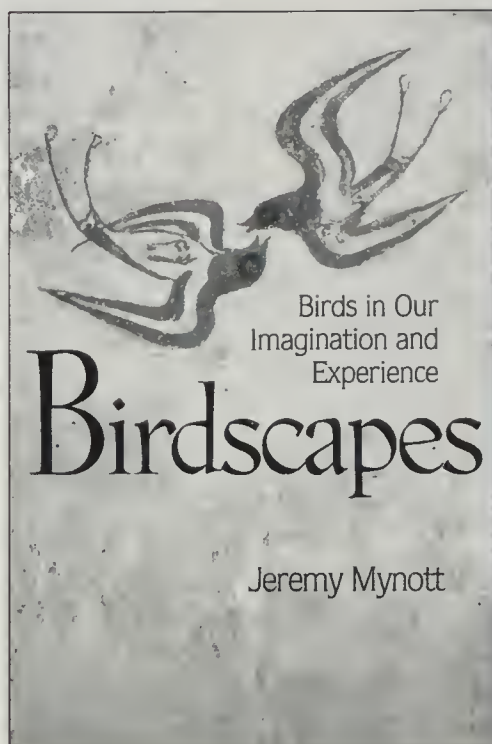


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104



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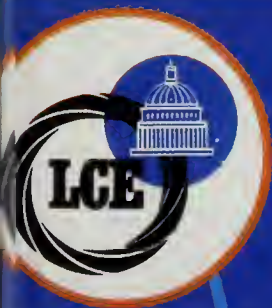
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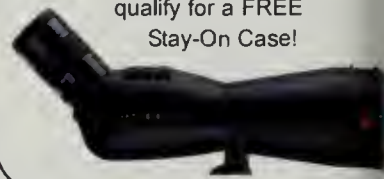
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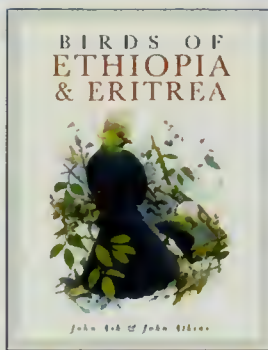
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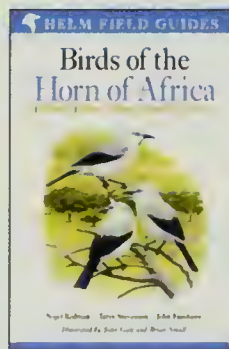
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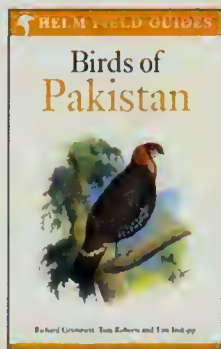
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- 5 MAY 2009

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- 230 The status of the Dartford Warbler in the UK and the Channel Islands in 2006  
*Simon Wotton, Greg Conway, Mark Eaton, Ian Henderson and Phil Grice*
- 247 The social behaviour of the Common Buzzard *Robin J. Prytherch*

## Regular features

- 274  Rarities Committee news  
BBRC AGM 2009
- 278 Letters  
Language and ornithology  
*Ernest Garcia, John A. Burton*
- 279 Notes  
The diet of Common Eiders at seaside resorts *Andrew Cannon*  
Goosanders approaching close to humans and feeding on bread  
*Robin M. Sellers*  
More on the foraging behaviour of the Grey Heron  
*Lukáš Šimek, Jan Ševčík and Josef Rajchard*  
Little Egret eating Brown Rat  
*Gordon Small*  
Common Kingfishers taking Great Crested Newts *John Webley*  
The use of natural tree holes by nesting Great Spotted Woodpeckers  
*Ken W. Smith*  
Mistle Thrushes defending Holly tree in Caithness *Stan Laybourne*  
Mistle Thrushes preying on flying insects *Tom and Janet Gladwin*
- 284 Reviews  
*Identification Guide to North American Birds. Part II. Anatidae to Alcidae*  
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- 293 Recent reports  
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the Spanish Common Breeding Bird Monitoring Scheme (Escandell 2006), and it has been suggested that the species may have declined by an average of 5.9% (95% confidence limits, 3.8%–8.1%) per annum during the period 1998–2006 (Escandell 2007). Although the reasons for this decline are not entirely clear, they are likely to include habitat change and degradation (IUCN 2008).

This paper reports on the fourth national Dartford Warbler survey in the UK, which was organised by the RSPB, BTO, Forestry Commission (England) and Natural England. The main aims of the survey were to produce a reliable estimate of the UK population size and current distribution, and also to assess the population and range in the Channel Islands.

**Methods**

**Sites covered**

Survey coverage was based on surveying 1-km grid squares, rather than on a site basis. The aim was to achieve complete coverage of a set of ‘core’ squares – those occupied during the 1994 survey and subsequently – and to survey a random selection of ‘sample’ squares from the area around those core squares. In addition, coverage of ‘extra’ squares was encouraged in a number of ways.

Information on 1-km squares occupied between 1994 and 2005 was collected from a

number of sources, including county recorders, the BTO regional network and RSPB regional staff. Data were also extracted from the national BTO/RSPB/JNCC Breeding Bird Survey (BBS) and from the BTO/RSPB/BirdWatch Ireland ‘BirdTrack’ recording scheme ([www.birdtrack.org.uk](http://www.birdtrack.org.uk)).

A stratified random sample of squares, based on habitat suitability, was selected from 5-km and 10-km buffers around the core squares. Within those buffer zones, 1-km squares containing >2 ha of lowland heath or upland heath were defined as potentially suitable. Heathland habitat information for England was extracted from the Heathland Extent and Potential (HEaP) Geographical Information Systems (GIS) map (Symes 2007), and the Natural England lowland and upland heath GIS datasets. For Wales, the following Countryside Council for Wales (CCW) Phase 1 habitat datasets were used: coastal heath; coastal heath/grassland mosaic; dry heath/acid grass mosaic; wet heath/acid grass mosaic. In addition, all coastal squares within the buffer zone were classed as potentially suitable, since there was no appropriate GIS habitat information to include known coastal breeding habitat for Dartford Warblers in England, and little available for Wales. Squares with no apparently suitable habitat were also sampled from both buffers, albeit at a low intensity,

**Table 1.** The number of core and sample 1-km squares selected for coverage in the 2006 national Dartford Warbler *Sylvia undata* survey, and the numbers actually surveyed. The total number of available 1-km squares in the suitable/non-suitable 5-km and 10-km buffers is shown in italics below the number of selected and surveyed squares. The percentage of the selected squares that were actually surveyed is shown in parentheses.

	England		Wales		UK	
	<i>selected</i>	<i>surveyed</i>	<i>selected</i>	<i>surveyed</i>	<i>selected</i>	<i>surveyed</i>
Core	943	885 (94%)	20	15 (75%)	963	900 (93%)
5-km sample						
suitable habitat	718	557 (78%)	60	37 (62%)	778	594 (76%)
<i>total available</i>	<i>4,395</i>		<i>378</i>		<i>4,773</i>	
5-km sample						
no suitable habitat	72	45 (63%)	4	2 (50%)	76	47 (62%)
<i>total available</i>	<i>8,960</i>		<i>463</i>		<i>9,423</i>	
10-km sample						
suitable habitat	204	139 (68%)	59	30 (51%)	263	169 (64%)
<i>total available</i>	<i>1,085</i>		<i>321</i>		<i>1,406</i>	
10-km sample						
no suitable habitat	23	15 (65%)	2	2 (100%)	25	17 (68%)
<i>total available</i>	<i>10,203</i>		<i>1,051</i>		<i>11,254</i>	
Sample total	1,960	1,641 (87%)	145	86 (59%)	2,105	1,727 (82%)
Extra SPA coverage	560	537 (96%)	–	–	560	537 (96%)
Extra others surveyed	–	280	–	31	–	311
TOTAL COVERAGE		2,458		117		2,575

to allow for the possibility that Dartford Warblers are expanding into other scrub habitats, especially those containing gorse, such as chalk downland. The 10-km buffer around the core squares was considered sufficient, as the majority of lowland heath in the core of the range was within the 5-km sample (see table 1).

Fig. 1 shows the survey area, encompassing the 5-km and 10-km buffers around core squares. The numbers of core squares, and of sample squares from the 5-km and 10-km buffers, are given in table 1. Squares containing suitable habitat were sampled at a slightly higher rate in the 10-km buffer than in the 5-km buffer (see table 1), mainly to ensure sufficient coverage in the 10-km buffer to allow viable population estimates to be calculated.

Many of the core and sample squares were located within the six Special Protection Areas (SPAs) where Dartford Warbler is listed as a qualifying species: Ashdown Forest, Dorset Heaths, East Devon Heaths, New Forest, Thames Basin Heaths and Wealden Heaths Phase 1 and 2 (Stroud *et al.* 2001; fig. 1). Any squares within these SPAs that were not already within the core or sample coverage were also surveyed, to ensure that the SPAs were covered fully for the purpose of designated sites monitoring (JNCC 2004).

There was also coverage of other, 'extra', squares, mainly by surveyors taking on additional squares with potentially suitable habitat. Extra coverage was also obtained through publicity in the birding press, where records were encouraged from areas away from the core range.

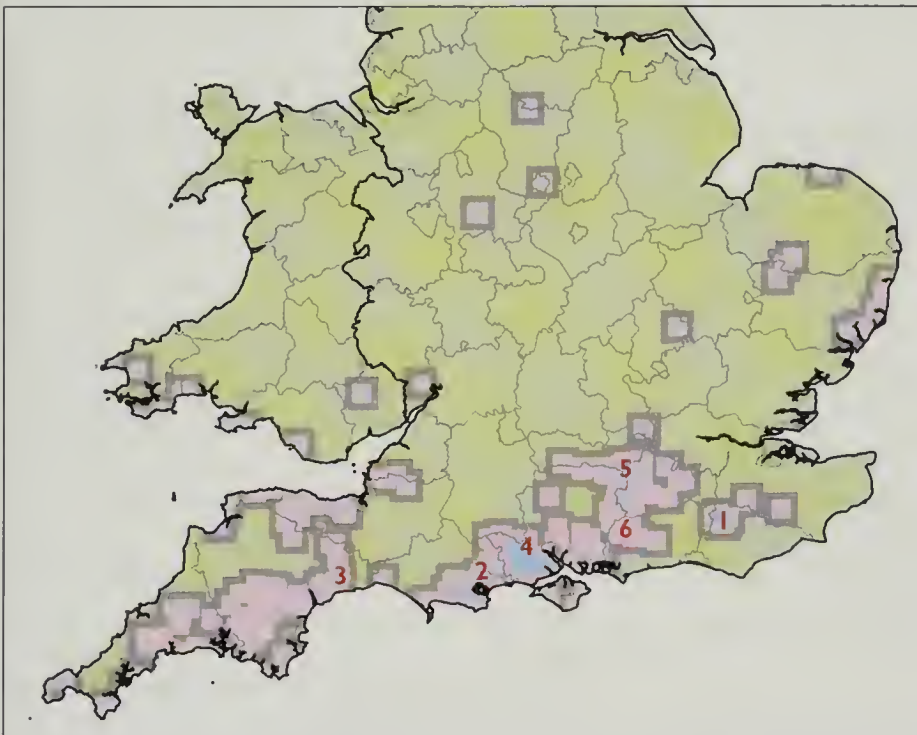
The majority of the fieldwork was undertaken by volunteers, primarily through the BTO regional network, but in some cases through other regional organisers. Staff from the survey partners and from other conservation organisations undertook a substantial amount of fieldwork. Three fieldworkers were also employed to fill in any gaps in coverage.

### Field methods

The survey methods broadly followed those outlined in Gilbert *et al.* (1998), which were derived from the 1994 survey methods (Gibbons & Wotton 1996). Each 1-km square was visited at least twice; the first visit was between 1st April and 15th May, the second between 16th May and 30th June, and with a minimum of ten days between visits. Extra visits were encouraged and 735 squares (29% of those surveyed in England and Wales) were visited more than twice. Ideally, visits were undertaken between dawn and mid morning on

mild, dry days with little wind; cold, wet or windy conditions were avoided wherever possible. All areas of potentially suitable habitat within the survey squares were covered.

Sightings were mapped using standard BTO symbols (Bibby *et al.* 2000), including simultaneous records of singing males or other territorial birds. Neighbouring territories can be separated with certainty only if the birds are heard or seen simultaneously. Birds recorded within 200 m of the square boundary were also mapped.



**Fig. 1.** The area of survey coverage in 2006, with the 5-km buffer zone highlighted in pink, and the 10-km buffer zone in grey (see text). The six Special Protection Areas where Dartford Warbler *Sylvia undata* is a qualifying species are shown in blue. The SPAs are (1) Ashdown Forest; (2) Dorset Heaths; (3) East Devon Heaths; (4) New Forest; (5) Thames Basin Heaths; (6) Wealden Heaths Phase 1 and 2.



130. Dartford Warbler *Sylvia undata*, Cornwall, April 2004.

After each visit, the number of singing males and the number of other territorial birds (such as a calling or otherwise territorial male, or a bird feeding young) were recorded on the survey form. Both males and females were most likely to be located through alarm and contact calls and while showing strong territorial behaviour.

#### *Territory analysis*

All site-map registrations were plotted onto GIS layers in MapInfo version 7.8 (MapInfo 2004). For consistency across all sites and to eliminate double counting, particularly along the edges of adjacent 1-km squares, individual territories were determined from the GIS location data for each registration. In most cases, the observer interpretation on the survey form and site map was sufficient, but any anomalies or uncertainties were dealt with consistently. The interpretation of uncertain territories was achieved mainly by identifying different individuals (e.g. two males singing simultaneously) from the site maps, or by classing individual registrations as separate territories if they were 200 m or more apart (Gilbert *et al.* 1998).

The minimum number of territories per square was defined by confirmed registrations of singing males, pairs or evidence of nesting (Bibby *et al.* 2000). Possible extra (i.e. maximum) territories in a square were defined

by situations where an individual was recorded during the survey but showed no signs of territorial or breeding behaviour, or where another territory was suspected but not confirmed by the criteria set out above. Forty-four possible extra territories were found during the survey, 1.7% of the total number of territories in England and Wales, and almost all birds involved showed no territorial or breeding behaviour. It has been assumed that these maximum figures should be used, as the presence of a Dartford Warbler in suitable habitat during the breeding season suggests potential breeding.

#### *Calculation of population estimates*

Minimum and maximum population estimates were calculated for England, Wales and the UK. To avoid any potential bias from the use of 'extra' records, data from only the core and selected sample squares were used to produce the final population estimates. The Channel Islands results were considered separately, based on a full survey of suitable habitat on Alderney, Guernsey, Herm and Jersey.

The aim for complete coverage of all core squares did not happen for a number of reasons. For missing core squares, an extrapolation was carried out based on the amount of suitable habitat in those squares. The density of territories per hectare was derived from those core squares actually surveyed and this was used to derive estimates for missing core squares. The core-square counts, including extrapolated figures, were used to produce 95% confidence limits on the core estimates (via a bootstrapping technique; Efron & Tibshirani 1986).

Population estimates within 5-km and 10-km sample zones were calculated separately. During this survey, all territories recorded in sample squares were found in apparently suitable habitat, as per the GIS layers described earlier, so the estimated population within each sample was derived only from those squares containing apparently suitable habitat. The 95% confidence limits of the sample estimates were produced by a bootstrapping procedure.

A correction factor was produced to determine the number of territories that may have been missed if the square was visited fewer than four times. The 1994 survey showed that the number of additional territories recorded on the fourth visit was small (Gibbons & Wotton 1996), and this method has been used in a number of other national surveys in the UK, such as for Cirl Buntings *Emberiza cirlus* (Wotton *et al.* 2004). During the 2006 survey, 244 squares were visited four times or more, of which Dartford Warblers were recorded in 162 (6.3% of the total number surveyed). From the mean proportions of territories recorded after each visit, it was possible to produce a revised estimate for the squares visited fewer than four times, correcting for territories that may have been missed. The overall correction factor was derived by calculating the mean of the proportions of the revised count per square against the original count, with 95% confidence limits of the correction factor produced by bootstrapping the proportions.

The England, Wales and UK estimates were divided by the correction factor to produce final population estimates. The unsorted, bootstrapped estimates from each stratum were summed and divided by the unsorted bootstrapped correction factor proportions for the 95% confidence limits.

### Broad habitat use

Territory habitat information was extracted from the GIS datasets used for the square stratification and other sources, particularly Google Maps (<http://maps.google.co.uk/maps>). The territories recorded during the 1994 and 2006 surveys were categorised into five broad habitat types: lowland heath; upland heath; coastal fringe of heather *Calluna/Erica*, gorse and rough grass; other gorse scrub (particularly on calcareous soils); and other scrub.

Although definitions of lowland and upland heath vary, an established guide for much of England and Wales is that lowland heath generally occurs below 250 m above sea level (Symes & Day 2003), so this cut-off was used here. The Google Maps website was used to confirm the other broad habitat types.

### Territory altitude

Since 1994, there has been evidence of a spread of Dartford Warblers into upland habitats in southwest England, so it was useful to compare the altitudinal range of territories in all four national survey years. The co-ordinates of the central point of all accurately mapped territories from the four national surveys were extracted from MapInfo. The Ordnance Survey dataset Land-Form PROFILE (Ordnance Survey 2001) was used to calculate the altitude of these points, to an accuracy of  $\pm 10$  m.

**Table 2.** The minimum and maximum number of Dartford Warbler *Sylvia undata* territories recorded in the core 1-km squares, and in the 5-km and 10-km buffer-sample 1-km squares, together with the number of territories recorded in extra coverage (SPA and other), with the number of occupied squares in parentheses. The final minimum and maximum population estimates are also shown (with 95% confidence limits in parentheses). Note that all territories recorded in Wales were allocated to the maximum category.

	Minimum		Maximum	
	<i>found</i>	<i>estimated</i>	<i>found</i>	<i>estimated</i>
England				
core	2,072 (489)	2,212 (2,072–2,445)	2,107 (490)	2,249 (2,107–2,494)
5-km sample	83 (47)	606 (409–811)	84 (48)	613 (423–832)
10-km sample	3 (3)	22 (3–43)	3 (3)	22 (3–43)
total sample	2,158 (539)	3,079 (2,746–3,431)	2,194 (541)	3,142 (2,827–3,491)
extra SPA	197 (92)	–	202 (94)	–
extra other	119 (70)	–	122 (71)	–
total found	2,474 (701)	–	2,518 (706)	–
Wales				
core	21 (10)	28 (21–38)	21 (10)	28 (21–38)
5-km sample	3 (3)	29 (3–67)	3 (3)	29 (3–67)
10-km sample	0	–	0	–
total sample	24 (13)	72 (41–116)	24 (13)	72 (41–116)
extra other	17 (12)	–	17 (12)	–
total found	41 (25)	–	41 (25)	–
UK				
TOTAL	2,515 (726)	3,151 (2,818–3,512)	2,559 (731)	3,214 (2,878–3,591)

**Results**

In all, 2,575 UK 1-km squares were surveyed in 2006, 2,458 in England and 117 in Wales (table 1). Of the core squares, 900 (93% of the total) were surveyed. Of the sample squares, 75% of the selected 5-km sample and 65% of the selected 10-km sample were surveyed. A further 537 1-km squares were surveyed in an attempt to ensure full coverage of the six SPAs for which the Dartford Warbler is a qualifying species, which resulted in 96% coverage of these areas.

**National population estimates**

Table 2 summarises the number of territories found in England and Wales during the survey fieldwork, and gives the estimated total population, by sampling category. In England, a maximum of 2,107 territories were located within 490 core squares surveyed, 82% of the total number of territories found during the entire survey. Adding in the territories estimated to be in the 53 core squares that were not surveyed gives a core population in England of 2,249 (2,107–2,494) territories (figures in parentheses are 95% confidence limits). In the 5-km buffer sample, 602 squares were surveyed, of which 47 were occupied, containing 83

territories. Taking into account the squares not surveyed, the 5-km buffer population estimate in England was 613 (423–832) territories. In the 10-km buffer sample, 154 squares were surveyed; just three territories were found, in three squares. The 10-km buffer population in England was thus calculated at 22 (3–43) territories. In addition, two territories were recorded beyond the 10-km square buffer. The final population estimate for England in 2006, combining core and selected sample square data as described in the methods, was 3,142 (2,827–3,491) territories.

In Wales, 15 core squares were surveyed, of which ten were occupied, containing 21 territories. In the 5-km buffer sample, 39 squares were surveyed and three territories located; the population was calculated to be 29 (3–67) territories. No territories were found in the 32 10-km buffer sample squares surveyed. The final population estimate for Wales in 2006 was 72 (41–116) territories.

An additional 537 1-km squares were surveyed in an attempt to achieve full coverage of the six relevant SPAs. In all, 1,068 of a potential 1,107 1-km squares were covered and 202 territories were recorded.

**Table 3.** The number of Dartford Warbler *Sylvia undata* territories recorded in the UK in 2006, by county. Estimated county totals, based on extrapolation from sampled squares, have been derived for those counties where at least 20 territories were recorded.

	Located (max.)	% UK	Estimated (max.) <sup>1</sup>	% UK
Berkshire	21	0.8	24 (21–37)	0.7
Buckinghamshire	1	<0.1	–	
Cornwall	29	1.1	51 (29–83)	1.6
Devon	233	9.1	364 (253–494)	11.3
Dorset	754	29.5	879 (754–1,059)	27.4
Hampshire	631	24.7	804 (668–937)	25.0
Isle of Wight	5	0.2	–	
Norfolk	1	<0.1	–	
Somerset	131	5.2	170 (131–257)	5.3
Staffordshire	3	0.1	–	
Suffolk	130	5.1	142 (130–240)	4.4
Surrey	471	18.4	522 (471–650)	16.3
East Sussex	38	1.5	49 (38–65)	1.5
West Sussex	68	2.7	79 (68–119)	2.5
West Midlands	2	0.1	–	
England	2,518	98.4	3,142 (2,827–3,491)	97.8
Carmarthenshire	10	0.4	–	
Glamorgan	12	0.5	–	
Gwent	4	0.2	–	
Pembrokeshire	15	0.6	–	
Wales	41	1.6	72 (41–116)	2.2
UK	2,559		3,214 (2,878–3,591)	

<sup>1</sup> Note that the sum of the estimated county totals does not match the total England estimate for a number of potential reasons, but is partly due to the number of 1-km squares overlapping county boundaries and the lack of occupied sample squares in some counties.

**Table 4.** The number of Dartford Warbler *Sylvia undata* territories recorded, by county, in England and Wales, and by National Park, during national surveys.

	1963	1974	1984	1994	2006
Berkshire	0	0	0	2	21
Buckinghamshire	0	0	0	0	1
Cornwall	0	0	6	7	29
Devon	0	3	2	163	233
Dorset	4	286	127	639	754
Hampshire	6	c. 250	219	645	631
Isle of Wight	0	6	0	9	5
Norfolk	0	0	0	0	1
Somerset	0	0	0	7	131
Staffordshire	0	0	0	0	3
Suffolk	0	0	0	0	130
Surrey	0	1	69	175	471
East Sussex	1	15	0	29	38
West Sussex	0	0	0	6	68
West Midlands	0	0	0	0	2
England	11	c. 561	423	1,682	2,518
Carmarthenshire	0	0	0	0	10
Glamorgan	0	0	0	0	12
Gwent	0	0	0	0	4
Pembrokeshire	0	0	0	0	15
Wales	0	0	0	0	41
UK	11	c. 561	423	1,682	2,559
<i>Brecon Beacons</i>	0	0	0	0	4
<i>Dartmoor</i>	0	0	0	4	52
<i>Exmoor</i>	0	0	0	1	118
<i>New Forest</i>	6	c. 250	198	574	453
<i>Pembrokeshire</i>	0	0	0	0	9
<i>South Downs</i>	1	(15)	0	6	66

surveys. It is notable that Hampshire is the only significant county where the number of recorded territories declined between 1994 and 2006, albeit by only 2%.

In the core part of the range, there has been a large increase in Surrey between 1994 and 2006, from 175 to 471 territories, primarily on the Thames Basin and Wealden Heaths. Elsewhere in England, the spread of the population since 1994 is reflected by the large increase in the Somerset population, from seven to 131 territories, and by the numbers found in Suffolk in 2006 (130 territories), since the first breeding attempt in 1995 (Crewe 1997). Also of interest are the records from Cannock Chase, in Staffordshire (three territories), and Sutton Park, in the West Midlands (two territories); these sites are less than 20 km apart. The closest Dartford Warblers to these sites are in the Brecon Beacons, Gwent, c. 115 km from Sutton Park and c. 125 km from Cannock Chase.

Finally, 311 'extra' 1-km squares (see methods) were also surveyed. Of these, 280 were in England (122 territories were recorded in 71 squares) and 31 in Wales (17 territories were recorded in 12 squares). Only four territories were recorded beyond the 10-km buffer zone, all in Wales. No Dartford Warbler territories were recorded in squares containing no suitable breeding habitat, as defined above.

The UK population estimate from this survey was calculated to be 3,214 territories (2,878–3,591), an increase of 70% on the 1994 estimate of 1,889 territories.

### Regional numbers

Table 3 shows the number of territories located in each county in England and Wales. Over 50% of territories located were found in Dorset and Hampshire, with a maximum of 754 and 631 respectively. Table 3 also provides a population estimate for those counties where 20 or more territories were found, based on extrapolation from sampled squares. Table 4 gives a detailed county breakdown of numbers from all national

surveys. In Wales, there has been an encouraging spread along the south coast since the first record in Gwent in 1998 (Williams 2000). Although most territories were found on heathland sites on the coast or nearby in Carmarthenshire, Glamorgan and Pembrokeshire, there were four territories in the Brecon Beacons.

### Range

Nationally, the number of occupied 10-km squares increased by 117% between 1994 and 2006, from 58 to 126 (in England from 58–110, in Wales from 0–16). A summary of 10-km-square occupancy between 1963 and 2006 is shown in table 5. Accurate data are available from the low point of the Dartford Warbler national population, in 1963, from the two national atlas periods (Sharrock 1976; Gibbons *et al.* 1993) and from the four national surveys.

The 2006 survey shows a significant range shift since the first national survey in 1974. Fig. 2 shows the 10-km-square distribution in the four national survey years. The distribution in

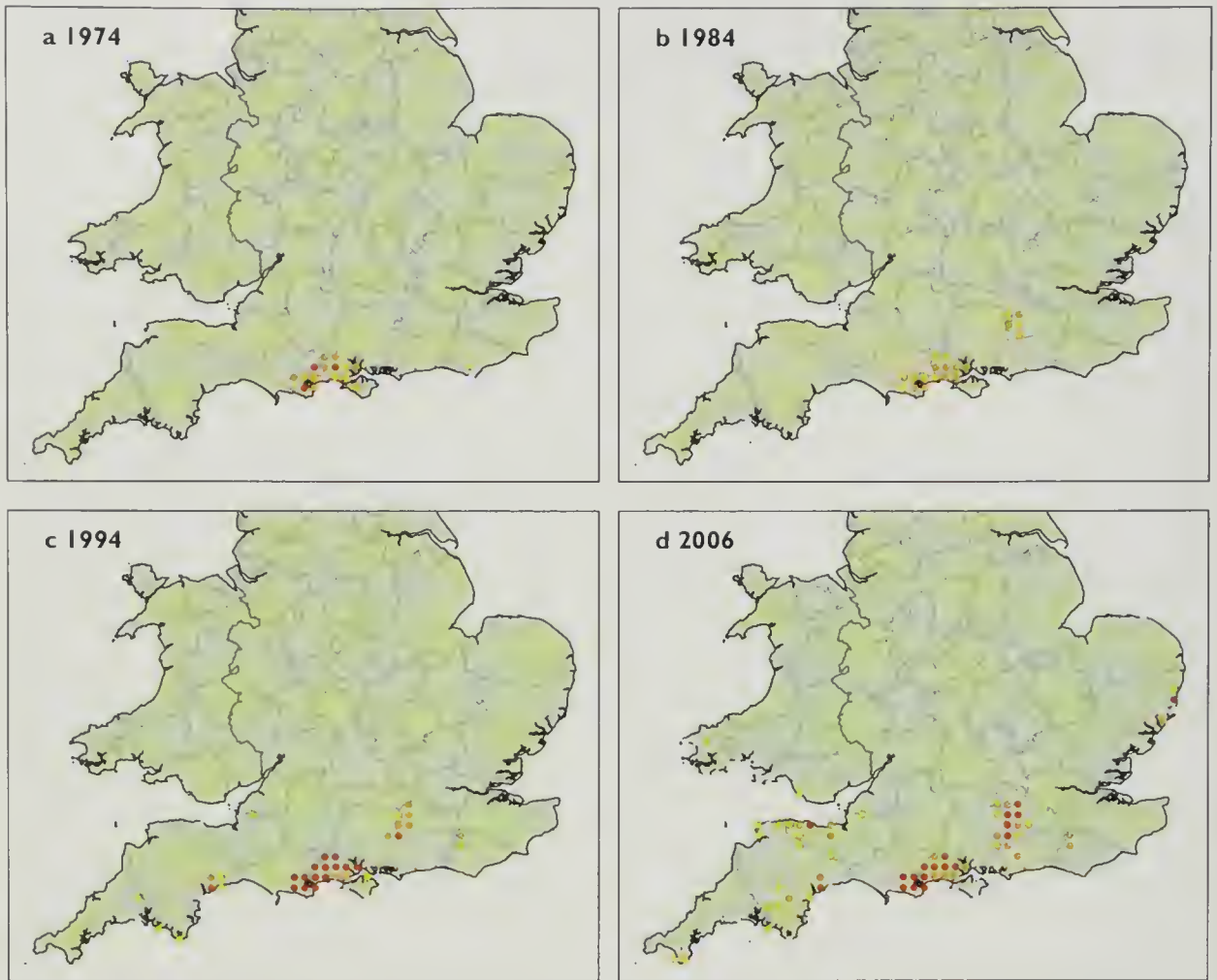


Fig. 2. Dartford Warbler *Sylvia undata* distribution and abundance, by 10-km square, in (a) 1974, (b) 1984, (c) 1994 and (d) 2006. Symbol colours denote number of territories: white (1–4 territories), yellow (5–14 territories), orange (15–49 territories), red (50+ territories).

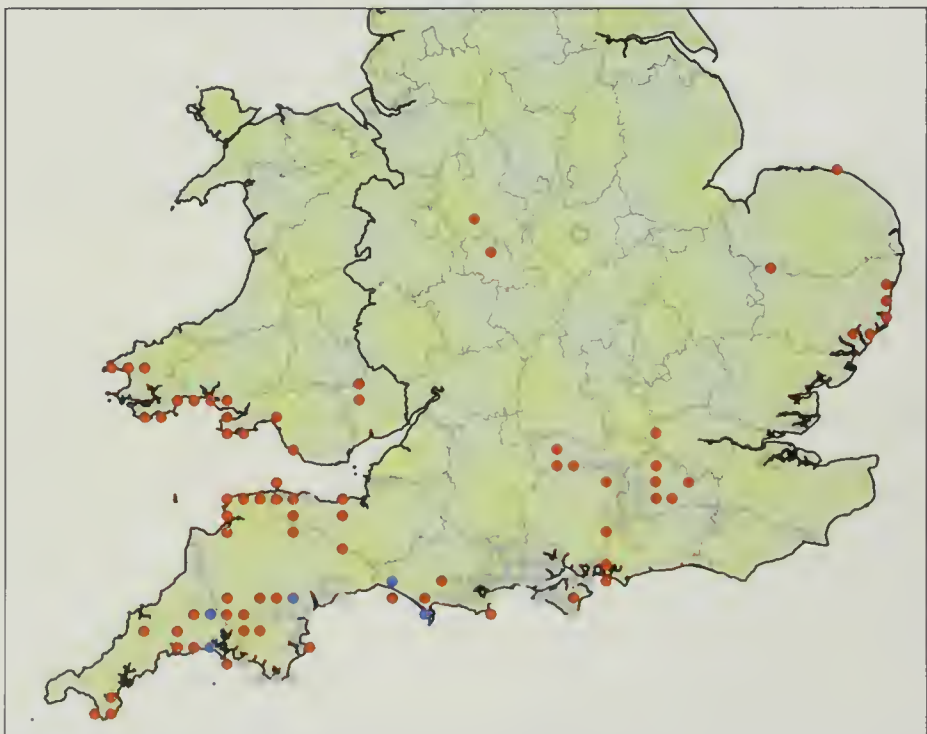


Fig. 3. The change in 10-km-square occupancy between the 1994 and 2006 national Dartford Warbler *Sylvia undata* surveys – a gain is shown by a red circle, a loss by a blue circle and squares occupied in both years by a grey circle.

**Table 5.** Number of 10-km squares occupied by Dartford Warblers *Sylvia undata*, nationally and by Government Office Region (GOR), between 1963 and 2006. In some cases, a 10-km square may occur in more than one GOR. For 2006, the number of 10-km squares in which there was survey coverage is shown in parentheses.

	1963	1968–72	1974	1984	1988–91	1994	2006
East England	0	0	0	0	0	0	7 (22)
East Midlands	0	0	0	0	0	0	0 (1)
South East	4	✓	11	16	✓	29	43 (72)
South West	1	✓	13	15	✓	32	61 (121)
West Midlands	0	0	0	0	0	0	2 (3)
Yorkshire & Humber	0	0	0	0	0	0	0 (1)
England	5	28	23	29	45	58	110 (220)
Wales	0	0	0	0	0	0	16 (29)
UK	5	28	23	29	45	58	126 (249)
Channel Islands <sup>1</sup>	–	3	–	–	5	–	8 (8)

<sup>1</sup> The British National Grid does not cover the Channel Islands; instead the Universal Transverse Mercator (UTM) grid is used to derive the figures

✓ = occupied

1974 and 1984 was broadly similar, though with the range increasing in the Thames Basin and Wealden Heaths by 1984, while by 1994, the increasing range is evident in Cornwall, Devon and Somerset. Fig. 3 highlights the major range increase between 1994 and 2006: of 126 occupied 10-km squares in England and Wales in 2006, 73 (58%) were not occupied in 1994. Only five 10-km squares were occupied in 1994 and not in 2006.

Southeast and southwest England are the key regions, where 10-km-square occupancy has

increased by 48% and 91% respectively between 1994 and 2006. There has been a notable extension of range in the two upland national parks in southwest England since 1994. The number of occupied 10-km squares increased on Dartmoor from two in 1994 to nine in 2006, and on Exmoor from one in 1994 to eight in 2006. In eastern England, there were seven occupied 10-km squares, five of these encompassing the developing population on the Suffolk coast heaths.



Guy Rossler/RSPB

**131.** Southwest England was a key region for the Dartford Warbler's *Sylvia undata* increase between the national surveys of 1994 and 2006. In particular, there was a notable range extension in the two upland national parks during that time; the number of occupied 10-km squares increased on Dartmoor from two in 1994 to nine in 2006, and on Exmoor (shown here) from one in 1994 to eight in 2006.

### Channel Islands

Eighty-five territories were located in the Channel Islands, 53 (62%) of these on Jersey, in 18 1-km squares. On Alderney, 20–24 territories were recorded in five 1-km squares, seven territories were found in six 1-km squares on Guernsey, and a single territory was found on Herm. Eight 10-km squares were occupied: one covering Alderney, three on Guernsey (including the Herm territory) and four on Jersey.

### Habitat use

In 2006, 89% of territories were located in traditional lowland heath habitat (table 6). In 1994, 98% of territories were located on lowland heath, and the main difference between the two surveys is the increase in numbers on upland heath, from two (0.1%) territories in 1994 to 175 (6.8%) in 2006.

Almost all the territories recorded in the key counties of Dorset and Hampshire in 1994 and 2006 were on lowland heaths. In Dorset, the number of territories on lowland heaths increased from 626 in 1994 to 718 in 2006, but in Hampshire there was a decrease from 644 to

619 in the same period. The latter statistic reflects declines in the New Forest, as numbers have increased markedly since 1994 in the Thames Basin and Wealden Heaths (table 7). The percentage of the national Dartford Warbler population found on lowland heath in Dorset and Hampshire has declined sharply between the two surveys (table 6), because of population increase and expansion in other counties and into other habitats. In both counties, more territories were recorded in coastal scrub in 2006, and in Dorset there was also an increase along the chalk downland of the Purbeck Ridge. In Surrey, all 471 territories found in 2006 were on lowland heath, 18.4% of the national population.

Only 0.1% of Dartford Warblers were on upland heath in Devon and in Somerset in 1994, but by 2006 the figures had increased to 2.5% and 4.1% respectively. It is also worth noting that numbers on lowland heath in Devon declined between the two surveys, from 145 to 135 territories. In Wales, more than half the territories found were in the mosaic of coastal heath and gorse habitats, and four were in upland heath, in the Brecon Beacons.

**Table 6.** Percentage of the national total of Dartford Warbler *Sylvia undata* territories, by county and broad habitat category, during the 1994 and 2006 national surveys.

	Lowland heath 1994, 2006	Upland heath 1994, 2006	Coastal fringe* 1994, 2006	Other gorse** 1994, 2006	Other scrub 1994, 2006
Berkshire	0.1, 0.8	–, –	–, –	–, –	–, –
Buckinghamshire	–, <0.1	–, –	–, –	–, –	–, –
Cornwall	0.4, 0.9	–, <0.1	0.1, 0.2	–, –	–, –
Devon	8.6, 5.3	0.1, 2.5	0.9, 1.3	0.1, –	–, –
Dorset	37.2, 28.1	–, –	0.1, 0.3	0.7, 1.1	–, –
Hampshire	38.3, 24.2	–, –	0.1, 0.4	–, 0.1	–, –
Isle of Wight	0.5, 0.2	–, –	–, –	–, –	–, –
Norfolk	–, <0.1	–, –	–, –	–, –	–, –
Somerset	0.4, 0.9	0.1, 4.1	–, 0.1	–, <0.1	–, –
Staffordshire	–, 0.1	–, –	–, –	–, –	–, –
Suffolk	–, 4.9	–, –	–, –	–, 0.1	–, 0.1
Surrey	10.4, 18.4	–, –	–, –	–, –	–, –
East Sussex	1.7, 1.4	–, –	–, –	–, <0.1	–, –
West Sussex	0.4, 2.6	–, –	–, –	–, –	–, <0.1
West Midlands	–, 0.1	–, –	–, –	–, –	–, –
England	1,648, 2,252	2, 171	19, 57	13, 35	–, 3
Carmarthenshire	–, –	–, –	–, 0.4	–, –	–, –
Glamorgan	–, 0.2	–, –	–, 0.3	–, –	–, –
Gwent	–, –	–, 0.2	–, –	–, –	–, –
Pembrokeshire	–, 0.4	–, –	–, 0.2	–, –	–, –
Wales	–, 16	–, 4	–, 21	–, –	–, –
UK	1, 648, 2,268	2, 175	19, 78	13, 35	–, 3
% UK	98.0, 88.6	0.1, 6.8	1.1, 3.0	0.8, 1.4	–, 0.1

\* Mosaic of gorse, heath and rough grass  
 \*\* Primarily gorse blocks on chalk grassland

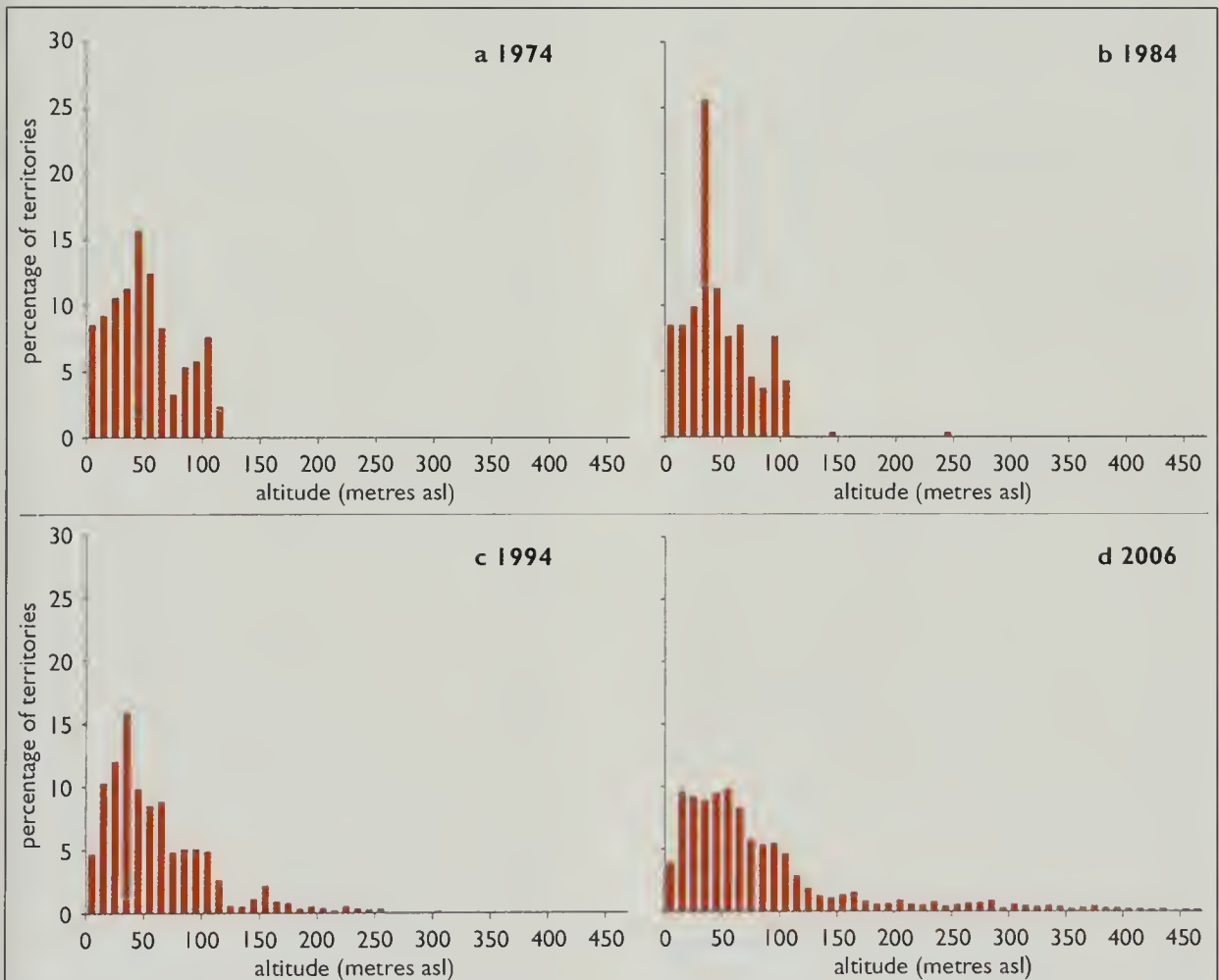
**Table 7.** The number of territories recorded within the boundaries of Special Protection Areas where Dartford Warbler *Sylvia undata* is currently a qualifying species, between 1963 and 2006. The total number found within the six SPAs is also shown (with the percentage of the national total in parentheses). The final column gives population estimates for each SPA in 2006 (with 95% confidence limits in parentheses), based on extrapolation from sampled squares, for comparison.

SPA	1963	1974	1984	1994	2006 actual	% change 1994–2006	2006 estimate
Ashdown Forest	0	0	0	28	38	+36	48 (27–70)
Dorset Heaths	4	223	118	596	644	+8	821 (662–989)
East Devon Heaths	0	0	2	123	70	-43	85 (50–131)
New Forest	6	250	187	535	420	-21	471 (388–556)
Thames Basin Heaths	0	0	31	101	382	+278	401 (297–516)
Wealden Heaths	0	1	43	156	272	+74	290 (203–381)
Total (%)	10 (91)	474 (85)	381 (91)	1,539 (91)	1,826 (72)	+19	2,116 (1,900–2,381)

### Numbers in SPAs

The proportion of the UK population found in the six SPAs where the Dartford Warbler is listed as a qualifying species declined from 91% in 1994 to 72% in 2006. This largely reflects the range expansion elsewhere in that period, since numbers in most SPAs increased (table 7), including a 278% increase in the Thames Basin

Heaths, from 101 to 382 territories. Overall, the number of territories recorded in the six SPAs increased by 19% between 1994 and 2006, although population declines were evident in two SPAs: the East Devon Heaths (by 43%, from 123 in 1994 to 70 in 2006) and the New Forest (by 21%, from 535 in 1994 to 420 in 2006).



**Fig. 4.** The proportion of territories within 10-m altitude bands, for each national Dartford Warbler *Sylvia undata* survey. Territory altitude data were obtained from the Ordnance Survey Land-Form PROFILE dataset (Ordnance Survey 2001). (a) 1974 (n=435); (b) 1984 (n=356); (c) 1994 (n=1,514); (d) 2006 (n=2,507).

### *Territory altitude*

Fig. 4 shows the marked shift in altitudinal range of Dartford Warbler territories between 1974 and 2006. In 1974, all territories were recorded below 120 m above sea level (asl) and in 1984 all but two were found below 110 m asl; in both years, 98% of the territories were below 100 m asl. An increasing number of territories were found between 110 m and 260 m asl in the 1994 survey, while an even more pronounced altitudinal spread was apparent in 2006, when territories were recorded at over 460 m asl (one on Exmoor, at 462 m, was the highest). The proportion of territories below 100 m asl fell from 89% in 1994 to 79% in 2006, and there is significant variation in the mean territory heights between survey years ( $F_{[3, 4, 808]}=79.71$ ,  $P<0.001$ ).

### *Discussion*

The 2006 survey has shown a large increase in both numbers and range since 1994. The final population figure for England and Wales included estimates of the core, 5-km buffer and 10-km buffer populations, and a survey intensity correction factor for squares surveyed fewer than four times. The degree of error associated with the sample strategy and the visit correction factor is indicated by the nature of the 95% confidence limits: for the 2006 UK minimum and maximum estimates, the percentage errors of the confidence limits were 11.0% and 11.1% respectively, suggesting that the survey design was robust and precise (Gregory *et al.* 2004).

### *Current and potential UK range*

The range increase since 1994 is of considerable interest, as the survey results have shown that Dartford Warblers are colonising new areas of lowland heath and are also moving into heathland habitats in upland areas in southwest England and Wales. Thus, the potential range for the species in the UK is now considerably greater than the extent of lowland heath, which defined the traditional range of the species.

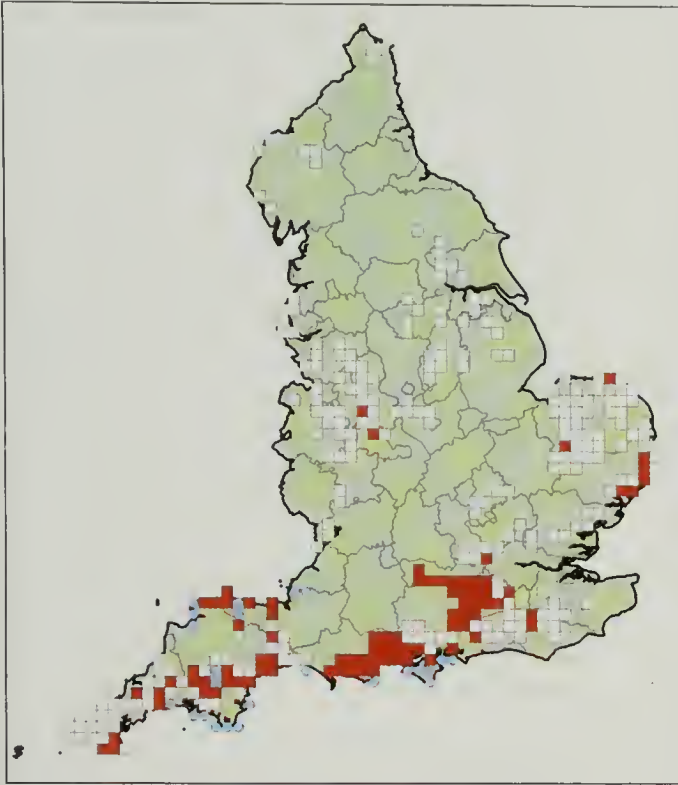
For the counties that were occupied in 1994, higher numbers were recorded in 2006 in all but Hampshire and the Isle of Wight (table 4). However, from the sampling strategy of the 2006 survey, an estimate for Hampshire of 804 (668–937) territories was produced (table 3). The maximum Hampshire population in 1994 was estimated to be 725 territories (Gibbons &

Wotton 1996), suggesting that there may well have been an increase here since 1994.

From annual monitoring of the Thames Basin and East Devon Heaths, it is apparent that fewer Dartford Warblers were recorded there in 2006 than in 2005. In the Thames Basin Heaths SPA, numbers fell by 30%, from 540 territories to 382, with a decline of similar proportions on the Wealden Heaths SPA (John Clark & John Eyre pers. comm.). In both areas, it was suggested that cold winter weather in February and early March 2006, exacerbated by large-scale gorse clearance at some key sites, might have contributed to these declines (John Clark & John Eyre pers. comm.). Numbers on the East Devon Heaths SPA dropped by a similar proportion between 2005 and 2006, where it was suggested that poor weather in late May was a possible reason for under-recording (Thornett 2007). The populations here, however, are now well established, compared with the situation prior to the 1990s (table 6), and it should be noted that year-on-year changes can be caused by stochastic events, such as habitat loss through heathland fires or localised harsh winter weather. There was little sign of any potential effects of poor weather in eastern England, where numbers in Suffolk increased from 113 territories in 2005 (*Suffolk Bird Report* 2005) to 130 in 2006.

The key habitat for Dartford Warblers continues to be lowland heath, with almost 90% of the recorded territories in 2006 in this habitat (table 6). In England, there are currently around 60,000 ha of existing lowland heath according to the HEaP dataset (Symes 2007), although there are limitations to this dataset and not all areas of lowland heath may be included. Fig. 5 shows the 323 10-km squares in England containing some lowland heath, according to that dataset. Of these, 86 held one or more Dartford Warbler territories in 2006, although these 86 squares contain 70% of existing lowland heath, some 42,000 ha, while the 237 unoccupied squares currently contain just under 18,000 ha.

It is perhaps unsurprising that areas of lowland heath away from the core southern England counties are not yet occupied. Dartford Warblers are currently absent from apparently suitable areas such as West Penwith, Cornwall, and the East Sussex/Kent border (fig. 5), although there is in fact little contiguous suitable habitat in West Penwith, while much of the current heathland on the East Sussex/Kent



**Fig. 5.** The distribution of lowland heath in England, by 10-km square, according to the Heathland Extent and Potential (HEaP) dataset. The 86 10-km squares occupied by Dartford Warblers *Sylvia undata* in 2006 are shown in red. A further 24 10-km squares occupied in 2006, but where lowland heath has not been identified by the HEaP dataset, are shown as blue circles.

border is overgrown with trees and shrubs (Nigel Symes pers. comm.). The Breckland heaths are considered generally unsuitable for Dartford Warblers, being predominantly grass-dominated heaths with little gorse, although there are pockets of suitable habitat there where the species could become established. There are a number of ongoing heathland restoration projects in a number of counties, including Bedfordshire, Dorset, Kent and Surrey. For example, Pembury Walks, in Kent, has had much restoration work in recent years and now supports breeding habitat suitable for Dartford Warblers (Nigel Symes pers. comm.).

The marked increase in recent years on Exmoor, and to a lesser extent on Dartmoor, suggests that upland heath can be increasingly important for Dartford Warblers. There is great potential for this species to spread further into upland habitats in South Wales, with a small population now establishing on the Brecon Beacons, and also into southern areas of the Peak District.

### Conservation issues in the UK

Lowland heathland in southern England

remains the key habitat for Dartford Warblers in the UK. This habitat continues to be subject to anthropogenic pressures despite much of it being afforded protected status of one form or another. The updated UK lowland heathland Biodiversity Action Plan currently estimates that there are 58,000 ha of lowland heathland in England and 12,500 ha in Wales, and that the habitat is increasing in England, through recreation and restoration ([www.ukbap.org.uk/UKPlans.aspx?ID=15](http://www.ukbap.org.uk/UKPlans.aspx?ID=15)). Current problems include habitat fragmentation, lack of or inadequate habitat management and development pressures, all of which have implications for Dartford Warbler populations.

In the first six years of the Common Standards Monitoring of UK Sites of Special Scientific Interest (SSSIs), between 1999 and 2005, only 17% of lowland heath SSSIs were considered to be in favourable condition, although another 47% were considered to be unfavourable but recovering (Williams 2006). Furthermore, in a recent sample survey of 104 English non-SSSI lowland heaths, none was considered to be in favourable condition (Hewins *et al.* 2007). Although there has been considerable work on the restoration and recreation of lowland heath in recent years in counties such as Dorset, Suffolk and Surrey, where the response by Dartford Warblers has been positive, there is obviously still much to be done.

Housing developments close to heathland sites have been shown to increase levels of disturbance to key heathland species (e.g. Liley & Clarke 2003), while increasing recreational use has been shown to have an adverse effect on European Nightjars *Caprimulgus europaeus* (Langston *et al.* 2007), Wood Larks *Lullula arborea* (Mallord *et al.* 2007) and Dartford Warblers (Murison *et al.* 2007). Specifically for Dartford Warblers, Murison *et al.* (2007) showed that increased levels of recreational disturbance could affect breeding productivity adversely, at least in heather-dominated territories. The Countryside Rights of Way Act (2000) introduced a statutory right of access to a number of open habitats, including lowland heathland and moorland, which has implications for increased disturbance levels (Bathe 2007). The Act does, however, allow

mitigation measures for nature conservation purposes, through management (such as controlling the positioning of footpaths and entry points) or formal restrictions on access (Bathe 2007).

There are currently major levels of new housing development proposed in southern England, which could affect lowland heathland sites. Indeed, to meet existing allocations, over 40,000 homes will need to be built close to the Thames Basin Heaths SPA by 2016 alone, with this figure set to increase when the South East Plan targets are adopted ([www.southeast-ra.gov.uk/seplan.html](http://www.southeast-ra.gov.uk/seplan.html)). Under European and UK law, housing and other development that could significantly affect an SPA must be subject to an assessment of its effects on the key bird populations of that SPA. Development that cannot be mitigated will be allowed only in very exceptional circumstances. Therefore, Natural England, the local authorities concerned and other partners have been working together to develop planning guidance, the Thames Basin Heaths Delivery Framework ([www.southeast-ra.gov.uk/sustainability\\_tbh\\_jsp.html](http://www.southeast-ra.gov.uk/sustainability_tbh_jsp.html)). This aims to provide local authorities with a framework to deliver developer-funded mitigation, comprising alternative public open spaces for recreation, access management measures on the SPA and monitoring to ensure that these measures are effective at preventing further pressure from new and existing visitors.

In Dorset, an 'Interim Planning Framework' has been set up, by Dorset County Council and Natural England, with RSPB involvement, to counter the effects of similar recreational and urban pressures and has been formally adopted by all the relevant local authorities. It co-ordinates the collection of a financial contribution from most residential developments within 5 km of designated heathland sites and funds measures to reduce or avoid the risk of further harm to the sites from the increased local population ([www.purbeck.gov.uk/pdf/08-12-10%20Dorset%20Heathland%20IPF%20amended\\_costs.pdf](http://www.purbeck.gov.uk/pdf/08-12-10%20Dorset%20Heathland%20IPF%20amended_costs.pdf)). The local authorities are now working on a robust, long-term solution to address this issue and secure the protection of the heaths over the next 20 years and beyond, through what is known as the Dorset Heathlands Joint Development Plan Document.

The continued growth of the UK Dartford Warbler population is important in a global

context, given the recent re-evaluation of the species' status to globally Near Threatened (IUCN 2008). This, as well as its status as a Species of European Concern (SPEC 2), will ensure the Dartford Warbler's continued presence on the amber list of the Birds of Conservation Concern in the UK, despite its recent increase in both population size and range. One of the key criteria for amber-listing previously was the historical, but recovering, population decline (Gregory *et al.* 2002), but this is no longer valid given the increase in numbers and range since the last national survey (Eaton *et al.* in press). There are, however, a number of counties where the species was recorded in the nineteenth century that have yet to be recolonised (Holloway 1996), such as Bedfordshire, Gloucestershire, Oxfordshire and Shropshire, although none of these were ever considered strongholds for Dartford Warblers. It is a measure of the current population level that we can now consider it possible, or even likely, that more counties will be (re)colonised in the coming years.

#### *Climate change*

It is possible that the shift in the altitudinal distribution of Dartford Warblers between 1984 and 2006 (fig. 4) could be linked to climate change during this period. A recent indicator measuring the impact of climate change on European bird populations during 1980–2005 (Gregory *et al.* 2009) shows a marked increase since the late 1980s, coinciding with a period of rapid warming. This fits with the observed altitudinal and distributional changes shown by Dartford Warblers between the 1974 and 1984 surveys and the 1994 and 2006 surveys.

Huntley *et al.* (2007) suggested that the simulated potential late twenty-first century global distribution of the Dartford Warbler could include much of England and Ireland, although more than 60% of its present range would be no longer suitable. The current declines in Spain are of concern, as the Atlas by Huntley *et al.* predicts that climate change will force Dartford Warblers to retreat from most of Spain.

The potential changes to Dartford Warbler numbers and distribution over the coming century, both in the UK and across its global range, are thus likely to provide an invaluable case study of a species responding rapidly to changes in climate.

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## Postscript – Dartford Warblers in the UK during the 2008/09 winter

The 2008/09 winter was the coldest winter since 1995/96, according to the Met Office ([www.metoffice.gov.uk/corporate/pressoffice/2009/pr20090225.html](http://www.metoffice.gov.uk/corporate/pressoffice/2009/pr20090225.html)). During early February 2009, in particular, there was heavy snowfall in much of the country, including the core Dartford Warbler counties in southern England. There have been anecdotal reports, particularly from sites in the Thames Basin and Wealden Heaths, that Dartford Warbler numbers in some areas appear to have crashed following this spell of cold weather. It will be very useful to gain some understanding of the effect of this cold spell and we would be grateful if any Dartford Warbler records from the 2009 breeding season could be entered onto BirdTrack ([www.birdtrack.org.uk](http://www.birdtrack.org.uk)). As stated in the paper, however, the species has been affected by harsh winters in the past and is known to recover quickly in numbers and range following a period of milder winters. Finally, it should also be noted that the Met Office states in the above press release: ‘Despite the cold winter this year, the trend to milder and wetter winters is expected to continue, with snow and frost becoming less of a feature in the future.’

Simon Wotton

Dan Powell



# The social behaviour of the Common Buzzard

Robin J. Prytherch

**ABSTRACT** During a long-term study of the Common Buzzard *Buteo buteo* in Avon, special emphasis was placed on social behaviour. This is shown to be more complex than previously thought, with several new behaviours being described. Furthermore, flight behaviours are shown to be distinctive for the two components of a resident population: territorial pairs and unpaired (non-breeding), mostly one- to three-year-old birds. Buzzards defend their territories from intruding birds by using assertive postures initially. If necessary, further, more demonstrative, behaviours are directed at intruders. These behaviours help the birds to avoid fighting, but this does happen rarely. These and other behaviours serve to advertise the presence of a pair in a territory and are important in pair-bonding. For breeding pairs, activity is normally restricted to the territory, but some males engage in extra-territorial chases, which may involve a form of reciprocal altruism. Some unpaired young birds defend territories, but do not use the full repertoire of behaviours. Some aspects of pair formation and relations within the family group are described, as well as perched postures. The behaviour of juveniles is distinctive especially with regard to play, an activity that can be easily confused with adult behaviours. A few exceptions are described. Suggestions for the origins of the displays are made.

A crucial aspect of my long-term study of the Common Buzzard *Buteo buteo* in Avon has been an attempt to unravel the intricate nature of the species' social behaviour, the results of which I present here. Other aspects of the study, which commenced in 1980 and still continues, concern population monitoring, territory size and topography, breeding biology, nest-sites, and individual life histories, all gathered during over 18,000 hours of fieldwork in my 75-km<sup>2</sup> study plot, which lies just west of Bristol. The area comprises a mixture of woodland (mostly deciduous), grassland (meadows for cattle, horses and sheep) and some arable land, and rises from sea level through wide, low-lying valleys to ridges and plateaus up to about 180 m. There are many villages, as well as three large conurbations adjacent to the area.

To gather information, I spent up to 1,200 hours in the field each year, making between

seven and 28 visits per month, most visits lasting some 3–8 hours. Visits were carried out in all months, although less frequently in winter. Early in the year, I check all territories for occupancy and then check nest-sites during March and April. This is when most territorial behaviour is seen, although it can be observed at other times. When entering my study area, observations often start opportunistically; otherwise, I watch a single territory or go to a regular observation point (usually at low elevation), from where I can monitor several territories. All observations are noted, timed and attributed to the relevant pairs/territories. I aim to spend a minimum of 25 minutes in a territory, in order to gain knowledge about conspicuousness, time budgets, etc., as well as social and other behaviours.

At the start of my study, I was heavily dependent on the work already carried out by Colin Tubbs (1974) and Douglas Weir and Nick

Picozzi (1975), as well as the account given in Vol. 2 of *BWP* (Cramp & Simmons 1980), based largely on the previous two studies. Soon I began to realise the value of following individual birds; by knowing their sex and/or age I was learning so much more as they interacted with others. It was also quickly apparent that the studies mentioned above were far from complete, as the social signals that the birds use to mark their territories are both complex and subtle.

Common Buzzards (hereafter referred to simply as 'Buzzards') vary greatly, not only in their plumages, among individuals and age classes (see below), but to a lesser extent also in terms of voice, 'personality' and shape. All of these features helped me to attribute particular behaviours to individual birds and therefore to interpret their purpose (I have identified as individuals at least 60 birds during the study period, by a mixture of plumage and other characters). In this paper, I describe first the various behaviours of both breeding (territorial) and non-breeding birds, and then describe their function and how the behaviours relate to each other. The social behaviour of territorial, breeding pairs is distinct from that of other Buzzards and is crucial in interpreting the activities of a group of two or more interacting birds. Indeed, breeding and non-breeding birds can be described as forming two components of the population.

### *Structure of the study population*

In my study area, all the breeding adults were sedentary, and defended their territories throughout the year. They comprised the bulk of the population: 13 pairs in 1982, rising to 97 pairs in 2008, with up to 107 juveniles by late summer, in addition to non-breeders (a group of unknown size, but probably fewer than 30). Most of the juveniles dispersed out of the area by early autumn, but were replaced to some extent by juveniles from elsewhere. Many of these juveniles may subsequently have returned to settle close to their natal area (Davis & Davis 1992; Walls & Kenward 1998). Some juveniles were initially sedentary (remaining in their parents' territory for much of their first year and rarely much longer) but most of them, and almost all other non-breeders, were wanderers or 'floaters' – settling for a period (from a few days to several months) in locations free of breeding birds, but often adjacent to an occupied territory. Many of these birds, like some breeders, became very inconspicuous in midsummer.

Before leaving the natal territory, juveniles can be identified quite easily: they are tolerated by their parents, and also call distinctively when in the territory. The call is usually a double or triple 'ki-ki' or 'pi-ya – pi-ya – pi-ya' (but very variable), rather higher pitched and shriller than the better-known adult calls (which I usually note as 'ca-au', but these are also highly

variable). The calls of juveniles are commonly thought to denote hunger, but they also act to appease their parents; once fledged, juveniles normally call only when a parent is in view, and do so even when the caller has a full crop. Later, when making their first flights beyond the territory, they often call on their return as they cross the boundary, as if to repress any attack from a parent (see also below). Having abandoned the natal

Robin Prytherch



**132.** Part of the study area in Avon: a view from Clevedon looking east-northeast along the Gordano Valley (which forms the western third of the study area); autumn 1994. It is an area of mixed woodland (mostly deciduous), damp meadows separated by ditches, and a small amount of arable land. Much of the flat area is within the Gordano Valley National Nature Reserve.

territory, a juvenile will normally cease to call, unless attacked (by another Buzzard), when it might squeal shrilly, until it occupies a territory of its own two to three or more years later.

Once independent, juveniles did not appear to defend the areas in which they settled and so these were not obvious territories. In this they differed from many 2nd-year (2Y) or older birds, which settled in a territory of their own. (Note that I use 'bird years' rather than calendar-years to distinguish age classes, since the major moult takes place from May/June in juveniles and from July/August in most adults, and lasts for at least four months.) Third-year and older birds could be referred to as adults, and were rarely unpaired. Intruders were chased out of these single-bird territories, but the full repertoire of behaviour (see below) was not used. Single-bird territories were usually held from a few months to a year or more, until a mate arrived or the bird moved on. Territorial pairs usually comprised two adults but, rarely, one of the pair was a juvenile or 2Y bird. These paired youngsters exhibited most of the behaviours of older birds, but often in a less demonstrative way (particularly juveniles). Four of my territories have been occupied by three adults (one male and two females in each case; see below) and for three, five, six and seven years, with the last three still present in 2008.

I recorded the plumage details of many individual paired birds and found this a crucial aid to the study, enabling intruders (especially juveniles) to be identified quickly. Knowing how to age birds in the field was therefore important. Plumage and structural differences between age classes, together with basic flight postures, are discussed in this paper because of their importance in understanding other behaviours.

#### Age classes and 'basic' flight behaviour

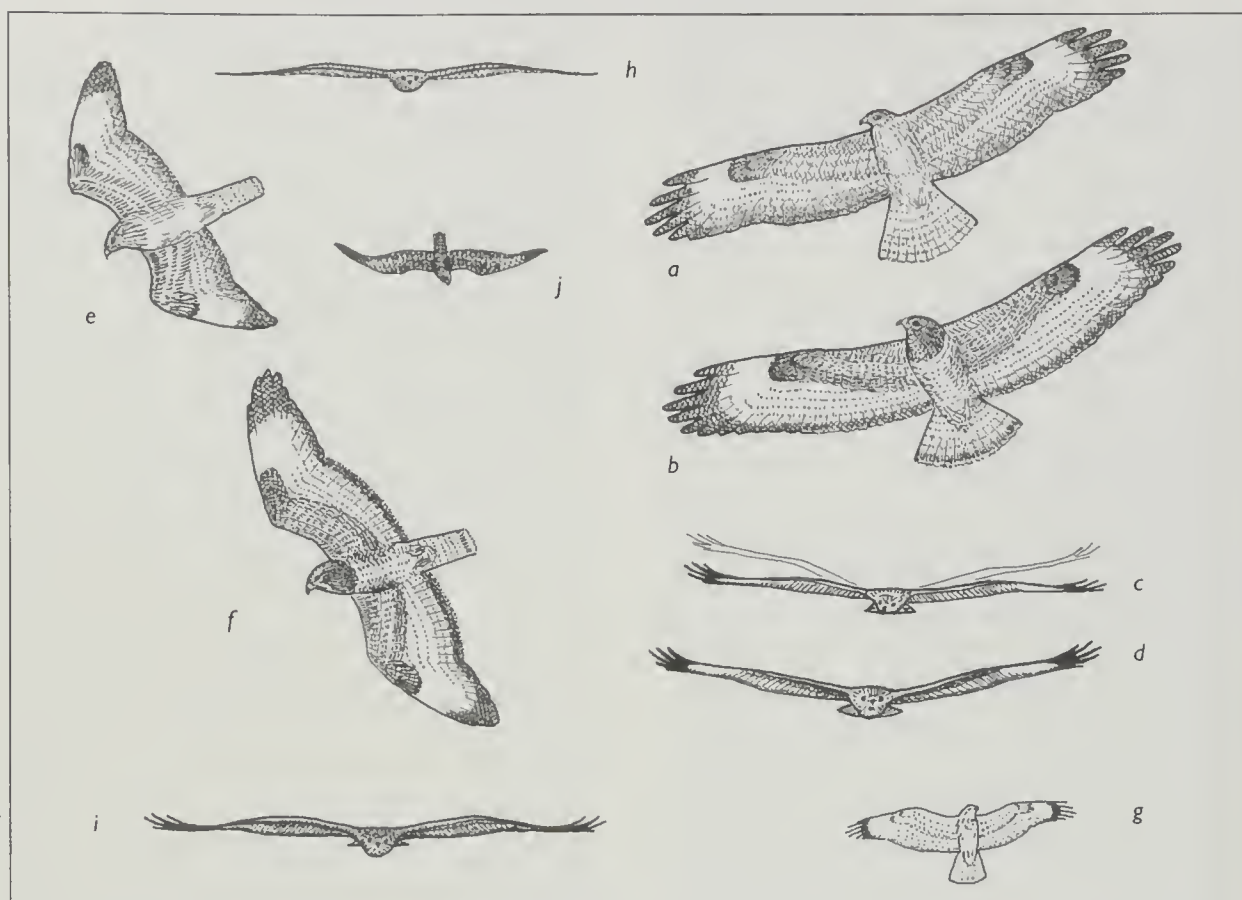
Adult Buzzards are distinguishable from juvenile and some 2Y birds in terms of plumage characters (see Appendix 1). Nonetheless, plumage variation is such that some juveniles (especially dark ones) can look very similar to older birds. Furthermore, in silhouette, which is a typical view of a flying Buzzard, plumage features are of limited value. There are, however, subtle structural differences and, more importantly, postural differences that help, and which lead neatly into social behaviour.

Almost all the territorial interactions are not between adjacent pairs, as might be expected, but between a pair and non-breeding (mostly juvenile), intruding birds. There are some exceptions, which I will describe later. A pair in its territory dominates all others that enter it (including its own young, some of which may remain in the territory for variable periods after fledging). The residents signal their status to intruders by a distinctive *assertive* body language. The intruders, regardless of their age, adopt *passive* postures. These are most often demonstrated in flight but equivalent signals are given by perched birds. Flapping flight, circle- and slope-soaring, sailing and gliding all have their distinctive forms (fig. 1). (When circle- and slope-soaring, birds ascend; when gliding, birds descend; but when sailing, birds drift about maintaining roughly the same level. Such sailing flights may include a few flaps or single



Robin Prytherch

**133.** Part of the study area in Avon: the Gordano Valley, looking southeast towards Cadbury Camp (with the M5 viaduct just visible); September 2003. Woodland on the slopes gives way to improved or unimproved grasslands and wet meadows plus wooded hedgerows. The majority of the wet meadows form part of the Gordano Valley NNR or reserves of the Avon Wildlife Trust.



**Fig. 1.** Basic flight behaviour and two age classes of the Common Buzzard *Buteo buteo*. Top right, Juvenile/IY (a) above an adult (b) as in circling or sailing. Note the slimmer wings and relatively longer tail of the juvenile, and the lack of an obvious dark subterminal bar along the trailing edge of the wings and tail, although in some dark youngsters this can be hard to see. Rely then on the different proportions, which are obvious even in silhouette. Below these are the equivalent views from the front. The juvenile (c), above the adult (d), tends to hold the wings flatter, but may vary somewhat, especially when alone, raising the wings in a shallow V but always looking more rakish. Centre and top left, juvenile (e) above adult (f) in the gliding posture. The juvenile looks slimmer and more rakish as in the small image below right (g). Top centre, head-on view of a gliding bird (h), although often wings are raised a little. Below left, an adult (i) in the rarer passive, flat-winged, circle/sail attitude. The other small image, upper left (j), shows the usual going-away glide. See text for further explanations.

circles. When slope-soaring, birds may 'hang' on an updraft or hover.)

In flapping flight, adults beat their wings rapidly on stiff wings. This may be interspersed with circle-soaring, slope-soaring or sailing, when the wings will be held in a slight dihedral (raised from the body to the tips and forming a shallow 'V'). In a close territorial encounter, the wings are held more stiffly, although the difference can be quite subtle and varies with the strength of uplift and, particularly, between individuals. These are assertive postures. However, when an adult is moving casually through the territory at low level, flapping flight may be more relaxed; in particular, the wings are held in a flatter, more relaxed, slightly raked posture (wings slightly tucked in towards the body with the hand pointing slightly back; see fig. 1) when gliding but also, occasionally, when soaring and sailing (see also Combridge 2000). Intruding birds almost always adopt passive,

relaxed, flight postures. Flapping is less rigid, slower and with a rather paddle-like effect. When soaring or gliding, a juvenile intruder holds its wings less stiffly and in a slightly more raked posture compared with an adult. Second-year or older intruders also adopt passive postures, but because of their more adult-like proportions (see Appendix 1) these are less obvious.

If an intruder is not threatened by adults, these postures are often not so obvious, especially for distant birds, when it is difficult to be sure of the status of some individuals. In general, though, when young birds are involved in a territorial encounter, their relaxed, passive wing action is different from the adults' assertive, stiff-winged, rapid-flapping flight. So, in such an encounter, the intruding bird would seem to be signalling the passive nature of its presence, while the adult is making it equally clear to the intruder that it should move on.

Should this basic signalling fail to have effect, the adult has a choice of other behaviours to draw upon to reinforce its message.

Pairs mostly restrict their territorial activity to the confines of their own territory, but temporarily they may become wind-drifted over the adjacent part of their neighbours' territory. There are exceptions, which I will describe below. In reality, the observer will often recognise territorial activity part way through an encounter, or lose track of the action before it is over. It is only through regular watching over long periods that it is possible to stitch together the various elements of the behaviour.

### Territorial behaviours

Behaviours are described below in an idealised order from the moment that a perched adult first spots an intruder, through a chase sequence to evict it, then the basic displays as the adult returns to a perch. This is followed by descriptions of variations and other displays that might occur as more intruders arrive and complicate the situation. Finally, I describe some other perched postures, the behaviour of juveniles and, briefly, expand on the exceptions referred to above.

Although territories are defended throughout the year, there is a distinct peak of activity in spring, from mid March to mid April, and a trough in summer, when birds can be very inconspicuous. Territorial behaviour increases again in the autumn as the juveniles disperse, but during the depths of winter the birds spend most of their time hunting and feeding, and intruders are chased out promptly (or almost ignored if they pass over quickly). Some displays may be used, especially display stoops (see below). From February onwards, displaying birds are seen more frequently. These timings are only approximate and are weather-dependent. Fine days with a mixture of sunshine, cloud cover and moderate winds seem to be best for observing display. In winter, activity can be seen at almost any time of the day and occasionally in poor weather. Otherwise, most activity takes place between mid morning and mid afternoon.



Robin Prytherch

**Fig. 2.** *Assertive bow.* Moving into a horizontal posture, the adult lowers its head, sleeking the head feathers, with the base of the upper neck raised (right), sometimes with the secondaries flared slightly. Invariably, the bird calls (left), looking up at the intruder that has stimulated the display. The posture is usually held for a few seconds, rarely longer, before the bird relaxes or flies off.

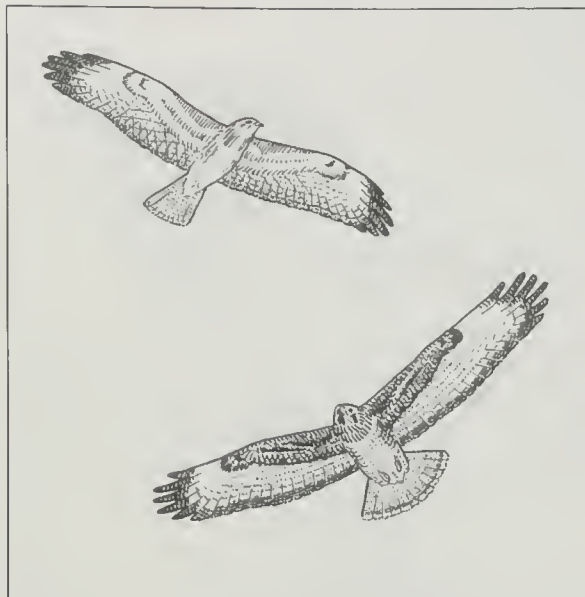
In the accounts that follow, 'adult' will refer to a territory-holder, 'intruder' to any other Buzzard not holding a breeding territory. The latter comprise mostly juveniles but also 2Ys and a few older birds in adult plumage. In this paper I introduce a new terminology for some of the behaviours so, where necessary and for the sake of clarity, I will also give the terms used in *BWP* in parentheses.

### *Conspicuous perching and assertive bow (perch-and-call display, high perching)*

Buzzards spend the majority of their time perched, in trees and bushes, on fences, poles, etc., as well as on the ground. Here they 'rest' and carry out routine behaviour such as preening, as well as using the perch to hunt from. Throughout the year, but most obviously in winter and spring, when foliage is absent, adults will perch conspicuously. This will often be high up, typically in a tree (preferably on a dead bough) or on a pylon. Such a position will give the bird a good view over its territory. To the casual observer the bird may appear to be quite relaxed, but this is deceptive; an adult Buzzard is always alert.

From such a location, an intruder entering the territory is readily spotted. If this should happen, the adult will call 'ca-au' (the familiar and widely known call, sometimes written as 'pei-eu' or other variants) and may adopt the *assertive bow* (fig. 2). This serves as a warning to the intruder: 'get out or further action will follow'. The intensity of this behaviour varies greatly, but usually the bird adopts an almost horizontal stance with the head lowered and head feathers sleeked. This produces a slightly hump-like effect at the base of the neck/top of the back. At its least intense just the head is lowered slightly, whereas at the other extreme,

Robin Prytherch



**Fig. 3.** Adult (below) engages juvenile in circling flight, the latter holding its wings passively in a flattish, slightly raked posture. The adult is holding its wings assertively, somewhat stiffly and raised in a shallow V. The adult starts much lower than the intruding bird.

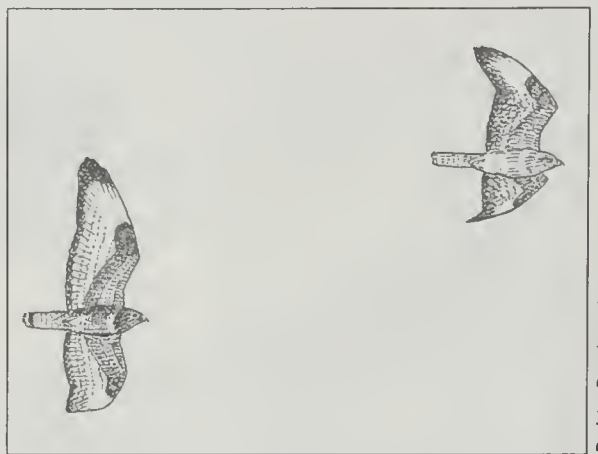
with body level, the wings are drooped (see pp. 263–264 and figs. 16 & 17, perched postures). The posture may be held for a few seconds before the bird relaxes or flies off, calling. If the intruder has turned and is heading out of the territory, or is high and moving fast across the territory, the adult relaxes. If the intruder remains in the territory and shows no sign of leaving, the adult will take flight, often calling.

On other occasions, an adult may remain perched while calling, sometimes with its mate perched nearby, also calling. One can occasionally also hear a bird from a neighbouring pair calling. The purpose of this calling is not entirely clear, unless to draw the attention of an intruder to the resident. But it often becomes clear that an intruder is perched within view (but unseen by a human observer), as eventually one of the adults flies off into cover to emerge quickly chasing an intruder.

When a feeding bird is approached by another, it will mantle the prey and the head is sometimes sleeked and lowered, as in the *assertive bow*.

#### *Engage and escort*

There is urgency in the initial, rapid flapping but the adult (male or female, but usually the former) soon circle-soars assertively, calling, rising fast towards the intruder. As the adult approaches the intruder, the differences in flight posture are most obvious. As they circle up, the intruder higher, circling passively, they will



Robin Prytherch

**Fig. 4.** Adult below/left, escorting a juvenile intruder out of its territory. Note that the adult retains a broader-winged appearance in the glide posture. The adult will normally turn back as soon as it reaches the edge of its territory.

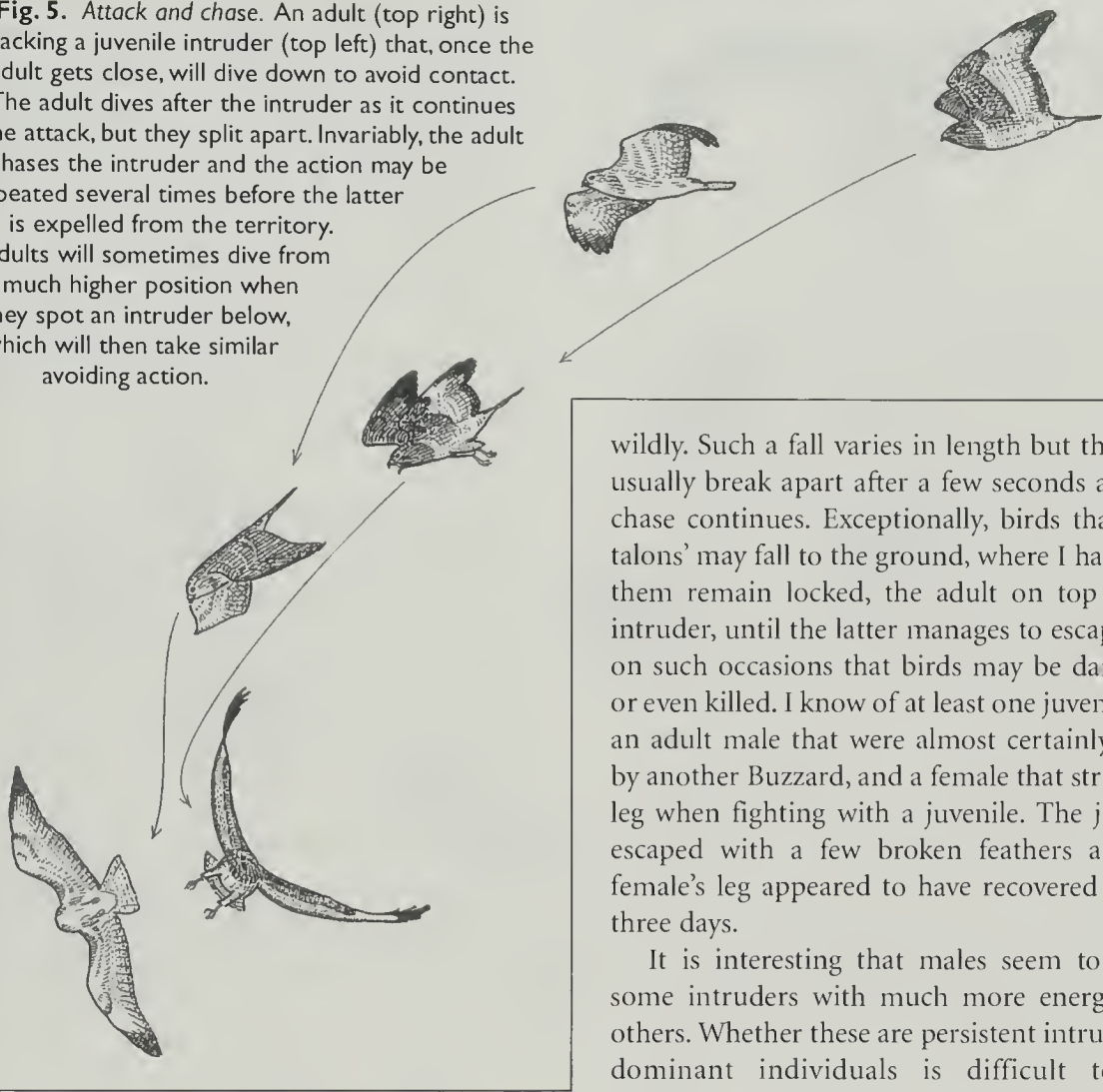
usually be wind-drifted to the edge of the territory (fig. 3). At this point, the adult will turn, usually to glide back down to perch as the intruder continues beyond the territory. Alternatively, at some point the intruder may stop circling to glide, heading into the wind. The adult will then follow the intruder, usually somewhat lower, or alternatively the adult may take the lead. During this glide the intruder will usually adopt a slightly more raked wing posture than the adult, which adopts a fuller-winged gliding posture (fig. 4). Again, once the intruder leaves the territory the adult will turn, sometimes to circle and then glide back down. At times, the birds will rise to over 1,370 m and regularly to over 900 m. On one occasion, I watched an adult male and intruder disappear momentarily into the cloud base before gliding out, whereupon the male, having reached the edge of his territory, dived down directly to his nesting wood, just 17 m above sea level. The cloud base recorded on that day, 14th May 1997, by the Bristol Weather Centre, was between 1,295 m and 1,370 m. At this height, from almost sea level, the birds appear tiny to the human eye (and still rather small through 10× binoculars). This suggests that the territory 'ceiling' is not a specific height above the ground, but is related to prevailing weather conditions.

This is the least aggressive form of territorial encounter, but is usually the prelude to any of the following behaviours.

#### *Attack and chase*

Almost invariably, an intruder may appear to show some reluctance to leave a territory. In this

**Fig. 5. Attack and chase.** An adult (top right) is attacking a juvenile intruder (top left) that, once the adult gets close, will dive down to avoid contact. The adult dives after the intruder as it continues the attack, but they split apart. Invariably, the adult chases the intruder and the action may be repeated several times before the latter is expelled from the territory. Adults will sometimes dive from a much higher position when they spot an intruder below, which will then take similar avoiding action.



Robin Prytherch

wildly. Such a fall varies in length but the birds usually break apart after a few seconds and the chase continues. Exceptionally, birds that 'lock talons' may fall to the ground, where I have seen them remain locked, the adult on top of the intruder, until the latter manages to escape. It is on such occasions that birds may be damaged, or even killed. I know of at least one juvenile and an adult male that were almost certainly killed by another Buzzard, and a female that strained a leg when fighting with a juvenile. The juvenile escaped with a few broken feathers and the female's leg appeared to have recovered within three days.

It is interesting that males seem to attack some intruders with much more energy than others. Whether these are persistent intruders or dominant individuals is difficult to tell. Certainly, 2Y or older intruders are usually dealt with aggressively and promptly.

Frequently but not invariably, the male takes the lead in an *attack and chase*, and the female may remain perched. If she does take flight, she may rise up, as mentioned above, or circle low for a while before dropping down, with lowered talons, to a perch where, on settling in a conspicuous position, she *wing-waves* (see below). Otherwise she lands rather heavily, briefly adopting the *assertive bow*.

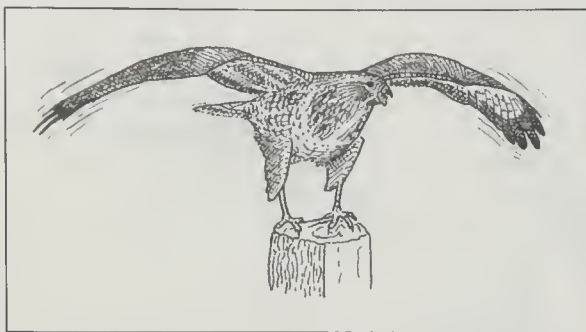
Once the intruder (or intruders, since there are often two or three, sometimes more) has left the territory, the adult (or pair) may circle or sail about before dropping down to perch. It is just as likely, however, that the adult will perform several *display stoops* (see below) after any encounter with an intruder.

#### *Wing-waving*

This display is given on a conspicuous perch (see above), which might also be an old nest (of their own or that of a corvid), most often by a female when her mate is involved in aerial activity with

case the adult may decide to press home an attack. To do so it will have to ascend to be level with, or above, the intruder. The adult usually circle-soars assertively, occasionally flapping up strongly. It can then fly powerfully at the intruder, causing it to flee – initially by flapping and then, as the adult gets closer, by diving down, followed closely by the adult (fig. 5). They then split apart quickly, swooping up again, when another dive might follow. Usually, though, the adult will chase after the intruder, the latter occasionally weaving from side to side or down to avoid contact until it leaves the territory. During such an attack the adult will often lower its talons. This is an aggressive signal (as indicated below). At any time the adult's mate may circle up assertively, calling 'ca-au', sometimes joining its mate in a two-pronged attack on the intruder. During close encounters the adult will usually lash out with its talons, the intruder responding likewise. On very rare occasions the adult and intruder may 'lock talons', whereupon they spiral down, flapping

Robin Prytherch



**Fig. 6.** Wing-waving is given from a conspicuous perch, usually by a female. The waving action is quite rapid, which, together with the calling, makes the bird obvious to an intruder.

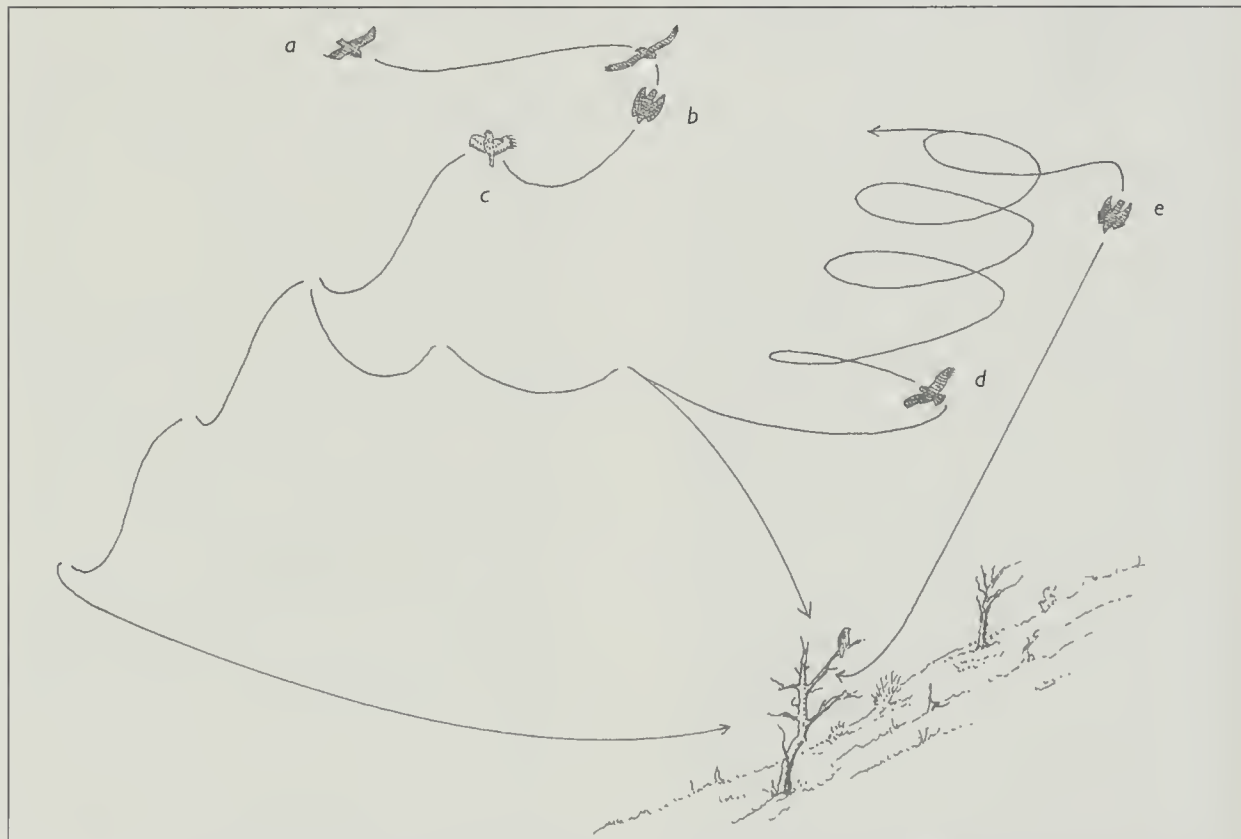
intruders. The perch will be approached from nearby cover or from above, if in flight. Talons are lowered during the approach and on settling, usually rather heavily, the head is lowered (as in the *assertive bow*), the wings remain partly open and are flapped rapidly (but not raised high) for several seconds, the tail fanned (fig. 6). The bird will call loudly ('ca-au' or a more abrupt, repeated, 'cau, cau, cau...'), cocking its head up to check on the action above, and then slowly subside into a normal posture. The display is also rarely given on the arrival of an intruder

into a territory, before any aerial activity has taken place. This conspicuous behaviour serves to warn an intruder that it is in an occupied territory or to reinforce the message during an encounter between its mate and an intruder. (See also pp. 263–264 for other perched postures.) The 'heavy landing' mentioned above is distinct from the normal method of landing where the bird approaches from below and sweeps up with wings fully spread to settle gently on its chosen perch. In a heavy landing, the bird approaches the perch at the same level or from slightly above, before settling.

*Display stooping, display dive (roller-coaster flight, sky dance display flight, undulating flight and deep dive flight)*

The stooping display is perhaps the one most familiar to the casual Buzzard watcher and is the most frequently performed of all the aerial displays. It is, however, highly variable, owing to different intensities of action and strength of wind. It also occurs in two basic forms. The first serves mainly as the culmination to a territorial encounter (above), affirming territory

Robin Prytherch

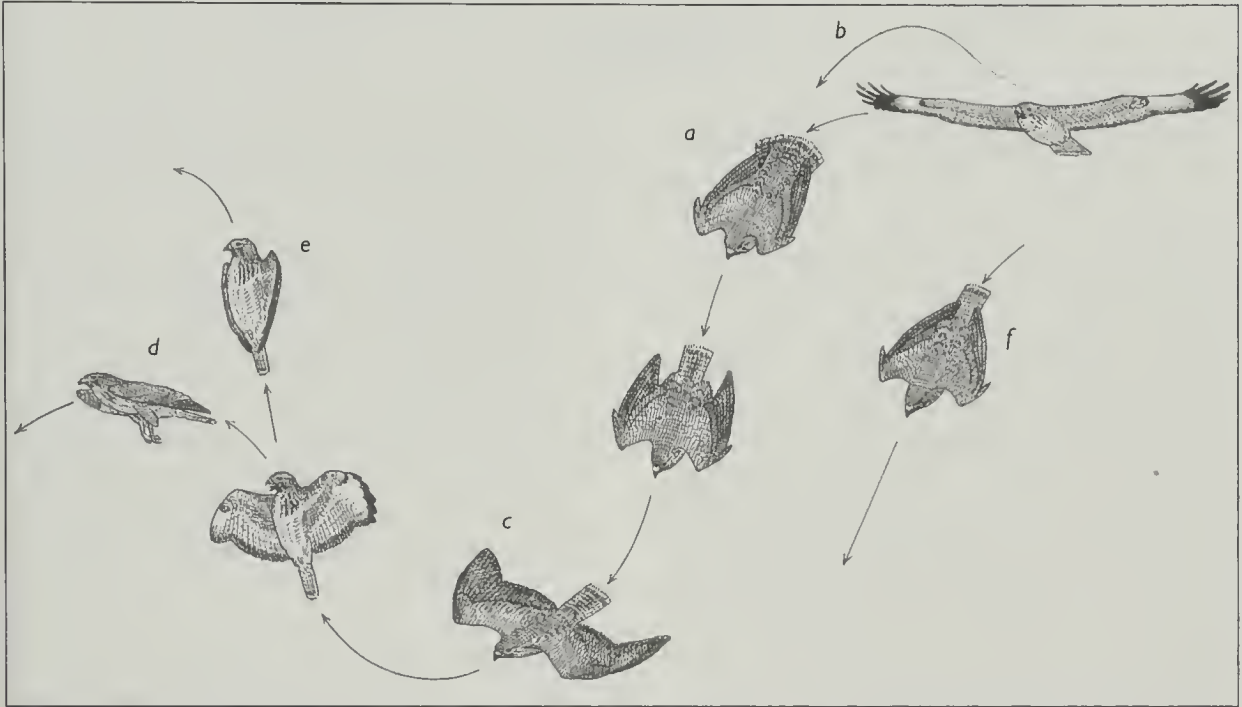


**Fig. 7.** Display stooping. A schematic outline of several versions of this variable display. Having seen off an intruder, the adult glides over the territory (a) then suddenly closes its wings (sometimes after rising slightly) and dives down (b). It soon pulls up and after rising, at the point of stall (c), it continues into the second stoop of four it performs before gliding off to settle near its mate. Alternatively, after two stoops it changes direction, performs two more rather shallow stoops before dropping down to settle near its mate. Otherwise it may circle up (d) then sail off over the territory, or *display dive* down to settle close to its mate (e). The number and intensity of the stoops can vary greatly even within a series. See also figs. 8 and 9.

occupation, which is dealt with here; the other, aggressive form is dealt with later.

The action is distinctive and conspicuous, occurring from c. 1,300 m down to treetop level (fig. 7). Having expelled the intruder, the adult

may glide or circle over the territory, then at some point, usually when heading into the wind, the *display stoops* may start (fig. 8): the bird will either (a) suddenly close its wings and dive; or (b) rise up slightly, tail usually closed, then



Robin Prytherch

**Fig. 8.** One *display stoop* to reveal the detail. The full explanation is given in the text. The degree of closure of the wings at (a) is highly variable (both within and between series) and some display stoops will be so shallow that the wings will not close more than shown at (c). The *display dive* posture is shown in (f).



Robin Prytherch

**Fig. 9.** The aggressive form of the *display stoop* varies from the normal form in two ways. (The bird at (c) matches that in fig. 8c.) Firstly, at (d), the bird flaps its wings wildly a couple of times and calls, with talons lowered. Then, at the end of the stoop, as it levels out, it lowers its talons and may continue calling as it sails off (g). The bird at bottom right is a front view of the same action as at bottom left.

suddenly close its wings and dive down. The closed wings are usually held slightly out at the carpal joint, often with the alula feathers protruding. The tail is often fanned initially, but soon closes. During the dive the bird gathers speed, the angle of descent being very variable (see below). After only one or a few seconds, the wings open (c) as the bird then swings through the base of the stoop and rises up. In the final part of the rise, the wings will be fully extended, tail closed, and may end with the bird travelling near vertically upwards. When almost stalled (d), the bird will close its wings again as it peaks and continues into the second *display stoop*. The bird may perform just one stoop, although a series is more typical. A series of 3–5 is common but this can be extended up to 12 and rarely to over 20. The display usually ends after point (c), at the base of the stoop, as the bird levels off to glide or circle, or to drop down to a perch if it has ended near ground level. The displaying bird will often call, usually just before or at point (d). During such high-level displays, it is often difficult to be sure when the calls are made, if indeed they can be heard at all.

At the display's least intensive, the angle of dive and rise and the extent of closure of the wings are considerably less, so that the bird appears to undulate gently. Such mild displays are usually composed of only two or three linked stoops. During more intensive displays, the dive and rise can be marked, as the bird performs a deep 'U', wings well open at the base but closing just before the peak, the bird twisting over to dive, more or less at the stall point (d). Occasionally the bird changes direction here, rather than continue down in the same direction. To achieve this, the bird may briefly throw out one wing in order to turn to the new course. *Display stooping* is initiated into the wind and the bird can use the wind to subtly change the direction of each stoop so that it ends up displaying downwind. Between the mild and more intensive forms there is much variation, with stoops deepening and wings more closed with increasing intensity of the display.

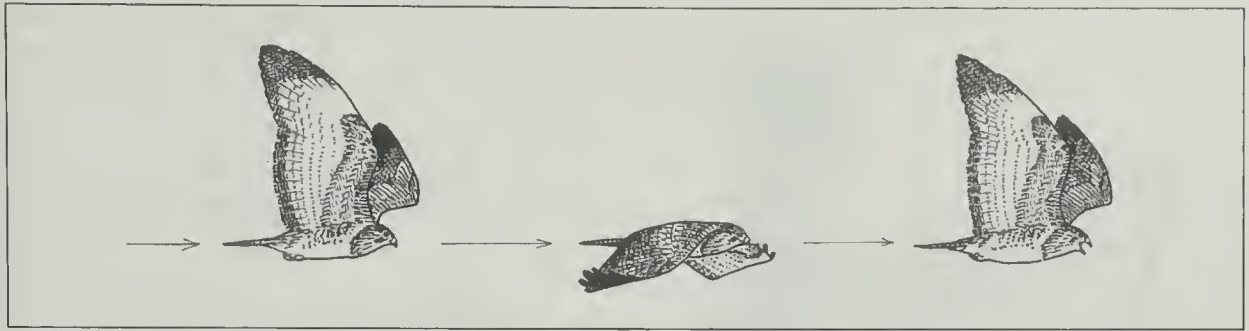
The most intensive form of *display stooping* differs from the others towards the end of the rise, after a deep dive. Instead of closing the wings just before or at the stall, the bird keeps them closed as it rises vertically, carried by the momentum created during the dive (e). Only when close to stalling does it peak to continue into another stoop. Even within a series, the

display stoops will rarely all be of the same intensity, starting at low intensity and developing into higher intensity or vice versa. Each series is usually distinct but may be broken by a long glide between two stoops within the series. Many series end at low level with the bird disappearing into the canopy. Occasionally, the final stoop converts into a *display dive* (see below), which may take the displaying bird 100 m or more down into woodland or to a conspicuous perch (see above). Otherwise the displaying bird will simply revert to gliding, sailing or circling. Generally, a series of display stoops will cause the displaying bird to descend gradually, but over a slope with a strong updraft the displaying bird may rise as much as it descends during the dive, and thus maintain height. If both members of a pair continue to circle or sail after a territorial encounter, they may both display stoop down together, either one taking the lead with the other following.

The displaying bird demonstrates a thrilling combination of grace and tremendous élan. It gives the impression of great fitness, and this message is presumably transmitted to its mate and to any other Buzzards in the vicinity. It must be remembered that this display occurs *after* any intruding birds have left the territory, even though it/they may still be visible.

*Display stoops* which occur during a territorial encounter take a different, aggressive form (fig. 9). This is much as above except that at point (d), at the top of the rise, the bird makes a couple of exaggerated flaps with talons lowered before dropping into the next stoop. The displaying bird, however, rarely performs more than two or three stoops in a series. During the flaps the wings are raised high, exposing the undersides. This is probably a brief form of *display flapping* (see below). As mentioned, *aggressive display stooping* occurs only in the presence of intruding birds (commonly when there are several) and the displayer (or pair) usually seems to be highly excited, giving repeated 'ca-au' calls. At the end of the display, the bird may also level out from the dive with *lowered talons* (g), sometimes even dropping down to a perch to *wing-wave* (see above). *Talon lowering* is a vital action, which distinguishes aggressive forms of several behaviours.

A *display dive* (fig. 8f) commences just like a *display stoop* but then the dive, with almost closed wings, alulas protruding, continues down



Robin Prytherch

**Fig. 10.** *Display flapping* is performed at the start of, or during, a territorial encounter. This shows the wings at the highest and lowest points of the flap in its most intense form. At lower intensity the wings are raised less. The display is often accompanied by calls.

at high speed in a straight line to a perch. Although usually performed as the final dive of a series of display stoops, it also occurs on its own, after a bird has been up high for some time, and for no apparent reason, but also during a territorial encounter. If a female is up, but below her mate, who is engaged with one or more intruders, she might suddenly *display dive* down and leave her mate to deal with the trouble.

*Display flapping (deep wing-beat flight, slow-flapping display-flight)*

This behaviour is performed at the start of, or during a territorial encounter. Used almost exclusively by the male, this distinctive flight can occur at treetop height or high in the sky. The bird will suddenly interrupt circling or gliding with a series of 4–7 very pronounced wingbeats, with the wings raised higher than normal between each powerful, downward flap. The bird is propelled rapidly, often making excited ‘ca-au’ calls; the tail is usually closed (fig. 10). *Display flapping* will often be performed soon after an intruder is spotted over, or approaching, the territory. The male (or female) will call as it leaves its perch, soon *display flapping* one or several times before circling up assertively. He may then perform display flaps again at a higher level, particularly if his mate suddenly appears in flight below. Alternatively, the male may already be high in the sky ‘waiting’, as he watches other distant pairs engaged in territorial activity. Then, invariably when an intruder makes an approach, he will suddenly *display flap* several times.

This display serves to draw the attention of approaching intruders to the presence of adults in a territory. The male usually gives the impression of being highly excited, but the action is very variable. Sometimes the flight seems rather wavering and the actual flapping

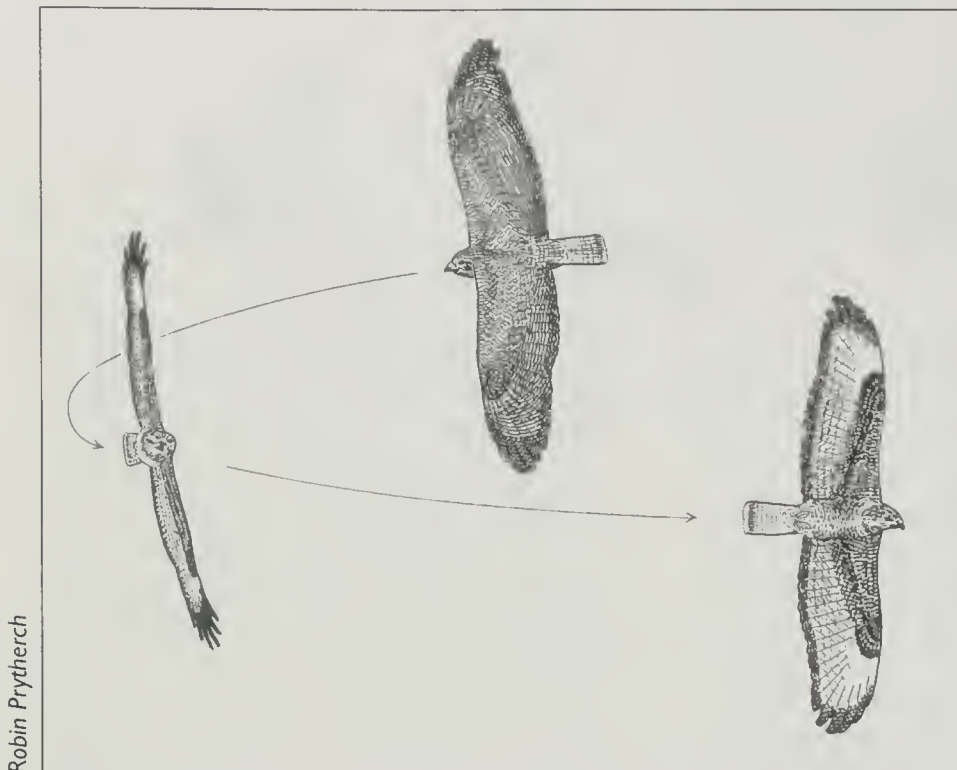
action may be less intense, at times appearing almost lackadaisical.

*Display flapping* is occasionally combined with other behaviours, particularly the *display bank* (see below), which causes a rapid change of direction. I have occasionally seen a female *display flapping*, but only at low level and usually at low intensity. During its first year in a territory, the male will sometimes *display flap* frequently when his mate is nearby.

This behaviour is demonstrated when I enter some territories to inspect nests. Birds will watch me, *display flap* and then (very rarely) dive at me, with much calling (a sure sign, at the appropriate time, that the nest has chicks).

*Display bank, and sailing and banking display*

Although Buzzards will sometimes tilt over when circle-soaring in a strong wind, this is never as marked as in a *display bank*. In this action, the Buzzard turns sharply with wings held stiffly, the bird tilted over so that the wings are held almost vertically and usually flattened (fig. 11). The tail is usually closed. Furthermore, this action is not associated with normal circling. It is used mainly in conjunction with other displays, especially *display flapping* (above). A bird will also sometimes *display bank* at the ‘top’ of a *display stoop* in order to change direction. Rarely, birds *display bank* at the end of each of a series of shallow downward dives, which is part of the *sailing and banking display*. This display usually includes frequent *display flaps*. The impression given is of a more dashing version of *display stooping*, but when the bird banks the wings are swept up a little, rather than held stiffly. This is an extraordinarily graceful and swift flying display, which also seems to reflect anxiety but to a higher degree. It is interesting that this display is associated with males when they are new in a territory and must therefore feel the pressure from both adjacent



**Fig. 11.** The *display bank* display is always used in conjunction with display flapping and more rarely with display stooping. Note that the wings are often held flat (but sometimes swept up by the force of the turn) with the tail closed. It is not a part of normal circling.

established pairs and intruders. I also have the impression that some young males have not quite resolved the distinctive nature of the various parts of the separate displays (i.e. display flapping, banking and stooping) and they get them mixed up in their excitement.

#### *Assertive flight posture*

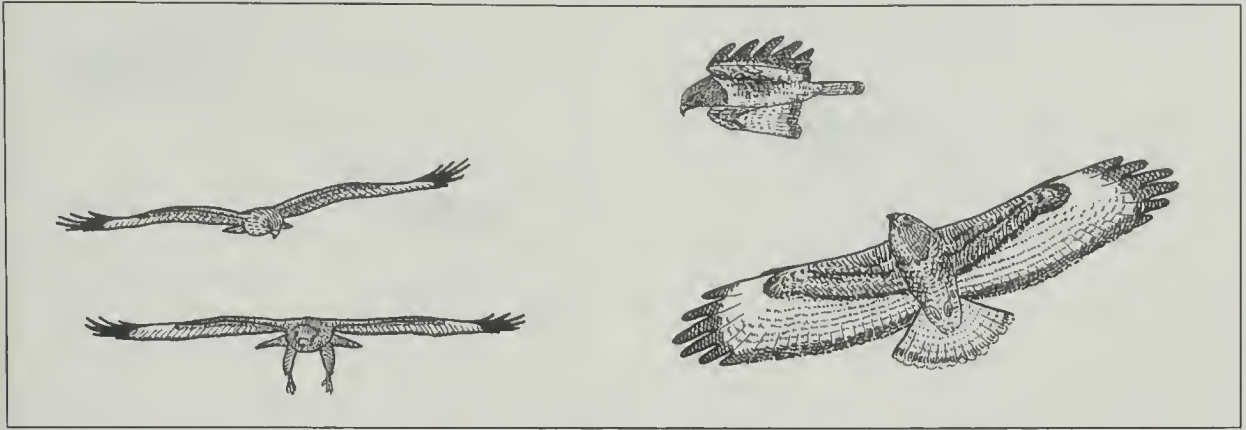
Following a territorial encounter, an adult may circle and sail about high in the sky, often because it can see some action in an adjacent territory. Then if an intruder approaches, the adult will sometimes call and adopt the *assertive flight posture* (if it does not *display flap*) as soon as the intruder enters the territory (fig. 12). This action is subtle and quite brief. The wings are held stiffly and usually flat (though sometimes raised slightly), with all feathers fanned to give maximum spread; the tail may be fanned or closed. The head is lowered slightly with the feathers sleeked and a small hump appears between the neck and the back. This is, therefore, an aerial version of the *assertive bow* and seems to have the same function of a warning. The posture is held for just a few seconds before the adult relaxes to circle or sail assertively. The intruder may then fly on, out of the territory, and the episode is quickly over. Occasionally, however, the intruder may

approach the adult, which will adopt the *assertive flight posture* again; this might develop into the aggressive form of this display, which simply involves the addition of *talon lowering* (figs. 12 & 13a). The adult may then suddenly flick over to attack the intruder with its talons, which remain lowered for several seconds (fig. 13b), but then a chase might follow. On such occasions, the intruder does sometimes seem to be 'attracted' to the adult and gives the strong impression of making a mock attack, despite the obvious

threatening signals. Both sexes will adopt this posture, sometimes as a pair.

#### *Dive-on, turn-over display*

This behaviour involves the pair and occurs in two forms: passive and aggressive. Typically, after a territorial encounter and as the pair sail overhead, the male positions himself above and behind his mate. He then dives fast towards her and on arrival over her drops his talons as she turns over and raises hers. The talons rarely, if ever, touch. The female immediately rights herself and both retract their talons to sail or glide on as before (fig. 14). The action may be repeated once or twice soon after. The female will occasionally roll over (through 360°) during this display. This is the passive form of the display and may serve to maintain the pair bond (see below). The pair will, however, perform a modified aggressive form of this display during a territorial encounter when several birds are involved (i.e. at a territory boundary when both adjacent pairs and several intruders are together). During the melee of dive-chasing, circling and so on, the male may *dive on* his mate as in the passive form but after the *turn over* the talons remain lowered. The lowered talons indicate the aggressive intent and at the same time signal that they are a pair. This display can



Robin Prytherch

**Fig. 12.** Assertive flight posture as seen from below (right) with, above it, the view from the side to show the lowered and sleeked head. All the flight feathers are spread to the maximum extent, usually with the wings flattened, although sometimes the tail remains closed. The aggressive form of the display is shown below left; the lowered talons are stimulated by the closeness of the intruder (above left). See also fig. 13.

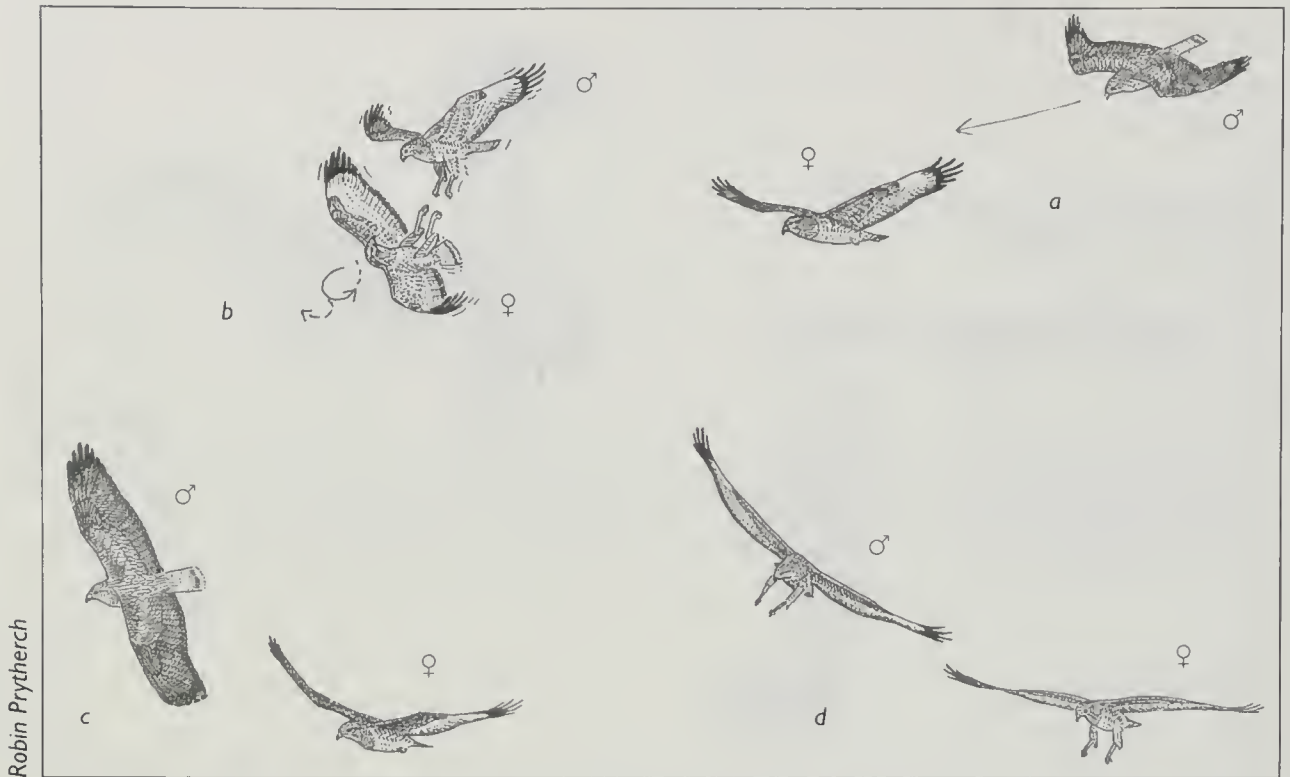


Robin Prytherch

**Fig. 13.** The aggressive form of the assertive flight posture is indicated by the lowered talons, as in (a), where an intruding juvenile dives slightly hesitantly down to an adult male, with its mate circling below and beyond, which also lowers its talons. This is followed (b) by the male flipping over to attack the intruder, which flees instantly. This is often followed by a chase. The roles of the sexes may be reversed. These actions could be mistaken for the dive-on, turn-over display of a pair (see fig. 14).

be difficult to pick out among the dive-chases that are also occurring during a mass encounter, especially as (rarely) the male from one territory may dive at the female from another. The point to note is that an intruder flees when attacked (even if, momentarily, it turns and flicks up its talons), but a territorial female does not. Such situations involving several birds can be very confusing, even to the practised eye.

In late summer and autumn, when a juvenile is flying over the natal territory, it may approach a parent in flight and 'mob' it. The parent (male or female) may then quickly flick over in an effort to fend off their pestering offspring. The juvenile will usually give its distinctive call during this action, but nevertheless it can be mistaken for the full *dive-on, turn-over* display of the pair if the observer is not familiar with the



Robin Prytherch

**Fig. 14.** The *dive-on, turn-over* display is performed by a pair, often after a territorial encounter. The male dives towards the female from behind (a), usually at a fairly shallow angle. As he arrives over her (b), he lowers his talons as she turns over and raises hers, but usually avoiding contact. The male sails on (c), perhaps turning back to repeat the procedure once or twice more. An aggressive form is used when intruders are still in the territory. In this case the talons remain lowered (d). Sometimes, as here, the male has combined the action with the assertive flight posture as revealed by his lowered and sleeked head.



Robin Prytherch

**Fig. 15.** An example of how various displays can be combined. In this case, the pair is gliding down after a territorial encounter with two intruders (which have just left the territory). The male suddenly *display banked* (a) and *display flapped* (b), then performed one *display stoop* (c) before *display diving* (d) down to the female and they performed the *dive-on, turn-over* display (e). Note that the talons are tucked away since the intruders are no longer present. The pair continued on to settle in one of their nest woods (f).

status of the birds involved.

The *dive-on, turn-over* display will rarely culminate a series of other displays after a period of territorial activity (fig. 15).

### Copulation

From early March (rarely earlier), Buzzard pairs copulate frequently and continue to do so until after the egg-laying period (all the pairs in my study area, with few exceptions, appear to produce eggs each year). This behaviour peaks in early April, when the pair may perform more than two copulations per hour. The action is conspicuous and can occur anywhere in the territory – high in a tree, on an electricity pylon, on the ground, etc. Even within the woodland canopy, the flashing of the white underprimaries of the male as he balances on the female show through the branches and twigs, especially on a sunny day. Many copulations occur when intruders are present, or immediately after they are expelled from the territory. Typically, when territorial action is high in the sky and the female has dropped down to a perch, the male will suddenly close his wings and dive or glide down to her, even though the intruder(s) may not have left the territory. He usually arrives with talons slightly lowered, directly onto the female's back (she may or may not have solicited by lowering her head). The male makes a rather quiet call, 'eez-ka', during copulation, which is rarely audible to human observers. He then flies off from his mate's back to circle or sail up again, or perch either next to her or nearby. On other occasions, when the intruder is much lower, the male will break off the chase, drop down to the female, copulate, then fly off, with loud calling, after the intruder to continue the chase. I suggest that the birds are using the conspicuous behaviour of copulation for a secondary purpose, to signal clearly to an intruder that here is a pair on territory.

### Extra-territorial chases and flights

Generally, a pair confines its territorial activities within the territory. There are occasional exceptions when the male leaves his territory – usually when engaged in a prolonged, high-level chase that extends across adjacent territories. The other pairs below call excitedly, sometimes flapping around at low level, but do not usually get involved further. Eventually, the chasing male gives up (he may be up to 2 km away at this

stage, although usually less) and returns to his territory. I once saw a neighbouring male 'escort' the intruding male back to his territory. They flew close together, with the occasional mild jostle but no obvious aggression. On arriving back at the territory, the male will often *display stoop* several times (occasionally calling) as he drops down to perch.

Such behaviour is clearly rare, but that it happens at all is interesting, and appears to be a form of reciprocal altruism. There is normally little or no territorial interaction between adjacent pairs, and they clearly 'know' their neighbours and other pairs beyond. It is possible that neighbours of a male involved in an extra-territorial chase will recognise what is happening. Furthermore, since most dispersing juveniles settle close to their natal territories (occasionally adjacent) (Davis & Davis 1992), they could be closely related. 'Helping' neighbours on rare occasions may not, therefore, be a disadvantage, as long as the neighbours reciprocate.

Although even more unusual, a pair may make an extra-territorial flight. They may circle up, drift out of their territory, then glide on away from it, passing over several other territories to eventually circle again, rising very high before slowly gliding/sailing back. On their return they may *display stoop/dive* down in several stoops to perch. During the 'outing', other territory occupiers seem to ignore them and if an adult does circle up to them there is no obvious territorial response. It is impossible to hear whether the pairs call at each other, but I think that it is likely.

### Single-bird and three-bird territories

In my study population there have occasionally been single birds holding a small territory. The birds are usually in their second or third year, rarely fully adult. When defending their territories they restrict their behaviour mainly to *assertive bows, engage and escort* and *wing-waving*, accompanied by calls. The actions are all rather low-key. A crippled female, which defended a territory for over five years until her death, never attracted a mate. She also *display-stooped* and was generally more conspicuous.

Three-bird territories are created when a juvenile stays with its parents for over a year. Even a young juvenile will occasionally help to chase out an intruder, but not usually on its own. As it gets older it tends to keep a low

profile, but will occasionally join its parents in some territorial behaviour. Very rarely, a young female will stay on into adulthood, remaining with her parents. I have recorded only one case of polygyny in my study (which involved one male defending two territories, with two females – a mother and daughter – in one and a single female in the other).

### *Pair formation*

Generally, a new (or replacement) pair of Buzzards appears on territory without obvious signs of pair formation. This might seem surprising for a long-lived species which frequently has pair bonds that last up to 20 years. I have, however, seen pair formation in single-bird territories. The incumbent has been a male, obviously highly excited/anxious by the arrival of an adult female. He demonstrates by calling as he *display flaps* wildly near the female, then settles to watch her. It could be that he is somewhat nervous, and torn between chasing her off and accepting her. The female appears totally unconcerned, or may fly to the male and displace him from his perch – females usually dominate males. Then the male may fly fast towards the female and attempt to displace her; rather than be displaced she merely flicks her wings or ignores him. Alternatively, the male may veer away just as he arrives at the female, or brake to a hover before gliding away. In some cases, the male may fly so hard at the female that she is forced to jump up to present her talons (collapsing back onto the branches). The male usually makes two or three of these flights in fairly quick succession. One single male made rather timid approaches to a new female, who left within a week. Then another female arrived and he immediately behaved more aggressively towards her; she stayed. It appears that the female is judging the aggressiveness of the male, which may relate to the male's ability as a hunter; that will be confirmed during the *mate-feeding* behaviour prior to breeding (see below).

The similarity of this action to the *dive-on, turn-over* display by established pairs is obvious, and (the latter) probably serves to reinforce the original pair bond. The *display flapping* indicates confusion on the male's part between mate attraction and intruder expulsion. This behaviour is also difficult for humans to interpret, especially when there is no knowledge of the status of the birds involved. Furthermore, once the pair seems to have settled, one partner

will often fly to perch next to its mate, causing the other to fly to another perch (each time the birds will briefly adopt the *assertive bow* on settling). This may happen several times and indicates a low level of residual anxiety. Established pairs often perch close together, fully relaxed.

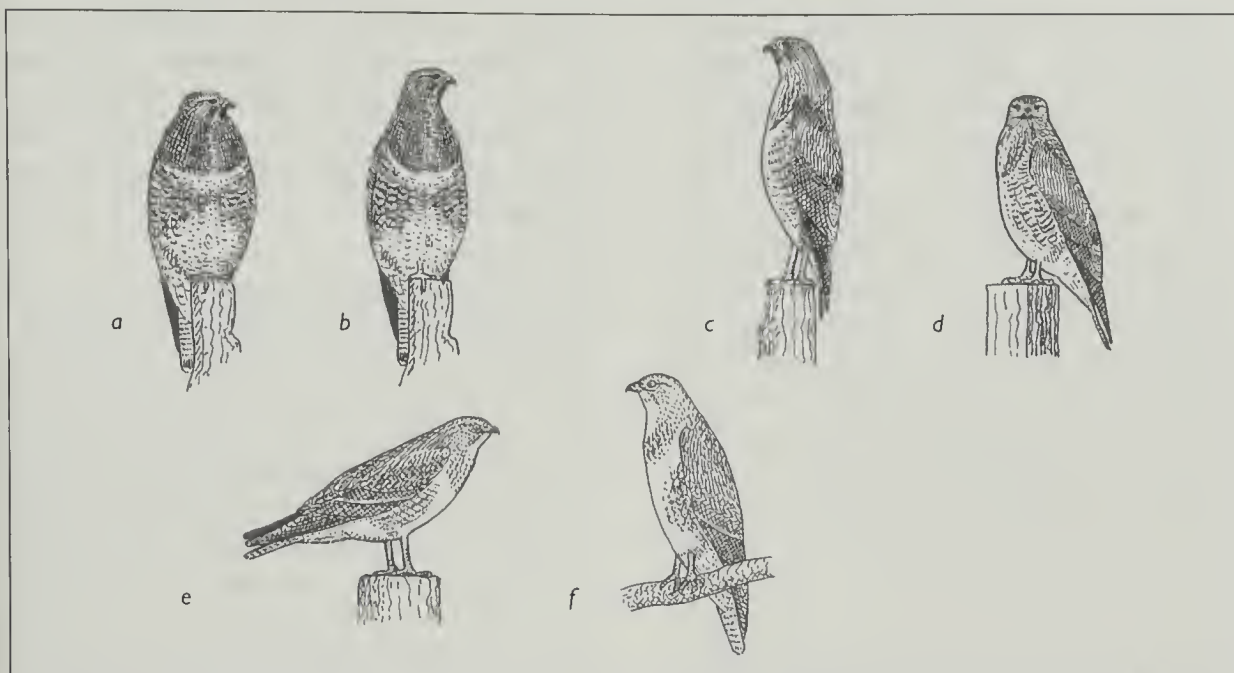
### *Relations within the family group*

After the young have fledged, they usually spend about six weeks with their parents before dispersing. At the end of this period, and for longer if one or more of the juveniles remain in the territory, confusion is possible as the juveniles interact with their parents. The hunger/appeasement calling of juveniles can be so incessant that the adult will fly away to 'hide' from its noisy offspring, but is otherwise quite quiet and not always easily heard. The adults normally do not fly at a juvenile to flush it away, although I have rarely seen this. Typically, though, the juvenile will fly at its parent, which it displaces. This might be repeated if the adult does not move far. This action is identical to that used by new pairs, when the female might repeatedly displace the male, and to that by young birds feeding in a large group when they occasionally displace each other (see below).

From time to time (especially in winter and spring), the pair will often perch very close to each other, occasionally almost touching, but regularly about 30 cm apart. The second to arrive usually briefly adopts the *assertive bow* as it lands close to its mate; this is more common in new pairs, and probably reflects a mildly aggressive (or even nervous) reaction. I have seen an old female settle thus next to her daughter (by now a full adult, sharing the same mate) but, while in the *assertive bow*, she instantly turned her head through 90° for a couple of seconds before relaxing. My impression was that this had a 'switching-off' effect, cancelling any unintended aggressive message. When apart, the pair will occasionally call quietly to each other – 'cau, cau...' – and at times this seems to be a contact call associated with food. Females will call like this from the nest.

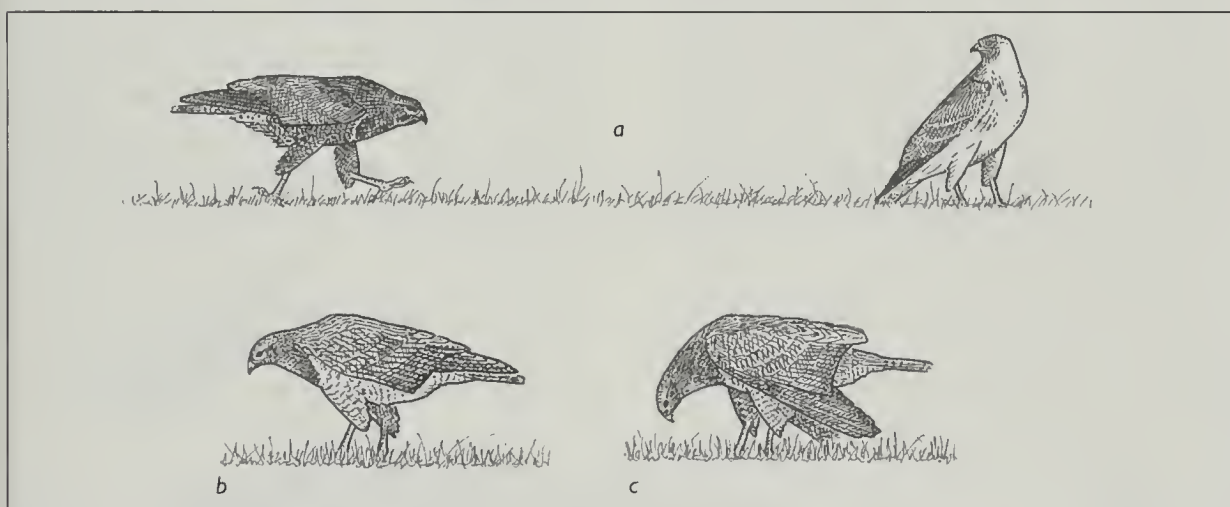
### *Mate feeding*

During the month or so before eggs are laid, male Buzzards start to provide food for their mate (Hinde 1985). The term 'courtship feeding', which often refers to this behaviour, is misleading for Buzzards as the behaviour



Robin Prytherch

**Fig. 16.** Various perched postures. These show relaxed adults (a) and (d), the former in cold weather, with most of the legs and feet hidden in the plumage. In (b), the adult has become more alert. The other alert adult (c) has spotted possible prey (or an intruder), which it is straining to see beyond a nearby obstruction. The juvenile at (e) is sleeked in a leaning posture owing to a strong wind, and the one at (f) is sleeked on the approach of a territorial adult.



Robin Prytherch

**Fig. 17.** Perched postures during aggressive interactions with intruders. In (a), an adult runs in the *assertive bow* at a large juvenile female, which flapped off to avoid physical contact. More extreme versions of the *assertive bow* are also shown, with the secondaries flared (b), and the secondaries flared even more (c), causing the primaries to lower, and the head is lowered further, rarely almost to the ground.

continues throughout incubation and the early part of chick-rearing. Thereafter, the behaviour changes slightly and the male often takes the food directly to the nest, although he does not usually feed the chicks.

#### Perched postures

Two perched postures, the *assertive bow* and *wing-waving*, have already been mentioned, but Buzzards assume a variety of postures when perched (fig. 16). If the birds are hunting in the open, their plumage is more or less sleeked and the body vertical, or tilted forward if facing into

a strong breeze (fig. 16e). Otherwise, when relaxed, they sit in a squat, hunched posture (figs. 16a,d) with (in cold weather) the body feathers fluffed out, covering the legs and most of the feet (fig. 16a). If a bird becomes aware of a hidden disturbance nearby, its first reaction is to 'stand up', sleeking the plumage (fig. 16b), looking intently towards the noise. If nothing transpires, the bird quickly relaxes. It may have spotted possible prey, in which case it may stretch up as high as possible (fig. 16c), rather than move. If an intruder suddenly appears, the adult will instantly call and adopt the *assertive*

*bow* (fig. 2), and then fly towards the intruder, as described earlier. Similarly, an intruder perched in a territory will sleek its plumage as soon as it sees the approaching adult, before flying off (fig. 16f).

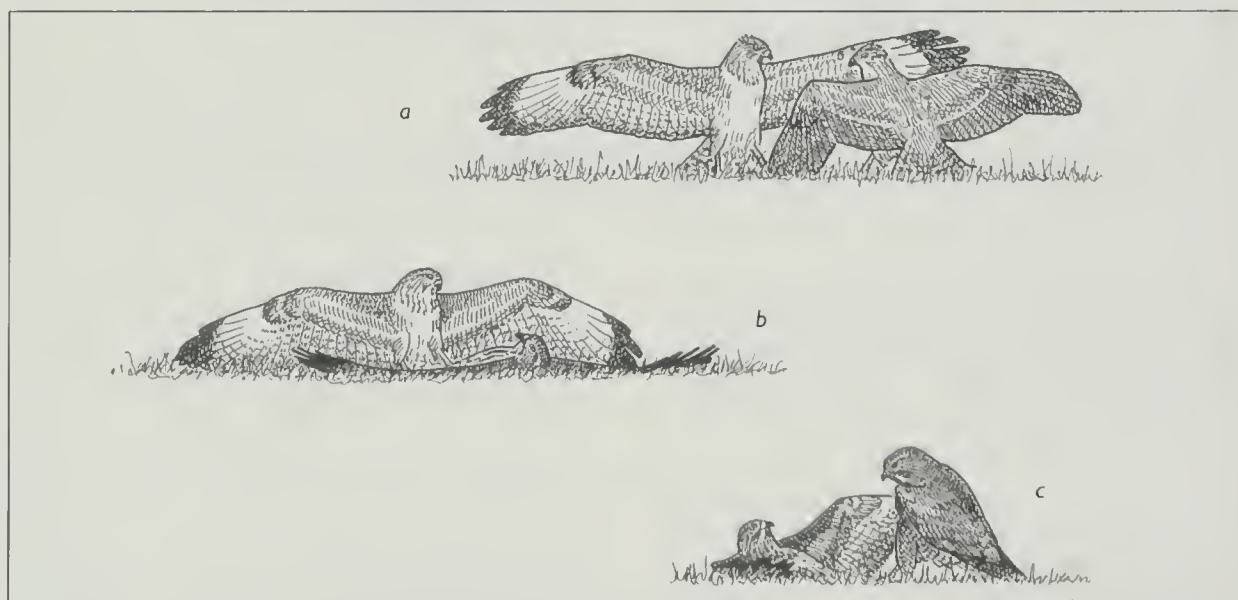
Groups of juveniles with some 2Y or older birds will gather on bare, tilled land in 'no-man's-land' between territories to feed, particularly on earthworms *Lumbricus* (see also below). The adjacent adults will also be feeding in such areas and checking any straying intruders. An adult will fly at such an intruder to displace it; if the latter does not move well away, the adult may run (fig. 17a) or sidle up to it adopting the *assertive bow* in an extreme form. In this case, the adult turns side-on to the intruder and flares its secondaries (fig. 17b). The amount of flaring is variable and has the effect of 'pushing' the primaries down so that they touch the ground (fig. 17c; 'wing-drag walk' in *BWP*), with the head lowered even further. Usually, only the wing facing the intruder is flared, although both wings may be flared at times. This has the effect of making the adult look larger and more intimidating. As a final resort, the adult might lunge at the intruder. When the pressure of a large number of feeding intruders is too great, the pair has to give way to them (I have seen up to 60 spread over c. 10 ha), although feeding pairs usually keep a clear area around them. In such cases, an abundant food supply and pressure from other Buzzards has forced the territory holders to relax their defensive behaviour. Interestingly, the large gatherings of

young birds dispersed in all directions at dusk and did not seem to be involved in a communal roost. It appears that these young birds are already showing signs of being solitary, which typifies the adults' behaviour (see also Glutz von Blotzheim *et al.* 1971).

#### *Behaviour of independent juveniles*

Having left their natal territory in their first autumn, juveniles seldom settle in defended territories, but wander over a larger area. They may stay in an area where there is an abundant food supply, congregating with other juveniles. Here, they will feed in close proximity (within 20 m) without interacting. The most frequent interaction is when one flies low to displace another from its feeding place. The latter may not submit but turn to engage the new arrival by jumping up and resettling, then rushing at the other, whereupon they lock talons or stand close together and adopt *angel* postures (Weir & Picozzi 1975), one 'fully spread' (pseudo-dominant), the other either 'half' or 'fallen' (submissive) (fig. 18). Head feathers are sometimes raised and, although I have never been sure of seeing the crest raised purposefully (Weir & Picozzi 1975), I have seen the same effect caused by wind blowing the feathers up.

These scuffles usually break up quickly. I have only ever seen juveniles perform these *angel* postures, never an adult. On one occasion, when a juvenile walked within a few metres of a 2Y on a fence post, the latter dropped onto the juvenile, which flattened into a *fallen angel* (fig.



**Fig. 18.** The *angel* postures used by juveniles. Initially (a), having rushed together, wings are opened and the birds may jump up, or one attacks the other, they lock talons and one falls into the *fallen angel* (b). A 2Y attacks a juvenile, which immediately adopted the *fallen angel* posture, with the 2Y looking on (c). These episodes are normally fairly brief.

18c). Another juvenile, attacked by an adult female on the edge of a territory, refused to move off. The female approached again, in an *assertive bow*; the juvenile adopted a *half angel* and stepped backwards, whereupon the female walked away. The *angel* postures apparently serve to appease an attacker and are submissive – but with a hierarchy from least submissive (full) to total submission (fallen).

### Play

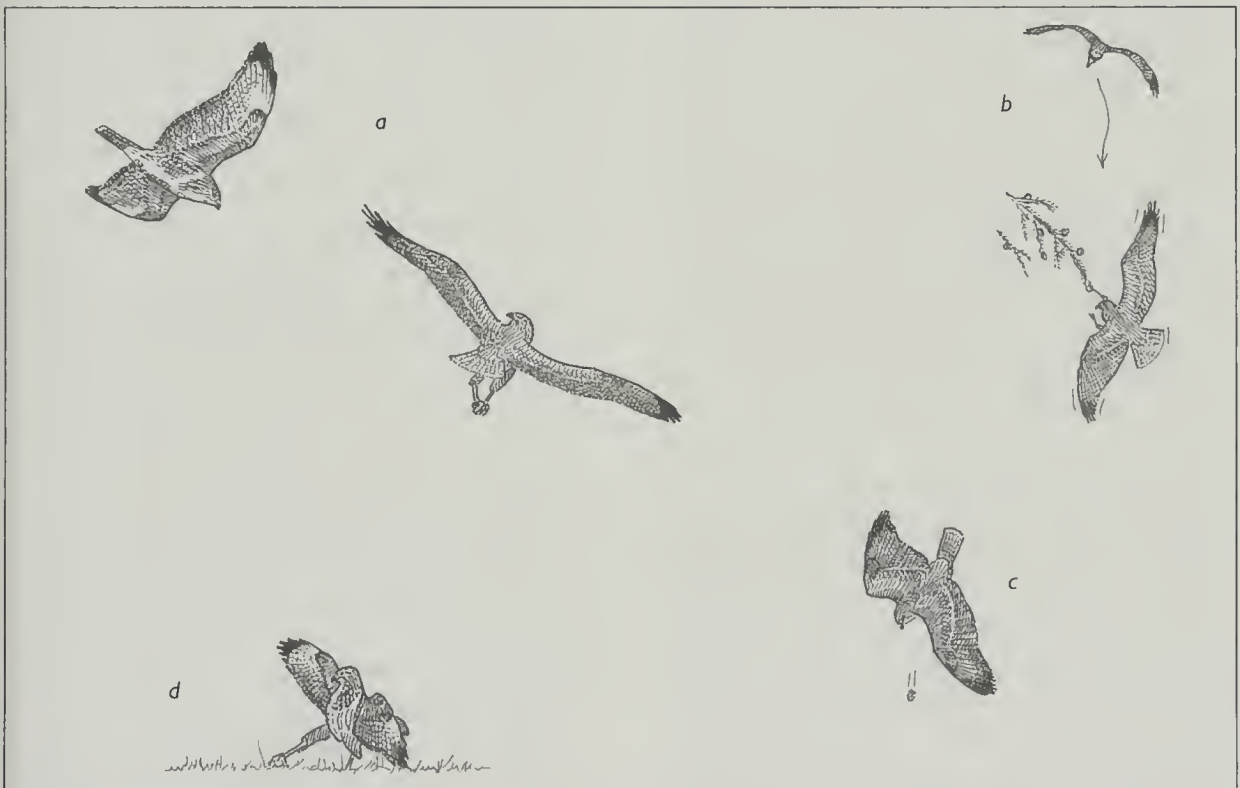
Juveniles often gather in small groups (up to about seven) in flight, often above a hilly bluff forming a boundary between two territories, and engage in apparent play activities (fig. 19). They circle, dive on others, chase, settle and displace (actions sometimes reciprocated), often weaving through the treetops at great speed. They will also fly at and grab a cone or small twig (items that may be mistaken for prey by observers), which is carried aloft and dropped, followed by a zigzagging chase to recapture it, unless another bird intercepts it. These activities appear to be ‘without purpose’ and to represent the classic *play* behaviour exhibited by the young of many birds and mammals (Immelman 1985); this appears not to have been recorded in the Buzzard before. Such episodes may last from

several minutes to around half an hour. If the group strays too far into a territory, one of the adults (usually the male) will approach, often adopting an *assertive flight posture*, and even dive at or chase the nearest bird, but I have never seen an adult fully engage in play. Eventually, the juveniles circle up, glide or sail off in ones or twos in various directions and the episode is over. When hunting on the ground, a juvenile will occasionally rush at something (e.g. a clod of earth, a piece of vegetation), pounce on it and then jump up, drop it, jump up again, tossing the object about and clearly playing with it. After a few seconds, the bird will return to hunting proper.

### Exceptions

#### *Interactions between pairs*

As emphasised above, during social behaviour it is intruding non-breeders that stimulate territorial adults to rise up and evict them. Many new pairs that take up a territory adjacent to one or more established pairs experience no conflict with the older birds. On some occasions, however, the male from the older territory will fly over the new territory and engage with one of the new birds, even diving at it. Both will circle *assertively* and/or adopt the *assertive flight*



**Fig. 19.** Play behaviour of juveniles. This involves much chasing, including when one has a play object (a). Birds will dive at branch tips to detach items such as cones (b), which may be dropped and dived after (c). On the ground any small, loose object may be dashed at, dislodged or thrown up (d). Up to seven birds were involved in the flight episodes observed in this study, which mostly happened at treetop level and sometimes lasted over half an hour.

Robin Prytherch

*posture*. Normally this activity will diminish quickly and within a few weeks the pairs more or less ignore each other.

Aggressive interactions between well-established pairs occur only rarely. On one occasion, I watched a female sail into her neighbours' territory where she was attacked by the male, after which she was soon back over her own territory. The neighbours had young chicks still branching (when the chicks wander from the nest but before they are capable of flight) and this may have caused the unusually aggressive reaction.

#### *Persistent adult intruders*

A similar activity might involve an adult intruder that attacks and chases a resident adult (i.e. male on male). This could result in the intruder killing the resident and thus effect a mate change. These 'battles' can last, intermittently, for two weeks or more before being resolved, but are rarely observed, at least in my study.

#### *Adult-like behaviour of juveniles*

Towards the end of their first year, some juveniles may (rarely) show signs of adult-like behaviour. I have seen one dive down aggressively, with talons lowered and toes spread, among a small group of other youngsters and an adult. It quickly assumed the expected passive glide and relaxed flapping as the adult sailed assertively towards it. On another occasion, a lone juvenile had been using the corner of a grass field to feed in for a week or so. When another juvenile arrived, the first bird adopted the *assertive* posture, with secondaries flared. The first bird was simply showing its dominance over the second, which soon flew off. Such events probably happen fairly frequently.

#### *Summary of territorial flight behaviours*

Having described in detail all the various displays and postures, this summary is intended to help underline the relationships between them and make their purpose clearer. This will be a hypothetical description since in reality most actions may involve only some of the behaviours, and there is great variation in individual behaviours both within and between episodes.

Once a perched adult spots an intruder flying over, it may call 'ca-au' as it adopts the *assertive bow*. It may remain perched if the intruder

passes over quickly, otherwise (usually) it takes flight with rapid, stiff-winged beats, sometimes *display flapping*. The adult, usually the male, then circles *assertively* up to the intruder, which circles above in a more relaxed *passive* posture. If the intruder is persistent, the adult may chase it and dive at it aggressively before circling resumes. Once the intruder glides off, the adult will follow it, somewhat below and behind, until the former leaves the territory. The adult will then turn back, dropping down to a perch in a steep glide, or it may *display stoop* a few times.

Alternatively, the adult may stay aloft, sailing about or circling. If another intruder approaches, the adult may *display flap* and call 'ca-au'. If the intruder enters the territory, the adult might adopt the *assertive flight posture*, perhaps calling again. If the intruder approaches the adult, by sailing towards it, or by diving down to it, the adult will briefly lower its talons into the *aggressive* form of the *assertive flight posture*, even rolling to direct its talons towards the intruder. By now the adult's mate (the female) may have appeared, circling up to the action, perhaps briefly *display flapping* and calling. It may also adopt the *assertive flight posture*, aggressively if necessary. One or both members of the pair may then chase the intruder out of the territory. The pair might then, after a period of circling, perform the *dive-on, turn-over* display two or three times in moderately quick succession before circling again.

One or both adults might then *display stoop* down to the trees, or they may glide to meet yet more intruders, perhaps at the territory boundary where neighbours are engaged with them. As they join in the circling melee, which could now involve eight or more birds, the pair(s) will engage in *display flapping*, and aggressive forms of *assertive flight posture*, *display stooping* and *dive on, turn overs*, seemingly throwing themselves about in the sky with abandon. The female might dive down, with talons dangling, to settle conspicuously, from where she calls and *wing-waves*. Once the birds have risen to well over 1,000 m, quite suddenly the sky empties as the intruders glide off fast and the adults drop down to the trees. This might be by one fast *display dive* or a series of *display stoops*, the pair doing so close to each other, but rarely synchronised.

All these behaviours are concerned with territory defence (and advertisement): the birds

are signalling 'get out' and, once the intruders have gone, the *display stooping* and *dive on, turn overs* reinforce the pair bond.

### Discussion

In this section, I refer to previous key studies in abbreviated form: *BWP* (Cramp & Simmons 1980), *GvB et al.* (Glutz von Blotzheim *et al.* 1971), Tubbs (Tubbs 1974) and *W&P* (Weir & Picozzi 1975). My study reveals new information about the social behaviour of Buzzards, some of which conflicts with previous work. In trying to explain these differences, it is worth considering several general points. I have put in far more effort (see p. 247) than the other studies. Even though Tubbs's main study lasted ten years, he had sparse information to work from, and the same applies to *W&P*, whose study lasted only three years. These and other accounts failed to recognise that any resident population of Buzzards comprises two components (territorial breeding adults and unpaired birds), as I have described, which reveals not only separate basic flight postures for the two age classes, but that the social behaviour which determines territory marking is confined to the older (breeding adult) component. Similarly, the significance of the distinction between 'passive' (or submissive) and 'assertive' (or aggressive) behaviours was not fully realised. Some of these facts have been implied by other studies (see *BWP* and *GvB et al.*) but not stated specifically.

Behaviours including *conspicuous perching* and *assertive bow, engage and escort/chase, display flapping*, and *display stooping and dive over* have been described in earlier accounts but not always clearly understood. I have chosen new names for some of the behaviours for the sake of simplicity. *Wing-waving* is described clearly in *BWP* but not identified as a discrete behaviour. Behaviours that have not been described before are *assertive flight posture, display banking, banking and sailing display*, and *dive on, turn over*, as well as the aggressive forms of *display stooping, assertive flight posture* and *dive on, turn over*.

The catalyst for all of the loud calling and subsequent territorial activity by adult birds is an intruder. The progression of behaviours from the first sighting of an intruder through to its departure from the territory has not previously been described (see summary above). Most of this behaviour is effectively a highly sophisticated form of signalling designed to

avoid overt aggression. Significant physical contact is unusual and will often occur only during an attack (involving talon-locking, culminating as a fight on the ground). The *angel* postures exhibited by juveniles are primarily concerned with determining hierarchy, although damage might occur.

Without this vital background knowledge, many behaviours can be easily misinterpreted; I certainly did so early in my study. This is demonstrated by the widespread misunderstanding of the most basic of observations, that when two Buzzards circle together it is the male that circles above (or 'leads') the female (quoted by or suggested by all the above accounts). This may be so if it is the *pair* which is circling, but it is more likely to be an intruding juvenile (male or female) above an adult male. The impression of smallness is, of course, due to the slightly smaller size and slimmer proportions of the young bird. This will be emphasised if the adult female is escorting a young intruder.

There are many suggestions in the key literature that behaviours are related to 'courtship'; this is misleading, in my view, especially where it concerns attracting a mate. This aspect of social behaviour in the Buzzard seems to be very perfunctory. Pairing appears to take place very quickly and once a pair is settled in a territory the two birds are usually together for life. There may be some changes in the first year, although these are rare and I have witnessed only one 'divorce'. Should one partner die, replacement can be rapid, often within a week, but may take several months. But suddenly the new bird is there and behaving as if it had been in the territory for years.

The calling contests described by Tubbs as between pairs are, in my view, always directed at an intruder, even if it is not visible to the human observer. One pair might start the calling and alert the other pair to a 'problem', perhaps an intruding bird (or even a human observer) on their common border or in a narrow strip of 'no-man's-land'.

It is clear to me that the *dive-on, turn-over* display (not recorded by other observers) has been mistaken for an adult chasing an intruder. Certainly it can be difficult to distinguish this behaviour if it occurs in a large group high in the sky involved in all sorts of activities. Similarly, mock dives by a juvenile on an adult that is in the *assertive flight posture* can be construed as an adult diving on a juvenile (if one

is not familiar with the detail of the behaviour) and may also account for W&P's 'wing-touching', which I have otherwise never seen.

I have never seen adults use *angel* postures when involved in antagonistic encounters. This has only ever involved juvenile and 2Y birds, and even the latter do not get fully involved. W&P, in using a captive bird, may well have observed actions that may be less likely in the wild. Continental writers (see *BWP*, GvB *et al.*) may have seen interactions involving adults (i.e. where migrants and residents mix in winter), but this is not clear. GvB *et al.* described a bird making 'pecking movements towards the ground' and attributed it to 'displacement-activity'. I have never seen this but I suspect that the action described may have been an extreme form of the *assertive bow*.

Tubbs discussed the likely vertical dimension of a Buzzard territory and estimated that the ceiling would be c. 160 m in the New Forest (Hampshire) and c. 250 m above the valley floors in south-central Wales. These estimates are far too low and, as suggested above, the ceiling height is probably determined by weather conditions. I have seen birds above 1,400 m, level with the cloud base, and they may well go higher on fine, cloudless days.

I have described a wide selection of behaviours, which also vary in intensity with extraordinary subtlety. Buzzards can be highly aggressive, a trait necessary for catching large prey, but also useful in the defence of territories. However, attacking another Buzzard has to be a last resort and many of the displays and other behaviours seem designed to avoid this while still deterring intruders. The appearance of an intruding Buzzard stimulates most of the behaviours described and, without such stimulus, pairs spend hours below canopy level and dispense with rising high into the sky. In summer (with nests to attend to), and even in winter, they can be very inconspicuous.

### *Origins of the displays*

Why has this species developed such a wide repertoire of social signals? The fact that territorial adults will go to great lengths to evict intruders without resorting to physical contact is clearly significant. The evolution of such signalling is complex but it may be related to basic autonomic actions such as intention movements, flight (hunting and casual) and feeding movements (Krebs & Davies 1981).

When unchallenged by intruders, adult Buzzards will fly about their territory in a relaxed mode, with the wings often slightly raked and sometimes held quite flat or, more usually, slightly raised at the tips; flaps will also be rather relaxed. Most commonly though, the adults are flying because an intruder has been spotted, in which case they switch to the assertive modes of flight. Wings are held more stiffly, the dihedral is more obvious, and flaps are more rapid. In other words, this is an exaggerated form of the normal flight. This certainly makes them look bigger, with the flight feathers spread to maximum effect. These are the most basic signals, together with calls, that adults use to indicate that they are in a territory. Intruders acknowledge the submissive nature of their flight by maintaining relaxed postures, which also helps to make them look smaller; large birds dominate smaller ones.

Intention to take flight is not always obvious, but birds will momentarily adopt a horizontal posture at take-off. Frequently, the most obvious intention movement is to defecate. This naturally puts the bird in a horizontal posture and, after a short delay, it flies (if it does not relax). This appears to be the root of the *assertive bow*. The lowering of the head, with sleeked head plumage, seems to be a modification to amplify the action. This latter action is also an important part of the aerial form of the display, the *assertive flight posture*.

*Display flapping* is almost identical to the flapping flight used in a low-level hunting flight towards prey. For the display, the flight is modified to give a slightly wavering effect and can be made more conspicuous with the addition of *display banks*, which are modified from a part of normal circling flight. The banking action is steeper than in normal circling, the tail is closed and the turn is restricted to about 180°.

*Display stooping* seems to be based on two separate actions that have been combined, namely a hunting stoop and normal landing on a raised perch. Hunting stoops are rarely as impressive as the display version, which emphasises (in the most intense forms) the closed wings (briefly held with the carpal area pushed out, sometimes with alulas spread, and wing-tips over the tail) and speed of the stoop. If a hunting stoop is aborted near the ground, the bird sweeps up on spread wings and this is mimicked in the *display stoop* at the end of each

downward dive section. But this also mimics the upward sweep to a normal landing on a raised perch, all the more so since the bird often closes its wings as it lands deftly, almost at the moment of stall. In the most intense form of the *display stoop*, in the final rising section of the stoop, the bird closes its wings before reaching the stall point and peaks before stooping again. In this way, the Buzzard has neatly combined two commonly used parts of routine behaviour to create one of its most impressive displays. *Display dives* are also derived from the hunting stoop.

The two parts of the *dive-on, turn-over* display appear to have evolved from different but related behaviours. The *dive on* by the male seems to be a simple modification of the chasing action of an adult on an intruder. The *turn over* by the female is a barely altered action normally used by both sexes when they are mobbed by conspecifics, corvids or other raptors. In both cases, however, the talons appear to be clenched, hiding the claws. The *talon lowering* that occurs briefly is a normal part of the separate actions (except that then the claws may be exposed) and signals their aggressive origins. However, in this case, between members of a pair, the male is signalling his aggressiveness to the female and she her dominance, as she does not flee. The mutual confidence signalled by this action could also indicate compatibility in the pair.

In the aggressive forms of *display stooping* and *diving, assertive flight posture* and *dive on, turn over* the talons are lowered; the birds are thus signalling with their lethal weapons! Although talons are also lowered briefly during aerial attacks by adults on intruders, in the *aggressive displays* the *talon lowering* is more prolonged. All these actions must have their origins in a hunting strike, when the talons are usually lowered and thrust forward at the last moment before the capture of prey.

*Wing-waving* also has an aggressive element, revealed by the flying bird as it approaches a perch with lowered talons and then lands heavily (without the usual sweep up from below), as if onto prey. The wing-waving which then follows is probably a modification of mantling – the partly spread wing posture used when a feeding bird is approached by another intent on stealing the prey. The mantling bird may flap its partly

open wings as it lurches at an interloper. It is possible that this flapping action has been exaggerated to produce this very conspicuous display.

The full *angel* posture adopted by fighting juveniles is exactly the same as the posture at the moment of 'capture' of a prey item on the ground, especially where the bird seems not to be sure whether the item is in its talons, as it looks down intently. This seems to indicate a conflict of aggression (needed to catch the prey) with anxiety (or fear) of the possible retaliation of the prey (which must happen often). When two fighting birds make contact (usually talon to talon), one soon relaxes slightly or even collapses on its back to indicate submission. This seems to be enough to 'switch off' the dominant individual and the birds soon separate, the submissive bird fleeing.

#### Acknowledgments

This paper is dedicated to my late friend Ken (K. E. L.) Simmons, who showed me how much more fulfilling birdwatching can be by taking an interest in what birds do, that is, watching their behaviour. Without his example and interest, I would not be writing these words now. I have many other people to thank, simply for encouraging me and taking an interest in my studies. More specifically, I thank Mike Wilson for providing me with a translation of the relevant parts from Glutz von Blotzheim *et al.*, and Ian Newton for his encouragement and for reading and commenting on a draft of this paper that resulted in many improvements.

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## Appendix I. Key to identifying age classes of nominate Common Buzzard *Buteo b. buteo*

This deals with the features that are most helpful; these are not full descriptions. The darkest adults have a dark breast with, below the pale crescent (which may be almost absent on the darkest birds), *heavily barred belly and flanks*. The barring can be fine or bold and often the flanks – and even the belly – appear uniformly dark at a distance. From these darkest birds there is a cline through almost limitless variation to the palest, which may have just a few streaks on the sides of the breast, but the belly and flanks will usually show some fine or faint *barring*. Intermediate individuals (the majority) will always show barring on the belly and flanks but the breast may be blotchy, speckled, streaked or a mix of these. The eyes are *dark*. In flight, a broad, dark subterminal bar is visible along the trailing edge of the secondaries and inner primaries, clearly demarcated from the other, much finer barring on the underside of the flight feathers. This bar is also apparent on the upperwing of most individuals but is usually difficult to see in normal viewing. The tail is similarly marked but the width of the subterminal bar is more variable.

Buzzards fledge with a distinctive *juvenile/1Y* plumage, different from that which, after 2–3 years, they will retain, through moults, for the rest of their lives. The remiges are narrower and *shorter* than those of adults. This gives juveniles a *narrower-winged, relatively longer-tailed appearance* than adults. Juvenile plumage is paler than the corresponding adult plumage (of whichever morph), but nonetheless some individuals can be very dark. The eyes are *pale grey or pale yellow* and can be difficult to see on a distant bird, giving a rather plain-faced appearance. The scapulars and wing-coverts are tipped pale (whitish or buff); the greater-covert tips usually show up as a pale bar and this may be a useful ageing feature on both perched and flying birds (note that some adults show this feature, but on them it is less obvious). The underparts are *streaked*, rarely with some rather blotchy barring on the flanks and ‘trousers’ (upper leg feathers). The dark subterminal bar on the tail is usually the same width as the other bars, occasionally slightly wider. The equivalent bar on the secondaries is more variable in width but *rarely well demarcated*, so that the dark trailing edge fades into the rest of the

underwing. On the inner primaries, the bar is *narrower and not well demarcated* – this is the best section of the wing to concentrate on for a bird that is difficult to age. Overall, juveniles look immaculate, although some flight feathers may get broken as time passes. By the end of their first year, often during May, they will start their first moult, usually indicated by a missing inner primary or outer secondary. Buzzards never undergo a complete moult (i.e. all the feathers replaced at one time), so after this point all birds will show a plumage with feathers of mixed ages.

Second-year birds retain many juvenile feathers, which gradually become extremely bleached and faded. As new median and lesser coverts appear, they are strikingly darker and are often obvious on perched birds. Many of the inner greater coverts are retained and these often contrast markedly with replaced, outer feathers, which are longer and darker. All the inner primaries are usually replaced and the new feathers have a broad, dark subterminal bar of adult type, distinctively different from that of a juvenile. Because the feathers are longer, they also change the proportions of the wing-tip. The retained outermost (‘fingered’) primaries are short and worn; the effect is to make the wing-tip look broader and more square-ended. Some of the outer secondaries are renewed but most of the inner ones are retained. This gives an uneven appearance to the trailing edge, with the inner wing ‘pinched in’. The 2Y wing is therefore distinctive, although not always completely obvious! Initially, the eyes of most 2Ys will show some paleness but the vast majority have dark eyes by the next summer, when they are two years old.

Virtually all third-year birds are inseparable from adults. During the second moult, almost all the retained juvenile feathers will be renewed. The odd feather retained for a second year may be invisible, but occasionally the outermost primaries and/or the outer tail feathers will be old, and obvious with an appropriate view of the bird. Exceptionally, an individual may retain a few juvenile median wing-coverts and an odd greater covert, which stand out as very pale against the new, darker feathers. In all these birds, though, the trailing edge of the wing will be neat (barring any damaged feathers).



**134.** This 2Y Common Buzzard *Buteo buteo* (photographed in the study area in November 2005) shows a bewildering mix of juvenile and new feathers following its first moult. The mix of older (shorter) and newer (darker and longer) feathers is most obvious in the greater coverts and secondaries. There is a mix of old and new feathers on the body, but especially on the median and lesser coverts. The eye is exceptionally pale for a 2Y (although this may be partly caused by the low sun). This is a particularly scruffy individual, and many are much neater – see plate 135, right. The chestnut colour on the undertail-coverts is staining from the soil, via the talons.



**135.** The age of this 2Y Common Buzzard *Buteo buteo* (photographed in the study area in October 2008) is revealed by the four shorter, paler, greater coverts. Some pale juvenile lesser coverts also remain, but this bird is much smarter than many 2Ys. This bird was hunting, and is therefore sleeked, thus hiding the secondaries. As yet, no barring is visible on the crescent.



**136.** This Common Buzzard *Buteo buteo*, observed in the study area in January 2006, is a tricky individual to age, since the barred flanks and dark eye suggest full adult plumage. But note the two pale, shorter, juvenile greater coverts, which, together with two ages of feather in the remainder of the greater-covert tract, confirm that this bird is a 3Y (i.e. is in its fourth calendar-year).



**137.** This is a dark adult Common Buzzard *Buteo buteo*, yet the pale crescent below the breast is still present; Latvia, April 2004.



Markus Varesvuo

138 & 139. Common Buzzard *Buteo buteo*, juvenile (above) and adult (below); both Sweden, September 2005. These two together make a fine comparison. The most conspicuous difference is the dark trailing edge to the flight feathers, being bolder and more sharply delineated on the adult. This juvenile is typical but on some this feature may be even less obvious and on others more so. The subterminal tail bar is more obvious on this juvenile than usual.



Markus Varesvuo



Markus Varesvuo

**140 & 141.** Common Buzzard *Buteo buteo*, juvenile (above, Finland, November 2005) and adult (below, Sweden, September 2004). From above, the most obvious difference between these individuals is in the tail, with the dark subterminal bar present on the adult, but not on the juvenile. Unusually, the juvenile's greater coverts are not clearly marked with pale buff tips.



Markus Varesvuo

# Rarities Committee news

The 2009 BBRC AGM was held at Minsmere, Suffolk, in early March. This included an informal social evening attended by about 30 local birders, which was enjoyed by the Committee and birders alike. The main items arising from the AGM are summarised below. Two identification meetings were also held at the Natural History Museum, Tring, during the year and we are grateful for the ongoing support from staff at the Museum for the work of BBRC. We also continue to be extremely grateful for the financial support offered by Carl Zeiss Ltd, and the ongoing commitment and support from directors and staff of the journal *British Birds*. Both of these organisations continue to underpin the variety of functions of the BBRC and enable us to achieve our core aims and objectives, serving British and overseas birders as we have done for the last 50 years.

## Committee membership

Since no alternative nominations for election to BBRC were received, the Committee's nominee, Richard Millington (see *Brit. Birds* 102: 105), was confirmed as a member and commenced his term of office on 1st April 2009. We welcome Richard, who replaces our longest-serving member, Brian Small, although we are delighted to retain Brian as the Committee's Museum Consultant. In addition, Phil Bristow has regrettably been forced to retire from the Committee, owing to the pressure of other commitments. It is a great shame to lose Phil,

who has made a very valuable contribution to the work of BBRC. Phil was due to retire in April 2011, so in the meantime we have co-opted a new member to undertake his duties. We were keen to find a replacement who was also based in Wales but, despite extensive enquiries, we were unable to find anyone who could commit their time to BBRC at present. We are nonetheless delighted to welcome Nic Hallam onto the Committee to replace Phil from 1st April 2009. Nic is based in Oxfordshire and does much of his birding at Farmoor Reservoir, where his impressive list of finds includes Britain's only inland Buff-bellied Pipit *Anthus rubescens*, along with three Bonaparte's Gulls *Chroicocephalus philadelphia*, two Franklin's Gulls *Larus pipixcan* and a Gull-billed Tern *Sterna nilotica*. His other finds in this landlocked county include Pied-billed Grebe, and he has served on the Oxfordshire Rarities Committee for 25 years and is co-author of the county bird report. Nic is widely travelled in Europe and farther afield. He has been co-opted for a period of 12 months, and there will be an opportunity for other candidates to be nominated during the coming year, for an election if necessary. Names and capabilities of potential candidates should be sent to the Chairman, supported by a proposer and seconder. We are disappointed that we no longer have a representative for Wales, but we are grateful to Reg Thorpe, Chairman of the Welsh Records Panel and a former BBRC member, who has continued to assist the Committee with Welsh records where necessary.

## Record assessment

Nigel Hudson has implemented a number of changes to our assessment and communication procedures that were highlighted in the introduction to the 2007 report (*Brit. Birds* 101: 516). For records since 1st January 2008, Andy Musgrove and Rob Fray have supported Nigel in reviewing submitted records against those reported by other



Danni Hudson

142. Some of the BBRC members at the 2009 AGM, at Minsmere, Suffolk. From left to right: John Marchant, Brian Small, James Lidster, Adam Rowlands, Chris Batty, Martin Garner, John Sweeney, Nigel Hudson and Paul French.

birding media such as the BirdGuides and Rare Bird Alert (RBA) websites and *Birding World*. This also allows us to follow up records that have not been submitted but for which photographs have been published, in order to attempt to improve our efficiency even further. We are extremely grateful for the support of Andy and Rob, along with that offered by the website teams, particularly Fiona Barclay at BirdGuides and Dick Filby at RBA. The support of individual observers and County Recorders in assisting with these tasks cannot be underestimated either. Overall, this system allows us to follow up the non-reported records more effectively and is continuing to assist with improving the comprehensiveness of our report.

Collectively these improvements have enabled us to speed up production of the Annual Report and we are intending to continue to publish in the October issue of *BB*, as in 2008.

We also discussed the issue of informal submissions or reports at the AGM. The concept was proposed in the RIACT report, published in 2006 (*Brit. Birds* 99: 619–645). This approach is welcomed by the Committee in instances where the identification criteria for a species or subspecies may be still evolving, and where documentation of particular individuals may assist the Committee's knowledge of the thresholds for acceptance. However, informal submissions should be as detailed as full/formal submissions and should include some research by the observer(s) to support the claim. Because of the nature of these records, we understand that they may not be submitted to us if there is a concern that they will be considered 'not proven'. In cases where they relate to taxa for which our knowledge is still evolving, such informal submissions may be held without the decision being published if the Committee feels that the detail is insufficient to enable acceptance at the present time. Observers wishing to make an informal submission should liaise with the Secretary, who will consult with the Chairman to determine the best way to proceed.

#### *Species to be removed from the BBRC list*

Despite the removal of a number of species in 2006 (*Brit. Birds* 99: 52 & 100: 18–19), the number of records received continues to grow and we assessed the frequency of several of the more regular rarities at the AGM. White-billed Diver *Gavia adamsii* met the statistical criteria for removal from the list (more than 150 records

in the last ten years, with ten or more in at least eight of those years) for the period to the end of 2008, and will therefore be dropped from the list of species considered from 1st January 2009. Cattle Egret *Bubulcus ibis* met the criterion of more than 150 records, but fell short of the threshold of ten or more per annum. Nonetheless, given that the influx which began in autumn 2007 appears to be being sustained, and that the species is relatively easy to identify, it was determined that it would also be dropped from the list of species considered from 1st January 2009. Parrot Crossbill *Loxia pytyopsittacus* was also considered. Although reports of this species to the Committee have been nowhere near the frequency normally required for it to be considered for review, the widely publicised Scottish breeding population (see *Brit. Birds* 95: 4–11; *Ibis* 144: 393–410) appears to be well established. Ron Summers has provided the Committee with summary data for Parrot Crossbills trapped during his study and we are grateful for this information, which allowed us to confirm the identification of these individuals. We will not, therefore, be seeking records of this species from 1st January 2009 onwards, but will also not assess retrospective records as a consequence of the established breeding population. We would like to take this opportunity to remind local committees that BBRC is willing to assist with the assessment of any previous BBRC species, if necessary. Any requests should be directed towards the Secretary.

#### *Species and subspecies reviews*

A number of reviews, referred to in the introduction to the 2007 Annual Report (*Brit. Birds* 101: 517), remain in progress. The species involved include Redhead *Aythya americana*, North Atlantic Little Shearwater *Puffinus baroli*, 'southern skuas' *Stercorarius* (to establish whether any of the records can be assigned to a specific taxon) and Royal Tern *Sterna maxima*. The Druridge Bay Slender-billed Curlew *Numenius tenuirostris* review also continues. With regard to the curlew, we have gathered all the material from previous recirculations, which established that the Committee has not formally reviewed some of the video evidence collected at the time. We are in the process of gathering this material, but would be grateful if observers with video evidence of the bird would be willing to submit it for review (please contact the Chairman). Following a review of the

identification criteria (*Brit. Birds* 102: 84–97), a full reassessment of ‘Ehrenberg’s Redstart’ *Phoenicurus phoenicurus samamisticus* records has commenced.

We are also still considering records of ‘orange-billed’ and Elegant Terns *Sterna elegans*, and of Canada Geese (to determine the first records of wild Greater *Branta canadensis* and Lesser Canada Goose *B. hutchinsii* for Britain, and then to determine whether each species should be considered as a national rarity). We have decided that records of Snow Goose *Anser caerulescens* will *not* be considered (*contra Brit. Birds* 99: 623). Vagrants do appear to reach Britain on a reasonably regular basis, but introduced or escaped birds continue to cloud the issue; furthermore, the volume of records for Snow Goose exceeds that which is deemed appropriate for its consideration as a rarity. Also, note that the Devon Falcated Duck *Anas falcata* has been re-aged as a first-winter (*contra Brit. Birds* 100: 751); reasons for this correction will be published in *BB* in due course.

The review of records of the ‘Siberian Chiffchaff’ *Phylloscopus collybita tristis* during 2008 has established that this taxon (or at least birds that can be assigned to *tristis*/*fulvescens*) occurs too frequently to be considered a BBRC rarity. BBRC is extremely grateful to those observers and recorders who co-operated with this review and submitted documentation to support their observations in 2008 (and some previous years). The subcommittee which has assessed claims is still keen to receive further documentation for birds in 2008 that were trapped (and for which full biometrics and

photographs are available) or sound-recorded, even if observers believe that the birds involved are closer to ‘*fulvescens*’ or ‘eastern *abietinus*’. Please send details to Alan Dean ([tristis@btinternet.com](mailto:tristis@btinternet.com)), who is undertaking secretarial duties for the group. It is intended that the results will be written up in due course and these additional reports will enhance the quality of that paper.

#### *Liaison with BOURC*

We welcomed Andrew Harrop (BOURC Secretary) to a joint session at the BBRC AGM and explored means of improving the working relationship of the two committees. Several initiatives were identified, particularly focusing on joint development of identification criteria for species and subspecies of relevance to both committees. We plan to hold a joint meeting in summer 2009 to explore these items further, and we are grateful for support from the BOU and members of BOURC, in particular Steve Dudley, the BOU Administrator, in taking these initiatives forward. The importance of submitting Category D records, emphasised in the introduction to both the 2006 and 2007 BBRC reports (*Brit. Birds* 100: 694, 101: 517), was reinforced and we continue to ask observers and recorders to document any such claims of potentially wild individuals so that they can be processed by BBRC and forwarded to BOURC.

#### *BTO and ringing rarities*

We also welcomed Mark Grantham (representing the BTO Ringing Scheme) to a session at the AGM. We discussed the value of full descriptions of trapped rarities and how these can assist with developing our knowledge of identification criteria. BBRC is keen to encourage a culture of recording plumage and biometric details where appropriate for rarities. Committee members will work with the BTO to develop a trapped-rarity recording form to highlight the details that should be recorded. It is intended to publish this in the *Ringers’ Bulletin* and make copies available on the internet in due course.

It is also proposed that ringers send rarity descriptions direct to BBRC in future and the BBRC Secretary will liaise directly with the Ringing Scheme regarding records received. The ringing details will still be reported to the BTO as part of the standard recording process. We are grateful for the continued support from the



James Lidster

143. Richard Porter, BB2000 Ltd director, wielding the frying pan before the start of business on the second day of the 2009 BBRC AGM.

BTO, particularly Mark Grantham and Jez Blackburn, in taking this work forward.

### *Constitution and Standing Orders*

The BBRC Constitution and Standing Orders have been reviewed and revised to ensure that they are relevant and up to date. The revised Constitution will be published on the BBRC website ([www.bbrc.org.uk](http://www.bbrc.org.uk)) shortly.

### *Website*

We are grateful to all those individuals who responded to the survey regarding the content of the BBRC website. We are planning to review the format and content of the website during the course of this year and hope to introduce a number of improvements in due course.

### *50th Anniversary*

BBRC celebrates its 50th Anniversary in August 2009 and a number of initiatives are underway to celebrate this. These include a poll in conjunction with BirdGuides ([www.birdguides.com](http://www.birdguides.com)) to identify the most popular rarity event of the last 50 years, a rarity section of the annual *BB Bird Photographer of the Year* competition, focusing on the best rare bird photographs of the last 50 years, and plans to publish a number of identification papers (the aforementioned 'Ehrenberg's Redstart' paper being one of these; *Brit. Birds* 102: 84–97). We are particularly grateful to a number of ex-BBRC members, together with Adrian Pitches, Richard Porter and Roger Riddington for their assistance with these initiatives.

### *BBRC archive*

We are currently investigating the possibility of digitising accepted records of species that are currently considered by BBRC, to ensure that we have an electronic archive to assist ongoing research or reviews. This will be a considerable task and we are at present attempting to secure external funding for the project. We are particularly keen to enable public access to part of the archive and are investigating the possibility of providing internet access to electronic versions of record submissions, but this will depend on whether we obtain funding to digitise the records first. This would provide a

significant resource, allowing data collected during the 50 years of BBRC's existence to be more widely available.

For this project to realise its full potential, and before we can make these data available in this way, we need the support of all those observers who have submitted descriptions and supporting documentation to BBRC. We ask anyone with any concerns regarding this proposal to contact the Chairman (see below).

### *Support for BBRC*

As well as the individuals and organisations acknowledged above, we continue to be grateful to a number of people who have provided significant support for our work. Many will be acknowledged in our Annual Report in due course, but we are extremely indebted to Peter Kennerley for uploading reference material and documents to assist BBRC members during the assessment process, particularly where records of subspecies are concerned (part of the Committee's ongoing RIACT work). This work has also been supported by a number of former BBRC members, some of whom have also been involved with the 'Siberian Chiffchaff' group mentioned above. We are grateful to Jimmy Steele for his assistance with the Little Shearwater review and work on the Canada Geese; to Arnoud van den Berg and the *Dutch Birding* team for providing electronic copies of the key identification texts from that journal to assist BBRC members; and to Mark Constantine and the Sound Approach team for assisting the Committee with research into the vocalisations of a number of species and subspecies, a very important and developing area of our work. Mark Constantine provided a thought-provoking and valuable presentation at the end of our AGM, which ensured that the conversation continued well after the official meeting had drawn to a close and presents opportunities which we hope to build upon in the coming months and years.

*Adam Rowlands, e-mail* [chair@bbrc.org.uk](mailto:chair@bbrc.org.uk)



### **The British Birds Rarities Committee is sponsored by Carl Zeiss Ltd**

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# Letters

## Language and ornithology

A. G. Blunt's advice on the pronunciation of scientific names (*Brit. Birds* 102: 25–28) makes interesting reading and I wish those involved in promoting classical pronunciation every success. Such abominations as 'Beauty-oh' for *Buteo* (should be 'Boo-teh-aw'), 'Troglo-die-tees' for *Troglodytes* (Troglo-dee-tess) and 'Puffyness' for *Puffinus* (Poo-fee-noose), among many others, have always struck me as implausible – but I am a native speaker of

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I read with amusement the recent letter on pronunciation of scientific names (*Brit. Birds* 102: 25–28), and assumed that it was written by M. Python. However, joking aside, there is an important issue here, about which I have been intending to write to *BB* for some months.

In terms of pronunciation, it is of course futile to even contemplate a 'correct pronunciation' since scientific names are not Latin names. They are based largely, though not entirely, on Latin. And the Latin on which they are based is not classical Latin. It probably has more affinity with medieval church Latin or even botanical Latin, both of which are recognised as distinct. To suggest that there is a 'correct' way of pronouncing Latin is like going back to the days when there was a 'correct', 'BBC', way of pronouncing English. And just as Spanish has a huge range of pronunciation (and even meanings for the same words), so does Latin and all its derivatives. There wasn't even an

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Spanish as well as English. When scientific names are pronounced as Spanish words, or those of other Latin-derived languages, most of the advised criteria are met. I fear that it will take a lot to shift British usage away from the straitjacket of, especially, English vowel sounds, at least among those who do not also speak a Latin-derived language. Still, it is well worth a try.

Italian language a couple of hundred years ago.

The fundamental issue is that scientific names are there to act as a lingua franca. Originally, they were used largely in literature, and so pronunciation was of little importance. And even now, I don't actually see the problem. I spend a huge proportion of my working life using scientific names, mostly with colleagues whose first language is not English. I rarely, if ever, have any problems understanding what they are talking about, since the permutations of pronunciation are fairly limited, even if the various dialects of Spanish-speaking South Americans use different stresses and pronunciation from those used in Italy and other parts of the Romance-speaking world. When we are trying to communicate about birds and other wildlife, there are usually far more important issues to worry about than whether or not we have pronounced a name 'correctly'.

## Looking back

### *One hundred years ago:*

'BRÜNNICH'S GUILLEMOT IN THE FIRTH OF FORTH. A female specimen of Brünnich's Guillemot (*Uria brueennichi*) was picked up dead on the shore at Craigielaw Point, on the Haddingtonshire coast of the Firth of Forth, on December 11th, 1908, and was sent

to the Royal Scottish Museum by Mr. Valentine Knight. Judging by the size of the bill, which measures along the curve of the culmen only 1.2 inches, Mr. Clarke considers the specimen a bird of the year (W. Eagle Clarke, *Ann. S. N. H.*, 1909, pp. 75 and 76).' (*Brit. Birds* 2: 425, May 1909)

# Notes

All Notes submitted to *British Birds* are subject to independent review, either by the Notes Panel or by the BB Editorial Board. Those considered appropriate for BB will be published either here or on our website ([www.britishbirds.co.uk](http://www.britishbirds.co.uk)) subject to the availability of space.

## *The diet of Common Eiders at seaside resorts*

According to *BWP*, the Common Eider *Somateria mollissima* feeds mostly on molluscs, and to a lesser extent on arthropods and echinoderms; vegetable matter is only significant in the diet of incubating females. Nonetheless, in July 2008, at Amble harbour, Northumberland, I was delighted to be able to feed juveniles of this charismatic species on deep-fried pieces of potato, commonly known as chips. Scrappets (fragments of fried batter) were enthusiastically hunted down among the floating algae and battered fish skin was also extremely popular. Another littoral chip-lover is

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the Turnstone *Arenaria interpres*; this species routinely scavenges takeaway leftovers on the promenade at Cromer, Norfolk.

The serious point behind these observations is that adaptation to human-provided foods can profoundly influence the distributions of species, and hence the composition and diversity of avifaunas. *BWP* states that, historically, Eiders have been unable to breed where 'biomass of benthos in accessible coastal waters falls below 25 gm<sup>-3</sup>', but it appears that chips were not included in this calculation.

## *Goosanders approaching close to humans and feeding on bread*

Goosanders *Mergus merganser* are generally considered rather timid, rarely allowing a close approach, so the following observations may be of interest. At Bowness-on-Windermere, Cumbria, on 4th January 2008, an adult male Goosander in the midst of a tight press of some 50 birds, mainly Mallards *Anas platyrhynchos* and Black-headed Gulls *Chroicocephalus ridibundus*, aggressively sought and took pieces of bread being thrown by one of the many visitors to the area. The birds were on a narrow, gravelly beach, about a metre from the water's edge, and some 4 m from the person feeding them.

On 16th January, two Goosanders were taking bread, an adult male and a 'redhead'. Both

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had joined the usual group of Mallards, Black-headed Gulls, etc. and were again actively and aggressively taking bread provided by passers-by; both Goosanders came right to the water's edge, but neither left the water on this occasion. One of the boatmen there told me that two Goosanders had been taking bread intermittently since at least mid December 2007 and two were reported doing so on 30th January. An instance of a Goosander taking bread has been reported in *BB* before (*Brit. Birds* 59: 341), but is clearly rare in a species that is usually almost exclusively fish-eating; emerging from the water to do so is perhaps particularly notable.

## *More on the foraging behaviour of the Grey Heron*

As a follow-up to our recent note (*Brit. Birds* 101: 92–93), we present here some further observations of the foraging behaviour of Grey Herons *Ardea cinerea*, made in the Třeboň Basin Biosphere Reserve, Czech Republic, which appear not to have been described previously.

On 13th February 2008, in a shallow stretch of the Lužnice River, we observed up to five Grey

Hérons taking advantage of concentrations of small Roach *Rutilus rutilus* which were escaping from a fishing Eurasian Otter *Lutra lutra*. Each time that the Otter began fishing, a Grey Heron appeared in flight overhead, following the Otter's movements and watching for the shoal of escaping fish; the heron seized a fish at more or less the same moment as the Otter. This 'co-

ordinated' fishing behaviour was observed five times on that day, and a fish was successfully caught by a heron on four occasions. Similar behaviour was recorded (just one observation) on 1st March 2008.

At the same site, on the evening of 15th January 2008, a Grey Heron was observed attempting to steal a fish from an Otter. This occurred at the point when an Otter, with the fish in its mouth, was about to clamber onto an area of ice from the river.

A final observation concerned a Grey Heron that managed to 'defrost' a fish by dipping it in

the water. This instance was observed near an artificial feeding station on 22nd January 2008, where small fish (100–150 mm in length) had been left out for White-tailed Eagles *Haliaeetus albicilla* and were frozen solid. One heron, unable to swallow a frozen Tench *Tinca tinca* c. 150 mm long, took the fish to running water nearby. The bird dipped the fish in the water until the ice melted.

#### Acknowledgments

The authors thank Dr Hana Cizkova for English revision of the manuscript.

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### Little Egret eating Brown Rat



Gordon Small



Gordon Small



Gordon Small



Gordon Small

144–147. Although the behaviour may not be unprecedented, plates 144–147 are a graphic illustration of the catholic diet of Little Egrets *Egretta garzetta*. This individual, photographed at Normandy Marshes, Hampshire, in January 2008, was seen to swallow a large Brown Rat *Rattus norvegicus* (an individual missing part of its tail), albeit with some difficulty and over a period of around 20 minutes.

## Common Kingfishers taking Great Crested Newts

The River Teise, in Kent, has a healthy population of Common Kingfishers *Alcedo atthis*, which from time to time visit ponds on my nearby property. Kingfishers are generally sporadic and unpredictable visitors throughout the year, but in late June they occur at one pond in particular with increasing regularity. This pond has a large population of Great Crested Newts *Triturus cristatus* and the increase in the Kingfishers' appearances coincides with the presence of juvenile newts, which by then have reached a reasonable size.

Kingfishers may continue to visit throughout July and August and even into September.

During a typical visit, a single Kingfisher will consume as many as ten juveniles and I have estimated that, at peak times, as many as 100 juveniles per day can be taken from the pond. This onslaught may continue day after day and it appears that only male Kingfishers are involved. The frequency of visits does seem to be less in some years compared with others, which may perhaps be related to whether the birds have second broods. There also appears to be territoriality associated with the pond. I have seen Kingfishers seek cover on the arrival of what I suspect is the dominant bird and, if discovered, being chased away aggressively.

Kingfishers appear unwilling to take the newts once they have reached a certain size, presumably because they become noxious. They rarely make mistakes when diving for them but



John Webley

148. Common Kingfisher *Alcedo atthis* with juvenile Great Crested Newt *Triturus cristatus*, Kent, July 2007.

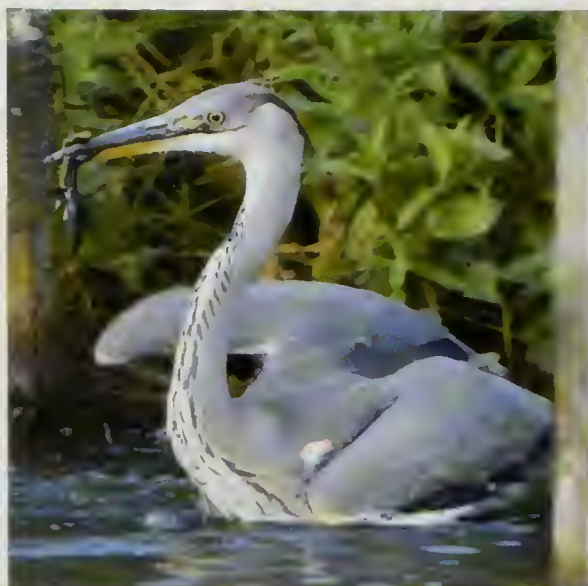
I once saw a bird catch a more mature newt, which it dropped immediately like a hot potato. Conversely, I have seen a Kingfisher on another pond catch a mature Smooth Newt *T. vulgaris* (plate 149) and eat it with relish.

It may be of interest that larger species have no problems eating mature Great Crested Newts. Grey Herons *Ardea cinerea* have no difficulty seeking them out and swallowing them



John Webley

149. Common Kingfisher *Alcedo atthis* with adult Smooth Newt *Triturus vulgaris*, Kent, February 2007.



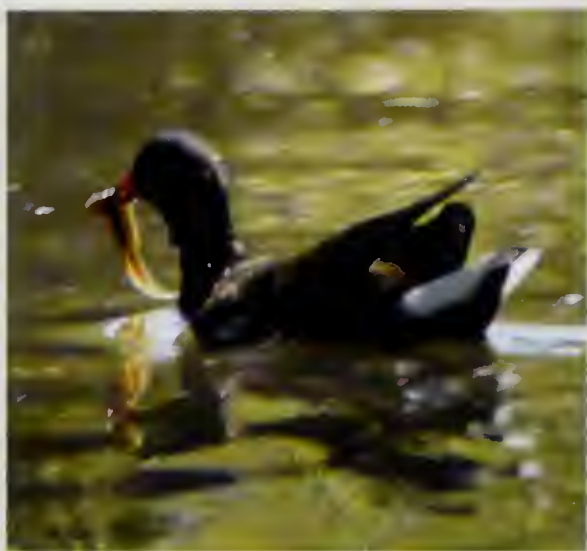
John Webley

150. Grey Heron *Ardea cinerea* with adult Great Crested Newt *Triturus cristatus*, Kent, June 2008.

whole (plate 150). Mallards *Anas platyrhynchos* hunt for the newts quite systematically and also swallow them whole. They will patrol the pond looking for the newts as they surface for air and I have watched a female Mallard catch and consume at least five fully-grown newts in the space of an hour. Moorhens *Gallinula chloropus* also eat them but they are opportunistic

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151. Moorhen *Gallinula chloropus* with adult Great Crested Newt *Triturus cristatus*, Kent, July 2006.

hunters and will catch them only if they happen to come across one surfacing within reach; the lack of webbed feet presumably makes more systematic hunting difficult. If they are lucky enough to catch one, it causes great excitement among other Moorhens in the vicinity, who chase the bird with the catch, hoping to share in the spoils. Moorhens will not eat the newts whole but peck them into small pieces first.

### The use of natural tree holes by nesting Great Spotted Woodpeckers

Alan Prowse recently reported the use of a natural cavity by a nesting Great Spotted Woodpecker *Dendrocopos major* (*Brit. Birds* 102: 143). Prompted by his note, I have looked at my records of 779 Great Spotted Woodpecker nests collected over the last 25 years in four Hertfordshire woodlands. In fact, the use of 'natural' cavities is very common. Of 267 nests in live oak trees *Quercus robur/petraea*, 66 (24.7%) were in apparently natural cavities. For Ash *Fraxinus excelsior* trees the figure was slightly lower, with 20 of 119 nests (16.8%) in natural cavities. Overall, around 11% of the Great Spotted Woodpecker nests in my study were in natural cavities.

It is actually quite difficult to define what is meant by a natural cavity and many natural-

looking cavities were probably created by woodpeckers in the first place. For the purposes of this note, I have included as 'natural' all pre-existing cavities with callousing around the hole that were not identified as excavated nest-sites from previous years. Many of these were probably created initially by excavating woodpeckers, exploiting a site where a branch had died or fallen. My studies have shown that the same nest hole can be used again after being abandoned for some years – up to nine years later in the case of holes in Ash trees. By the time that these holes are reused, they have developed the calloused appearance of natural holes (see plate 99 in Alan Prowse's note) and have larger entrance diameters than freshly excavated cavities.

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## Mistle Thrushes defending Holly tree in Caithness

Further to Dr Jeremy Brock's note on Mistle Thrushes *Turdus viscivorus* defending berries, and the accompanying editorial comment (*BB* 99: 158–159), I observed Mistle Thrushes defending a 6-m-high Holly *Ilex aquifolium* with a heavy crop of berries in my garden in Caithness during the winter of 2007/08.

From 10th November 2007, a Mistle Thrush was seen almost daily to chase Blackbirds *T. merula*, with churring alarm calls, if they tried to feed in or even approach within 2–3 m of the Holly. There were usually 4–5, but at times up to 8 Blackbirds in the garden. Between bouts of chasing, the Mistle Thrush perched in surrounding broadleaved trees, seldom more than 3 m from the Holly, or in the Holly, where it was seen to eat berries, though sparingly it seemed. On occasions, small numbers of Fieldfares *T. pilaris* and Redwings *T. iliacus* which arrived in the garden were given the same treatment, while smaller species such as Greenfinches *Carduelis chloris*, Chaffinches *Fringilla coelebs* and Siskins *Carduelis spinus* were ignored.

On 3rd December 2007, the Mistle Thrush was trapped, aged as a first-winter, and ringed. One was seen the following day but not for the next three days. The bird seen defending the berries on and after 8th December 2007 was unringed. This new Mistle Thrush was trapped on 14th December 2007, found to be another first-winter, and ringed on the opposite leg to the first bird, to avoid confusion. It behaved as had the earlier bird, which was not seen again,

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being recorded daily defending the berries until 1st March 2008, the last date seen. By this time the remaining berries were few and sparsely distributed on the tree.

In the 1970s, to my knowledge, Mistle Thrushes bred regularly in Caithness only in the Reay area, near the Sutherland border, and in the wooded straths in the south of the county (see also both national breeding atlases), although they were more common in the straths across north Sutherland. The last 10–15 years have seen some expansion eastwards, aided presumably by the afforestation of the peatlands, but it is still a very scarce breeding species over most of the county.

The Mistle Thrush was hitherto an extremely rare visitor to my garden, and the two birds mentioned here were presumably undergoing post-fledging dispersal: migrants from Scandinavia, less likely in any case (see the *Migration Atlas*), might have been expected to move on. However, the main purpose of this note is to place on record food-guarding behaviour by Mistle Thrushes throughout a winter, and on the north coast of mainland Scotland, *contra* the northern limit speculated by Snow & Snow (1988). Yet another indication of climate change?

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## Mistle Thrushes preying on flying insects

On the evening of 1st July 2008, on Westleton Heath, Suffolk, our attention was drawn to a pair of Mistle Thrushes *Turdus viscivorus* feeding on a swarm of newly emerged Summer Chafers *Amphimallon solstitialis* flying round a small Pedunculate Oak *Quercus robur* tree (c. 3.5 m high, canopy c. 5.5 m wide). The birds were catching the beetles mostly by darting up

vertically from the ground or by hunting them down in short dashes made within the canopy. In a period of 40 minutes, 23 out of 28 attempted captures were successful. Eighteen were delivered singly to young in a nearby nest, and five eaten by the adults. One of the adults also ate a fat-bodied moth (Noctuidae) that it caught in flight.

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# Reviews

**IDENTIFICATION GUIDE TO NORTH AMERICAN BIRDS.  
PART II. ANATIDAE TO ALCIDAE: A COMPENDIUM OF  
INFORMATION ON IDENTIFYING, AGEING AND SEXING  
WATERBIRDS, DIURNAL RAPTORS AND GALLINACEOUS  
BIRDS IN THE HAND**

By Peter Pyle, with Steve N. G. Howell, Siobhan Ruck and David F. DeSante, illustrations by Steve N. G. Howell and Siobhan Ruck.  
Slate Creek Press, California, 2008.  
848 pages; 556 black-and-white figures; 71 tables; 289 bar graphs.  
ISBN 978-0-9618940-4-7. Paperback, \$88.00.

This book is the long-awaited part 2 of 'Pyle', long regarded as the North American counterpart of 'Svensson' (or, more precisely, his *Identification Guide to European Passerines*). The title is a good summary of what the book is about; it presents detailed information on identification, moult, ageing and sexing of North American non-passerines, from ducks, geese and swans through to the auks. 'Near passerines', from doves to woodpeckers, were dealt with in part 1.

As in part 1, an excellent introduction precedes the species accounts, and covers topography, measurements, moult (in some detail), ageing and sexing techniques, and so on. Some 310 species and 276 subspecies are dealt with (compared with 392 and 856, respectively, in part 1), which comprise all the species which have

bred in North America together with annual visitors. Most of the species accounts stretch from one to three pages, although some are longer, with standard headings, including 'Geographic variation', 'Moult' and 'Age/sex' (in the last, distinct age/sex groupings from juvenile through to adult are described). Where appropriate, the section on geographical variation is extensive (over a page for the Common Eider *Somateria mollissima*, for example) and will be of particular interest for some species.

Like part 1, part 2 contains a phenomenal amount of information (see the statistics in the title bar, above). The second (much revised) edition of part 1 was published in 1997 (see *Brit. Birds* 91: 256) and Pyle admits in his introduction that the magnitude of the task was responsible for more

than four years of procrastination, once the first part was complete. Again, as with part 1, the information is targeted at ringers and museum workers in particular, yet there is much here for field birders as well. The 'New Approach' of Peter Grant and Killian Mullarney is no longer new, but it is that detailed scrutiny of individual feather tracts with good optics (and now digital cameras) that puts much of the information here directly in the realm of field birders. And, of course, there are plenty of potential transatlantic vagrants among the wildfowl, waders and gulls in particular (to say nothing of seabirds).

It takes a little concentration to use the book for those of us on this side of the Atlantic, given the unfamiliar (to us) American ageing and moult terminology, which is central to the way that the information is laid out. However, the effort is well worth it. This is another mightily impressive piece of work from a team of authors led by Peter Pyle and, despite its hefty price tag, it deserves to be considered by a wider audience than simply those who purchased part 1.

Roger Riddington

**THE HISTORY OF  
BRITISH BIRDS**

By Derek W. Yalden and Umberto Albarella.  
Oxford University Press,  
Oxford, 2009. 263 pages;  
numerous figures and tables.  
ISBN 978-0-19-921751-9.  
Hardback, £55.00.

The authors' main aim in writing this book was to draw attention to the extensive archaeological information about bird distribution. To achieve this they obtained external funding to set up a team to create a database of over 9,000 records of

birds that have been identified from archaeological sites. As a result they have been able to review our knowledge of avifaunal history over the last 15,000 years. Although the focus is on Britain, a real attempt has been made to set our avifauna in its wider historical and European context.

Most bird species can be tentatively identified by their larger bones. Although they appeared in other parts of Europe in the late Jurassic period (about 145 million years ago), in Britain evidence of birds cannot be found before the Eocene (55–65 million years ago). However, after this there are no more specimens until the

Pleistocene (from about 2 million years ago). Using records from around the country, the authors present a number of distribution maps for a selection of species. For example, in the Mesolithic (7,000–10,000 years ago) there were Ptarmigan *Lagopus muta* and Hazel Grouse *Bonasa bonasia* in Avon and south Devon. As time marches on into the Neolithic, there is more evidence available, and a wider range of species can be identified. The authors try to describe the habitats that would have been found in Britain at that time. In the fens there were many species that we still see today, but I had not expected Dalmatian Pelican *Pelecanus crispus*

to have been among them.

Another aspect of this book's scope is the use of place-names to indicate the historical significance of birds. Again a surprising range of species is revealed. Some are obvious, such as HawkrIDGE and Larkbeare, but as a Red Kite *Milvus milvus* enthusiast I never realised the significance of Kidbrooke (kite brook) or Gledholt (kite wood). The authors also assess the use of bird names in literature. The

histories of individual species are also examined – such as Great Bustard *Otis tarda*, Great Auk *Pinguinus impennis*, Capercaillie *Tetrao urogallus* and various raptors.

In a final chapter there is an assessment of twentieth-century bird distribution and the factors that influenced key species and, similarly, a look ahead to future changes that we may witness. There is also an appendix of more than 250 species with details of where

their bones have been detected and in approximately which period. The list includes Pygmy Cormorant *Phalacrocorax pygmeus*, Lammergeier *Gypaetus barbatus*, Demoiselle Crane *Anthropoides virgo*, White-backed Woodpecker *Dendrocopos leucotos*, Azure-winged Magpie *Cyanopica cyanus* and Snowfinch *Montifringilla nivalis*.

Keith Betton

### MODELLING THE FLYING BIRD

By C. J. Pennycuick.

Academic Press, London, 2008.

480 pages; many photographs and black-and-white illustrations.

ISBN 978-0-12-374299-5.

Hardback, £45.99.

This is a new addition to the Academic Press 'Theoretical Ecology Series', which discusses the mechanics and biology of flight, primarily in birds. It is designed to complement the freely available *Flight* programme, which uses basis

parameters such as a bird's mass and wingspan to make predictions about flight performance. The sometimes dense text is suitable either for engineers who want to understand the biology of bird flight or ornithologists who want to understand flight mechanics. To a large extent the chapters can be read in isolation and the casual reader, of which there are not likely to be many, can dip into the book and largely avoid the mathematics. Even a general reader would, however, pick up lots of useful information from this book. Mind-boggling though long-distance migration is, we learn that

migrating birds may be living well within their physiological means. For example, a Bar-tailed Godwit *Limosa lapponica* that migrates non-stop from the Alaskan Peninsula to New Zealand is in fact carrying enough fat to continue to the South Pole (without stopping), should it wish to. The book challenges many popular assumptions about how birds fly, and why different species adopt different flight strategies. It is recommended for serious students and professionals.

Martin Collinson

### BINOCULARS AND PEOPLE

By Brin Best.

Biosphere Publications, Otley,

2008. 210 pages; many

photographs and illustrations.

ISBN 978-1-904841-03-6.

Paperback, £25.00.

Technology continues to transform various aspects of our daily lives, including birding (how *did* we cope without the internet?), but binoculars are still the single-most important item in every birder's kitbag. Many, me included, can recall every binocular they've ever owned in a way that they might struggle to remember every car or... (I was going to say girlfriend, but perhaps I shouldn't) in their life. Nonetheless, there are scarcely any books about binoculars, and few if any dealing with what Brin Best calls their 'social dimension'.

The book is divided into eight

main chapters: the history of binoculars; their part in military service; the professional use of binoculars outside the military; their use in astronomy, and then natural history; 'Let me entertain you' (the use of the binocular to enrich people's leisure time); choosing, using and repairing; and, finally, binocular collectors. The main text in each chapter is liberally interspersed with illustrations, mostly in colour, and with a great many self-contained boxes or panels. The latter include short contributions on 'Landmark binoculars' (some of the more important or popular models, such as the Swift Audubon or the iconic Carl Zeiss Jena 7 × 50, 8 × 30 and 10 × 50 models, which many birders know through the Jenoptem badge); 'My binocular story', featuring interesting, amusing or quirky stories relating to binoculars; and 'Binoculars with a

history', describing particular instruments with a notable past.

Overall, I found the book a mixed bag. I particularly enjoyed the chapter on the history of binoculars, whereas 'Let me entertain you' left me wondering why the author had bothered. Likewise, the 'landmark binocular' panels were almost always a good read, whereas those telling 'My binocular story' were almost always quirky rather than interesting or amusing (though I did enjoy Rob Hume's account).

Lest that assessment seems lukewarm, on the whole I found this book a worthwhile read. I learnt a lot and some of it surprised me. I was fascinated to read about the early pioneers, notably Carl Zeiss, Ignazio Porro, Ernst Abbe and Moritz Carl Hensoldt. It surprised me, for example, to learn how long the roof-prism binocular has been around (Hensoldt

patented it in 1898, and the first incarnation of the Zeiss Dialyt became available in 1905), and that the Zeiss T-coating was pioneered way back in 1935. Looking forward, the idea of China becoming an optical superpower was certainly new to me. But above all, it struck me just how fashion-conscious we birders are. Most of us either own or aspire to own roof-prism binoculars from one of the big four manufacturers (Zeiss, Leica,

Swarowski or Nikon). Their latest incarnations are on the shelves at a whopping £1,200+ in some cases, and yet there are still some porro-prism binoculars available for about a quarter of that price, which are nigh-on equal to the top-of-the-range roofs in terms of optical and build quality. We seem to disregard them just because they are not *waterproof* (and how important is that in reality to most of us?) – or is it more to do with herd instinct,

fashion and slick advertising? Admittedly, I am as much a part of the herd as the rest but I think that this book has given me a more balanced perspective (incidentally, Brin Best presents a particularly fair treatment of all the brands). All in all, this was a good way to spend a few long winter evenings.

Roger Riddington

NOUVEL INVENTAIRE DES  
OISEAUX DE FRANCE

By P. J. Dubois, P. Le Maréchal,  
G. Oliosio and P. Yésou.  
Delachaux et Niestlé, Paris,  
2008. 559 pages; numerous  
tables, maps and photographs.  
ISBN 978-2-603-01567-4.  
Hardback, €49.50.

This is a wonderful book to delve into. After initial frustration about it being entirely in French (hardly surprising for a book on the French avifauna produced in France!), it is amazing how much of interest English speakers with a limited command of French can glean from it.

The first *Inventory*, written by Noël Mayaud, was published in 1936, and the *Second Inventory*, compiled by the present team, appeared in 2001. Since then, so much additional data regarding breeding birds, wintering waterfowl and occasional visitors and vagrants has come to light that a completely new book is required, hence the present volume.

The book starts with an introductory chapter, which gives information about data sources, a relief map, a list of départements and an explanation of the conventions used for the plentiful maps and histograms in the systematic list that follows. All the species accounts start with an introduction, giving the French vernacular and scientific names, species category (using the same A–E system as the UK), alternative French names, conservation status,

either protected or quarry, and systematics, including taxonomy and world distribution. There is a photograph for every species although line-drawings are conspicuous by their absence. The maps, although necessarily on a very small scale, are clear, with breeding, wintering, passage and year-round ranges shown by orange, blue, yellow and green respectively. The numbers and distribution of records of vagrants are shown by different-sized purple dots positioned in départements. Histograms, using the same colour coding, are used to show numbers of breeding pairs, total wintering populations and annual totals of records for vagrants over various timescales. There are also histograms showing the occurrence of vagrants over the course of the year, with each month divided into three ten-day periods. Further text sections cover distribution and annual cycle, history and trends, and a specific bibliography.

The systematic list deals with 560 species in categories A, B and C, and those in categories D and E appear in an appendix. The total list is less than that for the UK, but this masks a much greater number of breeding species and fewer vagrants. Resident species such as Middle Spotted Woodpecker *Dendrocopos medius*, Short-toed Treecreeper *Certhia brachydactyla* and Crested Tit *Lophophanes cristatus* breed right up to the Channel coast, but seem unlikely to colonise southern England. Black Woodpecker *Dryocopus martius* has spread towards the coast and is a

possible candidate for cross-Channel colonisation, while the Crested Lark *Galerida cristata* is withdrawing from northern France, making the prospect of further British records less likely. Presumably, migrants such as the Fan-tailed Warbler *Cisticola juncidis* (which has been spreading eastwards up the channel coast), Melodious Warbler *Hippolais polyglotta* and European Serin *Serinus serinus* may have a greater chance of colonising the UK, especially with the help of global warming. France has also lost breeding species, for example Black Wheatear *Oenanthe leucura*, which has not bred since 1938. I was also interested to check information for passage movements of seabirds and waders which are routinely observed from watchpoints in southern England. There was surprisingly no information for up-channel movements of Bar-tailed Godwits *Limosa lapponica* and Whimbrels *Numenius phaeopus* in spring, while in contrast numbers of Little Gulls *Hydrocoloeus minutus* dwarfed those recorded in southern England; records quoted included several single-day counts in excess of 3,000 and a spring total of 10,190 at Cap Gris-Nez in 2006. The data presented for Pomarine Skua *Stercorarius pomarinus* was also surprising, with spring numbers stated to be much lower than those in autumn, at which time observed passage has become heavier in recent years with a maximum single-day count of 700 in November 1999.

This is a very well-produced

volume with which I can find very little to nit-pick. The book lacks defining introductory chapters giving an overview of the composition and character of the French avifauna or a survey of the country's bird habitats, both of which were included in the seminal *Birds in England* (Brown & Grice, Poyser, 2005). Thus the opportunity to include photographs of key French habitats has been missed. The species sequence used is somewhat confusing – it is similar

to the *BB* list, although the order within some families, for example gulls (Laridae), is unfamiliar and the latest revisions to scientific names in, for example, the tits (Paridae) have not been incorporated. Most of the photographs are excellent, although there are some surprising choices, such as a juvenile Rock Thrush *Monticola saxatilis* rather than a breeding adult. I found two mistakes on the maps – the breeding map of the Mute Swan *Cygnus olor* is identical

to the winter one, and the winter records for Lapland Bunting *Calcarinus lapponicus* are labelled as breeding records.

This is a highly authoritative work and thus an essential purchase for professionals or laymen with an interest in the French and indeed Western Palearctic avifauna.

My thanks go to Gilbert Rowland for invaluable help with translation.

John Clark

#### OWLS OF THE WORLD

By Claus König and Friedhelm Weick. Christopher Helm, A&C Black, London, 2008. 2nd edn. 528 pages; 72 colour plates. ISBN 978-0-7136-6548-2. Hardback, £45.00.

First published in 1999, *Owls: a guide to the owls of the world* received mixed reviews: it was praised for bringing together detailed information on all the world's 212 species of owl and for the well-written account on owl taxonomy, but criticised for the disappointing illustrations and the incomplete reference list. In this new edition, all the plates have been revised, with some illustrations completely redrawn and eight new plates added. The slightly washed-out appearance of the plates in the first edition has been addressed and the reproduction seems much better. The illustrations may not be to everyone's liking, but they are meticulously drawn and serve the purpose of an aid to identification well. The addition of colour distribution maps next to the plates is good.

The taxonomy of owls has been reviewed during the last ten years and now 250 species are recognised. The chapter on molecular evolution and systematics of owls by Michael Wink and colleagues has been updated and provides a well-written account of the current thinking on owl taxonomy. The species accounts have been completely updated to reflect these changes and all 250 species are

treated. For example, the number of species in the genus *Tyto* has increased from 17 to 25, and three groups of barn owl, each with several races and previously considered as subspecies of *Tyto alba* have been given specific rank: Common Barn Owl *T. alba*, American Barn Owl *T. furcata* and Australian Barn Owl *T. delicatula*. Other barn owls with more or less isolated distribution have also been given specific rank, for example Galápagos Barn Owl *T. punctatissima*. Scops owls *Otus* have also been reviewed, with ten new species described recently, and the American screech owls have been split from *Otus* and placed in a separate genus, *Megascops*.

The introductory chapter covering subjects such as morphology, food, hunting, behaviour, breeding and vocalisations is largely unchanged from the first edition and provides a good overview. The species accounts comprise the bulk of the book and cover topics such as identification, vocalisations, distribution, movements, habitat, geographical variation, food, breeding, status and conservation, and an updated reference list.

If you're interested in owl taxonomy, then it would be worth buying this second edition, since there have been considerable changes over the last ten years. If you didn't buy the first edition, then you will find this an excellent reference book, the most comprehensive on owls available.

Dawn Balmer

#### EXTREME BIRDS

By Dominic Couzens. Collins, London, 2008. 287 pages; many colour photographs. ISBN 978-0-00-727923-4. Hardback, £30.00.

This attractive book illustrates some of the extremes that exist in the bird world. If there were such an event as the Bird Olympics, many of the contestants would be featured here. Obvious examples such as the largest, smallest, heaviest and lightest compete for space with the fastest and slowest, and so on. It would have been easy to stop with physical attributes but this book explores different cases of extreme behaviour such as longest copulation (Aquatic Warbler *Acrocephalus paludicola* – at up to 30 minutes), while the bird awarded the distinction of 'sneakiest bigamist' is the Pied Flycatcher *Ficedula hypoleuca*. Clearly the author has used his own judgement in many cases, and the result is a good mixture of stunning photography, interesting facts and a certain amount of humour. If it were possible to reappear as a bird, then I have decided to return as a Lake Duck *Oxyura vittata*. I cannot explain why in a journal of this stature, so if you want to find out why you'll have to buy the book!

Keith Betton

LONDON'S CHANGING  
NATURAL HISTORY:  
CLASSIC PAPERS FROM  
150 YEARS OF THE  
LONDON NATURAL  
HISTORY SOCIETY

London Natural History  
Society, 2008.  
264 pages; black-and-white  
photographs.  
ISBN 978-0-910009-25-3.  
Paperback, £9.50.

That the London Natural History Society (LNHS) can trace its origins back 150 years must make it unusual, perhaps unique, among such organisations. To mark its 150th anniversary, in 2008, the Society published this special volume containing a selection of papers published originally in its journals (*The London Naturalist* and *London Bird Report*), commencing with a presidential address delivered in 1916. The

papers are reproduced in facsimile and each is preceded by a modern commentary on the topic in question. A photograph of the schoolboys who formed one of the Society's predecessor clubs, on a field excursion in 1888, belies the current perception that, at that time, natural history was the preserve of clerics, diplomats and the military.

The diversity of subjects covered is remarkable, ranging from archaeology and 'herbs needed for drug making' to the more expected topics of botany, butterflies and bugs of diverse sorts, taking in fishes, mammals, spiders and others on the way. There are three papers on birds: on Common Starling roosts in the London area, by Richard Fitter (published in 1943); on observations of a bird population in an oakwood (at Bookham Common, Surrey), by Geoffrey Beven (1956); and on the influence of cleaner air on the breeding birds of Inner London, by

Stanley Cramp (1973). The eminence of all three authors says a lot about the standing of the LNHS; while the names of Fitter and Cramp will be well known to readers of *BB*, that of Beven may be less so (unless you were reading *BB* in the 1960s and 70s), but his studies at Bookham Common were a major influence on the methods adopted by the BTO in developing its Common Birds Census. When reading the papers, it is fascinating to be reminded how the once-spectacular roosting flocks of Common Starlings *Sturnus vulgaris* have now disappeared from Inner London and to ponder on the prescience of both Geoffrey Beven and Stanley Cramp in the way they dealt with their subjects. The volume throws an interesting light on the development of an active local natural history society and is testament to the vitality of the LNHS over 150 years.

Peter Oliver

EUROPEAN BIRD NAMES:  
A TRANSLATION GUIDE

By Tony Keene.  
Published by [www.lulu.com](http://www.lulu.com).  
99 pages.  
ISBN 978-1-4092-4392-2.  
Paperback, £9.99.

When I was invited to review this small book I was curious about the author's motives. The concept of providing multilingual alternatives to English bird names is not new: it was used in the original 'Peterson' guide half a century ago (*A Field Guide to the Birds of Britain and Europe*, Collins, 1954). The current book's purpose is best summed up by the publisher's comments on the back cover: 'A fully up-to-date translation guide to the birds of Europe from English to French, German and Dutch. Designed to complement one of the most popular European bird guides, this book enables the reader to understand the bird names in more

than ten European countries.'

A brief introduction tells us that the author's problems arose when he moved to Switzerland and needed to understand French and German vernacular names posted on sightings boards and websites. There are figures of bird topography with multilingual annotation. The main body of the book is a systematic list, in a traditional sequence, giving the English name (that used by the BOU, not the IOC-recommended English name; see *Brit. Birds* 101: 264–265) in bold type, the Linnaean name, and then the French, German and Dutch names. Some 50+ vagrants follow in a separate list. Splits announced since 1999, when the *Collins Bird Guide* (Svensson *et al.*) was published, are enclosed in boxes. Some well-recognised forms such as Red Grouse *Lagopus l. scoticus* are included in square brackets, but unlikely to be encountered in continental Europe. There are five pages of notes, mostly of a

taxonomic nature, highlighting the problems of nomenclature when the different authorities hold different opinions. The book ends with a couple of pages of references.

While the book does what it says in providing French, German and Dutch equivalents, it is not much use in doing the reverse, which was the author's original problem, i.e. going from continental vernacular to English. The book stresses how much of Europe it covers, and Francophone North Africa, but does nothing for Spain, Italy, Greece, Scandinavia or the former 'Iron Curtain' countries.

Readers may draw their own conclusions from the absence of any hint of using the Linnaean system for international communication. From this reviewer's experience of multilingual birding, the pictures in a field guide provide the best means of communication.

F. M. Gauntlett

# News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

## Malta bans spring hunting

The Prime Minister of Malta, Dr Lawrence Gonzi, has announced the first self-imposed ban on spring hunting of Common Quails *Coturnix coturnix* and Turtle Doves *Streptopelia turtur* in the Maltese islands. The PM said that no spring hunting could take place while the European Court of Justice case against Malta was pending (in April last year the ECJ applied an interim measure banning spring hunting for the first time since Malta joined the EU, in 2004). 'The Prime Minister's decision gives us hope

that Malta is starting to take serious action for the protection of the EU's common natural heritage,' said Joseph Mangion, BirdLife Malta President. 'We ask all political parties to join together on this issue and stop seeing spring hunting as a conflict between two sides, but as a serious conservation issue.'

The RSPB has been working with partners, especially BirdLife Malta, to bring illegal hunting in Malta to an end. In January 2007, the RSPB delivered a 115,000-strong petition requesting an

immediate halt to illegal spring hunting and for Malta to comply with the EU's Birds Directive. Alistair Gammell, director of the RSPB's international division, said: 'BirdLife hopes that Maltese hunters, like their fellow hunters in the EU, will respect the Birds Directive protecting wild birds during their breeding and spring migration periods. This will benefit the conservation of wild birds across Europe and thus there will be more birds in the autumn, when hunters can hunt legally.'

## Birds Directive celebrates 30 years

The good news from Malta came as conservationists were preparing to celebrate the 30th anniversary of the EU Birds Directive. Passed into law on 2nd April 1979, the Birds Directive remains the cornerstone of wildlife legislation in the EU (and was followed by the Habitats Directive in 1992).

The European Commissioner for the Environment, Stavros Dimas, attended a BirdLife event in Brussels to mark the 30th anniversary. 'The Birds Directive is one of the great success stories of EU environmental policy,' he said. And, referring to discussions on the EU's post-2010 biodiversity policy, he stressed: 'The Birds Directive is as relevant today as it was 30 years ago and has a key role to play in delivering our biodiversity policy for many years to come.'

African conservationists also conveyed their gratitude to the EU, for protecting African birds during their summer stay in Europe. Hamidou Mamoudou, from the BirdLife partner in Burkina Faso, said: 'We wish that we could have a Birds Directive too.'

## Stone crush traps in France

Despite the progress made by the Birds Directive, it's a return to the Stone Age for bird conservation in France. Stone crush traps used in the Massif Central were banned for a century, yet illegal poaching continued. So, the French Government legalised the practice in 2005 and the poachers became the custodians of a 'traditional hunting method' (!).

The now-legal traps, called *tendelles*, are one of the most brutal instruments in the bird-trapper's arsenal. A trap consists of a limestone slab, weighing some 3–10 kg, which is propped up on a structure of twigs and wood slivers and strewn with fresh juniper berries as bait. Birds coming to eat the berries brush against the twigs and are crushed under the slab or trapped in a small cavity beneath it. Many birds do not die instantly but haemorrhage, suffocate or die of thirst. Numerous birds also die from hypothermia as the temperatures in winter on the plateaux of the trapping region rarely rise above 0°C, even during the day.

The permitted quarry species are Blackbird *Turdus merula*, Fieldfare *T. pilaris*, Song Thrush *T. philomelos*, Redwing *T. iliacus* and Mistle Thrush *T. viscivorus*. But these appalling traps are indiscriminate and other bird species are often victims, especially Meadow Pipit *Anthus pratensis*, Robin *Erithacus rubecula* and Chaffinch *Fringilla coelebs*, but also more uncommon species such as Alpine Accentor *Prunella collaris* or Ring Ouzel *T. torquatus*. Since these species are protected under the EU Birds Directive, the use of stone crush traps is strictly forbidden throughout the EU. However, 32 communities in southern France are once again officially permitted to set up a total of 20,000 *tendelles*.

The Environment Ministry in Paris justifies this on the basis of a new type of trap that allegedly catches the smaller protected species alive. And the French Government has convinced Brussels that this trapping method is selective. But the German Committee Against Bird Slaughter (CABS) has done its own research in France to disprove the trappers' claims.

Between December 2006 and January 2009, CABS teams visited several dozen trapping sites with some 2,000 stone crush traps and recorded the trapping results. The results were unambiguous. As expected, not only thrushes were found in the traps: almost 20% of birds trapped were of protected species. And the claim that the heavy limestone slabs would trap the smaller protected species alive was also disproved: 75% of all trapped

Hugh Harrop



152. Alpine Accentor *Prunella collaris*, France, March 2006. Birds like this could potentially fall foul of the barbaric *tendelles*.

birds were dead, thrushes and protected species alike. Those that had survived were usually so badly injured that they could not be released into the wild. Not a single bird of a protected species was found alive.

CABS spokesman David Conlin commented: 'What the French Government "sold" to the European Commission as "selective, humane and traditional" is in fact a barbaric and unnatural custom that is cruel to the birds (and animals) involved. The traps are unquestionably in contravention of EU legislation and the French Government has pulled the wool over the eyes of the Commission with its untrustworthy studies.'

See [www.komitee.de/en/index.php?stonetraps](http://www.komitee.de/en/index.php?stonetraps)

### Sociable Lapwings in the firing line

More alarming news comes from Syria, where RSPB fieldworkers have encountered hunters shooting Sociable Lapwings *Vanellus gregarius* that were discovered in the region as recently as March 2007.

The Sociable Lapwing is listed as Critically Endangered, with a world population estimated at 11,200 birds. The birds migrate through the Middle East between their wintering grounds in northeast Africa and their only breeding area, the steppe grasslands of central Asia, principally Kazakhstan. A satellite-tagged bird from Kazakhstan was located in Turkey in October 2007 in a flock of 3,200 individuals. This followed simultaneous counts of over 1,500 in northern Syria and 1,000 in southeast Turkey in March 2007. Two tagged birds were then tracked to wintering quarters in Sudan in February 2008.

Martin Scott was a member of the RSPB survey team in Syria. He said: 'It seems clear that hunting could be a major threat to the species. During our visit we met government officials, police chiefs and religious leaders and everyone we spoke to recognised the plight of this bird and was keen to take action to prevent further deaths.' The RSPB's Rob Sheldon leads a research team studying Sociable Lapwings, funded by the UK Government's Darwin Initiative. He added: 'The Sociable Lapwing faces many threats and clearly hunting is emerging as a key danger. Thankfully, Syrian Government rangers moved rapidly to the area and were able to negotiate with the hunters and avert a worse disaster, which could have affected the hundreds of Sociable Lapwings passing through Syria on migration.'

Meanwhile, what could be a valuable tool in winning hearts and minds in Syria is the first dedicated field guide to the birds of the country. Written in Arabic, it's been jointly produced by the Syrian Society for the Conservation of Wildlife (SSCW) and BirdLife and covers nearly 400 species. 'The release of the "Birds of Syria" field guide gives a significant boost to hopes of protecting threatened birds in the country, and presents opportunities for the developing conservation movement in Syria,' said Dr Akram Darwish, vice-chair of the Syrian Society for the Conservation of Wildlife.

### Heat is on for upland birds

Warm summers are dramatically reducing populations of crane-flies (Tipulidae), which is having a severe impact on upland birds like the European Golden Plover *Pluvialis apricaria* that rely on them for food. Previous research has shown how changes in the timing of Golden Plover breeding, as a result of increasing spring temperatures, might affect their ability to synchronise with the spring emergence of the crane-flies. New research by the RSPB shows that the effects of increasing late summer temperatures, which cause the surface of the peatland soil to dry out, killing the crane-fly larvae, are even more problematic, resulting in a drop of up to 95% in the numbers of adult crane-flies emerging the following spring.

Average late summer temperatures in the Peak District study area have increased by 1.9°C over the last 35 years, and this has become the most important climatic factor affecting local Golden Plover populations. If these trends continue, as predicted by current climate models, plover populations will decline, or even face extinction, particularly in the south of their range, where temperatures will be highest.

Dr James Pearce-Higgins of RSPB Scotland said: 'Many studies predict dire effects of climate change upon wildlife but this study provides a rare example where such predictions are based on a detailed understanding of a species' requirements, linking the effects of climate on food

resources to changes in breeding success and population size. However, by understanding these processes, we now have the chance to respond. If we can maintain good-quality habitats for craneflies,

then we can help the birds too. For example, by blocking drainage ditches on our Forsinard reserve in northern Scotland we hope to raise water levels and reduce the likelihood of the crane fly larvae

drying out in hot summers. The fight against climate change will increasingly mean strengthening habitats to protect vulnerable species, as well as trying to reduce [carbon] emissions.'

## RSPB calls for more windfarms

Meanwhile, the RSPB has risked a gale of protest by calling for a large increase in the number of onshore windfarms to tackle climate change. The Society commissioned a report from the Institute for European Environmental Policy (IEEP), which found the UK lagging far behind in the drive for wind power.

Wind turbines met just less than 2% of the UK's electricity demands in 2007, though deployment levels varied, with Scotland significantly outperforming other parts of the UK. The UK was 13th in a European league table of wind power per head of population, trailing Estonia and just ahead of Belgium. The three countries at the top of the table were Denmark, where wind power met 29% of demand, Spain

(20%) and Germany (15%).

After looking at the ways in which those countries had facilitated onshore wind through their planning systems, and drawing on good practice from the countries of the UK, the report reached some conclusions on how to protect wildlife and deliver wind power on a large scale. It recommended that the planning system should take a strategic approach, identifying areas where new turbines should be given priority as well as those where they are most likely to conflict with wildlife. There should also be an expectation that developers discuss proposed developments before planning applications are submitted, to reduce conflict. And there should be more ways for communities to benefit from the

windfarms on their doorstep through direct ownership of the turbines, reduced bills, improvements to the local environment and/or money for local facilities.

Ruth Davis, Head of Climate Change Policy at the RSPB, said: 'The need for renewable energy could not be more urgent. Left unchecked, climate change threatens many species with extinction. Yet, that sense of urgency is not translating into action on the ground to harness the abundant wind energy around us. This report shows that if we get it right, the UK can produce huge amounts of clean energy without time-consuming conflicts and harm to our wildlife. Get it wrong and people may reject wind power. That would be disastrous.'

## RSPB scientist wins BOU medal

An RSPB research scientist has been awarded the BOU's Godman-Salvin Medal – making him only the 24th recipient in nearly 90 years. The honour bestowed on Rhys Green came at the recent BOU conference and celebrates his work studying the effects of development, farming and climate change on bird populations.

Mark Avery, Director of Conservation at the RSPB, said: 'Rhys has made a huge contribution to RSPB's species recovery work, particularly on Stone-curlews [*Burhinus oedinenus*], Corn Crakes [*Crex crex*] and Indian vultures [*Gyps*]. He's that rare scientist who can make his work relevant to a room of nature-reserve wardens or a room of politicians – or even a room of both!'

Previous recipients of the medal have included pioneering ornithologist and founder of the World Wildlife Fund, Max Nicholson; current BOU president Prof. Chris Perrins; and Harry Witherby, founder of *British Birds*.

Rhys said: 'It is a great privilege to receive the Godman-Salvin Medal. I have always worked as an applied ecologist, studying ways in which the effects of human activities on bird populations can be alleviated. Until recently, this honour was awarded as recognition for work carried out solely in the academic discipline of ornithology. The fact that the science applied to bird conservation is now also being recognised is a sign that ornithology has developed to the stage where it is playing a role in protecting species from population declines and extinction, and that is great news.'

## Seawatch SW annual report

The SeaWatch SW Annual Report for 2008 is now available to download from [www.seawatch-sw.org](http://www.seawatch-sw.org) This fully illustrated report is essential reading for anyone interested in UK marine wildlife, especially those based in the southwest or who are interested in migratory seabirds or marine mammals. SeaWatch SW 2009 is now underway and scheduled to run a full monitoring programme this summer and autumn. A few more volunteer observers are needed to assist with the Gwennap Head survey during 1st–30th August (bed and brunch near the watchpoint, and expenses equivalent to £70 a week are provided) and also to help with marine wildlife observation and recording during the survey phase in Cornwall.

SeaWatch SW is also looking to expand the sister sites network. If you seawatch regularly at a local site and would like to contribute to the project (ideally, sister sites should have more than 100 hours of coverage between mid July and mid October), then contact Russell Wynn at [rbwl@noc.soton.ac.uk](mailto:rbwl@noc.soton.ac.uk) or visit the website.

## All systems go on Fair Isle

In the last month, the project to build a new bird observatory on Fair Isle has received a significant boost, with the last major elements in the funding package being secured. The Scottish Government, through the Scottish Rural Development Programme, has stumped up a whopping £1.94 million (half the cost of the project), while Highlands & Islands Enterprise provided £400,000 on top of that. Together with £1.15 million from the Shetland Islands Council (SIC), this is sufficient to enable construction work to go ahead as planned in summer 2009. The planning application for the project was approved by SIC in mid April, and you can see drawings of

the new building on the FIBO website. Demolition of the 40-year-old existing observatory is scheduled to start in May, and construction of the new building in the summer. If all goes well, the new Obs will be open for business in spring 2010.

However, the fundraising isn't quite complete yet. So far, the FIBO appeal has garnered an impressive £250,000, meaning that a shortfall of around £300,000 still needs to be found. Compared with the initial £4m target, this now seems eminently possible, but it still has to be done! The FIBO directors and wardens Deryk and Hollie Shaw send heartfelt thanks to those who have already dipped into their

pockets, and encourage anyone with links to the island or the observatory to help the project over this final hurdle if they possibly can. Thanks once again to the photographers who have donated fees from front-cover images used in *BB* this year, and also other photographers who have donated their fees to the appeal. It's a testament to the perceived value of the observatory that, even in the depths of a recession, an ambitious project like this is still on schedule. Visit the FIBO website – [www.fairislebirdobs.co.uk](http://www.fairislebirdobs.co.uk) – for more details and an update on progress.

### The Birds of Scotland fund

*The Birds of Scotland* has been a great success, recognised by the award of the Neill medal by the Royal Society of Edinburgh and the Silver Medal of the Zoological Society of London. And as over 80% of the stock has now sold, it has achieved financial success too.

Both SOC Council and the editors of the book wished this success to be a springboard for other projects, and have agreed that cash surpluses from *The Birds of Scotland* should be used as a special fund to support ornithological projects in Scotland. Details of the fund and how to apply can be found on the SOC website: [www.the-soc.org.uk/birds-of-scotland-fund.htm](http://www.the-soc.org.uk/birds-of-scotland-fund.htm)

### New Editorial Board member

We are very pleased to welcome Brian Small onto the *BB* Editorial Board, with effect from 1st May. Brian will be well known to most readers for his contributions on various identification matters, most recently on 'Ehrenberg's Redstarts' *Phoenicurus phoenicurus samamisi-cus*, in the February issue. Brian has just completed his term of office with BBRC but will continue in his role as the Committee's Museum Consultant. Brian lives in Suffolk with his wife and family and works as an art teacher as well as an illustrator for a variety of projects, including *HBW*; he is widely travelled as a tour-leader and is a co-founder of the website [www.surfbirds.com](http://www.surfbirds.com)

### Bob Scott

It is with great sadness that we report the death of Bob Scott on 26th March, following a short illness. Bob, who was 70, spent almost 40 years working for the RSPB, beginning as warden of Dungeness (both the RSPB reserve and the bird observatory) and finishing up as head of reserves management. He had a long association with *BB*: he was a founder member of BB2000 Ltd, and remained an active and committed director of the company until his death; and, of course, he was a former compiler of *News and comment*. A full obituary will appear in *BB* shortly.

### BB prices stay the same

The price of your monthly issue of *BB* will not be increasing this year. Normally, a modest increase in annual subscriptions, in line with inflation (of production costs), comes into force at the start of the new financial year (1st July). However, at their last meeting, *BB* directors agreed that the cost of an annual subscription would be frozen for the financial year 2009/10 so that subscribers already feeling the pinch in a struggling economy would not be further hit. With a great mix of articles already planned for the next 12 months, it's just one more reason to keep reading...

# Recent reports

Compiled by Barry Nightingale and Eric Dempsey

This summary of unchecked reports covers early March 2009 to early April 2009.

**Headlines** The star bird was a White-throated Sparrow in Hampshire, with a supporting cast of a Ross's Gull in Lancashire & N Merseyside, a Killdeer in the Outer Hebrides, possibly three Great Spotted Cuckoos, and then a chorus line of White-billed Divers.

**Blue-winged Teal** *Anas discors* Lough Ateduan (Co. Clare), 29th March to 1st April. **Ferruginous Duck** *Aythya nyroca* Long-stayers at Chew Valley Lake (Avon) and Trimley Marshes (Suffolk). **Lesser Scaup** *Aythya affinis* Long-stayers at Holme Pierrepont (Nottinghamshire) and Cardiff Bay Wetlands (Glamorgan), both to 13th April. **King Eider** *Somateria spectabilis* Long-stayers at Earlsferry (Fife) to 6th April and Drumcliffe Bay (Co. Sligo), two, to 1st April; Wadbister/Laxfirth (Shetland), at least one, 30th March to 5th April.

**White-billed Diver** *Gavia adamsii* Mull (Argyll), long-stayer to 13th March; Little Loch Broom (Highland), 19th March to 11th April; North Ronaldsay (Orkney), 6th April; Turnberry Bay (Ayrshire), 11th April; Naast (Highland), two, 11th April, then five on 12th April; Gruinard Bay (Highland), 13th April; Lewis (Outer Hebrides), seven, 13th April.

**Cattle Egret** *Bubulcus ibis* Between 26 and 30 in Co. Cork (incl. maxima of nine at Timoleague, eight at Great Island/Rostellon and seven at Inchydoney); 15–20 in Cornwall (incl. nine together at Hayle); up to ten in Devon; six in Co.

Waterford; and other records from Cambridgeshire, Cheshire & Wirral, Dorset, Essex, Gloucestershire, Co. Kerry, Isle of Man, Isle of Wight, Lancashire & N Merseyside, Pembrokeshire, Scilly, Suffolk, Warwickshire and Wiltshire. **Great White Egret** *Ardea alba* Records from Ceredigion, Cleveland, Clyde, Co. Cork, Devon, Dorset, Kent, Lancashire & N Merseyside, Lincolnshire, Meirionnydd, Norfolk, Somerset, Staffordshire, Suffolk and Sussex. **Glossy Ibis** *Plegadis falcinellus* Tacumshin Lake (Co. Wexford), 13th March.

**Black Kite** *Milvus migrans* Blubberhouses (Yorkshire), 15th March; Sandwich Bay, 21st March, Pegwell Bay, 7th April and Lydd (all Kent), 12th April; Hayle (Cornwall), 12th April; Stoke Newington (Greater London), 13th April. **Gyr Falcon** *Falco rusticolus* Nimmo's Pier (Co. Galway), 8th March; St Mary's (Scilly), perhaps returning individual, 13th March; Mullet Peninsula (Co. Mayo), 15th–17th March; Islay, 21st March, and another on various dates to 3rd April, and Tiree, presumably one of same (both Argyll), 7th April; Trevoise Head, 27th March, Crackington Haven, 28th March and Newquay (all Cornwall), 1st–4th April, all presumably same.



153. Purple Heron *Ardea purpurea*, Shingle Street, Suffolk, April 2009.

**Black-winged Stilt** *Himantopus himantopus* Cape Clear Island (Co. Cork), 22nd March to 4th April. **Killdeer** *Charadrius vociferus* Lewis, 6th April. **American Golden Plover** *Pluvialis dominica* Breydon Water (Norfolk), 6th–13th April. **Long-billed Dowitcher** *Limnodromus scolopaceus* Dundalk (Co. Louth), long-stayer to 4th April. **Lesser Yellowlegs** *Tringa flavipes* Heybridge (Essex), 13th April.

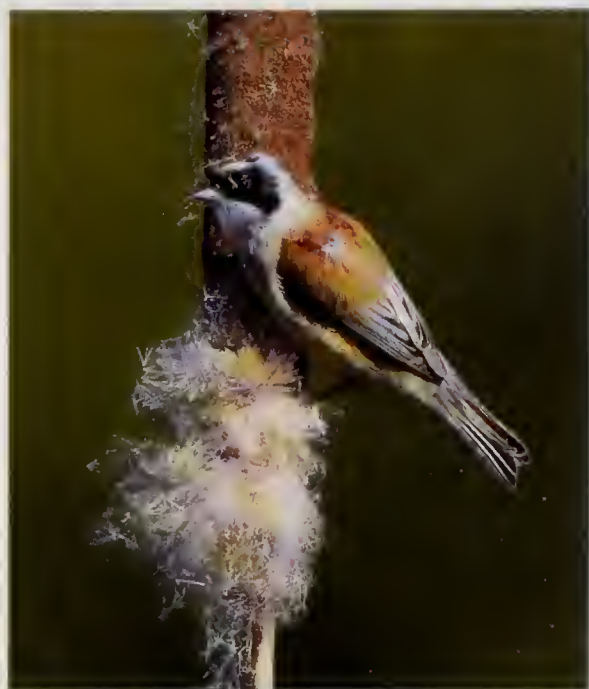
Andrew Chick



154. Alpine Swift *Apus melba*, Gibraltar Point, Lincolnshire, April 2009.

American Herring Gull *Larus smithsonianus* Long-stayers at Budleigh Salterton/Otter estuary (Devon) to 25th March, and Nimmo's Pier to 15th March. Ross's Gull *Rhodostethia rosea* Lytham St Anne's (Lancashire & N Merseyside), 22nd March. Bonaparte's Gull *Chroicocephalus philadelphia* Cardiff, long-stayer to 30th March; South Uist, 30th March to 10th April; Farnoor Reservoir (Oxfordshire), 11th and 13th April. Forster's Tern *Sterna forsteri* Nimmo's Pier/The Claddagh, long-stayer to 22nd March.

Snowy Owl *Bubo scandiacus* Long-stayer, Amalveor Downs/Sperris Quoit area, to 1st April, then near Sennen (both Cornwall), 1st April; Mainland Orkney, 13th–14th March; North Uist, 8th and 13th April. Great Spotted Cuckoo *Clamator glandarius* Trefeiddan Marsh (Pembrokeshire), 10th March; St Just, 22nd



155. Penduline Tit *Remiz pendulinus*, Clennon Valley, Devon, March 2009.

March, possibly same Bartinney Down (both Cornwall), 1st–6th April.

Alpine Swift *Apus melba* Portland (Dorset), 14th March; Snettisham (Norfolk), 9th April; Pulborough Brooks (Sussex), 11th April; Old Hall Marshes (Essex), 11th April; Gibraltar Point (Lincolnshire), 12th April. Red-rumped Swallow *Cecropis daurica* Bishop Middleton (Durham), 9th April; St Martin's (Scilly), 10th April; Frolesworth Manor Lake, 10th April, presumed same Watermead CP (both Leicestershire & Rutland), 11th–13th April.

Gary Thoburn



156. White-throated Sparrow *Zonotrichia albicollis*, Old Winchester Hill, Hampshire, April 2009.

Subalpine Warbler *Sylvia cantillans* Porthgwarra (Cornwall), 2nd April; St Mary's, 11th April. Penduline Tit *Remiz pendulinus* Clennon Valley (Devon), long-stayer to 1st April; Rye Harbour (Sussex), 17th March; Dingle Marshes (Suffolk), three, 20th–30th March; Rainham Marshes (Greater London), two, 29th March. European Serin *Serinus serinus* Caister (Norfolk), 5th April; Durlston CP (Dorset), 5th April. White-throated Sparrow *Zonotrichia albicollis* Old Winchester Hill (Hampshire), 11th–14th April, and possibly since November 2008.



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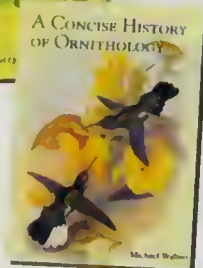
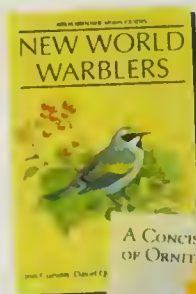
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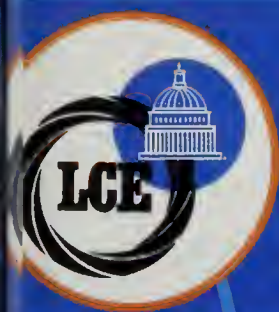
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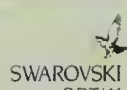
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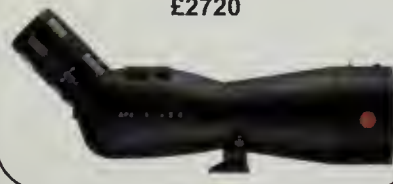
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296 Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man  
*Mark A. Eaton, Andy F. Brown, David G. Noble, Andy J. Musgrove, Richard D. Hearn, Nicholas J. Aebischer, David W. Gibbons, Andy Evans and Richard D. Gregory*

342 American Herring Gull in Cheshire & Wirral: new to Britain *David Quinn*

## Regular features

348 Conservation research news  
*James Pearce-Higgins, Nick Wilkinson and Rowena Langston*

350 Notes  
Balearic Shearwaters in UK and Irish waters between 2004 and 2006  
*Russell B. Wynn*  
European Storm-petrels diving for food *Robert L. Flood, Ashley Fisher, Andrew Cleave, Paul Sterry*  
A newly discovered colony of European Storm-petrels in Italy  
*Bruno Massa*  
Common Buzzard playing with plastic bag *Lawrence Leask*

355 Reviews  
*Birds of Amazonian Brazil*  
*Collins Field Guide – Birds of the Palearctic: Non-Passerines*

357 News and comment  
*Adrian Pitches*

360 Recent reports  
*Barry Nightingale and Eric Dempsey*

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# Birds of Conservation Concern 3

## The population status of birds in the United Kingdom, Channel Islands and Isle of Man

*Mark A. Eaton, Andy F. Brown, David G. Noble, Andy J. Musgrove, Richard D. Hearn, Nicholas J. Aebischer, David W. Gibbons, Andy Evans and Richard D. Gregory*



Arctic Skua *Stercorarius parasiticus*

*Alan Harris*

**ABSTRACT** This is the fourth major review of the status of birds occurring in the UK, Channel Islands and Isle of Man. We present Red, Amber and Green lists of conservation concern based on assessments using objective listing criteria and using the most recent data. The listing criteria assess global conservation status, historical population decline, recent population decline (numbers and geographical range), European conservation status, rarity, localised distribution, and international importance of populations. Some changes have been made to the criteria since the last assessment, and the effect of these changes is discussed. Of 246 species assessed, 52 (21.1%) have been placed on the Red list, 126 (51.2%) on the Amber list and 68 (27.6%) on the Green list. Eighteen species have moved onto the Red list since the last assessment in 2002, and six have moved from Red to Amber.

### Introduction

This paper presents the third 'Birds of Conservation Concern' status assessment for birds in the UK. We have reviewed the status of each regularly occurring species against a set of quantitative criteria in order to place each species on one of three lists: 'Red', 'Amber' or 'Green'. By using such a simple 'traffic light' system, we can provide a single, easily understood measure for each species which can be used to convey concern and hence to help set priorities for conservation action.

It is widely recognised that current pressures upon the global environment are unprecedented, with widespread and severe threats to habitats and the species within them; the great majority of well-studied species are declining in distribution, abundance or both (UNEP 2007; WWF 2008). The scale of the problems caused by the use of natural resources by humans (such as climate change, pollution, land degradation and over-exploitation) at present far exceeds our capacity to tackle these problems, although this capacity is largely limited by the reluctance of those with the power to act. Funds for conservation action are limited, and often the first to be lost in times of economic downturn. Given an inability to conserve all of the species all of the time, prioritising which species should receive conservation attention has become a well-established part of conservation planning.

At a global scale, the IUCN Red Lists of Globally Threatened species highlight those considered most likely to become extinct, by considering measures such as decline in numbers and range (IUCN 2008). Although preventing extinction globally should of course be a high priority for conservation programmes, it is important that biodiversity loss other than extinction is considered. In the UK, and indeed the whole of Europe, relatively few bird species are considered to be at risk of

extinction. Globally, 1,226 of 9,856 (12%) bird species are considered to be at risk, whereas in Europe 24 of 526 (5%) regularly occurring species are Globally Threatened and in the UK just two of 246 (less than 1%) are so threatened (BirdLife International 2008a,b). The relative strength of both governmental and non-governmental conservation organisations in the UK has ensured concerted action to prevent national extinctions in recent decades, and the fortunes of many rare breeding species have been changed for the better.

Thus, it is important to identify which species are under threat of extinction within the UK (and we should not be blasé – there are a growing number), and which species we have a responsibility to conserve in the global battle against extinction. It is also important that any exercise designed to set species priorities for conservation in the UK should consider a wider range of parameters. The 58% decline in numbers of Sky Larks *Alauda arvensis* over the last four decades equates to a loss of approximately 4 million individuals. Although the Sky Lark remains common and is not threatened with national extinction, this is biodiversity loss on an enormous scale. As a result, the setting of species priorities in the UK has evolved to recognise such loss. In addition, it takes accounts of instances where species have been depleted owing to pressures in the past, the



157. BoCC2 highlighted the problem of population decline among the UK's woodland birds, with eight species on the Red list in 2002. BoCC3 has added four more woodland species to the Red list, among them the Wood Warbler *Phylloscopus sibilatrix*.

Sue Tranter (rspb-images.com)

Tom Marshall (rspb-images.com)



158. There is concern that many of the UK's 'mountain specialists' may be adversely affected by warming climate during the coming decades, but, for now at least, the Ptarmigan *Lagopus muta* remains on the Green list.

importance of preserving small and localised populations, and our responsibility to preserve populations that are important on an international scale.

The first formal, quantitative assessment of the status of the UK's birds, Batten *et al.*'s (1990) *Red Data Book*, listed 117 species as 'demanding care and attention' in Britain. Although the criteria used were not identical to those adopted subsequently for the *Birds of Conservation Concern* (BoCC) assessments, they were similar enough that this list of 117 might be considered analogous to the Red and Amber lists, and most of the 117 have been Red- or Amber-listed by BoCC reviews subsequently. The first BoCC assessment (hereafter BoCC1), published in 1996 (Gibbons *et al.* 1996; JNCC 1996), developed the approach from a single list of concern to Red, Amber and Green lists, allowing finer distinctions to be drawn and identifying a shorter, more usable list of species deserving the greatest concern.

BoCC1 Red-listed 36 species and Amber-listed a further 110. This review was pivotal in the recognition of a number of common and widespread species, most notably those of farmland such as Sky Lark, Linnet *Carduelis cannabina* and Corn Bunting *Emberiza calandra*, as urgent conservation priorities following declines related to agricultural intensification

(e.g. Aebischer *et al.* 2000). The next review, BoCC2, was published in 2002 (Gregory *et al.* 2002); the dynamic nature of bird populations and the pressures and threats upon them means that regular reviews are sensible, to ensure that listings are based upon the latest data and reflect current concern. The Red list grew to 40 species (nine species moved onto the Red list, whereas five moved from Red to Amber) and the Amber list to 121. This review saw the addition of a number of woodland birds (e.g. Lesser Spotted Woodpecker *Dendrocopos minor*, Marsh Tit *Poecile palustris* and Willow Tit *P. montana*) to the Red list amid growing concern for declining woodland birds, but recovery in a number of historically depleted species (e.g. Red Kite *Milvus milvus* and Marsh Harrier *Circus aeruginosus*) resulted in them moving from the Red to Amber lists.

Since BoCC2, there have been other, alternative, reviews of the status of birds in the UK, which has led to the potential for confusion between listings. Eaton *et al.* (2005) explored the use of IUCN guidelines for regional Red-listing (Gärdenfors *et al.* 2001) in order to assess the extinction risk of birds within the UK. They classified 64 species as being regionally threatened, 12 of which were Critically Endangered. This list had considerable overlap with the Red and Amber lists from BoCC2,

although it was notable that only six of the 12 Critically Endangered species were on the *BoCC2* Red list. However, the authors concluded that applying the guidelines of the global Red-listing process at a regional scale required a considerable degree of subjectivity (although progress has been made since to improve the guidance, e.g. Miller *et al.* 2007). In addition, it was felt that the assessment of extinction risk alone could result in a mismatch with likely conservation priorities in the UK, and stressed that the prevention of extinction at a regional scale does not have to be the sole driver behind conservation action if the future of those species is safeguarded in other regions.

A review of birds on the priority list of the UK Biodiversity Action Plan (UKBAP, see [www.ukbap.org.uk](http://www.ukbap.org.uk)) was conducted in 2005 (using data up to 2004) and published in August 2007 (e.g. Eaton *et al.* 2007). Although the four criteria employed in the review were not the same as those used in *BoCC* assessments (and there was no second tier of listing, equivalent to the Amber list), they were similar and hence we should expect extensive overlap between those birds on the UKBAP priority list and those on the *BoCC3* Red list. In a new development, the UKBAP review for birds was conducted at race (subspecies) level, resulting in the 'BAP listing' of races such as the 'St Kilda Wren' *Troglodytes troglodytes hirtensis*, 'Fair Isle Wren' *T. t. fridariensis* and 'Greenland White-fronted Goose' *Anser albifrons flavirostris*, among others. It was felt that setting priorities at a lower taxonomic level would allow more accurate targeting of conservation action, recognise the different needs of races of the same species, emphasise the importance of preserving genetic and ecological diversity within species, and recognise the importance of conserving the UK's endemic races.

The UKBAP review resulted in the priority bird list increasing from 26 species to 59 races of 55 species; 37 of these races belong to species that were Red-listed by *BoCC2*. This list, along with a further 1,100 species across all taxa and 65 habitats, plays a major part in steering the UK Government's action to conserve biodiversity.

Finally, we should mention the new Birds of Conservation Concern in Ireland review (Lynas *et al.* 2007), which presented Red, Amber and Green lists for birds in (the island of) Ireland, and hence overlaps, in Northern Ireland, with UK-based reviews such as *BoCC*.

In this paper, we introduce a new list, the third since Batten *et al.* (1990) – *BoCC3* – to replace *BoCC2*, which is now seven years old. This new list will reflect some rapid changes in the status of the UK's birds in the intervening period. The same general approach has been used as in previous *BoCC* assessments, but with some minor but important changes to the criteria, described below. In a new development, we also present the results of a parallel assessment at the race level, following the pioneering work of the UKBAP review.

## Methods

### Species list

The species assessment covered all native species on the British Ornithologists' Union (BOU) list (Dudley *et al.* 2006; see also [www.bou.org.uk](http://www.bou.org.uk)), excluding those species that occur only as vagrants (and thus are considered by the British Birds Rarities Committee, see [www.bbrc.org.uk](http://www.bbrc.org.uk)) or scarce migrants (e.g. Fraser & Rogers 2006a,b; see also [www.scarce-migrants.org.uk](http://www.scarce-migrants.org.uk)). As in *BoCC2*, we have also included Globally Threatened species (BirdLife International 2008b) that have occurred in the UK in each of the last 25 years (Balearic Shearwater *Puffinus mauretanicus* and Aquatic Warbler *Acrocephalus paludicola*); while they occur in small numbers only, given the context of Global Threat the UK may be important to such species during the non-breeding period.

We have revised the approach used in *BoCC2* by Gregory *et al.* (2002), and excluded a number of species that have bred only occasionally in the UK. *BoCC2* included all species that had bred in any one year in the five years prior to the review. This led to the inclusion of species that are not a regular part of the UK's breeding avifauna (such as Hoopoe *Upupa epops* and Icterine Warbler *Hippolais icterina*), so we modified the criteria to include only those species that had bred for five consecutive years at any point within the last 25 years. The use of the 25-year period allowed us to consider species that were regular breeders until relatively recently, which are no longer so but should not yet be considered extinct (e.g. Wryneck *Jynx torquilla* and Red-backed Shrike *Lanius collurio*). Although we have retained the previously used definition of confirmed breeding as the laying of presumed fertile eggs, we made the presumption of breeding having occurred for a few species that almost undoubtedly breed annually but for which proof

is hard to obtain (e.g. Common Quail *Coturnix coturnix* and Spotted Crake *Porzana porzana*).

The review concerns native species only and not those introduced to the UK by humans, whether intentionally or accidentally. We do not consider populations of non-native species to be of conservation value; indeed, introduced species can be harmful to the natural environment, for example they are thought to have detrimental effects on 51% of all Globally Threatened bird species (BirdLife International 2008a). While it may be argued that most (although not all) non-native bird species in the UK are relatively benign, and that some may be attractive additions to our avifauna, we do not believe that they should be assessed as the potential recipients of conservation attention. None of the non-native species listed on category C of the British List (i.e. with self-sustaining populations derived from introductions) are considered threatened within their native ranges.

### Criteria

The BoCC process, as established in the two previous reviews, uses a simple approach whereby species (or races) are assessed against a series of quantitative criteria, listed below. These assess various important aspects of population status in the UK, Europe and globally. Meeting

one or more criteria qualifies a species for the relevant list, with species being placed on the highest-priority list for which they qualify (i.e. those qualifying against a Red criterion will be placed on the Red list regardless of qualification against Amber criteria). Those species that meet none of the criteria are placed on the Green list.

While we believe that it is important to maintain an approach to status assessments that is as constant as possible, we felt that there were a small number of respects in which the process had to be amended to reflect changing circumstances and to improve (slightly) on the approaches used previously. In this review we have addressed the issue of moving time windows, and improved the equality in the treatment of non-breeding populations; these changes are discussed in more detail below. Although we believe that these were necessary changes in the process, they will have had an impact upon the comparability of this list with BoCC2, and we highlight and discuss these impacts; it is not our intention to 'move the goalposts' in order to exaggerate declines in the UK's bird populations.

### RED-LIST CRITERIA

**IUCN: Global conservation status** Species that are listed as Globally Threatened (Critically Endangered, Endangered or Vulnerable, but not Near Threatened) under IUCN guidelines (IUCN 2008), as published online by BirdLife International, the IUCN Red List Authority for birds ([www.birdlife.org.uk](http://www.birdlife.org.uk)). These species are the highest priorities for action at a global scale, and this should be so in the UK, regardless of national status.

**HD: Historical decline in breeding population** Species that are judged to have declined severely between 1800 and 1995, and not to have recovered subsequently. A number of the UK's breeding birds were for-



Richard Chandler

**159.** Climate change is one major reason why numbers of wintering wildfowl and waders are starting to decline in the UK, as populations spend the winter farther north and east, in areas closer to the breeding grounds; such areas would formerly have been environmentally hostile in the depths of winter. Owing to a 51% decline since 1974/75, the Dunlin *Calidris alpina* is one of those species, and moves from the Amber list to the Red list in BoCC3.



Rebecca Nason

**160.** Four seabirds were Red-listed by BoCC3 (compared with just one by BoCC2), but perhaps the most alarming is the Arctic Skua *Stercorarius parasiticus*, which moved straight from Green to Red. Data suggest that declines during the past 22 years may have been as high as 70% in Shetland and 77% in Orkney, reflecting low breeding success, in turn related to failures in sandeel *Ammodytes* stocks. Oceanographic changes linked to climate change may be the ultimate factor responsible and this charismatic species, which is at the edge of its breeding range in the UK, could soon become an extremely rare breeding bird in Britain.

merly much more widespread and common, but underwent massive declines before the advent of modern bird-monitoring schemes, and in a number of cases have since stabilised at much lower levels. When considered over the more recent trend periods (see below), these species might not qualify for Red- or even Amber-listing but, given their depleted state, we believe that they should be considered to be of conservation concern.

Historical decline was measured using the existing assessments given by Gibbons *et al.* (1996), who used an ordinal scoring system to measure decline over five periods during 1800–1995, with the overall decline being assessed by the sum of these scores. Although this method was semi-quantitative, it provided a standardised approach across species, and has proved sufficiently robust to identify those species that have shown the greatest declines over the last two centuries.

Given the nature of the measure, it may take some species many decades to recover to the point where they no longer qualify as ‘historical decliners’ under this criterion. Therefore, in BoCC2, Gregory *et al.* (2002) suggested that

Red-listed species should move to the Amber list if they have doubled in number in the most recent 25-year period, providing that the UK population also exceeds 100 pairs and that the species is not classified as Globally Threatened by the IUCN. Subsequently, five species (Red Kite, Marsh Harrier, Osprey *Pandion haliaetus*, Merlin *Falco columbarius* and Dartford Warbler *Sylvia undata*) were moved to Amber in the 2002 assessment. Furthermore, Gregory *et al.* suggested that, in future reviews, those species that continued to recover (i.e. numbers increase by at least 20% between reviews) should be moved to the Green list if they do not qualify under any other criteria, but that if their recovery falters (i.e. numbers decrease by at least 20%) they should move back to the Red list.

**BDp:** *Breeding population decline* Severe decline in the UK breeding population size, of more than 50%, over 25 years (BDp<sup>1</sup>) or the entire period used for assessments since the first BoCC review, starting in 1969 (the ‘longer term’) (BDp<sup>2</sup>). Previous BoCC assessments have used a single time period (or window) of 25 years against which to assess population and range declines,

in addition to the 200-year period against which historical decline is measured. The latter provides the historical context, while the 25-year period identifies current status. However, the use of the 25-year window – or indeed any time window – is problematic in that as it ‘rolls forward’, some species may no longer qualify for Red- or even Amber-listing because, while still relatively recent, the period of qualifying loss is before the beginning of the 25-year window (e.g. in the current assessment, the 25-year window starts in 1981 for most common breeding birds). Without any change in the assessment process, such species would be moved to the Amber or even Green list without having shown any recovery, or in some cases may have undergone further decline but at a slower rate. We consider it unsatisfactory that species should move to lower concern status without having recovered from what may in some cases have been massive declines, and so we explored a number of approaches to prevent this.

We have chosen to use an additional, longer-term trend period, from the beginning of the 25-year time period used for the first *BoCC* assessment (1969–94) until the most recent data (in effect around 37 years, depending on the data sources used). Consequently, this assessment takes account of species whose declines lie between those that are ‘historical’ and ‘recent’, and which have led to an impoverishment of bird populations from which there has been no recovery. This period also ties in well with the availability of robust monitoring data, coinciding with the start of the Common Birds Census (CBC) and increased Wetland Bird Survey (WeBS) coverage in the late 1960s, the first breeding bird atlas (1968–72; Sharrock 1976), and the first UK seabird census, Operation Seafarer (1969–70; Cramp *et al.* 1974). Note that species Red-listed under BDp<sup>2</sup> show a wide range in their pattern of decline, although all have declined by at least 50% over the period. Some species (e.g. Song Thrush *Turdus philomelos*) declined steeply in the earlier part of the period but have undergone little decline since; some (e.g. Arctic Skua *Stercorarius parasiticus*) have declined steeply in recent years; and a small number have shown a steady decline throughout the longer period (e.g. Turtle Dove *Streptopelia turtur*). In some instances, species have shown recovery, but not yet reached the 50% of their population level at the beginning of the *BoCC* period, and so remain Red-listed.

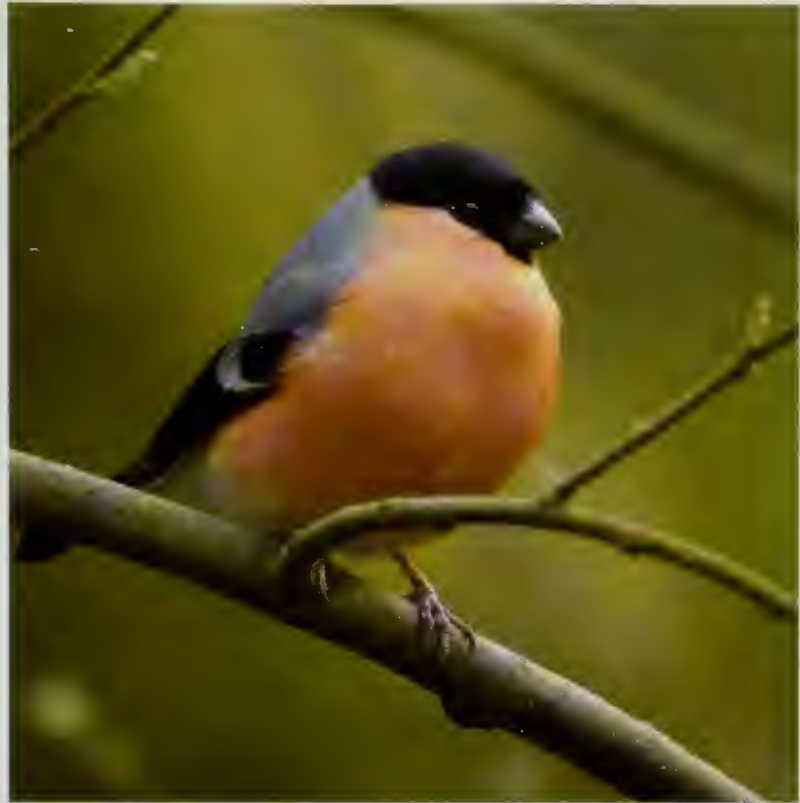
**WDp: Non-breeding population decline** Severe decline in the UK non-breeding population size, of more than 50%, over 25 years (WDp<sup>1</sup>) or the longer-term period (WDp<sup>2</sup>). Resident species (or, more accurately, species present in the UK year-round, since individuals may not be) were assessed against this criterion only if there was significant difference (and independence) between the breeding and non-breeding populations (e.g. Dunlin *Calidris alpina*), otherwise they were assessed on breeding trend (BDp) alone. This is also true of other criteria that could be applied to both breeding and non-breeding populations (e.g. breeding and non-breeding rarity, see below). As regular monitoring programmes in the non-breeding season exist for waterbirds only, many species were not assessed against this criterion.

**BDr: Breeding range decline** Severe decline in the UK range, of more than 50%, as measured by the number of 10-km squares occupied by breeding birds, over 25 years (BDr<sup>1</sup>) or the longer-term period (BDr<sup>2</sup>). In previous reviews, assessment against this criterion used data from the two national breeding bird atlases (Sharrock 1976; Gibbons *et al.* 1993). However, it was felt that this was no longer tenable, as data from the ongoing BTO/BirdWatch Ireland/SOC 2007–11 bird atlas are not yet available, and the most recent data, from the 1988–91 atlas, are now at least 18 years old. Therefore, we were able to assess only a limited number of species against this criterion. These were those for which recent single-species surveys have recorded range accurately (e.g. European Nightjar *Caprimulgus europaeus* and Dartford Warbler), and seabirds, which were mapped comprehensively by the Seabird 2000 census (Mitchell *et al.* 2004), for which distribution data in 10-km squares are available from the National Biodiversity Network ([www.nbn.org.uk](http://www.nbn.org.uk)). Recent range estimates from these sources were compared with range estimates from the 1968–72 atlas (for the longer-term period) and the 1988–91 atlas (for the 25-year period, although the time-span is shorter). Similar assessments were not made for non-breeding ranges, as such data are not available.

#### AMBER-LIST CRITERIA

**SPEC: European conservation status** Species categorised as Species of European Conservation Concern (SPEC 1, 2 or 3). The conservation

status of all European species was assessed most recently in *Birds in Europe* (BirdLife International 2004). SPEC 1 species are those of global conservation concern (including those classified as Near Threatened, and hence not Red-listed under criterion 'IUCN' by this assessment); SPEC 2 species are those of unfavourable conservation status within Europe and concentrated in Europe; while SPEC 3 species are those of unfavourable conservation status but not concentrated in Europe. European conservation status is determined by regional Red-list assessments, and additional factors such as rarity, localisation and decline. In a change from *BoCC2*, we have Amber-listed those SPEC species that occur in the UK as non-breeders only (e.g. Jack Snipe *Lymnocyptes minimus*).



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**161.** The Bullfinch *Pyrrhula pyrrhula* is one of six species moving from Red to Amber in the *BoCC3* review; in this case, because of a degree of population recovery since the previous assessment in 2002.

**HDrec: Historical decline – recovery** Red-listed for Historical Decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years).

**BDMp: Breeding population decline** As for Red-list criterion BDp, but with moderate decline (by more than 25% but less than 50%) over 25 years (BDMp<sup>1</sup>) or the longer-term period (BDMp<sup>2</sup>).

**WDMp: Non-breeding population decline** As for Red-list criterion WDP, but with moderate decline (by more than 25% but less than 50%) over 25 years (WDMp<sup>1</sup>) or the longer-term period (WDMp<sup>2</sup>).

**BDMr: Breeding range decline** As for Red-list criterion BDr, but with moderate decline (by more than 25% but less than 50%) over 25 years (BDMr<sup>1</sup>) or the longer-term period (BDMr<sup>2</sup>).

**BR & WR: Breeding and non-breeding rarity** Species were categorised as rare breeders (BR) if they had a UK breeding population of fewer than 300 pairs, and as rare non-breeders (WR) if the non-breeding population was fewer than 900 individuals. Breeding population size was assessed using estimates from recent single-

species surveys (e.g. Black-throated Diver *Gavia arctica* in 2006), or from the Rare Breeding Birds Panel, in which case the mean number of pairs (maximum total number) over the five most recent years for which data were available (2002–06) was used. Non-breeding rarity was assessed using estimates from a variety of sources, including WeBS, and the Avian Population Estimates Panel (APEP) (Baker *et al.* 2006). In a few cases (e.g. Wood Sandpiper *Tringa glareola*, Lapland Bunting *Calcarius lapponicus*), species were assessed as being rare non-breeders without robust estimates being available, based on expert opinion. The use of a criterion for non-breeding rarity was new in *BoCC3*, and was adopted to reflect the fact that small populations of non-breeding species are as susceptible to loss as those of breeding species.

**BL & WL: Localisation** At least 50% of the UK breeding (BL) or non-breeding (WL) population found in ten or fewer sites. As with previous applications of this criterion, sites were defined as those designated as either Special Protection Areas (SPAs – Stroud *et al.* 2001) or Important Bird Areas (IBAs – Heath & Evans 2000). If data were available for both categories of sites, assessments were conducted for each (but not using a combination of SPAs and IBAs

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**162.** Three raptors, Red Kite *Milvus milvus* (shown here), Marsh Harrier *Circus aeruginosus* and Osprey *Pandion haliaetus*, represent significant conservation success stories in the UK in the past decade, and have continued to recover since being moved from the Red to the Amber list in the BoCC2 review.

together). The sum of birds in the ten most important sites in the breeding season, in winter and, for a small number of species for which data were available, during passage periods were compared against the UK population estimate for the same period, using population estimates from APEP, RBBP, WeBS and single-species surveys. Species with more than 50% of their population in the ten most important SPAs or IBAs were designated as localised; if the UK population estimate was presented as a range, we took a conservative approach by requiring that the population held by the best ten sites exceeded 50% of the upper range limit.

This measure is dependent on data being available. In the case of SPAs, data were available only for those species listed on Annex 1 of

the EU Birds Directive and other migratory species, and then only for SPAs that have been designated for each species. Site estimates were obtained from Stroud *et al.* (2001), and so were somewhat dated. In addition, site estimates often came from a range of different years, while the total population estimate (against which the sum of estimates from the ten best sites was compared) was from a different year again. For non-breeding populations, site estimates are maxima and may not reflect regular patterns of site usage; moreover, for species with a comprehensive network of designated sites, the sum of site totals may comfortably exceed the total population estimate owing to the same individual birds using multiple sites. For IBA assessments, data were obtained from BirdLife International's World Birds Database and were mostly more recent than data for SPAs. The use of IBAs and SPAs as 'sites' for the purpose of this assessment is thus not perfect, owing to issues with

data availability and the varying nature of the sites themselves (they vary enormously in size, for example). However, we believe that this is a more standardised approach than using any other definition of sites (reserves or WeBS count sites, for example) and maintains consistency with previous BoCC assessments.

Rare breeders or non-breeders (species qualifying under criteria BR or WR) were not assessed against this criterion since, by virtue of their small numbers (and hence often small range), such species are likely to be restricted to a small number of sites. Amber-listing under the localised criterion is intended to signal a species' vulnerability, as relatively small-scale pressures (e.g. development) could affect a large proportion of the population adversely.

**BI & WI:** *International Importance* Species for which the UK holds at least 20% of the European population in either the breeding (BI) or the non-breeding (WI) season were considered to be present in internationally important numbers. Population estimates for Europe were taken from *Birds in Europe* (BirdLife International 2004). For non-breeding waterbirds, we followed the approach used in previous *BoCC* assessments by using estimates for the northwest European (for wildfowl) or East Atlantic (for waders) flyways, taken from *Waterbird Population Estimates* (Wetlands International 2006).

Although there is considerable variation among species, the European estimates are often of uncertain quality and expressed as a large range owing to poor knowledge in many countries. For example, the European estimate for Twite *Carduelis flavirostris* is 170,000–760,000 pairs, and even within the UK, there can be considerable variation in estimates for our more common and widespread species (e.g. see Newson *et al.* 2008). As with assessing localisation, we therefore required the UK population estimate to exceed 20% of the upper range limit of the European or flyway population estimate for a species to qualify under this criterion.

#### Data sources

The monitoring of bird populations in the UK is almost unparalleled, thanks largely to the many skilled and enthusiastic volunteer birdwatchers who participate in schemes such as those listed below. Such monitoring provides a rich resource for informing status assessments; even so, there are considerable gaps in our knowledge for certain groups and these were highlighted by the assessment process. The main monitoring schemes, and thus sources of data for assessment against the criteria described above, are outlined below.

#### *BTO/JNCC Common Birds Census (CBC) and BTO/JNCC/RSPB Breeding Bird Survey (BBS)*

These two surveys have provided the backbone of monitoring of common breeding birds in the UK since 1966. The former ran from 1966 to 2000 and involved observers mapping territories within relatively small plots they had chosen themselves. Although it measured population trends of breeding birds in most habitats, it had a small sample size, biases in habitat coverage, and very poor coverage outside England. As a result of these deficiencies, the BBS was started in 1994, with an overlap of seven years before the CBC ceased in 2000. The BBS uses a line-transect method in randomly selected 1-km



Richard Chandler

**163.** Recent fieldwork in parts of Shetland that held 45% of the UK breeding population of Whimbrels *Numenius phaeopus* in the last national survey (in the 1980s) has suggested a decline of up to 70%, and this alarming statistic has meant that this species was Red-listed by *BoCC3*.

squares, and is more representative both geographically and of all habitats (see Risely *et al.* 2008 for further details of the scheme and results). A far greater sample size (e.g. more than 3,600 squares in 2007) means that the BBS is able to monitor trends in more species, so some (e.g. Wood Warbler *Phylloscopus sibilatrix*) are reported from 1994 onwards only.

For species covered by both surveys, the overlap period means that in most cases data from both surveys can be jointly modelled to produce trends spanning 1966 to date (Freeman *et al.* 2007). However, for a small number of species, the divergence in CBC and BBS trends within the 1994–2000 overlap period means that joint models cannot be produced. In such cases, UK trends have been produced by modelling trends from the two schemes separately and ‘anchoring’ the two together in 1994. As is good

practice when using smoothing, the last year of indices has not been used (although the full run of years is used in deriving the indices), so trends run to 2006: 1969–2006 for the longer-term trend, 1981–2006 for the 25-year trend, and 1994–2006 for those species monitored by the BBS only.

For a small number of wetland species, it was considered more appropriate to use trends from the Waterways Bird Survey (WBS), which has monitored plots along rivers, streams and canals since 1974. A similar modelling approach was used as with CBC and BBS data, with smoothing and hence the end year excluded.

#### BTO/JNCC/RSPB/WWT Wetland Bird Survey (WeBS)

National Wildfowl Counts started in the UK in 1947, since when coverage has grown and evolved into the present-day WeBS, which utilises volunteer counters to monitor waterbirds at a network of key sites throughout the winter. Around 3,000 observers now make counts at 2,000 sites on the same weekend every month from September to March (many sites are counted year-round). More details on the scheme and the latest results can be found in Austin *et al.* (2008).

Robust trends can be generated for most wildfowl species from 1966/67 onwards, and from 1974/75 for waders; a few other waterbird species are covered from later years (e.g. Common Coot *Fulica atra* and Great Crested Grebe *Podiceps cristatus* from 1983/84). As with trends for common breeding species, these indices are smoothed (using counts from peak winter months) and used to the penultimate year for which data are available, i.e. 2005/06. For some species of the open coast (e.g. Purple Sandpiper *Calidris maritima*), WeBS trends may not be representative of overall changes in the population as WeBS coverage of the principal habitats used is poor, and trends are



Sue Tranter (rspb-images.com)

**164.** The Tree Pipit *Anthus trivialis* joins three other woodland breeders (Wood Warbler *Phylloscopus sibilatrix*, Lesser Redpoll *Carduelis cabaret* and Hawfinch *Coccothraustes coccothraustes*) moving from the Amber to the Red list in BoCC3. The factors responsible for declines in woodland bird populations are less clear-cut than (for example) those of farmland birds. Furthermore, two of these four species, Tree Pipit and Wood Warbler, are long-distance migrants, and problems on the wintering grounds or on passage routes may be compounding pressures in the breeding areas.

biased towards populations on estuaries. In a few cases, trends from periodic Non-Estuarine Coastal Waterbird Surveys are used instead.

Trends for a number of geese (e.g. Pink-footed Goose *Anser brachyrhynchus*) are based on data from the WWT/JNCC Goose and Swan Monitoring Programme, which co-ordinates annual counts at key sites.

### Seabird monitoring

Trends in breeding seabird numbers come from two main sources. Three UK censuses have produced complete estimates of most species at 15-year intervals: Operation Seafarer (1969–70; Cramp *et al.* 1974), Seabird Colony Register (1985–88; Lloyd *et al.* 1991) and Seabird 2000 (1998–2001; Mitchell *et al.* 2004). However, not all species were covered in the earlier censuses (e.g. European Storm-petrel *Hydrobates pelagicus* and Leach's Storm-petrel *Oceanodroma leucorhoa*), or were surveyed using methods incomparable between surveys (e.g. Black Guillemot *Cephalus grylle*). In addition, the Seabird Monitoring Programme, initiated in 1986 to survey a UK-wide sample of colonies annually, provides annual indices for the more widespread seabird species (see Mavor *et al.* 2008 for further details). For some species it is possible to combine census estimates from 1969–70 onwards with SMP results to report on changes in seabird population sizes over the longer-term trend period.

### Rare Breeding Birds Panel (RBBP)

This independent body has collated records of rare breeding birds since 1973, with the most recent report covering 2006 (Holling *et al.* 2009). For a few species (e.g. White-tailed Eagle *Haliaeetus albicilla*), more recent data (up to 2008) were available from annual RSPB monitoring. In order to smooth the between-year variation in numbers of breeding birds reported by the RBBP, the mean number of pairs (using the maximum total number of pairs) was calculated over five-year

periods at the beginning and end of trend periods: 1973–77 for the longer period, and 1977–81 for the 25-year period, to 2002–06. Population trends were calculated as the percentage change between these means.

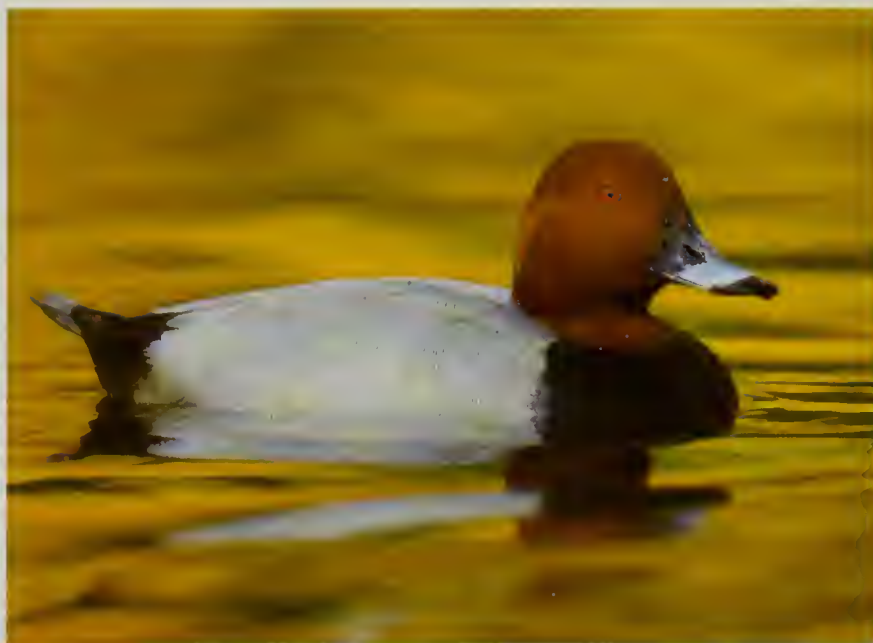
### Periodic surveys

Many of the species trends (and population estimates) used in this status assessment were generated from surveys conducted under the Statutory Conservation Agency and RSPB Annual Breeding Bird Scheme (SCARABBS), which entails periodic (nowadays at intervals of six or 12 years) surveys of rare and localised breeding species such as Red-throated Diver *G. stellata* (Dillon *et al.* in press) and Hen Harrier *Circus cyaneus* (Sim *et al.* 2007).

Other sources of trends and population estimates include BTO-led surveys, for example of Ringed Plover *Charadrius hiaticula* and Little Ringed Plover *C. dubius* and the 2003/04–2005/06 Winter Gull Roost Survey (WinGS). Trends for a few game species (e.g. Red Grouse *Lagopus lagopus* and Woodcock *Scolopax rusticola*) are derived from the Game & Wildlife Conservation Trust's National Gamebag Census (Aebischer & Baines 2008).

### Race-level assessments

The assessment of BoCC at race level was undertaken following the species-level



Ben Hall (rspb-images.com)

**165.** Many species of wildfowl winter in the UK in internationally important numbers. Some of these, among them Common Pochard *Aythya ferina*, have shown a moderate decline in numbers over the longer-term period considered by this review (Pochard is Amber-listed). This may not necessarily mean that the population as a whole is declining, but may reflect a shift in distribution in response to milder winters.

approach, as described above, as closely as possible, using exactly the same criteria and data sources. However, in many cases the information available for races is considerably poorer than that for species. Bird monitoring is rarely targeted at bird races, with a few exceptions such as races of geese (or even populations of the same race, such as the Svalbard and East Canadian high Arctic populations of 'Pale-bellied Brent Geese' *Branta bernicla hrota*, which have been long treated as separate entities for monitoring and conservation purposes). In many cases it was straightforward to derive race-level data from species-level monitoring: when, for example, there is only one regularly occurring race in the UK, or when the ranges of the individual races are distinct. However, there were cases where assumptions had to be made or inferences drawn, and thus we are aware that the BoCC listing for races presented in this paper may be less robust than that for species.

The first stage in the race-level assessment, that of identifying a list of regularly occurring races, was in many ways the most problematical and remains unsatisfactory in some respects. The same approach was used as for the species assessment, in that vagrants and scarce migrants

were excluded. For the latter, as there is no accepted list of scarce-migrant races comparable with that for species, we made our own assessments using broadly similar thresholds. For example, the continental race of Great Spotted Woodpecker *Dendrocopos major major* was excluded as we felt that it was a scarce migrant.

A greater problem was lack of clarity on the existence in the UK (and indeed anywhere in the world, in the case of supposed endemic races) of a number of races. The BOU maintains a list of races occurring in the UK in their *Checklist of the Birds of Britain* (Dudley *et al.* 2006), but we felt that this did not provide a definitive starting point for our assessment, as in a number of instances this list is at odds with other key references. A number of races not included in the BOU list (thus, in the case of endemic races, suggesting that they are not valid) are still considered extant by others. For example, Common Eider *Somateria mollissima* of the race *S. m. faeroensis* is not listed by the BOU, but there is evidence that it is a valid race (Tiedemann *et al.* 2004), and that it is highly likely that the breeding birds in the Northern Isles are of this race (e.g. Heubeck 1993).

It is not surprising that there is some confusion over the existence and occurrence of



Richard Chandler

166. By assessing birds at race level in addition to species level, BoCC3 was able to distinguish the contrasting fortunes of different races of the same species. A good example is the Black-tailed Godwit *Limosa limosa*. The nominate race (shown here) is Red-listed, reflecting its status as a rare and historically depleted breeder in southern Britain. In contrast, the Icelandic breeding *L. l. islandica* has increased significantly in recent decades; it is Amber-listed by this review, reflecting its localisation and international importance in the UK.

such races, given the lack of studies in recent years. Scepticism over the existence of some endemic races is inevitable, particularly given that many arise from the work of just a few nineteenth- and twentieth-century ornithologists with a penchant for splitting. Phillip A. Clancey, for example, was responsible for naming a host of endemic races such as a Linnet *C. c. autochthona*, a Greenfinch *C. chloris harrisoni*, a Meadow Pipit *Anthus pratensis whistleri*, a Wren *T. t. indigenus* and a Yellowhammer *E. citrinella caliginosa* (and after emigrating, described a further 200 subspecies of bird in southern Africa). In many cases (such as the west of Scotland races of Song Thrush *T. p. catherinae* and Blackbird *T. merula ticehursti*), such races have long been disregarded, but there is still support for others within the ornithological literature. We have erred on the side of including such races within our review when they are covered by at least one of three significant sources: *BWP* (including Snow & Perrins 1998), *Birds in Scotland* (Forrester *et al.* 2008) and *Handbook of the Birds of the World* (del Hoyo *et al.* 1992–2008). Our inclusion of a race-level assessment should not be taken as a judgement on the provenance of a race, and we call for more research in this area.

For many polytypic species there is only one race that occurs with regularity in the UK, so assessments against most criteria (historical decline, trends in population and range, rarity and localisation) were the same as for the parent species. For others, there is more than one regularly occurring (i.e. on the list of races to be assessed) race (see table 10, pp. 326–327). In order to assess such races against these criteria, we needed to be able to determine the range (from published literature such as *BWP*) and produce appropriate data. In many cases (e.g. clearly isolated populations such the Fair Isle Wren, or races that are present in the UK at different times such as Black-tailed Godwits *Limosa limosa limosa* and *L. l. islandica*) this was straightforward, although data to enable an assessment were often lacking. In some cases, it was possible to disaggregate datasets such as the BBS to produce new population estimates and trends corresponding (approximately, in most cases) to the ranges of races of interest. In other cases this was not possible, and some assessments were based on informed opinion, often steered by knowledge of the status of the parent species.

A further complication arose when considering criteria that required some knowledge of status outside the UK: IUCN status, SPEC, and international importance (BI & WI). IUCN assessments of global threat and SPEC assessments do not exist for races. We had therefore to create ‘pseudo-assessments’ using the best data available. In many cases, the race we were assessing was the only race for a given species occurring in Europe, or was at least the main representative of the species within the continent. In such cases, we used the SPEC status given in *Birds in Europe* (BirdLife International 2004). Otherwise, we used descriptions of species range and the country population size and trend estimates from *Birds in Europe* to calculate IUCN and SPEC assessments as best we could. We should stress that these were not formal IUCN or SPEC assessments, rather pseudo-assessments solely for the purpose of this review. Likewise, by adding population estimates from countries within the range of races, we derived new population estimates against which to assess whether UK populations of races were internationally important.

## Results

### Species-level assessment

A total of 246 species were assessed, one fewer than in 2002. Five species were dropped from the assessment: Snow Goose *Anser caerulescens*, Hoopoe, Bluethroat *Luscinia svecica*, Icterine Warbler and Common Rosefinch *Carpodacus erythrinus*. Conversely, Balearic Shearwater, Yellow-legged Gull *Larus michahellis*, Shore Lark *Eremophila alpestris* and Hooded Crow *Corvus cornix* were assessed for the first time, all except the lark owing to their being recognised by BOU as full species since the last assessment.

The definition of ‘regular breeder’, employed

*continued on page 314*

**Table 1.** Formerly regular breeding species that have become extinct in the UK since 1800.

Species	Date of last recorded breeding
Great Bustard <i>Otis tarda</i>	c. 1833
Kentish Plover <i>Charadrius alexandrinus</i>	1979
Black Tern <i>Chlidonias niger</i>	1975
Great Auk <i>Pinguinus impennis</i> <sup>1</sup>	c. 1812
Snowy Owl <i>Bubo scandiacus</i>	1975

<sup>1</sup> Became globally extinct in 1844

**Table 2.** BoCC3: Red-listed species and the criteria under which they qualify.

	BoCC2 <sup>a</sup>	Red-list criteria <sup>b</sup>								Additional Amber-list criteria under which species qualifies <sup>c</sup>													
		IUCN	HD	BDp <sup>1</sup>	BDp <sup>2</sup>	WDp <sup>1</sup>	WDp <sup>2</sup>	BDr <sup>1</sup>	BDr <sup>2</sup>	SPEC	HDrec	BDMp <sup>1</sup>	BDMp <sup>2</sup>	WDMp <sup>1</sup>	WDMp <sup>2</sup>	BDMr <sup>1</sup>	BDMr <sup>2</sup>	BR	WR	BL	WL	BI	WI
Greater Scaup <i>Aythya marila</i>	A						•			•													•
Common Scoter <i>Melanitta nigra</i>	R			•	•										•		•						•
Black Grouse <i>Tetrao tetrix</i>	R		•	•						•													
Capercaillie <i>Tetrao urogallus</i>	R								•						•								
Grey Partridge <i>Perdix perdix</i>	R			•	•					•													
Balearic Shearwater <i>Puffinus mauretanicus</i>	NA	•								•													
Eurasian Bittern <i>Botaurus stellaris</i>	R		•							•							•	•					
White-tailed Eagle <i>Haliaeetus albicilla</i>	R		•							•								•					
Hen Harrier <i>Circus cyaneus</i>	R		•							•													
Corn Crake <i>Crex crex</i>	R		•		•				•	•													
Northern Lapwing <i>Vanellus vanellus</i>	A			•						•		•											•
Temminck's Stint <i>Calidris temminckii</i>	A			•	•					•								•					
Dunlin <i>Calidris alpina</i>	A						•			•			•							•	•		•
Ruff <i>Philomachus pugnax</i>	A			•	•					•				•				•					
Black-tailed Godwit <i>Limosa limosa</i>	R		•							•							•					•	•
Whimbrel <i>Numenius phaeopus</i>	A			•						•							•						
Red-necked Phalarope <i>Phalaropus lobatus</i>	R		•							•							•						
Arctic Skua <i>Stercorarius parasiticus</i>	G			•						•													
Herring Gull <i>Larus argentatus</i>	A				•	•				•		•											•
Roseate Tern <i>Sterna dougallii</i>	R			•	•				•	•								•					
Turtle Dove <i>Streptopelia turtur</i>	R			•	•					•													
Common Cuckoo <i>Cuculus canorus</i>	A			•	•					•													
European Nightjar <i>Caprimulgus europaeus</i>	R								•	•											•		
Wryneck <i>Jynx torquilla</i>	R		•	•	•					•								•					
Lesser Spotted Woodpecker <i>Dendrocopos minor</i>	R			•	•					•													
Sky Lark <i>Alauda arvensis</i>	R				•					•		•											
Tree Pipit <i>Anthus trivialis</i>	A			•	•					•													
Yellow Wagtail <i>Motacilla flava</i>	A			•	•					•													
Ring Ouzel <i>Turdus torquatus</i>	R			•						•													
Fieldfare <i>Turdus pilaris</i>	A				•					•		•							•				
Song Thrush <i>Turdus philomelos</i>	R				•					•													
Redwing <i>Turdus iliacus</i>	A				•					•									•				
Grasshopper Warbler <i>Locustella naevia</i>	R			•	•					•													
Savi's Warbler <i>Locustella luscinioides</i>	R			•	•					•									•				
Aquatic Warbler <i>Acrocephalus paludicola</i>	R	•					•			•											•		
Marsh Warbler <i>Acrocephalus palustris</i>	R			•	•					•									•				
Wood Warbler <i>Phylloscopus sibilatrix</i>	A			•						•													
Spotted Flycatcher <i>Muscicapa striata</i>	R			•	•					•													
Willow Tit <i>Poecile montana</i>	R			•	•					•													
Marsh Tit <i>Poecile palustris</i>	R				•					•		•											
Golden Oriole <i>Oriolus oriolus</i>	A			•						•		•							•				
Red-backed Shrike <i>Lanius collurio</i>	R		•	•	•					•									•				
Common Starling <i>Sturnus vulgaris</i>	R			•	•					•													
House Sparrow <i>Passer domesticus</i>	R			•	•					•													
Tree Sparrow <i>Passer montanus</i>	R			•	•					•													
Linnet <i>Carduelis cannabina</i>	R				•					•		•											
Twite <i>Carduelis flavirostris</i>	R		•	•						•													

**Table 2.** BoCC3: Red-listed species and the criteria under which they qualify, *continued*

	BoCC2 <sup>a</sup>	Red-list criteria <sup>b</sup>								Additional Amber-list criteria under which species qualifies <sup>c</sup>														
		IUCN	HD	BDp <sup>1</sup>	BDp <sup>2</sup>	WDp <sup>1</sup>	WDp <sup>2</sup>	BDr <sup>1</sup>	BDr <sup>2</sup>	SPEC	HDrec	BDMp <sup>1</sup>	BDMp <sup>2</sup>	WDMp <sup>1</sup>	WDMp <sup>2</sup>	BDMr <sup>1</sup>	BDMr <sup>2</sup>	BR	WR	BL	WL	BI	WI	
Lesser Redpoll <i>Carduelis cabaret</i>	A			•	•																			
Hawfinch <i>Coccothraustes coccothraustes</i>	A			•																				
Yellowhammer <i>Emberiza citrinella</i>	R			•	•																			
Cirl Bunting <i>Emberiza cirlus</i>	R							•							•									
Corn Bunting <i>Emberiza calandra</i>	R		•	•	•					•														

<sup>a</sup>BoCC2 assessments

NA=Not assessed, R=Red, A=Amber, G=Green.

<sup>b</sup>Red-list criteria

IUCN: Globally Threatened. HD: Historical decline in breeding population. BDp<sup>1/2</sup>: Severe breeding population decline over 25 years/longer term. WDp<sup>1/2</sup>: Severe non-breeding population decline over 25 years/longer term. BDr<sup>1/2</sup>: Severe breeding range decline over 25 years/longer term.

<sup>c</sup>Amber-list criteria

SPEC: Species of European Conservation Concern. HDrec: Historical decline – recovery. BDMp<sup>1/2</sup>: Moderate breeding population decline over 25 years/longer term. WDMp<sup>1/2</sup>: Moderate non-breeding population decline over 25 years/longer term. BDMr<sup>1/2</sup>: Moderate breeding range decline over 25 years/longer term. BR/WR: Breeding/non-breeding rarity. BL/WL: Breeding/non-breeding localisation. BI/WI: Breeding/non-breeding international importance.



Tom Marshall (rspb-images.com)

**167.** The Corn Bunting *Emberiza calandra* has been Red-listed by all three BoCC reviews, and it is one of the signal species of farmland bird declines. It is one of 15 species that have declined by over 80% during the period considered by this review, and remains an urgent conservation priority.

Table 3. BoCC3: Amber-listed species and the criteria under which they qualify.

	BoCC2 <sup>a</sup>	Amber-list criteria <sup>b</sup>												
		SPEC	HDrec	BDMp <sup>1</sup>	BDMp <sup>2</sup>	WDMp <sup>1</sup>	WDMp <sup>2</sup>	BDMr <sup>1</sup>	BDMr <sup>2</sup>	BR	WR	BL	WL	BI
Bewick's Swan <i>Cygnus columbianus</i>	A	•										•		•
Whooper Swan <i>Cygnus cygnus</i>	A								•			•		
Bean Goose <i>Anser fabalis</i>	A									•				
Pink-footed Goose <i>Anser brachyrhynchus</i>	A											•		•
Greylag Goose <i>Anser anser</i>	A											•		•
Barnacle Goose <i>Branta leucopsis</i>	A											•		
Brent Goose <i>Branta bernicla</i>	A	•										•		•
Common Shelduck <i>Tadorna tadorna</i>	A											•		•
Eurasian Wigeon <i>Anas penelope</i>	A											•		•
Gadwall <i>Anas strepera</i>	A	•												•
Eurasian Teal <i>Anas crecca</i>	A													•
Mallard <i>Anas platyrhynchos</i>	G					•	•							
Pintail <i>Anas acuta</i>	A	•							•			•		•
Garganey <i>Anas querquedula</i>	A	•							•					
Shoveler <i>Anas clypeata</i>	A	•												•
Common Pochard <i>Aythya ferina</i>	A	•				•	•							•
Tufted Duck <i>Aythya fuligula</i>	G	•												
Common Eider <i>Somateria mollissima</i>	A					•								
Velvet Scoter <i>Melanitta fusca</i>	A	•										•		
Common Goldeneye <i>Bucephala clangula</i>	A								•					
Smew <i>Mergellus albellus</i>	G	•								•				
Red Grouse <i>Lagopus lagopus</i>	A			•	•									
Common Quail <i>Coturnix coturnix</i>	R	•	•											
Red-throated Diver <i>Gavia stellata</i>	A	•												
Black-throated Diver <i>Gavia arctica</i>	A	•							•	•				
Great Northern Diver <i>Gavia immer</i>	A													•
Little Grebe <i>Tachybaptus ruficollis</i>	G			•	•									
Red-necked Grebe <i>Podiceps grisegena</i>	A					•					•			
Slavonian Grebe <i>Podiceps auritus</i>	A	•		•	•				•	•				
Black-necked Grebe <i>Podiceps nigricollis</i>	A								•	•				
Fulmar <i>Fulmarus glacialis</i>	A			•								•		
Sooty Shearwater <i>Puffinus griseus</i>	G	•												
Manx Shearwater <i>Puffinus puffinus</i>	A	•						•			•			•
European Storm-petrel <i>Hydrobates pelagicus</i>	A											•		
Leach's Storm-petrel <i>Oceanodroma leucorhoa</i>	A	•										•		•
Northern Gannet <i>Morus bassanus</i>	A											•		•
Shag <i>Phalacrocorax aristotelis</i>	A			•	•							•		•
Little Egret <i>Egretta garzetta</i>	A											•		
Eurasian Spoonbill <i>Platalea leucorodia</i>	A	•								•				
Honey-buzzard <i>Pernis apivorus</i>	A								•					
Red Kite <i>Milvus milvus</i>	A	•												
Marsh Harrier <i>Circus aeruginosus</i>	A									•	•			
Montagu's Harrier <i>Circus pygargus</i>	A								•					
Golden Eagle <i>Aquila chrysaetos</i>	A	•												
Osprey <i>Pandion haliaetus</i>	A	•							•					
Common Kestrel <i>Falco tinnunculus</i>	A	•												
Merlin <i>Falco columbarius</i>	A		•											
Spotted Crake <i>Porzana porzana</i>	A									•				
Common Crane <i>Grus grus</i>	A	•							•					
Oystercatcher <i>Haematopus ostralegus</i>	A											•	•	•
Avocet <i>Recurvirostra avosetta</i>	A											•	•	
Stone-curlew <i>Burhinus oedichenus</i>	R	•							•		•			

**Table 3.** BoCC3: Amber-listed species and the criteria under which they qualify, *continued*

	BoCC2 <sup>a</sup>	Amber-list criteria <sup>b</sup>													
		SPEC	HDrec	BDMp <sup>1</sup>	BDMp <sup>2</sup>	WDMp <sup>1</sup>	WDMp <sup>2</sup>	BDMr <sup>1</sup>	BDMr <sup>2</sup>	BR	WR	BL	WL	BI	WI
Ringed Plover <i>Charadrius hiaticula</i>	A			•											•
Dotterel <i>Charadrius morinellus</i>	A											•			
European Golden Plover <i>Pluvialis apricaria</i>	G														•
Grey Plover <i>Pluvialis squatarola</i>	A												•		•
Red Knot <i>Calidris canutus</i>	A	•											•		•
Purple Sandpiper <i>Calidris maritima</i>	A					•				•					
Jack Snipe <i>Limnocyptes minimus</i>	G	•													
Common Snipe <i>Gallinago gallinago</i>	A	•													
Woodcock <i>Scolopax rusticola</i>	A	•													
Bar-tailed Godwit <i>Limosa lapponica</i>	A												•		•
Eurasian Curlew <i>Numenius arquata</i>	A	•		•	•									•	•
Common Sandpiper <i>Actitis hypoleucos</i>	G	•		•											
Green Sandpiper <i>Tringa ochropus</i>	A									•					
Spotted Redshank <i>Tringa erythropus</i>	A	•									•				
Wood Sandpiper <i>Tringa glareola</i>	A	•									•	•			
Common Redshank <i>Tringa totanus</i>	A	•		•	•										•
Turnstone <i>Arenaria interpres</i>	A														•
Great Skua <i>Stercorarius skua</i>	A												•		•
Mediterranean Gull <i>Larus melanocephalus</i>	A									•					
Common Gull <i>Larus canus</i>	A	•													•
Lesser Black-backed Gull <i>Larus fuscus</i>	A											•			•
Glaucous Gull <i>Larus hyperboreus</i>	G										•				
Iceland Gull <i>Larus glaucoides</i>	G										•				
Yellow-legged Gull <i>Larus michahellis</i>	NA									•					
Great Black-backed Gull <i>Larus marinus</i>	G					•									
Little Gull <i>Hydrocoloeus minutus</i>	G	•													
Black-headed Gull <i>Chroicocephalus ridibundus</i>	A					•									•
Kittiwake <i>Rissa tridactyla</i>	A			•								•			
Little Tern <i>Sternula albifrons</i>	A	•								•		•			
Black Tern <i>Chlidonias niger</i>	G	•													
Sandwich Tern <i>Sterna sandvicensis</i>	A	•								•		•			
Common Tern <i>Sterna hirundo</i>	G											•			
Arctic Tern <i>Sterna paradisaea</i>	A									•					
Common Guillemot <i>Uria aalge</i>	A											•			•
Razorbill <i>Alca torda</i>	A											•			
Black Guillemot <i>Cephus grylle</i>	A	•													
Puffin <i>Fratercula arctica</i>	A	•										•			
Stock Dove <i>Columba oenas</i>	A														•
Barn Owl <i>Tyto alba</i>	A	•													
Short-eared Owl <i>Asio flammeus</i>	A	•													
Common Swift <i>Apus apus</i>	G			•											
Common Kingfisher <i>Alcedo atthis</i>	A	•													
Green Woodpecker <i>Picus viridis</i>	A	•													
Wood Lark <i>Lullula arborea</i>	R	•								•		•			
Shore Lark <i>Eremophila alpestris</i>	NA													•	
Sand Martin <i>Riparia riparia</i>	A	•													
Barn Swallow <i>Hirundo rustica</i>	A	•													
House Martin <i>Delichon urbicum</i>	A	•		•	•										
Meadow Pipit <i>Anthus pratensis</i>	A			•	•										
Water Pipit <i>Anthus spinoletta</i>	G										•				
Grey Wagtail <i>Motacilla cinerea</i>	A					•									
Dunnock <i>Prunella modularis</i>	A					•									

**Table 3.** BoCC3: Amber-listed species and the criteria under which they qualify. *continued*

	BoCC2 <sup>a</sup>	Amber-list criteria <sup>b</sup>													
		SPEC	HDrec	BDMp <sup>1</sup>	BDMp <sup>2</sup>	WDMp <sup>1</sup>	WDMp <sup>2</sup>	BDMr <sup>1</sup>	BDMr <sup>2</sup>	BR	WR	BL	WL	BI	WI
Common Nightingale <i>Luscinia megarhynchos</i>	A			•											
Black Redstart <i>Phoenicurus ochruros</i>	A			•	•					•					
Common Redstart <i>Phoenicurus phoenicurus</i>	A	•													
Whinchat <i>Saxicola rubetra</i>	G			•											
Northern Wheatear <i>Oenanthe oenanthe</i>	G	•													
Mistle Thrush <i>Turdus viscivorus</i>	A			•	•										
Common Whitethroat <i>Sylvia communis</i>	G				•										
Dartford Warbler <i>Sylvia undata</i>	A	•										•			
Willow Warbler <i>Phylloscopus trochilus</i>	A			•	•										
Firecrest <i>Regulus ignicapilla</i>	A									•					
Pied Flycatcher <i>Ficedula hypoleuca</i>	G			•											
Bearded Tit <i>Pauurus biarcticus</i>	A							•				•			
Crested Tit <i>Lophophanes cristatus</i>	G	•													
Short-toed Treecreeper <i>Certhia brachydactyla</i>	G									•					
Red-billed Chough <i>Pyrrhocorax pyrrhocorax</i>	A	•													
European Serin <i>Serinus serinus</i>	A			•						•					
Scottish Crossbill <i>Loxia scotica</i>	R	•													•
Parrot Crossbill <i>Loxia pytyopsittacus</i>	A									•					
Bullfinch <i>Pyrrhula pyrrhula</i>	R			•	•										
Lapland Bunting <i>Calcarius lapponicus</i>	G											•			
Snow Bunting <i>Plectrophenax nivalis</i>	A									•					
Reed Bunting <i>Emberiza schoeniclus</i>	R				•										

<sup>a</sup>BoCC2 assessments

NA=Not assessed, R=Red, A=Amber, G=Green.

<sup>b</sup>Amber-list criteria

SPEC: Species of European Conservation Concern. HDrec: Historical decline – recovery. BDMp<sup>1/2</sup>: Moderate breeding population decline over 25 years/longer term. WDMp<sup>1/2</sup>: Moderate non-breeding population decline over 25 years/longer term. BDMr<sup>1/2</sup>: Moderate breeding range decline over 25 years/longer term. BR/WR: Breeding/non-breeding rarity. BL/WL: Breeding/non-breeding localisation. BI/WI: Breeding/non-breeding international importance.

for the first time by this assessment, resulted in Snowy Owl *Bubo scandiacus* being added to the list of birds to have become extinct in the UK since 1800 (table 1), since it qualifies as a formerly regular breeder (in Shetland between 1967 and 1975) that has not bred for over 20 years.

Of these 246 species, the current review placed 52 (21.1%) species on the Red list, 126 (51.2%) on the Amber list and 68 (27.6%) on the Green list (tables 2, 3 and 4). The Red list has increased by 12 species since BoCC2, with 18 species Red-listed for the first time and six moving from Red to Amber. Of the 18 new Red-listed species, one (Balearic Shearwater) was not assessed previously, and one (Arctic Skua) moved straight from Green to Red; the other 16 species were Amber-listed by BoCC2.

Thirty-four species have remained on the

Red list since BoCC2, and 23 of these were on the BoCC1 Red list. None of the five species moved from Red to Amber by the BoCC2 assessment has returned to the Red list. All five were moved originally in response to recovery from historical declines, and four (Red Kite, Marsh Harrier, Osprey and Dartford Warbler) have continued this recovery to the extent that they no longer qualify for the Amber list under this criterion. All four still qualify for the Amber list under at least one other criterion, preventing us from celebrating the first complete recovery from the highest level of conservation concern.

Most species on the Red list were placed there because of breeding population decline: 32 showed a severe decline over 25 years, 31 over the longer-term period and 40 over at least one of the two periods (77% of those Red-listed).

Table 4. BoCC3: Green-listed species.

Species	BoCC2 <sup>1</sup>	Species	BoCC2 <sup>1</sup>
Mute Swan <i>Cygnus olor</i>	A	Waxwing <i>Bombycilla garrulus</i>	G
White-fronted Goose <i>Anser albifrons</i>	A	Dipper <i>Cinclus cinclus</i>	G
Long-tailed Duck <i>Clangula hyemalis</i>	A	Wren <i>Troglodytes troglodytes</i>	G
Red-breasted Merganser <i>Mergus serrator</i>	G	Robin <i>Erithacus rubecula</i>	G
Goosander <i>Mergus merganser</i>	G	Common Stonechat <i>Saxicola torquatus</i>	A
Ptarmigan <i>Lagopus muta</i>	G	Blackbird <i>Turdus merula</i>	G
Great Crested Grebe <i>Podiceps cristatus</i>	G	Cetti's Warbler <i>Cettia cetti</i>	G
Great Shearwater <i>Puffinus gravis</i>	G	Sedge Warbler <i>Acrocephalus schoenobaenus</i>	G
Great Cormorant <i>Phalacrocorax carbo</i>	A	Reed Warbler <i>Acrocephalus scirpaceus</i>	G
Grey Heron <i>Ardea cinerea</i>	G	Blackcap <i>Sylvia atricapilla</i>	G
Northern Goshawk <i>Accipiter gentilis</i>	G	Garden Warbler <i>Sylvia borin</i>	G
Eurasian Sparrowhawk <i>Accipiter nisus</i>	G	Lesser Whitethroat <i>Sylvia curruca</i>	G
Common Buzzard <i>Buteo buteo</i>	G	Common Chiffchaff <i>Phylloscopus collybita</i>	G
Hobby <i>Falco subbuteo</i>	G	Goldcrest <i>Regulus regulus</i>	A
Peregrine Falcon <i>Falco peregrinus</i>	A	Long-tailed Tit <i>Aegithalos caudatus</i>	G
Water Rail <i>Rallus aquaticus</i>	A	Blue Tit <i>Cyanistes caeruleus</i>	G
Moorhen <i>Gallinula chloropus</i>	G	Great Tit <i>Parus major</i>	G
Common Coot <i>Fulica atra</i>	G	Coal Tit <i>Periparus ater</i>	G
Little Ringed Plover <i>Charadrius dubius</i>	G	Eurasian Nuthatch <i>Sitta europaea</i>	G
Sanderling <i>Calidris alba</i>	G	Eurasian Treecreeper <i>Certhia familiaris</i>	G
Little Stint <i>Calidris minuta</i>	G	Eurasian Jay <i>Garrulus glandarius</i>	G
Curlew Sandpiper <i>Calidris ferruginea</i>	G	Magpie <i>Pica pica</i>	G
Greenshank <i>Tringa nebularia</i>	G	Western Jackdaw <i>Corvus monedula</i>	G
Pomarine Skua <i>Stercorarius pomarinus</i>	G	Rook <i>Corvus frugilegus</i>	G
Long-tailed Skua <i>Stercorarius longicaudus</i>	G	Carrion Crow <i>Corvus corone</i>	G
Little Auk <i>Alle alle</i>	G	Hooded Crow <i>Corvus cornix</i>	NA
Rock Dove/Feral Pigeon <i>Columba livia</i>	G	Common Raven <i>Corvus corax</i>	G
Wood Pigeon <i>Columba palumbus</i>	G	Common Chaffinch <i>Fringilla coelebs</i>	G
Collared Dove <i>Streptopelia decaocto</i>	G	Brambling <i>Fringilla montifringilla</i>	G
Tawny Owl <i>Strix aluco</i>	G	Greenfinch <i>Carduelis chloris</i>	G
Long-eared Owl <i>Asio otus</i>	G	Goldfinch <i>Carduelis carduelis</i>	G
Great Spotted Woodpecker <i>Dendrocopos major</i>	G	Siskin <i>Carduelis spinus</i>	G
Rock Pipit <i>Anthus petrosus</i>	G	Common Redpoll <i>Carduelis flammea</i>	G
Pied Wagtail <i>Motacilla alba</i>	G	Common Crossbill <i>Loxia curvirostra</i>	G

<sup>1</sup> BoCC2 assessments

NA=Not assessed, R=Red, A=Amber, G=Green.

Table 6 shows the declines in population or range for species qualifying for Red or Amber lists under these criteria. Fifteen species have declined by more than 80% over at least one of the two time periods: Common Scoter *Melanitta nigra*, Black Grouse *Tetrao tetrix*, Grey Partridge *Perdix perdix*, Roseate Tern *Sterna dougallii*, Turtle Dove, Lesser Spotted Woodpecker, Tree Pipit *Anthus trivialis*, Grasshopper Warbler *Locustella naevia*, Marsh Warbler *Acrocephalus palustris*, Spotted Flycatcher *Muscicapa striata*, Willow Tit, Red-backed Shrike, Tree Sparrow *Passer montanus*, Lesser Redpoll *Carduelis cabaret* and Corn Bunting. Only five species have shown a severe range decline over either time period (Capercaillie *Tetrao urogallus*, Corn

Crake *Crex crex*, Roseate Tern, European Nightjar and Cirl Bunting *Emberiza cirlus*), and a further eight showed a moderate decline, although these figures may reflect the relatively small number of species for which range change could be assessed rather than retention of range in the UK's declining species. With one exception, Balearic Shearwater, all of the 18 species new to the Red list were moved there because of population declines. The shearwater has been added to the IUCN global Red List since BoCC2 owing to sustained population decline and a small geographical range.

There was little change in the number of species Red-listed because of historical decline; just one species, Common Quail, showed a

**Table 5.** Changes to the Red, Amber and Green lists between BoCC2 and BoCC3.

Species	Reason for status change
<i>Species with worsened status</i>	
Newly assessed, straight to Red	
Balearic Shearwater	Globally Threatened (Critically Endangered)
Green to Red	
Arctic Skua	Breeding population decline $\geq 50\%$ over 25 years
Amber to Red	
Greater Scaup	Non-breeding population decline $\geq 50\%$ over longer-term period
Northern Lapwing	Breeding population decline $\geq 50\%$ over 25 years
Temminck's Stint	Breeding population decline $\geq 50\%$ over 25 years and longer-term period
Dunlin	Non-breeding population decline $\geq 50\%$ over longer-term period
Ruff	Breeding population decline $\geq 50\%$ over 25 years and longer-term period
Whimbrel	Breeding population decline $\geq 50\%$ over 25 years
Herring Gull	Breeding population decline $\geq 50\%$ over longer-term period Non-breeding population decline $\geq 50\%$ over 25 years
Common Cuckoo	Breeding population decline $\geq 50\%$ over 25 years and longer-term period
Tree Pipit	Breeding population decline $\geq 50\%$ over 25 years and longer-term period
Yellow Wagtail	Breeding population decline $\geq 50\%$ over 25 years and longer-term period
Fieldfare	Breeding population decline $\geq 50\%$ over longer-term period
Redwing	Breeding population decline $\geq 50\%$ over longer-term period
Wood Warbler	Breeding population decline $\geq 50\%$ over 25 years
Golden Oriole	Breeding population decline $\geq 50\%$ over 25 years
Lesser Redpoll	Breeding population decline $\geq 50\%$ over 25 years and longer-term period
Hawfinch	Breeding population decline $\geq 50\%$ over 25 years
Green to Amber	
Mallard	Non-breeding population decline $\geq 25\%$ over 25 years and longer-term period
Tufted Duck	SPEC status
Smew	SPEC status and rare non-breeder
Little Grebe	Breeding population decline $\geq 25\%$ over 25 years and longer-term period
Sooty Shearwater	SPEC status
European Golden Plover	International importance of non-breeding population
Jack Snipe	SPEC status
Common Sandpiper	SPEC status Breeding population decline $\geq 25\%$ over 25 years
Glaucous Gull	Rare non-breeder
Iceland Gull	Rare non-breeder
Great Black-backed Gull	Non-breeding population decline $\geq 25\%$ over 25 years
Little Gull	SPEC status
Black Tern	SPEC status
Common Tern	Localised breeder
Common Swift	Breeding population decline $\geq 25\%$ over 25 years
Water Pipit	Rare non-breeder
Whinchat	Breeding population decline $\geq 25\%$ over 25 years
Northern Wheatear	SPEC status
Common Whitethroat	Breeding population decline $\geq 25\%$ over longer-term period
Pied Flycatcher	Breeding population decline $\geq 25\%$ over 25 years
Crested Tit	SPEC status
Short-toed Treecreeper	Rare breeder
Lapland Bunting	Rare non-breeder
<i>Species with improved status</i>	
Red to Amber	
Common Quail	Partial recovery from historical decline: $\geq 100\%$ increase in 25 years
Stone-curlew	Breeding range decline now $< 50\%$ over 25 years and longer-term period
Wood Lark	Breeding range decline now $< 50\%$ over 25 years and longer-term period
Scottish Crossbill	No longer qualifies as Globally Threatened
Bullfinch	Breeding population decline now $< 50\%$ over 25 years and longer-term period

**Table 5.** Changes to the Red, Amber and Green lists between BoCC2 and BoCC3. *continued*

Species	Reason for status change
<i>Species with improved status</i>	
Red to Amber	
Reed Bunting	Breeding population decline now <50% over 25 years and longer-term period
Amber to Green	
Mute Swan	No longer qualifies as a localised breeder
White-fronted Goose	No longer qualifies as a localised non-breeder
Long-tailed Duck	No longer qualifies as a localised non-breeder
Great Cormorant	No longer qualifies as an internationally important breeder
Peregrine Falcon	No longer SPEC
Water Rail	Breeding range decline not assessed
Common Stonechat	No longer SPEC
Goldcrest	Breeding population decline now <25% over 25 years and longer-term period

recovery from historical decline in this review, being one of six species to move from Red to Amber. Of the other five, the two widespread species (Reed Bunting *Emberiza schoeniclus* and Bullfinch *Pyrrhula pyrrhula*) did so because of population recovery to the extent that neither now shows a severe population decline (although this is only just so in the case of Bullfinch). Stone-curlew *Burhinus oedicnemus* and Wood Lark *Lullula arborea* both moved from Red to Amber because of recoveries in

range, while Scottish Crossbill *Loxia scotica* was moved to Amber because a recent survey (the first ever) has revealed that it is not as scarce as was previously thought and so should not qualify as Globally Threatened (Summers & Buckland in prep.). This is an example of reclassification due not to a change in status, but to an improvement in our knowledge. A full list of which species have moved between the Red, Amber and Green lists, and the reasons for these moves, is given in table 5.



**168.** The recovery in the range of the Stone-curlew *Burhinus oedicnemus*, which has resulted in the species moving from Red to Amber in the latest BoCC assessment, reflects the creation and management of suitable areas of semi-natural grassland, and the provision of suitable nesting plots within farmland. The latter is dependent on the continuation of funding support, without which the population would certainly decline (and contract in range) again. Although a major conservation success story, this is still a vulnerable species – if success makes it less of a priority, the withdrawal of resources may mean that hard-won gains are soon wiped out.

Chris Gomersall (rsb-images.com)

**Table 6.** Trends of Red- and Amber-listed species with declining populations or ranges.

Species	Season	Population trends			Data source <sup>1</sup>	Range trends		
		25-year trend	Longer trend	Longer trend		25-year trend	Longer trend	Data source <sup>1</sup>
Mallard	NB	-34	-36		WeBS, 1968/69–2005/06			
Common Pochard	NB	-38	-40		WeBS, 1968/69–2005/06			
Greater Scaup	NB	-28	-66		WeBS, 1968/69–2005/06			
Common Eider	NB	-28			WeBS, 1968/69–2005/06			
Common Scoter	B	-83	-84		RBBP, 1973–2006. Trend confirmed by species surveys in 1995 and 2007	-32		1988–91 atlas, 2007 survey
Red Grouse	B	-33	-44		GWCT Game Bag Census			
Black Grouse	B	-80			Surveys in 1991–92 and 2004			
Capercaillie	B							
Grey Partridge	B	-78	-88		Smoothed UK joint CBC-BBS, 1969–2006			
Little Grebe	B	-28	-33		Smoothed UK trend from WBS and BBS, 1974–2006			
Red-necked Grebe	NB	-30			WeBS summed site maxima 1995/96–2005/06			
Slavonian Grebe	B	-41	-27		RBBP, 1973–2006			
Fulmar	B	-25			Seabird censuses & SMP			
Manx Shearwater	B							
Shag	B	-45	-33		Seabird censuses & SMP			1968–72 atlas, Seabird 2000
Corn Crane	B		-54		1968–72 breeding bird atlas and annual RSPB monitoring			
Stone-curlew	B							
Ringed Plover	B	-37			WeBS, 1974/75–2005/06			
Northern Lapwing	B	-53	-45		Smoothed UK joint CBC-BBS, 1969–2006			
Temminck's Stint	B	-75	-69		RBBP, 1973–2006			
Purple Sandpiper	NB	-27			Non-estuarine surveys 1984/85 and 2007/08			
Dunlin	NB	-26	-51		WeBS, 1974/75–2005/06			
Ruff	B	-63	-69		RBBP, 1973–2006			
Ruff	NB		-36		WeBS, 1974/75–2005/06			
Whimbrel	B	Decline of at least 50%			Full surveys in mid 1980s and partial resurveys in late 2000s: see text for further details			
Eurasian Curlew	B	-31	-34		Smoothed England joint CBC-BBS, 1969–2006			
Common Sandpiper	B	-28			Smoothed UK WBS, 1974–2006			

Table 6. Trends of Red- and Amber-listed species with declining populations or ranges. *continued*

Species	Season	Population trends			Range trends		
		25-year trend	Longer trend	Data source <sup>1</sup>	25-year trend	Longer trend	Data source <sup>1</sup>
Common Redshank	B	-45	-47	Smoothed UK WBS, 1974–2006			
Arctic Skua	B	-56		SMP			
Herring Gull	B	-29	-63	Seabird censuses & SMP			
Herring Gull	NB	-53 to -60		Wintering gull surveys, 1983/84–2004/05			
Great Black-backed Gull	NB	-33 to -58		Wintering gull surveys, 1983/84–2004/05			
Black-headed Gull	NB	-33 to -41		Wintering gull surveys, 1983/84–2004/05			
Kittiwake	B	-36		Seabird censuses & SMP			
Little Tern	B						1968–72 atlas, Seabird 2000
Sandwich Tern	B						1968–72 atlas, Seabird 2000
Arctic Tern	B						1968–72 atlas, Seabird 2000
Roseate Tern	B	-83	-84	RBBP, 1973–2006			1968–72 atlas, Seabird 2000
Turtle Dove	B	-82	-86	Smoothed UK joint CBC-BBS, 1969–2006			
Common Cuckoo	B	-61	-60	Smoothed England joint CBC-BBS, 1969–2006			
European Nightjar	B						
Common Swift	B	-29		Smoothed UK BBS, 1994–2006			1968–72 atlas, 2004 survey
Wryneck	B	-78	-69	RBBP, 1973–2006			
Lesser Spotted Woodpecker	B	-85	-71	Smoothed UK joint CBC-BBS, 1969–2006			
Wood Lark	B						
Sky Lark	B	-47	-58	Smoothed UK joint CBC-BBS, 1969–2006			
House Martin	B	-46	-37	Smoothed UK anchored CBC-BBS, 1969–2006			
Tree Pipit	B	-70	-85	Smoothed UK anchored CBC-BBS, 1969–2006			
Meadow Pipit	B	-41	-39	Smoothed UK anchored CBC-BBS, 1969–2006			
Yellow Wagtail	B	-70	-72	Smoothed UK joint CBC-BBS, 1969–2006			
Grey Wagtail	B		-27	Smoothed UK WBS, 1974–2006			
Duncock	B		-30	Smoothed UK joint CBC-BBS, 1969–2006			
Common Nightingale	B	-49		Smoothed UK BBS, 1994–2006			
Black Redstart	B	-40	-32	RBBP, 1973–2006			
Whinchat	B	-37		Smoothed UK BBS, 1994–2006			
Ring Ouzel	B	-58		1988–91 breeding bird atlas and 1999 survey			
Fieldfare	B	-46	-66	RBBP, 1973–2006			
Song Thrush	B		-51	Smoothed UK joint CBC-BBS, 1969–2006			

**Table 6.** Trends of Red- and Amber-listed species with declining populations or ranges. *continued*

Species	Season	Population trends			Range trends		
		25-year trend	Longer trend	Data source <sup>1</sup>	25-year trend	Longer trend	Data source <sup>1</sup>
Redwing	B	-53	-53	RBBP, 1973–2006			
Mistle Thrush	B	-38	-45	Smoothed UK joint CBC-BBS, 1969–2006			
Grasshopper Warbler	B	-80	-91	Smoothed UK joint CBC-BBS, 1969–2006			
Savi's Warbler	B	-78	-53	RBBP, 1973–2006			
Aquatic Warbler	NB	-68		Scarce Migrant report			
Marsh Warbler	B	-83	-86	RBBP, 1973–2006			
Common Whitethroat	B	-62	-28	Smoothed UK joint CBC-BBS, 1969–2006			
Wood Warbler	B	-43	-45	Smoothed UK BBS, 1994–2006			
Willow Warbler	B	-81	-85	Smoothed UK anchored CBC-BBS, 1969–2006			
Spotted Flycatcher	B	-49	-85	Smoothed UK joint CBC-BBS, 1969–2006			
Pied Flycatcher	B			Smoothed UK BBS, 1994–2006			
Bearded Tit	B				-27		1988–91 atlas, 2002 survey
Willow Tit	B	-82	-88	Smoothed UK joint CBC-BBS, 1969–2006			
Marsh Tit	B	-38	-66	Smoothed UK joint CBC-BBS, 1969–2006			
Golden Oriole	B	-67	-32	RBBP, 1973–2006			
Red-backed Shrike	B	-95	-96	RBBP, 1973–2006			
Common Starling	B	-69	-75	Smoothed UK anchored CBC-BBS, 1969–2006			
House Sparrow	B	-56	-67	Smoothed UK anchored CBC-BBS, 1969–2006			
Tree Sparrow	B	-87	-93	Smoothed UK anchored CBC-BBS, 1969–2006			
European Serin	B	-45		RBBP, 1973–2006			
Linnets	B	-37	-59	Smoothed UK anchored CBC-BBS, 1969–2006			
Twite	B	-56		Smoothed UK BBS, 1994–2006			
Lesser Redpoll	B	-87	-88	Smoothed UK anchored CBC-BBS, 1969–2006			
Bullfinch	B	-28	-49	Smoothed UK joint CBC-BBS, 1969–2006			
Hawfinch	B	-74		RSPB woodland surveys between 1984/85 and 2003/04			
Yellowhammer	B	-53	-54	Smoothed UK joint CBC-BBS, 1969–2006			
Chil Bunting	B						
Reed Bunting	B		-30	Smoothed UK joint CBC-BBS, 1969–2006			
Corn Bunting	B	-84	-88	Smoothed UK joint CBC-BBS, 1969–2006			
					-46	-89	1968–72 & 1988–91 atlases, 2003 survey

<sup>1</sup> Data sources and abbreviations as described previously: B=breeding, NB=non-breeding.



Richard Chandler

169. As breeding birds in the UK, Red-necked Phalaropes *Phalaropus lobatus* are confined to the Northern Isles and the Outer Hebrides. Research has suggested that, by 2080, the breeding range of the Red-necked Phalarope may lie entirely to the north and east of the UK as the climate warms.



Richard Chandler

170. Dark-bellied Brent Geese *Branta bernicla bernicla* are considered Globally Threatened at the race-level owing to recent population declines. The UK is internationally important for its wintering population of this distinctive race, which was Red-listed in this review (table 11). The species as a whole was Amber-listed, given that the Pale-bellied Brent Geese *B. b. hrota*, which also winter in the UK in important numbers, are considered less at risk and have increased markedly in recent decades.

**Table 7.** Rare breeding and non-breeding species, and localised species.

Species	Population estimate	Data source for UK estimate	Percentage of UK population in ten best sites
	breeding populations (see footnote for units)		
Whooper Swan	5.2 <sup>1</sup>	RBBP 2002–2006	
Pintail	26 <sup>1</sup>	RBBP 2002–2006	
Garganey	69 <sup>1</sup>	RBBP 2002–2006	
Common Scoter	52 <sup>4</sup>	2007 national survey	
Common Goldeneye	156.2 <sup>1</sup>	RBBP 2002–2006	
Black-throated Diver	217 <sup>2</sup>	2006 national survey	
Slavonian Grebe	45.2 <sup>1</sup>	RBBP 2002–2006	
Black-necked Grebe	61.2 <sup>1</sup>	RBBP 2002–2006	
Fulmar			50–60 <sup>IBA</sup>
Manx Shearwater			90–100 <sup>IBA/SPA</sup>
European Storm-petrel			90–100 <sup>IBA/SPA</sup>
Leach's Storm-petrel			90–100 <sup>IBA/SPA</sup>
Northern Gannet			90–100 <sup>IBA/SPA</sup>
Shag			50–60 <sup>SPA</sup>
Eurasian Bittern	54.4 <sup>3</sup>	RSPB monitoring 2004–08	
Little Egret			70–80 <sup>SPA</sup>
Honey-buzzard	69 <sup>1</sup>	2000 national survey	
White-tailed Eagle	32 <sup>4</sup>	RSPB monitoring 2004–08	
Marsh Harrier			50–60 <sup>SPA</sup>
Montagu's Harrier	12.8 <sup>1</sup>	RBBP 2002–2006	
Osprey	173.8 <sup>1</sup>	RBBP 2002–2006	
Spotted Crake	73 <sup>5</sup>	1999 national survey	
Common Crane	5.8 <sup>1</sup>	RBBP 2002–2006	
Avocet			90–100 <sup>IBA</sup>
Stone-curlew			70–80 <sup>IBA/SPA</sup>
Dotterel			70–80 <sup>SPA</sup>
Temminck's Stint	1 <sup>1</sup>	RBBP 2002–2006	
Purple Sandpiper	1.6 <sup>1</sup>	RBBP 2002–2006	
Dunlin			70–80 <sup>IBA/SPA</sup>
Ruff	5 <sup>6</sup>	RBBP 2002–2006	
Black-tailed Godwit	61 <sup>1</sup>	RBBP 2002–2006	
Whimbrel	<300 <sup>4</sup>	Expert opinion	
Green Sandpiper	2.4 <sup>1</sup>	RBBP 2002–2006	
Wood Sandpiper	12.8 <sup>1</sup>	RBBP 2002–2006	
Red-necked Phalarope	32 <sup>7</sup>	RBBP 2002–2006	
Great Skua			60–70 <sup>SPA</sup>
Mediterranean Gull	244.6 <sup>1</sup>	RBBP 2002–2006	
Lesser Black-backed Gull			70–80 <sup>IBA/SPA</sup>
Yellow-legged Gull	2.2 <sup>1</sup>	RBBP 2002–2006	
Kittiwake			70–80 <sup>SPA</sup>
Little Tern			60–70 <sup>IBA/SPA</sup>
Sandwich Tern			90–100 <sup>IBA/SPA</sup>
Common Tern			60–70 <sup>IBA</sup>
Roseate Tern	95.2 <sup>4</sup>	RBBP 2002–2006	
Common Guillemot			50–60 <sup>IBA</sup>
Razorbill			60–70 <sup>IBA</sup>
Puffin			80–90 <sup>IBA/SPA</sup>
European Nightjar			60–70 <sup>SPA</sup>
Wryneck	2.8 <sup>1</sup>	RBBP 2002–2006	
Wood Lark			60–70 <sup>SPA</sup>
Black Redstart	54.6 <sup>1</sup>	RBBP 2002–2006	
Fieldfare	2.6 <sup>1</sup>	RBBP 2002–2006	

**Table 7.** Rare breeding and non-breeding species, and localised species. *continued*

Species	Population estimate	Data source for UK estimate	Percentage of UK population in ten best sites
	breeding populations (see footnote for units)		
Redwing	14.2 <sup>1</sup>	RBBP 2002–2006	
Savi's Warbler	5.6 <sup>1</sup>	RBBP 2002–2006	
Marsh Warbler	10.8 <sup>1</sup>	RBBP 2002–2006	
Dartford Warbler			80–90 <sup>SPA</sup>
Firecrest	246.6 <sup>1</sup>	RBBP 2002–2006	
Bearded Tit			60–70 <sup>SPA</sup>
Short-toed Treecreeper	<300 <sup>4</sup>	Expert opinion	
Golden Oriole	8.6 <sup>1</sup>	RBBP 2002–2006	
Red-backed Shrike	2.2 <sup>1</sup>	RBBP 2002–2006	
European Serin	1.2 <sup>8</sup>	RBBP 2002–2006	
Parrot Crossbill	12 <sup>1</sup>	RBBP 2002–2006	
Snow Bunting	19 <sup>1</sup>	RBBP 2002–2006	
	non-breeding populations (individuals)		
Bewick's Swan			90–100 <sup>IBA/SPA</sup>
Whooper Swan			90–100 <sup>IBA/SPA</sup>
Bean Goose	500	WeBS	
Pink-footed Goose			90–100 <sup>IBA/SPA</sup>
Greylag Goose			80–90 <sup>SPA</sup>
Barnacle Goose			70–80 <sup>SPA</sup>
Brent Goose			90–100 <sup>IBA/SPA</sup>
Common Shelduck			70–80 <sup>IBA/SPA</sup>
Eurasian Wigeon			50–60 <sup>IBA/SPA</sup>
Pintail			90–100 <sup>IBA/SPA</sup>
Greater Scaup			90–100 <sup>IBA</sup>
Common Scoter			90–100 <sup>IBA</sup>
Velvet Scoter			90–100 <sup>IBA</sup>
Smew	390	WeBS	
Black-throated Diver	700	WeBS	
Red-necked Grebe	200	WeBS	
Slavonian Grebe	775	WeBS	
Black-necked Grebe	120	WeBS	
Eurasian Bittern	<900	Expert opinion	
Eurasian Spoonbill	<900	Expert opinion	
Marsh Harrier	<900	Expert opinion	
Oystercatcher			60–70 <sup>IBA/SPA</sup>
Avocet			90–100 <sup>IBA/SPA</sup>
Grey Plover			80–90 <sup>IBA/SPA</sup>
Red Knot			90–100 <sup>IBA/SPA</sup>
Dunlin			60–70 <sup>SPA</sup>
Black-tailed Godwit			90–100 <sup>IBA</sup>
Bar-tailed Godwit			80–90 <sup>IBA</sup>
Spotted Redshank	<900		
Wood Sandpiper	<900	Expert opinion	
Glaucous Gull	<900	Expert opinion	
Iceland Gull	<900	Expert opinion	
Shore Lark	<900	Expert opinion	
Water Pipit	<900	Expert opinion	
Aquatic Warbler	<900	Expert opinion	
Lapland Bunting	<900	Expert opinion	

Units for breeding population estimates: <sup>1</sup> maximum total pairs; <sup>2</sup> summering territories; <sup>3</sup> booming males; <sup>4</sup> breeding pairs; <sup>5</sup> singing males; <sup>6</sup> females at leks; <sup>7</sup> males; <sup>8</sup> maximum total pairs in UK only.

**Table 8.** Species occurring in internationally important numbers in the UK.

Species	Percentage of the European breeding population	Percentage of the European or flyway non-breeding population
Bewick's Swan		40–50
Pink-footed Goose		80–90
Greylag Goose		30–40
Brent Goose		50–60
Common Shelduck		20–30
Eurasian Wigeon		20–30
Gadwall		20–30
Eurasian Teal		30–40
Pintail		40–50
Shoveler		30–40
Common Pochard		20–30
Great Northern Diver		60–70
Manx Shearwater	80–90	
Leach's Storm-petrel	20–30	
Northern Gannet	70–80	
Shag	30–40	
Oystercatcher	30–40	30–40
Ringed Plover		40–50
European Golden Plover		20–30
Grey Plover		20–30
Northern Lapwing		20–30
Red Knot		70–80
Dunlin		40–50
Black-tailed Godwit		30–40
Bar-tailed Godwit		50–60
Eurasian Curlew	30–40	30–40
Common Redshank		50–60
Turnstone		30–40
Great Skua	60–70	
Common Gull		30–40
Lesser Black-backed Gull	30–40	
Herring Gull		20–30
Black-headed Gull		30–40
Common Guillemot	40–50	
Stock Dove	40–50	
Scottish Crossbill	100	

### *The influence of changes in the BoCC assessment criteria*

As outlined in the methods section, there were four changes in the assessment process since *BoCC2*. Three of these were relatively minor: the change in definition of 'regular breeder'; the Amber-listing of non-breeding species due to SPEC-listing; and the use of a rarity criterion for non-breeders. One change, however, was more significant: the adoption of a longer-term period for assessing breeding and non-breeding

population trends and breeding range change.

Table 9 lists the 27 species that would have received a different *BoCC3* listing if this review had been conducted using *BoCC2* assessment criteria. Three species (Black-winged Stilt *Himantopus himantopus*, Pectoral Sandpiper *Calidris melanotos* and European Bee-eater *Merops apiaster*) were not assessed by the *BoCC3* review as they were not considered regular breeders, but would have been Amber-listed using *BoCC2* criteria. Two Green-listed species, Brambling *Fringilla montifringilla* and Common Redpoll *Carduelis flammæa*, were assessed only as non-breeders by *BoCC3* but would have been classified as breeders by *BoCC2* criteria, and Amber-listed in consequence.

Of the remaining 22 species, seven were Amber-listed (instead of Green) because of changes in how non-breeding species were considered (the use of a rare non-breeder criterion and recognition of SPEC status for such species), but the other 15 species (11 of which were Red-listed) were given a higher concern listing because of the additional longer-term period used for measuring population (eight Red-listed species) and range (three Red-listed species) trends. Most notably, Song Thrush, which has shown a moderate recovery in recent years, would have been moved to the Green list if only the 25-year period had been used to measure population trends, but as the recovery has yet to bring it to 50% of 1969 levels – hence the longer-term decline still exceeds 50% – it remains on the Red list. Thus while we believe that the modified approach is appropriate, given that it recognises the failure of species to recover from declines in recent decades, the adoption of the new longer-term period has prevented seven species (Capercaillie, European Nightjar, Sky Lark, Song Thrush, Marsh Tit, Linnet and Cirl Bunting) from being moved from Red to Amber or even Green, and has been responsible for a further four species moving from Amber to Red (Greater Scaup *Aythya marila*, Dunlin, Fieldfare *Turdus pilaris* and Redwing *T. iliacus*).

### *Race-level assessment*

New *BoCC* assessments were made for 226 races of 173 species (the remaining 73 regularly occurring species are monotypic). Of those 173 species, 130 have only one race that occurs regularly in the UK. The remaining 43 species have two or more regularly occurring races (up to six in the case of the Wren) and are detailed in

**Table 9.** Species for which the BoCC3 listing would be different if the BoCC2 criteria had been used unchanged.

Species	Change in listing due to new criteria <sup>1</sup>	Reason for listing change
Greater Scaup	A → R	Non-breeding population decline over long term
Smew	G → A	SPEC status of UK non-breeder, and rare non-breeder
Capercaillie	A → R	Breeding range decline over long term
Black-winged Stilt <i>Himantopus himantopus</i>	A → NA	Not assessed as regular breeder (would be rare breeder if assessed)
Pectoral Sandpiper <i>Calidris melanotos</i>	A → NA	Not assessed as regular breeder (would be rare breeder if assessed)
Dunlin	A → R	Non-breeding population decline over long term
Jack Snipe	G → A	SPEC status of UK non-breeder
Glaucous Gull	G → A	Rare non-breeder
Iceland Gull	G → A	Rare non-breeder
Little Gull	G → A	SPEC status of UK non-breeder
European Nightjar	A → R	Breeding range decline over long term
European Bee-eater <i>Merops apiaster</i>	A → NA	Not assessed as regular breeder (would be rare breeder if assessed)
Sky Lark	A → R	Breeding population decline over long term
Water Pipit	G → A	Rare non-breeder
Grey Wagtail	G → A	Breeding population decline over long term
Duncock	G → A	Breeding population decline over long term
Fieldfare	A → R	Breeding population decline over long term
Song Thrush	G → R	Breeding population decline over long term
Redwing	A → R	Breeding population decline over long term
Common Whitethroat	G → A	Breeding population decline over long term
Marsh Tit	A → R	Breeding population decline over long term
Brambling	A → G	Not assessed as regular breeder (would be rare breeder if assessed)
Linnet	A → R	Breeding population decline over long term
Common Redpoll	A → G	Not assessed as regular breeder (would be rare breeder if assessed)
Lapland Bunting	G → A	Rare non-breeder
Cirl Bunting	A → R	Breeding range decline over long term
Reed Bunting	G → A	Breeding population decline over long term

<sup>1</sup> BoCC assessments: NA=Not assessed, R=Red, A=Amber, G=Green.

table 10, with those races that are endemic or near-endemic indicated. There are another ten endemic or near-endemic races not listed as they are the only races of their species occurring in the UK regularly: Red Grouse *L. l. scotica*, Great Spotted Woodpecker *D. m. anglicus*, Lesser Spotted Woodpecker *D. m. comminutus*, Long-tailed Tit *Aegithalos caudatus rosaceus*, Crested Tit *Lophophanes cristatus scoticus*, Willow Tit *P. m. kleinschmidti*, Eurasian Treecreeper *Certhia familiaris britannica*, Red-billed Chough *Pyrrhocorax pyrrhocorax pyrrhocorax*, Goldfinch *Carduelis carduelis britannica* and Bullfinch *P. p. pileata*. All ten are at least Amber-listed on account of the UK's internationally important populations.

Of the 226 races assessed, 48 were Red-listed, 117 Amber-listed and the remaining 61 Green-listed; full lists and qualifying criteria are given in

tables 11–13. The proportions of races placed on each of the three lists are extremely similar to those for the species assessment: 21.2% of races were Red-listed (21.1% of species were), 51.7% Amber-listed (51.4%) and 27.0% Green-listed (27.5%).

The majority of race-level assessments concord with those for the parent species: there was agreement in 177 instances (78.3%). Where there was disagreement (table 14), this resulted in races having a worse BoCC status than their parent species in 30 cases (including four Red-listed races of Green-listed species), and a better status in 19 (five Green-listed races of Red-listed species). Endemism was influential in changing BoCC status for races; the endemic or near-endemic status of 18 races of species of low conservation concern resulted in their Amber-listing.

**Table 10.** Polytypic species with two or more races occurring in the UK regularly.

Species and relevant race <sup>1</sup>	Notes on range and occurrence within UK
'Taiga Bean Goose' <i>A. f. fabalis</i>	Regular winter immigrant populations in central Scotland & Norfolk
'Tundra Bean Goose' <i>A. f. rossicus</i>	Scattered winter immigrants
'European White-fronted Goose' <i>A. a. albifrons</i>	Winter immigrants in southern England
'Greenland White-fronted Goose' <i>A. a. flavirostris</i>	Winter immigrants in Scotland, Wales & Northern Ireland
'Dark-bellied Brent Goose' <i>B. b. bernicla</i>	Winter immigrants in southern England, south Wales
'Pale-bellied Brent Goose' <i>B. b. hrota</i>	Winter immigrants in northeast England, north Wales & Ireland
Common Eider <i>S. m. mollissima</i>	All UK breeding population except for Northern Isles
Common Eider <i>S. m. faeroensis</i>	Northern Isles breeding population
Great Cormorant <i>P. c. carbo</i>	Coastal & some inland breeders
Great Cormorant <i>P. c. sinensis</i>	Recently colonised inland breeders
Merlin <i>F. c. aesalon</i>	All UK breeding population
Merlin <i>F. c. subaeson</i>	Some of wintering population
Ringed Plover <i>C. h. hiaticula</i>	All UK breeding population
Ringed Plover <i>C. h. tundrae</i>	Passage only
Dunlin <i>C. a. alpina</i>	All UK wintering population
Dunlin <i>C. a. arctica</i>	Passage only
Dunlin <i>C. a. schinzii</i>	All UK breeding population
Common Snipe <i>G. g. gallinago</i>	All UK breeding population except possibly Northern Isles
Common Snipe <i>G. g. faeroeensis</i>	Some of UK wintering population, possibly breeds on Northern Isles
Black-tailed Godwit <i>L. l. limosa</i>	Nearly all of UK breeding population
Black-tailed Godwit <i>L. l. islandica</i>	Occasional breeders in north Scotland, all UK wintering population
Common Redshank <i>T. t. totanus</i>	All UK breeding population except possibly Northern Isles, some of UK wintering population
Common Redshank <i>T. t. robusta</i>	Some of UK wintering population, possibly breeds on Northern Isles
Lesser Black-backed Gull <i>L. f. graellsii</i>	All UK breeding population
Lesser Black-backed Gull <i>L. f. intermedius</i>	Some winter immigrants and passage migrants
Herring Gull <i>L. a. argentatus</i>	Some winter immigrants
Herring Gull <i>L. a. argentus</i>	All UK breeding population
Common Guillemot <i>U. a. aalge</i>	Scottish breeding population
Common Guillemot <i>U. a. albionis</i>	England, Wales & Northern Ireland breeding population
Razorbill <i>A. t. torda</i>	Some winter immigrants
Razorbill <i>A. t. islandica</i>	All UK breeding population
Sky Lark <i>A. a. arvensis</i>	England (possibly not northwest England) & Wales breeding population
Sky Lark <sup>c</sup> <i>A. a. scotica</i>	(Possibly northwest England), Scotland & Northern Ireland breeding population
Meadow Pipit <i>A. p. pratensis</i>	England, Wales & southeast Scotland breeding population
Meadow Pipit <sup>c</sup> <i>A. p. whistleri</i>	West Scotland & Northern Ireland breeding population
Rock Pipit <i>A. p. petrosus</i>	All UK breeding population
Rock Pipit <i>A. p. littoralis</i>	Some winter immigrants
'Blue-headed Wagtail' <i>M. f. flava</i>	Passage, occasional breeding
Yellow Wagtail <sup>c</sup> <i>M. f. flavissima</i>	All UK breeding population
'Grey-headed Wagtail' <i>M. f. thunbergi</i>	Passage only
'White Wagtail' <i>M. a. alba</i>	Passage only
Pied Wagtail <i>M. a. yarrellii</i>	All UK breeding population
Dipper <sup>c</sup> <i>C. c. gularis</i>	Scotland (but not in west), England & Wales breeding population
Dipper <sup>c</sup> <i>C. c. hibernicus</i>	Outer Hebrides & west coast of Scotland breeding population
Wren <i>T. t. troglodytes</i>	Central & southern England breeding population
Wren <sup>c</sup> <i>T. t. indigenus</i>	All UK except central & southern England & Scottish Islands, resident
'Fair Isle Wren' <sup>c</sup> <i>T. t. fridariensis</i>	Fair Isle only breeding population
'Hebridean Wren' <sup>c</sup> <i>T. t. hebridensis</i>	Outer Hebrides breeding population

**Table 10.** Polytropic species with two or more races occurring in the UK regularly. *continued*

Species and relevant race <sup>1</sup>	Notes on range and occurrence within UK
'Shetland Wren' <sup>c</sup> <i>T. t. zetlandicus</i>	Shetland breeding population
'St Kilda Wren' <sup>c</sup> <i>T. t. hirtensis</i>	St Kilda only breeding population
Dunnock <i>P. m. modularis</i>	Some winter immigrants
Dunnock <sup>c</sup> <i>P. m. hebridimm</i>	Hebrides & Northern Ireland breeding population
Dunnock <sup>c</sup> <i>P. m. occidentalis</i>	England, Wales & eastern Scotland breeding population
Robin <i>E. r. rubecula</i>	Southeast England breeding population
Robin <sup>c</sup> <i>E. r. melophilus</i>	All UK breeding population except southeast England
Northern Wheatear <i>O. o. oenanthe</i>	All UK breeding population
'Greenland Wheatear' <i>O. o. leucorhoa</i>	Passage only
Song Thrush <i>T. p. philomelos</i>	Winter immigrants
'Hebridean Song Thrush' <sup>c</sup> <i>T. p. hebridensis</i>	Outer Hebrides only
Song Thrush <sup>c</sup> <i>T. p. clarkei</i>	All UK breeding population except Outer Hebrides
Redwing <i>T. i. coburni</i>	Some winter immigrants
Redwing <i>T. i. iliacus</i>	All UK breeding population, winter immigrants
Willow Warbler <i>P. t. trochilus</i>	All UK breeding population
Willow Warbler <i>P. t. acredula</i>	Passage only
Blue Tit <i>C. c. caeruleus</i>	Some winter immigrants
Blue Tit <sup>c</sup> <i>C. c. obscurus</i>	All UK breeding population
Great Tit <i>P. m. major</i>	Southeast England breeding population
Great Tit <sup>c</sup> <i>P. m. newtoni</i>	All UK breeding population except southeast England
Coal Tit <i>P. a. ater</i>	Some winter immigrants
Coal Tit <i>P. a. hibernicus</i>	Northern Ireland breeding population
Coal Tit <sup>c</sup> <i>P. a. britannicus</i>	All UK breeding population (except parts of Northern Ireland)
Marsh Tit <i>P. p. palustris</i>	Possibly northern England and southern Scotland breeding population
Marsh Tit <sup>c</sup> <i>P. p. dresseri</i>	All UK breeding population except possibly northern England and southern Scotland
Eurasian Jay <i>G. g. glandarius</i>	Some winter immigrants
Eurasian Jay <sup>c</sup> <i>G. g. hibernicus</i>	Northern Ireland breeding population
Eurasian Jay <sup>c</sup> <i>G. g. rufitergum</i>	All UK breeding population except Northern Ireland
Western Jackdaw <i>C. m. monedula</i>	Some winter immigrants
Western Jackdaw <i>C. m. spermologus</i>	All UK breeding population
Common Starling <sup>c</sup> <i>S. v. zetlandicus</i>	Shetland & Outer Hebrides
Common Starling <i>S. v. vulgaris</i>	All UK breeding population except Shetland & Outer Hebrides
Common Chaffinch <i>F. c. coelebs</i>	Winter immigrants
Common Chaffinch <sup>c</sup> <i>F. c. gengleri</i>	All UK breeding population
Greenfinch <i>C. c. chloris</i>	Northern Scotland and winter immigrants
Greenfinch <sup>c</sup> <i>C. c. harrisoni</i>	Possibly all UK breeding population except northern Scotland
Linnet <i>C. c. cannabina</i>	All UK breeding population except Scotland
Linnet <sup>c</sup> <i>C. c. autochthona</i>	Scotland
Twite <sup>c</sup> <i>C. f. bensonorum</i>	Possibly Outer Hebrides
Twite <i>C. f. pipilans</i>	All UK breeding population except possibly Outer Hebrides
Lapland Bunting <i>C. l. lapponicus</i>	Some winter immigrants
Lapland Bunting <i>C. l. subcalcaratus</i>	Some winter immigrants
Snow Bunting <i>P. n. nivalis</i>	Some of UK breeding population, winter immigrants
Snow Bunting <i>P. n. insulae</i>	Some of UK breeding population, winter immigrants
Yellowhammer <i>E. c. citrinella</i>	England breeding population
Yellowhammer <sup>c</sup> <i>E. c. caliginosa</i>	Wales, Scotland and Northern Ireland breeding population
Corn Bunting <i>E. c. calandra</i>	All UK breeding population except possibly Outer Hebrides
Corn Bunting <sup>c</sup> <i>E. c. clanceyi</i>	Possibly Outer Hebrides

<sup>1</sup> English names given are as for species. In instances where a well-known English name exists for the race, this is given in inverted commas.

<sup>c</sup> Endemic or near-endemic race, including British & Irish endemics.

Table 11. Red-listed races and the criteria under which they qualify.

Species and relevant race <sup>a</sup>	Species-level BoCC3 result <sup>b</sup>	Red-list criteria <sup>c</sup>								Additional Amber-list criteria under which species qualifies <sup>d</sup>														
		IUCN	HD	BDp <sup>1</sup>	BDp <sup>2</sup>	WDp <sup>1</sup>	WDp <sup>2</sup>	BDr <sup>1</sup>	BDr <sup>2</sup>	SPEC	HDrec	BDMp <sup>1</sup>	BDMp <sup>2</sup>	WDMp <sup>1</sup>	WDMp <sup>2</sup>	BDMr <sup>1</sup>	BDMr <sup>2</sup>	BR	WR	BL	WL	BI	WI	
'Taiga Bean Goose' <i>A. f. fabalis</i>	A	•								•									•					
'European White-fronted Goose' <i>A. a. albifrons</i>	G					•	•															•		
'Greenland White-fronted Goose' <i>A. a. flavirostris</i>	G	•								•												•		•
'Dark-bellied Brent Goose' <i>B. b. bernicla</i>	A	•								•												•		•
Common Eider <i>S. m. mollissima</i>	A	•								•	•													
Black Grouse <i>T. t. britannicus</i>	R	•	•	•						•													•	
Capercaillie <i>T. u. urogallus</i>	R								•						•									
Grey Partridge <i>P. p. perdix</i>	R	•		•	•					•														
Eurasian Bittern <i>B. s. stellaris</i>	R		•							•								•	•					
Hen Harrier <i>C. c. cyaneus</i>	R		•							•														
Stone-curlew <i>B. o. oediconemus</i>	A	•								•					•						•			
Dunlin <i>C. a. alpina</i>	R								•	•			•									•		•
Black-tailed Godwit <i>L. l. limosa</i>	R		•							•								•						
Whimbrel <i>N. p. phaeopus</i>	R			•						•								•						
Herring Gull <i>L. a. argentus</i>	R	•			•	•				•	•		•										•	
Roseate Tern <i>S. d. dongallii</i>	R			•	•				•	•								•						
Turtle Dove <i>S. t. turtur</i>	R			•	•					•														
Common Cuckoo <i>C. c. canorus</i>	R			•	•					•														
European Nightjar <i>C. e. europaeus</i>	R								•	•											•			
Wryneck <i>J. t. torquilla</i>	R		•	•	•					•								•						
Lesser Spotted Woodpecker <i>D. m. comminutus</i>	R	•		•	•					•													•	
Sky Lark <i>A. a. arvensis</i>	R				•					•	•													
Tree Pipit <i>A. t. trivialis</i>	R			•	•					•														
Yellow Wagtail <i>M. f. flavissima</i>	R	•		•	•					•													•	
'Fair Isle Wren' <i>T. t. fridariensis</i>	G	•								•								•				•		
'St Kilda Wren' <i>T. t. hirtensis</i>	G	•								•								•				•		
Ring Ouzel <i>T. t. torquatus</i>	R			•						•														
'Hebridean Song Thrush' <i>T. p. hebridensis</i>	R	•								•													•	
Song Thrush <i>T. p. clarkei</i>	R				•					•													•	
Redwing <i>T. i. iliacus</i>	R				•					•								•						
Grasshopper Warbler <i>L. n. naevia</i>	R			•	•					•														
Savi's Warbler <i>L. l. luscinioides</i>	R			•	•					•								•						
Spotted Flycatcher <i>M. s. striata</i>	R			•	•					•														
Willow Tit <i>P. m. kleinschmidti</i>	R	•		•	•					•													•	
Marsh Tit <i>P. p. palustris</i>	R				•					•	•													
Marsh Tit <i>P. p. dresseri</i>	R				•					•	•												•	
Golden Oriole <i>O. o. oriolus</i>	R			•						•		•						•						
Red-backed Shrike <i>L. c. collurio</i>	R		•	•	•					•								•						
Common Starling <i>S. v. vulgaris</i>	R			•	•					•														
House Sparrow <i>P. d. domesticus</i>	R			•	•					•														
Tree Sparrow <i>P. m. montanus</i>	R			•	•					•														

**Table 11.** Red-listed races and the criteria under which they qualify. *continued*

Species and relevant race <sup>a</sup>	Species-level BoCC3 result <sup>b</sup>	Red-list criteria <sup>c</sup>								Additional Amber-list criteria under which species qualifies <sup>d</sup>														
		IUCN	HD	BDp <sup>1</sup>	BDp <sup>2</sup>	WDp <sup>1</sup>	WDp <sup>2</sup>	BDr <sup>1</sup>	BDr <sup>2</sup>	SPEC	HDrec	BDMp <sup>1</sup>	BDMp <sup>2</sup>	WDMp <sup>1</sup>	WDMp <sup>2</sup>	BDMr <sup>1</sup>	BDMr <sup>2</sup>	BR	WR	BL	WL	BI	WI	
Linnet <i>C. c. canabina</i>	R				•					•		•												
Twite <i>C. f. pipilans</i>	R		•	•																				
Hawfinch <i>C. c. coccothraustes</i>	R			•																				
Yellowhammer <i>E. c. citrinella</i>	R			•	•																			
Yellowhammer <i>E. c. caliginosa</i>	R			•	•					•														•
Corn Bunting <i>E. c. calandra</i>	R		•	•	•					•														
Corn Bunting <i>E. c. clanceyi</i>	R	•	•	•	•					•								•						•

<sup>a</sup> English names given are as for species. In instances where a well-known English name exists for the race, this is given in inverted commas.

<sup>b</sup> BoCC3 assessments: NA=Not assessed, R=Red, A=Amber, G=Green.

<sup>c</sup> Red-list criteria. IUCN: Globally Threatened: 'pseudo-assessment' for BoCC3 purposes only. HD: Historical decline in breeding population. BDp<sup>1/2</sup>: Severe breeding population decline over 25 years/ longer term. WDp<sup>1/2</sup>: Severe non-breeding population decline over 25 years/longer term. BDr<sup>1/2</sup>: Severe breeding range decline over 25 years/longer term.

<sup>d</sup> Amber-list criteria. SPEC: Species of European Conservation Concern: 'pseudo-assessment' for BoCC3 purposes only. HDrec: Historical decline – recovery. BDMp<sup>1/2</sup>: Moderate breeding population decline over 25 years/ longer term. WDMp<sup>1/2</sup>: Moderate non-breeding population decline over 25 years/longer term. BDMr<sup>1/2</sup>: Moderate breeding range decline over 25 years/longer term. BR/WR: Breeding/non-breeding rarity. BL/WL: Breeding/non-breeding localisation. BI/WI: Breeding/non-breeding international importance.

This table lists Red-listed races of polytypic species only: it does not include monotypic species, e.g. Corn Crane.



Richard Chandler

**171.** Yellow Wagtail *Motacilla flava* is among 18 newly Red-listed species, and one of five of the 18 which is also a long-distance Afro-Palaearctic migrant. The race which breeds regularly in the UK, *M. f. flavissima* (shown here), is distinctive, and is a Red-listed race in terms of its breeding population (table 11); other races, which are regular passage migrants here (Blue-headed *M. f. flava* and Grey-headed Wagtail *M. f. thunbergi*), are Amber-listed.

**Table 12.** Amber-listed races and the criteria under which they qualify.

Species and relevant race <sup>a</sup>	Species-level BoCC3 result <sup>b</sup>	Amber-list criteria <sup>c</sup>													
		SPEC	HDrec	BDMp <sup>1</sup>	BDMp <sup>2</sup>	WDMp <sup>1</sup>	WDMp <sup>2</sup>	BDMr <sup>1</sup>	BDMr <sup>2</sup>	BR	WR	BL	WL	BI	WI
Bewick's Swan <i>C. c. bewickii</i>	A	•											•		•
'Tundra Bean Goose' <i>A. f. rossicus</i>	A												•		
Greylag Goose <i>A. a. anser</i>	A												•		•
'Pale-bellied Brent Goose' <i>B. b. hrota</i>	A												•		•
Eurasian Teal <i>A. c. crecca</i>	A														•
Mallard <i>A. p. platyrhynchos</i>	A					•	•								
Pintail <i>A. a. acuta</i>	A	•											•		•
Common Eider <i>S. m. faeroensis</i>	A	•		•	•										•
Common Goldeneye <i>B. c. clangula</i>	A												•		
Red Grouse <i>L. l. scotica</i>	A	•		•	•										•
Ptarmigan <i>L. m. millaisi</i>	G	•													•
Common Quail <i>C. c. coturnix</i>	A	•	•												
Black-throated Diver <i>G. a. arctica</i>	A	•											•	•	
Little Grebe <i>T. r. ruficollis</i>	A			•	•										
Red-necked Grebe <i>P. g. griseogena</i>	A					•							•		
Black-necked Grebe <i>P. n. nigricollis</i>	A												•	•	
Fulmar <i>F. g. glacialis</i>	A			•									•		
Leach's Storm-petrel <i>O. l. leucorhoa</i>	A	•											•		•
Great Cormorant <i>P. c. carbo</i>	G														•
Great Cormorant <i>P. c. sinensis</i>	G												•		
Shag <i>P. a. aristotelis</i>	A			•	•								•		•
Little Egret <i>E. g. garzetta</i>	A												•		
Eurasian Spoonbill <i>P. l. leucorodia</i>	A	•											•		
Red Kite <i>M. m. milvus</i>	A	•													
Marsh Harrier <i>C. a. aeruginosus</i>	A												•	•	
Golden Eagle <i>A. c. chrysaetos</i>	A	•													
Osprey <i>P. h. haliaetus</i>	A	•													•
Common Kestrel <i>F. t. tinnunculus</i>	A	•													
Merlin <i>F. c. aesalon</i>	A		•												
Merlin <i>F. c. subaeson</i>	A	•													•
Peregrine Falcon <i>F. p. peregrinus</i>	G	•													•
Oystercatcher <i>H. o. ostralegus</i>	A													•	•
Ringed Plover <i>C. h. hiaticula</i>	A			•											•
Red Knot <i>C. c. islandica</i>	A	•													•
Dunlin <i>C. a. schinzii</i>	R												•		
Common Snipe <i>G. g. gallinago</i>	A	•													
Common Snipe <i>G. g. faeroensis</i>	A														•
Black-tailed Godwit <i>L. l. islandica</i>	R												•		•
Bar-tailed Godwit <i>L. l. lapponica</i>	A												•		•
Eurasian Curlew <i>N. a. arqata</i>	A	•		•	•										•
Common Redshank <i>T. t. totanus</i>	A	•		•	•										
Common Redshank <i>T. t. robusta</i>	A														•
Turnstone <i>A. i. interpres</i>	A														•
Common Gull <i>L. c. canus</i>	A	•													•
Lesser Black-backed Gull <i>L. f. graellsii</i>	A												•		•
Glaucous Gull <i>L. h. hyperboreus</i>	A												•		
Iceland Gull <i>L. g. glaucoides</i>	A												•		
Yellow-legged Gull <i>L. m. michahellis</i>	A												•		
Kittiwake <i>R. t. tridactyla</i>	A			•									•		

**Table 12.** Amber-listed races and the criteria under which they qualify, *continued*

Species and relevant race <sup>a</sup>	Species-level BoCC3 result <sup>b</sup>	Amber-list criteria <sup>c</sup>												
		SPEC	HDrec	BDMp <sup>1</sup>	BDMp <sup>2</sup>	WDMp <sup>1</sup>	WDMp <sup>2</sup>	BDMr <sup>1</sup>	BDMr <sup>2</sup>	BR	WR	BL	WL	BI
Little Tern <i>S. a. albifrons</i>	A	•						•			•			
Black Tern <i>C. n. niger</i>	A	•												
Sandwich Tern <i>S. s. sandvicensis</i>	A	•						•			•			
Common Tern <i>S. h. hirundo</i>	A										•			
Common Guillemot <i>U. a. aalge</i>	A										•			
Common Guillemot <i>U. a. albionis</i>	A										•		•	
Razorbill <i>A. t. islandica</i>	A										•		•	
Stock Dove <i>C. o. oenas</i>	A													•
Barn Owl <i>T. a. alba</i>	A	•												
Short-eared Owl <i>A. f. flammeus</i>	A	•												
Common Swift <i>A. a. apus</i>	A			•										
Common Kingfisher <i>A. a. ispida</i>	A	•												
Green Woodpecker <i>P. v. viridis</i>	A	•												
Great Spotted Woodpecker <i>D. m. anglicus</i>	G													•
Wood Lark <i>L. a. arborea</i>	A	•						•			•			
Sky Lark <i>A. a. scotica</i>	R													•
Shore Lark <i>E. a. flava</i>	A	•								•				
Sand Martin <i>R. r. riparia</i>	A	•												
Barn Swallow <i>H. r. rustica</i>	A	•												
House Martin <i>D. u. urbicum</i>	A	•		•	•									
Meadow Pipit <i>A. p. pratensis</i>	A			•	•									
Meadow Pipit <i>A. p. whistleri</i>	A													•
Water Pipit <i>A. s. spinoletta</i>	A									•				
Rock Pipit <i>A. p. petrosus</i>	G													•
'Blue-headed Wagtail' <i>M. f. flava</i>	R									•				
'Grey-headed Wagtail' <i>M. f. thunbergi</i>	R	•								•				
Grey Wagtail <i>M. c. cinerea</i>	A				•									
Pied Wagtail <i>M. a. yarrellii</i>	G													•
Dipper <i>C. c. gularis</i>	G													•
Dipper <i>C. c. hibernicus</i>	G	•												•
Wren <i>T. t. indigenus</i>	G													•
'Hebridean Wren' <i>T. t. hebridensis</i>	G	•												•
'Shetland Wren' <i>T. t. zetlandicus</i>	G	•												•
Dunnock <i>P. m. hebridium</i>	A													•
Dunnock <i>P. m. occidentalis</i>	A				•									•
Common Nightingale <i>L. m. megarhynchos</i>	A			•										
Black Redstart <i>P. o. gibraltariensis</i>	A			•	•					•				
Common Redstart <i>P. p. phoenicurus</i>	A	•												
Northern Wheatear <i>O. o. oenanthe</i>	A	•												
Mistle Thrush <i>T. v. viscivorus</i>	A			•	•									
Common Whitethroat <i>S. c. communis</i>	A				•									
Dartford Warbler <i>S. u. dartfordiensis</i>	A										•			
Willow Warbler <i>P. t. trochilus</i>	A	•		•	•									
Firecrest <i>R. i. ignicapilla</i>	A									•				
Pied Flycatcher <i>F. h. hypoleuca</i>	A				•									
Bearded Tit <i>P. b. biarmicus</i>	A							•			•			
Long-tailed Tit <i>A. c. rosaceus</i>	G													•
Blue Tit <i>C. c. obscurus</i>	G													•
Great Tit <i>P. m. newtoni</i>	G													•

**Table 12.** Amber-listed races and the criteria under which they qualify. *continued*

Species and relevant race <sup>a</sup>	Species-level BoCC3 result <sup>b</sup>	Amber-list criteria <sup>c</sup>												
		SPEC	HDrec	BDMp <sup>1</sup>	BDMp <sup>2</sup>	WDMp <sup>1</sup>	WDMp <sup>2</sup>	BDMr <sup>1</sup>	BDMr <sup>2</sup>	BR	WR	BL	WL	BI
Crested Tit <i>L. c. scoticus</i>	A	•												•
Coal Tit <i>P. a. britannicus</i>	G													•
Eurasian Treecreeper <i>C. f. britannica</i>	G													•
Short-toed Treecreeper <i>C. b. megarhynclia</i>	A									•				
Eurasian Jay <i>G. g. hibernicus</i>	G													•
Eurasian Jay <i>G. g. rufitergum</i>	G													•
Red-billed Chough <i>P. p. pyrrhocorax</i>	A	•												•
Common Starling <i>S. v. zetlandicus</i>	R													•
Common Chaffinch <i>F. c. gengleri</i>	G													•
Greenfinch <i>C. c. harrisoni</i>	G													•
Goldfinch <i>C. c. britannica</i>	G													•
Linnet <i>C. c. autochthona</i>	R	•												•
Twite <i>C. f. bensonorum</i>	R	•												•
Bullfinch <i>P. p. pileata</i>	A	•		•	•									•
Lapland Bunting <i>C. l. lapponicus</i>	A												•	
Lapland Bunting <i>C. l. subcalcaratus</i>	A												•	
Snow Bunting <i>P. n. nivalis</i>	A												•	
Snow Bunting <i>P. n. insulae</i>	A												•	
Reed Bunting <i>E. s. schoeniclus</i>	A					•								

<sup>a</sup> English names given are as for species. In instances where a well-known English name exists for the race, this is given in inverted commas.

<sup>b</sup> BoCC3 assessments: NA=Not assessed, R=Red, A=Amber, G=Green.

<sup>c</sup> Amber-list criteria. SPEC: Species of European Conservation Concern – ‘pseudo-assessment’ for BoCC3 purposes only. HDrec: Historical decline – recovery. BDMp<sup>1/2</sup>: Moderate breeding population decline over 25 years/longer term. WDMp<sup>1/2</sup>: Moderate non-breeding population decline over 25 years/longer term. BDMr<sup>1/2</sup>: Moderate breeding range decline over 25 years/longer term. BR/WR: Breeding/non-breeding rarity. BL/WL: Breeding/non-breeding localisation. BI/WI: Breeding/non-breeding international importance.

Note that this table lists Amber-listed races of polytypic species only: it does not include monotypic species, e.g. Red-throated Diver.

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**172.** An increase in the species' breeding range in the UK has enabled the Wood Lark *Lullula arborea* to move from the Red to the Amber list between BoCC2 and BoCC3.

**Table 13.** Green-listed races.

Species and relevant race <sup>1</sup>	Species-level BoCC3 result <sup>2</sup>	Species and relevant race <sup>1</sup>	Species-level BoCC3 result <sup>2</sup>
Goosander <i>M. m. merganser</i>	G	Common Stonechat <i>S. t. hibernans</i>	G
Great Crested Grebe <i>P. c. cristatus</i>	G	'Greenland Wheatear' <i>O. o. leucorhoa</i>	A
Grey Heron <i>A. c. cinerea</i>	G	Blackbird <i>T. m. merula</i>	G
Northern Goshawk <i>A. g. gentilis</i>	G	Song Thrush <i>T. p. philomelos</i>	R
Eurasian Sparrowhawk <i>A. u. nisus</i>	G	Redwing <i>T. i. coburni</i>	R
Common Buzzard <i>B. b. buteo</i>	G	Cetti's Warbler <i>C. c. cetti</i>	G
Hobby <i>F. s. subbuteo</i>	G	Reed Warbler <i>A. s. scirpaceus</i>	G
Water Rail <i>R. a. aquaticus</i>	G	Blackcap <i>S. a. atricapilla</i>	G
Moorhen <i>G. c. chloropus</i>	G	Garden Warbler <i>S. b. borin</i>	G
Common Coot <i>F. a. atra</i>	G	Lesser Whitethroat <i>S. c. curruca</i>	G
Little Ringed Plover <i>C. d. curonicus</i>	G	Common Chiffchaff <i>P. c. collybita</i>	G
Ringed Plover <i>C. h. tundrae</i>	A	Willow Warbler <i>P. a. acredula</i>	A
Dunlin <i>C. a. arctica</i>	R	Goldcrest <i>R. r. regulus</i>	G
Long-tailed Skua <i>S. l. longicaudus</i>	G	Blue Tit <i>C. c. caeruleus</i>	G
Lesser Black-backed Gull <i>L. f. intermedius</i>	A	Great Tit <i>P. m. major</i>	G
Herring Gull <i>L. a. argentatus</i>	R	Coal Tit <i>P. a. ater</i>	G
Razorbill <i>A. t. torda</i>	A	Coal Tit <i>P. a. hibernicus</i>	G
Black Guillemot <i>C. g. arcticus</i>	A	Eurasian Nuthatch <i>S. e. caesia</i>	G
Little Auk <i>A. a. alle</i>	G	Eurasian Jay <i>G. g. glandarius</i>	G
Rock Dove/Feral Pigeon <i>C. l. livia</i>	G	Magpie <i>P. p. pica</i>	G
Wood Pigeon <i>C. p. palumbus</i>	G	Western Jackdaw <i>C. m. monedula</i>	G
Collared Dove <i>S. d. decaocto</i>	G	Western Jackdaw <i>C. m. spermologus</i>	G
Tawny Owl <i>S. a. sylvatica</i>	G	Rook <i>C. f. frugilegus</i>	G
Long-eared Owl <i>A. o. otus</i>	G	Carrion Crow <i>C. c. corone</i>	G
Rock Pipit <i>A. p. littoralis</i>	G	Hooded Crow <i>C. c. cornix</i>	G
'White Wagtail' <i>A. a. alba</i>	G	Common Raven <i>C. c. corax</i>	G
Waxwing <i>B. g. garrulus</i>	G	Common Chaffinch <i>F. c. coelebs</i>	G
Wren <i>T. t. troglodytes</i>	G	Greenfinch <i>C. c. chloris</i>	G
Dunnock <i>P. m. modularis</i>	A	Common Redpoll <i>C. f. flammea</i>	G
Robin <i>E. r. rubecula</i>	G	Common Crossbill <i>L. c. curvirostra</i>	G
Robin <i>E. r. melophilus</i>	G		

<sup>1</sup> English names given are as for species. In instances where a well-known English name exists for the race, this is given in inverted commas.

<sup>2</sup> BoCC3 assessments: NA=Not assessed, R=Red, A=Amber, G=Green.

Note that this table lists Green-listed races of polytypic species only: it does not include monotypic species, e.g. Mute Swan.



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**173.** Six of the newly Red-listed species in BoCC3 are rare or scarce breeders in the UK, and at the southern or western limit of their breeding range. The Redwing *Turdus iliacus* is one of these, and the nominate race (shown here, and which breeds in Britain) is Red-listed. The Icelandic race, *T. i. coburni*, which is a regular passage and winter visitor, is not threatened and was Green-listed in the race assessment (tables 13 & 14).

Table 14. Races with different BoCC3 assessments from the parent species.

Species and relevant race	Reason for difference between assessments
<b>Species Green, race Red</b>	
'European White-fronted Goose' <i>A. a. albifrons</i>	Race has declined severely in the UK over both trend periods
'Greenland White-fronted Goose' <i>A. a. flavirostris</i>	Race Globally Threatened due to recent population decline
'Fair Isle Wren' <i>T. t. fridariensis</i>	Race Globally Threatened due to small population size
'St Kilda Wren' <i>T. t. hirtensis</i>	Race Globally Threatened due to small population size
<b>Species Amber, race Red</b>	
'Taiga Bean Goose' <i>A. f. fabalis</i>	Race Globally Threatened due to recent population decline
'Dark-bellied Brent Goose' <i>B. b. bernicla</i>	Race Globally Threatened due to recent population decline
Common Eider <i>S. m. mollissima</i>	Race Globally Threatened due to recent population decline
Stone-curlew <i>B. o. oediconemus</i>	Race Globally Threatened due to recent population decline
<b>Species Green, race Amber</b>	
Ptarmigan <i>L. m. millaisi</i>	Race (pseudo-) SPEC-listed and internationally important (endemic race)
Great Cormorant <i>P. c. carbo</i>	Internationally important
Great Cormorant <i>P. c. sinensis</i>	Localised breeder
Peregrine Falcon <i>F. p. peregrinus</i>	Race (pseudo-) SPEC-listed and internationally important
Great Spotted Woodpecker <i>D. m. anglicus</i>	Internationally important (endemic race)
Rock Pipit <i>A. p. petrosus</i>	Internationally important
Pied Wagtail <i>M. a. yarrellii</i>	Internationally important (near-endemic race)
Dipper <i>C. c. gularis</i>	Internationally important (endemic race)
Dipper <i>C. c. hibernicus</i>	Race (pseudo-) SPEC-listed and internationally important (near-endemic race)
Wren <i>T. t. indigenus</i>	Internationally important (endemic race)
'Hebridean Wren' <i>T. t. hebridensis</i>	Race (pseudo-) SPEC-listed and internationally important (endemic race)
'Shetland Wren' <i>T. t. zetlandicus</i>	Race (pseudo-) SPEC-listed and internationally important (endemic race)
Long-tailed Tit <i>A. c. rosacens</i>	Internationally important (endemic race)
Blue Tit <i>C. c. obscurus</i>	Internationally important (near-endemic race)
Great Tit <i>P. m. newtoni</i>	Internationally important (near-endemic race)
Coal Tit <i>P. a. britannicus</i>	Internationally important (endemic race)
Eurasian Treecreeper <i>C. f. britannica</i>	Internationally important (endemic race)
Eurasian Jay <i>G. g. hibernicus</i>	Internationally important (endemic to Ireland)
Eurasian Jay <i>G. g. rufitergum</i>	Internationally important (near-endemic race)
Common Chaffinch <i>F. c. gengleri</i>	Internationally important (endemic race)
Greenfinch <i>C. c. harrisoni</i>	Internationally important (endemic race)
Goldfinch <i>C. c. britannica</i>	Internationally important (endemic race)
<b>Species Red, race Green</b>	
Dunlin <i>C. a. arctica</i>	Red-listing of species is due to decline in wintering <i>alpina</i> ; <i>arctica</i> are passage migrants only
Herring Gull <i>L. a. argentatus</i>	Red-listing of species is due to decline in breeding and wintering <i>argentatus</i> ; trend in <i>argentatus</i> unknown
Song Thrush <i>T. p. philomelos</i>	Red-listing of species is due to decline in breeding <i>clarkei</i> ; <i>philomelos</i> are winter immigrants
Redwing <i>T. i. coburni</i>	Red-listing of species is due to decline in breeding <i>iliacus</i> ; <i>coburni</i> are winter immigrants
<b>Species Red, race Amber</b>	
Dunlin <i>C. a. schinzii</i>	Red-listing of species is due to decline in wintering <i>alpina</i> ; <i>schinzii</i> are UK breeders
Black-tailed Godwit <i>L. l. islandica</i>	Red-listing of species is due to historical decline in breeding <i>limosa</i> ; <i>islandica</i> are winter immigrants
Sky Lark <i>A. a. scotica</i>	Red-listing is due to decline in breeding <i>arvensis</i> ; <i>scotica</i> not believed to have declined to the same extent
'Blue-headed Wagtail' <i>M. f. flava</i>	Red-listing is due to decline in breeding <i>flavissima</i> ; <i>flava</i> are passage migrants/occasional breeders only

**Table 14.** Races with different BoCC3 assessments from the parent species. *continued*

Species and relevant race	Reason for difference between assessments
<b>Species Red, race Amber</b>	
'Grey-headed Wagtail' <i>M. f. thumbergi</i>	Red-listing is due to decline in breeding <i>flavissima</i> ; <i>thumbergi</i> are passage migrants
Common Starling <i>S. v. zetlandicus</i>	Red-listing is due to decline in breeding <i>vulgaris</i> ; <i>zetlandicus</i> not believed to have declined to the same extent, if at all
Linnet <i>C. c. autochthona</i>	Red-listing is due to decline in breeding <i>camabina</i> ; <i>autochthona</i> not believed to have declined to the same extent
Twite <i>C. f. bensonorum</i>	Red-listing is due to historical and recent decline; <i>bensonorum</i> not known to have declined to same extent
<b>Species Amber, race Green</b>	
Ringed Plover <i>C. h. tmdrae</i>	Amber-listing of species is due to decline in breeding <i>hiaticula</i> ; <i>tmdrae</i> are passage migrants only
Lesser Black-backed Gull <i>L. f. intermedius</i>	Amber-listing is due to localised breeding of <i>graellsii</i> ; <i>intermedius</i> are winter immigrants
Razorbill <i>A. t. torda</i>	Amber-listing is due to localised breeding <i>islandica</i> ; <i>torda</i> are winter immigrants
Black Guillemot <i>C. g. arcticus</i>	European <i>arcticus</i> population is not depleted and is not (pseudo-) SPEC-listed
Duncock <i>P. m. modularis</i>	Amber-listing of species is due to decline in breeding population; <i>modularis</i> are winter immigrants
'Greenland Wheatear' <i>O. o. leucorhoa</i>	Amber-listing is due to SPEC status of <i>oenanthe</i> ; <i>leucorhoa</i> is not known to have declined, hence is not (pseudo-) SPEC-listed
Willow Warbler <i>P. t. acredula</i>	Amber-listing of species is due to decline in breeding <i>trochilus</i> ; <i>acredula</i> are passage migrants only

## Discussion

### How to use the new BoCC3 lists

The Red, Amber and Green lists presented in this paper are an attempt to classify the UK's bird species objectively, according to the conservation concern with which they should be regarded. We stress that, as with any such assessment, the BoCC3 list (or any other priority or status list) should not be the only basis for setting priorities. Other factors, both objective and subjective, should be considered when deciding which species to target in conservation programmes. Factors which should be included in decision making are logistical (e.g. feasibility, conflicting issues), biological (e.g. likelihood of success, benefits to other species), societal (e.g. cultural importance, role as flagship species) and economic (e.g. cost of action). For example, Red-listing does not mean that species should immediately or automatically become the highest priorities for recovery programmes and, for some species, it may be appropriate that no action is taken beyond monitoring.

### Data availability, constraints on the assessment and expert opinion

The BoCC3 review was based upon the best

and most recent data available. The development of joint CBC-BBS trends since BoCC2 means that we now have more faith that trends for common breeding birds are representative. BoCC2 did not Red-list species with declines of over 50% if the CBC trend was felt to be unrepresentative (e.g. Tree Pipit, Goldcrest *Regulus regulus*). In BoCC3, however, we felt able to do so because the BBS data used were not geographically biased. We were, however, hampered by the lack of recent range data for the majority of species, so only a few species were assessed against the range criteria. In addition, trends or reliable population estimates were available for very few non-breeding visitors not covered by WeBS. In some cases we had to rely upon 'expert opinion' to assess species, most notably in the case of the Whimbrel *Numenius phaeopus*, for which there has not been a complete survey since the 1980s (Richardson 1990). Recent surveys in areas of Shetland that held 45% of the population previously have revealed a decline of 70% (M. Grant pers. comm.); we decided that a decline of such severity warranted Red-listing, despite the lack of knowledge on trends elsewhere in the range.

### The influence of changed criteria

The change in criteria to ensure parity in the treatment of breeding and non-breeding populations, by adding a non-breeding rarity criterion (WR) and considering non-breeding species for Amber-listing under the SPEC criterion, has introduced an element of non-comparability between the *BoCC3* and *BoCC2* lists. Seven species are Amber-listed solely because of these changes, but it could be argued that none should be of conservation concern in the UK, and certainly some (e.g. Iceland Gull *Larus glaucoides*) are unlikely to be recipients of conservation action. However, we feel that the UK's importance as a home for wintering bird populations equals (or perhaps even exceeds) its importance for breeding bird populations, and so it is only right that the *BoCC* process should reflect this even-handedly.

Conversely, six species have either not been assessed by *BoCC3*, or have been assessed only as non-breeders owing to the change in how species are defined as regular breeders: five of these species would have been on the Amber list if they had been assessed.

The other change adopted, the use of an additional, longer-term time window for assessing trends in breeding and non-breeding populations, and trends in breeding ranges, had a significant affect on the Red list. Eleven species were Red-listed because of this new criterion. Of these ten, seven were Red-listed by *BoCC2* and

would have been Amber-listed (with the exception of Song Thrush, which would have been Green-listed) had we not introduced this criterion. Importantly, however, none of these six species have recovered from the declines which led them to be Red-listed originally, and we felt that if species were allowed to move from Red to Amber without recovery, the credibility of *BoCC* assessments would have been undermined. We feel that this demonstrates the need to adapt the *BoCC* criteria to meet changing circumstances, in this case the increasing length of monitoring data available for many species, and the time elapsed since periods of known decline in the 1970s. The change also allows Greater Scaup, Dunlin, Redwing and Fieldfare to qualify for the Red list: species that declined only moderately (i.e. by less than 50%) over any 25-year period, but which have declined severely over the longer term. It may be argued that use of the longer-term period 'lowers the bar' for Red-listing, but such species have suffered a similar loss in numbers to others that may have declined in the 1970s then stabilised (e.g. Song Thrush), or undergone severe declines only more recently (e.g. Northern Lapwing *Vanellus vanellus*), so surely deserve the same treatment.

By way of example, fig. 1 shows how trends in Yellowhammer (decline since 1975, severe decline over both longer-term and 25-year periods), Song Thrush (decline since 1969, but

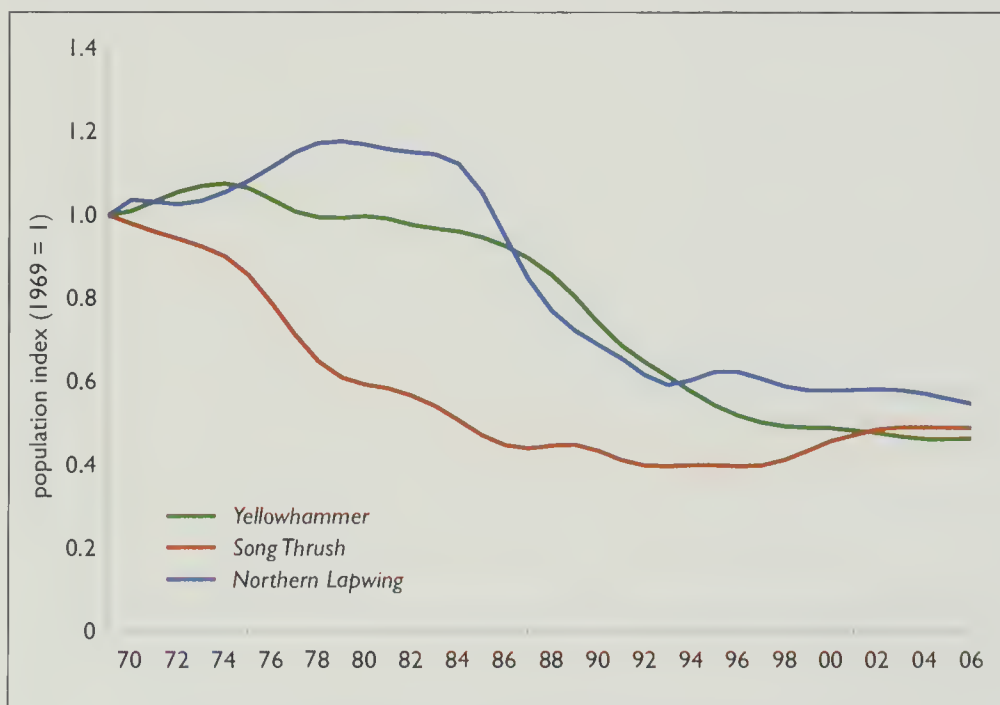


Fig. 1. Breeding population trends in three Red-listed species, illustrating differing patterns of decline.

Source: BTO/JNCC Common Birds Census and BTO/JNCC/RSPB Breeding Bird Survey

some recovery since 1998 and severe decline over longer-term period only) and Northern Lapwing (decline since 1984, severe decline over 25-year period only) had resulted in a proportionately similar fall in population by 2006 despite the varying patterns; we believe that all three species should be Red-listed.

### The new BoCC lists: themes in UK bird conservation

The enlarged Red list contains a wide range of species. Some are likely to be Red-listed for reasons external to the UK. For example, the status of the two Globally Threatened species, Balearic Shearwater and Aquatic Warbler, are unlikely to be affected by changes within the UK. The same is likely to be true for some rare migrant species, for which the availability of habitat of suitable quality seems unlikely to be limiting UK populations. Nonetheless, it is easy to identify a number of themes running through the new list which reflect concerns in UK conservation both new and old.

The first BoCC assessment recognised the decline of farmland birds in the UK, and there has been little change since, even though one species, the Reed Bunting, has now moved from Red to Amber. Of 19 species contributing towards the UK Farmland Bird Indicator ([www.defra.gov.uk/ENVIRONMENT/statistics/wildlife/kf/wdkf03.htm](http://www.defra.gov.uk/ENVIRONMENT/statistics/wildlife/kf/wdkf03.htm)), ten are now Red-listed (with the addition of Lapwing and Yellow Wagtail *Motacilla flava* to the Red list in this review), with nine of these ten considered farmland specialists. Farmland birds have been the recipients of much research, to establish the precise, species-specific causes of decline and then identify suitable remedial action for population recovery (e.g. Vickery *et al.* 2004). Despite this, the delivery of this action through Government-funded agri-environment schemes has in many cases failed to initiate species recovery, and there is growing concern that some species continue to decline.

BoCC2 highlighted the declines in woodland birds, with eight woodland species Red-listed in 2002 (using species-habitat classifications given by Gibbons *et al.* 1993). In 2009, another four woodland birds have joined the list: Tree Pipit, Wood Warbler, Lesser Redpoll and Hawfinch *Coccothraustes coccothraustes*. Two further (Amber-listed) species, Common Nightingale *Luscinia megarhynchos* and Pied Flycatcher *Ficedula hypoleuca*, showed declines of 49% between 1994 and 2006, so only just escape Red-listing. Our knowledge of the drivers of woodland bird declines is more rudimentary than that for farmland species. Although potential causes have been identified (e.g. Fuller *et al.* 2005), more research is needed to determine which are affecting which species, and then to identify potential management

methods, in woodlands or more broadly, to counter these impacts.

A complication when considering declines in breeding birds of woodland, farmland and other habitats is the influence of factors away from the breeding grounds. Five of the 18 newly Red-listed species (Common Cuckoo *Cuculus canorus*, Tree Pipit, Yellow Wagtail, Wood Warbler and Golden Oriole *Oriolus oriolus*) are Afro-Palaearctic migrants, joining a further 13 migrants Red-listed already (thus 35% of all Red-listed species). Of 50 UK breeding species classified as long-distance migrants by Sanderson *et al.* (2006), 18 (36%) were Red-listed, 25 (50%) Amber-listed and just seven (14%) Green-listed by BoCC3: this is significantly more Red-listed and fewer Green-listed species than would be expected by chance ( $\chi^2 = 8.1$ , 2 df,  $P \leq 0.05$ ). Sanderson *et al.* found that, across Europe, inter-continental migrants showed significantly worse trends between 1970 and 1990 than short-distance migrants or resident species.

The causes of migrant declines might include degradation or loss of habitat on sub-Saharan wintering grounds, degradation or loss of staging areas, hunting pressure in southern Europe and North Africa, and climate change (Ewing 2008). However, determining the causes of decline is difficult, and complicated by pressures on the breeding grounds (e.g. although seven woodland migrants are Red-listed, so are seven resident woodland species) and possibly by interactions between influences on both the breeding and the non-breeding grounds.

The influence of climate change is beginning to be felt in the UK, and some of the changes in the BoCC3 lists probably reflect this. Following decades of year-on-year increases in many of our wintering waterbirds, in response to better flyway-level protection (e.g. reduced hunting pressure and a network of well-maintained protected sites), some species have now begun to decline. BoCC2 saw Dunlin Amber-listed following a moderate decline and now, just seven years later, it has been moved to the Red list owing to a 51% decline over the longer-term period. At the race level, 'European White-fronted Goose' *A. a. albifrons* has been Red-listed because of population decline, and species such as Mallard *Anas platyrhynchos*, Pochard *Aythya ferina* and Purple Sandpiper have been Amber-listed. These declines may not necessarily be due to declining populations (although it is possible

that they may be), but may reflect a shift in distribution as milder winters enable populations to winter farther north and east, nearer to breeding grounds. Rehfishch *et al.* (2004) demonstrated such shifts for wader populations, including Purple Sandpiper and Dunlin, on non-estuarine coastlines.

The Red-listing of Greater Scaup is due to the disappearance of large wintering flocks attracted to sewage and distillery waste discharges on the east coast of Scotland, before the removal of these food sources in the late 1970s (Campbell 1984). Recent improvements in the generation of waterbird trends mean that only now are we able to produce a trend for Greater Scaup; had

we been able to do so previously, it would have been Red-listed by earlier *BoCC* reviews.

Six of the newly Red-listed species are rare or scarce breeders for which the UK lies at the southern or western edge of their breeding range: Temminck's Stint *Calidris temminckii*, Ruff *Philomachus pugnax*, Whimbrel, Arctic Skua, Fieldfare and Redwing. Huntley *et al.* (2007) suggested that, on average, bird populations in Europe might shift their ranges north and east through the twenty-first century in response to climate change, as their 'climatic envelopes' (the climatic conditions that define their current range) move with projected climatic warming. They predicted

that the ranges of all six of the above species, plus those of Red-necked Phalarope *Phalaropus lobatus* and Common Scoter, might lie entirely to the north and east of the UK by 2080. Of course, there is a considerable degree of uncertainty in such predictions, both in terms of how the climate and habitats might change and then in terms of how the birds themselves will be able to respond, but, as with wintering birds, there is evidence that this process is already occurring. Green *et al.* (2008) found that changes in climate could explain a significant amount of the variation in trends of rare breeding birds in the UK since 1980, and that Temminck's Stint, Ruff, Fieldfare and Redwing all had declining trends in both climate suitability and population over the study period. Gregory *et al.* (2009) have extended the work in the UK to show a general population response of widespread European birds to projected climatic change.

Another theme with potential links to climatic



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174. The Common Cuckoo *Cuculus canorus* is another of the long-distance migrants added to the Red list during the *BoCC3* review as a result of the serious decline in breeding populations in the UK, of more than 50% in the past 25 years.

change is declining seabird populations. In BoCC3, the number of Red-listed seabirds has grown from one to four with the addition of Balearic Shearwater, Arctic Skua and Herring Gull *Larus argentatus*. The decline of the Arctic Skua is particularly worrying; recent analyses suggest declines over 22 years, of 70% in Shetland and 77% in Orkney, driven by low productivity related to failures in sandeel *Ammodytes marinus* stocks (Parsons *et al.* 2006). Although the causes of crashes in sandeel numbers are poorly understood, they may be related to oceanographic changes, possibly driven by climatic change.

The fact that six species have moved from Red to Amber does give some slight cause for optimism. One species, the Scottish Crossbill, has moved not because of a change in status, but through knowledge of the population size following the first-ever survey. The apparent recovery of Common Quail (from historical decline) may not be due to a genuine improvement in status either. This migrant species shows massive between-year fluctuations in the numbers breeding in the UK, with occasional years of high abundance ('quail years'). The apparent increase that led to the downgrading may simply be due to the fact that a quail year (2005) fell within the recent five-year period used to calculate the trend.

However, two of the species that have moved from Red to Amber demonstrate what can be achieved if well-informed and adequately resourced conservation effort is directed at a species. Wood Lark has moved to the Amber list because of range expansion (accompanying an increase in numbers). This species has responded to improvements in the area and condition of lowland heathland and appropriate management of conifer plantations. Similarly, a recovery in the range of the Stone-curlew reflects the creation and management of suitable areas of semi-natural grassland, and the provision of suitable nesting plots within farmland. The latter requires a high level of ongoing funding, in the absence of which the population would undoubtedly decline (and contract in range) again. This prompts consideration of how to help such conservation-dependent species; if success brings a downgrading in priority and thus (potentially) a fall in funding, the progress made previously may be lost.

### *New directions: BoCC at race level*

Although the main emphasis of this paper is a review of the status of the UK's bird species, comparable with those conducted previously, we have in addition produced the first BoCC lists of races occurring regularly in the UK.

The first finding from this exercise did not surprise us: that, compared with our knowledge of bird species, there are clear deficiencies in our knowledge of the distribution, numbers, population trends, ecology and conservation requirements of birds at the race, or subspecies, level. Outside taxonomic circles and groups with a passion for field identification, rather little attention has been paid to bird races in the UK, and this holds true in conservation circles, except in cases where it is felt that races may actually be hitherto unrecognised species, for example taxa in the Common Chiffchaff *Phylloscopus collybita* and large white-headed gull complexes (Helbig *et al.* 1996; Collinson 2001). Indeed, the very validity of some races currently recognised in the UK is uncertain. Thus, while we recognise the limitations of resources, we would encourage the BOURC Taxonomic Sub-committee to clarify the validity of a number of taxa that some authorities maintain are not only diagnosable but also occur in the UK with regularity and in internationally important numbers.

Of course, there are good reasons to target conservation resources at the species rather than the race level, but as conservationists we are also keen to recognise and preserve biological and genetic diversity at all scales, this goal being enshrined in the Convention on Biological Diversity ([www.cbd.int/](http://www.cbd.int/)). There are also considerable practical difficulties in studying (and conserving) races, not least in their identification under field conditions. We perceive a tendency for non-taxonomists, professional conservationists included, to disregard those races that do not differ markedly from one another in the field, although such practicality is hard to avoid. A focus at race level has two important consequences. Firstly, it highlights the fact that the UK is home to a number of endemic races and holds internationally important populations of many others. A considerable number of these are declining and several endemics could even be at the risk of extinction in the UK, and hence globally.

Secondly, reference to racial identity allows us to be more discriminating in our assignation

of status. The status of individual races within the same species may differ widely, perhaps because they occupy different geographical areas and are exposed to very different threats and opportunities. Drawing these distinctions can only serve to help target action more precisely and efficiently. For example, while at the species level the Black-tailed Godwit is Red-listed, race-level listing allows us to distinguish between concern for the depleted numbers of the nominate race *L. l. limosa*, which is now a rare breeder in southern Britain (and declining elsewhere in its range), and the Icelandic breeding *L. l. islandica*, which has increased massively in recent decades (and is Amber-listed by this review owing to its localisation and international importance in the UK). This was recognised by the review of bird priorities for the UK BAP at race level, which priority-listed many of the races Red-listed by this review. We hope that by presenting Red, Amber and Green lists for races in this paper, we may encourage work to fill knowledge gaps (thus ensuring that future assessments might be more robust) and stimulate debate on the importance of bird races in the UK and the correct taxonomic level at which to set conservation priorities.

### The future

The BoCC3 lists should provide a valuable basis for setting conservation priorities in the UK, alongside other references such as the UKBAP priority list. As stated before, such lists should not be considered in isolation, but decisions should reflect a wider range of considerations. There are a number of Red-listed species for which UK-based action seems futile (e.g. Savi's Warbler *Locustella luscinioides*), other than adequate monitoring, but we hope that this review prompts a speedy response to the deterioration in the status of such iconic species as the Lapwing and Cuckoo, and the lack of recovery in species such as the Sky Lark and Turtle Dove.

We recommend that BoCC reviews continue at regular intervals to allow conservation priorities to be updated and hence remain relevant, and that support for the excellent monitoring programmes that underpin such reviews is continued and, where possible, enhanced.

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# American Herring Gull in Cheshire & Wirral: new to Britain

David Quinn

**ABSTRACT** The discovery of a first-winter American Herring Gull *Larus smithsonianus* in Cheshire & Wirral, in late February 1994, is described. At that time, American Herring Gull was treated as the North American race of Herring Gull *L. argentatus*, while the accepted Irish records formed part of the joint British & Irish List. As a consequence, the significance of this record in a British context was not fully appreciated, and full details of the occurrence have not been published. With the subsequent separation of the British and Irish Lists, and the recent decision by BOURC to treat *smithsonianus* as a full species, this now becomes the first British record.

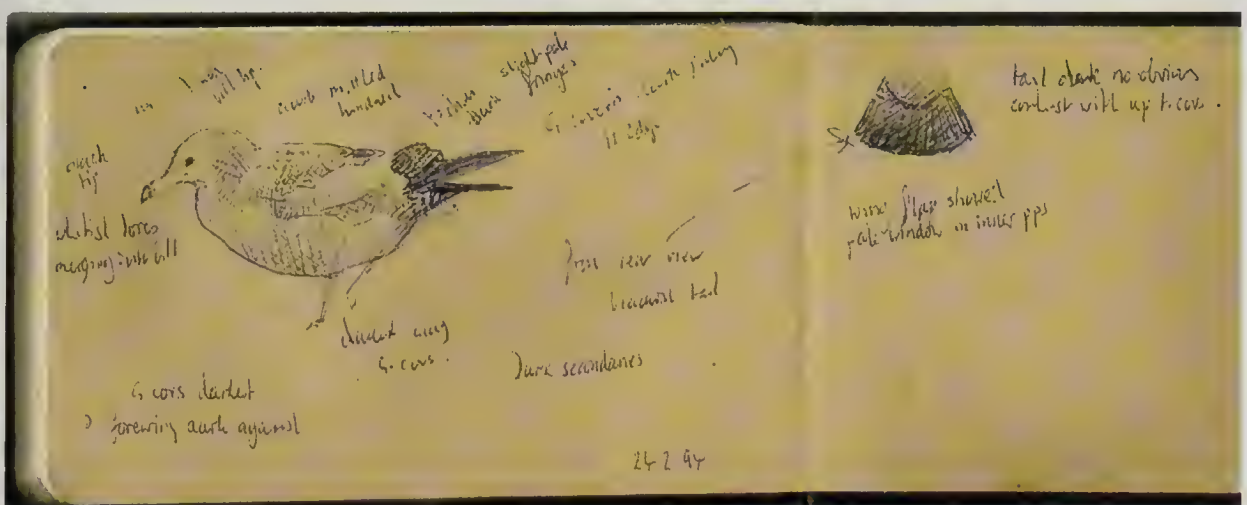
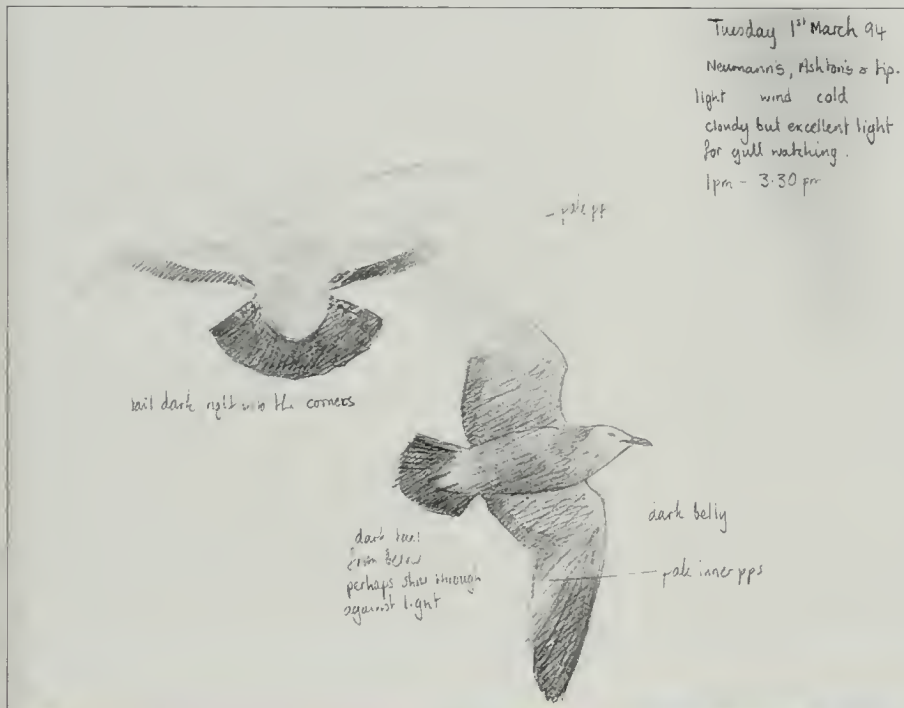
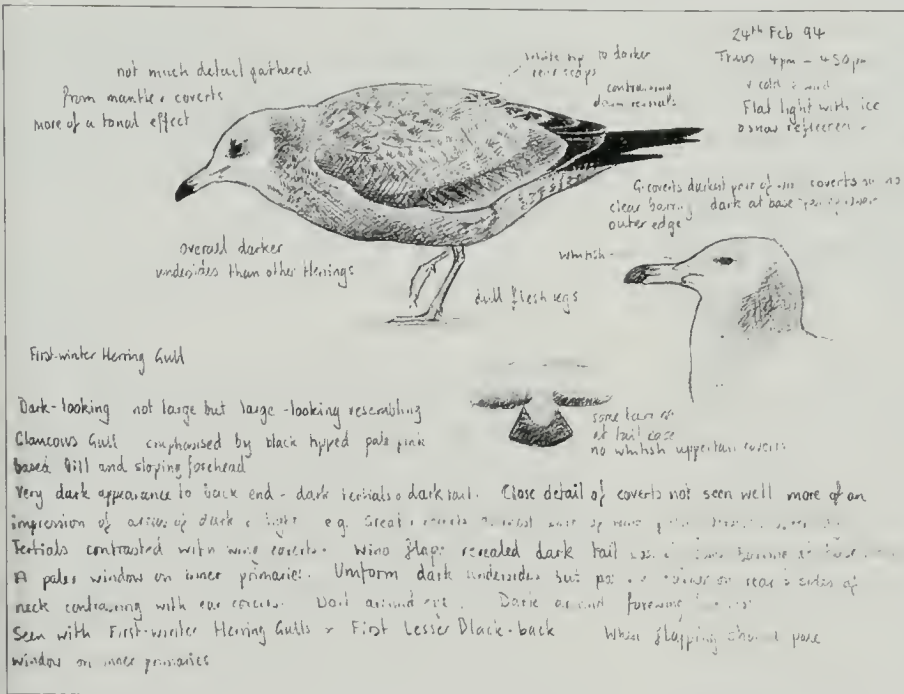
Two large, shallow lakes on the outskirts of Northwich, Cheshire & Wirral, known locally as Ashton's and Neumann's Flashes, form the centrepiece of several hundred hectares of newly accessible nature reserves, regenerated community woodlands and meadows, lying on the site of the former Witton Lime Beds. These variably flooded, shallow lagoons and pools are well known not just for their birds, but also for the varied plant, insect and other animal communities that flourish in a lime-rich environment. A good spread of rarities have been found here over the last 30 years or so, most recently in 2008, when a pair of Black-winged Stilts *Himantopus himantopus* arrived in late April and stayed to nest at Neumann's Flash.

Ashton's Flash came into being after 'The Great Subsidence' in 1880, following the catastrophic flooding and dissolution of underlying salt-mine structures, just one of many dramatic events which presented the local industry and communities with long-term difficulties to overcome. Around 1950, large bund walls were constructed around the dangerous and derelict areas of the flashes to contain the lime waste and slurry being pumped in. By the mid 1980s, as the habitats improved and the flashes attracted more birds, the area was increasingly visited by birders. Another attraction was provided by the often-spectacular

hordes of winter gulls attracted to the nearby Witton landfill, situated just a few hundred metres to the west, and visible from the bund-wall viewpoints overlooking the flashes. It was on a cold winter's day in February 1994 that, from one of these vantage points, overlooking the scrubby willow *Salix* and birch *Betula*-fringed frozen pools of Ashton's Flash, I discovered what was to become Britain's first American Herring Gull *Larus smithsonianus*.

## *The discovery*

On 24th February 1994, having birded the area earlier in the day, I returned home to work but, distracted by thoughts of so many gulls just a few miles away, the temptation to go back for another look was too strong to resist. When I arrived at around 16.00 hrs, large numbers of gulls were already coming and going overhead. It was a day of cold, easterly winds and an overcast sky. Patches of snow and ice reflected the flat light evenly from the ground, affording almost ideal light conditions for gull-watching. With no direct sunlight or harsh shadows to complicate the usual challenges of distinguishing one grey tone from another and of unravelling the complexities of immature gull plumage patterns, I was hopeful that I might, at least, connect with a Glaucous *L. hyperboreus* or Iceland Gull *L. glaucoides*, both of which were



being seen regularly at that time.

After I had spent about half an hour quickly 'scoping' as many of the resting large gulls as possible, the sight of an unusual first-winter gull, fanning what appeared to be an all-dark tail, hit me with a jolt of fear and excitement. Focusing on this bird intently as it moved among other immature large gulls, I was struck by several features that distinguished it from the crowd of more familiar Lesser Black-backed *L. fuscus* and Herring Gulls *L. argentatus*. Very quickly, the feeling dawned upon me that I had found an American Herring Gull, which at the time was treated as a subspecies of Herring Gull.

I had been watching gulls regularly at this site for about ten years, and had seen American Herring Gull previously in North America, in southern Ontario and Texas. Through reading

**Figs. 1-3.** First-winter American Herring Gull *Larus smithsonianus*, Ashton's and Neumann's Flashes, Cheshire & Wirral, February 1994; original field sketches and drawings derived from these and written notes.

Killian Mullarney's paper describing the discovery and characteristics of American Herring Gulls at Cork City dump, Co. Cork (Mullarney 1990), and Peter Grant's pioneering book on gull identification (Grant 1982), I was alert to the possibility of finding and identifying *smithsonianus* in the UK. In the heat of the moment, however, it is surprising how prior knowledge can evaporate. I was alone, without a camera, and with a growing sense of panic, knowing that the bird could fly away at any moment, I resorted to making notes and sketches. Frustratingly, due to the biting cold, and thanks to the fingerless glove on my right hand, there was no sensation of the pen in my numbed fingers. Added to this, my eyes were watering and my nose was leaking. Nothing unusual there for the winter gull-watcher but, due to the adrenalin rush, I had turned into a shaking fool, almost incapable of performing the simple tasks of note-taking and making a few simple sketches. The resulting clumsy scribbles were made on the brown paper inside the back cover of my small notebook – simply because it was the page most quickly available and the most stable part of the book to use in the chilling easterly breeze coming straight at me.

I took notes as best I could, and observed the bird for about 20 minutes before leaving, reluctantly, in the fading light to collect my wife from work and return home, where I made further drawings and notes from memory.

### Description

The following description is taken directly from my notes and observations on the day, and from subsequent views of the bird in flight after finding it again over Witton landfill on 1st March.

### Size and general appearance

Larger and bulkier than adjacent Lesser Black-backed Gulls, and estimated to be similar in size to, or a little smaller than, a nearby adult Herring Gull. The bird frequently adopted a hunched stance and, on a number of occasions, thrust its bill towards other gulls. At the time, its cumbersome and bossy demeanour, together with the appearance of its head and bill, created an impression of a first-year Glaucous Gull, rather than that of a Herring Gull.

### At rest

The head was noticeably paler than the neck and

underparts. There was some light-brown streaking on the crown, and a dark area in front of the eye, which created a slight frowning expression. The forehead near to the bill base and the area around the loreal point were whiter than the rest of the pale head.

The neck looked dark around the ear-coverts and down the neck sides towards the lower neck and upper-breast region. The rest of the underparts were washed with sepia and became fairly dark and uniform towards the belly.

The mantle and scapulars were fairly plain, with indistinct darker centres to the feathers, although the rear scapulars were noticeably darker, with distinct narrow whitish tips. The lesser, median and greater coverts were also rather plain-looking, with few contrasting features such as notches or barring; my views (at a distance of c. 100–125 m, through a Bushnell Spacemaster telescope) revealed grey-brown tones on the wing-coverts, with a general darkening towards the leading edge and bend of the folded wing, although this area of the wing was partly overlapped by paler flank feathers. Appearing darkest at the base and blending to paler grey-brown distally, the greater coverts contrasted with the relatively paler lesser and median coverts.

The tertials, projecting primaries and tail were very dark and gave the bird a noticeably dark rear end. The tertials appeared almost wholly blackish-brown, apart from slightly paler edges with a hint of a shallow-notched whitish edge towards the tip, and were reminiscent of those of first-winter Lesser Black-backed Gull.

The most significant feature was the dark tail, which initially attracted my attention when I saw it fanned briefly from the rear, and also from the side. Even with a side view, an impression of an all-dark tail prevailed, and I also noted some whitish barring towards the base, which I initially attributed to overlapping undertail-coverts, just visible beneath the folded wings. My field sketch of the fanned tail shows a suggestion of limited white markings at the very base of the outer tail feather, yet I wrote of an all-dark impression of the tail. Details of the uppertail-coverts were not noted, but this area did not register as being contrastingly pale or whitish.

When the gull opened its wings during an interaction with neighbouring birds, a pale window on the inner primaries was noticeable, framed by the band of very dark secondaries and the dark outer primaries.

### Bare parts

The bill was distinctly bi-coloured, being pale pink at the base of both mandibles. The tip was black from around the distal edge of the nostril, down to the gonydeal angle, and back a little way along the cutting edges. The eyes were dark and the legs a dull pink.

### In flight

With scope views in good light and at a distance of about 450 m, the contrast between the pale head and darker neck was striking. Comparison with a large number of other immature gulls present revealed a clearly darker impression to the underparts and underwing-coverts. The uppertail-coverts and rump were not noticeably paler than the back and, set against the entirely dark tail, gave a distinctive appearance which enabled me to pick out the bird from the hordes of swirling gulls on at least half a dozen occasions. The paler, inner-primary window was again clearly visible.

At this time, I also saw a second-calendar-year Lesser Black-backed Gull in flight which had an extensively dark or black tail, but the rump and uppertail-coverts were strikingly white. The inner primaries lacked the pale window shown by accompanying Herring Gulls. The bill appeared all-dark and the head, neck and underparts were white with some sparse dark markings.

I was pleased and relieved that, over the days following my initial sighting, my friend Paul Kenyon (who submitted his own detailed field description to BBRC) and Paul Holt both saw the bird independently and supported its identity as an American Herring Gull.

In addition to our sightings at Northwich, a gull fitting this description was discovered on 6th March at Otterspool, some 38 km away on the River Mersey, by gull enthusiasts Mark Garner and Gavin Thomas.

### The taxonomic position of American Herring Gull

In 2008, BOURC adopted the recommendations of Sangster *et al.* (2007) and treated American Herring Gull as a distinct polytypic species, with the North American race *L. s. smithsonianus* being included on the British List (BOU 2008). Sangster *et al.* acknowledged that while many individuals can be identified, *smithsonianus* is not fully diagnosable from Herring Gull in Europe on the basis of plumage alone (Adriaens

& Mactavish 2004; Lonergan & Mullarney 2004), but is clearly differentiated on the basis of mitochondrial DNA (mtDNA).

As the basis for this decision, the report acknowledged phylogenetic evidence based on analysis of mtDNA sequences, which indicated that the large white-headed gull complex consists of two main clades (see Collinson *et al.* 2008):

- The 'Atlantic' clade, comprising Yellow-legged Gull *L. michahellis* (including races *michahellis* and *atlantis*), Armenian Gull *L. armenicus*, Herring Gull (including races *argentatus* and *argenteus*), Great Black-backed Gull *L. marinus* and Palearctic individuals of Glaucous Gull.
- The 'Aralo-Caspian' clade, comprising Caspian Gull *L. cachinnans*, Lesser Black-backed Gull (including races *fuscus*, *intermedius*, *graellsii*, *heuglini*, *barabensis* and *taimyrensis*) and Kelp Gull *L. dominicanus*. Within this clade an 'Arctic/Pacific' grouping was identified within which they positioned American Herring Gull (including races *smithsonianus*, *vegae* and *mongolicus*), Slaty-backed Gull *L. schistisagus*, Iceland Gull, Glaucous-winged Gull *L. glaucescens* and Nearctic individuals of Glaucous Gull.

These phylogenetic relationships revealed that the large white-headed gulls previously recognised as *L. (a.) vegae* from northeastern Siberia, *L. (a.) mongolicus* from eastern Siberia, eastern Mongolia and northeastern China, and *L. (a.) smithsonianus* from North America fall within the Arctic/Pacific species group of the 'Aralo-Caspian' clade, rather than the 'Atlantic' clade, within which Herring Gull from the eastern North Atlantic resides. BOURC accepted that North American *smithsonianus* and European *argentatus* are not sister taxa and are sufficiently differentiated to be treated as distinct species. In addition, the report recommended that, given their lack of diagnostic differences, *vegae* and *mongolicus* should remain conspecific with *smithsonianus*.

### Status

In the early 1990s, when American Herring Gull was still treated as a race of (European) Herring Gull, and when Britain and Ireland were regarded as a single ornithological unit, the discovery of this 'First for Britain' did not generate the same level of interest that it would do today. There had already been nine records

(14 individuals) of *smithsonianus* in Ireland prior to the discovery of the Ashton's Flash bird and many birders had already made the pilgrimage to Cork City dump and added this race of Herring Gull to their British & Irish List. At the time, probably few would have realised that the Ashton's Flash bird was to become the first British record. Moreover, its position as 'just' a race of Herring Gull probably did little to inspire interest, while there was relatively little information available at that time about the distinctive appearance of American Herring Gull and its separation from its European counterpart. Although Mullarney (1990) reviewed its status in Europe and discussed the identification of several individuals discovered in Ireland during the previous decade, American Herring Gull identification was still poorly understood except by a handful of gull enthusiasts.

#### Other occurrences

Since the early 1990s, several important papers have refined the criteria for identifying *smithsonianus* in Europe, particularly in first-winter plumage. It is not intended to address these criteria here, but for anyone with an interest in American Herring Gull identification, papers by Adriaens & Mactavish (2004), Lonergan & Mullarney (2004) and Adriaens *et al.* (2008) provide a fascinating insight into the problems. American Herring Gull has now occurred in Britain on several occasions, and up to the end of 2007 there had been a total of 16 accepted records. It has been identified with increasing frequency in recent years, with nine of the 16 being found between 2002 and 2007, as field

characters have become better understood. As would be expected for a North American vagrant, the majority of records come from the southwest, including the Isles of Scilly (3), Cornwall (3), Devon (1) and Dorset (1), with the remainder of English records coming from Gloucestershire (1), Cheshire & Wirral (1) and Lancashire & North Merseyside (1). In Scotland, it has been recorded in Argyll (1), Highland (1), Outer Hebrides (2) and offshore (sea area Rockall) (1). In Ireland, since the first in 1986, no fewer than 72 birds have been accepted to the end of 2007 and it is now recorded almost annually there.

#### Acknowledgments

I would like to thank Janet Moore of the Cheshire Salt Museum for helping with my research into the local history of the salt industry.

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**EDITORIAL COMMENT** Bob McGowan, Chairman of BOURC, commented: 'Following the first record of American Herring Gull in Ireland, in Co. Cork in November–December 1986 (as a race of *Larus argentatus*), it was really just a matter of time before this Nearctic breeder would be noticed in Britain, and David Quinn's persistence in scrutinising the flocks of gulls around the flashes and landfill at Northwich certainly paid off.

'The submitted description was of a high standard and fully met the criteria for *smithsonianus*. As there were no escape issues or other doubts on provenance, BOURC unanimously accepted the sight record as the first British occurrence (BOU 1996) and later accepted the Taxonomic Sub-committee's recommendation to treat American Herring Gull as a separate, polytypic taxon (BOU 2008). As identification characters have become better understood, there has been an increase in the frequency of records in Britain, and American Herring Gull appears to be a fairly regular vagrant – one that, like other Nearctic gulls, is prone to influx years.'

Adam Rowlands, Chairman of BBRC, added: 'This account captures the trials and tribulations of winter gull-watching perfectly. When the record was first published in a BBRC Report (*Brit. Birds* 89: 504), the observers were congratulated by both BBRC and BOURC on their excellent, detailed reports.

If anything, our knowledge of the pitfalls surrounding the identification of *L. s. smithsonianus* has increased since the mid 1990s, particularly involving superficially similar examples of 'first-cycle' Herring Gulls (particularly of the form *L. a. argentatus*), and the fact that a proportion of *L. s. smithsonianus* exhibit features that would prevent a confident identification in a vagrant context in Europe. This has ensured that the acceptance criteria for this species remain stringent. Observers fortunate enough to find potential candidates in Britain are reminded to take notes containing as much detail as possible, accompanied by field sketches and preferably photographs to support the submission. At the time of writing, all the accepted British records refer to birds in their 'first-cycle' plumage, but there are pending claims of other ages and we would encourage submissions of such records, even though the identification pitfalls tend to be more exaggerated with older birds.'



www.irishbirdimages.com



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**175 & 176.** American Herring Gull *Larus smithsonianus* has been recorded almost annually in Ireland since the first in 1986, with over 70 accepted records to date. This first-winter was photographed in Nimmo's Pier, Co. Galway, in March 2008.

# Conservation research news

Compiled by James Pearce-Higgins, Nick Wilkinson and  
Rowena Langston



## The phenology of woodland birds

One of the most widely recognised impacts of climate change concerns the phenology of biological events. Since birds tend to time their breeding to coincide with peaks in food availability, climate change has the potential to disrupt this match. Christiaan Both and Marcel Visser, studying Pied Flycatchers *Ficedula hypoleuca* and Great Tits *Parus major* breeding in oak *Quercus* woodland in the Netherlands, have shown that, as spring temperatures increase, the timing of peak caterpillar abundance (the main food for flycatcher and tit broods) has advanced more rapidly than the timing of the birds' breeding seasons. Productivity of both species has fallen, leading to population declines in Pied Flycatchers across a range of Dutch woodlands. Both *et al.* (2009) extended this work by examining changes in phenology from the mid 1980s to 2005 across four trophic levels, from oak trees to caterpillars, passerines and Eurasian Sparrowhawks *Accipiter nisus*.

There was no clear temporal trend in the timing of oak budburst, which had advanced by only 1.7 days per decade, but the timing of peak caterpillar abundance had advanced significantly, by 7.5 days. The response of the caterpillars was generally greater than that of the four passerines studied (Pied Flycatcher, Blue Tit *Cyanistes caeruleus*, Great Tit and Coal Tit *Periparus ater*), which advanced their timing of breeding by an average of 4.2 days per decade. For Blue Tits, the earliest-hatching species, this

appeared to result in a closer match between their peak demand for food and peak caterpillar availability, but for the other passerines the degree of match was reduced. There was no significant change in the timing of Sparrowhawk breeding, which is therefore now also less well matched with peak food availability.

This study provides clear evidence that climate change is resulting in mismatches in timing across different trophic levels within oak woodland. Although the authors did not quantify the likely consequence of this, they discussed whether this general pattern (of more rapid phenological responses by prey than predators) results from an inadequate response of high-level predators to climate change, or an adaptive response of prey, enabling them to escape predation.

It is interesting to speculate how this study might relate to British woodlands, where research suggests that, while Great Tits have thus far matched changes in the phenology of caterpillar abundance, Pied Flycatchers are declining. Given the complexity of climate change impacts, detailed studies across different trophic levels are extremely valuable if conservation scientists are to be able to predict and manage for the consequences of climatic change.

Both, C., van Asch, M., Bijlsma, R. G., van den Burg, A. B., & Visser, M. E. 2009. Climate change and unequal phenological changes across four trophic levels: constraints of adaptations? *J. Anim. Ecol.* 78: 73–83.

## Mortality from mowing implicated in Whinchat declines

Agricultural improvement has resulted in grasslands that are species-poor and cut earlier and more frequently, while technological advances have increased the speed and efficiency

of mowing machines. Although earlier harvesting can cause high nest losses in ground-nesting birds, whether it affects the survival of nesting females directly is unclear because of the

difficulty in finding carcasses and in separating mortality from dispersal or emigration after nest losses. Grübler *et al.* (2008) looked at this issue in relation to Whinchats *Saxicola rubetra*.

Breeding primarily in meadows, Whinchats have declined in the UK (-26% since 1994) and across Europe (-55% since 1980) due to habitat degradation and low productivity of grassland populations. Studying a declining Whinchat population in the Swiss Alps, Grübler *et al.* estimated the survival of adults over two breeding seasons using colour-marked and radio-tagged birds. They found that female survival was significantly lower during the mowing period, with the result that 12% fewer females survived the breeding season than males. Mowing killed two (out of 20) radio-tagged females before the eggs hatched but none afterwards, suggesting that females did not leave the nest while laying eggs or incubating. Over the past two decades, the timing of nest destruction by mowing has shifted from the nestling stage to the pre-hatching stage, with the rate of losses occurring before hatching increasing from <10% in 1988 to >80% by 2007. During this period there was a significant increase in the proportion of territories occupied by unmated males. Including this

additional effect of mowing on female mortality in a mathematical model of the population considerably accelerated the predicted local population decline.

Clearly, interpreting estimates of man-made mortality based on a sample of just two fatalities requires caution, but it does confirm that mowing causes female mortality and is likely to be an important factor in this species' decline in the Swiss Alps. This has some important conservation implications for Whinchats in other agriculturally improved areas. Grassland in breeding habitats should be cut after the nesting period or, if this is not possible, measures to avoid casualties should be trialled. Moreover, low-input management is required to maintain suitable breeding habitats with adequate food availability. Finally, the high proportion of territories with unmated males implies that monitoring based on records of singing males will overestimate the number of breeding pairs and thus may underestimate the extent of population decline.

Grübler, M. U., Schuler, H., Müller, M., Spaar, R., Horch, P., & Naef-Daenzer, B. 2008. Female biased mortality caused by anthropogenic nest loss contributes to population decline and adult sex ratio of a meadow bird. *Biol. Conserv.* 141: 3040–3049.

## Collision fatality of raptors at windfarms

Several major windfarms have been built at Tarifa, in southern Spain, where a series of north–south mountain ranges border the north shore of the Strait of Gibraltar, one of the main landfall areas for migrants arriving from and departing to North Africa. In the latest of several published papers on bird studies at windfarms there, De Lucas *et al.* (2008) analysed avian fatality data collected between November 1993 and June 2003 by a variety of non-standardised searches. Additional field observations recorded the number of birds crossing the turbine rows within 250 m of a turbine.

There was no clear relationship between mortality and abundance: mortality was not greatest in the season with highest bird abundance. All collisions of large birds, 151 in total, were of raptors, most frequently Griffon Vultures *Gyps fulvus* (111) and Common Kestrels *Falco tinnunculus* (19). Significant differences were found in seasonal collision rates: there were more in winter, both for vultures and for other raptors, even though

raptor abundance, especially of Griffon Vultures, was greatest during the pre-breeding period. This may have important implications for collision-risk models, which assume a positive relationship between bird abundance and collision. No significant year-to-year differences in collision rates were found, suggesting that birds did not habituate to the turbines.

Collision mortality was species-specific and topography and weather were important contributory factors. Vultures collided more often when uplift conditions were poor – such as on gentle slopes and when thermals were weak, notably in winter – and when turbines were taller or at higher altitude, because the birds need extra lift to avoid them. No other evidence of association with turbine type was found.

De Lucas, M., Janss, G. F. E., Whitfield, D. P., & Ferrer, M. 2008. Collision fatality of raptors in wind farms does not depend on raptor abundance. *J. Appl. Ecol.* 45: 1695–1703.

# Notes

All Notes submitted to *British Birds* are subject to independent review, either by the Notes Panel or by the BB Editorial Board. Those considered appropriate for BB will be published either here or on our website ([www.britishbirds.co.uk](http://www.britishbirds.co.uk)) subject to the availability of space.

## Balearic Shearwaters in UK and Irish waters between 2004 and 2006

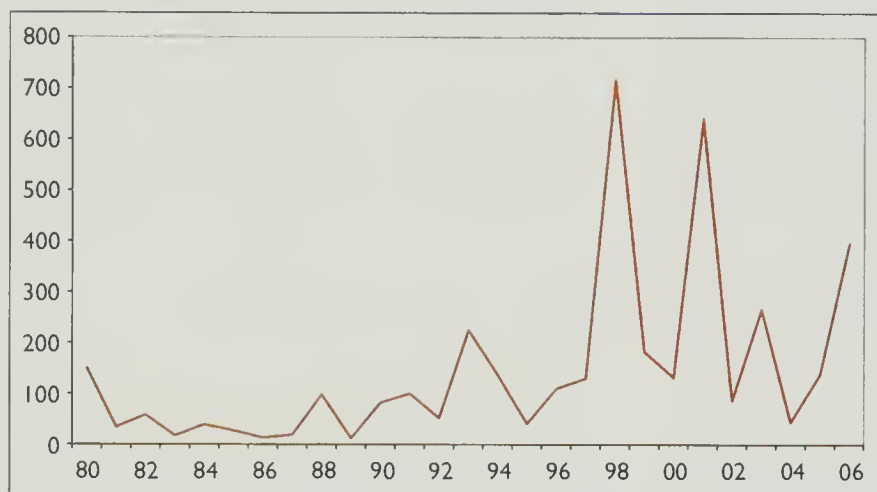
The Balearic Shearwater *Puffinus mauretanicus* is Europe's only Critically Endangered seabird, with the known breeding population of 2,000–2,500 pairs restricted to the Balearic Islands. A recent study (Wynn & Yésou 2007) used sightings data between 1980 and 2003 to highlight the increasing numbers of Balearic Shearwaters recorded in northwest European coastal waters from the mid to late 1990s onwards. That increase was tentatively interpreted to be a function of increasing sea-surface temperature, and subsequent changes in prey-fish distribution and abundance (Wynn *et al.* 2007). More specifically, it seems likely that a

drastic decline in European Anchovies *Engraulis encrasicolus* in the Bay of Biscay (ICES 2008) has led to reduced foraging success in this traditional moulting area, while a moratorium imposed upon the associated anchovy fishery will have reduced the availability of discards (Votier *et al.* 2008). Both of these factors are likely to be contributing to the increased numbers of birds dispersing farther north.

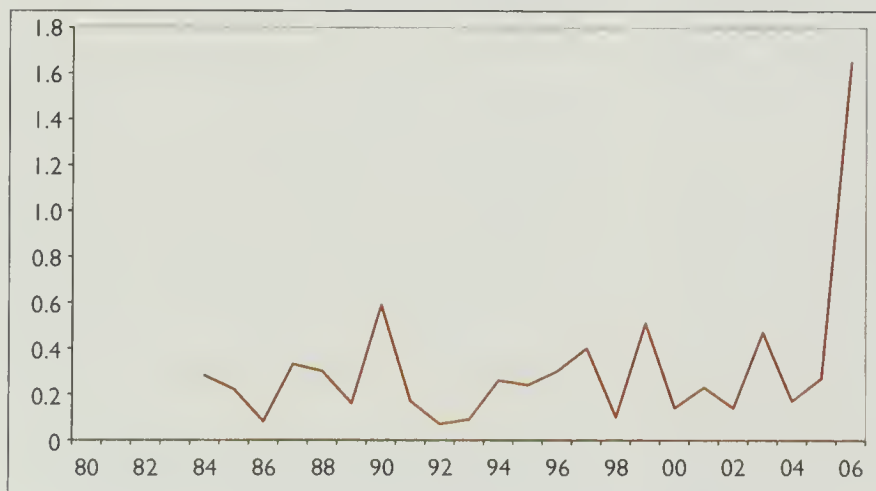
Some authors have argued that the increased numbers of Balearic Shearwaters reported in northwest Europe may, in part, be related to greater observer awareness and more diligent recording (Votier *et al.* 2008), following taxo-

nomic changes that elevated Balearic Shearwater to species status (e.g. Sangster *et al.* 2002). A new project (see [www.seawatch-sw.org](http://www.seawatch-sw.org)) was set up in 2007 to try to improve our understanding of the distribution and abundance of this species in UK and Irish waters. Although interesting results have emerged already, it will require further years of data for a clear picture to emerge. This note is therefore intended to provide a brief update on the status of Balearic Shearwater in the UK and Ireland during 2004–06, bridging the gap between recently published studies and the new Sea-Watch SW dataset. Two long-term datasets are presented, supported by data from other sites.

Wynn & Yésou (2007) showed that records of Balearic Shearwaters off Portland Bird Observatory, Dorset, increased in the late 1990s and have



**Fig. 1.** Annual totals of Balearic Shearwaters *Puffinus mauretanicus* recorded at Portland Bird Observatory, Dorset, 1980–2006. Note that these totals will overestimate the actual numbers of birds involved, as lingering birds will be recorded on multiple dates.



**Fig. 2.** Average rates of birds per hour for Balearic Shearwaters *Puffinus mauretanicus* passing Strumble Head, Pembrokeshire, 1984–2006.

remained relatively high since, albeit with marked year-to-year variability (fig. 1). During 1980–1995, annual totals of 100 or more occurred in just four years, while during 1996–2006 the annual total exceeded 100 in all but two years. The 396 in 2006 was the third-highest total in 1980–2006, with a peak day count of 77 on 12th September. At Strumble Head, Pembrokeshire, intensive recording by Graham Rees (on average, about 400 hours per year between July and December) has taken place from 1984 onwards. This dataset is of particular value as the results can be presented in terms of birds per hour passing offshore (fig. 2). These data show that numbers off Strumble Head have fluctuated annually since 1984, with no obvious trend. Both 2004 and 2005 were relatively poor, while 2006 was an exceptional year for Balearic Shearwaters, with 1.65 birds per hour seen between 3rd August and 11th November, roughly three times more than in any other year. The peak day count in 2006 was 93 on 7th October, which is the largest day total since intensive recording began. As might be expected, the peak years at Strumble Head (1990, 1999 and 2003) are the same as those reported for Wales as a whole by Wynn & Yésou (2007). In general, the marked interannual variability in the number of birds recorded is clear from figs. 1 & 2, although the large numbers in autumn 2006 may indicate a continuation of the overall upward trend.

Additional evidence that 2006 was an exceptional year for Balearic Shearwaters in UK and Irish waters comes from day totals of 100+ birds at several sites during September, including 102 off Berry Head, Devon, on 13th September, 101 off Porthgwarra, Cornwall, on 21st September, and 110 off Bardsey, Caernarfonshire, on 28th September. The *Devon Bird Report* stated that 2006 was a 'record-breaking' year (following two relatively 'poor' years in 2004 and 2005, cf. fig. 1). At Berry Head, 520 birds were recorded in 128 hours of observation between July and October 2006, an exceptional 4.1 birds per hour. At Trevoise Head, Cornwall, where observers logged 154–262 hours of observation per year between 2004 and 2006, a mean of 1.5 birds per hour in 2006 was significantly higher than the 1.0 birds per hour recorded in 2004 and 2005.

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Late 2006 produced further surprises. A count of 77 off Trevoise Head on 31st October was unusually late and highlighted the presence of large numbers lingering off north Cornwall. In November and December, 67 reports were received by [www.birdguides.com](http://www.birdguides.com), with the majority off southwest England but small numbers in the Irish and North Seas. Four off Portland Bill in December were the first-ever site records for that month. The largest numbers were off northwest Cornwall, with a peak of 130 past St Ives and 29 past Trevoise Head on 5th–6th December; this follows a total of 119 counted off Trevoise Head on 11th–13th January 2004. These numbers are unprecedented in midwinter in a UK and Irish context.

Finally, in response to Bill Bourne's letter (*Brit. Birds* 101: 213), there is certainly evidence to suggest that Balearic Shearwaters occasionally visited UK and Irish waters in significant numbers prior to 1980 (see discussion of Portland Bird Observatory's data in Wynn & Yésou 2007). There is, however, no historical evidence for a sustained period of elevated numbers, such as that from the mid to late 1990s, or for significant numbers appearing in midwinter. It appears that climate-driven changes in prey-fish distribution and abundance, and/or associated changes in the availability of discards, are continuing to affect this highly threatened seabird.

#### Acknowledgments

Special thanks go to Martin Cade, Stan Christophers, Mark Darlaston and Graham Rees for providing much of the data used in this article.

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## European Storm-petrels diving for food

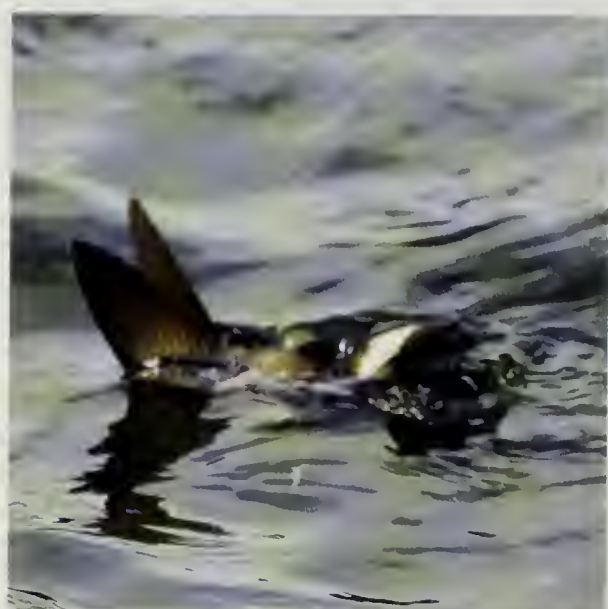
There are several documented sightings of storm-petrels diving to collect food items. Madeiran Storm-petrels *Oceanodroma castro* off the Azores were studied by Bried (2005), who found that the average maximum dive depth was 0.85 m and that such diving was part of typical feeding behaviour. Wilson's Storm-petrels *Oceanites oceanicus* off South Georgia and South Shetlands were seen to make short, shallow dives, timed using video at 1–2 seconds (Flood & Thomas 2007). European Storm-petrels *Hydrobates pelagicus* were recorded diving to collect food items off South Africa by Griffiths (1981).

European Storm-petrels breed on uninhabited islands in the Isles of Scilly, where the most recent population estimate is 1,398

pairs (Heaney *et al.* 2008). Between 2000 and 2008, European Storm-petrels were recorded on every one of more than 350 short-range pelagic trips off Scilly during the breeding season. Storm-petrels were attracted to the vessel using chum, typically of mackerel (several days old) mixed with cod-liver oil, although fish liver seemed particularly attractive to storm-petrels. Prior to August 2008, European Storm-petrels were observed diving for food items on just three or four occasions.

During 9th–10th August 2008, force seven southwesterly winds gave us no option but to drift just a few kilometres off the northeast coast of St Martin's, in the lee of the islands. Even here, the sea state was challenging, with a 3-m

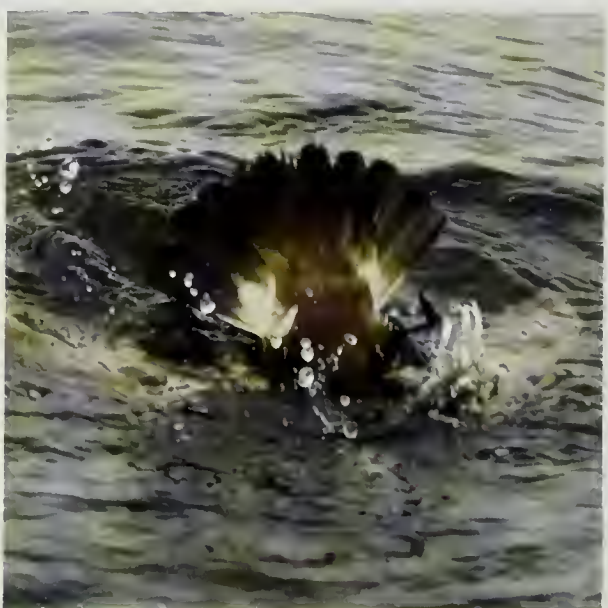
Paul Sterry/Nature Photographers Ltd



Paul Sterry/Nature Photographers Ltd

177 & 178. European Storm-petrel *Hydrobates pelagicus* diving for food, Isles of Scilly, 10th August 2008.

Andrew Cleave/Nature Photographers Ltd



Andrew Cleave/Nature Photographers Ltd

179 & 180. European Storm-petrel *Hydrobates pelagicus* diving for food, Isles of Scilly, 10th August 2008.

swell. A chum of dogfish liver mixed with popcorn was deployed at regular intervals and was quickly churned up in the sea, with many fragments below the surface; we also dripped cod-liver oil. The chum odour dispersed downwind, away from the islands, and on both days European Storm-petrels arrived in force, building into uncountable numbers that we estimated at 500+.

We noted that many of the European Storm-petrels were diving to collect fragments of dogfish liver below the surface. Some dived close to the vessel, making it possible to watch them swim underwater. Gauging dive depth was difficult, but dives probably did not exceed 0.5 m. Assessing horizontal distance travelled was confounded by drift, though most birds appeared to surface near the dive point, with a few travelling possibly up to 1 m. Video footage taken on 10th August captured 16 incidents of

diving where the whole body was submerged, and two examples of partial submersion. The video permitted timing of the full-submersion dives to the nearest 0.04 seconds and showed them to vary between 0.72 and 1.96 seconds, with a mean of 1.28 seconds (standard deviation 0.48,  $n=16$ ). It seems likely that the particular combination of sea conditions and type of chum used produced the unusually high frequency of dives observed on these trips.

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## A newly discovered colony of European Storm-petrels in Italy

On 31st May 2008, on the north coast of Lampedusa Island (a small island in the Mediterranean, about 20 km<sup>2</sup> in extent, c. 120 km from Tunisia and c. 195 km from Sicily, Italy), I noticed the characteristic musty odour associated with a storm-petrel breeding colony. The avifauna of Lampedusa is well known, and Moltoni (1970) found just one nest of European Storm-petrel *Hydrobates pelagicus*, on the neighbouring islet of Lampione, 18 km ENE of Lampedusa.

On 6th June 2008, I returned to the site, a large cave, at night and discovered a large colony of European Storm-petrels breeding in small cavities in the cave walls. Although I could not estimate the total number of birds present, many tens of individuals were entering the cave and milling around at the cave entrance. Subsequent daytime visits in August 2008 failed to provide any further information on numbers present.

Two subspecies of European Storm-petrel occur in Europe, distinguishable in terms of both biometrics and genetics: nominate

*pelagicus* breeds in the eastern North Atlantic, while *H. p. melitensis* (see editorial comment, below) is restricted to a small number of islands in the Mediterranean. The latter is characterised by its larger size and the fact that it breeds at a younger age, including some at one year old (Hemery & D'Elbée 1985; Catalisano *et al.* 1988; Bretagnolle 1992; Lo Valvo & Massa 2000; Lalanne *et al.* 2001; Cagnon *et al.* 2004). The population is much smaller than that of the North Atlantic, believed to be in the range of 8,500–15,200 pairs, compared with 430,000–510,000 pairs in the North Atlantic (BirdLife International 2004). The breeding range of *H. p. melitensis* includes the Balearic Islands (1,800–4,000 pairs), Corsica (c. 100 pairs), Sardinia (c. 500 pairs, including c. 300 pairs on a single islet off the northwest coast; Paddau *et al.* 1997), Sicily (1,700–2,500 pairs, mostly on the island of Marettimo; Lo Valvo & Massa 2000, Albores-Barajas *et al.* 2008), and Filfla, Malta (5,000–8,000 pairs), together with

small numbers on other islets in the region (e.g. Lo Cascio 1994; Ientile & Massa 2008).

European Storm-petrel is considered to be of Least Concern by BirdLife International (2004), but the restricted range and small population of *H. p. melitensis*, combined with a large decline in numbers in recent years, has resulted in it becoming threatened in the Mediterranean basin. This is mainly due to habitat degradation and the introduction of predators, including rats and domestic cats (Massa 2006). Considering the rarity of the Mediterranean subspecies and the scarcity of its colonies, the discovery of a previously unknown colony on Lampedusa is important for the conservation of this taxon. Moreover, urgent action is required to reduce disturbance at the remaining colonies and to minimise the effects of predation. Since European Storm-petrel is nocturnal when visiting breeding colonies, and has certainly been overlooked in the past, other unknown breeding colonies may exist in similar situations elsewhere in the Mediterranean.

#### Acknowledgments

I would like to thank Giusi Nicolini and the staff of the Nature Reserve and of the Protected Marine Area of Lampedusa Island who agreed to allow me to visit the cave. I also thank Angelo Dimarca and Tommaso La Mantia for their contribution.

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**EDITORIAL COMMENT** BOURC presently considers European Storm-petrel to be a monotypic species, although in view of evidence showing that *H. p. melitensis* is genetically, acoustically and biometrically distinct, this may be subject to review.

*Eds*

## Common Buzzard playing with plastic bag

One afternoon in July 2008, I saw a Common Buzzard *Buteo buteo* circling over Penton Copse, near Hatherden, Hampshire, a place where I see this species regularly. This individual was some 300–500 m high in the sky and, having stopped the car, I realised that the bird was 'playing' with

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a plastic carrier bag. The bag was filled with air and thus acted like a small sail. The buzzard let it fall for some 20 seconds or so, followed it down, then caught it and regained height before repeating the procedure. This routine was repeated about ten times.

#### Lawrence Leask

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# Reviews

## AVES DA AMAZÔNIA BRASILEIRA/BIRDS OF AMAZONIAN BRAZIL

By Tomas Sigrist. *Avis Brasilis*,  
2008. 470 pages; 204 colour  
plates; several line-drawings;  
numerous colour maps.  
ISBN 978-85-60120-04-8.  
Paperback, £34.99. Available  
in the UK exclusively from  
NHBS [www.nhbs.com](http://www.nhbs.com).

A companion to Sigrist's own *Birds of Eastern Brazil* field guide (see *Brit. Birds* 102: 40), this book illustrates the 1,000+ species in Brazilian Amazonia. Its geographical ambit is the states of Amapá, Amazonas, Maranhão, Mato Grosso, Rondônia, Roraima, and Tocantins, many of which have not been common 'stomping grounds' for visiting birders, apart from tiny parts of Mato Grosso (e.g. Alta Floresta) and Amazonas (e.g. Manaus). As the layout, and many of the positives and negatives, of this guide mirror the eastern Brazil book, readers are referred to my earlier review for a general résumé.

Compared to the *Birds of Eastern Brazil*, wherein 21 plates were by Eduardo Brettas, whose depictions I much commended,

here 32 are entirely by him, with another eight partially his work. Especially pleasing are his raptors, nightbirds, jacamars (Galbulidae), puffbirds (Bucconidae) and woodpeckers (Picidae). Sadly, Sigrist's own plates (the great majority of the overall total) remain underwhelming. Those fortunate to penetrate far-western Amazonian Brazil will probably prefer to carry the *Birds of Peru* (Schulenberg *et al.* 2007, Princeton/A&C Black) over the present work. Lack of vocalisation data remains another significant negative (especially given the vocal complexity *within* many species, whose songs vary across major, and even some minor, rivers).

Maps are important in guides such as this and yet, while the cartography of those in this book is praiseworthy, their accuracy is compromised. Given that, even now, very few comprehensive avifaunal inventories have been attempted in Brazilian Amazonia, with huge areas effectively unsampled, authors of guidebooks will obviously rely on a broad-brush approach to mapping ranges. But, where published data exist, one expects them to be utilised. Sadly, there are sufficient examples to suggest that this has been

attempted only patchily (and the same was, to a lesser extent, true of the earlier guide). This is particularly obvious for Kaempfer's Woodpecker *Celeus obrieni* and Manu Antbird *Cercomacra manu* (neither mapped for Tocantins), Purple-breasted Cotinga *Cotinga cotinga* (not mapped for southwest Amazonia) and Buff-cheeked Tody-Flycatcher *Poecilotriccus senex* (records from Rondônia missed), while quite a number of species known from the Serra dos Carajás, Pará, are not shown as occurring there, among them Black-and-white Tody-Tyrant *P. capitalis*. And this point cannot extend to the many data not yet published, which will substantially advance our knowledge of avian distributions in Amazonia. In sum, the maps can only be seen as a 'guide'.

Criticisms aside, Sigrist's book is still the best devoted to Amazonian Brazil, although those birding the region's margins may prefer one of the superb guides covering some of Brazil's neighbours. An in-depth and well-illustrated guide to the land of football, samba and 'dental floss' bikinis is still a dream.

Guy M. Kirwan

## COLLINS FIELD GUIDE – BIRDS OF THE PALEARCTIC: NON-PASSERINES

By Norman Arlott. Collins,  
London, 2009. 240 pages;  
80 colour plates; numerous  
distribution maps.  
ISBN 978-0-00-715565-1.  
Hardback, £25.00.

This is the second part of a two-volume treatment of all the birds of the Palearctic region. The first volume, dealing with the passerines, was published in 2007 (see *Brit. Birds* 101: 43).

This second volume follows an identical format to the first, comprising a short introduction

and very brief sections (a page or less) on the area covered, nomenclature, identification and bird topography. The meat of the book consists of 80 colour plates containing illustrations in a standard field-guide style, all the birds facing right to left. Opposite each plate is a text page, again in a traditional format. Each text section comprises four segments: 'Field Notes', 'Song/Call', 'Habitat' and (for some species) 'Races'. The book's final section comprises maps, showing summer, winter and resident distributions. The definition of the Palearctic is that given by Beaman (1994, *Palearctic Birds*, Harrier Publications), and vagrants to the region are included, even Eskimo Curlew *Numenius*

*borealis*. The species order is 'traditional', starting with Ostrich, divers and grebes.

One's first impression of the text is that, with around 10, and sometimes as many as 14, species per page, the space per species is tiny. Within each 'Field Notes' section there is room for little more than one or two short sentences. For species whose identification is in any way difficult, this book therefore offers little help. For example, the entire identification text for Yellow-legged Gull *Larus michahellis* reads 'Actions, habits and upperwing pattern very similar to Herring Gull.' To make matters worse, only adult breeding and non-breeding plumages are described, juvenile and first-winter

plumages being only rarely mentioned. For many species, therefore, the very plumage most likely to be encountered is not described at all. The text is also plagued by simple errors. For example, we are told that Canary Islands Oystercatcher *Haematopus meadewoldoi* is 'Probably extinct', despite it having been officially declared so 15 years ago. Conversely, Crested Ibis *Nippouia uippou* is described as 'Endangered (Extinct?)' whereas it is well known to be very much alive in China's Shaanxi Province. In both text and map, Dalmation [*sic*] Pelican *Pelecaus crispus* is incorrectly spelt.

Despite the book's commendable attempt to cover the major races, its choice is somewhat arbitrary. While the three forms of Black-tailed Godwit *Limosa limosa* are noted, those of other polytypic waders such as Lesser Sand Plover *Charadrius uougolus* are not. Even some extremely well-defined forms are not mentioned, most notably 'Pale-bellied' Brent Goose *Branta beruicla hrota*. Within the large-gulls complex, there is no mention at all of Steppe Gull *L. barabeusis* or Mongolian Gull *L. uougolicus*. For Whimbrel *Nuuenius phaeopus*, the Nearctic vagrant form *hudsonicus* is listed but there is no mention of the Palearctic forms *alboaxillaris* and *variegatus*. There is no mention of

other Nearctic vagrant taxa such as Wilson's Snipe *Gallinago delicata*. The book's taxonomy is also somewhat conservative, for example Caspian Gull *L. cachiuuuus* is mentioned briefly within Yellow-legged Gull.

The maps are bright and clear but, unfortunately, it is easy to find errors. The mapped winter ranges of Hooded Crane *Grus uouuachia* and White-naped Crane *G. vipio* do not include Japan, even though the majority of the world population of both species winters on Kyushu. The map for Marbled Murrelet *Brachyruaphus uaruoratus* actually illustrates that of Long-billed Murrelet *B. perdix*. The map of Fea's Petrel *Pterodroua feae* omits its breeding colonies on the Cape Verdes. Conversely, the map for Zino's Petrel *P. madeira* shows (incorrectly) a breeding presence on the Cape Verdes and an absence from its actual breeding site on Madeira. The map for Yellow-legged Gull shows the breeding range of Caspian Gull but not that of Yellow-legged Gull; it also shows a separate breeding distribution corresponding to the range of Mongolian Gull, a form which is completely unmentioned. These are far from being the only errors.

As with all field guides, the plates are perhaps the most important part. Despite being a little cluttered, these are on the

whole very pleasing, as one would expect from this artist. However, only adult breeding and non-breeding plumages are depicted. For groups such as waders, gulls (Laridae) and skuas (Stercorariidae) this is a serious problem. For Long-tailed Skua *Stercorarius longicaudus*, the plate therefore shows a dark-morph adult, whose existence remains unproven, but no juvenile! There is no illustration of Caspian Gull, yet room is found for a dark-morph Rough-legged Buzzard *Buteo lagopus*, a form found only in the (unmentioned) Nearctic vagrant form *sancti-johannis*.

On a positive note, this book does provide illustrations of a large number of species in a very small space and is the only field guide to encompass the whole of the Palearctic. This is in itself a significant achievement. However, there is simply too little space to do justice to the subject matter. Ultimately, it is hard to imagine who would use a field guide to the whole of the Palearctic when so many much better national and regional guides exist. Combine these basic problems with an arbitrary and dated taxonomy and numerous errors, and most readers will conclude that their money would be better spent elsewhere.

Andy Stoddart

#### ALSO RECEIVED:

##### THE BIRDS OF SPURN PENINSULA: A COMPREHENSIVE CHECKLIST

By G. Neal.

Spurn Bird Observatory Trust, 2008.

2nd edn. 115 pages; maps, drawings and diagrams.

ISBN 978-0-9538588-9-7.

Paperback; £11.50 inc. p&p from the Warden, Spurn BO, Kew Villa, Kilnsea, East Yorkshire HU12 0UB.

An update of the 1996 edn.

##### WHERE TO WATCH BIRDS IN YORKSHIRE

By John R. Mather.

Christopher Helm, A&C Black, London, 2008.

3rd edn. 320 pages; many maps and line-drawings.

ISBN 978-0-7136-8782-8.

Paperback, £16.99.

##### WHERE TO WATCH BIRDS IN DEVON AND CORNWALL

By David Norman and Vic Tucker.

Christopher Helm, A&C Black, London, 2009.

5th edn. 384 pages; many maps and line-drawings.

ISBN 978-0-7136-8814-6.

Paperback, £16.99.

##### HAWKWATCH: NORTH COTSWOLDS TO COASTS 1988–2006

By Mark E. Turner.

Trafford Publishing, Victoria BC, 2008.

166 pages; one colour and several black-and-white illustrations.

ISBN 978-1-4251-4151-6.

Paperback, £10.50.

# News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

## More birds on the Critical list

More birds are at risk of extinction than ever before: the latest Red List of threatened species lists 192 species as Critically Endangered, two more than last year's total.

A total of 1,227 species (12% of the world total) are classed as Globally Threatened in the annual review published by BirdLife on behalf of the International Union for the Conservation of Nature (IUCN) (see [www.birdlife.org/extinction/CR\\_list.html](http://www.birdlife.org/extinction/CR_list.html)). Sidamo Lark *Heteromirafra sidamoensis* from the Liben Plain of southern Ethiopia has been upgraded to this category owing to changes in land use, and is in danger of becoming mainland Africa's first bird extinction. A recent paper in the African Bird Club Bulletin (Vol. 15: 2, September 2008) highlights the plight of Sidamo Lark, whose world range is tiny – 50 square kilometres – and whose population is 250 individuals, at most.

A recently discovered hummingbird from Colombia – Gorgeted Puffleg *Eriocnemis isabellae* – appears for the first time on the BirdLife/IUCN Red List, as Critically Endangered. The puffleg has only 1,200 ha of habitat remaining in the cloud forests of the Pinche mountain range in southwest Colombia and 8% of this is being damaged every year to grow coca. And, coinciding with the 200th anniversary of Charles Darwin's birth, one of the Galapagos finches, Medium Tree-finch *Camarhynchus pauper*, also becomes Critically Endangered, partly as a result of parasitism by an introduced fly.

But it's not only rare birds that are becoming rarer, common birds are becoming less common. In eastern North America, Chimney Swift *Chaetura pelagica* is fast disappearing from the skies. Following continent-wide declines

of nearly 30% in the last decade alone, this common species has been 'uplisted' to Near Threatened.

'Across Africa, widespread birds of prey are also disappearing at an alarming rate and emblematic species such as Bateleur [*Terathopius ecaudatus*] and Martial Eagle [*Polemaetus bellicosus*] have been uplisted as a result. These declines are mirrored in many species, in every continent,' said Jez Bird, BirdLife's Global Species Programme Officer.

Happily, it's not all doom and gloom. Conservation *does* work and there are some great examples in this year's Red List. In Brazil, Lear's Macaw *Anodorhynchus leari* has been downgraded from Critically Endangered. Named after the English poet Edward Lear, this spectacular blue parrot has increased four-fold in numbers as a result of a joint effort by many national and international non-governmental organisations, the Brazilian Government and local landowners. Meanwhile, in Mauritius, the stunning Mauritius Fody *Fondia rubra* has been rescued from the brink after the translocation and establishment of a new population on a predator-free offshore island. It has now been reclassified as Endangered. Similar work is now also underway for 32 Critically Endangered species as part of the BirdLife Preventing Extinctions Programme.

Nonetheless, Simon Stuart, Head of IUCN's Species Survival Commission, observed: 'It's extremely worrying that the number of Critically Endangered birds on the IUCN Red List continues to increase, despite the number of successful conservation initiatives around the world... The IUCN Red List is the global standard when it comes to measuring species loss so we urge

governments to take the information contained in it seriously and do their level best to protect the world's birds.'

In total, nine species have been upgraded to Critically Endangered: Flores Hawk-eagle *Spizaetus floris*, Nightingale Reed-warbler *Acrocephalus luscinius*, Marquesan Kingfisher *Todiramphus godeffroyi*, Crow Honeyeater *Gymniomyza aubryana*, Medium Tree-finch, \*Palila *Loxioides bailleui*, Sidamo Lark, plus Gorgeted Puffleg and Antioquia Brush-finch *Atlapetes blancae*, which are newly described and Critically Endangered. Six species have been downgraded to Endangered: Chestnut-bellied Hummingbird *Amazilia castaneiventris*, Minas Gerais Tyrannulet *Phylloscartes roquettei*, Kaempfer's Tody-tyrant *Hemitriccus kaempferi*, Mauritius Fody, Chatham Petrel *Pterodroma axillaris*, Lear's Macaw and one has been reclassified from Critically Endangered to Not Recognised (Bulo Burti Boubou *Laniarius liberatus*, as a new review of molecular-sequence data has shown it to be a colour-morph of the Somali Boubou *L. erlangeri*).

Closer to home, there are still six species classified as Critically Endangered that occur or have occurred in the Western Palearctic: Balearic Shearwater *Puffinus mauretanicus*, Siberian Crane *Grus leucogeranus*, Sociable Lapwing *Vanellus gregarius*, Slender-billed Curlew *Numenius tenuirostris*, Raso Lark *Alauda razae* and Azores Bullfinch *Pyrrhula uurina*.

\*Palila is a large finch found in Hawaii and becomes the 13th Critically Endangered species for those islands, making them the world's biggest extinction hotspot for birds.

## DNA database of the innocent

Just as the UK Government is forced to destroy DNA samples from people who have not been convicted of a crime, Nottingham Trent University has started to compile its own DNA database of innocent... birds of prey. Geneticists are working in collaboration with the Nottinghamshire Wildlife Trust and Nottinghamshire Police to develop a library of genetic fingerprints for the local Peregrine Falcon *Falco peregrinus* and Northern Goshawk *Accipiter gentilis* populations. The collaboration – thought to be the first of its kind in the UK – will catalogue DNA profiles extracted

from feathers, swabs, droppings and even eggshells. The database will be used to cross-reference DNA samples collected by Wildlife Trust staff and police officers during investigations into suspected thefts of chicks and eggs.

The DNA profiles will not only help to identify individual birds but could also help in identifying their parents. In instances where eggs, chicks or droppings are found in suspicious circumstances (such as in an aviary), the DNA collected could point investigators to parent birds that are on the database. This evidence would help in dismissing any claims from suspects that the

birds had been bred and reared in captivity.

All known nesting pairs of Peregrines and Goshawks in Nottinghamshire – and their chicks – will be profiled. The work has already begun in the 2009 breeding season. Andy Lowe, from the Nottinghamshire Wildlife Trust, said: 'We're delighted that Nottingham Trent University has the local expertise and facilities that are needed to make this DNA database a reality. Our work will hopefully act as a benchmark for other schemes and initiatives across the country.'

## Waiting for the Cahows to come home

The first Bermuda Petrel *Pterodroma cahow* chick to be born on Nonsuch Island, Bermuda, for almost 400 years has hatched recently, the result of a successful translocation programme. The Bermuda Petrel (also known as the Cahow) once numbered in the tens of thousands before the island's discovery by the Spanish in the early 1500s. The Cahow changed Bermuda's history, as the ghostly sounds made at night by the island's huge Cahow population so frightened the superstitious Spanish sailors that they thought Bermuda was inhabited by devils and never settled there. However, although they didn't settle, they left pigs on the island as food for shipwrecked sailors.

Over the next 100 years, the pigs destroyed almost 90% of the Cahow population, rooting up the birds' nest burrows and eating eggs, chicks and adult birds. By the time the English settled in Bermuda in 1609, the Cahows survived only on remote islands. As a result of predation by rats, cats and dogs brought to Bermuda by early settlers, and hunting by the settlers themselves, the remaining Cahows disappeared quickly, and were thought to be extinct by the 1620s. No Cahows were seen between 1620 and 1951, when a few breeding pairs were discovered nesting on some of the smallest and most remote rocky islands.

'I cannot think of a more appropriate success story for the 400th anniversary of the settlement of Bermuda, as the Cahow practically saved the early settlers – but then they almost became extinct because of them!' said Dr David Wingate, who has devoted 50 years of his life to saving the species. After all the rats had been removed from Nonsuch Island, 105 Cahow chicks were moved there between 2004 and 2008 in the hope of establishing a new predator-free breeding population. In 2008, the first of these now fully-grown Cahows returned to nest burrows on Nonsuch. Four Cahows, identified by their tags as leaving Nonsuch in 2005, were recaptured prospecting for nests and now a pair has successfully bred. 'I'm hopeful that next year we will see more chicks born on Nonsuch and we will then truly have secured a major victory in ensuring the future survival of this most extraordinary bird,' said Jeremy Madeiros, Conservation Officer for the Bermuda Department of Conservation Services.

## A century of ringing

*BB* celebrated its centenary in 2007. Now another lasting legacy from visionary *BB* founder Harry Witherby has reached the same milestone: bird ringing.

On 8th May 1909, the first bird to be fitted with a numbered ring in Britain – a Northern Lapwing *Vauellus vauellus* – was caught and ringed by ornithologists at Aberdeen University. The Aberdeen scheme was devised by Arthur Landsborough Thomson in the same year as the *BB* scheme started; the BTO has administered the national ringing scheme since 1937.

In the past century, 36 million birds have been 'processed' by BTO ringers (who currently ring approximately 800,000 birds per year); and those 36 million rings have used an incredible 11.3 tonnes of metal! The first British-ringed bird to be found abroad was also a Scottish Lapwing, found in France. Since then, British-ringed birds have been found across the globe, some in very unusual circumstances. They've been eaten by crocodiles in the Gambia (Osprey *Pandion haliaetus*), by Chimpanzees in zoos (Common Buzzard *Buteo buteo*), caught by African spiders (Reed Warbler *Acrocephalus scirpaceus*), hit whaling ships in snowstorms (Arctic Tern *Sterna paradisaea*), been hit by golf balls (gulls and ducks) and even died after getting their bill stuck in the hem of a blanket (Barn Owl *Tyto alba*)!

Congratulations to the BTO for steering the Ringing Scheme to this major milestone. An article currently in preparation for *BB* will provide a more detailed look at a centenary of ringing.

## Three times more IBAs for Lebanon

The Society for the Protection of Nature in Lebanon and A Rocha Lebanon have just completed a three-year search for new Important Bird Areas (IBAs) in a country important for many birds – such as migratory soaring birds, species with restricted ranges, and overwintering waterbirds.

The recent survey work has more than tripled the number of IBAs in Lebanon; previously, just four sites had been recognised as IBAs. One newly identified IBA – the Beirut River Valley – covers over

8,000 ha of riverside, woodland, cultivated ground and high clifftops. During migration periods, more than 70,000 soaring birds fly through the Beirut River Valley IBA, including White Storks *Ciconia ciconia*, Honey-buzzards *Pernis apivorus*, and Lesser Spotted Eagles *Aquila pomarina*. Many migratory soaring birds funnel through Lebanon, where they run the risk of problems such as illegal hunting, water pollution and habitat loss.

Working together, teams of

researchers from the two organisations made a total of 320 visits to sites thanks to generous funding from the MAVA trust. Thousands of bird records were then compared against BirdLife's global IBA criteria resulting in the identification of nine new IBAs of global significance and two of regional significance, with additional funding to support documentation in a database provided by the UK Government's Darwin Initiative.

## OSME summer meeting

The OSME (Ornithological Society of the Middle East) summer meeting will be held on Saturday 18th July at BTO HQ, The Nunnery, Thetford, Norfolk. Doors open at 10.00 hrs and the speakers include Richard Bonser, Bas van den Boogaard, Steve Cale, Dominic Harmer, Ian Harrison, Menno Hornman and Richard Porter, covering northern Cyprus, Iran, Kuwait, Oman and Yemen, among others. Join us for dinner at the Crown in Mundford afterwards. Contact [secretary@osme.org](mailto:secretary@osme.org) for further details.

(Contributed by Ian Harrison)

## County Recorders update

At opposite ends of the country, there are new Recorders in both Scilly and Shetland. Nigel Hudson (Post Office Flat, St Mary's, Scilly TR21 0LL; [nigel-hudson1@tiscali.co.uk](mailto:nigel-hudson1@tiscali.co.uk)) has taken back the reins from Chris Langsdon on Scilly while, in Shetland, Mark Chapman (55 Leaside, Firth, Mossbank, Shetland ZE2 9TF; 01806 242401; [msc.1@btinternet.com](mailto:msc.1@btinternet.com)) has taken over from Paul Harvey.

## Sparrow burns the house down

A hitherto unsuspected cause of the catastrophic decline of the House Sparrow *Passer domesticus* may have been discovered in Lincolnshire: smoking in bed. The habit came to light after a fire at a shop that caused £250,000-worth of damage. At first Paul Sheriff, who runs Crescent Stores in Leasingham, Lincolnshire, was at a loss as to what caused the blaze. An investigation immediately after the fire found no electrical or gas faults. But six weeks later, Mr Sheriff was told by insurance investigators that they had discovered 35 cigarette ends in the roof. Their conclusion was that a sparrow must have picked up a smouldering butt to feather its nest in the roof's eaves, causing the blaze. Mr Sheriff, a non-smoker, was less than impressed...

## Thanks, Len

In December 1996, the first instalment of the Conservation Research News feature appeared in *BB*. That first write-up, compiled by Mark Avery and Rhys Green, set the scene for the series as a whole, covering a diversity of topics including White-tailed Eagle *Haliaeetus albicilla* reintroductions, Red Kites *Milvus milvus* and forestry, and counting Dunlins *Calidris alpina* from space. CRN has always been provided by the RSPB's Research (now Conservation Science) Department, and has become well established as a regular feature in *BB*. For many years (at least eight, which is how far back the current editor can remember), Len Campbell has co-ordinated this feature on behalf of RSPB, using his not inconsiderable reserves of charm and persuasion to cajole a great many people into summarising a piece of interesting work with a conservation research theme. Len retired at Easter this year and the contribution on pp. 348–349 was the last that he put together. Len, on behalf of our readers, we are extremely grateful for your efforts down the years, and we wish you a happy and bird-filled retirement; many thanks. Len's successor is Guy Anderson, also based at Sandy as part of the Conservation Science Department; we welcome Guy and very much look forward to CRN continuing as a key feature in *BB*.

Eds

## Correction

In the May issue, on p. 270, there is a minor error in the description of second-year Common Buzzards *Buteo buteo*. The third sentence of that section should have read 'Retained greater coverts often contrast markedly with replaced feathers, which are longer and darker.' Typically it is the feathers in the centre of the tract which are retained and which show most contrast (as shown in plates 134 & 135).

# Recent reports

Compiled by Barry Nightingale and Eric Dempsey

This summary of unchecked reports covers early April 2009 to early May 2009.

**Headlines** As a whole, the period had a decidedly southern or southeast European feel, with spring overshoots including a long-awaited Crested Lark at Dungeness, an unprecedented influx of Whiskered Terns in the Midlands, a Collared Flycatcher at Portland, a Black-winged Pratincole in Kent and a scatter of Black Kites, Red-footed Falcons, Alpine Swifts, Red-rumped Swallows (especially), Subalpine Warblers and Woodchat Shrikes. In addition, a long-staying Pallid Swift at Seaforth and an Eastern Bonelli's Warbler at Portland were notable. At the end of the period, a remarkable run of American vagrants appeared in Shetland, headlined by Britain's second or third Brown-headed Cowbird (there was an unconfirmed report of one in Norfolk the day before the Fair Isle bird), with a supporting cast of various ducks, gulls and a Solitary Sandpiper.

**Black Duck** *Anas rubripes*, Loch of Hillwell (pair), 9th May, then Scatness (both Shetland), 11th May. **Blue-winged Teal** *Anas discors* Pat Reddan's Lake (Co. Tipperary), 22nd April. **Ferruginous Duck** *Aythya nyroca* Long-stayer at Chew Valley Lake (Avon) to 8th May; Rookery Clay-pit (Bedfordshire), 23rd April; Livermere Lake (Suffolk), 28th April. **Lesser Scaup** *Aythya affinis* Long-stayer at Cardiff Bay Wetlands (Glamorgan) to 2nd May; Bracklagh Lough (Co. Cavan), 13th April; Hornsea Mere (Yorkshire), 13th–22nd April; Blair Drummond (Forth), 15th–18th April; Clea Lakes (Co. Down), 16th April. **King Eider** *Somateria spectabilis* Two long-stayers at Drumcliffe Bay (Co. Sligo) to 14th April; Loch of Strathbeg (North-east Scotland), 4th May.

**White-billed Diver** *Gavia adamsii* Little Loch Broom (Highland), long-stayer to 28th April; North Ronaldsay (Orkney), 15th April; Lewis

(Outer Hebrides), two, 18th–19th April, one 25th–29th, and two 30th April; Mousa (Shetland), 26th April; Burghead (Moray), 1st–3rd May; Loch Gairloch (Highland), 3rd May; Mull (Argyll), 8th May.

**Little Bittern** *Ixobrychus minutus* St Mary's (Scilly), 10th May. **Cattle Egret** *Bubulcus ibis* Records from Cambridgeshire (three), Cheshire & Wirral, Co. Cork (at least 20), Cornwall (including six together at Hayle), Devon (up to five), Dorset (two), Lancashire & N Merseyside (two), Leicestershire & Rutland, Pembrokeshire and Sussex. **Great White Egret** *Ardea alba* Records from Cambridgeshire (two), Ceredigion, Cleveland, Clyde, Co. Cork, Dorset (two), Greater London, Hampshire, Norfolk, North-east Scotland, Northumberland, Powys, Shetland, Somerset and Suffolk.

**Black Kite** *Milvus migrans* Seaford, 14th April and Lancing (both Sussex), perhaps same, 15th April; St Martin's (Scilly), 16th April; Margate, 20th April and Westenhanger (both Kent), presumed same, 22nd April; Sandwich/Channerwick area, 27th–29th April, then Fladdabister (all Shetland), 5th May; Braxted (two) 3rd, Weald Bridge 4th and 8th and Boughton Street (all Essex) 9th May; Knotley 3rd, Haysden Lake 4th, Bough Beech Resr 4th and Glynde (all Kent) 5th May; Stowupland (Suffolk), 3rd



181. Adult Franklin's Gull *Larus pipixcan*, Sullom, Shetland, May 2009.

Jim Nicolson

May; Romford (Greater London), 5th and 7th May. Red-footed Falcon *Falco vespertinus* Kelling (Norfolk), 24th April; Portland (Dorset), 25th April; Cockerington (Lincolnshire), 27th April; Hastings CP (Sussex), 2nd May; Holkham 4th, Cley 5th, Holme and Titchwell 6th, Stiffkey 7th and 9th, and Hellesdon (all Norfolk) 7th May; Margate, 8th May. Gyr Falcon *Falco rusticolis* Middleton area (Co. Cork), 13th April.



Steve Young/Birdwatch

182. Pallid Swift *Apus pallidus*, Seaforth, Lancashire & N Merseyside, May 2009.

Black-winged Stilt *Himantopus himantopus* Maxey GP

(Cambridgeshire), 25th April; Deeping St James (Lincolnshire), 25th April. Black-winged Pratincole *Glareola nordmanni* Reculver (Kent), 10th May. American Golden Plover *Pluvialis dominica* Long-stayer Breydon Water (Norfolk), until 18th April. Semipalmated *Calidris pusilla* or Western Sandpiper *Calidris mauri* Bowling Green Marsh and Dawlish Warren (Devon), 4th–9th May. Long-billed Dowitcher *Limnodromus scolopaceus* Long-stayer at Dundalk (Co. Louth), to 25th April; Shannon Lagoons (Co. Clare), 13th April; Islay (Argyll), 26th April. Solitary Sandpiper *Tringa solitaria* Foula (Shetland), 6th and 9th May. Lesser Yellowlegs *Tringa flavipes* Heybridge Basin/Malden (Essex), to 23rd April; Pegwell Bay 25th and Sandwich Bay (both Kent), 26th April; Islay, 26th April.

and eight to 26th April. Some/all of following may relate to the Willington group: Frampton/Slimbridge (Gloucestershire), 25th; two, Saltholme Pools (Cleveland), 26th; Long Eaton (Derbyshire), 26th; five, Croxall Lakes (Staffordshire), 26th; three, Rutland Water (Leicestershire & Rutland), 27th April; Paxton (Cambridgeshire), 27th–29th April. Also Quoile Pondage (Co. Down), 26th April; Bowness-on-Solway (Cumbria) and Seafield (Dumfries & Galloway), 10th May. Forster's Tern *Sterna forsteri* Nimmo's Pier (Co. Galway), long-stayer to 22nd April; Tacumshin Lake, 2nd–4th May.

Snowy Owl *Bubo scandiacus* On the Outer Hebrides, a long-stayer on North Uist until 28th April plus records on St Kilda, 30th April, and Lewis, 9th May; Gwithian (Cornwall), presumed

Laughing Gull *Larus atricilla* Foula, 6th May. Franklin's Gull *Larus pipixcan* Sullom, Shetland, 11th–12th May. Bonaparte's Gull *Chroicocephalus philadelphia* Farmoor Resr (Oxfordshire), long-stayer to 18th April; Swords (Co. Dublin), 10th April; Tacumshin Lake (Co. Wexford), 18th April; St Mary's, 5th May.



David Walker

183. Crested Lark *Galerida cristata*, Dungeness, Kent, May 2009.

Whiskered Tern *Chlidonias hybrida* Hanningfield Resr (Essex), 14th April; Willington GP (Derbyshire), eleven, 24th April, with ten to 25th

Paul Hackett



184. Male Collared Flycatcher *Ficedula albicollis*, Portland, Dorset, May 2009.

long-stayer, 19th April; Holm (Orkney), 28th–29th April. Alpine Swift *Apus melba* Pilling Lane Ends (Lancashire & N Merseyside), 15th April; Bradwell-on-Sea (Essex), 19th April; Brighstone (Isle of Wight), 20th April; Meare Heath (Somerset), 24th April and 8th May; Walmsley Sanctuary (Cornwall), 29th April; Barton-on-Humber (Lincolnshire), 1st May; Hessle (Yorkshire), 8th May. Pallid Swift *Apus pallidus* Seaforth (Lancashire & N Merseyside), 30th April to 10th May. European Bee-eater *Merops apiaster* Butley 7th and Lound (both Suffolk), 10th May.

Crested Lark *Galerida cristata* Dungeness (Kent), 29th April to 4th May (and possibly since 27th April). Red-rumped Swallow *Cecropis daurica* A marked influx in the latter part of April and early May, with reports from counties as follows, involving perhaps as many as 35 birds

Subalpine Warbler *Sylvia cantillans* Mizen Head (Co. Cork), 10th–12th April; Toe Head (Co. Cork), 11th April; Carnsore Point (Co. Wexford), 12th April; Bardsey (Caernarfonshire), 18th April; Great Saltee Island (Co. Wexford), 18th April; Spurn (Yorkshire), 18th–20th April; Scatness, 22nd–25th April; Newport Wetlands (Gwent), 26th–28th April; Portland, 9th May. Eastern Bonelli's Warbler *Phylloscopus orientalis* Portland, 1st May. Collared Flycatcher *Ficedula albicollis* Portland, 28th April to 2nd May.

Woodchat Shrike *Lanius senator* Cot Valley (Cornwall), 18th April; Ballydwan (Co. Waterford), 21st–28th April; St Martin's, 23rd–26th April and 9th May, same or another Bryher (both Scilly), 28th April and 10th May; Plymouth (Devon), 27th April to 3rd May; Yeovil (Devon), 29th April; Portland, 7th–8th May. European Serin *Serinus serinus* Coverack (Cornwall), 18th April; Winspit (Dorset), 18th April; Margate, 23rd April; Landguard and Bawdsey (both Suffolk), 26th April; Portland, 28th April and 4th May; Spurn, 7th May; Great Yarmouth (Norfolk), 8th May. White-throated Sparrow *Zonotrichia albicollis* Old Winchester Hill (Hampshire), long-stayer, to 20th April. Brown-headed Cowbird *Molothrus ater* Fair Isle, 8th–10th May.

Deryk Shaw



185. Brown-headed Cowbird *Molothrus ater*, Fair Isle, May 2009.



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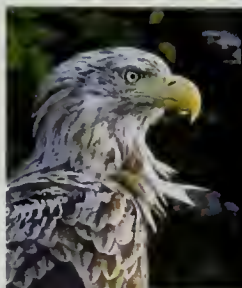
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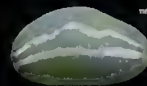
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# British Birds

July 2009 • Vol. 102 • 363–422

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'All-dark' *Oceanodroma* storm-petrels

The decline of the Willow Tit



ISSN 0007-0335

# British Birds

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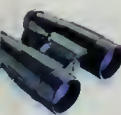
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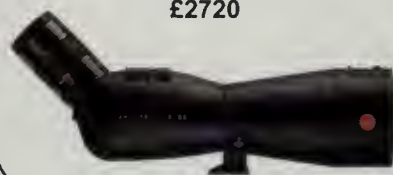
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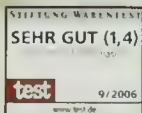
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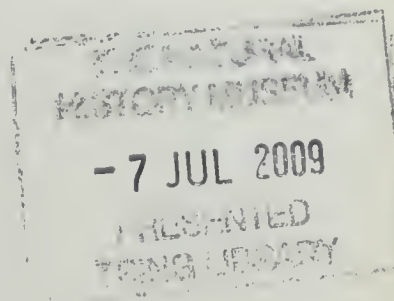
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# British Birds

Volume 102 • Number 7 • July 2009



- 364 Editorial *Roger Riddington*
- 365 'All-dark' *Oceanodroma* storm-petrels in the Atlantic and neighbouring seas *Robert L. Flood*
- 386 The decline of the Willow Tit in Britain *Alex J. G. Lewis, Arjun Amar, Elisabeth C. Charman and Finn R. P. Stewart*
- 399 A second British record of Allen's Gallinule *Katrina Cook*

## Regular features

- 394 Obituaries  
David William Snow (1924–2009)  
Bob Scott (1938–2009)
- 403 Letters  
*The Cape Verde Warbler on Fogo*  
*W. R. P. Bourne*  
Wilson's Storm-petrels seen from mainland Britain *Dave Britton*
- 405 Notes  
*Unusual feeding behaviour by Eurasian Sparrowhawks* *Bryan Sage*  
Osprey catching Great Crested Grebe  
*Thomas E. Watters*  
Peregrine Falcon robbing Hobby of prey  
*Simon S. King*  
Mock-feeding by Common Starlings to facilitate kleptoparasitism *Trevor Jones*
- 407 Reviews  
*Handbook of the Birds of the World. Vol. 13. Penduline-tits to Shrikes*
- Lars Jonsson's Birds: paintings from a near horizon*  
*The Birds of Turkey*  
*Birdwatcher: the life of Roger Tory Peterson*  
*Bird Ringing: a concise guide*  
*Wings and Rings: a history of bird migration studies in Europe*  
*Say Goodbye to the Cuckoo*  
*Great Birds of Britain & Europe*  
*Field Guide to the Birds of Eastern Africa*  
*Field Guide to the Birds of East Asia*  
*Birdscapes: birds in our imagination and experience*  
*A Naturalist's Eye: twenty Somerset years*
- 415 News and comment  
*Adrian Pitches*
- 418 Recent reports  
*Barry Nightingale and Eric Dempsey*

*British Birds* aims to: ❖ provide a forum for contributions of interest to all birdwatchers in the Western Palearctic; ❖ publish material on behaviour, conservation, distribution, ecology, identification, movements, status and taxonomy; ❖ embrace new ideas and research; ❖ maintain its position as the respected journal of record; and ❖ interpret good scientific research on birds for the interested non-scientist.



After three issues with one or more rather long main papers, some readers may be glad to see that this one has a higher proportion of short items, the sort you can get through between stops on the train. There is apparently good evidence to suggest that readers (in general) increasingly prefer short, snappy items to longer articles, which is no doubt partly related to the way that almost all of us use the internet these days, and the associated volume of accessible information. In an increasingly sound-bite society, we want the key points of an argument quickly, before moving on to the next: bullet points and a pretty picture, that'll do. And quite often it *will* do.

Sometimes, however, a heavy hand with the editorial scalpel nicks a main artery and the essence of a contribution is lost. *BB* has always mixed up the short and pithy with some landmark longer papers. For example, Robin Prytherch's treatise on the Common Buzzard *Buteo buteo* in the May issue represents a phenomenal amount of study, and I have already seen it described (authoritatively as well) as one of the best studies yet of the social behaviour of any raptor. We could have slimmed it down to half of its 27 pages, but the soul of the piece would have been torn away. So, although we acknowledge the modern appetite for short pieces, we make no apology for mixing them with some longer and more detailed items – it's part of the DNA of *British Birds*.

\* \* \*

(By the way, I hope you've noticed that I've split this editorial up to make it easier to read on the train.) Before I sat down at the desk today I spent half an hour dismantling the wood-burning stove to rescue a juvenile Common Starling *Sturnus vulgaris zetlandicus* that had fallen down the chimney. The bird was retrieved unscathed and was soon reunited with its pals, of which there are several dozen in my garden alone. In Shetland, Starlings are thriving and atlas work last year confirmed that the Starling is one of the commonest and most widespread breeding birds in the islands. The national perspective is quite different, however, as last month's *Birds of Conservation Concern 3* report made clear: the nominate race of Starling is Red-listed on account of severe breeding-population decline. That report was another piece that you

wouldn't have got through between Sevenoaks and London Bridge and, while the headlines are clear, the detail will surely interest every reader as well. The return of the subspecies as an important unit in conservation terms is fascinating and highlighting those species where there is a marked contrast between the fortunes of different subspecies raises many intriguing questions.

When I was a kid, the Willow Tit *Parus montanus* was a species that I could guarantee seeing within a five-minute bike ride of my Lincolnshire home. This winter, a three-hour search of its former favourite sites was a fruitless one, and the Willow Tit, like the Starling, remains on the Red list for severe breeding-population decline. This month's paper examining the status of the Willow Tit in Britain is the first in a new, occasional series on the UK's conservation priority species; our aim with these pieces is to keep them short but, more importantly, to ensure that they are authoritative and bang up to date.

\* \* \*

The obituaries of two great British ornithologists is an important section in this issue. I regret that I never met David Snow (although I was delighted that his Song Thrush *Turdus philomelos* paper was published in *BB* on my watch as editor) but Bob Scott has been a cornerstone of *British Birds* in the last ten years, and I shall miss him greatly. The intention here is not to add to Dick Newell's touching obituary, nor to the item on p. 416 which describes a donation from *BB* to a project close to Bob's heart. The more general issue of the *BB* Charitable Trust contributing to worthy environmental causes demands a comment, though. Publishing bird magazines is no longer a gravy train (if it ever was), and it has taken a long time, over 100 issues under new management in fact, to reach a point where *BB*'s accounts show black rather than red at the year's end, and we can begin to contribute, albeit modestly, to good causes. *BoCC3* underlined that the problems with our once-common birds are not just in our own backyard and a global outlook is now entirely appropriate for a publication named 'British Birds'.

Roger Riddington

# 'All-dark' *Oceanodroma* storm-petrels in the Atlantic and neighbouring seas

Robert L. Flood

**ABSTRACT** The occurrence of 'all-dark' *Oceanodroma* storm-petrels in the Atlantic and neighbouring seas is examined. The principal findings are that: the occurrence of Leach's Storm-petrel *O. leucorhoa* with an entirely dark rump has yet to be proven; a 'small, all-dark' storm-petrel is almost certainly a Swinhoe's Storm-petrel *O. monorhis*; the sole 'large, all-dark' storm-petrel record is a Matsudaira's Storm-petrel *O. matsudairae*; and, with the exception of freak vagrancy events, Least *O. microsoma*, Ashy *O. homochroa*, the two Pacific forms of Leach's with dark-rumped variants *O. l. chapmani* and *O. l. socorroensis*, Markham's *O. markhami*, Black *O. melania* and Tristram's Storm-petrels *O. tristrami* are extremely unlikely to occur in the Atlantic. A selection of photographs of North Atlantic Swinhoe's Storm-petrels is presented.

*One quiet grey morning early in the course of the voyage, Beck remarked that he would like to lower a boat for birds. 'But there are no birds here señor,' said the skipper, waving an arm around the circle of blank water. Nevertheless, a skiff was sent down, and Captain Charlie manned the oars. For two miles or more he pulled straight ahead, while Beck methodically tossed flecks of oil and grease and scraps of meat in the boat's track. Then they doubled on their course, and to Charlie's amazement the long food-line was soon dotted with unfamiliar, dainty sea-sprites, which skipped and danced like butterflies along a blossoming hedge-row.*

Robert C. Murphy (Murphy 1925) recounting exploits of Rollo H. Beck off Peru

This paper investigates the occurrence of 'all-dark' *Oceanodroma* storm-petrels in the Atlantic and neighbouring seas. It examines theories and supporting evidence that attempt to identify the species involved. Eight species of *Oceanodroma* storm-petrel occur in 'all-dark' plumage: Least Storm-petrel *O. microsoma*, Ashy Storm-petrel *O. homochroa*, Swinhoe's Storm-petrel *O. monorhis*, Leach's Storm-petrel *O. leucorhoa*, Markham's Storm-petrel *O. markhami*, Black Storm-petrel *O. melania*, Matsudaira's Storm-petrel *O. matsudairae* and Tristram's Storm-petrel *O. tristrami*. Bulwer's Petrel *Bulweria bulwerii* is included

since it may be mistaken for an 'all-dark' storm-petrel.

Of the smaller species, Least breeds during the northern summer and only in Mexico, on the San Benito islands off the Pacific coast of the Baja California peninsula and on several islands in the Gulf of California, with post-breeding dispersal mainly south to Panama, less commonly as far south as Peru. Ashy breeds during the northern summer on islands from Cape Mendocino, California, to the Todos Santos islands off the northwest Baja peninsula, with the majority on the Farallon Islands and Channel Islands off California; it is largely

sedentary, occurring throughout the year over waters of the continental slope near the breeding islands. Swinhoe's breeds in the northern summer on islands off the coasts of Japan and the Korean Peninsula, migrating after breeding mainly to the northern Indian Ocean. The nominate form of Leach's breeds during the northern summer in the northwest and northeast Atlantic, and in the northeast and northwest Pacific, migrating after breeding mainly to regions of tropical convergence. Leach's *O. l. socorroensis* breeds during the northern summer on Isla Guadalupe off the Pacific coast of Baja California, but its post-breeding dispersal is poorly understood. Leach's *O. l. chapmani* breeds during the northern summer on the Coronado and San Benito islands off Baja California, and disperses south to waters off Central America, and perhaps farther south.

Of the larger species, Markham's breeds late in the southern winter, and the only confirmed breeding location is on the Paracas peninsula, Peru, though birds are found offshore from Mexico to central Chile. Black breeds in the northern summer on islands from southern California to the Gulf of California, with post-breeding dispersal south as far as southern Peru. Matsudaira's breeds late in the northern winter on Iwo and the Ogasawara Islands, south of Japan, migrating after breeding mainly to the northern Indian Ocean. Tristram's breeds in the northern winter in the northwest Hawaiian group and islands south of Japan and may disperse north after breeding. Bulwer's Petrel breeds mainly in the northern summer, on islands throughout a disjunct pan-oceanic range, but mostly in tropical waters.

It is known from tape-lured captures that Swinhoe's Storm-petrel frequents the Atlantic and neighbouring seas in small numbers during June–September at least. Offshore and at-sea sightings of 'all-dark' storm-petrels occur in most years, some of which must surely be Swinhoe's. However, as Rob Hume argued (in Cubitt 1995), all potential species warrant consideration. Here, they are investigated in two groups, 'small' and 'large'.

#### 'Small, all-dark' *Oceanodroma* storm-petrels

Sightings of 'small, all-dark' storm-petrels in the Atlantic and neighbouring seas may be explained by one or more of the following five possibilities.

*1. Least, Ashy, and/or dark-rumped Leach's Storm-petrel vagrancy from the eastern Pacific*  
Spear & Ainley (2007) attempted to define the marine habitat affinities of various storm-petrel forms; they suggested that all forms covered (excluding Humboldt Current endemics) were distinct from one another in their association with different oceanic parameters (including wind speed, sea-surface temperature, and thermocline depth and strength). For Least and Leach's (*O. l. chapmani* and *O. l. socorroensis*), this was partially related to an association with warm waters of the Costa Rica Current, especially in the Gulf of Panama. The obvious oceanic route from these waters to the Atlantic is via the southern tip of South America, a 10,500-km trek over the cold, northward-flowing Humboldt Current and unsuitable oceanic parameters. The American landmass creates a wall to the east and it is unlikely that storm-blown individuals would find their way across Panama given the direction of prevailing surface winds and storm tracks in that region (D. G. Ainley *in litt.*). There is a slender chance of single vagrancy across the Pacific and through the Indian Ocean but it must be most unlikely that Least or Leach's from the eastern Pacific will reach the Atlantic.

Ashy shows an affinity for cooler water and has no tendency to migrate, making only local movements within the California Current. Warm equatorial waters 'block' the species moving south to cool waters of the Humboldt Current, while the American landmass and prevailing surface winds create a significant barrier to the east. Again, it is hard to imagine this species ever reaching the Atlantic.

#### *2. Dark-rumped Leach's Storm-petrels (unknown colony/unknown form) in the tropical Atlantic*

Leach's in the North Atlantic is currently known to breed no farther south than Massachusetts, USA (41°N), although it regularly prospects and even nests in tiny numbers in the southern oceans (Imber & Lovegrove 1982; Randall & Randall 1986). In principle, an unknown colony or even an undiscovered form of dark-rumped Leach's could breed in the tropical Atlantic. There is, however, little evidence to support this theory (the few possible records are listed in table 2, p. 372) and, even though there is little search effort in the region, it is most likely that no such population exists.

### 3. Dark-rumped Leach's Storm-petrels from North Atlantic breeding populations

Field guides suggest that Atlantic-breeding Leach's occur with an extensively and perhaps a wholly dark rump (e.g. plate 186), although the probability of encountering one is not quantified. Dark-rumped variants are analysed below based on data received from: (i) field observers, (ii) ringers, and (iii) museum staff. Each dataset has a caveat: (a) judging the extent of darkness in the white rump of a Leach's in flight is tricky at moderate distance and in the stormy conditions that cause wrecks; (b) a close inspection of the rump patch of Leach's in the hand is not the main focus of ringers; and (c) each taxidermist has their own style in presenting rump and uppertail-coverts, while plumage condition of old skins sometimes is poor. To some extent, examining the data together overcomes individual caveats and raises confidence in overall findings.

The 'dark-rumped Leach's' phenomenon divides into two types: (a) *dark-rumped*, where the rump is extensively dark; and (b) *ghost-rumped*, where the rump is neither dark nor white, but pallid. It is uncertain whether 'ghost-rumped' is a distinct plumage variant or an artefact of wear. Formation of dark in the rump is reviewed in Appendix 1.

#### (i) Field observations

In Europe, northwest England is a hotspot for field observation of autumn wrecks of Leach's. Records kept for Seaforth, Lancashire & N



Katherine Ogden © Nova Scotia Museum of Natural History

**186.** Leach's Storm-petrels *Oceanodroma leucorhoa*, all collected in the Atlantic, Nova Scotia Museum of Natural History. Note how the extent of dark in the white rump patch varies across the three specimens. The right-hand bird, collected on 21st July 1955 on St Paul Island, Nova Scotia, is quite extensively dark-rumped and scores 8 on the Ainley scale (see Appendix 2).

**Table 1.** Details of large wrecks of 50 or more Leach's Storm-petrels *Oceanodroma leucorhoa* recorded off Seaforth, Lancashire & N Merseyside, to the end of 2008 (T. Vaughan *in litt.*)

Date	No.	Observation of dark-rumped birds
16th September 1978	60	None
30th September 1978	200	None
13th September 1980	51	None
14th September 1987	377	None
7th October 1988	80+	None
8th October 1988	50+	None
20th September 1990	60	None
21st September 1990	120	None
22nd September 1990	600+	None
24th September 1990	300+	One partially dark-rumped & one ghost-rumped
27th September 1995	60	None
13th September 1997	133	None
15th September 2001	100+	None
20th September 2004	60+	None
21st September 2004	150+	None
22nd September 2004	300+	None
1st October 2005	50+	None
8th December 2006	190	None
1st October 2008	107	None
Total (poss. duplication)	3,048+	One partially dark-rumped & one ghost-rumped

Merseyside, document only one extensively dark-rumped and one ghost-rumped Leach's in 30 years of wrecks involving c. 3,000 birds (Vaughan 1990; A. J. Conway, P. Kinsella & T. Vaughan *in litt.*). Table 1 lists wrecks of 50 or more birds off Seaforth. At least 88 'mini-wrecks', involving fewer than 50 birds per wreck, were witnessed but these did not contain any extensively dark-rumped or ghost-rumped birds (T. Vaughan *in litt.*). No white was apparent in the rump of an individual seen 200 m off New Brighton, Cheshire & Wirral, on 8th September 2001 (*Cheshire & Wirral Bird Report 2001*). Of 165 Leach's seen on 15th September off Hoylake, Cheshire & Wirral, one 'seen at ranges down to 20 feet had an all-dark rump but no other plumage or flight differences from a normal Leach's, (C. Schofield *in litt.*). Seawatches off Blackpool since 1963 have recorded over 700 Leach's, of which just one was a dark-rumped bird, seemingly with no white in the rump, on 4th December 2006 (M. Jones *in litt.*).

Elsewhere in Britain & Ireland, during a record count of 900+ Leach's west past Ramore Head, Co. Antrim, on 6th September 1990, two

showed an extensively dark rump and two a ghost rump (McKee 1990). On 12th February 1990, three ghost-rumped Leach's were seen at Burnham-on-Sea, Somerset, one possibly with a restricted pallid area, while another ghost-rumped bird was there on 27th February 1990 (B. Rabbitts *in litt.*).

The picture is similar in North America. N. Brinkley, editor of *North American Birding*, commented that: 'I review very carefully all bird sightings in the USA and Canada, and now south to Panama... and I have never come across a record of a dark-rumped Leach's.' A Leach's seen off Oregon Inlet, North Carolina, on 27th July 1992 showed a pale border highlighting an otherwise dark rump (O'Brien *et al.* 1999), while a ghost-rumped Leach's was off Port O'Connor, Texas, in 1997 (Lasley *et al.* 1997). Comprehensive seawatch statistics like those for Seaforth are simply not available for the east coasts of Canada and the USA, however (B. Patteson *in litt.*).

A North American claim of a wholly dark-rumped North Atlantic Leach's (scoring 11 on the Ainley scale; see Appendix 2) refers to a bird found dead at Oneida Lake, New York, on 7th September 1933, two weeks after a hurricane and seabird wreck on 24th–25th August 1933. It was identified by R. C. Murphy as a moulting Leach's (Sadler 1933), although there is some doubt whether the specimen was genuinely dark-rumped, given that it may have been in poor condition (perhaps missing uppertail-coverts) when eventually seen by Murphy (O'Brien *et al.* 1999; N. Brinkley *in litt.*); since the skin was not preserved, the true significance of this record is unknown.

Three published photographs of extensively dark-rumped Leach's observed at sea were located. One photographed off St Kilda, Outer Hebrides, in 1960 scored between 5 and 6 on the Ainley scale (Bourne & Simmons 1997); one off Sweden in September 1997 scored between 8 and 9 (Blomdahl *et al.* 2003); and one in April 2006 in the equatorial Atlantic scored between 7 and 8 (Flood & Thomas 2007). Another seen in the equatorial Atlantic in April 2005 scored 9 on the Ainley scale, '... and looked excitingly dark at moderate range, but no luck with better and closer views' (S. N. G. Howell *in litt.*).

Morrison (1998) located c. 20 records of



187. Leach's Storm-petrel *Oceanodroma leucorhoa*. Note missing white rump feathers, revealing black rectrices and restricting the amount of white in the rump.

extensively dark-rumped Leach's, but did not provide details for all of them. In parallel with the findings here, the majority were logged in autumn, when Leach's are likely to be worn and/or in moult. White tips of worn feathers may be abraded, making the rump look darker, while moulting birds may have rump feathers missing (e.g. plate 187). A partially dark-rumped individual that is worn and/or in moult and *not seen well* could *appear* wholly dark-rumped (Brinkley 1995); such individuals are 'pseudo dark-rumped' and this might explain four of the records referred to above: Oneida Lake on 7th September 1933, New Brighton on 8th September 1997, Hoylake on 15th September 2001, and Morecambe Bay on 4th December 2006.

(ii) *Data from ringers*

An even smaller number of extensively dark-rumped Leach's were reported by ringers, sampling a much larger population. In Britain & Ireland, ten individuals or ringing groups are responsible for ringing 97% of all Leach's Storm-petrels (K. Risely, BTO, *in litt.*) and several of these supplied data for birds handled.

The only known colony of Leach's in Ireland is at The Stags of Broadhaven, Co. Mayo, where c. 300 pairs breed. On average 10–15 Leach's are ringed each year and none with an extensively dark rump has been recorded (D. Clarke *in litt.*).

In Scotland, no wholly dark-rumped Leach's were recorded on St Kilda among c. 3,000 birds handled by R. W. Furness (*in litt.*), nor among c. 600 handled by Steve Votier (*in litt.*) in 2004 and 2008 (some of the 3,000 handled by RWF were in Shetland but most were on St Kilda). North Ronaldsay Bird Observatory ringed 65 Leach's between 1985 and 2007 and two between 1977 and 1984; two had a partially dark rump and none had an extensively or wholly dark rump (A. Duncan *in litt.*). No wholly dark-rumped birds were noted by Sule Skerry Ringing Group among 768 handled on Sule Skerry during 1975–2007, 1,262 on North Rona in 2003–05 and c. 550 on St Kilda in 2004 and 2007 (D. Budworth, A. & J. Blackburn *in litt.*). No wholly dark-rumped birds were noted among 2,320 handled by J. Love (*in litt.*) as follows: North Rona 1,140 (1971, 1972 and 1974), 744 (1993 and 1998) and 266 (2005 and 2006); Foula 40 (1974); St Kilda c. 100 (1979); Flannan Isles 30 (1988). However, small variation in the degree of dark in the centre of the rump was noted and

one had 'quite a lot of dark', yet the rump was still predominantly white. None with a wholly dark rump was noted in 25 ringed on Foula in the mid 1960s and 147 ringed there in 1973–78 (A. R. Mainwood *in litt.*), though some were dusky in the centre of the rump.

In Norway, the Herynken ringing station ringed 754 Leach's, most after 1980. None showed a wholly dark rump, though a small number had a partially dark rump, scoring up to 6 on the Ainley scale (T. Anker-Nilssen *in litt.*).

In North America, extensively dark-rumped Leach's were unknown to ringers in Newfoundland, each of whom had seen well over 10,000 individuals (B. Mactavish in Morrison 1998). B. Montevecchi (*in litt.*) has studied Leach's in Newfoundland for 25 years, encountering many thousands, but none with a wholly dark rump. A. Hedd (*in litt.*) estimates ringing c. 700 adult/subadult birds in Newfoundland during 2003–08 and handled none with a wholly dark rump. O'Brien *et al.* (1999) noted that 'research in Atlantic colonies has never revealed a [wholly] dark-rumped individual (C. Huntington *in litt.*).' A few Leach's exhibiting a 'ghost rump' were noted by C. Huntington in 50 years' research at breeding colonies in the Bay of Fundy, Nova Scotia (N. Brinkley *in litt.*).

(iii) *Museum specimens*

Since Leach's are prone to wrecks and to coming on board ships, skins are liable to occur in a wide variety of museums. Thirty-eight museums were contacted for this analysis, employing the following criteria: (a) geographical location in eastern North America and northwest Europe, (b) museums known to house important collections of Hydrobatidae, and (c) provincial museums near to breeding and wreck sites. With the co-operation of curators, collection managers, and keepers from 34 of the selected museums (see Acknowledgments) a total of 955 skins were scored using the Ainley scale. Scores are an interpretation of how the rump would appear in fresh plumage, taking into account wear and deterioration. Badly deteriorated skins were excluded from the analysis. In many cases, sample digital images facilitated checks, maintaining consistency in evaluation. The great majority of skins scored between 2 and 6 on the Ainley scale (fig. 1). These represent 'typical' Leach's, familiar to field observers and ringers. About 25 skins scored 7. All skins that were

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**188.** Leach's Storm-petrel *Oceanodroma leucorhoa*. Collected at Narssalik, Greenland, on 16th November 1905. A total of 955 skins were evaluated using the Ainley scale with the cooperation of curators, collection managers, and keepers from 34 museums across North America, northwest Europe and Scandinavia. About 25 skins scored 7 on the Ainley scale, only five scored 8, and just one, this specimen, scored 9; none scored higher than 9. These statistics indicate that extensively dark-rumped Leach's Storm-petrels in the Atlantic are rare.

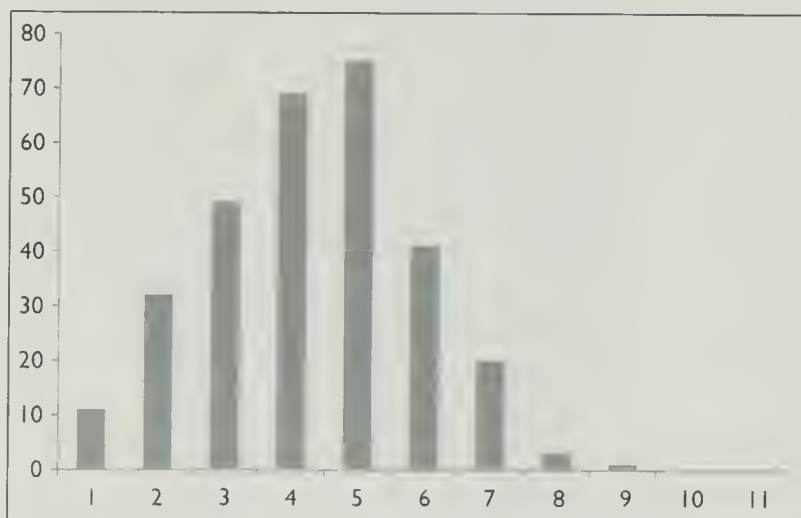
missing, or were flattened. Careful examination revealed only five skins that scored 8 (e.g. the right-hand bird in plate 186), one that scored 9 (plate 188), and none that scored higher than 9.

Bourne & Simmons (1997) referred to a Leach's skin scoring 10 on the Ainley scale – the specimen, housed at NHM, Tring, was found southeast of St Helena on 22nd January 1964 and left in Ascension by a seaman from a passing ship – and claimed that in-hand inspection revealed barely visible pale on each side of the base of the rump. Re-evaluation by the author yielded a maximum score of 8 (taking wear into account), and this specimen is an example of a pseudo dark-rumped Leach's (plates 189–191).

Table 2 summarises the findings of this investigation. There are just ten field records scoring more than 7 on the Ainley scale. Seven of these were extensively dark-rumped, of which four birds are candidate wholly dark-rumped Leach's. However, all four were recorded in autumn, when wear and moult can make the rump look dark, and thus may have been pseudo dark-rumped Leach's. Moreover, one had been dead several weeks and the specimen may have

been in poor condition, while the other three were part of wrecks seen in stormy weather, which makes observation difficult. There are eight field records of ghost-rumped birds. Of thousands of Leach's handled by ringers during the breeding season, when plumage is still fresh, just a few extensively and no wholly dark-rumped Leach's have been noted. Museum skins included just five with a score of 8, one with a score of 9 and none higher, though one scoring 8 was collected in the breeding season. Thus, data from field records, birds trapped for ringing and inspection of museum skins

scored 8 or above by museum staff were photographed and checked by the author, with a second opinion given by E. A. Fisher. Some were in poor condition, with moth damage or feathers



**Fig. 1.** Number of skins in each class of the Ainley scale from 301 specimens in nine museums that provided Ainley-scale scoring for all skins of Leach's Storm-petrel *Oceanodroma leucorhoa* in their collections: Bristol, Brussels, Copenhagen, Liverpool, Louisiana, Manchester, Paris, Tring and Trondheim.

yielded no wholly and unequivocally dark-rumped Leach's.

In conclusion, views of a 'small, all-dark' storm-petrel in the Atlantic that confirm a wholly and unequivocally dark rump effectively eliminate nominate Leach's. Given the earlier discussion of Least, Ashy, and Leach's in the eastern Pacific, it is thus highly likely that a 'small', wholly and unequivocally dark-rumped storm-petrel observed in the Atlantic is Swinhoe's (see below), especially in summer, before the possibility of encountering a pseudo dark-rumped Leach's in autumn. Identification can be confirmed by examination of structure, plumage, and flight behaviour, which differ visibly between Swinhoe's and Leach's (e.g. Howell & Patteson 2008). Singling out Swinhoe's sharpens focus on the question of their origin.

#### 4. Swinhoe's Storm-petrel vagrancy from Indian Ocean wintering grounds

Swinhoe's Storm-petrels migrate from their breeding islands off Japan and Korea in September to winter in the northern Indian Ocean. Swinhoe's clearly is a long-distance migrant. There are occasional records west to Somalia (reported in *Sea Swallow*) and south of the equator (e.g. in the Comoro Islands in February 2003, I. Sinclair *in litt.*), in addition to wide-ranging southerly and northeasterly records

(e.g. Takeshita 1992, <http://users.bigpond.net.au/palliser/barc/sub295.html>). Swinhoe's in the southwest of their winter range could follow ocean currents and the prevailing easterly airflow round the southern tip of Africa into the South



**189–191.** Leach's Storm-petrel *Oceanodroma leucorhoa*. Plate 189 compares a partially dark-rumped Leach's (left), found southeast of St Helena on 22nd January 1964 (Bourne & Simmons 1997), with one that scores 1 or 2 on the Ainley scale. Note the extent of wear in the remiges and rectrices of the former. Plate 190 also shows the Leach's from St Helena. Note the heavy wear of the rectrices, uppertail-coverts and rump. Some white is evident on the left-hand side of the inner part of the rump but on the remaining inner-rump feathers the white tips are almost completely worn away, leaving dark basal areas and revealing dark feather bases beneath. The outer-rump feathers are also worn, though generally dark. Plate 191 isolates one inner-rump feather of the same bird, revealing the extent of wear of the white tip. It is difficult to score this specimen on the Ainley scale; in fresh plumage the score would have been a maximum of 8, possibly less. In summary, the rump feathers of this bird are heavily worn, restricting the amount of visible white and producing a pseudo dark-rumped Leach's. The date (22nd January) falls within the predicted period for pseudo dark-rumped Leach's described in the text. This specimen might also provide insight into the 'ghost-rumped' phenomenon. The result of wear and ageing apparently yield a largely ghost-rumped appearance.

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**Table 2.** Ghost-rumped, extensively dark-rumped (score greater than 7 on the Ainley scale) and apparently wholly dark-rumped Leach's Storm-petrels *Oceanodroma leucorhoa* in the Atlantic and neighbouring seas; field records and birds handled or trapped in the breeding season (both to the end of 2008), and museum skins.

Key: (e) = estimated, (?) = questionable, GR = ghost-rumped, max. = maximum score.

All museum specimens scored by the author.

Location	Ainley scale	Details
field records		
New York, USA	11 (?)	One dead at Oneida Lake on 7th September 1933 (Sadler 1933)
Somerset	GR	Three off Burnham-on-Sea on 12th February and one on 27th February in 1990 (B. Rabbitts <i>in litt.</i> )
Co. Antrim	8 or 9 (e)	Two off Ramore Head on 6th September 1990 among 900 Leach's (McKee 1990)
Co. Antrim	GR	Two off Ramore Head on 6th September 1990 among 900 Leach's (McKee 1990)
Lancashire & N Merseyside	7 or 8	One off Seaforth on 24th September 1990 among 300 Leach's (Vaughan 1990)
Lancashire & N Merseyside	GR	One off Seaforth on 24th September 1990 among 300 Leach's (Vaughan 1990)
North Carolina, USA	7 or 8 (e)	One on a trip off Oregon Inlet on 27th July 1992 (O'Brien <i>et al.</i> 1999)
Texas, USA	GR	One off Port O'Connor in 1997, exact date unknown (Lasley <i>et al.</i> 1997)
Cheshire & Wirral	10 or 11	One off New Brighton on 8th September 1997 (C. Schofield <i>in litt.</i> )
Sweden	8 or 9	One September 1997 pictured in Blomdahl <i>et al.</i> (2003: 81)
Cheshire & Wirral	10 or 11	One off Hoylake on 15th September 2001 ( <i>Cheshire &amp; Wirral Bird Report 2001</i> )
Equatorial Atlantic	9	One at c. 5°N 20°W on 12th April 2005 (S. N. G. Howell <i>in litt.</i> )
Equatorial Atlantic	7 or 8	One at c. 2°N 18°W on 2nd April 2006 pictured in Flood & Thomas (2007: 421)
Lancashire & N Merseyside	10 or 11	One in Morecambe Bay on 4th December 2006 (M. Jones <i>et al. in litt.</i> )
handled or trapped in breeding season		
Orkney	7 or 8 (e)	Two between 1997 & 2007 in North Ronaldsay (P. Brown <i>in litt.</i> )
Nova Scotia	GR	A few in 50 years in Bay of Fundy (N. Brinkley <i>in litt.</i> )
museum specimens		
Natural History Museum, Copenhagen	max. 9	One collected at Narssalik, Greenland, on 16th November 1905, see plate 188
Nova Scotia Museum of Natural History	8	One collected at St Paul Island, Nova Scotia, on 21st July 1955, see plate 186
National Museum of Natural History, Paris	8	One collected in the Mediterranean at Pézenas, Hérault, France, on 26th December 1955
National Museum of Natural History, Paris	8	One collected in the North Atlantic at 35°21'N, 29°16'W on 17th October 1963
NHM, Tring	max. 8	One retrieved from Ascension on 22nd January 1964 (Bourne & Simmons 1997), see plates 189–191
National Museums of Scotland, Edinburgh	max. 8	One collected at Newcastleton, Borders, on 7th March 1966

Atlantic (Bourne 1991, 1992; Parkin 1995). Having thus entered the Atlantic, vagrant Swinhoe's may try to migrate northeast, become 'trapped', and end up travelling north into the North Atlantic. There are currently no records of Swinhoe's from southern Africa, but there are two records of unidentified 'small, all-dark' storm-

petrels from Walvis Bay, Namibia (T. Hardaker *in litt.*).

An alternative route from the Indian Ocean into the Atlantic is via the Red Sea and the Mediterranean (Bourne 1967; James & Robertson 1985). 'The records from the Mediterranean off Italy and Spain and one from Eilat, Israel

lend credence to the latter theory' (O'Brien *et al.* 1999). Morrison (1998) was sceptical because the route involves an overland crossing. Since 1998 there have been four further records off Eilat (September 2000, April 2003, September 2004 and January 2008), with all five birds found dead or dying. These most likely represent a dead end to the Red Sea to Mediterranean Sea passage.

### 5. Swinhoe's Storm-petrels breeding in the Atlantic

Bretagnolle *et al.* (1991) considered it unlikely that the six captures of Swinhoe's in the northeastern Atlantic up to the end of 1990 could be explained by vagrancy to Europe from wintering grounds in the Indian Ocean. Instead, they suggested that a small, undiscovered breeding colony (or colonies) in the Atlantic was the source. Some trapped birds had vascularised brood patches (plate 192), adding weight to their theory, and the authors pinpointed the Azores or Cape Verde Islands as likely breeding locations, even though sea temperature is slightly warmer than the 17°C around Pacific breeding sites. The Canary Islands, Selvagens, and Madeira were considered less likely given extensive searches for petrels at these sites prior to 1991. However, today, a track record of Swinhoe's captures and suitable sea temperatures favours the last three island groups as likely breeding locations (see table 5).

In summary, the most plausible explanation for 'small, all-dark' storm-petrel records in the Atlantic and neighbouring seas is a small breeding population of Swinhoe's in the Atlantic. How and when this population colonised the Atlantic remains unclear. It could be the result of ongoing vagrancy and/or a fairly recent, single large event, or it could be an ancient relict population (Bretagnolle *et al.* 1991). However, DNA analysis of Tynemouth and some Selvagens birds indicates that Atlantic and Pacific Swinhoe's are inseparable (Dawson 1992; Dawson *et al.* 1995), so any Atlantic population has not been isolated for long (O'Brien *et al.* 1999). Recent in terms of DNA analysis probably means no more than a few centuries, possibly since the Little Ice Age ended in the 1700s.

Entry into the Atlantic was and remains most likely via southern Africa, following climatic and habitat variations after the Little Ice Age.

'Large, all-dark' *Oceanodroma* storm-petrels 'Large' *Oceanodroma* storm-petrels that occur in 'all-dark' plumage are Markham's, Black, Matsudaira's and Tristram's. Claims of 'large, all-dark' storm-petrels in the Atlantic and neighbouring seas may be explained by one or more of the following four possibilities.

#### 1. Size illusion in relation to 'small, all-dark' *Oceanodroma* storm-petrels

On short-range pelagic trips from Scilly, participants typically comment that Wilson's Storm-petrel *Oceanites oceanicus* is 'one-and-a-half times as big' as European Storm-petrel *Hydrobates pelagicus*; and that Leach's (and therefore Swinhoe's) is 'twice as big' as European. Flood & Thomas (2007) used the linear measurement of wingspan to illustrate that this is not the case. The actual wingspan ratios are 1.05 (European: Wilson's – *perceived* wingspan ratio 1.5) and 1.21 (European: Leach's – *perceived* wingspan ratio 2.0). Volume may be a more useful index of overall size (which is three-dimensional) – see Howell & Patteson (2008) – but there is a general issue of size illusion among storm-petrel species observed together at sea. Size illusion may cause observers of an unfamiliar 'small, all-dark' storm-petrel, such as a Swinhoe's, to believe that they have

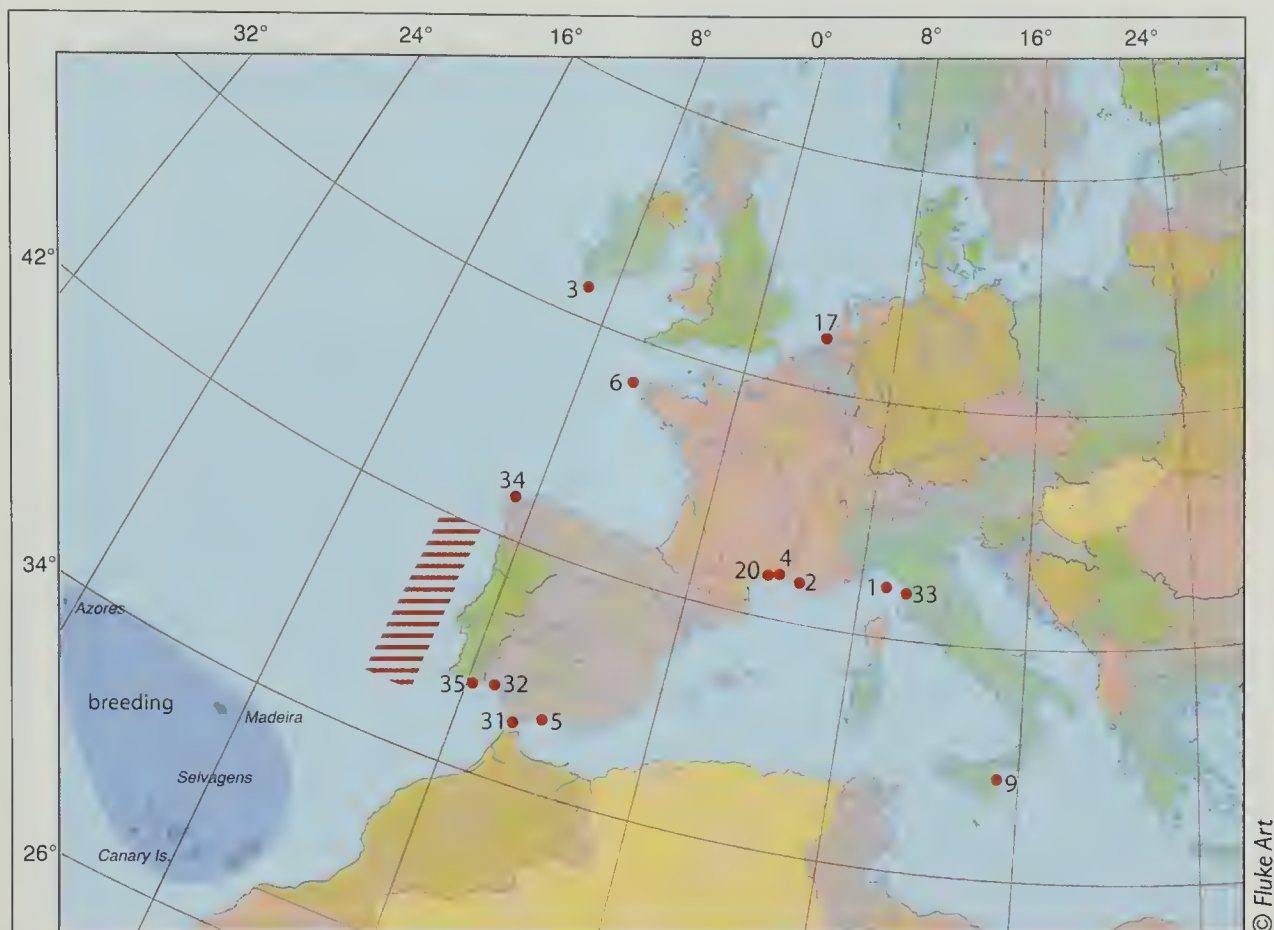


Mark Bolton

192. Swinhoe's Storm-petrel *Oceanodroma monorhis*, Ponta da Almadena, Algarve, Portugal, 27th June 1998, showing the vascularised brood patch.

**Table 3.** Extralimital European records of Bulwer's Petrels *Bulweria bulwerii* formally accepted or acceptance expected by national panels to the end of 2008; see also fig. 2.

No.	Year	Location	Details
1	1898	Italy/France	One between Corsica and Genoa collected exhausted on lightship, 3rd June; specimen at Florence Museum (Bourne 1967; Bricchetti & Fracasso 2003)
2	1967	Bouches-du-Rhône, France	Two off Salin-de-Giraud, 12th May (French national rarities committee – Comité d'Homologation National (CHN))
3	1975	Co. Cork	One off Cape Clear Island, 3rd August (Alibone 1980); may be reviewed by Irish Rare Birds Committee (P. Milne <i>in litt.</i> )
4	1977	Hérault, France	One 10 km off Frontignan, 17th June (CHN)
5	1982	Málaga, Spain	One at sea off Torremolinos, 7th February (Paterson 1997) (pre-dates Spanish national rarities committee – Comité de Rarezas de SEO (CRSEO))
6	1986	Brittany, France	One at sea off Ouessant, 15th January (CHN)
7	1987	Portugal	One, 42°12'N 10°15'W, 21st August (C. Moore; de Juana 1990)
8	1989	Portugal	Ten, 38°04'N 11°17'W, 6th August (C. Moore & P. Holt; de Juana 1991)
9	1991	Sicily, Catania	One past Simeto River Mouth, 9th March (A. Ciaccio and A. Corso, Italian national committees – Commissione Ornitologica Italiana (COI) and Comitato Italiano Rarità (CIR))
10	1991	Portugal	One 38°28'N 11°04'W, one 38°29'N 10°45'W, two 38°33'N 10°31'W and one 38°34'N 10°30'W; all 22nd July (C. Moore; de Juana 1993)
11	1992	Portugal	One, 40°25'N 12°25'W, 15th August (C. Moore; de Juana 1994)
12	1992	Portugal	One, 38°37'N 12°55'W, 23rd August (C. Moore; de Juana 1995)
13	1993	Portugal	Three between 36°23'N 12°25'W & 36°10'N 12°32'W, 7th August (C. Moore & K. Mullarney; de Juana 1995)
14	1994	Portugal	Two 38°30'N 12°57'W, 20th August (C. Moore; de Juana 1996)
15	1994	Portugal	One 36°00'N 12°41'W, 30th August (C. Moore; de Juana 1996)
16	1995	Portugal	One 38°44'N 11°50'W and one 38°45'N 11°46'W, both 13th August (C. Moore; Costa 1997)
17	1995	Zuid-Holland, the Netherlands	One feeding off Westplaat, 21st August (Schafteenaar 1996, disputed by van den Berg & Bosman 2001, under review by Dutch national rarities committee – Commissie Dwaalgasten Nederlandse Avifauna)
18	1996	Portugal	One 40°42'N 11°29'W and one 40°39'N 12°28'W, both 10th August (C. Moore; Costa <i>et al.</i> 1999)
19	1996	Portugal	Two 37°15'N 11°02'W and one 38°00'N 10°15'W, both 20th August (C. Moore; Costa <i>et al.</i> 1999)
20	1997	Hérault, France	One at sea off Sète harbour, 19th May (CHN; <i>Brit. Birds</i> 91: 38)
21	1997	Portugal	One 40°30'N 12°55'W, 15th August (C. Moore; Costa <i>et al.</i> 2000)
22	1998	Portugal	One 38°07'N 9°55'W and one 38°14'N 9°45'W, both 6th August (C. Moore; Costa <i>et al.</i> 2000)
23	1999	Portugal	Sixteen between 37°30'N 11°09'W & 36°57'N 11°29'W on 21st August (C. Moore; Costa <i>et al.</i> 2003)
24	1999	Portugal	One 37°40'N 10°29'W, 26th August (C. Moore; Costa <i>et al.</i> 2003)
25	2000	Portugal	One 36°01'N 12°03'W, 21st August (C. Moore; Costa <i>et al.</i> 2003)
26	2000	Portugal	17 between 36°30'N 12°09'W and 36°49'N 11°51'W, 23rd August (C. Moore; Costa <i>et al.</i> 2003)
27	2002	Portugal	One Banco de Gorringe zone, 25th August (C. Moore; Elias <i>et al.</i> 2004)
28	2004	Portugal	Two Banco de Gorringe zone, 22nd August (C. Moore; Elias <i>et al.</i> 2006)
29	2005	Portugal	Two 36°15'N 12°31'W, 21st August (C. Moore; Jara <i>et al.</i> 2007)
30	2005	Portugal	Two 36°16'N 12°29'W, 24th August (C. Moore; Jara <i>et al.</i> 2007)
31	2006	Cádiz, Spain	One off Tarifa, Cádiz, 19th August (under consideration, CRSEO)
32	2006	Huelva, Spain	One dead at Playa Cristina on 25th October (J. M. M. García, photographed, CRSEO)
33	2007	Tuscany, Italy	One past Marina di Vecchiano on 26th May (Italian national committees – COI and CIR)
34	2007	Spain	One at sea c. 370 km west of Cape Vilán, Camariñas, on 25th July (D. Romá, A. Servidio; under consideration, CRSEO)
35	2008	Portugal	One off Vila Real de Santo António, Faro, on 5th October (under consideration, Portuguese national rarities committee – Comité Português de Raridades)



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**Fig. 2.** Extralimital European records of Bulwer's Petrels *Bulweria bulwerii*, details of which are given in table 3. Numbered records relate to entries in table 3; records at sea off Portugal are highlighted by the shaded box, which covers the area 36°N–42°N and 10°W–12°W. The northeast Atlantic breeding grounds are highlighted also.

seen a 'large, all-dark' storm-petrel or a Bulwer's Petrel. For example, it is likely that size illusion played a significant part in the case of the infamous 'Chalice petrel', leading to the belief by some that it was a Matsudaira's (e.g. Gantlett 1988). The prevailing opinion now is that it was a Swinhoe's (see discussion in Force 1997, Hume *et al.* 1997, Young & King 1997 and Garner & Mullaney 2004). It is therefore not surprising to find cases where the first impression of a Swinhoe's led even experienced observers to consider the much larger Bulwer's Petrel (e.g. Brinkley 1995, Howell & Patteson 2008).

Bulwer's Petrel straggles north and east of its Atlantic breeding grounds. Table 3 summarises those European records of extralimital Bulwer's formally accepted by national records committees (see Harrop 2008 for discussion of British records), with most seen in Portuguese waters. There are two Atlantic records off North Carolina, USA (Alderfer 2006), the individual on 8th August 1998 being photographed (LeGrand *et al.* 1999).

## 2. Misidentification of nightjars

The risk of confusion between Bulwer's Petrel

and nightjars *Caprimulgus* was discussed by Gutiérrez (2006). He highlighted a claim of up to 14 Bulwer's off the mouth of the Tordera river, northeastern Spain, in April 1984 (Eigenhuis 1985). The claim was initially accepted by the Spanish rarities committee, but later rejected because nightjars had not been eliminated. Eigenhuis's response was that if the 14 birds were not Bulwer's, then they were dark-rumped Leach's Storm-petrels (in Gutiérrez 2006). Given the true rarity of extensively dark-rumped Leach's established here, this solution is surely not tenable.

The problem of confusion with nightjars was brought into focus on 8th May 1999, when a bird observed c. 2.5 km off Barcelona, Spain, reminded observers of a Bulwer's Petrel. To their surprise, it was a European Nightjar *Caprimulgus europaeus* (Gutiérrez & Larruy 2002). The bird was reminiscent of a Bulwer's Petrel because of its structure (overall size and long tail), its generally featureless brownish plumage, and the fact that it was foraging over the sea surface together with two European Storm-petrels. However, with good light and close views, the observers saw white wing-flashes

**Table 4.** Claims of 'large, all-dark' *Oceanodroma* storm-petrels off the south coast of England that could potentially relate to a misidentified European Nightjar *Caprimulgus europaeus*, given the location and date of the record.

Year	Location	Details
1980	Sussex	One off Worthing, 12th May, possibly same 23rd May (Morrison 1998)
1990	Dorset	One off Chesil Cove 14th and 15th May, possibly same 28th–30th May
1991	Devon	One off Prawle Point 27th May, possibly same 31st May (Morrison 1998)
1991	Hampshire	One off Keyhaven, 30th May (Morrison 1998)
1993	Dorset	Two east off St Aldhelm's Head, 10th May (Morrison 1998)
2006	Sussex	One west past Selsey Bill, 30th May (BirdGuides, Rare Bird Alert)

and other features that confirmed identification as a European Nightjar. An alternative misidentification could easily have been Matsudaira's Storm-petrel, given the white wing-flashes of a male European Nightjar.

Examples of migrating or even apparently foraging European Nightjars offshore, mainly during April and May, in the Mediterranean and the Atlantic are not exceptional (Gutiérrez 2006). Furthermore, some observers have noted similarities between the flight behaviour of at-sea European Nightjars and tubenoses. Consequently, accepted records of Bulwer's Petrel in the Mediterranean in May and June off France (1967, 1977 and 1997) and Italy (2007) perhaps warrant review (see table 3).

Gutiérrez (2006) suggested that the confusion risk of European Nightjar at sea in northwest Europe, where it is scarcer, is lower than in the Mediterranean. Even so, there are claims of 'large, all-dark' storm-petrels off southern England in May that may be suspect (table 4). One of these is now considered to have been a European Nightjar by the observer concerned. He witnessed a near-identical event several years later, except that this time the bird flew straight inshore and overhead, revealing its identity as a European Nightjar. The coincidence of the dates and locations of five other claims off southern England suggest that the mistake may have been repeated. Clearly, migrating and foraging nightjars off the coasts of Europe and Africa pose an identification pitfall for all-dark petrels. The same possibility for nighthawks *Chordeiles* in the Americas is worth consideration.

### 3. Black and/or Markham's Storm-petrel vagrancy from the eastern Pacific

The geographical distribution of the Black Storm-petrel is partially related to an association with warm waters of the Costa Rica Current, especially in the Gulf of Panama (Spear & Ainley

2007). For the same reasons given for Least and Pacific Leach's *O. l. chapmani* and *O. l. socorroensis* (see above), it is improbable that Black will ever reach the Atlantic.

Markham's resides farther south in the Humboldt Current, normally between 13°N and 26°S, though occasionally up to 33°S, off Valparaiso, Chile. Since there are no regular pelagic trips south of Valparaiso, this port tends to mark the southernmost range for many seabirds (A. Jaramillo *in litt.*). However, Cape Horn is a further 2,400 km south, and the fact that Markham's is dispersive within its range rather than migratory (Spear & Ainley 2007) means that it is an unlikely candidate to reach the Atlantic.

### 4. Matsudaira's and/or Tristram's Storm-petrel vagrancy from the western and central Pacific

The winter range of Matsudaira's in the northern Indian Ocean has considerable overlap with that of Swinhoe's and the two species share the same possibility of vagrancy into the Atlantic. There are two records of Matsudaira's off South Africa that support vagrancy potential. The first record, on 30th July 1988 off Durban on the east coast (Indian Ocean), was accepted by the South African rare birds committee (I. Sinclair *in litt.*). The second, on 25th March 2002, off Cape Town and thus just within the Atlantic, was not submitted since the South African rare birds committee was not operational at the time, but identification is clear-cut given the video-grabs ([www.zestforbirds.co.za/mspetrel1.html](http://www.zestforbirds.co.za/mspetrel1.html)). Clearly, Matsudaira's remains a candidate for incursion into the Atlantic.

Unlike that of Matsudaira's, the range of Tristram's, including known cases of vagrancy, falls wholly within the Pacific. There are well-documented records for southeast Australia and central California, USA, but none near the Atlantic. Vagrancy of Tristram's into the Atlantic is improbable.

In summary, there are very few claims of 'large, all-dark' storm-petrels in the Atlantic and neighbouring seas. Some of these may refer to smaller species whose size has been misjudged, while others may relate to misidentified Bulwer's Petrels or European Nightjars. Black and Markham's from the eastern Pacific can be virtually ruled out in the Atlantic, as can Tristram's from the northwestern Pacific, although vagrancy of Matsudaira's into the Atlantic seems more likely, given two sightings off South Africa and their migration strategy.

On the basis of the evidence available and reviewed in this paper, the occurrence of 'all-dark' storm-petrels in the Atlantic and neighbouring seas seems likely to involve just one species: Swinhoe's Storm-petrel. An Atlantic-bred, wholly and unequivocally dark-rumped Leach's is yet to be proven, although 'pseudo dark-rumped' Leach's in late autumn may be mistaken for truly dark-rumped birds. The final section of this paper presents a summary of known records of Swinhoe's in the region.

### *Swinhoe's Storm-petrel in the Atlantic and neighbouring seas*

Swinhoe's Storm-petrel was first encountered in the Atlantic in 1983 and small numbers have been recorded regularly since then. Confirmation of the identity of trapped individuals in those early years was possible on the basis of morphometrics and purr calls (Bretagnolle *et al.* 1991) as well as DNA analysis



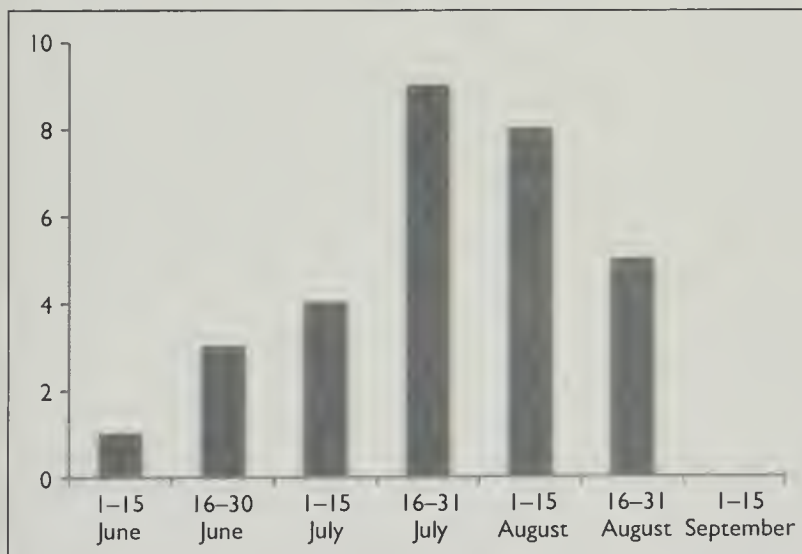
Mark Cubitt

**193.** The first British records of Swinhoe's Storm-petrel *Oceanodroma monorhis* involved two birds trapped at Tynemouth, Tyne & Wear, in July 1989. This photo shows the second individual, caught on 26th July.

(Cubitt *et al.* 1992; Dawson 1992; Cubitt 1995; Dawson *et al.* 1995). Up to the end of 2008, 24 Swinhoe's have been recorded (see table 5, fig. 3, plates 192–193 and 198–210).

Of the 24 individuals listed in table 5, 16 were trapped, one was captured sick, six were observed at sea, and one was heard only. Records of trapped individuals occurred between 27th June and 30th August, reflecting active ringing programs. Five of these trapped birds were found to have a brood patch: two in Madeira, one in Portugal, one in Spain, and one in northeast England. Four were retrapped in subsequent years: Selvagens (trapped 1983, retrapped 2007), England (trapped 1990, retrapped each year 1991–94), Selvagens (trapped 1993, retrapped each year 1994–96), and Norway (trapped 1997, retrapped 2000 & 2003). These records are mostly associated with warm waters originating from the Gulf Stream that feed the southward-moving Canary Current and northward-moving North Atlantic Current (flowing northeast past Scotland). Records off North Carolina are associated with the warm Gulf Stream.

Given that there have been no fewer than 16 tape-lured and trapped birds in a 25-year period, it is logical that there will have been offshore and at-sea observations during the same period. Conventional thinking



**Fig. 3.** Half-monthly distribution of records of Swinhoe's Storm-petrels *Oceanodroma monorhis* in the Atlantic and neighbouring seas to the end of 2008 (from table 5), utilising the date of sighting, date heard or, if trapped, the date of first capture in each year it was trapped (where known).

**Table 5.** Records of Swinhoe's Storm-petrels *Oceanodroma monorhis* in the Atlantic and neighbouring seas to the end of 2008. \* Still under consideration by the relevant national records panel.

Year	Location	Details
1983 & 2007	Selvagens, Madeira	One male heard several nights from 29th June, trapped on 8th July (James & Robertson 1985); retrapped 21st August 2007 (Robb <i>et al.</i> 2008)
1985	Co. Clare	One off Bridges of Ross, 15th August ( <i>Irish Birds</i> 7: 391–393)
1988	Selvagens, Madeira	One trapped on 30th June (Bretagnolle <i>et al.</i> 1991)
1989	Brittany, France	One trapped at l'île de Banneg, Molène archipelago on 15 July & retrapped on 24 July (Bretagnolle <i>et al.</i> 1991)
1989	Tyne & Wear	One female trapped at Tynemouth on 23rd July (one possible circling trapping area on 19th July) (Cubitt 1995)
1989	Tyne & Wear	One female trapped at Tynemouth on 26th July (Cubitt 1995)
1990–94	Tyne & Wear	One female trapped at Tynemouth on 7th July; retrapped on 31st July 1991, with brood patch; retrapped on 30th July 1992, with brood patch; retrapped on 21st, 28th, & 29th July 1993; retrapped on 24th & 26th July 1994, perhaps same female heard on 12th July (Cubitt 1995)
1991	Selvagens, Madeira	One trapped on 23rd July, with brood patch (Zino <i>et al.</i> 1995)
1991	Genoa, Italy	One captured sick on 11th August, killed in captivity by Yellow-legged Gull <i>Larus michahellis</i> ( <i>Riv. Ital. Orn.</i> 65: 63–68)
1993*	North Carolina, USA	One at sea off Oregon Inlet on 20th August (Brinkley 1995; Morrison 1998)
1993–96	Selvagens, Madeira	One trapped (but not ringed) on unknown date in summer 1993, with brood patch and missing leg; possibly same (also with missing leg), trapped on unknown date in summer 1994; retrapped on 30th August 1995 and 29th August 1996 (Zino <i>et al.</i> 1995)
1994	Benidorm, Spain	One (possible male) trapped on 13th July with brood patch (King & Mínguez 1994; Mínguez & King 1995; King <i>et al.</i> 1996)
1996	Rogaland, Norway	One trapped on Revekai, Jaeren, on 13th August ( <i>Vår Fuglefauna</i> (Suppl.) 3: 4–23)
1997, 2000 & 2003	Rogaland, Norway	One trapped on Revekai, Jaeren, on 9th August; retrapped on 27th July & 16th August 2000; retrapped on 5th August 2003 ( <i>Vår Fuglefauna</i> (Suppl.) 4: 4–31; <i>Ornis Norvegica</i> 24: 3–59; <i>Ornis Norvegica</i> 28: 4–50)
1997	Balearic Islands, Spain	One trapped on Cabrera on 16th August (McMinn & Dietrich 1998)
1998	Algarve, Portugal	One trapped at Ponta da Almadena on 27th June, with brood patch (Bolton 1998)
1998*	North Carolina, USA	One photographed at sea off Cape Hatteras on 8th August ( <i>North American Birds</i> 53: 6–10)
2000	Co. Kerry	One trapped on Great Skellig Island on 1st July ( <i>Irish Birds</i> 7: 84)
2000	North-east Scotland	One female trapped at Cove Harbour on 5th August ( <i>Brit. Birds</i> 94: 457)
2005	Isles of Scilly	One at sea 15 km south of Scilly on 21st July (Flood 2005)
2006	Nordland, Norway	One trapped at Hernyken, Røst, on 13th August ( <i>Ornis Norvegica</i> 31); DNA bar-coded (Lifjeld & Johnsen 2008)
2007*	Selvagens, Madeira	One or two females heard in September (R. Matias; Robb <i>et al.</i> 2008)
2008*	North Carolina, USA	One photographed at sea c. 65 km ESE of Cape Hatteras on 2nd June (Howell & Patteson 2008)
2008*	Portugal	One at sea c. 175 km SW of Lisbon on 19th August (K. D. Shaw & R. B. Wynn <i>in litt.</i> )

that dark-rumped Leach's exist and closely resemble Swinhoe's has made claims of the latter difficult for records committees to assess in recent decades. However, as demonstrated in this paper, extensively dark-rumped Leach's are extremely rare, and a wholly and unequivocally dark-rumped Leach's in the Atlantic is yet to be proven. Moreover, current knowledge about at-

sea identification of Swinhoe's confirms that the species is visibly different from Leach's given reasonable views (Howell & Patteson 2008). Now, a quarter of a century after the first Atlantic record, enough is known about the occurrence and identification of Swinhoe's to make a well-documented, offshore or at-sea observation more straightforward to assess.

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*Appendix 1. Formation of dark in the rump of Leach's Storm-petrel O. leucorhoa.*

The extent of dark in the white rump patch of Leach's Storm-petrel is variable and is formed roughly as follows. The specimen in plate 194 has a largely white rump. Note that the innermost rump feathers are dark at their bases and the central outermost rump feathers are dark at their tips. The specimen in plate 195 is partially dark-rumped. The extent of darkness is increased: (a) at the base of the innermost rump feathers, especially those most central, and (b) across the tips of all outermost rump feathers. The white rump patch is somewhat shorter. The specimen in plate 196 is extensively dark-rumped. The extent of darkness is further increased and covers: (a) most of the innermost rump feathers and the bases of some of the next innermost rump feathers, (b) most of the central rump feathers, and (c) most of the outermost rump feathers and the tips of some of the next-outermost rump feathers. The white rump patch is restricted to the sides of the rump. Formation of dark in the rump may be asymmetrical and can vary, though the end result is broadly similar. The impact of wear and moult on darkness of the rump is discussed elsewhere in the article.

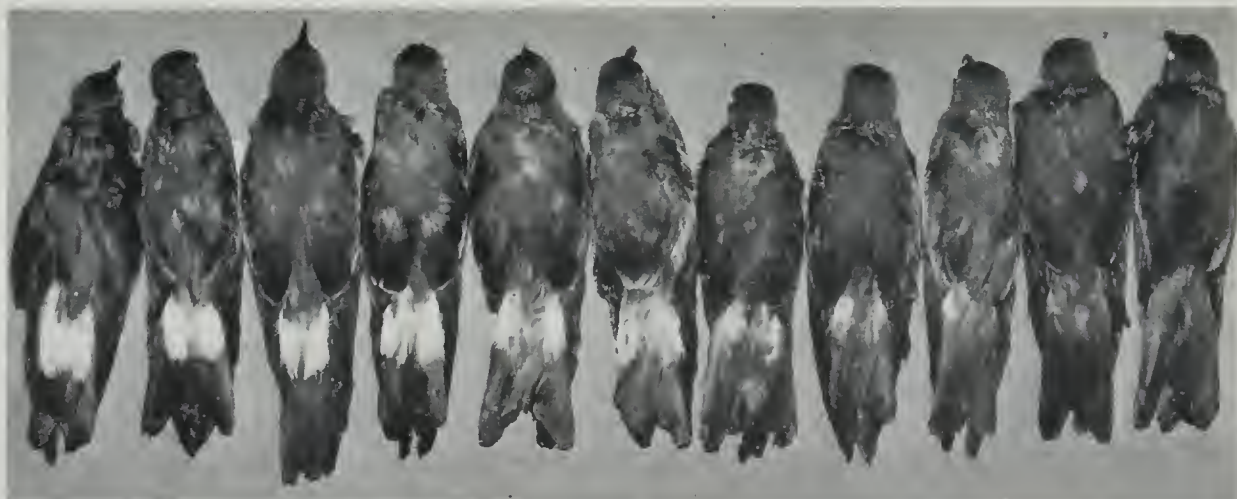


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**194–196.** Leach's Storm-petrel *Oceanodroma leucorhoa*. Note how the extent of dark in the rump varies between these three specimens scoring, respectively, 1–2, 5 and 7 on the Ainley scale.

*Appendix 2. The Ainley scale: darkness in the rump of Leach's Storm-petrel O. leucorhoa.*

Ainley (1980) classified darkness in the rump of the Leach's Storm-petrel complex in the eastern Pacific by comparing specimens with a series of 11 reference skins. Each skin represents an approximately equal step in a continuum beginning with all rump feathers entirely white, except for feather shafts (class 1), ending with all rump feathers entirely dark (class 11). The original black-and-white photograph from Ainley (1980) is reproduced as plate 197. The scale is not exact but does offer a yardstick by which to score darkness in the rump of Leach's.



David Ainley

**197.** The Ainley scale of darkness in the rump of Leach's Storm-petrel *Oceanodroma leucorhoa*. This is the series of reference specimens used by Ainley to show darkness variation in the rump of Leach's in the eastern Pacific. Reproduced from Ainley (1980) with kind permission of the American Ornithologists' Union.

Appendix 3. Swinhoe's Storm-petrels *Oceanodroma monorhis* in the North Atlantic.

Vincent Bretagnolle



**198.** Swinhoe's Storm-petrel *Oceanodroma monorhis*, Selvagens, Madeira, 30th June 1988. Note the pale base of the primary shafts and fairly distinct cream-brown upperwing-covert bar, from trailing edge at the body almost to leading edge at the carpal joint, comprising: greater coverts with outermost feathers increasingly dark-tipped; median coverts with inner feathers all dark and outermost increasingly cream-brown; a pale base to the innermost primary coverts; and a few pale outermost lesser coverts.

Vincent Bretagnolle



**199.** Swinhoe's Storm-petrel *Oceanodroma monorhis*, l'île de Banneg, Molène archipelago, Brittany, France, 15th July 1989. Note the rather short and deep bill, slightly hooked, with nasal tubes 40% of length, and the wholly dark rump.



Colin Bradshaw

**200.** Swinhoe's Storm-petrel *Oceanodroma monorhis*, Tynemouth, Tyne & Wear, 30th July 1992. Note the upperwing plumage features described in the caption to plate 198 and the entirely dark rump.



Miguel McMinn

**201.** Swinhoe's Storm-petrel *Oceanodroma monorhis*, Cabrera, Balearic Islands, 16th August 1997. Note the upperwing plumage features described in the caption to plate 198, the short/medium-length tail with medium fork, and the entirely dark rump. This photograph, taken in daylight, shows typical brown hues to the plumage.



**202.** Swinhoe's Storm-petrel *Oceanodroma oceanodroma* (right) with Leach's Storm-petrel *O. leucorhoa*, Great Skellig Island, Co. Kerry, 1st July 2000. The contrast in rump pattern between the two birds is striking. Alyn Walsh



**205.** Swinhoe's Storm-petrel *Oceanodroma oceanodroma*, Cove Harbour, North-east Scotland, 5th August 2000. Harry Scott



**203 & 204.** Swinhoe's Storm-petrel *Oceanodroma oceanodroma*, Rogaland, Norway; 27th July 2000 (above) and 5th August 2003 (below). Morten Kersbergen





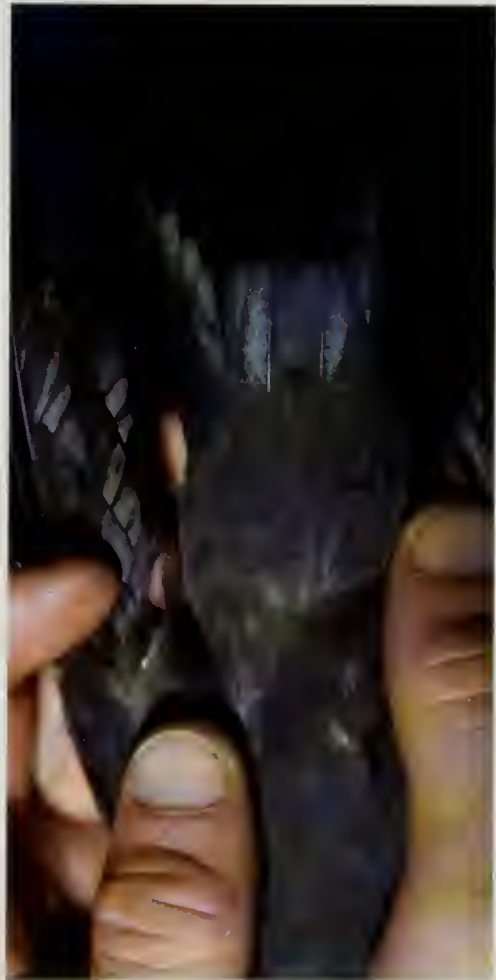
**206.** Swinhoe's Storm-petrel *Oceanodroma monorhis*, Nordland, Norway 13th August 2006. Tycho Anker-Nilssen



**207.** Swinhoe's Storm-petrel *Oceanodroma monorhis*, off Cape Hatteras, North Carolina, USA, 8th August 1998. Note the relatively long, medium to wide wings, 'hands' attenuated, tips blunt. Wings are held rather outstretched, yielding moderately angular leading edges and less angled trailing bar. The cream-brown upperwing-covert bar is prominent as the only contrasting plumage feature. Note typical brown hues to the plumage. Brian Patteson



**208.** Swinhoe's Storm-petrel *Oceanodroma monorhis*, off North Carolina, USA, 2nd June 2008. The creamy-brown upperwing-covert bar and (at this range) the pale bases to the primary shafts are contrasting plumage features, while the rump is completely concolorous with the tail and back. Gareth Krass



**209.** Swinhoe's Storm-petrel *Oceanodroma monorhis*, Nordland, Norway 13th August 2006 (same bird as in plate 206). In close-up, the head is smoky-grey and the rump and tail uniformly dark. Tycho Anker-Nilssen



**210.** Swinhoe's Storm-petrel *Oceanodroma monorhis*, Selvagens, Madeira, 21st August 2007. Note typical brown hues to the plumage and the smoky-grey head. Rafael Matias

## The decline of the Willow Tit in Britain

Alex J. G. Lewis, Arjun Amar, Elisabeth C. Charman  
and Finn R. P. Stewart

**ABSTRACT** Numbers of the British Willow Tit *Poecile montanus kleinschmidti* have decreased dramatically in recent decades. This paper outlines the three main hypotheses for the decline – increased competition, increased predation and changes in habitat availability – and describes the fieldwork and analyses undertaken to try and understand its cause. The results so far are not conclusive but indicate that the loss of young, damp woodland may have been important. Possible positive management strategies are suggested.

### Introduction

#### Range and habitat

The British race of the Willow Tit *Poecile montanus kleinschmidti* is found in England, Wales and parts of southern Scotland, including Dumfries & Galloway and North Lanarkshire (Clyde). The species as a whole is found throughout much of the Western Palearctic and east through northern Asia as far as Japan, where it is found largely in boreal forest with conifers (Snow 1954; Alerstam *et al.* 1974; Snow & Perrins 1998; Sellers 2002). A recent study in northern Finland (Siffczyk *et al.* 2003) showed that in a 'mosaic forest landscape', Willow Tits preferred mature woodland (and pine bogs) and avoided young stands. In Britain, however, the species is associated almost exclusively with early successional habitats such as those found along river valleys, overgrown flooded gravel-pits and wet woodland (Snow & Perrins 1998).

#### Breeding ecology

Three separate but related studies of Willow Tits were commissioned by the RSPB and took place in 2005 and 2006, and form the basis of this review. One of these was carried out in the Midlands (South Yorkshire, Derbyshire and Nottinghamshire) and involved the location and observation of 56 Willow Tit nests during the two breeding seasons (Lewis unpubl.). This was

the first study to observe such a high number of natural nests in Britain and thus provides an insight into the species' breeding ecology.

Willow Tits remain in their territories from their first breeding year and start to sing in January when the weather is good (Maxwell 2007). Between April and May, they excavate a nest hole in dead wood. The most frequently chosen tree species in the Midlands study area were willow *Salix* spp. (n=20), Elder *Sambucus niger* (n=10) (plate 211) and Silver Birch *Betula pendula* (n=16) (plate 212), but nests were also found in Alder *Alnus glutinosa* (n=3), Hawthorn *Crataegus monogyna* (n=2), Hazel *Corylus avellana* (n=2), Wild Cherry *Prunus avium* (n=1) and a conifer (n=1). The nest hole is excavated in either a dead tree or a dead part of a live tree, or occasionally in a felled trunk (plate 213). Willow Tits can nest successfully in a trunk with a diameter as small as 5 cm (measured at the part of the trunk corresponding to the base of the nest chamber), although the mean diameter recorded was 12 cm.

Willow Tits line their nests with material such as feathers, animal hair, thin strips of bark and the fluffy seeds from the heads of bulrush *Typha* (plate 214). The female incubates for approximately 14 days (Maxwell 2007). Of 56 nests studied, it was possible to inspect only 20 internally (with an endoscope; plate 215) so that



Alex Lewis



Alex Lewis



Alex Lewis

**211–213.** Willow Tit *Poecile montanus* nests in Elder *Sambucus niger* (211), Silver Birch *Betula pendula* (212) and a felled Hawthorn *Crataegus monogyna* (213), Nottinghamshire, April 2006.

clutch size could be determined. Clutch size was found to be  $8.8 \pm 0.4$  (mean  $\pm 1$  s.e.) and this was not related to tree diameter (as measured above). In all cases, other than that described in Lewis & Daniells (2007), it was impossible to calculate brood size and number of fledglings owing to: (i) the way that the chicks were invariably sitting on top of one another inside the chamber; and (ii) the need to avoid excessive disturbance that prolonged viewing may have caused.

After the eggs hatch, the chicks remain in the nest for approximately 18 days (plate 216). Once fledged (plate 217), they remain in the immediate area for up to 20 days, while they continue to be fed by both parents (Maxwell 2007). At the end of the breeding season, British Willow Tits differ from their European counterparts in that they do not form gregarious social groups, neither with conspecifics nor with other tit species (Perrins 1979; Sellers 2002), and

remain in the breeding territory all year round. The few ringing recoveries for this species support the finding that Willow Tits are sedentary (but that juveniles in late summer or autumn will occasionally move more than 5 km; Sellers 2002).

#### *Population status*

An analysis of Common Birds Census (CBC) and Breeding Bird Survey (BBS) data has shown that the British Willow Tit underwent a dramatic decline of 88% between 1970 and 2006 (Eaton *et al.* 2008). Ringing data provide further evidence of a substantial population decline (Perrins 2003). In fact, of all the species monitored adequately by the BBS, the Willow Tit showed the greatest decline (77%, 1994–2007; Risely *et al.* 2008). The Repeat Woodland Bird Survey, which looked at population changes in woodland habitat only, also recorded a severe decline, of 70% between the mid

1980s and 2003/04 (Hewson *et al.* 2007). As well as a reduction in numbers, the Willow Tit has suffered a marked contraction in its range in Britain and has been lost entirely from many counties (Gibbons *et al.* 1993; Smith *et al.* 1993). Owing to its population decline, the Willow Tit appears on the UK's 'Red list' of birds of conservation concern (Eaton *et al.* 2009) and is a priority species in the UK Biodiversity Action Plan. However, despite the decline in numbers and range contraction, Willow Tits still appear to be doing well in parts of the Midlands. Consequently, much of the recent work has focused on these apparently stable populations.

#### Potential threats to Willow Tit populations

Research into the decline of the Willow Tit has focused on three hypotheses: increased competition, increased predation and habitat change.

#### Competition

The excavation of a nest hole can be a noisy activity, as both birds often call repeatedly to each other. Typically, the process is also visually obvious as it involves much physical activity and continual production of small wood chippings. An excavating Willow Tit pair is thus vulnerable to detection by competitively superior Blue *Cyanistes caeruleus* and Great Tits *Parus major*. If either of these species finds a Willow Tit nest hole, they can oust the occupants with little difficulty (Maxwell 2002). Excavating a nest hole is a time- and energy-consuming process and

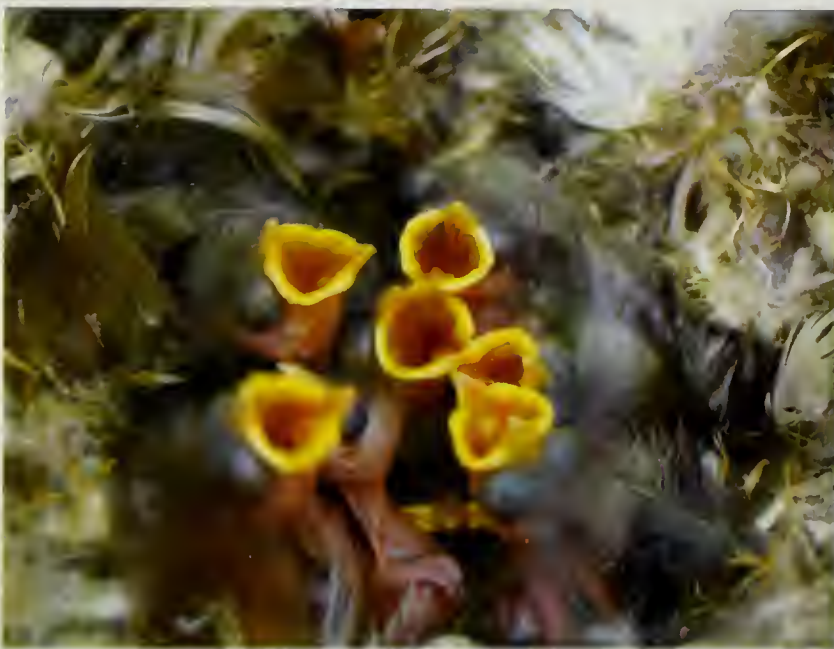
losing a nest hole following its completion can result in breeding failure. Between 1995 and 2000, Maxwell (2002) monitored 30 Willow Tit pairs using both natural nests and nestboxes. He found that only ten of these pairs were successful. Of the 20 unsuccessful pairs, 18 had their nest cavity taken over by Blue Tits and two by Great Tits. Blue and Great Tit populations have increased in the UK between 1970 and 2006 (Blue Tits by 33% and Great Tits by 91%) (Eaton *et al.* 2008). Consequently, interspecific competition for nest-sites may have increased and contributed to the Willow Tit's decline.

#### Predation

Once a nest hole has been excavated and lined, Willow Tits can still be noisy around their breeding site, leaving them vulnerable to detection by Great Spotted Woodpeckers *Dendrocopos major*, which are accomplished at extracting prey from rotten wood (Wesolowski 2002; Fuller *et al.* 2005). This species will destroy a Willow Tit nest with ease and take the eggs or chicks (Lewis unpubl.) (plate 218). Willow Tits are single-brooded and if predation occurs at the chick stage, the pair is extremely unlikely to breed again that year. Even if predation occurs at the egg stage, the pair will have limited resources (of time and energy) for another attempt. Numbers of Great Spotted Woodpeckers have increased dramatically in the UK (by 314% between 1970 and 2006; Eaton *et al.* 2008), and Willow Tits may have suffered a corresponding increase in predation rate.

#### Habitat

Willow Tits are traditionally associated with damp, scrubby areas in Britain (Perrins 1979; Snow & Perrins 1998). Despite the steep population decline, they can still occur at relatively high densities in some brownfield sites and disused gravel-pits, where such habitat is often characteristic (plate 219) (Lewis unpubl.). However, these disused industrial sites have become less common in recent decades, having been lost to (for example) urban development and agricultural clearance (Barr *et al.* 1993).



214. Eight Willow Tit *Poecile montanus* chicks in a nestbox, Wiltshire, May 2005. The bedding is made up of feathers and thin strips of bark.

This apparent wasteland does not have the same perceived biodiversity value as more established habitats such as woodland (Mortimer *et al.* 2000) and the loss of large areas of such scrub could be driving the Willow Tit's decline.

### Testing the hypotheses and exploring the causes of the decline

#### Data analysis

Siriwardena (2004) showed that the major decline in Willow Tit numbers had occurred in woodland and farmland, and that populations in wet habitats had remained stable. In addition, no significant negative relationships were found between the abundance of Willow Tits and numbers of Great Tits, Blue Tits or Great Spotted Woodpeckers over the same time period (apart from between Willow Tits and Great Spotted Woodpeckers on farmland; see below). Siriwardena (2004) concluded that further research, particularly into the possible role of habitat in the species' demise, was needed, prompting the RSPB to undertake the three research projects described here. In addition to the Midlands breeding study, a small-scale study was carried out to investigate Willow Tit habitat selection by comparing occupied and unoccupied woods in an area of north Nottinghamshire with a relatively high density of Willow Tits. This project also looked at differences in habitat *within* individual woods, between occupied and unused areas. A separate, larger-scale study tested the competition, predation and habitat-change hypotheses outlined above, by comparing woods that had been abandoned by Willow Tits with those that were still occupied. These two studies used the same basic field methodology, but at different geographical scales.

#### The small- and large-scale studies

The small-scale study (Lewis *et al.* in press) was carried out in north Nottinghamshire, in an area of 18 × 26 km where Willow Tits still occur in good numbers. The apparent stability and relatively high density of Willow Tits in this region increases the probability that

unoccupied patches represent unfavourable habitat; in areas which are sparsely populated owing to factors other than habitat (such as predation), many favourable sites may be unoccupied and thus wrongly classified as unfavourable. A large number of habitat variables were quantified (including tree diameter, tree-stem density and tree species composition, canopy cover, soil-water content, dead-wood abundance and vegetation cover at varying height bands) in both occupied and unoccupied sites, and in areas within each occupied site where Willow Tits were present and absent.

The large-scale study (Lewis *et al.* 2007) took place throughout central, southern and eastern England. It aimed to determine whether nine woodland sites that were known to have been abandoned by Willow Tits (five years or more previously) differed from nine that were still occupied, in terms of competitor numbers, predator numbers and/or habitat. The numbers of Blue Tits, Great Tits and Great Spotted Woodpeckers were recorded and habitat measurements taken. These measurements were taken around past or present Willow Tit locations rather than throughout the wood, in order to ensure that the habitat sampled was in a relevant area.

In terms of habitat, both of these studies showed that occupied sites had a significantly higher soil-water content than unoccupied or abandoned sites. In addition, the small-scale study showed that occupied sites were of a



**215.** An endoscope is used to inspect the contents of a Willow Tit *Poecile montanus* nest at Bennerley Marsh, Nottinghamshire, May 2006. One person is directing the fibre-optic tube while the other views the chamber contents.

Richard Rogers

significantly earlier successional stage (defined by a combination of factors indicative of tree age, including tree diameter and canopy height) than unoccupied sites. Furthermore, Willow Tits tended to be found in most young patches of woodland but were also present in older patches if these patches had moist soils. However, they were almost completely absent from older, drier woods. In addition, unoccupied sites tended to have more coniferous trees. Within occupied woods, Willow Tits were located in areas with less Bracken *Pteridium aquilinum* and more cover between 2 and 4 m in height – the mid-level understorey. The large-scale study found no differences in numbers of Blue Tits, Great Tits and Great Spotted Woodpeckers between occupied and abandoned sites.

### The Midlands study

Results from the Midlands study showed that, of the 56 Willow Tit nests monitored over two breeding seasons, breeding success was high with only 17 nests (30%) failing. Breeding success was similar between the two breeding seasons (2005: 66%  $\pm$  1% (n=24), 2006: 72%  $\pm$  8% (n=32)). Great Spotted Woodpecker predation caused ten of the 17 failures (seven at the chick stage and three at the egg stage). There was no evidence of any of these pairs re-nesting following predation. Only one nest failure was due to mammal predation (by a Weasel *Mustela nivalis*; Lewis & Daniells 2007), and no failures due to ousting by competitors were recorded. The cause of failure for six nests was unknown.

### Interpretation of results

The small- and large-scale studies provide quantitative support for the observation that Willow Tits in Britain select early successional deciduous woodland and that they are often associated with damp habitats (Snow & Perrins 1998). Their preference for damp woodland (that with a relatively high soil-water content) was shown in both studies and for early successional woodland in the small-scale study. The fact that abandoned sites tended to be drier than occupied sites suggests that drier sites are either less likely to retain their Willow Tits or that they have become drier and lost them as a result. In the small-scale study, measurements of tree diameter from occupied sites showed that, according to Forestry Commission yield models, stands between 15 and 25 years old had the highest probability of occupancy. Both studies also supported Siriwardena's (2004) finding that Willow Tits have declined dramatically in woodland and farmland but not in damp habitats. The reasons for this



Richard Rogers



Alex Lewis

**216 & 217.** A colour-ringed Willow Tit *Poecile montanus* bringing caterpillars back to chicks in the nest, and a chick ready to fledge; Bennerley Marsh, Nottinghamshire, May 2005.

species' association with young, damp woodland are currently being investigated (see below). Such sites may offer greater nesting opportunities: willow and birch are more likely to occur in greater quantity in damp conditions while higher rates of timber decay in such areas may facilitate nest-hole excavation. Such conditions may also present Willow Tits with favourable feeding opportunities.

Neither study was able to establish the reason for the Willow Tit's decline with certainty, but the finding that abandoned sites were significantly drier than occupied sites provides perhaps the strongest clue that the drying out of woodland could be driving the species' decline. It is impossible to quantify the decline in early successional, damp woodland over the last few decades; no figures exist for either past or present coverage (UK Wet Woodland Biodiversity Action Plan [www.ukbap.org.uk](http://www.ukbap.org.uk)). However, various factors known to contribute to the loss of such woodland (such as the lowering of water tables, pollution from agricultural run-off and climate warming) are all known to have increased in recent years (UK Wet Woodland Biodiversity Action Plan).

Why do Willow Tits prefer young, damp woodland? Early successional woodland supports proportionately fewer Blue and Great Tits; for example, Smart *et al.* (2007) showed that Blue Tits were more abundant in older woods, which contain more natural cavities for nest-sites. Competition for nest-sites is not new, but may well have increased in recent years as populations of Blue and Great Tits have grown. Although no direct link was found between abundance of other tit species and the Willow Tit decline (Siriwardena 2004), competitors may still be influencing the Willow Tit's selection of habitat. Great Spotted Woodpeckers were the main nest predator of Willow Tits in the Midlands study. This woodpecker requires trees with a minimum diameter of 18 cm for nest excavation (Smith 1997) and young woodland will thus support lower densities (Kosiński 2006). Willow Tits may therefore select (or survive

better in) habitats which support lower population densities of this predator.

The results do not show that the Great Spotted Woodpecker has been instrumental in the Willow Tit's decline. However, an increase in woodpecker numbers within the Willow Tit's preferred habitat would be likely to increase predation rates. Moreover, although no overall relationship was found between the Willow Tit's decline and the Great Spotted Woodpecker's increase between 1970 and 2005, Siriwardena (2004) did find a significant negative relationship between the two species on farmland sites. Willow Tit habitat in farmland areas usually consists of small, scrubby woodlands, orchards or hedgerows and Amar *et al.* (2006) showed that Great Spotted Woodpecker numbers had increased by 440% in small farm woods over the past 20 years (eight times more than in other broadleaved woods). The same study showed that the probability of an increase in numbers of the Willow Tit's most significant predator was higher in younger woodlands – the Willow Tit's preferred habitat. Nonetheless, in the large-scale analysis no difference was found in Great Spotted Woodpecker abundance between woods occupied and abandoned by Willow Tits.

#### Ongoing and future research

Investigations into habitat selection by Willow Tits are ongoing and have now been extended to cover more of the UK. Establishing consistent habitat preferences across a wide area should



**218.** Willow Tit *Poecile montanus* nest in willow *Salix* destroyed by Great Spotted Woodpecker *Dendrocopos major*, Ogston Reservoir, Derbyshire, May 2004. All the chicks were eaten and the nest abandoned.

Alex Lewis



Alex Lewis

**219.** Daneshill Gravel-pits, Nottinghamshire, April 2006, a site where several pairs of Willow Tits *Poecile montanus* still breed successfully.

improve our understanding of whether habitat loss has been responsible for driving the decline. Once the characteristics of suitable Willow Tit habitat are more clearly understood, it will be critical to establish whether a shortage of such habitats exists where declines have been most evident. If habitat is abundant, then other factors must be responsible for the decline and woodland management will not help. However, if a lack of suitable habitat appears to be instrumental in the species' decline, such management will be crucial. Further analyses of key BTO data (such as that from Constant Effort Sites and the Nest Record Scheme) are also being undertaken to improve understanding of any demographic changes linked to the species' decline.

There are also several key areas relating to Willow Tit ecology that are worthy of further study. Although the species appears to favour damp scrub and woodland, the reasons for this remain unclear. As outlined above, this may reflect the physical structure of such habitat resulting in reduced competition and/or nest predation. However, it also may be related to food availability. Until more is known, in particular about the species' diet throughout the year, establishing the importance of such habitat will be difficult.

Given the current gaps in knowledge, the efficacy of any habitat management measures (such as provision of nestboxes, creation of wet features and/or cultivation of areas of scrub) must be monitored carefully. A good estimate of the number of Willow Tits at a site can be obtained by playing a recording of their call and song at specific points throughout the site (although this should be carried out only as part

of a structured survey) and such an assessment should be undertaken before and after any intervention.

#### *Interim management recommendations*

##### *Wet features*

Willow Tits are traditionally associated with wet woodland and the comparative studies showed that more Willow Tits were found at sites with a high soil-moisture content. Features such as ponds and streams should therefore contribute to making a site more

favourable as Willow Tit habitat.

##### *Young trees*

Willow Tits are traditionally associated with early successional woodland and have been shown to favour sites with trees between 15 and 25 years old. Managing an area to include substantial areas of such trees should enhance the prospects for Willow Tits.

##### *The protection of brownfield sites*

Brownfield sites in the Midlands often support high densities of Willow Tits, possibly because such areas often support young trees and waterbodies. These areas have minimal protection from development and are therefore constantly at risk of being lost. As well as supporting Willow Tits, such areas provide habitat for other Red-listed species such as the Bullfinch *Pyrrhula pyrrhula*, Turtle Dove *Streptopelia turtur* and Reed Bunting *Emberiza schoeniclus*. Protection of such areas will help to maintain key populations of Willow Tits.

##### *Nestbox placement – a red herring?*

Nestboxes are often put up in an attempt to increase Willow Tit abundance and/or breeding success in an area. However, there is no evidence to suggest that dead wood is a limiting factor: no difference in dead-wood abundance was found between sites that had been abandoned by Willow Tits and those occupied by them (Lewis *et al.* 2007). A survey of the River Clyde showed that the number of Willow Tit pairs had declined by 50% between 2000 and 2003, yet no shortage of dead wood was found (Maxwell 2007). Recent habitat-related studies of

woodland have also shown that, overall, the dead-wood resource has increased (e.g. Amar *et al.* 2007). A reduction in dead wood is therefore unlikely to be the cause of the species' decline. If there is local concern that dead wood is lacking, the resource should be measured (see Lewis *et al.* 2007) and compared with that of the occupied sites in the north Nottinghamshire population where the availability of dead wood is known not to be a problem.

#### Acknowledgments

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# Obituaries

## David William Snow (1924–2009)

David Snow, who died at the age of 84 on 4th February 2009, was one of the most significant figures in ornithology during the second half of the twentieth century, though his self-effacing personality means that his real stature as someone who combined clarity of thought with painstaking fieldwork to produce fundamental biological insights is only likely to become enhanced with time. He grew up with a passion for the natural world, which developed into a burning desire to 'understand why [birds' lives] are as they are' (*The Web of Adaptation*, p. xii). From his early thirties he was fortunate enough to find, in his wife Barbara, someone whose ornithological abilities and enthusiasms complemented his own, and with whom he worked closely and productively over many decades.

Though interested in birdwatching from an early age, widely read and, when young, showing considerable ability in mathematics, David specialised in classics at Eton, winning an open scholarship in this subject to New College, Oxford. This, however, was in the middle of the Second World War and service in the Armed Forces first loomed. He joined the Navy to see

the world, but his wartime service was confined to the North Atlantic; however, immediately afterwards he was involved in a voyage of nearly a year to the Far East, taking in the Mediterranean, Middle East, Ceylon, Singapore, the Philippines, south China and Australia. The experiences gained convinced him that, to achieve 'the sort of career I hoped for' (*Birds in our Life*, p. 69), he must switch to studying zoology when he started at Oxford in late 1946. In those enlightened times this posed no problem.

Taking full advantage of the long Oxford summer vacations to travel and watch birds, David produced his first published paper, on ecological differences among tit species (*Paridae*), while assisting with a moth population study in Sweden in 1948. The following year he led a logistically complex expedition that enhanced knowledge of bird biology on the remote and little-known Gulf of Guinea islands of Sao Tomé and Príncipe. By then he had already been accepted (by David Lack) to study for a DPhil on geographical variation and ecology of Palearctic tits at the Edward Grey Institute. His work for this



220. David and Barbara Snow, taken near the Tring Museum in the early 1980s during one of their forays to study 'birds and berries'.

encapsulated the two predominant directions his career would take: field research, often in remote situations and frequently on a shoestring – in this case winter and breeding-season studies in both Lapland and western North Africa; and innovative exploitation of museum collections to gain broader insight into taxonomy and annual cycles, here exemplified by his use of age ratios among specimens to investigate geographical variation in productivity. Of these, he was always clear that it was from the former that he derived his major satisfaction.

Four years of postdoctoral study into the biology of Blackbirds *Turdus merula* breeding in the Oxford Botanic Gardens resulted in his first book, *A Study of Blackbirds* (1958), one that remains both important and enjoyable 50 years later. By the time that it was published he, joined in 1958 by Barbara, was already well into the pivotal research experience of his life: studying frugivory and the annual cycles of Neotropical birds, notably cotingas, manakins and the Oilbird *Steatornis caripensis*, for more than four years in the idyllic surroundings of William Beebe's research station in the northern mountains of Trinidad. This resulted in a string of papers and, following subsequent forays onto the South American mainland, culminated in *The Web of Adaptation: bird studies in the American Tropics* (1976), which is an underappreciated classic. With remarkable succinctness, David outlined in the introductory chapter a conceptual framework within which to understand the causes and consequences of avian frugivory and then pursued the issues raised through 11 concise chapters based on his and Barbara's research. It is highly appropriate that his contributions in this area were later recognised by the 2001 designation of a new genus in the Cotingidae as *Snowornis*.

The birth of his first son during his time in Trinidad was followed by that of his second during his subsequent posting as third Director of the Charles Darwin Research Station on the Galapagos where, in addition to his relatively limited administrative duties, he and Barbara researched in particular the biology of the endemic seabirds. Becoming a family man clearly had focused David's mind on the need for greater stability and continuity – the relevant chapter in his autobiography is pointedly entitled 'A Career in Ornithology' – and at the age of 40 he accepted a four-year contract as Director of Research at the BTO, which had

recently moved to Tring. With his diffident nature, he could not have been ideally suited to a leadership role in a membership-based organisation, but his passion for the underlying fieldwork was never in doubt and he produced some seminal analyses, including a paper in *Nature*, based on BTO data.

His final career move was his appointment in 1968 to the post of Senior Principal Scientific Officer at the Natural History Museum, where he remained until his retirement in 1984, with an immediate remit of overseeing the move of the ornithological collections from London to a new purpose-built facility at Tring. This was achieved efficiently but David was never a willing administrator and in 1972 took voluntary demotion in order to shed his responsibilities as Officer-in-charge at the Tring Museum and to be able to concentrate more on the fieldwork and other research opportunities that his post in the Sub-department of Ornithology would then offer. The quality of this research meant that, in fact, he received a special merit promotion back to his old grade only two years later, but his willingness to take a demotion epitomises his view of priorities in life. As well as continuing overseas field trips, he undertook considerable museum-based research, including that for the very influential *Atlas of Speciation in African Non-passerine Birds* (1978) and, a favourite of mine, his 1976 paper in *Ibis* on the inter-relationship between climate and annual cycles in the Cotingidae.

Both before and after retirement from the Natural History Museum, David pursued continuing field studies local to Wingrave, the village in Buckinghamshire in which he lived for over 40 years. He was the first to try and disentangle the complex sexual relationships of Dunnocks *Prunella modularis*, and five years of fieldwork during 1980–85 resulted in his and Barbara's book *Birds and Berries*, which parallels for a temperate environment his previous studies of frugivory in the tropics. Spanning his whole time in Wingrave, he kept detailed track of the bird populations of the surrounding area; most of this information remains unpublished, but he drew on data on the Song Thrush *T. philomelos* for his important 2003 paper in *BB* (*Brit. Birds* 96: 119–131) on song patterns and population change in this declining species.

David pursued an eclectic life, going where his fascination with birds' lives led him and eschewing a more typical academic career path.

He combined simple techniques with clarity of conception and write-up to produce research that was easy to comprehend but of lasting value. He was deeply appreciative of his good fortune in largely avoiding being mired in administrative duties, as he stresses in his fascinating 2008 autobiography *Birds in our Life*, but accepted substantial responsibility in editing the journals *Bird Study* (1964–68), *Ibis* (1969–73) and *Bulletin of the British Ornithologists' Club* (1991–97), for which his own felicitous writing style made him well suited. He worked largely on his own or with Barbara, who predeceased him in 2008, had little involvement in research-student training, and tended to seem reserved in conversation, but influenced generations of ornithologists through his research and writing.

His work was honoured by receipt (jointly with Barbara) in 1972 of the William Brewster Memorial Medal of the AOU, election in 1979 as an Honorary Member of the German Ornithologists' Society, and receipt in 1982 of the Godman-Salvin Medal for distinguished ornithological work from the BOU, of which he was President from 1987 to 1991. Outside ornithology, he loved poetry, had a wide knowledge of European languages and, when younger, was a more-than-talented artist, epitomised for me by his 1948 watercolour evocation of a now lost Bedfordshire landscape (*Birds in our Life*, p. 76). He was someone one feels privileged to have known.

Robert Prŷs-Jones

### Bob Scott (1938–2009)

Robert Ernest Scott was born on 11th May 1938 and died of prostate cancer on 26th March 2009 in Hinchingsbrook Hospital, Cambridgeshire. He leaves his second wife Ann, and two sons, Ian and Bruce, from his marriage to first wife Ann.

In the series on birding Personalities in this magazine (*Brit. Birds* 74: 283–285), it was said that Bob Scott had unsuccessfully proposed a new race of the Little Auk, namely *Alle alle allelujah*, which nicely illustrates one aspect of this man's personality. Many of those who started their birding life in the fifties and sixties would have made their way to the shingle at Dungeness, Kent, where they would have found a rugged, bearded warden, with his dogs, including the Dalmatian Tosca (who had different coloured eyes); and although the primary reason for the slog down to Dunge was the birds, a richer experience awaited those who made it. Many a long evening of Scrabble and Monopoly would end up with major tantrums since Bob's first wife Ann was not a good loser. Over the years, Bob's rugged, bearded appearance never really changed; while the rest of us got more decrepit, Bob stayed the same – he had always looked rustic. While birding with Bob, there was always a lot more to it than the birds, it was a fun experience. Lest one may think that I am making light of this man's personality, fear not, there was a deeper man too, thoughtful, intelligent, considerate, and with a quick wit. Just as a pub depends upon a good landlord, so Bob made visits to Dungeness something unique. One remembers clap-netting

terns on the beach using decoys, mounted by Bristow of Hastings Rarities fame, when Bob refused to spring the net for a potential catch of 60 Black Terns *Chlidonias niger*, as he waited for the single White-winged Black Tern *C. leucopterus* to walk into the catching area – it never did. Many were the late nights out on the shingle, catching moths with a Tilley lamp and a white sheet. A regular visitor to Dungeness in those days was the late Peter Grant. With Bob as his foil, Peter honed his ideas on the identification of Mediterranean Gulls *Larus melanocephalus* and immature terns on the famed nuclear power station 'patch', resulting in two joint papers in this journal (*Brit. Birds* 60: 365–368; 62: 297–299). Bob takes a lot of the credit for inspiring Peter in his quest for identification science, resulting in many papers, and books, including the seminal *Gulls* (Poysers, 1982).

Bob was no slouch himself at finding rare birds and identifying them, having four birds new to Britain to his credit: Northern Waterthrush *Seiurus noveboracensis* (St Agnes, Scilly, September 1958), Dark-eyed Junco *Junco hyemalis* (Dungeness, May 1960), Hume's Warbler *Phylloscopus humei* (Beachy Head, Sussex, November 1966) and Short-toed Treecreeper *Certhia brachydactyla* (Dungeness, September 1969). Always an avid traveller, he also added not a few species to the lists of other countries, including Sharp-tailed Sandpiper *Calidris acuminata* in Bulgaria, Temminck's Stint *C. temminckii* in Canada, Bonelli's Eagle

*Aquila fasciata* in Slovenia and Citrine Wagtail *Motacilla citreola* in Montenegro. A few years ago, in Bulgaria, we came across a flock of Yellowhammers and I said 'Come on Bob, let's find a Pine Bunting.' Bob raised his glasses and said 'What's this then?' It was Bulgaria's fourth Pine Bunting *Emberiza leucocephalos*.

It was always good to have Bob on a trip, everything seemed much easier somehow, and obstacles were always overcome with a little humour. On an overland trip to Iran by the Dungeness faithful in 1970, long before the bird-tour industry, Bob was the person who eased the stresses that naturally occurred between nine people cooped up in a Ford Transit virtually 24 hours a day for six days. When folk got ratty, Bob would say, that's it, stop the car, everybody out for a meal – and good humour was restored. It was on that trip, when birdwatching in the suburbs of Golhak, in Tehran, that Bob came across some warblers mobbing something. Bob looked into the bush and saw two Eurasian Scops Owls *Otus scops*. He stuck his hand in and plucked one off the branch. We took it back to the house to show my wife's family but, since Iranian superstitions have it that owls are omens of bad luck, the women ran out hysterically.

Bob ended his career with responsibility for all of the RSPB's reserves, but how did he get there? Looking back to where he started, one might not have predicted that he'd become such a responsible, competent person.

During the Second World War, Bob was evacuated from his birthplace – Carshalton, Surrey – to spend his early years on a Wiltshire farm, where he encountered the pet Jackdaw *Corvus monedula* of the farmer's son. This must have planted the original seed. Bob, known as Robert to his mum, started his birding career in 1952, when he was 14 and at Sutton County Grammar School. His routine involved trudging around the London reservoirs and, to the embarrassment of his mum, weekly visits to Beddington Sewage-farm. He would cycle regularly to Dungeness at weekends, a round trip of over 100 miles (160 km), when bicycles were not the efficient machines that they are



Ann Scott

221. Bob Scott in southern India, November 2005.

today. His first job, with the Forestry Commission, lasted just three days, when he misidentified the trees he should have been culling, destroying newly planted conifers instead of the native deciduous trees he was meant to remove. Bob then tried working for a cable company that conveniently overlooked Beddington Sewage-farm. From there he moved to the Natural History Museum in Kensington, where he distinguished himself with the identification of obscure gut parasites in a Redwing *Turdus iliacus* found at Beddington (which resulted in his first note to *BB, Brit. Birds* 50: 122–123).

All this time he kept in touch with Dungeness and his mentor, Bert Axell. Bert was a forbidding character to some, but Bob got on well with him, as he did with everyone. As a result, he joined the committee of the Dungeness Bird Observatory and then, with the disapproval of his parents, he gave up his 'safe' museum job to take over from Bert in 1959 as

warden of both the Bird Observatory and the RSPB reserve, Britain's oldest nature reserve. During his 15-year tenure at Dungeness, he oversaw the installation of two nuclear power stations on his doorstep, and the development of extensive gravel diggings which eventually become a major wetland reserve. One of his achievements was to disrupt the building of the power station to avoid disturbing breeding Common Gulls *L. canus*, a rare breeding bird so far south.

Following Dungeness, Bob tried something completely different, with a three-year stint at the RSPB's Northward Hill reserve. His marriage with first wife Ann had come to an end, and it was there that he met his second wife, also called Ann, who at the time was working at the RSPB's regional office. Thus began the partnership known as 'Bob & Ann'. It was not long before the RSPB elders recognised that they had in their midst someone with greater potential, and so Bob & Ann were summoned to RSPB HQ at The Lodge, where Bob took over the roll of Reserve Manager, disseminating the experience gained at Dungeness and Northward Hill to other reserve wardens. He was so on top of this job that he was promoted to the roll of Senior Reserves Manager and then Head of Reserves Management, where he took on responsibility for all 200 RSPB reserves. For the many wardens who were his subordinates, formal management practices, such as appraisals, became more light-hearted and enjoyable. He set much of the groundwork as to how the reserves should be run and left a legacy that was the foundation of the reserves network.

Bob's retirement from the RSPB in 1997 allowed him to indulge his passion for travel, undertaking up to 12 overseas trips each year, many of those for Gulliver's Travels, to places all over the world. He had already achieved substantial conservation work overseas in Italy, Ghana, Rwanda and Burundi, but for two places he had a particular fondness: Bulgaria and, more recently, India. Apart from an early passion for the country's wine, there was something about Bulgaria and its birds that Bob and Ann couldn't resist, and together they led many trips there, playing a major part in establishing a substantial tourist industry for visiting birders. Bob did so much to foster conservation in the name of the Bulgarian Society for the Protection of Birds that he was awarded a medal by the Bulgarian Government. In India, he stayed at the Lakeside

residence of Joe Homan, of Boys Town charity fame. I was due to go on his trip there in February 2009, but he and Ann had to cancel because of his illness. While we had a good trip, it was much diminished without Bob & Ann. However, the effects that Bob had on the local staff at Lakeside, some of whom had become extremely competent field ornithologists under Bob's tutelage, illustrated well the enthusiasm that had inspired these locals to go on and hone their fieldcraft.

Bob became famous for his lectures and his inspirational communication skills. He would pack the hall at BTO conferences at Swanwick, as people knew that they were in for a session of sheer entertainment. He and Ann flogged up and down the country giving lectures to countless bird clubs and conservation societies, as well as teaching birdwatching in night school, spreading the message of the wonder of birds as any good evangelist would. He once gave a talk on sunsets – so many had he gathered in his travels. In retirement, he also took up his old hobby of moth trapping in his back garden in St Neots, chalking up a list of over 400 species.

Bob was the author of a number of books – including *The Birdwatcher's Key* (1976, also published in Dutch, Swedish and Spanish), *The Birdwatcher's Calendar* (1982) and *The Atlas of British Bird Life* (1987) – and contributed to many others. He had been a member of the BOU Council and was on the rarities committee for the Seychelles until his death. In recent years, he took on the Chairmanship of the Cambridgeshire Bird Club and was still active with the Countryside Restoration Trust. He was one of the five people with the foresight to ensure that *British Birds* had a viable future when, on 30th June 2000, he became one of the five original directors of BB 2000 Ltd.

Birdwatching with Bob was always fun, whether there were birds around or not. His was not the glass-half-empty life of the obsessional birder, much more the glass-half-full life of someone who enjoyed his birds, the whole experience and the company he was with. This gregarious, humorous and infectiously enthusiastic man will be missed by many as a very good friend, particularly by Ann, and the world of birds and their conservation is poorer for his passing.

*Dick Newell*

## A second British record of Allen's Gallinule

**ABSTRACT** An Allen's Gallinule *Porphyrio alleni* was picked up in a moribund condition on 10th February 2002 at Weston, Portland, Dorset, and died shortly afterwards. This was the second British record and the first since 1902.

Its occurrence fell within the established pattern of northward vagrancy by Allen's Gallinule, most European records having occurred between December and February.

Only one tropical African bird species has ever been recorded in the wild in Britain: Allen's Gallinule *Porphyrio alleni*. The first for Britain was a juvenile that was found exhausted on a boat off the Norfolk (then Suffolk) coast near Hopton-on-Sea in January 1902. As if to commemorate the anniversary of this important record, almost exactly 100 years later a second was discovered: a moribund individual at Portland, Dorset (Cade 2002). Following a review by BOURC, it was placed in Category A of the British List (BOU 2005).

### *The Portland bird*

On 10th February 2002, local resident Ashleigh Snaith discovered a moribund bird while walking her dog at West Cliffs, Weston, near Portland. The bird was in an advanced state of exhaustion and was given into the care of Portland Bird Observatory warden Martin Cade. The bird was thin and severely dehydrated and, despite Martin's best efforts to revive it, its condition deteriorated rapidly and it died within the hour. The bird's weight at the time was 82 g, some 20 g below the lowest previously recorded weight, and about half that of a healthy bird.

### *Specimen preparation*

The specimen was donated to the ornithological

research collections of the Natural History Museum (NHM), Tring. The body was prepared as a skin and skeleton, and a wing was detached and spread (plates 222 & 223). The skull was removed from the skin and replaced with a cast, which has been left uncoloured. The bones from the detached wing and one leg are also now incorporated with the skeleton of the trunk and skull, making its osteological representation complete. The BMNH Registration Number of the skin and spread wing is 2007.17.1 and the Registration Number of the skeleton is (s)2009.1.1. Tissue samples have been taken for future DNA analysis. Internal sexing showed the bird to be a male, with gonad length of 5 mm. The flight muscles were severely depleted and no subcutaneous fat was present.

### *Description*

The specimen is a first-winter just commencing post-juvenile moult. The wide buff margins to the juvenile feathers of the mantle and wing-coverts show extensive wear and several partially grown blue (adult) feathers are already visible on the upper flanks.

### *Plumage*

Forehead, crown, lores and ear-coverts uniform dark brown and no supercilium. Upper nape and side of neck warm terracotta-brown. Feathers of lower nape, mantle and scapulars dull brown with broad pale straw fringes. Chin white, with faint reddish-brown wash. Throat and upper breast dull terracotta-brown. Lower breast, belly and flanks pale sandy-brown, with occasional newly replaced bright blue feathers appearing on the lower flanks. Lesser, median and greater coverts olive-brown with broad pale straw fringes. Tertiaries rich olive-brown with a narrow dark buff fringe on both webs, becoming broader towards tip. Primary coverts dark grey-brown with dull blue-green outer webs. Alula dark grey-brown with dull blue-green outer webs and paler sandy-buff fringe at tip. Primaries and secondaries dark grey-brown with dull blue-green outer webs, gradually

becoming rich olive-brown at the fringe. On the folded wing, where only the outer webs are visible, these combine to form a conspicuous blue-green panel.

#### Bare parts

Upper mandible dull reddish-brown, becoming darker towards base. Lower mandible dull red with slight darkening at base. Tarsi dull plumbeous-brown, toes and claws slightly paler dull reddish-brown.

#### Biometrics and wing formula

The bird's wing formula had been recorded by Martin Cade (primaries numbered ascendantly) and two sets of biometrics were compiled (table 1)

#### Weather conditions

Wind flows in the days prior to 10th February 2002 originated far out into the North Atlantic, and no trajectories during the previous few days can be related to a movement from the south. The first fortnight of January 2002 produced conditions suitable for a movement from northern Africa into eastern Iberia, and even onwards into Britain, but there was no particular weather-related event in the days

leading up to the discovery of this individual that may have influenced its arrival in Dorset.

#### Comments on the first British record

Britain's first Allen's Gallinule, also a juvenile, landed exhausted on a boat not far from Hopton-on-Sea on 1st January 1902. It was taken to the premises of local taxidermist Walter Lowne, in Great Yarmouth. Although it was kept alive for a few days on a diet of mealworms, it is uncertain whether or not the unfortunate bird's death was entirely due to natural circumstances! The specimen then came into the possession of Mr J. B. Nichols, but was later sold at auction in London in 1929 and its whereabouts are no longer known (Taylor *et al.* 1999).

The unprecedented arrival of a sub-Saharan rail in Britain in the middle of winter was met with incredulity. At that time, little was known of the importance of seasonal rainfall in Africa and how this affects the movements and dispersal of tropical African birds. In the late nineteenth and early twentieth centuries, several aviculturalists kept small numbers of Allen's Gallinules in Britain, although none was reported missing at the time of the Norfolk bird's arrival (Gurney 1902). Furthermore, there

**Table 1.** Measurements of the Portland Allen's Gallinule *Porphyrio alleni* taken by Martin Cade (MC), when the bird was freshly dead, and by Katrina Cook (KC), of the defrosted specimen.

Measurement	MC	KC	Comments						
Weight	82 g	80 g	discrepancy may be due to dehydration during freezing						
Wing length	157 mm	156 mm	maximum chord						
Tail	64 mm	66 mm							
Bill length from top/end of frontal shield	36.7 mm	34.5 mm	discrepancy may be due to shrinkage						
Total head length		52.5 mm							
Bill width at feathering	8.7 mm								
Bill width at proximal end of nostril	7 mm								
Bill width at anterior tip of nostril		3 mm							
Bill depth at feathering	12.5 mm								
Bill depth at proximal end of nostril	10.5 mm								
Bill depth at anterior tip of nostril		9 mm							
Tarsus (maximum)	53.2 mm	50 mm	discrepancy may be due to different methodology used to take the measurement						
Tarsus and toe (including claw)	120 mm	120 mm							
Hind claw	13.1 mm	13 mm							
Middle toe	66.3 mm								
Wing formula									
P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
-25	-4	0	-3	-8	-15	-24	-33	-40	-48

Note also: wing-tip to S1 (outermost secondary), 55 mm; wing-tip to longest secondary, 50 mm; wing-tip to tertials, 39 mm.

was no sign of damage to the unmoulted juvenile plumage consistent with a prolonged period of captivity during live transportation from Africa.

Witherby & Ticehurst (1908) noted that the species had occurred in the winter in Italy and Sicily, and acknowledged the possibility that the Norfolk bird could be a genuine storm-driven migrant. Nonetheless, they retained the record in brackets and did not include it with the list of additions to the list of British birds since 1899. This remained the view of most authors throughout the first half of the twentieth century, including Witherby *et al.* (1938–1941), although Bannermann (1963) recommended acceptance. By the early 1970s, a pattern of northward vagrancy was well established and Robert Hudson suggested that BOURC review the 1902 record (Hudson 1974). Allen's Gallinule was accepted onto the British List by BOURC in March 1974 (BOU 1974) and placed in Category B.

#### Distribution

Allen's Gallinule is widespread in sub-Saharan Africa from Senegal and the Gambia to Ethiopia and southwest Somalia, south to Namibia, northern Botswana and eastern South Africa (Urban *et al.* 1986), where it inhabits well-vegetated wetlands up to 1,900 m asl. The species is an intra-African partial migrant, and most birds migrate north to the northern tropics at the onset of rains from about December to March, when they often appear in large numbers (Urban *et al.* 1986).

Although it appears clumsy and inefficient in the air over short distances, it is surprisingly adept at sustained flight, and vagrants have been recorded from as far afield as Ascension Island and St Helena in the South

Atlantic, the Comoro Islands and Rodrigues Island in the Indian Ocean, and it has even reached South Georgia, some 4,800 km from Cape Town, South Africa, where it is also a vagrant (del Hoyo *et al.* 1996; Snow & Perrins 1998).

#### Vagrancy to the Western Palearctic

Up to the end of 2008, there have been at least 46 records of Allen's Gallinules in the Western Palearctic. In addition to the two British records, others have occurred in the Azores, the Canary Islands, Cyprus, Denmark, Finland, France, Germany, Greece, Italy, Madeira, Malta, Morocco, Portugal, Spain and Tunisia. The majority have occurred between December and



222. Allen's Gallinule *Porphyrio alleni* before preparation at NHM, Tring.



223. Skin and wing of prepared specimen of Allen's Gallinule *Porphyrio alleni* at NHM, Tring. Note that the skull has been removed and replaced with a plaster cast.

Katrina Cook © NHM, Tring

Katrina Cook © NHM, Tring

Miguel Avelino Suares Farias



Miguel Avelino Suares Farias

**224 & 225.** Juvenile Allen's Gallinule *Porphyrio alleni*, Maspalomas, San Bartolomé de Tirajana, Gran Canaria, December 2008.

February, supporting the idea of northward dispersal associated with rains in the northern tropics. Many of the birds that reach Europe arrive exhausted and are often in poor condition. Occasionally, some survive the journey well, including a juvenile that reached Gran Canaria in December 2008 (plates 224 & 225). During the weeks prior to the discovery of the Portland bird, two exhausted juveniles, presumably affected by similar meteorological conditions, were found in Spain: on Mallorca on 8th January – the first for the island – and Benidorm on 26th January. Both were taken into care and released several days later.

### Postscript

Martin Cade concluded his report (Cade 2002) with a touching reflection on the coincidence of this important event occurring within sight of Weymouth, the birthplace and final resting place of William Allen (1793–1864), after whom the bird was named (Mearns & Mearns 1988).

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# Letters

## *The Cape Verde Warbler on Fogo*

It was interesting to see the account by Jens Hering and Elmar Fuchs (*Brit. Birds* 102: 17–24) on the discovery of the Cape Verde Warbler *Acrocephalus brevipennis* on the island of Fogo. In the past, its absence from the island was very surprising but no-one, including a number of good ornithologists, had managed to find it. I did not visit the island myself when I was in the archipelago in 1951, but passed almost close enough to hear any singing birds there. I suggest that the birds currently missing from the adjacent island of Brava, which lies within sight of Fogo, may have moved there. The observation that the birds now on Fogo prefer cultivated areas, as they did on Brava, where they avoided the ravines (in which the species occurs on Santiago), supports this.

The Cape Verde Islands are prone to intermittent droughts, and seem likely to have been affected by the African ones of the 1970s. The Cape Verde Warbler does not at first sight

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appear likely to move around, but it is related to long-distance migrants. It seems likely that an essential strategy for the species, in common with other birds of wetland habitats, is to disperse either when its habitat dries up or when the population is high, under more favourable conditions. There are past records of its presence, and then absence, and then reappearance on the island of São Nicolau. Perhaps its former absence from the large islands of Fogo and São Antão reflected some deficiency of the food available there, since repaired on Fogo by the advance of human civilisation. Its future may hang by a slender thread, since it was said in the past that the splendid Fogo coffee crop was bought up entirely by one London hotel, implying that it was not yet very large, so the appearance of the warbler may be a tribute to its growing success. Let's hope that they keep it up.

## *Wilson's Storm-petrels seen from mainland Britain*

When BBRC removed 17 species from its list at the end of 2005 (*Brit. Birds* 100: 16–19), a few seasoned rarity finders felt that it may have gone a little too far. Clearly, the statistics must ultimately decide what stays and what goes, but why was Wilson's Storm-petrel *Oceanites oceanicus* removed? BBRC had accepted only 16 records of that species from mainland Britain since 1958 (nine from Cornwall, five from Pembrokeshire and singles from Somerset and Cumbria). None was on the east coast of Britain and none had been seen by the very experienced petrel watchers in Lancashire & N Merseyside and Cheshire & Wirral. The only British record prior to 1958 was one obtained in Cornwall in August 1838; other records listed by Witherby *et al.* (1938–41) have since been discredited.

BBRC's statistics were greatly swelled by pelagic records of Wilson's Storm-petrel, the vast majority in the Southwestern Approaches. The only North Sea record was 20 km off Northumberland on 1st September 2002, although two of the five Scottish records were in

sea-area Fair Isle, well north of Shetland and close to the North Sea. The species is thus very rarely observed from mainland Britain and almost non-existent in the North Sea. Why didn't BBRC simply retain the species on its list for records claimed from mainland Britain or for all records apart from those in the Southwestern Approaches? In the first year after it was removed from the BBRC list, one was seen off Hartlepool, Cleveland, on 7th September 2006. This was accepted and published (*Cleveland Bird Report* 2006) but for some, without BBRC endorsement it will always sit uneasily on the record books. This record may be perfectly acceptable, and I make no comment on that, but surely it is time for BBRC to reconsider its position and return Wilson's Storm-petrel to its list in the format suggested above.

When the late Peter Grant and I first figured out a numbering system for BBRC rarities during a transatlantic flight in October 1976, I don't think either of us thought that this would

ultimately lead to the removal of a mainland record of Wilson's Storm-petrel as a BBRC rarity! An alternative approach would be for mainland recorders to request that BBRC considers such records. The Committee has always been prepared to consider exceptional records of species previously on the list, and this offer was reiterated recently (*Brit. Birds* 102:

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275). Records don't come much more exceptional than the first record of a pelagic species from the east coast.

#### Reference

Witherby, H. F., Jourdain, F. C. R., Ticehurst, N. F., & Tucker, B. W. 1938–41. *The Handbook of British Birds*. Witherby, London.

**EDITORIAL COMMENT** Adam Rowlands, BBRC Chairman, has replied as follows: 'Dave Britton makes a valid point regarding the geographical rarity of Wilson's Storm-petrels in many parts of Britain/British waters. The issue of geographical rarity in general has been debated at length at successive BBRC AGMs when we have been discussing potential species to be removed from the Committee's list because they have surpassed the national statistical threshold for rarity status. When the Rarities Committee was first established in 1958, records of a number of species with a restricted range in Britain were assessed by the Committee from areas where they were considered to be rarities. These included Golden Eagle *Aquila chrysaetos* (outside Scotland), Kentish Plover *Charadrius alexandrinus* (away from the coast between the Wash and the Isle of Wight), Dartford Warbler *Sylvia undata* (outside England) and Bearded Tit *Panurus biarmicus* (outside East Anglia) among 11 species to which this geographical caveat applied (*Brit. Birds* 52: 241–244). These four species were among nine of the geographical rarities dropped in 1963 (*Brit. Birds* 56: 394) and this caveat has not been applied to the assessment of any species subsequently, despite the fact that Dartford Warbler would (statistically) still be worthy of the Committee's attention in Scotland and the Northern Isles, as would Golden Eagle in English counties south of Yorkshire. Whenever BBRC elects to drop a species that has met the statistical threshold, the Committee members are often aware that this may cause issues in parts of Britain where the species is extremely rare (for example Arctic Redpoll *Carduelis hornemanni* on the south coast of England, European Serin *Serinus serinus* in Scotland and Parrot Crossbill *Loxia pytyopsittacus* away from its Scottish breeding grounds). However, rather than attempt to determine a series of geographical caveats to address this, we have decided that the simplest approach is to use the national figures to determine rarity, which ensures that we remain true to our core objective of maintaining an accurate database of records of the occurrence of rare taxa in Britain. If we assessed only a proportion of the records of an individual species, for example Wilson's Storm-petrels observed from the mainland while ignoring the at-sea records, the statistics that we collected would not truly reflect our core aims.

'We will of course continue to offer support to regional and county records committees with species with which they are unfamiliar, but this relies on the discretion of the committee involved. We consider this to be a more appropriate use of our finite time and resources than introducing more complicated geographical caveats for individual species.'

# Notes

All Notes submitted to *British Birds* are subject to independent review, either by the Notes Panel or by the BB Editorial Board. Those considered appropriate for BB will be published either here or on our website ([www.britishbirds.co.uk](http://www.britishbirds.co.uk)) subject to the availability of space.

## Unusual feeding behaviour by Eurasian Sparrowhawks

On 19th October 2007, while walking over the Warham saltmarsh in north Norfolk, I noticed two female Eurasian Sparrowhawks *Accipiter nisus* apparently hunting in tandem over an area of saltmarsh with scattered Annual Sea-blite *Suaeda maritima* bushes. One bird was flying at a height of about 4 m, whilst the other was much higher, and on a parallel course to the right. During a 15-minute observation period, a number of small birds, mostly Rock Pipits *Anthus petrosus*, were flushed and one of these was taken by the higher-flying Sparrowhawk. The lower of the two hawks made no attempt to take any of the birds flushed.

At about 07.00 hrs on 28th August 2008, I flushed a female Sparrowhawk on the rear lawn of my house; the bird flew off, leaving behind the

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**EDITORIAL COMMENT** Ian Newton has commented that the second observation represents behaviour that has been previously suspected but not proved.

partially eaten remains of an unfeathered Collared Dove *Streptopelia decaocto* nestling. After an absence of four hours, I returned to the house and found what was presumably the same female Sparrowhawk on the lawn, in the process of eating a second nestling. Both these nestlings must have been taken from a well-concealed nest in Virginia Creeper *Parthenocissus tricuspidata*, some 4 m above the ground. When checked on 26th August, this nest had contained two young. Although this nest was well hidden, a sitting adult would have been partially visible amongst the leaves.

There is no mention of either of these types of behaviour in Newton (1986).

### Reference

Newton, I. 1986. *The Sparrowhawk*. Poyser, Calton.

## Osprey catching Great Crested Grebe

In August 2008, a colleague and I were trimming bushes and trees along the margins of Blatherwycke Lake, Northamptonshire. The owner of the lake was attempting to spruce up the estate, efforts that included dredging the lake, which required the water level to be lowered significantly. Each day in early August, we had a visit from an Osprey *Pandion haliaetus*, which took full advantage of the concentration of fish in shallow water, normally arriving in mid afternoon for about half an hour's fishing and being quite unperturbed by our presence.

On 8th August, a beautiful, sunny afternoon with scarcely a ripple on the water, the Osprey arrived as usual, spent some time quartering the lake and finally plunged down for its quarry. What

a surprise we got when, instead of coming up with a fish, it came up with a Great Crested Grebe *Podiceps cristatus* in its talons, accompanied by much squawking, flapping of wings and a flurry of feathers! The Osprey quickly dropped its catch a metre or so above the water surface; the grebe dived for safety as soon as it hit the water. I can only assume that the Osprey had mistaken the grebe's streamlined form under the water for a fish. Undaunted, the Osprey continued hunting and secured a fish soon after; it continued to visit the lake on a daily basis for at least a week after this incident, but did not repeat its mistake!

### Acknowledgment

My Dad helped me to compose this note. That's why it sounds so old-fashioned!

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**EDITORIAL COMMENT** A previous note in BB recorded an Osprey taking a half-grown Northern Lapwing *Vanellus vanellus* chick (*Brit. Birds* 40: 252), but this seems a remarkable observation.

## Peregrine Falcon robbing Hobby of prey

On 13th July 2008, near Totton, Hampshire, Ian Pibworth and I were watching an adult Peregrine Falcon *Falco peregrinus* perched on a nearby electricity pylon when we noticed a Hobby *F. subbuteo* carrying prey. The Peregrine launched itself from the pylon and rapidly approached the Hobby from below and behind, and as it passed beneath the smaller falcon it rolled over on its back and extended its talons. The Hobby, presumably intimidated by this, dropped the prey, which was neatly caught by the Peregrine (the incident reminded us of an

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aerial food pass at the nest by harriers *Circus*).

Ratcliffe (1980) commented that 'Piracy seems to be only occasional', and, quoting Meinertzhagen (1959, *Pirates and Predators*), could name only Honey-buzzard *Pernis apivorus*, Eurasian Sparrowhawk *Accipiter nisus* and Common Kestrel *F. tinnunculus* as victims. Our observation in Hampshire may thus be the first documented instance to involve a Hobby.

### Reference

Ratcliffe, D. 1980. *The Peregrine Falcon*. Poyser, Calton.

## Mock-feeding by Common Starlings to facilitate kleptoparasitism

In early May 2008, I watched small flocks of Common Starlings *Sturnus vulgaris* feeding avidly on leatherjackets, or crane fly larvae (Tipulidae), in a Birmingham suburb, 'leapfrogging' hedges and working from lawn to lawn. Some 15–20 birds would spend ten minutes or so foraging on each lawn, with birds arriving or rejoining the flock as others left with full beaks to feed chicks in the nest.

Their feeding technique involved putting down previously caught prey items to search for another (because of the close proximity of the observations, the technique could be seen in detail). In the first movement, up to three or four leatherjackets were placed on the lawn; the second was a deep probe for a new item and was quickly followed by the third, as the previous items were retrieved. Together, these three movements lasted about one second. Foraging birds typically concentrated their searches at the base of larger tufts of grass or weeds growing in the lawn.

Occasionally, an individual would be observed that fed less avidly and more half-heartedly, almost 'going through the motions' of foraging. Such birds did not seem to concentrate on larger tufts (as above) and also probed with shallow-angled jabs (I termed it 'mock-feeding' or 'pseudo-feeding') rather than the deep,

straight strikes of more determined feeders. These shallow-angled jabs with the head inclined seemed to be designed to allow the bird to watch for the moment when another put down its cache, enabling the 'pirate' to rush in and steal leatherjackets placed on the ground. It was between the first and third peck, as described above, that the pirate could snatch the leatherjackets.

These tactics allowed the pirates a closer approach than if they merely approached without pretending to feed. 'Determined feeders' quickly moved away from birds not showing feeding behaviour. For example, determined feeders would stay close together, up to six per square metre, until a pirate revealed itself by making an attack, whereupon the flock would disperse more widely over the lawn. Perhaps owing to the security of foraging close together or a tendency to congregate at productive spots, the foragers soon grouped together again, prior to another pirate attack.

An instance of kleptoparasitism by Common Starlings (on a Whimbrel *Numenius phaeopus*) was reported in *BB* recently (*Brit. Birds* 95: 656–657), but the detail of this observation seems worth placing on record as an example of intraspecific kleptoparasitism in the Common Starling.

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# Reviews

## HANDBOOK OF THE BIRDS OF THE WORLD. VOL. 13. PENDULINE-TITS TO SHRIKES

Edited by Josep del Hoyo,  
Andrew Elliott and David  
Christie. Lynx Edicions, 2008.  
880 pages; 60 colour plates;  
many colour photographs and  
638 distribution maps.  
ISBN 978-84-96553-45-3.  
Hardback, £150.00.

Well, here we are again. Volume 13 of the long-running *HBW* series, and another reviewer has to consult a thesaurus to find some more ways of saying 'very good'.

Potential purchasers of Vol. 13 will be pretty familiar with the formula by now. This volume covers 16 families of birds, including some charismatic, well-studied groups that pretty much guarantee the broad appeal of this instalment. Each family of birds is given an extended chapter, which starts with a narrative account covering aspects of systematics, general characteristics, ecology and habitat of the group, liberally scattered with specific examples from the individual species in the

family. The family accounts, as in previous volumes, are packed with top-level information, and the level of erudition is impressive. They are all well written and thought-provoking. Outstanding in this volume is the family-account text on the shrikes *Lanius*, which has many illustrative paragraphs drawn from an obviously intimate knowledge of the literature surrounding these well-studied birds, and is well worth reading. Few of the pages within these family accounts are without a photograph or two, and these are generally good quality – many of them are stunning. The species accounts vary in length but are often quite brief, and follow the standard formula of taxonomy, distribution, description, habitat, feeding, breeding, movements, status and conservation. These provide useful summaries without, of course, being all there is to say. As usual, there is a guest essay at the start of the volume, and this time it is a typically well-planned and authoritative chapter on migration by Ian Newton. It provides a nice précis of the state of our knowledge.

As might be expected, given the

track record of the series, this book is a pleasure to own. When I look at the accumulating bookshelf-bursting collection, it occurs to me that most of these books are still looking suspiciously new – am I actually taking care of them because they are so expensive, or am I not using them? Sure, I dip into them from time to time, but they are not scrawled over like my other 'working' handbooks and guides. If there is an issue, it is that sometimes the narrative style of the family accounts is a bit overwhelming, and it is not always easy to find the piece of information you want, or even know if it is going to be included. Without wanting to sound like a total geek, I am starting to prefer online or DVD sources to books, and *HBW* would benefit from being in a searchable electronic format, not least so that it would be possible to use it without having to winch a breeze-block volume off the shelf. Nevertheless, this is a valuable addition to an invaluable collection that has become a major standard reference work. The relentless march of this enormous project continues.

*Martin Collinson*

## LARS JONSSON'S BIRDS: PAINTINGS FROM A NEAR HORIZON

By Lars Jonsson.  
Christopher Helm, A&C Black,  
London, 2009. 192 pages;  
numerous colour paintings.  
ISBN 978-1-4081-1014-0.  
Hardback, £35.00.

Lars Jonsson surely needs no introduction to readers of *British Birds*. Some will recognise him as an illustrator of birds without equal, but surely most must now be aware of his true status as one of the greatest living artists at work today, in any field. His approach to working almost exclusively from life enables him to find something

new from every subject, no matter how many times he visits it.

The book begins with invited essays from Adam Duncan Harris, Kent Ullberg and Fredrik Sjöberg, who put their various slants on the importance of the work and explain the phenomenon that is Lars Jonsson. It is a sometimes difficult but nevertheless an illuminating read. Perhaps if you are impatient, like me, you may just skip those first 33 pages and get straight to the visuals.

The book itself grew from an exhibition catalogue for a show in Oldenberg, Germany, in 2008, in a similar way to one of his previous books, *Birds and Light* (2003). I say 'grew' because Jonsson has added other material to set the current work in the context of his working

life so far. He guides the reader through the book with a fascinating text outlining motives and method, or just the simple delights of the subject.

Starting with 'Early Works', Jonsson briefly outlines his beginnings for the newcomer and describes how his approach to art developed. This is followed by a section containing reprints of pages from his sketchbooks. I cannot resist poring over artists' sketchbooks, no matter who the artist is – they are so immediate and revealing. The next chapter deals with watercolours, which, having been executed on site (outside) for the most part, are a natural and flowing progression from the smaller sketchbook pages. As with the oil paintings in the next chapter,

they feature investigations into light and form, many from along a boulder-strewn foreshore, the recurring fascination in Jonsson's current work. These oil paintings in particular show continuity and are accompanied by little narrative.

The final section is entitled 'Ornithological Works', and features the Lars Jonsson work that is perhaps most familiar to British readers. Here, his approach to book plates is explained along with some well-known examples, and his appetite and ability to rise to

challenging areas of field identification are confirmed.

As I turned the page, I came upon his current area of identification interest: gulls (*Laridae*). I had brief hopes for a masterclass, but really this is not the place. Pages 172 and 173 hint at the treasure trove: 56 thumbnail reproductions of detailed field-sketch pages of individual gulls, the raw material, entitled 'The Puzzle of Gull Evolution' (puzzling it is; one is a Eurasian Spoonbill *Platalea leucorodia!*).

The final part of the book is a

biography, detailing significant moments in the life of Lars Jonsson. In Sweden he is a national hero; there are surely very few living artists from any discipline who have a museum dedicated to their work. This book is just what you'd want it to be, a first-class production, page after page of sketches, studies, words and paintings from an extraordinarily talented artist.

Alan Harris

### THE BIRDS OF TURKEY

By Guy M. Kirwan, Kerem Boyla, Peter Castell, Barbaros Demirci, Metehan Özen, Hilary Welch and Tim Marlow.  
Christopher Helm, A&C Black, London, 2008. 512 pages;  
32 colour plates;  
distribution maps.  
ISBN 978-1-4081-0475-0.  
Hardback, £40.00.

Turkey is situated where Europe meets Asia, and its rich and diverse avifauna has for many years attracted the attentions of visiting birders searching for some of the most exciting birds to be found in the Western Palearctic. Countries such as Israel, Egypt and Armenia have all been the subject of a comprehensive national avifauna but, although the Ornithological Society of the Middle East (OSME) has published regular updates on Turkey's birds via the *Turkey Bird Report*, until now there has been no really thorough and comprehensive assessment of Turkey's birds.

This book has been a long time coming. I met Guy Kirwan during the course of my first trip to Turkey, in 1991, and the first seeds of this book were clearly in his mind back then. A year later some of the first texts had been drafted. Now eighteen years on and after many days in the field and museum, and at the computer, we see the fruits of his and his team's labours.

The introductory sections cover a variety of topics. Peter Castell

provides an overview of the breeding season and outlines some of the remaining challenges that could and should be taken up to fill in the gaps in our knowledge of the country's breeding birds. A section dealing with some reflections on modern ornithology in Turkey is co-authored by, amongst others, Richard Porter, and includes a number of evocative black-and-white photographs. Beginning in a period when most of the birding in Turkey was undertaken by visiting European birders, this takes us through the most significant developments in Turkish ornithology through to the present time when, encouragingly, a small but growing number of Turkish nationals are pursuing birding as a hobby and making significant discoveries themselves.

Hilary and Geoff Welch and Sancar Bariş tackle the major gaps in our knowledge of Turkey's birds, pointing us in the direction of where future studies could be targeted, and demonstrating that there is still much to be learnt. The senior author plans to keep us posted with details of new discoveries, updates and corrections on his website ([www.freewebs.com/guykirwan/turkeybookupdates.htm](http://www.freewebs.com/guykirwan/turkeybookupdates.htm)).

Turkey's eco-regions, their biodiversity and conservation are covered in depth, and 32 colour plates include some wonderful landscapes and some superb portraits of many Turkish specialities. In almost all instances these

photographs are sharp and richly coloured, although a couple (Common Rosefinch *Carpodacus erythrinus* and the hills around Gaziantep) are a touch blurry in the review copy. Significantly, most images are contributed by Turkish nationals, something I could not have envisaged during my first travels in the country.

Of course the main bulk of the book is taken up with the species accounts. These cover all 463 species deemed by the authors to have been reliably recorded in Turkey. There are additional species for which claims exist for the country and these are treated in square brackets and justification for not admitting them to the Turkish list is provided. The cut-off date for publication is generally 2006, with reports and information from some more recent publications included where possible. So, recent discoveries, such as the Iraq Babbler *Turdoides altirostris* found to have bred at Birecik in 2006, make it into the book.

Each species is treated under two or three subheadings: 'Subspecies and taxonomy', 'Status and distribution' and, for those species that breed in the country, 'Breeding'. The sections on subspecies and taxonomy are of particular interest, and for each species an attempt is made to determine which subspecies has (or have) occurred in the country. The accounts repeatedly demonstrate extensive personal field and museum work and, combined with

a comprehensive and thorough appraisal of the relevant literature, this is an authoritative review of the taxonomy of Turkey's birds.

For those species nesting in the country, the section on breeding provides details of the timing of the breeding cycle. These sections contain many individual observations (usually credited to a specific observer) that on their own might seem rather insignificant. However, these sections are a mine of useful information, and demonstrate the value of ensuring that those seemingly minor observations make it beyond the field notebook and get submitted to a suitable recording body such as OSME. When pulled together in a publication such as this, their value becomes all the more significant.

The species maps could perhaps have benefited from the use of colour, but that would have doubtless added significantly to the cost of the book. The use of a greyscale for the maps does give a clear impression of bird distributions and they are generally easy to interpret. These maps represent the most accurate and up-to-date distribution maps currently available for the country, and it is intended that they are maintained and updated with any future data that arises. An extensive bibliography running to over 30 pages is testament to the extent of the research undertaken for this publication.

In most books there are likely to be some minor errors, but I am unable to find anything significant

here. The overwhelming impression is of a comprehensive and meticulous job well done. This is an excellent publication that summarises in detail all that we currently know about Turkey's birds and it is obvious that it will provide a baseline for further work for many years. In his preface the principal author expresses his hope that this book might be seen to nestle on a par with the likes of *The Birds of Morocco* and *The Birds of Egypt*. I believe that he has succeeded. This book ought to be an essential purchase for anyone with an interest in the ornithology of Turkey and the Middle East.

Chris Bradshaw

**BIRDWATCHER: THE LIFE  
OF ROGER TORY PETERSON**

By Elizabeth J. Rosenthal.  
The Lyons Press, Guilford,  
Connecticut, 2008.  
438 pages; 14 pages of  
photographs.  
ISBN 978-1-59921-294-4.  
Hardback, £19.99.

Roger Tory Peterson was possibly the most influential birder of the twentieth century. His *Field Guide to the Birds*, covering the eastern United States, first published in 1934 and still in print, was a quantum leap forward in field identification. The European version, prepared in partnership with Guy Mountfort and P. A. D. Hollom, and still referred to by some birders as *the field guide*, appeared in 1954 and is also still in print.

Obviously, Peterson features prominently in all the recent books on the social history of birdwatching, despite their British bias, but the *Field Guide to the Birds of Britain and Europe* and the friendship with James Fisher tend to dominate. The story told by Eric Hosking tends to be most commonly repeated: a select bunch of British birders visiting Hilbre are

listening to Lord Alanbrooke recounting his exploits in World War II, when Peterson interrupts with the observation 'I guess these Oystercatchers [*Haematopus ostralegus*] eat most any mollusc.'

The Alanbrooke anecdote does not appear in this book, but it easily could have done, as Peterson's single-minded obsessiveness is a recurring theme. Without any apparent hint of irony, a whole section is dedicated to debunking the idea that Peterson was a monomaniac by explaining that he was equally enthusiastic about wild flowers and butterflies. At another stage, Peterson's close friendship with Sir Peter Scott is seen as surprising, given Sir Peter's wide breadth of interests. The friendship with James Fisher, though, was so close because they shared an obsession. Clem Fisher, James's daughter, recalls visits by Peterson: '...they'd come in and sit down and still talk. Have food, and still talk. And then leave, still talking.'

The best biographies are often gripping stories, even if you tend to know the ending, but this book is written in a rather dry, journalistic style, perhaps surprising for a biographer whose other subject was Elton John. The research involved in producing the book is

unquestioned – the list of personal interviews extends to almost four pages – but the frequent lengthy quotes, while underlying the accuracy, rather tend to break the flow, as three or four writing styles often appear on one page.

The book has already appeared in the USA and garnered glowing reviews from many people who knew the 'Great Man' himself, as Peterson was widely known in later life. At times, though, the book seems almost too reverential, and the author seems quite surprised at any hint of criticism. Despite this, a chapter on Peterson's paintings as art is rather dismissive of his talents.

Exactly how Peterson became such an influence seems unclear. Just how did the unconnected son of poor immigrants get to publish his first field guide at the age of just 25? Perhaps it is because the names he associated with in his early years were more influential than a Brit can appreciate. Or perhaps, in America, it is accepted that someone with talent and a good idea would naturally go on and achieve.

Overall, the book is an interesting insight on a man who was undoubtedly an enormous influence on the development of birdwatching and conservation in

many parts of the globe. If you have read the recent books on the history of birding in Britain, it is also interesting to get a transatlantic perspective on things (it was hard to read the section on Peregrine Falcons *Falco peregrinus* and DDT without shouting 'What about Derek Goodwin?' – although he was eventually given due credit).

It would have been nice to see more of Peterson's artwork and photos. There is just a rather old-fashioned-looking 14-page insert of mainly black-and-white photos. Peterson's work is presumably widely published and well known in his native America, whereas many in the UK will have seen little more than his *Field Guide*

illustrations. If you've forgotten how good *they* are, dig out your copy and have another look. Then, as the reviewer will be doing, go and find a copy of Peterson and Fisher's *Wild America*, the original Big Year birding-buddy roadtrek.

Mike Pennington

**BIRD RINGING:  
A CONCISE GUIDE**

By Dawn Balmer, Liz Coiffait,  
Jacquie Clark and Rob  
Robinson. BTO, Thetford,  
2008. 76 pages; many colour  
photographs and figures.  
ISBN 978-1-9062-0445-4.  
Paperback, £7.50 + p&p.

Launched to help celebrate 100 years of ringing in Britain, and dedicated to the late Chris Mead, this little book is an excellent introduction to the topic. Following a short introductory chapter, there are main chapters on

catching and ringing birds, understanding movements and migration, bird ringing as a tool for monitoring and conservation, getting involved and, finally, 'frequently asked questions and record breakers'.

Well illustrated and nicely produced, the book is crammed with facts and figures and is as authoritative as you would expect, given that the authors include some of the best-known ringers currently employed by the BTO. Essentially, it is an introductory guide, using all those facts and figures to explain how and why we ring birds. Nonetheless, I suspect that all

ringers will enjoy it too, and find plenty they didn't know or had at least forgotten. Most of all, I think that it should be applauded for showing the extent to which bird ringing is one of the most rewarding of 'extra dimensions' to add to 'general' birding skills. Compared with buying a scope, digital camera and pager, becoming a ringer is not easy, and the route to an A-permit demands serious effort and resources, not least of time – but it's well worth it and this guide will hopefully inspire some new recruits.

Roger Riddington

**WINGS AND RINGS:  
A HISTORY OF BIRD  
MIGRATION STUDIES  
IN EUROPE**

By Richard Vaughan.  
Isabelline Books, Penryn,  
Cornwall, 2009. 228 pages;  
21 black-and-white  
photographs, 23 colour photos.  
ISBN: 978-0-9552787-4-7.  
Paperback, £19.95.

We are now so familiar with the use of bird ringing, radar and radio-tracking to study bird migration that it is easy to forget how it all began. This book describes the early history of bird migration studies in Europe told mainly through the lives of four of the early pioneers, who were active in the late nineteenth and early twentieth centuries. These were Heinrich Gätke (1814–1897), Hans Christian Cornelius Mortensen (1856–1921), Johannes Thienemann (1863–1938) and William Eagle Clark (1863–1938). Born in

Brandenburg in northeastern Germany, Gätke spent his entire adult life as a skin collector and observer of bird migration on Helgoland in the eastern North Sea; Mortensen was a Danish schoolmaster who 'invented' bird ringing; Thienemann became the director of the first proper bird observatory established at Rossitten (now Rybachi) on the Courish Spit on the southern Baltic Sea coast; and Clark conducted early studies of bird migration at lighthouses around the British coasts, and discovered the ornithological importance of Fair Isle. One way or another, all these pioneers left a huge legacy through their actions and writings, and together they laid the foundations for the next century of research into bird migration. Both Helgoland and Rossitten were left devastated by the Second World War, and the book goes on to summarise the subsequent re-establishment of these sites as centres for migration studies, together with the

development of bird observatories and bird ringing in general. In their interpretation of what they saw, these early observers seem to have got many things right, as confirmed by later research, although it is clear that they were working in times when bird populations were generally much larger than they are now.

The author of this book is described on the cover as an academic historian with an interest in birds and photography. He has produced a book which is both well researched and beautifully written, giving pleasurable bedtime reading. The author's own text is enlivened with extended extracts from the writings of these various pioneers, and the people who visited them. Taken together, these accounts convey the spirit of the time, and the excitement of early discoveries. For example, they give vivid descriptions of the huge mortalities of birds that sometimes occurred at lighthouses, of the massive irruptions of Pallas's Sandgrouse

*Syrhaptes paradoxus* into western Europe in 1863 and 1888, and of the incredible rivers of migrating birds that streamed each autumn along the Courish Spit. As an aside, the book also provides hints on the culinary merits of various bird species no longer legal fare in western Europe, and how best to cook or pickle them. According to

the old Helgolanders, who seemed to have eaten almost every bird species that appeared on the island, the Short-eared Owl *Asio flammeus* provided 'the finest dish a man could wish for', and Gätke himself describes how, on catching a fat Ring Ouzel *Turdus torquatus*, he found his thoughts straying, 'with by no means unpleasurable

feelings, from the throstle bush to the soup pot'. In summary, this book provides an enjoyable and evocative read about exciting, pioneering times long gone, and is nicely peppered with interesting anecdotes.

Ian Newton

#### SAY GOODBYE TO THE CUCKOO

By Michael McCarthy.  
John Murray, London, 2009.  
243 pages; 12 vignettes.  
ISBN 978-1-84854-063-7.  
Hardback, £16.99.

As the 1960s became the 1970s, I enjoyed our migrant songbirds in both Britain and West Africa. Bar one partial depletion from a Sahel drought, they showed resilience. In his 1972 classic assay of their biannual movements, Reg Moreau gave us their full scale and amazing reliefs. Four decades on in Britain, repetitive statistical injury has almost inured me to the loss of some niche species. Yet every passing spring, I wince again at the

ever-lower tides of most incoming summer visitors.

It is this loss of migrant security and the diminuendo of the dawn chorus that form the main themes of Michael McCarthy's book. Will he succeed in prompting redoubled action to reverse them? I hope so. Certainly his masterly re-telling of the recent declines of about a dozen 'spring bringers' is what one would expect from an award-winning journalist. The birds are vividly evoked in verbatim accounts describing guided visits to archetypal breeding haunts. Entrancingly, however, McCarthy also reprises from three millennia the views of over 190 scribes who have witnessed the birds' presences and wondered at their mysteries. Woven into a rich ornithological tapestry,

his twelve chapters are models of scene description and reader enlightenment. I learnt not just more about the birds but also of their best students and other extraordinary people.

Buy this book, enjoy it, then pass it on to several Philistines and, at the eleventh hour, do whatever else you can to save the western rump of the once teeming Palearctic-African migration system. A contribution to the BTO's new international initiative on migrant ecology would be a start.

McCarthy and Reg Moreau's ghost expect us to remember that avian rights were established many millions of years before ours.

Ian Wallace

#### GREAT BIRDS OF BRITAIN & EUROPE

By Jonathan Elphick and David Tipling. Duncan Baird Publishers, London, 2008.  
256 pages; 215 colour photographs.  
ISBN 978-1-84483-686-4.  
Hardback, £22.50.

*Great Birds* is a handsome, coffee-table book that showcases a fair proportion of Europe's birds (some 200 species). As such, it's also a showcase for some of Europe's finest bird photographs, many of which are truly stunning images.

In his introduction, Jonathan Elphick says that his selection of species for this book was based on the most 'remarkable' birds to be found in Europe. His '200 Star Species' (the book's subtitle) range

from the spectacular Eagle Owl *Bubo bubo* to the distinctly unspectacular Zitting Cisticola *Cisticola juncidis* and include 13 ducks, 21 waders and 9 owls. Each species is allocated a page incorporating concise and informative text, a neat little range map and status summary – and a photo. The photographs take up less than half the page whereas, in most instances, they cry out for more space. Happily, the species accounts (in the most recent taxonomic order) are interspersed with double-page spreads of magnificent images – and the occasional species also receives this treatment, for example Red-breasted Goose *Branta ruficollis*, Common Crane *Grus grus* and Snowy Owl *Bubo scandiacus*.

Jonathan Elphick is an erudite author (he did much of the text research for Mark Cocker's *Birds*

*Britannica* (Chatto & Windus, 2005)) and there is much to be gleaned from his written accounts. Find out how Thekla Lark *Galerida theklae* was named, which Critically Endangered species reputedly guides pilgrims to Mecca and which mountain dweller has the highest copulation rate of any bird!

Chief photographer David Tipling rightly receives equal billing in *Great Birds* because it's the great photos that make this book. Most of them are taken by David himself and he has sourced the remainder from equally talented lensmen like Markus Varesvuo, Jari Peltomäki and Roger Tidman. Among my personal favourites are the Steller's Eiders *Polysticta stelleri* on a rippling sea, the Kittiwakes *Rissa tridactyla* nesting on a Scandinavian homestead and the battling Black Grouse *Tetrao tetrix* leaping in the air. All of these are by David

Tipling; the grouse photo is confined to a half-page slot when it deserved far more space. (Incidentally, locations and dates for the photos would have been a very useful addition to the photo credits page.) There are some rarely photographed species (Caucasian Snowcock *Tetraogallus caucasicus*,

Dupont's Lark *Chersophilus duponti*, Great Rosefinch *Carpodacus rubicilla*) in *Great Birds* and others that have been rarely photographed so well (Eurasian Spoonbill *Platalea leucorodia*, Golden Eagle *Aquila chrysaetos*, European Roller *Coracias garrulus*). It is this collection of excellent

photographs, many of which have great artistic merit, together with the very affordable price tag, that make this book a worthwhile addition to your bookshelf – or coffee table.

Adrian Pitches

**FIELD GUIDE TO THE  
BIRDS OF EASTERN AFRICA**

By Ber van Perlo.  
Collins, London, 2009.  
2nd edn. 301 pages.  
ISBN 978-0-00-728511-2.  
Paperback, £25.00.

In 1995, the first edition of this guide received mixed reviews. In many ways it was a step forward, providing a pocket-sized volume that illustrated 1,487 species – from not just Kenya, Uganda and Tanzania, but also from Ethiopia, Somalia, Djibouti and Socotra. However, cramming up to 25 species on each relatively small page was never going to allow enough detail for this book to have a major impact, particularly when *Birds of Kenya and Northern Tanzania* by Dale Zimmerman *et al.* was due to arrive just a few months later. Where the Collins guide did add value was in illustrating a significant number of species that other books ignored – such as those found in Ethiopia and neighbouring countries. It was perhaps for that uniqueness that many people bought it.

So, after 14 years, Collins has now decided to reissue this guide, presenting the opportunity to update the text, maps and

illustrations and add in any new species that have occurred since the early 1990s. Unfortunately, Collins has chosen not to alter any of the 96 plates, even though a number of errors had been identified. I find it amazing that they have decided to recognise these errors only by referring to them in the text and not by correcting them on the plates! There are around 20 such notes in the updated text. Some are relatively minor errors, such as the wrong eye colour (although surely easy to correct?), but others are more significant. For me it is simply not acceptable to reissue a field guide with illustrations that are known to be wrong. The Grey Apalis *Apalis cinerea* text reads 'Upperparts all very dark brown, mantle slightly more grey (no buff-brown plumage parts as wrongly shown on plate)'; and there are plenty of such examples.

Taxonomy and nomenclature in the first edition followed early volumes of *The Birds of Africa* (itself sometimes at odds with modern thinking). With this new edition, a number of names have been adjusted to reflect recent changes, for example Herring Gull *Larus argentatus* was listed originally and this has now been changed to Heuglin's Gull [*L. heuglini*] but the text still describes *L. argentatus*. Furthermore, the

plate still depicts a gull with pink legs, another error that is mentioned in the text. In addition, this is still the only book I have that uses the common name 'sylvietta' for what most people call a crombec *Sylvietta*.

A number of species have been added to the East African list since the early 1990s, but these have not been included. Similarly, the discovery of Karamoja Apalis *Apalis karamojae* in the Masai Mara, Kenya, is not mentioned. There are other examples where new information on distribution has been ignored. The first edition overlooked Southern Blue Waxbill *Uraeginthus angolensis*, which breeds in Southern Tanzania. Now it is mentioned in the text but no illustration has been added.

For many people the value of the first edition was that it was the only modern field guide to include all the birds found in Ethiopia. Any time now *Birds of the Horn of Africa* will be published and that will become the book to take to Ethiopia. As a result, this Collins guide has lost its uniqueness and now, as heavier guides are appearing in softback, the advantage of its light weight has been reduced too.

Keith Betton

**FIELD GUIDE TO THE  
BIRDS OF EAST ASIA**

By Mark Brazil. Christopher  
Helm, London. 2009.  
528 pages; 236 colour  
plates, maps.  
ISBN 978-0-7136-7040-0.  
Paperback, £29.99.

The region covered by this excellent and much anticipated new field guide includes Japan, the Korean Peninsula, Taiwan, plus eastern China and Russia east of c. 116°E, to the Bering Strait, including all outlying island groups south to the Tropic of Cancer. Perhaps the title should include the word 'North', as the Philippines and other Asian

islands to the south are, of course, excluded.

As the book deals with 1,006 species (19 of them extralimital but considered potential) and currently runs to 528 pages, it is perhaps not surprising that the font size is very small. In fact, the 26 introductory pages and the index have a slightly larger font size than the main

species texts, which face the 236 plates.

Acknowledgments and the author's preface precede the main Introduction, which includes the aims of the book, a map of the region covered, the geographical scope, taxonomy, nomenclature, bird identification, bird habitats, migration and vagrancy. This is followed by descriptions of the species accounts, the plates and the distribution maps, diagrams of avian topography and terminology, and then an excellent textual summary of all the families. Just 15 references are listed, but with a direction to an extensive online bibliography at (<http://sites.google.com/site/birdsofeastasia>).

As Mark Brazil states, every author has to have a cut-off date, and his was the end of 2006. Coping with the rapidly changing taxonomy and improvements to our ornithological knowledge of the region presents huge problems; the taxonomic shifts, splits and lumps, and alterations to the family, generic and species sequences and varying English names must be a complete nightmare when bringing together a major project such as this field guide. Without going into detail, I think that the author, his acknowledged helpers, the artists and the publishers have done a brilliant job.

So what of the meat? Having the species texts facing the plates is a huge user-friendly advantage in modern field guides. In this book the texts are really detailed, including size, weights, extralimital and East Asian range (abbreviation 'SD'), habitat and habits including altitude range (HH), succinct descriptions of all plumages (whether male, female, immature, juvenile, winter or summer) (ID), bare parts (BP) and vocalisations (Vo). Alternative names (AN) and taxonomic changes (TN) are also given, though these last two abbreviations are not mentioned in the introductory 'How to use this

book' section and some widely used alternative names are not included. Thus the texts are a veritable mine of information. For all species that regularly occur in the region a distribution map is inset within the text. Though these maps are very small, the use of a combination of five colours for summer (red), resident (green), migration (yellow), winter (blue) and scarce (pink), and also small directional coloured arrows to small islands, means that they are in general very useful. Somewhat confusingly, the pink for scarce overrides another colour, so reference to the text is needed to fully understand that designation.

This reviewer, probably like every other birder, tends to look at the illustrations in a new book before reading the text. Fourteen artists have contributed, with Dave Nursey supplying by far the bulk, and the other 13 covering, mainly, their specialist groups: Derek Olney on albatrosses, petrels and shearwaters, Alan Harris on raptors, Hans Larsson on gulls, Christopher Schmidt on terns, Martin Elliott on skuas, Brian Small on bush warblers and *Locustella* and *Acrocephalus* warblers, Ren Hathway on thrushes and Per Alström on pipits. The vast majority of the illustrations are unquestionably of an extremely high quality in colour, shape, detail, proportions and jizz. Indeed, the depictions of the extremely difficult *Cettia* and *Bradypterus* bush warblers and similarly difficult *Acrocephalus* warblers are the best in any field guide. I can find only a very few illustrations that are not so good. Some of the kingfishers on plates 123 and 124 and the bee-eaters on plate 125 seem a bit dull. The head of the Northern Raven *Corvus corax* on plate 141 is much too small, especially for such an intelligent species! Neither Pallas's Grasshopper Warbler *Locustella certhiola* on plate 159 rings true, particularly shape-wise. The Snowy-browed Flycatchers *Ficedula*

*hyperythra* on plate 206 are a bit too dumpy, and the female's eye is actually c. 25% larger than the male's! On the male Hill Blue Flycatcher *Cyornis banyumas* and on the male Blue-throated Flycatcher *C. rubeculoides* the darker face mask is much blacker than it actually appears in the field.

Since the book covers the likes of huge albatrosses, eagles and cranes, and tiny warblers, sunbirds and flowerpeckers, there is inevitably considerable variation in the scale of illustrations from plate to plate. However, why show the larks on plate 149 at a different scale from the larks on plates 150 and 151? Surely it would have been better to enlarge the two *Melanocorypha* larks on plate 149 to the same scale as the larks on the next two plates, and decrease the size of the *Aegithalos* tits on plate 149, which are separated by several plates of hirundines from the other genera of tits. On plates 169, 170 and 181 the fact that the single species at the top or bottom of each plate is on a different scale from the other species on that plate is not such a problem. Surely images on plate 147 could have been shifted a little to accommodate Purple Martin *Progne subis* at the same scale as the various swallows? Likewise, the minivets *Pericrocotus* on plate 133 could have been moved slightly to allow the Tiger Shrike *Lanius tigrinus* to be at the same scale. In the earlier non-passerine plates, where scales vary to a much greater extent, the sort of juggling suggested above would be very difficult, but maybe a dividing line should appear on the plate to clarify the different scales.

Any birder venturing into the eastern Palearctic, or southeast Asia in the winter will need this book. Oh, how we could all do with a similarly high-quality field guide for the whole of China and, to a lesser extent, for Russia.

Nick Dymond

**BIRDSCAPES: BIRDS IN OUR  
IMAGINATION AND  
EXPERIENCE**

By Jeremy Mynott.

Princeton University Press,  
Princeton and Oxford, 2009.  
367 pages; eight colour plates  
and 57 monochrome figures.  
ISBN 978-0-691-13539-7.  
Hardback, £17.95.

By the time I had read the first dozen or so pages of this book, two things became apparent: *Birdscapes* is a groundbreaking work and it is extremely well written. Recently, there has been a welcome trend for books on the wider aspects of bird-watching, including our responses to birds. Some of these have raised the bar of quality high but this one soars over it.

The author is the former Chief Executive of Cambridge University Press, with an academic background in Greek philosophy. Though his writing is invested with erudition, it is also blessed with such clarity, verve and leavenings of wit that make it at once informative, invigorating and a delight to read. Its friendly style made me feel as though I was having a leisurely conversation with a wise and very well-informed friend.

*Birdscapes* is as much about ourselves as watchers and thinkers as about the birds themselves. The analogy of its title with landscapes reflects Jeremy Mynott's interest in our responses to their environment, too. Each of the book's ten chapters begins with a brief but

intensely evocative account of one of the author's encounters with birds, from Shingle Street in Suffolk, Scilly, the Volga Delta and the Flannan Isles to New York's Central Park, Kakadu and Delphi. The Envoi neatly completes the journey by returning us to his home patch at Shingle Street. He weaves into this literal exploration of birds and place the mental journey he undertook as his thoughts evolved during the course of writing the book.

The text positively fizzles with ideas. The first two chapters outline some of the many questions that intrigue the author, and introduce through example the diverse ways in which one can think about birds, from 'top ten' singers to what constitutes charisma. These themes are then developed in the following text, which includes discussion of identification and field guides; illusion and self-deception; listing and the hunting instinct; image and imagination; a whole chapter on bird sounds; birds in a landscape; disturbance, disorientation, intervention and conservation; a fascinating exploration of names; and a final chapter on augury, signs, symbols and emblems that poses the question 'why birds?' and suggests why they are so 'good to think with'. As well as footnotes, there are 23 pages of endnotes. Four appendices contain delights in the form of notable lists (of the Sumerians, Jefferson and Clare); birds and bonnets (of species identified in New York in the 1880s by Frank Chapman from feathers

on ladies' hats); a couple of nightingale mysteries; and derivations of common names of many Australian birds.

The huge number of quotations are well chosen and remarkably wide-ranging. They include not only words from more expected sources such as Gilbert White, John Clare, Audubon, W. H. Hudson, Roger Tory Peterson, Ted Hughes and Mark Cocker, but also from Homer, Descartes, Dickens, Oscar Wilde, Freud, Conan Doyle and George Orwell. There is even a transcript of Monty Python's (in)famous Norwegian Blue Parrot sketch, complete with a footnote pointing out that although Norway can claim no endemic parrots, a fossil species is known from Denmark.

Like the text, the illustrations are extraordinarily varied, from plates in field guides, a music score and a sonogram to sketches of Barn Swallows *Hirundo rustica* in flight by Leonardo – and wartime photographs of nude reviews at London's famous Windmill Theatre!

This is one of the most thoughtful – and thought-provoking – books on birds that I have ever had the pleasure of reading. It is eminently dippable-into but is so much more than just another 'bedside book'. Moreover, it is not just a 'must-read' for the initiated, but also would make an inspiring gift to help persuade a non-birding partner or friend that they are missing out on a rich experience.

*Jonathan Elphick*

**A NATURALIST'S EYE: TWENTY SOMERSET YEARS**

By Philip Radford.

Somerset Archaeological & Natural History Society, Taunton, 2008.  
116 pages; 50 colour photographs.  
ISBN 978-0-902152-20-5.  
Paperback, £14.99.

This book is a compilation of articles written (in 'country diary' style) for the newsletter of the Somerset Archaeological & Natural History Society between 1988 and

2007 by Philip Radford, a regular contributor to the Notes section of *British Birds*. The observations are arranged in chronological order (and are not indexed) and cover all

aspects of natural history, though particularly birds, dragonflies and fungi. The emphasis is on interesting or unusual aspects of behaviour. Philip is not only a gifted observer but also a talented wildlife photographer and the book is illustrated with many of his own photographs. This book will be of particular interest to readers who live in or visit the West Country.

*Roger Riddington*

# News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

## Great Bustards breed in Britain

The reintroductions bandwagon rolls on: the first Great Bustard *Otis tarda* chicks to hatch in Britain since 1832 have been sighted on Salisbury Plain in Wiltshire. David Waters, founder and Director of the Great Bustard Group, said: 'This is a tremendous step forward for the Great Bustard Reintroduction Project, the wildlife of the UK, Great Bustards and for me. It has been a hard struggle to get this far. I am exhausted and nearly broke, but to see Great Bustards breeding after an absence of 177 years is brilliant.' (The former policeman has reportedly ploughed £100,000 into the project.)

The news of successful breeding was released in the first week of June. Two chicks were seen following a female bustard and being fed. A day later, another female was seen feeding a chick. Viewers of the BBC *Springwatch* series saw the first video footage of the young birds, which had been named 'Rhubarb' and 'Crumble' by

Karen Waters, who first spotted them (the mother is 'Custard'... Custard Bustard).

The RSPB has recently joined the project group. Dr Mark Avery, RSPB Conservation Director, said: 'This fantastic news marks another chapter in the struggle to bring back England's lost wildlife. The Great Bustard is the only bird nesting in the UK that is facing global extinction. Establishing a new population here should ensure a brighter future for this Globally Threatened bird, which continues to decline across parts of Europe.'

The Great Bustard Group [www.greatbustard.com](http://www.greatbustard.com) was formed in 1998. The reintroduction began in 2004 with annual releases of between six and 32 birds each autumn. Several of the birds have wandered well beyond the Salisbury Plain release site (on MoD land) and at least two have been found dead in France. Chicks for the project are reared from eggs harvested from nests in southern

Russia; at about six weeks old they are imported into the UK and, after a period of quarantine, released onto Salisbury Plain.

The first known nest from this project was in 2007, and there was at least one further nest in 2008. However, the eggs from these clutches were found to be infertile, most likely owing to the young age of the males. It is widely considered that male Great Bustards become fertile at an age of four or five years, so 2009 is the earliest that eggs were expected to hatch. David Waters added: 'The Great Bustard is a bird that matures slowly, so it has been a long wait to get this far, but this could not be speeded up. A small UK population of about 18 birds has been built up, but it is only when this population begins to produce its own young and becomes self-sustaining that the project can be judged as successful. The indications are extremely positive.'

## The last Cuckoo?

While the reintroductions of charismatic 'megabirds' continue apace, the decline of our formerly common summer migrants escalates and their disappearance from the British countryside has now become a distinct possibility. As we learnt last month in the latest Birds of Conservation Concern report (*Brit. Birds* 102: 296–341), the Common Cuckoo *Cuculus canorus*, whose song is the definitive sound of summer, has now joined the Red list of species in dire trouble. New additions to the list include Wood Warbler *Phylloscopus sibilatrix* and Tree Pipit *Anthus trivialis*, taking to 21 the number of summer migrants on the Red list of 52 species.

That almost half of the species

in big trouble are migrants from sub-Saharan Africa is ringing loud alarm bells about threats to these bird populations on their wintering grounds and en route to and from Eurasia. The BTO has responded with its *Out of Africa* appeal for £365,000 to fund research into the causes of catastrophic declines in summer migrant populations (Pied Flycatchers *Ficedula hypoleuca* and Wood Warblers are down by more than 60%, Spotted Flycatchers *Muscicapa striata* by 59% and Common Swifts *Apus apus* by 41%). As the BTO candidly admits, our knowledge of the ecology of migrants on their wintering grounds is extremely poor and severely hampers our ability to explain these declines and to

conserve this group of species. We lack even basic information about when birds arrive, the habitats they use and how they move around Africa.

Among proposed projects to be funded by the appeal is one in which the BTO will work with RSPB and BirdLife partners in West Africa to evaluate when 'our' migrants arrive in their wintering grounds, what habitats the species use and how they move about through the autumn, winter and spring. North-south transects, from the Sahara to the coast, will be identified and studied over the next three years.

For anyone stirred by the plight of our summer migrants, Michael McCarthy's *Say Goodbye to the*

*Cuckoo* (John Murray, 2009 – see review on p. 411) is a layman's lament for the 'spring bringers', the disappearing birds like the Cuckoo and the Common Nightingale *Luscinia megarhynchos* which feature so prominently in European

folklore and yet spend most of their lives in Africa, lives which remain a mystery to modern-day scientists. Hopefully it's not too late to learn what we need to know to save them.

If only Natural England was ploughing as much time, energy

and money into England's vanishing migrants as it is into reintroducing White-tailed Eagles *Haliaeetus albicilla*, Red Kites *Milvus milvus* and Hen Harriers *Circus cyaneus*.

## The Bob Scott rainforest

Most *BB* readers will know that the most threatened rainforests in the world are the Atlantic rainforests of South America, of which there are now less than 7% remaining. Once stretching right along the coast of Brazil, through northern Argentina and into Paraguay, the forest is now fragmented and the only large protected forest survives in Misiones province, northeast Argentina. Even that was at serious risk of fragmentation from another National Park, in Brazil. With the help of a private donor, the World Land Trust, working with its partner organisation, Fundación Frontera Verde, was able to step in and fund the down payment to purchase the connecting corridor, which was already being logged.

A couple of years ago, when I was staying at the Iguazu Falls, I ran into Bob and Ann Scott, who were holidaying there. Bob had been an enthusiastic supporter of the World Land Trust (WLT) ever since I had founded it, back in 1989, partly I suppose because of his background in reserve management. When *BB* approached me and suggested a donation in memory of Bob to the WLT, that meeting immediately sprang to mind and I thought what better way to commemorate Bob's support for the WLT than buying a chunk of rainforest.

In consultation with provincial government departments, Fundación Frontera Verde is working with the local and international academic community, as well as with the indigenous Guaraní community, to secure a biological 'corridor' to link three existing Protected Areas: Esmeralda National Park (in the core area of Yabotí Biosphere Reserve), Moconá National Park, and Parque do Turbo, in Brazil. The first phase of this project is the purchase of 3,764 ha within the Yabotí Biosphere Reserve that links it with Moconá National Park, close to the Moconá Falls.

The area is known to contain at least 548 species of birds, including Brazilian Merganser *Mergus octosetaceus* (Critically Endangered), Harpy Eagle *Harpia harpyja* and Black-fronted Piping Guan *Pipile jacutiuga* (Endangered), as well as the Black-capped Piprites *Piprites pileata* (or Black-capped Manakin), once thought to be extinct.

Although a down payment has been made, the World Land Trust now has six months to raise the rest of the funds needed – a further \$500,000 to finish paying for the land, and also modest funds to start the protection. That's less than £50 an acre. By any stretch of the imagination it has to be good value – barren farmland with none of the biological richness of the rainforests costs over £5,000 an acre in England. Please support the World Land Trust, whether it's £50 for one acre or £5,000 for 100 acres – every little helps. Everything raised through this appeal will go to create the Bob Scott Sector of the rainforest, a memorial that we know Bob would appreciate. The easiest way to make a donation will be to go online to [www.justgiving.com/bobscottrainforest](http://www.justgiving.com/bobscottrainforest) but you can also call on 01986 774422.

(Contributed by John Burton, founder and CEO of the World Land Trust, who first met Bob at Beddington Sewage-farm in about 1958)

*BB* will donate £500 to the World Land Trust. Another £500 donation in memory of Bob will be made to the Bulgarian Society for the Protection of Birds, an organisation and cause very close to Bob's heart. *Eds*

## The Eric Hosking Trust

October 2009 will mark the 100th anniversary of the birth of Eric Hosking, the man widely acknowledged as one of the great pioneers of natural history photography, and whose work inspired three generations of young naturalists and photographers to follow in his footsteps.

The Eric Hosking Trust is now looking for applications for its 2009 bursaries. The aim of the Trust is to sponsor ornithological research through the media of writing, photography, painting or illustration. Bursaries of up to £750 are awarded to suitable candidates once a year, and the closing date for applications is 30th September 2009.

In 2008, the Trust awarded two bursaries. The first was to Rebecca Stanley, on behalf of the Tees Valley Wildlife Trusts, to engage young people to design and create a large mural of bird-related artwork at the Portrack Marsh reserve. It is hoped that this artwork will inspire and motivate more local people to take an active interest in the wildlife of the marsh. The second bursary went to Nils Navarro from Cuba, to organise a community campaign, supported by both artists and scientists, to highlight the illegal trafficking of wild birds in the village of Gibara, on the northeast coast.

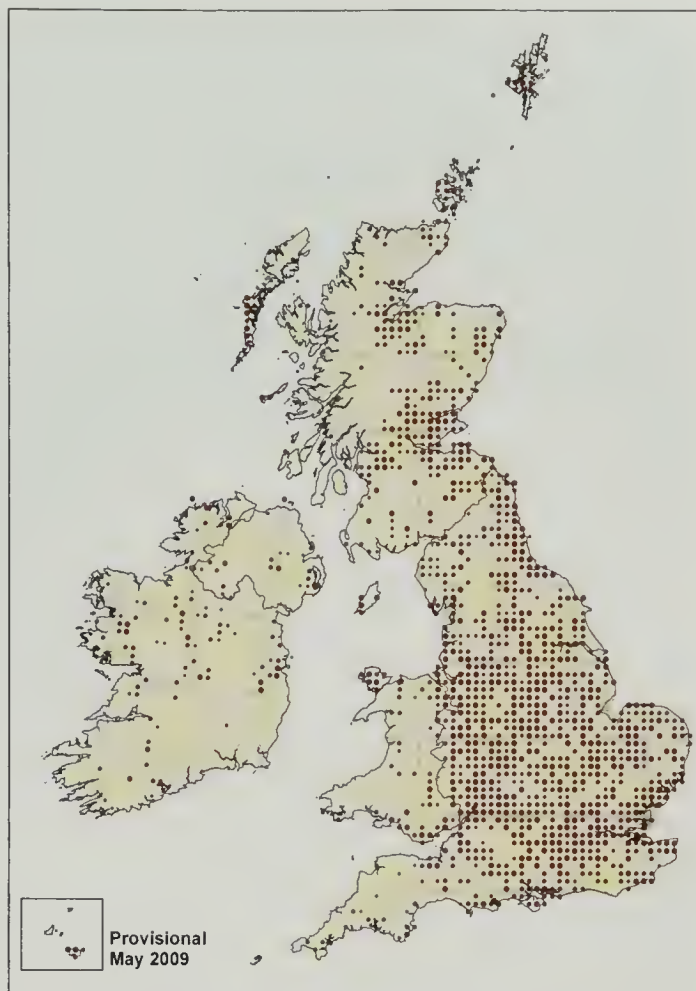
Details are available from The Eric Hosking Trust, Pages Green House, Wetheringsett, Stowmarket, Suffolk IP14 5QA; tel. 01728 861113; e-mail [david@hosking-tours.co.uk](mailto:david@hosking-tours.co.uk); see also the Trust's website [www.erichoskingtrust.com](http://www.erichoskingtrust.com)

## Broods for the Bird Atlas

A key part of fieldwork for the Bird Atlas during the breeding season is the recording of breeding evidence. July is a good month to look out for broods of Tufted Ducks *Aythya fuligula* and such records are the best way of confirming breeding in a 10-km square or tetrad (2 × 2 km square). Fig. 1 shows the distribution of breeding Tufted Ducks recorded for the Atlas so far; the three sizes of dot represent possible (small), probable (medium) and confirmed (large) breeding. There are still many areas where we need to confirm breeding, especially in Ireland and Wales. Between the first (1968–72) and second (1988–91) breeding atlases there was much infilling throughout the species' range in Britain but numbers in Ireland declined. Recent information from the Wetland Bird Survey (WeBS) indicates a decline in the wintering population in Northern Ireland, with the index now at its lowest ever level, so it will be interesting to see the effect on the breeding population.

If you see a brood of Tufted Ducks, or observe breeding evidence for any species, please submit your records to the Bird Atlas 2007–11 project. Records can be submitted online at [www.birdatlas.net](http://www.birdatlas.net) or on a form from BTO (tel. 01842 750050).

(Contributed by Dawn Balmer, Atlas Coordinator)



**Fig. 1.** Provisional breeding season distribution of Tufted Ducks *Aythya fuligula* in Britain and Ireland in 2008–09

## RSPB evidence convicts Maltese bird killer

Evidence from an RSPB Scotland officer has helped to convict a Maltese hunter, and an accomplice, for the shooting of a Lesser Spotted Eagle *Aquila pomarina* on Malta in September last year. Bob Elliot, the RSPB's Head of Investigations in Scotland, was helping the Society's Partner – BirdLife Malta – when he witnessed the incident in the Buskett Forest, a protected area close to the Presidential Palace.

Bob was participating in Raptor Camp – an international network of observers organised by BirdLife Malta to collect data on bird migration and to report illegal hunting to the police. He saw the hunters stalk a roosting Lesser Spotted Eagle, which was then shot. One of the hunters was then filmed by the Raptor Camp observers

hiding the dead body under his shirt, before stashing it by the side of the road. Police, who arrived on the scene shortly after being alerted to the incident, apprehended the hunters.

Speaking outside the court after giving evidence in Valletta in June, Bob Elliot said: 'The illegal killing of birds of prey is happening across Europe. In the UK, we are familiar with the illegal killing of birds of prey, such as the Hen Harrier, Red Kite and even Golden Eagle [*Aquila chrysaetos*], but even I have been staggered at the sheer scale of the slaughter in Malta, which must have the highest number of incidents of anywhere in Europe.'

Very small numbers of Lesser Spotted Eagles pass through Malta on migration each year, making this

a highly prized quarry for hunters to add to their collections. Tolga Temuge, the head of BirdLife Malta, said: 'The conviction is fantastic news. Hunters have to realise that they cannot continue to kill protected species. The islands' authorities are increasingly becoming frustrated with bird killers, who bring shame on Malta. This frustration has been reflected in the thorough investigation and sentencing of these criminals from the islands' enforcement authorities and judiciary.' The hunter, Philip Tanti, was fined €2,500 and had his shooting licence withdrawn for one year. His shotgun was also confiscated. His accomplice, Joseph Camilleri, was fined €1,800 and also had his shooting licence withdrawn for one year.

## Crackdown on Cypriot spring shooting

After a successful campaign by BirdLife Cyprus, the Cypriot Government has decided to stop the shooting of birds during the month of May on the island. Prior to the new law, hunting was allowed in 2008 for eight days in May to control crows – particularly Carrion Crows *Corvus corone* and Magpies *Pica pica*. This initiative was then seen as an excuse to allow hunters to shoot migratory species like the Turtle Dove *Streptopelia turtur* as

well. However, following BirdLife protests to the European Commission, the ‘corvid control decree’ was this year reduced to just three days in June, when the risk to migratory species was deemed to be low.

In 2007, BirdLife managed to ban spring hunting after another derogation from the EU Birds Directive related to the shooting of Turtle Doves, wrongly justified as ‘crop damage control’. The Commission sent a letter of formal

notice – a first warning – to Cyprus, who promised not to repeat this practice. Three years of continuous vigilance by BirdLife and its Partner in Cyprus finally paid off this year, as now not only the Turtle Dove but also other migratory species such as European Bee-eater *Merops apiaster* and Common Quail *Coturnix coturnix* can fly more safely over the island.

### Would you like to be a British Birds Director?

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### CORRECTION

Several sharp-eyed readers have written in to query an item in the Notes section in the May issue. An earlier draft of the caption for plates 144–147 (p. 280) was used by mistake, which referred to the Little Egret’s *Egretta garzetta* victim as a ‘large’ Brown Rat *Rattus norvegicus*. It was clearly not a large rat, and we apologise for that error, but what was it? The majority view is that the unfortunate creature was a Water Vole *Arvicola terrestris*, but a large Field Vole *Microtus agrestis* would also fit the photographic evidence in terms of the length of the bird’s beak and the mammal’s body.

## Recent reports

Compiled by Barry Nightingale and Eric Dempsey

This summary of unchecked reports covers early May 2009 to early June 2009.

**Headlines** During an excellent spell for rarities, arguably the most eye-catching records were a Royal Tern in Ireland and a remarkable ‘full set’ of pratincoles in England. Also in England, short-staying White’s Thrush, Paddyfield Warbler and Hume’s Warbler were unseasonal and unexpected, while other highlights included a Squacco Heron in East Anglia, a Terek Sandpiper in Yorkshire, at least four Laughing Gulls and two Pallid Swifts, a Black-eared Wheatear in Scilly, River Warbler, Iberian Chiffchaff and Collared Flycatcher in Scotland, and Blyth’s Reed Warbler in Norfolk. Continuing from last month there were good numbers of Black Kites, Whiskered Terns, European Bee-eaters, Red-rumped Swallows, Subalpine Warblers (of three different

Black Duck *Anas rubripes* Colliford Lake (Cornwall), 24th May and 1st–10th June. Blue-winged Teal *Anas discors* Ashton’s Callows (Co. Tipperary), 9th May. Ferruginous Duck *Aythya nyroca* Long-stayer at Chew Valley Lake (Avon), to 8th June; Lenwade Common (Norfolk), 14th May. Lesser Scaup *Aythya affinis* South Nesting (Shetland), 12th May to 7th June.

White-billed Diver *Gavia adamsii* Gruinard Bay

(Highland), 11th May; Girdle Ness (North-east Scotland), 12th May; Inishbofin (Co. Galway), 13th May; Mull (Argyll), 15th May; Saltcoats (Ayrshire), 18th May.

Little Bittern *Ixobrychus minutus* St Mary’s (Scilly), one or two, 10th–18th May, one again 6th June; Walton Heath (Somerset), 6th–10th June. Squacco Heron *Ardeola ralloides* Felixstowe Ferry (Suffolk), 18th–20th May, presumed same

Wicken Fen (Cambridgeshire), 24th May to 10th June. **Cattle Egret** *Bubulcus ibis* Records from Co. Cork (five), Cornwall (two), Glamorgan (two), Isle of Wight, Lancashire & N Merseyside, Northamptonshire and Sussex. **Great White Egret** *Ardea alba* Records from Cleveland, Clyde, Dorset, Gloucestershire, Hampshire, Kent, Montgomeryshire, Norfolk, Northamptonshire, Sussex, Co. Tipperary, Co. Wicklow and Wiltshire. **Purple Heron** *Ardea purpurea* Courtmacsherry (Co. Cork), 30th May. **Black Stork** *Ciconia nigra* Llanelli (Carmarthenshire), 1st June.



Alan Tate

**Black Kite** *Milvus migrans* In

Cornwall: Porthgwarra and Marazion, 12th May; Goss Moor, 17th May; Zennor, 25th May; Polgigga, Skewjack and St Buryan, 1st June; Marazion, 7th June. In Hampshire: Crockford Bridge, 11th May; between West Wellow and Ower, 17th May; Hook, 19th May; Black Gutter Bottom, 30th May, perhaps same Havant then Blashford Lakes, 31st May. In Norfolk: Holkham, Burnham Norton and Titchwell, 15th May; Breydon Water, 22nd May; Flicham, 24th May. In Somerset: Steart, Burnham and Berrow, 14th May; Bawdrip, 6th June. In Suffolk: Rendlesham Forest, 21st May; Haughley, 31st May. Elsewhere: Dungeness (Kent), 20th May; St Agnes, Tresco and St Martin's (all Scilly), 24th May; Wicken Fen, 24th May; Dunbar (Lothian), 25th May; St Catherine's Valley (Gloucestershire), 26th May; High Salvington (Sussex), 1st June; Exeter (Devon), 1st June; Abingdon (Oxfordshire), 2nd June. **Red-footed Falcon** *Falco vespertinus* Grove Ferry (Kent), 16th May, and another 31st May; Flamborough Head (Yorkshire), 17th–18th May; Snetterton (Norfolk), 18th May; Hatfield Moors (Yorkshire), 24th–25th May; Gosforth (Northumberland), 30th May; Winterton (Norfolk), 6th June.

**Collared Pratincole** *Glareola pratincola* Salthouse/Cley/Blakeney 15th–23rd May, presumed same New Swillington Ings (Yorkshire), 23rd–25th May, then Pugneys CP

**226. Squacco Heron** *Ardeola ralloides*, Wicken Fen, Cambridgeshire, May 2009.

(Yorkshire), 26th May. **Oriental Pratincole** *Glareola maldivarum* Pagham Harbour (Sussex), 28th–29th May, then Dungeness, 3rd June. **Black-winged Pratincole** *Glareola nordmanni* Grove Ferry/Stodmarsh, 12th–25th May, same Elmley Marshes (all Kent), 25th May, then probably same Holme/Ringstead/Thornham/Titchwell (Norfolk), 31st May to 10th June. **American Golden Plover** *Pluvialis dominica* Felixstowe, 6th June. **Semipalmated Calidris pusilla** or **Western Sandpiper** *C. mauri* Dawlish Warren (Devon), long-stayer again 17th and 23rd–29th May. **Buff-breasted Sandpiper** *Tryngites subruficollis* Hatfield Moors, 23rd–24th May; Alkborough (Lincolnshire), 24th May; Attenborough NR (Nottinghamshire), 4th June. **Terek Sandpiper** *Xenus cinereus* Patrington Haven (Yorkshire), 23rd May. **Spotted Sandpiper** *Actitis macularius* Malltraeth (Anglesey), 2nd June. **Marsh Sandpiper** *Tringa stagnatilis* Vange Marshes (Essex), 11th May.

**Laughing Gull** *Larus atricilla* Various sites in south Mainland Shetland, 17th–30th May; Skomer (Pembrokeshire), 21st May, perhaps same Marton Mere (Lancashire & N Merseyside), 25th May; Testwood Lakes (Hampshire), 25th May; Coll (Argyll), 2nd June. **Franklin's Gull** *Larus pipixcan* Sullom Voe, 11th–12th May, presumed same Unst (both Shetland), 24th–25th May.

Gary Thoburn



**227.** Collared Pratincole *Glaucopis pratincola*, Cley, Norfolk, May 2009. Late May was an unprecedented time for pratincoles in Britain, when all three species on the Western Palearctic List were recorded in southern and eastern England.

John Malloy



**228.** Black-winged Pratincole *Glaucopis nordmanni*, Ringstead, Norfolk, June 2009.

Gull-billed Tern *Gelochelidon nilotica* Dawlish Warren/Topsham, 23rd May and Bowling Green Marsh (all Devon), 31st May to 1st June. Caspian Tern *Hydroprogne caspia* Freiston Shore (Lincolnshire), 22nd May. Whiskered Tern *Chlidonias hybrida* Snettisham (Norfolk), three, 23rd May, presumably same New Swillington Ings, 24th May (with one to 29th); also presumably part of the same group, one Fairburn Ings, 25th–28th May, two at Broomhill Flash and Wombwell Ings (all Yorkshire) on 25th, and two at Earls Barton Gravel-pits (Northamptonshire), 26th May. White-winged Black Tern *Chlidonias leucopterus* Staines Reservoir (Surrey), 11th–13th May; Draycote Water (Warwickshire), 13th May; Livermere Lake (Suffolk), 14th May; Covenham Reservoir (Lincolnshire), 14th May; Guardbridge (Fife),

and more erratically 2nd–8th June; St Mary's, 17th–20th May.

European Bee-eater *Merops apiaster* Great Yarmouth (Norfolk), three, 11th May, with at least two to 12th; Donna Nook, five, 16th–17th May, then three, Humberston Fitties (both Lincolnshire), 18th May; Auchmithie (Angus), 17th May; Barns Ness (Lothian), 18th May; Elie (Fife), 19th May; Langton Herring (Dorset), six, 20th May; Breage (Cornwall), 20th May; Fair Isle, 22nd May; Brading (Isle of Wight), 23rd May; Cley, three, 23rd May; Broadstone (Dorset), three, 24th May; Bough Beech (Kent), five, 24th May; St Mary's, seven, 24th May; Rye Harbour (Sussex), three, 25th May; Spurn, then Easington (both Yorkshire), 27th May; Land's End (Cornwall), 29th May; North Ronaldsay

18th May; Blanketnook (Co. Donegal), 1st June; Tacumshin Lake (Co. Wexford), 7th June. Royal Tern *Sterna maxima* Between Clonakilty and Inchydoney (Co. Cork), 7th June. Forster's Tern *Sterna forsteri* Tacumshin Lake, long-stayer to 7th June.

Snowy Owl *Bubo scandiacus* In northern Scotland, two were seen on St Kilda during the period, with others on North Uist (also Outer Hebrides) on 4th June and at Evie (Orkney) on 14th May. In Ireland, singles at Liscannor (Co. Clare), 17th May and Inishkea North (Co. Mayo), 20th May, while recently moulted feathers from a Snowy Owl were found on Inishbofin on 4th June.

Alpine Swift *Apus melba* Lodmoor (Dorset), 13th May; Dryslwyn (Carmarthenshire), 16th May; Lewis (Outer Hebrides), 30th May; Glasgow (Clyde), 31st May. Pallid Swift *Apus pallidus* Seaforth (Lancashire & N Merseyside), long-stayer to 22nd, again 26th–27th May,

(Orkney), 29th May; Canterbury (Kent), 29th May; St Agnes, 30th May; Staincross (Yorkshire), 31st May; Gibraltar Point (Lincolnshire), 31st May; Dingle Marshes (Suffolk), 1st June.

**Red-rumped Swallow** *Cecropis daurica* St Marys, 12th May, with up to three 13th–18th, one remaining to 20th, with it or another 24th May, also Tresco, 24th May; Portland (Dorset), two, 13th May; Dungeness, 16th May; Titchwell and Burnham Norton, 16th May and Choseley (all Norfolk), 31st May; Grove Ferry, 17th May, and Deal (both Kent), 18th May; Kilconquhar Loch (Fife), 18th–19th May; Spurn, 20th–21st May; Cowpen Bewley (Cleveland), 20th May; Eastleigh (Hampshire), 23rd May; Lizard (Cornwall), 23rd May; Portsdown Hill (Hampshire), 2nd June. **Red-throated Pipit** *Anthus cervinus* St Agnes, 12th–14th May; Farne Islands (Northumberland), 15th May; Fair Isle 18th May. **Citrine Wagtail** *Motacilla citreola* Cley, 12th–14th May.

**Thrush Nightingale** *Luscinia luscinia* Kilnsea (Yorkshire), 15th May; Donna Nook, 16th May; Thorpeness (Suffolk), 16th May; Sands of Forvie (North-east Scotland), 17th May. **Bluethroat** *Luscinia svecica* A large influx in mid May, with at least 65, mostly on Scottish islands, including 15 on Fair Isle on 16th May. **Black-eared Wheatear** *Oenanthe hispanica* St Agnes, 2nd–3rd June. **White's Thrush** *Zoothera dauma* Isle of May (Fife), trapped and ringed, 2nd June.

**River Warbler** *Locustella fluviatilis* Fair Isle, 31st May. **Paddyfield Warbler** *Acrocephalus agricola* Hilbre Island (Cheshire & Wirral), trapped



Hugh Harrop

**229.** Second-summer Laughing Gull *Larus atricilla*, Boddam, Shetland, May 2009.

and ringed 5th June, again 9th June. **Blyth's Reed Warbler** *Acrocephalus dumetorum* Burnham Overy (Norfolk), 13th May. **Great Reed Warbler** *Acrocephalus arundinaceus* St Mary's, 13th–16th May; Patrington Haven, 27th May; Out Skerries (Shetland), 28th May to 3rd June; Fair Isle, 30th–31st May. **Subalpine Warbler** *Sylvia cantillans* Dungeness, 13th May; North Ronaldsay, 16th–18th May; Foula (Shetland), 17th–19th May; Scousburgh (Shetland), 19th May; Fair Isle, 21st May; Land's End, 22nd May; Scatness (Shetland), 22nd–28th May; Unst (Shetland), 1st–9th June. **Yellow-browed Warbler** *Phyllos-*



Michael O'Keefe

**230.** Royal Tern *Sterna maxima*, Clonakilty, Co. Cork, June 2009. The second for Ireland (the first was a tideline corpse found in Co. Dublin in 1954).

Rob Brookes



**231.** Male Subalpine Warbler *Sylvia cantillans*, Skaw, Unst, Shetland, June 2009. This bird, which stayed at Skaw for over a week, was holding territory (and regularly carrying nest material). Its distinctive call was the most obvious pointer to it being *S. c. moltonii*, found in the Balearics, Corsica, Sardinia and parts of mainland Italy; although currently treated as a subspecies of Subalpine Warbler, it is considered a strong candidate for species status by some authorities. Also in Shetland, a bird at Scatness on 22nd–28th May may also have been of this form but was not trapped or sound-recorded, while one trapped at Scousburgh on 19th May was of the eastern race *S. c. albistriata*.

*copus inornatus* Predannack (Cornwall), 5th June. Hume's Warbler *Phylloscopus humei* Kilnsea, 12th–13th May. Iberian Chiffchaff *Phylloscopus ibericus* South Uist (Outer Hebrides), 31st May. Collared Flycatcher *Ficedula albicollis* Crail (Fife), 16th–19th May.

Woodchat Shrike *Lanius senator* Bryher (Scilly), 11th–16th May; Tealham Moor (Somerset), 12th

May; Rathangan (Co. Wexford), 12th–23rd May; Blakeney, 19th May, then Morston, 20th May, Horsey, 23rd May and Mundesley (all Norfolk), 24th May; Portland, 22nd–23rd May; Swanage (Dorset), 23rd May; Pugneys CP, 24th May; Poole Harbour (Dorset), 28th May; Abbeystead (Lancashire & N Merseyside), 29th May; Brandon Marsh (Warwickshire), 29th May; Whickham (Durham), 29th May; Gwenter (Cornwall), 31st May. Rose-coloured Starling *Pastor roseus* Arnside (Cumbria), 19th May; Evie, 19th May; Mull, 29th May.

Mark Caunt



**232.** First-summer male Collared Flycatcher *Ficedula albicollis*, Crail, Fife, May 2009.

European Serin *Serinus serinus* Portland, three, 11th May, with singles regularly between 14th May and 1st June; Prawle (Devon), 18th May; Gibraltar Point, 23rd May; Durlston CP, 31st May and Poole (both Dorset), 7th June; Pegwell Bay (Kent), 8th June. Arctic Redpoll *Carduelis hornemanni* Foula, 12th May.



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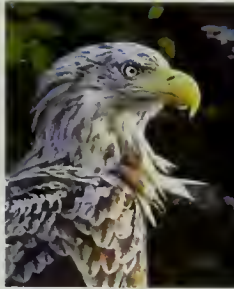
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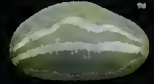
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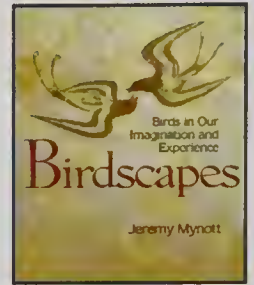


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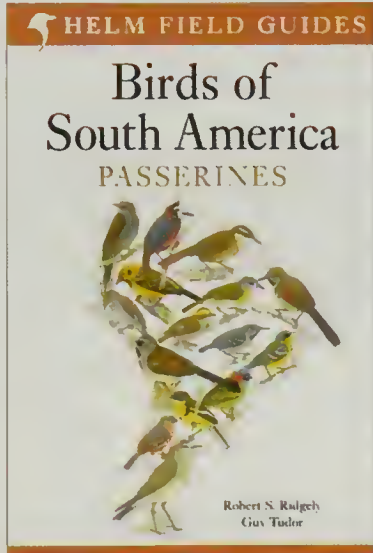
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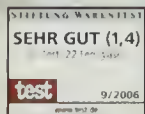
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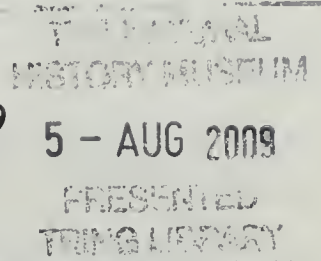




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# British Birds

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- 424 Editorial *Roger Riddington and Adam Rowlands*
- 425  From the Rarities Committee's files: Identification of Wilson's Snipe and assessment of the first British record  
*Adam Rowlands, Brian J. Small and Colin Bradshaw*
- 435 Naumann's Thrush in Essex: new to Britain *Ken Murray*
- 441 Bird Photograph of the Year 2009  
*Richard Chandler, Tim Appleton, Robin Chittenden, David Hosking, Peter Kennerley and David Tipling*
- 451  The Carl Zeiss Award 2009: 50 years of rarity photographs  
*Roger Riddington, Colin Bradshaw, Adrian Pitches, Richard Porter and Andy Stoddart*
- 459 Rare birds in Britain – 50 golden years: birders vote for the 'best rarity' of the BBRC era *Adrian Pitches*

## Regular features

- |   |  |
|---|--|
| <p>465 Conservation research news<br/><i>Elisabeth Charmau, Rowena Langston and Juliet Vickery</i></p> <p>467 Letter<br/>Common Chiffchaffs on the Greek island of Lesbos <i>Adrian Dally</i></p> <p>468 Notes<br/>Two male Hen Harriers attending nests in Dumfries &amp; Galloway<br/><i>R. C. Dickson</i><br/>Snow-burrowing by Robin<br/><i>A. P. Radford</i><br/>Evidence of interspecific egg-dumping between tit species<br/><i>Derek J. Gruar</i></p> | <p>Magpie taking adult Common Swift<br/><i>Harold A. Lilley</i></p> <p>470 Reviews<br/><i>Birds of the Horn of Africa</i><br/><i>A Close Up Look: approaching nature through digiscoping</i><br/><i>Shorebirds of the Northern Hemisphere</i><br/><i>Birds of Pakistan</i></p> <p>474 News and comment<br/><i>Adrian Pitches</i></p> <p>477 Recent reports<br/><i>Barry Nightingale and Eric Dempsey</i></p> |
|---|--|

*British Birds* aims to: ❖ provide a forum for contributions of interest to all birdwatchers in the Western Palearctic; ❖ publish material on behaviour, conservation, distribution, ecology, identification, movements, status and taxonomy; ❖ embrace new ideas and research; ❖ maintain its position as the respected journal of record; and ❖ interpret good scientific research on birds for the interested non-scientist.



# Editorial

In August 1959, an editorial in *BB* announced the formation of the British Birds Rarities Committee. You can read the article in full on our website, [www.britishbirds.co.uk/BBRC%20is%20born.pdf](http://www.britishbirds.co.uk/BBRC%20is%20born.pdf). Fifty years on, it is a pleasure to acknowledge BBRC's half-centenary and look forward to the future with confidence.

Two short articles in this issue mark the milestone with an informal look back at some of the highlights of the last 50 years. Another contribution is along more familiar lines, describing the assessment process of Britain's first accepted record of Wilson's Snipe *Gallinago delicata*, on Scilly in 1998. In many ways, this record is a microcosm of what the Committee is all about – a vagrant Wilson's Snipe is one of the thorniest of field identification problems and one that remains right at the edge of what is currently possible. Rarity-minded readers will know that BBRC came to an earlier decision that the record was not acceptable as a first for Britain, and that only after further work and input from outside the Committee was it deemed fit to pass muster. Some will inevitably accuse the Committee of being slow and incompetent over this bird. It was widely touted as being Britain's first Wilson's Snipe soon after the event, so why did it take a decade for BBRC to accept it? Such criticism is easy in hindsight, yet ignores the challenges and the amount of research that this record demanded. The fact is, even though it looked superficially like a straightforward Wilson's, genuinely reliable identification features are few and difficult to assess – and this bird was close to the overlap zone with Common Snipe *G. gallinago* in several key respects. Of course, it would have been ideal to get to this point more quickly, and without some of the twists and turns of the journey, but the process of re-examining both the evidence and an earlier decision make the outcome that much more robust.

The article on pages 425–434 sets out clearly what is required for future records of Wilson's Snipe and this is timely, given several subsequent claims from Scilly. Assessment of future records will not be a cakewalk, but there is now a solid framework in place signposting the way forward.

An essential part of the Committee's structure is the ability to review old records if new evidence comes to light. The Druridge Bay

Slender-billed Curlew *Numenius tenuirostris* is the most high-profile record that the Committee has ever dealt with, and Adrian Pitches' summary of 'great rarity events' on pages 459–464 indicates how prominent this bird is in the minds of the birding public. Accepted as the first for Britain after a painstaking four-year investigation, that record is now under review once more. Part of the problem is that the photographic evidence is simply not good enough for the same level of critical analysis as for the Scilly Wilson's Snipe. Birders' opinions on whether or not it was a Slender-billed Curlew are strongly divided, with trenchant views held by both camps. The present Committee, none of whom were involved with the first assessment, have the unenviable task of judging the evidence. If the decision to accept the bird should be overturned (and at the time of writing we don't know whether that will happen), that would not be an embarrassing climb-down, as some have suggested – it's simply a democratic process of reacting to, and making a decision based upon, the best evidence available!

The snipe and the curlew provide two good examples of why BBRC members voluntarily devote a huge amount of time each year to the Committee's work. It provides them with the opportunity to explore identification issues, to determine criteria and then test them against real occurrences. BBRC members bring considerable experience to the process but also learn a great deal, and that accumulating knowledge is one of the rewards for the time invested. The whole process would not be possible without support from observers, recorders and other identification consultants, whose input helps to provide a solid foundation for the Committee's work. We hope that sharing BBRC's thought processes and conclusions, in articles like the first one in this issue, will go some way to acknowledging that support and improving our collective understanding.

BBRC has had its ups and downs over the past 50 years, but we believe that the structure underpinning the Committee remains solid, that the vast majority of active birders support its role, and that we have an exceptionally committed and skilled team on board at present – and we feel optimistic about the years ahead.

*Roger Riddington and Adam Rowlands*

# From the Rarities Committee's files

## Identification of Wilson's Snipe and assessment of the first British record

*Adam Rowlands, Brian J. Small and Colin Bradshaw*

**ABSTRACT** A claim of Wilson's Snipe *Gallinago delicata* from St Mary's, Isles of Scilly, in October 1998 led to one of BBRC's most detailed investigations into the identification of an individual bird, and this paper summarises that process. Common *G. gallinago* and Wilson's Snipe are closely related and have only recently been treated as distinct species by BOURC. Field identification is exceptionally difficult and there is considerable overlap in most plumage characters. Initially, BBRC concluded that although the St Mary's bird was probably a Wilson's Snipe, the level of proof fell below that required to accept a first record for Britain. However, after re-examination of a critical identification feature, the outermost tail feather, the record was recirculated and eventually accepted by both BBRC and BOURC. Wilson's Snipe has now been added to Category A of the British List.



On 9th October 1998, from the hide at Lower Moors, St Mary's, Isles of Scilly, Jon Baker, Bryan Bland, Andrew Chamberlin and Pete Milford found a snipe that appeared strikingly different from the accompanying Common Snipes *Gallinago gallinago*, being noticeably colder-toned and having an obvious blackish greater-covert bar (plates 233 & 234). After painstaking study, they felt that it showed many features of Wilson's Snipe *G. delicata*, then treated as a race of Common Snipe by BOU. The bird remained on St Mary's until 7th April 1999 and was seen and photographed by many observers. Bryan Bland subsequently published articles describing it and setting out a number of features for the separation of Wilson's Snipe from Common

Snipe, which he suggested confirmed that the Lower Moors bird was a Wilson's Snipe (Bland 1998, 1999; see also [www.birdingworld.co.uk/WilsonsSnipeArticle.htm](http://www.birdingworld.co.uk/WilsonsSnipeArticle.htm)). His analysis, which contained a series of excellent photographs illustrating the key features, was submitted to BBRC, along with another analysis of separation features from Jon Baker. BBRC also amassed a large collection of photographs of the St Mary's bird, which has been widely regarded as a definite Wilson's Snipe among the birding community.

The field identification of closely related snipes presents some significant challenges. For example, Leader & Carey (2003) showed that Swinhoe's *G. megala* and Pintail Snipes *G. stenura* can be almost impossible to separate unless they

are displaying. Common (hereafter *gallinago*) and Wilson's Snipe (hereafter *delicata*) have only recently been split, which gives some idea of the task facing observers and assessors of a potential vagrant *delicata* – an acceptable record would require significant attention to detail, in both the submission and the assessment process. Moreover, Leader (1999) responded to Bland (1998, 1999) by showing that *gallinago* from eastern Asia could show many of the features described as suggestive of *delicata* (Leader 1999), while Martin Reid subsequently came to similar conclusions (Reid 2008). Reid's work was published after the BBRC investigations had been completed and represents a thorough analysis of the situation. This paper outlines the process undertaken by BBRC prior to the

publication of Reid's paper, but observers wishing to familiarise themselves with the separation of the two species are urged to refer to that paper and the references and further reading highlighted within it. The BBRC analysis came to approximately the same conclusions as Reid's, although with some differences in emphasis on significant features, which are highlighted in this paper. Note that we have also adopted Reid's findings where the sample size examined was larger than that employed for the BBRC analysis.

BBRC felt that the only way forward with this difficult record was to review all the available information, derive rigorous separation criteria that could be supported by evidence, and then assess the St Mary's bird against those criteria.

Searches for photographs of autumn *delicata* from various North American sources yielded photographs of many different individuals, although we found no photographs that showed *delicata* and *gallinago* together for a comparison without the vagaries of photographic effect on tone and colour. Examination of museum specimens by Adam Rowlands and Brian Small at the Natural History Museum (NHM) at Tring confirmed both the variability of *gallinago* and the nature of potential separation characters from *delicata*. Their findings were discussed with other BBRC members and other birders, notably Ian Lewington, who had a particular interest in snipe identification in the Holarctic.

Using the results from museum study and photographs, we established a list of criteria to act as guidelines during record assessment. These criteria fell into two broad categories, which are

Gary Bellingham



Gary Bellingham



233 & 234. Wilson's Snipe *Gallinago delicata*, St Mary's, Isles of Scilly, October 1998 (centre bird in plate 234).

described below: 'soft' features that were no more than supportive of the identification; and 'strongly indicative' features that (in combination) could be important for identification of *delicata*. We also had to consider whether these features were usable in the field or whether photographs or examination in the hand might be essential to determine the key features.

### Soft features

Soft features are average differences only, and those which (individually) overlap extensively between the two species; although, in combination, they can produce an overall appearance in a particular bird that seems to be highly distinctive, they cannot be described as diagnostic. We could not find any consistent differences in these characters, which have previously been suggested as useful pointers to separate *delicata* from *gallinago* (e.g. Bland 1998, 1999). In particular, characters 2–4 were considered to be of no value whatsoever.

#### 1. Overall plumage tone

On average, *gallinago* is a warmer, browner bird and *delicata* is a colder, more grey-toned bird. However, some *gallinago* appear significantly colder than the majority and some *delicata* appear warmer or more buffish-toned than others. Museum specimens confirmed that the degree of overlap between the two species means that this can be no more than a supporting feature for any record.

#### 2, 3. Loral stripe, fore-supercilium

A narrow and parallel-sided loral stripe and a bulging fore-supercilium are thought to be characteristic of *delicata*. Both of these features were difficult to assess from skins but photographs suggested so much overlap that neither feature was of any value.

#### 4. Median crown-stripe

The median crown-stripe of *delicata* seemed to be wider than that of *gallinago*, particularly on the fore-crown, but there was so much overlap that we considered this of no identification value.

#### 5. Mantle colour

Skins suggested that, although there was a general trend towards a dark mantle being typical of *delicata*, there was too much overlap

for it to be a useful character. Photographs also suggested that while not all *delicata* show this feature, some *gallinago* could and that it was a supportive but not diagnostic separation feature.

#### 6. Scapular fringes

The presence of narrow and whitish lower scapular fringes and 'pips' is a potential pro-*delicata* feature, but we felt that this was linked with overall plumage coldness (1) and that there was too much overlap for this to be of any identification value.

#### 7. Greater coverts

Although there is a general tendency for plain blackish greater coverts to point to *delicata*, this feature is variable: they can be quite well barred on *delicata* and unmarked on *gallinago*.

#### 8. Flank barring

We checked this on specimens, photographs and in the field, and concluded that the differences involved are not sufficiently consistent for strongly barred flanks on a white ground colour to be a positive feature for *delicata*. Bland (1999) included a painting of a warm-washed *gallinago* that we felt was at the extreme end of the spectrum (and in fact probably represents a typical *G. g. faeroeensis* – see below), whereas many nominate *gallinago* show flank patterns and coloration indistinguishable from those of *delicata*.

#### 9. Tertial pattern

There is a tendency for *delicata* to show finely (pale-) barred tertials compared with the more prominent, rich buff tertial barring of *gallinago*, but we found specimens and photographs of significant numbers of *gallinago* which mirrored the *delicata* pattern in this respect.

#### Strongly indicative features

Given the extent of overlap in features 1–9, we felt that safe identification rests on the following indicative features, although in combination rather than isolation.

#### 10. Underwing-coverts

The whole underwing of *delicata* appears dark and strongly barred and this species typically shows narrower white tips to the greater underwing-coverts than *gallinago* and black bars wider than white bars, a pattern which extends

Adam Rowlands © Natural History Museum, Tring



**235.** Underwing and flanks of Common Snipe *Gallinago gallinago*. This is an example of *gallinago* where the black approaches, but does not equal, the white on the axillaries – cf. plate 242.

to the median, lesser, and marginal underwing-coverts. This is extremely difficult to assess objectively in the field – it is not sufficient to get a general impression that the underwing is dark, as some *gallinago* can appear similar – but good photographs of the underwing may show this feature sufficiently well. Martin Reid's analysis (Reid 2008) was not available when we were assessing this record, but he stated that 'there is very little overlap in this feature... no *delicata* came close to approaching the core range of *gallinago*... over half (51.7%) of the *delicata* studied had no white band on any of the underwing-covert tips, while just over a third (36.7%) had a small band on the tips of the greater coverts only.' See plates 104–110 in Reid (2008) and plate 236. Critically, *gallinago* typically shows a pattern with distinct white bands across one or more of the underwing-covert tracts, while these bands are much reduced or absent on *delicata*.

Angela Ross © National Museums Northern Ireland



Angela Ross © National Museums N. Ireland



**236 & 237.** Common Snipe *Gallinago gallinago*, collected in Northern Ireland in 1984. This bird has strikingly heavily barred underwings, and is close to matching some Wilson's Snipes *G. delicata* in this respect. Furthermore, the white trailing edge to the secondaries is relatively narrow, superficially similar to a typical *delicata*; however, using the criteria proposed by Reid (2008), the depth of white is closer to that of *gallinago* than *delicata*. The width, shape and pattern of the outermost tail feather clearly point to *gallinago*.

### 11. Pattern of the axillaries

The axillaries of *delicata* are typically densely barred, usually with more black than white, but on some the width of white bars equals the black and a minority have slightly broader white bars than black. Furthermore, several *gallinago* appear to show barring where the black approaches (but does not equal) the width of white. See plate 235 and plates 104–110 in Reid (2008). Reid found that the axillary barring of *delicata* apparently never matches the extent of white shown by paler examples of

*gallinago*, but that darker examples of *gallinago* can overlap completely with *delicata*, confirming this feature to be supportive but not diagnostic.

BBRC's analysis of museum skins indicated that on some *G. g. faeroeensis* the black barring is wider than the white, but these birds also show a rich buff wash to the flanks, clearly different from the whiter base colour on the flanks of most *delicata*. Reid's study did not distinguish between races of Common Snipe, so it is not clear whether his darkest individuals were *faeroeensis*. Note also that the width of barring is not always consistent across the axillaries of the same individual, and such variation makes the assessment of black and white on the axillaries difficult with anything other than a pin-sharp photograph. In fact, photographic effects may be very important since the amount of white appears more extensive on less-than-sharp images, where the blurred definition causes the white to 'bleed' into the black. Nonetheless, we felt that this character is strongly indicative as long as it can be assessed properly.

### 12. Pattern of the white tips to the secondaries

Most *delicata* have secondaries with a narrow white tip that fades away along the fringe of the inner web, while most *gallinago* show a broad (deep) and square-cut white tip (although rarely *gallinago* may be very similar to *delicata*). On both the upperwing and the underwing, this gives a typically very narrow white trailing edge to the secondaries in *delicata* (occasionally stretching onto the inner primaries); this trailing edge is virtually absent on many birds, and contributes to the darkness of the underwing. However, some *delicata* have broader white tips to the secondaries and overlap with some *gallinago* in this respect, forming part of the group that cannot be safely separated in the field. Conversely, we found only two *gallinago* (identified on numerous other features) with white secondary tips that approached the characteristic appearance of most *delicata*. See plates 104–109 in Reid (2008) and plate 237. Note that Reid found that the *depth* of the white tips allowed separation of a proportion of individuals of each species, but that the *shape* of the white feather tip was not diagnostic.

### 13. Pattern of the outer tail feathers

This is a relatively consistent feature that was first described by Meinertzhagen (1924): 'In American Snipe the barring is narrower and

there are consequently more bars, frequently as many as seven.' We found that the dark barring in *gallinago* tends to be less black, narrower and more widely spaced than in *delicata*, in which the bars are darker and broader and often on a whiter background than in *gallinago*. There is variability, however, and some *gallinago* show a greater number of bars. Given that the number of bars on a plucked outer tail feather is not the same as the number visible beyond the undertail-coverts, it is hard to say how valuable this is in the field, where *delicata* typically shows 3–4 relatively closely spaced dark bars. Although *gallinago* is variable, only a few show 3–4 dark bars in the field; most show fewer, more irregular and widely spaced bars.

Independently, Killian Mullarney and Ian Lewington (*in litt.*) showed that, although there may be overlap in the number of bars on the outermost tail feather, there is an important difference in the *pattern* on the outer web between the two species. The bars in *delicata* are consistently darker and better defined, align with similar markings on the inner web and thus contrast more with the pale areas of the feather; in *gallinago* the dark bars are paler, less distinct and frequently do not line up with markings on the inner web. In *gallinago*, the overall effect is a rather pale outermost feather with slightly 'blurred' markings while *delicata* shows more precise and contrasting markings (see plates 238–241 and plate 112 in Reid 2008). Reid found that there was some overlap in this feature, but it appears to be a strong indicator.

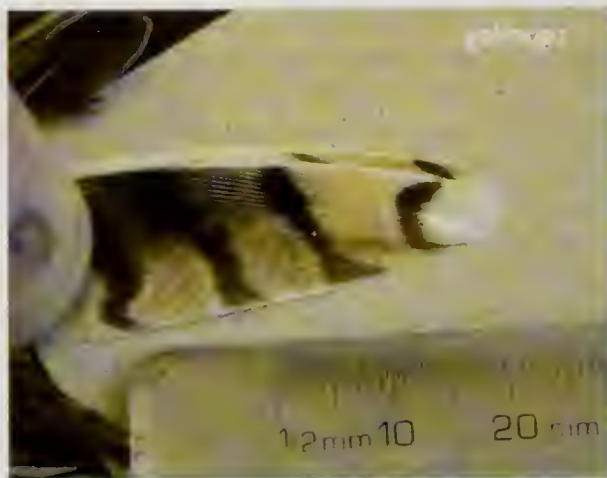
### 14. Number of tail feathers

BWP shows that a bird with only 12 tail feathers should be *gallinago* (which typically has 14), but that one with 14–18 tail feathers could be either *gallinago* or *delicata* (typically 16). Glutz von Blotzheim *et al.* (1977) referred to a sample of 242 *gallinago* in which five birds had 12 tail feathers, three had 16 and the rest had 14. The fact that the St Mary's bird had 16 was thus a strong pointer to *delicata*, but not conclusive.

### 15. Width and shape of the outermost tail feather

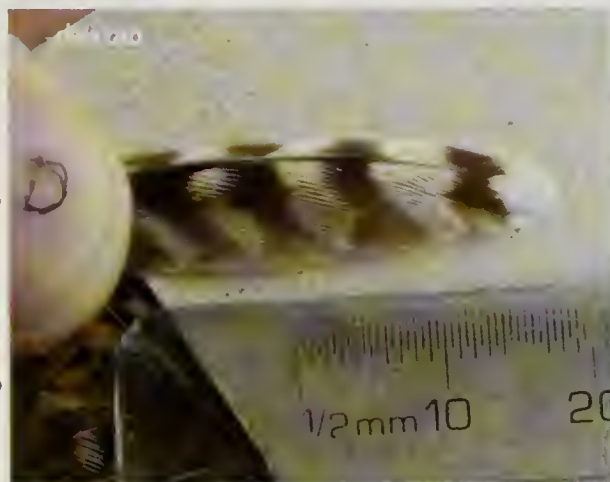
The width and shape of the outermost tail feather is perhaps the single most important separation feature; this produces the different sound made during the 'drumming' display of the two species, and was an important factor in the elevation of *delicata* to species level by the

Ian Lewington © NHM, Tring



Ian Lewington © NHM, Tring

Ian Lewington © NHM, Tring



Ian Lewington © NHM, Tring

238–241. Outermost tail feathers of Common Snipe *Gallinago gallinago* (top two) and Wilson's Snipe *G. delicata* (bottom two). The outermost tail feather of *delicata* typically differs from that of *gallinago* in having dark bars that are darker and more well defined, and which contrast more with the pale bars, while the bars on the outer and inner webs are more closely aligned. This produces a more sharply contrasting, less 'blurry' pattern in *delicata*.

There are key differences in shape and width of this feather between the two species; in summary, in *delicata* it is generally distinctly narrower, of more even width throughout its length and with a less pointed tip.

AOU (Banks *et al.* 2002). In a sample of 40 of each species, Meinertzhagen (1924) found that the width of the outermost tail feather was 8–12.5 mm for *gallinago* and 4–9 mm for *delicata* (feathers measured at 20 mm from the feather tip). Reid (2008) measured >200 of each and found the widths for *gallinago* to be in the range 8.8–13.0 mm while the greatest width for *delicata* was 10.5 mm, suggesting that the overlap zone between the two species was greater than previously thought. The shape of the outermost tail feather of *delicata* appears subtly different in that it has a more even width throughout its length and often (probably due to its narrowness) a less pointed tip; *gallinago* often has a more rounded, convex or bulging inner web, and a more pointed tip (see plates 238–241).

#### What is required for identification of vagrant *delicata*?

This fundamental question was at the forefront of our minds throughout the assessment of the

St Mary's bird. It is not straightforward to answer, for either the observers or the record assessors. For example, although it would be easy to measure and photograph the outermost tail feather on a specimen or a trapped individual, could this feature be assessed properly on a field record? Even with photographs of the quality of plate 245, the overlapping feathers make assessment of width and shape extremely difficult. Initially, we were unconvinced that this could ever be done accurately in the field (although the advance in digital photography in recent years now suggests that such definitive evidence *is* possible).

Having agreed that features 10–15 are (strongly) indicative features for separating the two species, could we foresee a situation where a bird showing two or three of these plus most of the soft features described might be acceptable as long as it did not show anything contrary to expectation? Two specimens in the NHM collection, one dated November 1849 from

Hampshire and another August 1914 from Lancashire, and both diagnosable as *gallinago* on outermost-tail-feather shape, show other features compatible with *delicata*. The Hampshire bird shows black bars of equal width to the white bars on the axillaries, tail feathers with four bands that appear more or less equally spaced, and narrow secondary tips fading onto the inner web of the feather. The Lancashire bird has black bars marginally narrower than white on the axillaries, four bands on the tail feathers (though not equally spread), and a secondary edge that fades a little. Using the 'balance of probability' approach, would we have identified these birds correctly in the field?

The level of detail provided by birders and photographers of the St Mary's bird was extraordinary. Even so, most of the sketches submitted show the patterning of the axillaries with more black than white, while photographs suggest either the reverse or that the comparative width of the white/black varies along the length of the axillaries. It seems unlikely that anyone could accurately describe the underwing pattern, or the shape of the tips of the secondaries, from field-only views and for the foreseeable future any submission will need high-quality photographs to stand any chance of being accepted.

### *The 1998 St Mary's bird*

#### *Lower Moors and the problem of faeroeensis*

Lower Moors is a remarkable place for watching numbers of snipe at close range and gives many birders an unprecedented chance for critical observation of the species. In addition, many of the migrant and wintering Common Snipe on Scilly may be *G. g. faeroeensis*, which breeds in Iceland, the Faeroe Islands and Northern Isles. When examining photos of the Common Snipes accompanying the St Mary's bird, it becomes clear that many show characteristics of *faeroeensis*, a view alluded to briefly by Bland (1998). Indeed, many of his criteria for separating *delicata* and *gallinago* (including his illustration) seem more accurately to examine ways of separating a putative *delicata* from the rather distinctive *faeroeensis* (which is typically more richly coloured on the head, upperparts and breast than nominate *gallinago*). How many of us are completely familiar with the degree of variation of Common Snipe? Martin Garner commented that: 'While I did not see the Scilly bird, I was then living in Northern Ireland,

where a specimen of *delicata* had been shot, so the Scilly bird got me inspired to look hard at snipe! I then discovered that many of the features of *delicata* listed by Bland could be found on nominate *gallinago*, though I never saw any with the overall appearance that matched the Scilly bird... Nominate *gallinago* breeds in Northern Ireland, *faeroeensis* appears in autumn/winter and the two could be seen side by side, although not all were assignable. The reality of how hard this subject can be was brought home by finding a specimen in Belfast Museum, collected in Northern Ireland in 1984 (plates 236 & 237), which has a heavily barred underwing (close to matching some *delicata*) and a thin white edge to the secondaries, again very similar to the typical *delicata* pattern. However, the outermost tail feather clearly makes it *gallinago*...' Although relatively narrow, the depth of white on the tips of the secondaries of this bird appears closer to *gallinago* than *delicata* using the criteria proposed by Reid (2008).

#### *BBRC's assessment process*

When BBRC began the assessment process, the excellent documentation and photographs already in the public domain seemed to have secured the argument for the bird's identity as *delicata*. Several voting members had seen the bird and were familiar with the debate over its identity.

Although we all agreed that this individual looked 'different', and represented what we would expect of *delicata*, it was important to review the record systematically, based on the criteria set out above. The width and shape of the outermost tail feather provided the starting point; we compared several key images but were unable to agree that this feature pointed unequivocally to *delicata*. Had the tail feathers been obviously narrow (say 4 or 5 mm), assessment would have been straightforward, but this was not the case. We then focused on, and tried to quantify, the outermost-tail-feather shape: on specimens of *delicata* at NHM, the width of the outer web (from outer edge to feather shaft) is c. 1.5 mm at the level of the third dark bar from the tip, while that of the inner web is 4–7 mm, or up to five times that of the outer web; in *gallinago*, the inner web is consistently six or seven times (or more) wider than the outer, as shown in plates 244–246. Using photographs of the St Mary's snipe, we

judged the inner web to be at least six times wider than the outer and thus more reminiscent of *gallinago* than *delicata*, or at best well within the overlap zone.

Another option was to see whether we could identify the bird using a combination of indicative features. The bird showed the correct outer-tail pattern (as shown by photographs), and the shape and depth of the white secondary tips favoured *delicata* (although some voters felt uncertain that the secondary tips were sufficiently narrow to rule out *gallinago*). The amount of white on the underwing-coverts, especially the greater underwing-coverts, appeared to be at the top end for *delicata*, although the almost wholly dark median underwing-coverts were a strong pointer to *delicata*. The axillaries showed the white bars to be clearly as wide as the black bars, and probably wider (plates 242 & 243). We knew that this pattern, of slightly broader white bars than

black, fell within the known range for *delicata* and was shown by one of the specimens at the NHM, but we felt that it placed this individual beyond the range of acceptable indicative features and that we could not safely identify it by the 'balance of probability' approach.

Considering all the evidence we had amassed, especially the fact that many potential *delicata* features, particularly the axillaries, were in the overlap zone, we came to the conclusion that it was not acceptable as a first for Britain and published that decision (*Brit. Birds* 98: 692). Shortly afterwards, we shared a draft of this paper with Killian Mullarney and Ian Lewington. KM's assessment of the outermost-tail-feather shape and width was different from ours, and both he and IL placed more emphasis on the pattern of the outer web of that feather. KM compared the ratio of width of the outer web to the *total* feather width, which averaged 1:5.7 for *delicata* and 1:7.8 for *gallinago*, based

on measurements from skins. The ratio for the St Mary's bird was 1:5–1:6, well within the range of *delicata*, and suggesting that the total feather width was probably <9 mm. This supported his general impression (from photographs) of a comparatively narrow and rather parallel-sided outermost tail feather, lacking the typical convex shape to the edge of the inner web of *gallinago*. In terms of the pattern, the contrast between the pale and dark barring on the outer web was significantly better for *delicata*.

Taking this new perspective into account, the record was reassessed. The re-evaluation of the critical outermost tail feather, combined with the indicative features as discussed above and a raft of soft features (the overall cold, dark plumage, the plainness of the scapulars, the solidly dark greater coverts, the strength and extent of black/white flank markings) now pointed much more

George Reszeter



George Reszeter



242 & 243. Wilson's Snipe *Gallinago delicata*, St Mary's, Isles of Scilly, October 1998. These photos show the underwing and upperwing patterns of the bird discussed in this paper – see text for details.

convincingly to *delicata*. The record was accepted by BBRC, and then by BOURC as the first record of Wilson's Snipe for Britain (BOU 2009).

*What of the future?*

Now that Wilson's Snipe is on the British List, what is required for future submissions? At the present time, we consider that the strongest features for *delicata* are (i) the width and shape of the outermost tail feather, (ii) the pattern of the underwing-coverts, (iii) the depth of the white tips to the secondaries, (iv) the pattern of the outermost tail feather, and (v) the pattern of the axillaries. We feel that an acceptable record of this species in Britain requires documentation which establishes that a number of these features fall within the range defined for *delicata* and, in combination, are outside the known range of *gallinago*, as described above and by Reid (2008). We consider that this will require a series of photographs that show an appropriate pattern on the underwing, outer-tail feathers and axillaries, together with narrow white tips to the secondaries and preferably the shape of the outermost tail feather. Alternatively, a specimen, a trapped bird (with a detailed in-hand description plus biometrics and photographs) or a ringing recovery from North America would clearly be considered.

Although we would consider full field descriptions alone, these should be of the bird under different light conditions and should accurately describe two, or ideally three, of the features listed as 'strongly indicative'

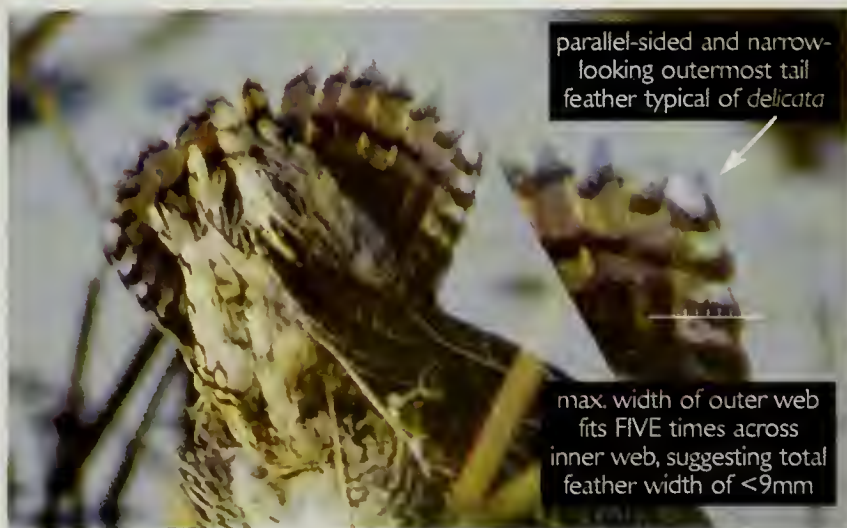
and as many 'soft' features as possible. On present knowledge, however, such records may still prove to be unacceptable as many of these features are extremely difficult to assess with confidence in the field and are really only accurately assessed from photographic evidence.



Bryan Thomas



Bryan Thomas



parallel-sided and narrow-looking outermost tail feather typical of *delicata*

max. width of outer web fits FIVE times across inner web, suggesting total feather width of <9mm

Bryan Thomas

244–246. The spread tail of the St Mary's Wilson's Snipe *Gallinago delicata*, October 1998, with, in plate 246, Killian Mullarney's analysis of the width and shape of the outermost tail feather.

Bryan Thomas



247. Wilson's Snipe *Gallinago delicata*, St Mary's, Isles of Scilly, October 1998.

#### Acknowledgments

BBRC is grateful to everyone who helped the Committee with this paper, particularly Martin Garner, Paul Leader, Dennis Paulson and Martin Reid; the staff at the Natural History Museum, Tring, for allowing access to the skin collection; Angela Ross for supplying photographs of the specimen at National Museums Northern Ireland; and the many photographers, too numerous to mention, from North America who supplied us with photographs of *delicata*. The Committee is particularly grateful to Killian Mullarney and Ian Lewington; without their intervention the outcome of this record may have been very different.

Therefore, at the present time, any acceptable submission is likely to require high-quality photographs although, in the possible event of a displaying bird, sound recordings of drumming flight could confirm identification. We recognise that observers may consider these criteria to be exceptionally stringent and we welcome informal submissions of well-documented birds thought to be *delicata* but for which the evidence is inconclusive. These will be held on file in case our understanding of the identification features of *delicata* is revised in due course or if the status of *delicata* becomes that of a regular rather than exceptional vagrant, at which point we may reassess well-documented records that fall just below the current standard.

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# Naumann's Thrush in Essex: new to Britain

Ken Murray

**ABSTRACT** A first-winter male Naumann's Thrush *Turdus naumanni* discovered at Woodford Green, Essex, on 3rd February 1990 remained until 9th March 1990, although it transpired that the bird had been present since 19th January. During its stay, it frequented gardens and an adjacent playing field, where it was watched by several hundred observers. Until recently, Naumann's Thrush and the closely related Dusky Thrush *T. eunomus* were treated as races of a single species; Dusky Thrush had already occurred in Britain but this was the first occurrence of Naumann's Thrush. Following a review of diagnosable plumage differences, and after considering the relatively infrequent occurrence of hybrids, BOURC concluded that Naumann's and Dusky Thrushes represent monotypic species, and both were accepted into Category A of the British List. This paper describes this record, and also discusses the distribution of Naumann's and Dusky Thrushes and the occurrence of hybrids.

Although it is now 19 years ago, my memories of the event are still remarkably fresh. It could have been just any old 'Saturday morning after the night before', a typical and otherwise quite forgettable winter's day, with heavy rain and a northwesterly gale. Except that this particular Saturday morning, 3rd February 1990, was a day that I shall never forget. As I savoured a breakfast grapefruit segment, I noticed a movement in the ivy *Hedera* hedge through the rain-spattered window. Although the driving rain reduced visibility from the kitchen window almost to zero, I managed to make out a rear-facing, downward tugging, thrush-sized bird, showing prominent 'rusty wedges' either side of a dark brown, fanned tail. The hangover vanished in a nanosecond. I tore up the stairs, choking on the grapefruit as I aimed for the bedroom window. Nervously peering over the windowsill with my binoculars, I was relieved to find the bird still present just 10 m away.

Immediately, I asked my wife to call P. Vines (PV), C. Fentiman and T. Wilson, and I began to make some notes. PV was the first to arrive, but by then the bird had been missing for about 15 minutes. Needless to say, my angst was probably equal to PV's frustration. Knowing that there

are no guaranteed returns in this situation, I was beginning to feel somewhat depressed but then the bird suddenly reappeared, swooping in from my neighbour's garden, and landed back in the hedge. The bird was feeding avidly on the ivy berries and showing really well. There were mutterings of American Robin *Turdus migratorius*, and Red-throated Thrush *T. ruficollis*, even though we both knew that the bird was clearly neither of these. The possibility of some sort of hybrid seemed more plausible, but these musings were born out of sheer frustration and the initial euphoria was beginning to dissipate... we just didn't know what it was! Poring over the illustrations and text in Heinzel *et al.* (1972) and *BWP*, we concentrated on all the plates and the only images that were somewhat comparable were, unbelievably, those of Naumann's Thrush *T. naumanni*. Although there were some discrepancies – the image in Heinzel *et al.* showed a longer bill, more contrasting head pattern, whiter belly, flank and undertail-coverts, a dull red tail and shallower forehead – this was the closest match we could find.

PV was strongly supportive of this identification and, with no other obvious contender, it seemed the most likely candidate. As the

reality sank in, we sat there completely and utterly stunned! We reasoned that it was, in all probability, a first-winter male, although the illustrations in *BWP* and Heinzel *et al.* differed on this point. C. Fentiman arrived shortly afterwards, by which time the bird had disappeared again. T. Wilson soon followed, but it was a long 30 minutes before the bird reappeared once more and excellent views were had by all. On this occasion the bird started to preen and, while doing so, showed off its red underwing-coverts and rusty uppertail-coverts, features that we had not observed earlier.

It subsequently transpired that the bird had first been seen (but not identified) on 19th

January in a garden c. 300 m away belonging to a neighbour, Mrs Bridges. These two garden locations straddle the boundary between Waltham Forest in Greater London and Woodford Green in Essex. During its stay the thrush often frequented a local school playing field, where it showed extremely well to hundreds of admirers. It was last reported on 9th March 1990.

Many good photographs were taken to support the identification and it was accepted by both BBRC and BOURC, and added to Category A of the British List in 1991 (BOU 1992). Although a summary of the occurrence has previously been published (Murray 1990), that was prior to its formal acceptance and its treatment as a species distinct from Dusky Thrush *T. eunomus*.

#### Description

The following description was made during initial observations, and is supplemented by additional details provided by Brian Small from notes and sketches made on 16th February 1990.

#### Size and structure

Similar in size and structure to Song Thrush *T. philomelos* but appeared to have a deeper-based and slightly dagger-shaped, dark-tipped bill. It also showed a heavier neck and a slightly longer tail. The forehead seemed steeper than that of Song Thrush, although the angle changed according to posture.

#### Head

Long, narrow supercilium, a dingy pale cream; dark lores, with a creamy crescent under the eye forming a pale triangular area above the malar. Malar stripe of blackish feathers, which broke into streaks at the lower edge. Throat off-white or pale cream and lightly flecked. Crown and ear-coverts grey-brown.



David Cottridge



David Cottridge

248 & 249. First-winter male Naumann's Thrush *Turdus naumanni*, Woodford Green, Essex, February 1990.

Upperparts

Mantle and scapulars grey-brown, faintly marked with darker feather centres, forming a few dark spots, particularly on lower back. Uppertail-coverts rufous.

Wings

Greater coverts with broad, neat, pale grey-cream fringes. Dark grey remiges, with pale creamy-buff fringes, those of the tertials and

secondaries forming a wing panel. Underwing-coverts red.

Tail

From above, central tail feathers dark brown; outer feathers broadly edged rufous. From below the tail looked pale washed-out orange.

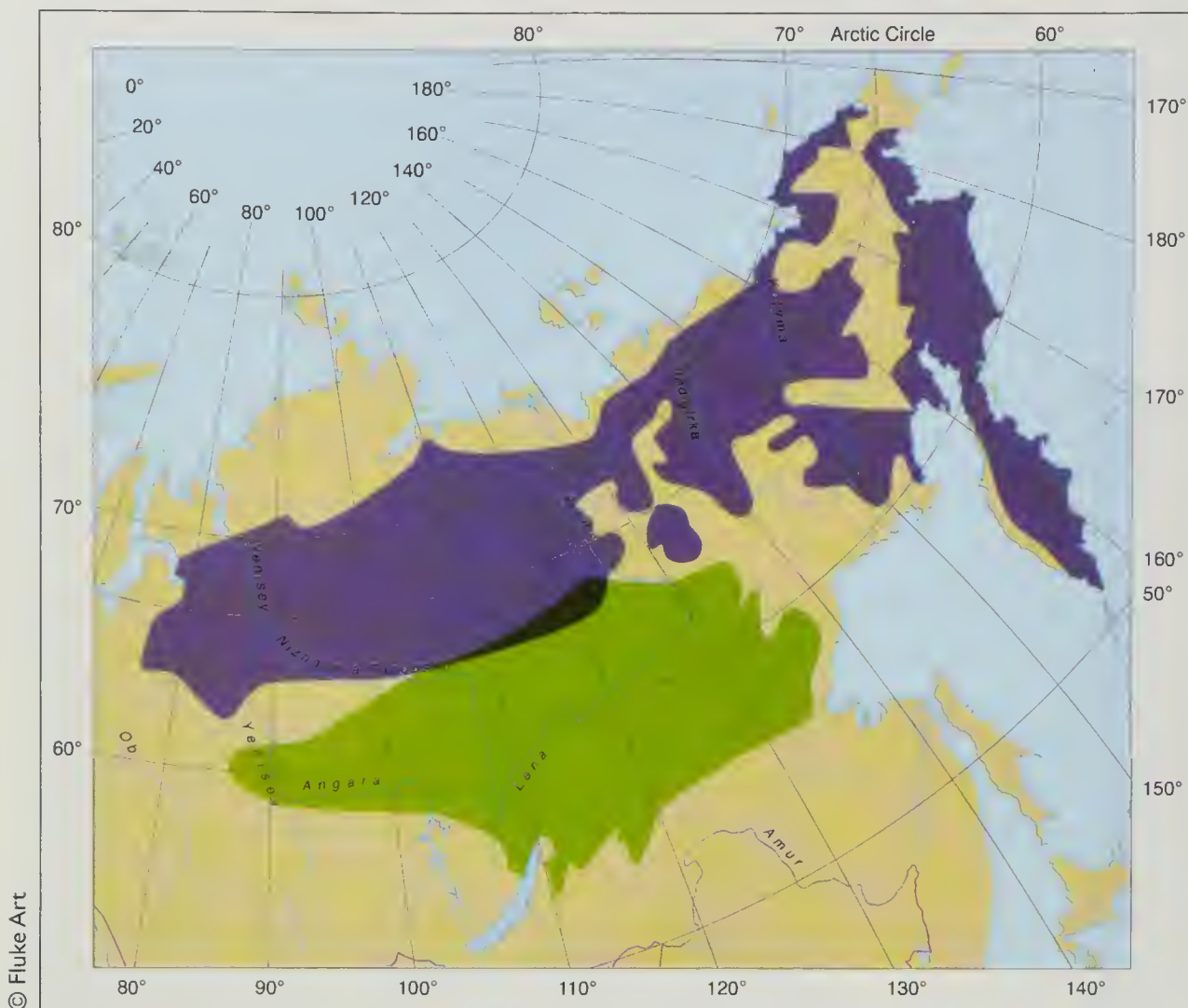
Underparts

Breast, flanks and undertail-coverts rufous-



Brian Small

Fig. 1. Notes and sketches of first-winter male Naumann's Thrush *Turdus naumanni*, Essex, February 1990.



**Fig. 2.** Breeding ranges of Naumann's Thrush *Turdus naumanni* (green) and Dusky Thrush *T. eunomus* (purple). Redrawn from a provisional map provided by Kees Roselaar from the forthcoming *Handbook of Geographical Variation and Distribution of Palearctic Birds* by Kees Roselaar and Hadoram Shirihai.

orange, feathers edged pale cream, forming a conspicuous 'chevroned' or 'scaly' effect. Centre of belly pale cream with little orange.

*Bare parts*

Bill yellow, with extensive blackish tip and upper edge of upper mandible. Legs and feet dark flesh. Eye dark.

*Age and sex*

The broadly pale-fringed greater coverts helped to confirm the age as first-winter. Sexing can be difficult, but birds lacking prominent dark streaks on the chin, throat and breast-sides, as this bird, and with deep rufous-tinged underparts, should be males (Svensson 1992).

*Taxonomic change*

Until BOU (2009) ratified treatment of Naumann's and Dusky Thrushes as two distinct species, they had both been considered races of *T. naumanni* but, confusingly, the English name

of Dusky Thrush was used for this species. The basis for the decision by BOURC to recognise both forms as distinct species was based upon them being diagnosable in terms of both plumage and structure (Knox *et al.* 2008). Although it was acknowledged that birds with intermediate phenotypes do exist in museum collections, they were considered to occur relatively infrequently. Furthermore, the expected interactions between them are poorly described and apparent hybrids are much rarer than would be expected if they were merging extensively. Both Naumann's Thrush and Dusky Thrush are now accepted into Category A of the British List.

*Records elsewhere in Europe*

There has been just one subsequent record of Naumann's Thrush in Britain, a first-winter at South Woodford, Greater London, on 6th–11th January 1997 (*Brit. Birds* 91: 503). Remarkably, this bird was found just a few kilometres from

where the Woodford Green bird was discovered. Elsewhere in Europe, Naumann's Thrush has occurred widely, with records in Austria, Belarus, Belgium, the Czech Republic, Finland, France, Germany, Hungary, Italy, Norway and Poland (*BWP Concise*).

There are more records of Dusky Thrush in Britain, eight in total. The first was in 1905 and the remaining seven have all been since 1959. Nonetheless, Dusky Thrush has been seen by fewer birders in Britain than Naumann's Thrush and only one, at Hartlepool, Durham, which stayed from 12th December 1959 to 24th February 1960, was widely appreciated. All the others have been difficult to catch up with, being short-stayers or erratic in their appearance, or appearing in largely inaccessible locations. The most recent record was one on Skomer, Pembrokeshire, on 3rd–5th December 1987.

### Distribution

Naumann's Thrush breeds across a vast region of central Siberia, in places north to c. 65°N, between the Yenisey and Kolyma Rivers. The southern and western boundaries lie close to the lower Tunguska River, south to c. 54°N and west to c. 90°E, then east across the Lake Baikal region and the Stanovoi Mountains, perhaps reaching the Sea of Okhotsk. The breeding ranges of Naumann's and Dusky Thrushes are largely allopatric in Siberia (fig. 2), with Dusky having a more northerly breeding distribution, extending from c. 66°N to c. 72°N. The range of Naumann's Thrush does, however, overlap with that of Dusky Thrush in central Siberia towards the northern limit of its range and this is presumably the source of reported hybrids.

On migration, Naumann's Thrushes pass through Mongolia, southeastern Siberia and northeast China. In coastal northeast China, autumn passage through Beidaihe in Hebei province occurs from late September to early November, usually peaking in the third week of October. The species winters in northern and eastern China south to the Yangtze River, and the Korean Peninsula. In irruption years, small numbers reach southeast China, including Hong Kong, where birds have appeared on 11 occasions (Carey *et al.* 2001), although the Dusky Thrush is more frequently seen here. Small numbers also reach Japan, where Brazil (1991) reported it to be a very uncommon, even rare, migrant and winter visitor.

### Hybrids

Individuals showing characters of both Naumann's and Dusky Thrushes are well documented in the literature, are represented in specimen collections, and are noted regularly on migration and during the winter months in eastern China. Stepanyan (1983) treated Naumann's and Dusky Thrushes as distinct species, and although he acknowledged that low levels of hybridisation occur within regions of sympatry, he also recognised that they appear to display widespread reproductive isolation. He suggested that hybridisation occurs only within limited areas in the regions where the two species overlap, and then only at low levels, and hybrids appear to be genuinely rare. Furthermore, in some regions of sympatry, including the lower reaches of the Angara River, the Angara–Podkamennaya Tunguska catchment and in the upper reaches of the Nizhnyaya Tunguska River, hybrids are apparently unknown.

Stepanyan noted that the collection housed in the Zoological Museum of Moscow University contained 81 specimens of undoubted Naumann's Thrush, 62 specimens of undoubted Dusky Thrush, and 27 specimens showing mixed characters of both species. In some cases, hybrids were difficult to separate from pure specimens, showing only minor differences in colour tone – for example, some otherwise typical Dusky Thrushes with an ochreous tone to areas of normally black-brown coloration. Hybrid specimens of otherwise typical Naumann's showing features of Dusky were said to be rare. There may be a disproportionately high number of hybrids held in collections owing to their novelty value; collections may tend to retain or actively seek to add hybrids to the collection.

Both species are common migrants in autumn at Beidaihe in coastal northeast China, and smaller numbers remain here throughout the winter months. Jesper Hornskov (*in litt.*) estimated the percentage of apparent hybrids to be in the region of 4–5% of all Naumann's and Dusky Thrushes observed. However, because of their elusive nature and nervous disposition, observation of flocks in open situations where all birds can be examined in detail is rarely possible. Consequently, it has not been feasible to quantify more accurately the relative frequency with which birds showing mixed characters occur. These include birds showing a range of overlapping characters, although others

are more subtle – apparently typical Naumann's Thrushes with entirely dark tails, and otherwise typical Dusky Thrushes with rufous tails and light cinnamon mottling on the flanks.

As the photographs and illustrations clearly show, the Woodford Green bird showed no intermediate or hybrid characters, and was unanimously accepted as an undoubted Naumann's Thrush.

#### Acknowledgments

I would like to thank: Jesper Hornskov for his comments on the status of Naumann's and Dusky Thrushes, and the occurrence of apparent hybrids, at Beidaihe; Kees Roselaar for allowing BB to reproduce the map shown in fig. 2; Jevgeni Shergalin for translating the Russian literature; and Brian Small for the use of his artwork in fig. 1 and for contributing to the written description.

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Ken Murray, Woodford Green, Essex



**EDITORIAL COMMENT** Bob McGowan, Chairman of BOURC, commented: 'European records of the Naumann's Thrush tend to be in southern countries and it has been recorded only twice in Britain, both times in London. In contrast, Dusky Thrush is more frequent in northern Europe and the eight British records, of which three were in Shetland, reflect this distribution. Interestingly, the temporal distribution of British records also differs markedly: the two records of Naumann's in the 1990s contrast with seven of Dusky in the 28-year period between 1959 and 1987.'

'The Woodford Green Naumann's Thrush was well observed and photographed. After some initial confusion, its distinctive plumage made determination of subspecies (as then) relatively straightforward. Subsequent assessment by BOURC raised no particular problems. Good photographs supported the submission and the bird was accepted as a first-winter male. Captive status of this taxon was not considered a significant factor and as there were no concerns over provenance it was added to Category A.'

'The adoption of Naumann's and Dusky Thrush as separate species by the BOU had been anticipated for some time. Despite the clear differences in plumage of adult birds, however, the degree of hybridisation and existence of intermediates made consideration of the issue more complex, particularly as some "intermediates" were reported in areas where no hybridisation occurs. The Taxonomic Sub-committee's recommended treatment was based on three main factors: plumage and structure are distinctive; intermediates (in museum collections) are relatively uncommon; and interactions between the taxa are poorly described and the number of apparent hybrids suggests that contact is low. In consequence, the adoption of Naumann's and Dusky Thrush as separate species was promulgated in the BOURC's 37th Report.'

Adam Rowlands, Chairman of BBRC added: 'This bird was enjoyed by many past and present members of BBRC and was a straightforward record to assess. Any observer fortunate enough to find a Naumann's or Dusky Thrush in the UK could be forgiven for savouring the moment and not being too concerned about some of the finer colour detail alluded to above as useful for separating hybrid individuals. Given that both species are rarities, BBRC will consider and publish any acceptable records of hybrids in the future, alongside any claims that can be confidently assigned to species. Following the split, BBRC will need to review past records of Dusky Thrushes to ensure that the birds did not show hybrid characters. It has been suggested that at least one individual (the 1975 Shetland bird) showed characters suggesting a hybrid origin (Vinicombe & Cottridge 1996).'

# Bird Photograph of the Year 2009

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This is the longest-running of all the various competitions and awards that have been featured in *BB* over the years and two things in particular seem to be responsible for its continued (and increasing) appeal. A decade ago, a small minority of birders took bird photographs; now, digital equipment has brought acceptable results within everyone's reach. The very best equipment is still very expensive, yet there is genuine quality in mid-range and even budget-priced gear. The increasing number of people trying their hand

at bird photography has to be good for a competition like this, which is aiming to find photographs that are interesting as well as technically excellent. This is an exciting era for photography.

The second factor in the appeal of this award is the carrot of a decent prize for the winner! For this, the 33rd Bird Photograph of the Year competition, we were delighted to welcome Warehouse Express, one of Europe's leading retailers of optical equipment, as a main supporter for the event and as a result we were

1st	Glaucous Gulls <i>Larus hyperboreus</i>	(plate 250)	Kit Day
2nd	Mistle Thrush <i>Turdus viscivorus</i>	(plate 251)	John Robinson
3rd	Hobby <i>Falco subbuteo</i>	(plate 252)	Helge Sørensen
4th	Great Snipe <i>Gallinago media</i>	(plate 253)	Sheila Blamire
5th	Barn Swallow <i>Hirundo rustica</i>	(plate 254)	Mark Hamblin
6th	Green Woodpecker <i>Picus viridis</i>	(plate 255)	John Robinson
7th	Dotterel <i>Charadrius morinellus</i>	(plate 256)	Mark Hamblin
8th	House Sparrow <i>Passer domesticus</i>	(plate 257)	Edmund Fellows
9th	Golden Eagle <i>Aquila chrysaetos</i>	(plate 258)	Emil Enchev
10th=	Common Tern <i>Sterna hirundo</i> and Herring Gull <i>Larus argentatus</i>	(plate 259)	Gordon Bramham
10th=	Common Guillemot <i>Uria aalge</i>	(plate 260)	Philip Mugridge
12th	King Eider <i>Somateria spectabilis</i>		Hugh Harrop
13th	Little Owl <i>Athene noctua</i>		Bill Baston
14th	Puffin <i>Fratercula arctica</i>		Jari Peltomäki
15th	Razorbill <i>Alca torda</i>		Martin Perrow
16th	European Roller <i>Coracias garrulus</i>		Bill Coster
17th	Common Sandpiper <i>Actitis hypoleucos</i>		Richard Brooks
18th	Black Guillemot <i>Cephalus grylle</i>		Oliver Smart



**250. BIRD PHOTOGRAPH OF THE YEAR 2009** Glaucous Gulls *Larus hyperboreus*,  
Dingle Harbour, Co. Cork, February 2008

(Canon 1D Mark III, Canon 400-mm f5.6 lens + 1.4x converter; 1/2000, f8, ISO 250). *Kit Day*

able to offer a cash prize of £1,000 for the winning entry. In addition, our loyal supporters of many years, A&C Black and HarperCollins, have continued their sponsorship, as has the Eric Hosking Charitable Trust, which actively supports photography as a medium for documenting bird behaviour. Without the backing of our sponsors we could not run this competition, and we gratefully acknowledge their support.

The prizes available mean that 'BPY' continues to attract an increasing number of entries and in 2009 we were particularly pleased by the number received from photographers new to this competition. Many of the submitted images were absolutely outstanding and it is clear that there are now a great many highly talented wildlife photographers out there. Even those who failed to make the final shortlist may still see their images used at some point in *BB*.

A winning image is the culmination of a great many factors, among them equipment, planning, an understanding of the bird and its

environment, and (usually) an element of luck as well! However, there is more to winning a photographic competition than just taking the photograph. Back home at the computer, judicious manipulation of a digital image can elevate an already outstanding shot to a prize-winner. We allow the use of levels and curves and other image-processing tools to adjust contrast, brightness, exposure and colour saturation, and also for minor cleaning work. Sharpening of images and cropping by up to 25% by area are also permitted. This enables photographers to achieve a composition which brings out the best of the bird, its behaviour and its surroundings. David Tipling recently set out recommendations for simple image-manipulation techniques that are within the rules of this competition (*Brit. Birds* 101: 39–42) and we recommend that all prospective entrants are familiar with these, as well as the competition rules ([www.britishbirds.co.uk/bpy.htm](http://www.britishbirds.co.uk/bpy.htm)). For the second year running, no slide entries were received, and it seems that digital photography



251. SECOND Mistle Thrush *Turdus viscivorus*, Bewdley, Worcestershire, December 2008  
(Nikon D200; Sigma 50–500-mm zoom lens; 1/200, f8, ISO 640). *John Robinson*

252. THIRD Hobby *Falco subbuteo*, Copenhagen, Denmark, September 2008  
(Canon EOS ID Mark III; Canon 400-mm f4 lens; 1/2500, f5.6, ISO 400). *Helge Sørensen*



has superseded traditional format completely, among wildlife photographers at least. Consequently, we shall not accept slide entries in future.

This year, the judges gathered in Thetford, Norfolk, where the hospitality and excellent facilities at the BTO's headquarters were much appreciated. As normal, the judging process began by viewing all the submitted images twice, after which an initial shortlist (which this year ran to more than 60 entries!) was compiled. Each image in that first shortlist was examined closely for sharpness and clarity for reproduction, as well as any telltale signs of over-sharpening or other excessive digital manipulation. To help us progress, we agreed that unless an image was considered by at least one judge as a 'top ten' contender, it fell by the wayside. With no little difficulty, the pack was eventually whittled down to a final shortlist of some 18 images, listed above, which were then voted on by all the judges.

Selecting the winner is rarely straightforward but Kit Day's image of two fighting Glaucous Gulls *Larus hyperboreus* was the first choice of three judges and fell within the top seven of all six judges, making it a clear winner. Obtaining sharp, crisp action shots is never easy, even in bright conditions, but Kit has managed to achieve this to perfection. We felt that his image captured the atmosphere and aggression of wintering gulls squabbling in a fishing port so well that you can almost hear them screaming! Kit commented that he came across at least three Glaucous Gulls in Dingle Harbour, Co. Kerry, during a short tour round various gull spots along the west coast of Ireland. Two of the birds seemed to favour the mast of a ship in the harbour, and when both tried to perch there at the same time, an aerial duel ensued. He managed to get a series of shots as the birds came together, this being the most pleasing of the various compositions. The conditions were perfect, with superb light and little wind. The image was manipulated slightly, with adjustment of levels, slight saturation and sharpening. Kit will receive a cash prize of £1,000 donated jointly by Warehouse Express and BB.

Few photographers have the patience to spend an entire day in a hide in the middle of an English winter, waiting to photograph birds in their garden. But this is exactly what John Robinson did and he took second place with this

splendid image of a Mistle Thrush *Turdus viscivorus* feeding on Mistletoe *Viscum album* berries in his Worcestershire garden. This image was all the more unusual as the thrush was eating the berries after which it was named, something none of the judges had actually witnessed before. John commented that the photograph was taken from a hide set near an apple *Malus* tree. The bunch of Mistletoe just happened to be in the same tree and the bird would dive into the middle and stop there. A new branch was tied onto the bunch, with more berries at the top, and finally, after John had waited all day in the hide, the bird eventually went to it. The final result was achieved by edge-preserving and smoothing on the area around the bird, and one-pass sharpening.

Returning to the theme of action shots, Hobbies *Falco subbuteo* and dragonflies (Odonata) always seem to go together. In this image by Helge Sørensen, a juvenile Hobby is about to dismember a dragonfly, and the moment is captured to perfection. The image is so sharp that it is almost possible to identify the species of unfortunate dragonfly. Helge commented that although Hobbies are very rare breeding birds in Denmark, several are seen every autumn on migration near Copenhagen, where they often stop over for a couple of days to feed on dragonflies over a lake. As these falcons are such fast and agile fliers, it took seven days of trial and error before a bird – and the camera's autofocus-system – co-operated to allow this wonderful image to be achieved. The final result was manipulated with slight curve modification and cropping.

Scandinavia holds an irresistible lure for bird photographers, and many of the photographs showcased previously in this competition have been taken in the land of the midnight sun. In fourth place this year comes this classic image of a displaying Great Snipe *Gallinago media*, with chest puffed out and tail fanned, photographed at a lek in Norway by Sheila Blamire after spending an entire night in a hide overlooking a lekking site. With low, soft lighting, pleasing colour tones and patches of snow on the distant hills, it almost felt as if we were there. Sheila commented that: 'By 7.30 pm I had settled down in the small photographic hide on the periphery of the display arena. About an hour later, several Great Snipe started lekking close by, their display becoming more and more frenzied in their efforts to claim the most prominent tussocks or



**253.** FOURTH Great Snipe *Gallinago media*, Forra, Norway, May 2008  
(Canon EOS 40D; Sigma 50–500-mm zoom lens at 500 mm; 1/800, f8, ISO 800). Sheila Blamire

**254.** FIFTH Barn Swallow *Hirundo rustica*, Carrbridge, Inverness-shire, May 2008  
(Canon EOS 1D Mark III; Canon 500-mm f4 lens; 1/640, f7.1, ISO 800). Mark Hamblin





255. SIXTH Green Woodpecker *Picus viridis*, Bewdley, Worcestershire, December 2008 (Nikon D200; Sigma 50–500-mm zoom lens; 1/200, f8, ISO 640). John Robinson

mounds. Occasionally, one would put its head down and run, mouse-like, through the heather to reappear on an unoccupied mound to continue the very vocal display. As the night wore on, sleep was out of the question, but the light was too gloomy for photography. Then, with dawn approaching, came further opportunities to record this remarkable event, albeit having to use a higher ISO to try and freeze the action. In this photo, the pink glow accentuates the colour of the heather and the distant hills, resulting in a very atmospheric image, but importantly the main visual signal used in their display has been captured – that is the exposure of the white tail feathers.’ Minor adjustments have been made including cropping, levels, sharpening and contrast.

Barn Swallows *Hirundo rustica* are great favourites of photographers, and every year we

receive several entries. So the competition is pretty fierce and to get a placing, any Barn Swallow image has to be something rather special. This was what we felt Mark Hamblin had achieved with this stunning image of a female collecting mud from his garden pond. Not only has Mark captured this behaviour to perfection, but the position, composition, reflection and background combine to create an immensely satisfying and instructive image. Achieving it involved a significant redesign of his garden pond, a level of dedication which future competitors may wish to contemplate in order to achieve a top-ten placement. Mark commented that although many species visit his pond, the stars of the spring are undoubtedly the Barn Swallows that visit to collect mud to rebuild or repair their nests. Last year he revamped his pond, constructed an elevated tray



**256.** SEVENTH Dotterel *Charadrius morinellus*, Grampian Mountains, central Scotland, May 2008  
(Canon EOS 1D Mark III; Canon 500-mm f4 lens + 1.4x converter; 1/2000, f8, ISO 400). Mark Hamblin

**257.** EIGHTH House Sparrow *Passer domesticus*, Islesteps, Dumfries & Galloway, May 2008  
(Canon 1D Mark II; Canon 300-mm f4 lens + 1.4x converter; 1/2000, f4, ISO 400). Edmund Fellows





258. NINTH Golden Eagle *Aquila chrysaetos*, Balkan Mountains, Bulgaria, March 2008  
(Canon EOS 1D MKIII, Canon 500-mm f4 lens; 1/800, f4.5, ISO 400). Emil Enchev

259. TENTH EQUAL Common Tern *Sterna hirundo* attacking Herring Gull *Larus argentatus*,  
Inner Farne Island, Northumberland, July 2008  
(Canon EOS 1D Mark II, Canon 400-mm f4 lens; 1/8000, f4, ISO 400). Gordon Bramham





**260. TENTH EQUAL** Common Guillemot *Uria aalge*, Skomer, Pembrokeshire, June 2008  
(Canon EOS 1D Mark II, Canon 400-mm f4 lens; 1/2500, f4, ISO 400). Philip Mugridge

that was clear of the background and provided a mirror to enhance the reflection. When the swallows discovered this elevated platform and overcame their initial confusion, they immediately took to the task of collecting mud. The pond is sited to receive warm, early-morning light, but there were surprisingly few days when the water was sufficiently calm to render a perfect reflection. The resulting image is well worth the hours of dedication involved.

When we think of Green Woodpeckers *Picus viridis* feeding, it is usually on ants (Formicidae) among short turf, but we rarely give a second thought to what they feed upon during the winter months, when invertebrate food is harder to come by. Sixth place goes to John Robinson for his unusual image of this male Green Woodpecker in his garden, which is clearly attractive to his local bird population. As with his second-placed Mistle Thrush image, this one of a Green Woodpecker feeding on rotting apples is another fine photograph. Once again, the result is the product of hours of waiting in a hide set up near an apple tree where numerous

birds were coming to feed. In all, John photographed 16 species feeding on the rotting fruit, and this Green Woodpecker was the highlight of another chilly day.

Returning Dotterels *Charadrius morinellus* are a sure sign that spring has arrived on Scotland's higher hills. Mark Hamblin's seventh-placed image shows a female, part of a trip of three pairs, which he discovered in the Grampian Mountains in early May. Although quite flighty, they remained faithful to a relatively small area along the edge of a snowfield, where they fed on emerging flies. With patience, Mark was able to gain their confidence and spent the afternoon photographing them. The perfect opportunity to 'freeze' a bird running at top speed was provided by this female as she crossed an expanse of snow. The judges were particularly impressed by the perfect exposure of both the Dotterel and the crystalline crust of the snow.

Edmund Fellows takes eighth place with his delightful composition of a male House Sparrow *Passer domesticus* frozen in flight as it

hovers to collect a feather, while the wing-tip blur adds to the action appeal of the image. To achieve this outstanding shot, Edmund fixed the seedhead of a docken *Rumex* to a fence and placed a gull's feather on it, which the sparrow took to its nearby nest. When the feather had been taken, Edmund planted a new feather and the sparrow repeatedly returned to take feathers placed on the seedhead. Although it took many attempts until the sparrow came in along exactly the right plane, this pin-sharp image demonstrates that the time he spent waiting was well worth the effort.

The judges were extremely impressed with Emil Enchev's stunning portrait of an adult Golden Eagle *Aquila chrysaetos* coming in to land in a strong wind, which achieved ninth position. This image was taken in the Balkan Mountains in central Bulgaria from a permanent hide overlooking a feeding station. On this particular day, the wind was blowing especially strongly, which enabled the eagle to almost stall just before touchdown. The eagle has indeed landed!

Two images, both featuring seabirds, were tied for tenth place. Gordon Bramham's picture is an action shot of a Common Tern *Sterna hirundo* aggressively pursuing a Herring Gull *Larus argentatus* which had intruded into its territory on Inner Farne Island, Northumberland. The judges felt that the action portrayed in this image captured the atmosphere of a busy tern colony brilliantly.

Philip Mugridge captured this unusual shot of a Common Guillemot *Uria aalge* on a visit to Skomer, Pembrokeshire, in June. This image was taken from the steps leading up from the landing stage where, just below where Philip was standing, a hungry youngster was sitting. This returning adult was quite unperturbed by his presence. By using a high shutter speed, Philip was able to ensure that the head and body remained sharp but still managed to obtain a slight blur in the wing-tips to convey the speed and motion of the guillemot as it approached the rock face.

### Digiscoping

One of the aims of this competition has been to promote digiscoping as a medium to obtain images that would otherwise be unattainable.

The standards set by the best digiscopers (albeit using top-of-the-range cameras and telescopes) can be on a par with those of photographers using a conventional lens and DSLR body, and these standards are rising every year as camera technology improves and images can be adjusted and manipulated in ways previously unavailable to digiscopers. For many birders, carrying a digiscoping kit has become almost as routine as it was to carry a notebook and pencil ten years ago. Many achieve remarkable results, as the images on Surfbirds [www.surfbirds.com](http://www.surfbirds.com), BirdGuides [www.birdguides.com](http://www.birdguides.com) and countless blogs will testify. Of course, digiscoping is restrictive and often lacks the flexibility to capture the action that features in many of the higher-placed entries in this competition. But it does offer an alternative means to capture unique aspects of behaviour, some of which may be undocumented. And when published, there is sometimes little difference in quality between digiscoped and conventional images.

However, as in 2008, the judges expressed their disappointment in the quality of the images submitted. We had expected to receive some high-quality entries but all those submitted failed to meet the aims and goals set for this award, and the quality of some was disappointing. Consequently, and with the agreement of the Eric Hosking Charitable Trust, the judges have decided not to award the digiscoping prize for a second year. This competition remains committed to promoting and extending the benefits of digiscoping, and we encourage more entries for the 2010 competition.

### Prizes

The awards will be presented at this year's British Birdwatching Fair at Rutland Water, in the Events marquee on Friday 21st August, at 4.30 pm, and we invite all readers to come and join us. Once again we thank our sponsors, Warehouse Express ([www.warehouseexpress.com](http://www.warehouseexpress.com)), HarperCollins ([www.harpercollins.com](http://www.harpercollins.com)), A&C Black ([www.acblack.com](http://www.acblack.com)) and the Eric Hosking Charitable Trust for their support. The rules for next year's competition will be announced in the January 2010 issue of *BB*, and on our website ([www.britishbirds.co.uk](http://www.britishbirds.co.uk)).

Richard Chandler, Tim Appleton, Robin Chittenden, David Hosking, Peter Kennerley and  
David Tipling, c/o 4 Kings Road, Onndle, Peterborough PE8 4AX



# The Carl Zeiss Award 2009

## 50 years of rarity photographs



Photographs have always been a part of rare-bird assessment and in the vast majority of cases they add a significant extra dimension to that process. The number of photographs submitted to BBRC increased slowly but steadily during its first four decades, but in the last ten years digital photography has been responsible for a quantum shift in the role of photographs in the Committee's work. In the 1960s and 1970s, a small proportion of rarity submissions were accompanied by (generally) small, grainy images. Nowadays, a rarity with no photographic evidence is the exception rather than the norm (although certain groups, most notably seabirds, still present a major challenge). The fact that good-quality digital equipment is now (relatively) cheaply available has brought about a sea change in our approach to birding, and the sight of birders carrying bins and camera rather than bins and scope has become commonplace. Whether this will improve observers' field skills (rather than their ability to identify a bird subsequently, on the back of a camera or at home on the computer screen with the aid of Photoshop) is a moot point and a debate for another time, but there is no question that photography has extended ID frontiers to another level.

In 1992, *BB* and BBRC first introduced the Carl Zeiss Award, which aimed to single out one photograph or a set of photographs that had been most instructive in the record-assessment process during a particular 12-month period. That award has continued to the present time, with sponsorship from Carl Zeiss, in the form of a pair of binoculars for the winner, being greatly appreciated. To mark BBRC's half-centenary, we wanted to do something slightly different with

the award, for this year only, something less 'scientific' or clinical. We wanted to celebrate 50 years of rarity photographs by looking back over the highlights during that period. How can we define the 'best'? We can't, of course – but with the help of a judging panel with a broad range of interests and experience, we hoped to come up with a shortlist of images that were memorable and iconic for a variety of reasons, and that together would be a worthy tribute to the Committee's first 50 years.

### *The judges*

The judging panel comprised Colin Bradshaw (BBRC Chairman 1997–2008), Adrian Pitches (BB 2000 director and N&c compiler), Richard Porter (BB 2000 director and BBRC member 1981–84), Roger Riddington (*BB* Editor) and Andy Stoddart (BBRC member 1993–2001). We felt that this team provided a reasonable spread of ages and experience – both birding and photographic – but we shan't bore readers with further details.

### *The methods*

Our approach was to divide BBRC's first 50 years into five decades, with each judge being responsible for producing an initial shortlist of potential winners from one of these decades. To qualify for selection, the photograph(s) simply had to show a bird that (a) was a BBRC rarity at the time and (b) had been accepted by the Committee. The photograph(s) could have been published anywhere, not just in *BB*. The initial task was divided up as follows: Richard Porter took 1959–68, Colin Bradshaw 1969–78, Andy Stoddart 1979–1988, Adrian Pitches 1989–98 and Roger Riddington 1999–2008. With one

Eric Hosking



261. Macqueen's Bustard *Chlamydotis macqueenii*, Hinton, Suffolk, November/December 1962.

Scottish Daily Express



262. Black-browed Albatross *Thalassarche melanophris*, Bass Rock, Lothian, summer 1967.

exception, of which more in a moment, it proved fairly straightforward to come up with a shortlist of 6–10 photographs for each decade. Having done so, each judge voted independently for a top three in each ten-year period, to give a decade winner. Taking those five winners, we then voted once more for an overall winner.

#### *The criteria*

We considered a number of factors when selecting our initial shortlists. Several of these overlapped to some degree with the criteria used to judge the more conventional Carl Zeiss Award: had the photograph made a difference to whether the record was accepted?; had it made a difference to the way we approach identification? Other factors were related to the 'quality' of the bird: just how amazing was the occurrence? And then we tried to take account of the indefinable – photographs of birds that simply have a 'wow' factor because of the bird itself or the situation or the circumstances (perhaps encompassing historical/behavioural/ social elements). And finally (see below), we also took into account how many photographs there were of the bird.

#### *The first round of voting*

The shortlist of images for each decade is presented in table 1, with the 'score' being the cumulative number of points given by the five judges (three points for first, two for second, one for third).

This part of the process went smoothly until judges

Table 1. The shortlist of images for each decade.

	Score
1959–68	
Macqueen's Bustard <i>Chlamydotis macqueenii</i> , <i>Brit. Birds</i> 56: pl. 61 (Eric Hosking) (plates 261 & 271)	14
Black-browed Albatross <i>Thalassarche melanophris</i> , <i>Brit. Birds</i> 61: pl. 1 ( <i>Scottish Daily Express</i> ) (plate 262)	8
Snowy Owl <i>Bubo scandiacus</i> , <i>Brit. Birds</i> 61: pl. 18 (Bobby Tulloch)	8
Long-billed <i>Limnodromus scolopaceus</i> or Short-billed Dowitcher <i>L. griseus</i> , <i>Brit. Birds</i> 54: pls. 57b & 57c (G. des Forges/Dick Bagnall-Oakeley)	-
Ivory Gull <i>Pagophila eburnea</i> , <i>Brit. Birds</i> 55: pl. 68 (J. Peterson/C. J. Williamson)	-
Wilson's Phalarope <i>Phalaropus tricolor</i> , <i>Brit. Birds</i> 60: pl. 63 (J. B. & S. Bottomley)	-
1969–78	
Yellow-bellied Sapsucker <i>Sphyrapicus varius</i> , <i>Brit. Birds</i> 72: pl. 206 (David Hunt) (plate 264)	15
Common Nighthawk <i>Chordeiles minor</i> , <i>Brit. Birds</i> 65: pl. 51 (David Hunt) (plate 263)	7
Pallid Swift <i>Apus pallidus</i> , <i>Brit. Birds</i> 71: pl. 135 (Jeff Pick)	6
Ross's Gull <i>Rhodostethia rosea</i> , <i>Brit. Birds</i> 67: pl. 64 (J. B. & S. Bottomley)	2
Long-billed Dowitchers <i>Limnodromus scolopaceus</i> , <i>Brit. Birds</i> 69: pl. 34 (J. B. & S. Bottomley)	-
Grey-cheeked Thrush <i>Catharus minimus</i> , <i>Brit. Birds</i> 70: pl. 115 (J. B. & S. Bottomley)	-
White-tailed Lapwing <i>Vanelhus leucurus</i> , <i>Brit. Birds</i> 70: pl. 127 (Alan Dean)	-
Scarlet Tanager <i>Piranga olivacea</i> , <i>Brit. Birds</i> 70: pl. 76 (David Hunt)	-
Semipalmated Plover <i>Charadrius semipalmatus</i> , <i>Brit. Birds</i> 73: pls. 227–230 (various)	-
1979–88	
White-throated Needletail <i>Hirundapus caudacutus</i> , <i>Birding World</i> 1: 186 (Pete Wheeler) (plate 266)	11
Hawk Owl <i>Surnia ulula</i> , <i>Brit. Birds</i> 77: pl. 223 (Dennis Coutts) (plate 265)	9
Aleutian Tern <i>Onychoprion aleuticus</i> , <i>Brit. Birds</i> 74: pls. 238–244 (A. Ferguson, A. R. Taylor)	8
Long-toed Stint <i>Calidris subminuta</i> , <i>Brit. Birds</i> 75: pl. 217 (Paul Doherty)	1
Gyr Falcon <i>Falco rusticolus</i> , unpublished (Pete Wheeler)	1
Little Swift <i>Apus affinis</i> , <i>Brit. Birds</i> 74: pl. 190 (W. R. Hirst)	-
Cedar Waxwing <i>Bombycilla cedrorum</i> , <i>Brit. Birds</i> 93: pl. 353 (Clive McKay)	-
1989–98	
Pallas's Sandgrouse <i>Syrrihaptes paradoxus</i> , <i>Brit. Birds</i> 84: pl. 262 (Larry Dalziel) (plate 268)	13
Golden-winged Warbler <i>Vermivora chrysoptera</i> , <i>Brit. Birds</i> 85: pl. 270 (Paul Doherty) (plate 267)	12
Yellow-throated Vireo <i>Vireo flavifrons</i> , <i>Brit. Birds</i> 87: pl. 98 (Tim Loseby)	2
Red-breasted Nuthatch <i>Sitta canadensis</i> , <i>Pitches &amp; Cleeves</i> (2005) pls. 11/34 (David Cottridge)	1
Red-throated Thrush <i>Turdus ruficollis</i> , <i>Brit. Birds</i> 88: pl. 173 (Dave Stewart)	1
Black Stork <i>Ciconia nigra</i> , <i>Brit. Birds</i> 92: pl. 229 (Reston Kilgour)	1
Ancient Murrelet <i>Synthliboramphus antiquus</i> , <i>Pitches &amp; Cleeves</i> (2005): pls. 12/36 (Dave Atkinson)	-
Yellow-browed Bunting <i>Emberiza chrysophrys</i> , <i>Brit. Birds</i> 88: pl. 190 (Rob Wilson)	-
Great Knot <i>Calidris tenuirostris</i> , <i>Brit. Birds</i> 90: pl. 166 (Jim Pattinson)	-
Spanish Sparrow <i>Passer hispaniolensis</i> , <i>Brit. Birds</i> 90: pl. 191 (Iain Leach)	-
1999–2008	
Yellow-nosed Albatross <i>Thalassarche chlororhynchos</i> , <i>Brit. Birds</i> 100: pls. 215 & 216 (Paul Condon) (plate 270)	13
Gyr Falcon <i>Falco rusticolus</i> with Little Auk <i>Alle alle</i> , <i>Brit. Birds</i> 100: pl. 4 (Allister Irvine) (plate 269)	9
Red-billed Tropicbird <i>Phaethon aethereus</i> , <i>Brit. Birds</i> 95: pl. 282 (Roger Barnes)	5
Fea's Petrel <i>Pterodroma feae</i> , <i>Brit. Birds</i> 95: pls. 340 & 341 (Gary Bellingham)	2
Olive-tree Warbler <i>Hippolais olivetorum</i> , <i>Brit. Birds</i> 101: pls. 52–55 (Hugh Harrop)	1
Black Lark <i>Melanocorypha yeltoniensis</i> (various)	-
Long-billed Murrelet <i>Brachyramphus perdix</i> (various)	-

David Hunt



263. Common Nighthawk *Chordeiles minor*, St Agnes, Scilly, October 1971.

David Hunt



264. First-winter male Yellow-bellied Sapsucker *Sphyrapicus varius*, Tresco, Scilly, September 1975.

Dennis Courtts



265. Hawk Owl *Surnia ulula*, Frakkafield, near Lerwick, Shetland, September 1983.

attempted to vote on RR's shortlist. Healthy debate, most of it constructive, ensued by e-mail, the upshot of which was that we felt we had to acknowledge how many photographs of a particular bird there were. Few people would argue that the Anglesey Black Lark *Melanocorypha yeltoniensis* and the Devon Long-billed Murrelet *Brachyramphus perdix* were two of the birds of the decade, the first because it is one of those 'mythical' birds that everyone has always dreamed of seeing/finding, the second because it is such an improbable record. However, both birds were widely twitched and enjoyed by hundreds if not thousands of birders – and there were heaps of stunning photographs. How could we realistically choose the efforts of one photographer above the rest? In this decade at least, we decided that we could not, and instead voted on just the five birds that were effectively photographed by only one person. The fact that both Gary Bellingham and Hugh Harrop had already won the Carl Zeiss Award for their pictures of Fea's Petrel *Pterodroma feae* and Olive-tree Warbler *Hippolais olivetorum* respectively, plus the fact that we were looking at a broader set of criteria, helps to explain the placings. But it wasn't easy!

*The second round of voting*  
Having finally established our decade winners, we voted one more time to find our overall winner. The results are given in table 2.

*The winner*

The process of going back through 50 years' worth of rarity photographs unearthed some real gems and brought back some happy memories. The fantastic photograph of the Bass Rock Black-browed Albatross *Thalassarche melanophris*, taken in 1967 with lighthouse keeper Duncan Jordan looking on, was one that none of us had fully appreciated before: utterly charismatic and what a contrast to the modern-day scene. The Bottomleys' domination of the late 1960s/early 1970s rarities photographs is another point of interest of the early years, while the Isles of Scilly, and David Hunt in particular, were equally prominent in the 1970s as a whole. Yellow-bellied Sapsucker *Sphyrapicus varius* remains a bird that many people dream of connecting with in Britain.

In some ways the middle decade had the best selection of truly iconic birds: White-throated Needletail *Hirundapus caudacutus* and Hawk Owl *Surnia ulula* have more wow factor than most, Long-toed Stint remains one of the most sought-after of waders, and Aleutian Tern *Onychoprion aleuticus* would surely have been a shoo-in for the Carl Zeiss Award had it then been in existence. The fourth decade considered here had a collection of birds that few would have predicted, including Ancient Murrelet *Synthliboramphus antiquus*, Red-breasted Nuthatch *Sitta canadensis* and a supermarket special offer on American warblers, the Kent Golden-winged Warbler *Vermivora chrysoptera*. Paul Doherty's unbeatable story (finding the bird on the way to post a letter – how good is that?!), and photographs, of the last bird stand alongside the Pallas's Sandgrouse *Syrhaptes paradoxus* that spent a few days in Shetland, and which Larry Dalziel

**Table 2.** Decade winners.

Decade	Photograph	Score	Place
1959–68	Macqueen's Bustard, Eric Hosking	23	1st
1969–78	Yellow-bellied Sapsucker, David Hunt	7	5th
1979–88	White-throated Needletail, Pete Wheeler	12	4th
1989–98	Pallas's Sandgrouse, Larry Dalziel	18	2nd
1999–2008	Yellow-nosed Albatross, Paul Condon	15	3rd



Pete Wheeler

**266.** White-throated Needletail *Hirundapus caudacutus*, Hoy, Orkney, June 1988.



Paul Doherty

**267.** Golden-winged Warbler *Vermivora chrysoptera*, Larkfield, Kent, April 1989.

Larry Dalziel



268. Pallas's Sandgrouse *Syrrhaptes paradoxus*, Quendale, Shetland, May 1990.

Allister Irvine



269. First-winter Gyr Falcon *Falco rusticolus* with Little Auk *Alle alle*, sea area Fair Isle, west of Shetland, February 2005.

Paul Condon



270. Immature Yellow-nosed Albatross *Thalassarche chlororhynchos*, Manton, Lincolnshire, July 2007.

captured so memorably, as our top choices for that decade. And then for the last decade, when the rarities have become even less predictable, we have unbelievable images of unthinkable seabirds, together with an improbably dramatic image of a Gyr Falcon *Falco rusticolus* clutching a hapless Little Auk *Alle alle*.

In some ways, we regretted having to find a winner for the award this year, since everyone will have their own personal favourites. Nonetheless, that's what we set out to do. Perversely, given all of the advances in equipment that we discussed briefly at the start, we chose Eric Hosking's images of the Suffolk Macqueen's Bustard in 1962 as the ones by which to remember BBRC's first 50 years. None of the judging panel saw the 'Suffolk Houbara' (as it was then known) and very few of BB's readers in 2009 will remember it, yet we all know the photographs, we can all picture the bustard strutting about, the shot with a headlamp of a Rolls Royce (Eric's favoured mode of transport – he bought a 1936 Rolls in 1953, drove it for 20 years and then sold it for more than he bought it for!) in the foreground, the images of the early twitchers with their wooden tripods and improbable telescopes. Eric Hosking still had a fine camera but even so, bird photography was infinitely more challenging in the middle decades of the twentieth century than it is today.

Eric's three children, Margaret, Robin and David,



Eric Hosking

271. Macqueen's Bustard *Chlamydotis macqueenii*, Hinton, Suffolk, November/December 1962.

accepted this award on behalf of the Eric Hosking Trust and will be using the prize to further the aims of the Trust (to sponsor ornithological research through the media of writing, photography, painting or illustration). David commented that: 'I know my father would be very honoured by this award and most interested that of all the records of the last 50 years the bustard should be number one. The fact that the prize is a pair of Zeiss binoculars is most fitting as Eric had a long association with Zeiss and these pictures were taken with a Zeiss Contarex camera!' The story of the Suffolk Macqueen's Bustard *Chlamydotis macqueenii* was recounted in *BB* quite recently (Jobson & Small 2004) but we feel that it is worth repeating Eric Hosking's thoughts on the 'event' (see Appendix 1).

Roger Riddington, Colin Bradshaw, Adrian Pitches, Richard Porter and Andy Stoddart,  
c/o Spindrift, Eastshore, Virkie, Shetland ZE3 9JS

We hope that readers have enjoyed this short article and the pictures it contains. We accept that the analysis was subjective rather than scientific but we feel that our winner is a worthy one, and look forward to the coming years of rarity photographs immensely. What would you have chosen – and why?

#### Acknowledgments

Harry Scott kindly provided digital files of several of the photographs that were taken in Scotland.

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### Appendix I. Extract from *An Eye for a Bird* (Hosking 1970).

'The Houbara was feeding in a field of mustard, which the farmer had generously refrained from ploughing in while the bird was there. I met Bert [Axell, then Minsmere warden] and arranged for him to drive my car across the frozen field

while I attempted to photograph the bird from the car window, using a 400-mm Novoflex lens with the Contarex camera. Unfortunately the light was bad and it was raining, but the next day the weather had improved so we decided to

make another attempt. But it was a Sunday and news travels fast – no fewer than eighteen cars were parked by the edge of the field and hordes of bird-watchers with every possible size and shape of binocular and telescope were observing the bustard's every movement. Obviously photography was out of the question.

'We made another attempt on Monday. A hide was erected along the edge of the field most favoured by the bird and I was just about to go into it when a press photographer arrived from London. He hadn't a clue about bird photography and imagined he could just walk up, take his pictures and rush back to London. I could not convince him that he would get nothing with the apparatus he had unless he concealed himself in some way. But he was too old a hand to take any advice from an amateur like me and set off across the field. Before he got within 200 yards of the bird it leapt into the air and was away. Sheepishly he came back full of apologies, realising for the first time that he had spoilt my chances of photography as well as his own. As I had a spare hide with me, I suggested that this should be erected by the side of mine and that he should sit in it and keep absolutely quiet until the bird returned, not attempting to take any photographs until it was well within range of our cameras.

'I think he must have suffered from St Vitus's dance or something because there was hardly a moment when I could not hear him moving –

striking matches to light cigarettes (he was a chain-smoker), making the wooden box on which he sat creak, playing with his camera, etc. After about an hour I saw the Houbara alight by the far edge of the field and start to walk slowly in our direction.

'As so much noise was coming from the other hide I whispered: "The bird's coming."

"What did you say?" answered a loud voice.

"The bustard is approaching your hide, from the left," I replied.

"Where? I can't see it," he shouted.

"For goodness' sake keep quiet!"

'There were a few seconds of silence and by now the Houbara was within five yards of our hides but at such a sharp angle to me that I decided to wait until it came by the front of the hide. Not so my impatient friend. In trying to turn his camera lens round sufficiently to focus on the bird, the wooden box collapsed with a crash and the Houbara took off!

'The press photographer returned to London without getting a single picture and I was beginning to think that I would be equally unlucky. But as Bert and I drove along the narrow country lane we could hardly believe our eyes – there was the Houbara in the road walking steadily towards us! We pulled up. I focused the camera and fired the shutter when the bird came to within eighteen feet. The result was published in *The Sunday Times* on 16th December 1962.'

Eric Hosking



272. Bert Axell (right) and A. N. Other (perhaps the photographer described in Appendix 1?) discussing the 'Suffolk Houbara', Suffolk, November 1962.

## Rare birds in Britain – 50 golden years Birders vote for the ‘best rarity’ of the BBRC era

Adrian Pitches

Pallas's Sandgrouse *Syrhaptes paradoxus*? Wallcreeper *Tichodroma muraria*? Steller's Eider *Polysticta stelleri*? Siberian Ruby-throat *Luscinia calliope*? It's probably a debate that takes place whenever birders gather together, but it's never been put to the vote – until now. To celebrate 50 years of the British Birds Rarities Committee, birders were asked to vote for THE rarity event of the BBRC era. The rare-bird roll-call from 1959 to the present day is long and illustrious, and any shortlist will be highly subjective. But, in an attempt to distil the major highlights of the last 50 years, and with no little difficulty, a shortlist of 30 was put together, featuring a range of species and events from right across the period. There are birds here that could not fail to excite anyone with an interest in rarities. And then, in collaboration with BirdGuides [www.birdguides.com](http://www.birdguides.com), an online poll was carried out; birders cast their votes in February and March 2009 and this entirely non-scientific analysis reports on the findings.

Some of these birds sparked a mass twitch, some of them were enjoyed by a privileged few but all of them are – or were – on birders' 'Most Wanted' lists. None more so than the first one. In December 1959, a first-winter male Dusky Thrush *Turdus eunomus* took up residence on Hartlepool Headland, in what was then Co. Durham, and stayed for an incredible ten weeks. In 2009, British birders travelled to Belgium to see a Dusky Thrush as the wait for another twitchable British bird continues. The 1960s were not even swinging before the next big bird landed on our list. And it *was* a big bird! The Suffolk 'Houbara' (Macqueen's Bustard *Chlamydotis macqueenii*) that strolled around the Minsmere area in November–December 1962 was famously photographed by Eric Hosking through his car window (see plates 261 & 271). The following year, a 'first for Britain' arrived just before Christmas – and stayed for another five years. The Pied-billed Grebe *Podilymbus podiceps* found at Blagdon Lake in

Avon (then Somerset) in December 1963 subsequently moved to nearby Chew Valley Lake and was last seen in July 1968. It overlapped with one of the most improbable rarities of that, or any, era. The famous Brown Thrasher *Toxostoma rufum* that arrived in Dorset in the November of World Cup year, 1966, was to be found skulking near – or even in – the public toilets on Durlston Head until February 1967. In 1968 there was a true 'rarity event', a nationwide spectacle that would be warmly welcomed if it was repeated 40 years later. The Nutcracker *Nucifraga caryocatactes* invasion started in August, with the first birds making landfall in Norfolk and Suffolk. In the following months, more than 200 birds were logged, right across the country, from Shetland to Cornwall. Since that unprecedented arrival, only one or two others have straggled across the North Sea.

The 1970s are often (unfairly) maligned on music and fashion grounds, but in birding terms this decade was Solid Gold Easy Action! In 1972, 'Albert' the lonesome Black-browed Albatross *Thalassarche melanophris* took up residence on the northernmost tip of Britain, at Hermaness on Unst, Shetland. The bird returned every year until 1995 and was probably the bird that summered on the Bass Rock, in the Firth of Forth, from 1967 to 1969 (see plate 262). And, if it was also the bird that spent the summers of 2005/06/07 on Sula Sgeir, in the Outer Hebrides, then his stay in British waters spanned 40 years! Another 'mega' that started his long stay in 1972 was the male Steller's Eider that inhabited the waters around Vorrán Island off South Uist, Outer Hebrides, until 1984. Amazingly, another male summered on Papa Westray, Orkney, from 1974 to 1982!

One of THE vintage years in the past half-century was 1975. Incredible birds arrived in Britain that autumn from both the east and the west, two of which made the Top 30, one from America and one from Siberia. It was the late David Hunt, the 'Scilly Birdman', who found a

woodpecker drilling holes in trees on Treco that September. It was Britain's first (and only) Yellow-bellied Sapsucker *Sphyrapicus varius* and it stayed until October, by which time the 'Sibes' were arriving. Among them was another 'first', and a long-awaited one at that: a Siberian Ruby-throat, on Fair Isle. It was more than 20 years before another one turned up (in Dorset in 1997) but Shetland and Sunderland (!) have recorded every other one.

The mid 1970s was a purple patch for Fair Isle, with Tennessee Warbler *Vermivora peregrina*, American Kestrel *Falco sparverius*, Hermit Thrush *Catharus guttatus* and Bimaculated Lark *Melanocorypha bimaculata* among a crop of wonderful birds. But it was the unlikely setting of inland Somerset that attracted one of the most desirable birds of the past 50 years: a Wallcreeper overwintered in Cheddar Gorge in 1976/77 – and again in 1977/78. The 1970s cheese-marketing campaign had it just right: Cheddar Gorgeous!

Both 1981 and 1982 were astonishing years for rare birds, with an incredible nine firsts for Britain in each year. The difficulty of whittling down the candidates to come up with a Top 30 was underlined, but the aim was to choose the rare-bird events that linger long in the memory of those who were there (and those who weren't!). The spring of 1982 was particularly warm and overshooting Mediterranean vagrants included a male Marmora's Warbler *Sylvia sarda* that took up residence on a moor in South Yorkshire and song-flighted over the heather from May until July. On Scilly that October there was a 10th for Britain – and an 8th for Scilly –

but this Common Nighthawk *Chordeiles minor* was 'The One'. It stayed for two weeks and performed much-appreciated fly-pasts around St Agnes lighthouse. Attention switched to the Cornish mainland in November when a strange, grey-and-white thrush arrived in the Nanquidno valley. It didn't seem to match any bird in the book, until you painted it chocolate-brown and orange: it was a rare variant of Varied Thrush *Ixoreus naevius* from western North America. The Top 30 bird from 1983 was much-needed by many (and still is), stayed for three weeks at a bird observatory and was seen by just a handful of people: the infamous Spurn Tengmalm's Owl *Aegolius funereus*.

The Scilly season in 1987 secured no fewer than three firsts for Britain. Very few folk saw the Wood Thrush *Hylocichla mustelina* and Eastern Bonelli's Warbler *Phylloscopus orientalis* but many hundreds more made the boat trip to Treco for the Philadelphia Vireo *Vireo philadelphicus*. There have been Irish birds before and since but this remains Britain's only record. 'From Treco to Tesco', to quote the finder, Paul Doherty (*Brit. Birds* 85: 595–600), 20 years after the event, the Golden-winged Warbler *Vermivora chrysoptera* in Kent from January to April 1989 remains THE mass participation/mass hysteria twitch with thousands of participants. That year secured two other nominations in the Top 30 (and they're not the Teesside Double-crested Cormorant *Phalacrocorax auritus* nor the East Yorkshire Blue-cheeked Bee-eater *Merops persicus*). In July 1989, two mysterious dark-rumped petrels were mist-netted at Tynemouth, Tyne & Wear.

The following summer another was trapped – and that individual was retrapped no fewer than seven times between 1991 and 1994. DNA analysis confirmed these birds to be Swinhoe's Storm-petrels *Oceanodroma monorhis* from the northern Pacific: a quite staggering series of records. And in October 1989, while Britain's finest were steaming over to Scilly, an American vagrant was blowing its own trumpet... in Norfolk.



David Cottridge

273. Golden-winged Warbler *Vermivora chrysoptera*, Larkfield, Kent, February 1989.

The Red-breasted Nuthatch *Sitta canadensis* that set up camp in Holkham Pines stayed until May 1990.

The 1990s started with a bang. On four different offshore islands on the same day in late May there were four extraordinary birds. Skokholm's White-throated Robin *Irania gutturalis* was inaccessible and the Isle of Wight's Alpine Accentor *Prunella collaris* was relegated to an also-ran because the main events were a long-staying Pallas's Sandgrouse *Syrhaptes paradoxus* on



David Tipling

274. Red-breasted Nuthatch *Sitta canadensis*, Holkham, Norfolk, January 1990.

Shetland and a newly arrived Ancient Murrelet *Synthliboramphus antiquus* on Lundy. There have been hundreds of Pallas's Sandgrouse in historical times but the 1990 bird was the modern era's Holy Grail. The Lundy murrelet was totally unexpected but joined a growing list of Pacific seabirds (among them Aleutian Tern *Onychoprion aleuticus* and Elegant Tern *Sterna elegans*) to have reached Britain & Ireland. It lingered long enough for boatloads of birders to make the trip across from the Devon coast, and reappeared in the two subsequent summers.

It took the better part of a decade for another birding blitz to match May 1990 but there were plenty of good birds during the 1990s. Many would rank the Red-flanked Bluetail *Tarsiger cyanurus* at Winspit, Dorset in October 1993 as their bird of the decade. But for urban birders perhaps their favourite came in February 1996 with a Cedar Waxwing *Bombycilla cedrorum*, skilfully identified among the hundreds of Waxwings in the centre of Nottingham. Still courting controversy more than ten years after the event is the Slender-billed Curlew *Numenius tenuirostris* at Druridge Bay in Northumberland in May 1998. It's one of the most recent, validated, records of this Critically Endangered species and it faced a four-year scrutiny period by BBRC before being accepted onto the British List by BOURC in 2002. And then the 1990s ended with a flourish to match their beginning. October 1999 on Scilly was a purple patch that saw Siberian Thrush *Zoothera sibirica*, White's Thrush *Z. dauma* and Blue Rock Thrush

*Monticola solitarius* eclipsed by a young Short-toed Eagle *Circaetus gallicus* drifting over the islands.

How has twenty-first century birding measured up? Well, the final five nominations in the Top 30 all came from the past six years and all of them were rare-bird events that will live long in the memory. 'Mega alerts' don't come any better than 'Black Lark on Anglesey' and the obliging male Black Lark *Melanocorypha yeltoniensis* that stayed for a week at South Stack in June 2003 became Bird of the Century for many. It later emerged that another had been recorded at Spurn in 1984 (and a third was in Norfolk in 2008). But it was even further back, in 1979/80, that the last Belted Kingfisher *Megaceryle alcyon* graced these shores, a long-stayer in Cornwall. Surely a repeat was overdue? But on April 1st? Pull the other one! However, the 2005 bird was pukka and it led birders on a merry dance from Staffordshire to East Yorkshire to North-east Scotland over the course of a week.

What other jokers could there be in the birding pack? Well, how about *another* Pacific alcid in Devon? The Long-billed Murrelet *Brachyramphus perdix* in November 2006 was yet another incredible seabird from the northern Pacific although, surprisingly, not even a first for Europe, following one in landlocked Switzerland in 1997. Nevertheless, the Dawlish bird was very much appreciated by British twitchers, and completes a double whammy of Devon murrelets for the shortlist. And then there was an inland Pacific Diver *Gavia pacifica*, happily

Nigel Blake



275. Black Lark *Melanocorypha yeltoniensis*, South Stack, Anglesey, June 2003.

Table 1. The Top 30 Rarity Events, 1959–2008.

Year	The event	Votes (%)
1959/60	Dusky Thrush in Co. Durham	31 (0.4%)
1962	Macqueen's Bustard in Suffolk	248 (3.5%)
1963–68	Pied-billed Grebe in Avon	18 (0.3%)
1966/67	Brown Thrasher in Dorset	73 (1.0%)
1968	Nutcracker invasion	106 (1.5%)
1972–95	Black-browed Albatross on Shetland	107 (1.5%)
1972–84	Steller's Eider on South Uist	57 (0.8%)
1975	Yellow-bellied Sapsucker on Scilly	119 (1.7%)
1975	Siberian Rubythroat on Fair Isle	55 (0.8%)
1976/77 & 77/78	Wallcreeper in Somerset	165 (2.4%)
1982	Marmora's Warbler in Yorkshire	123 (1.8%)
1982	Common Nighthawk on Scilly	36 (0.5%)
1982	Varied Thrush in Cornwall	145 (2.1%)
1983	Tengmalm's Owl in Yorkshire	74 (1.1%)
1987	Philadelphia Vireo on Scilly	117 (1.7%)
1989	Golden-winged Warbler in Kent	722 (10.3%)
1989–94	Swinhoe's Storm-petrels in Northumberland	304 (4.4%)
1989/90	Red-breasted Nuthatch in Norfolk	694 (9.9%)
1990	Pallas's Sandgrouse on Shetland	131 (1.9%)
1990–92	Ancient Murrelet in Devon	286 (4.1%)
1993	Red-flanked Bluetail in Dorset	151 (2.2%)
1996	Cedar Waxwing in Nottinghamshire	195 (2.8%)
1998	Slender-billed Curlew in Northumberland	885 (12.7%)
1999	Short-toed Eagle on Scilly	131 (1.9%)
2003	Black Lark on Anglesey	358 (5.1%)
2005	Belted Kingfisher in Staffordshire/Yorkshire/ North-east Scotland	885 (12.7%)
2006	Long-billed Murrelet in Devon	345 (4.9%)
2007	Pacific Diver in Yorkshire	109 (1.6%)
2007	Yellow-nosed Albatross in Somerset	138 (2.0%)
2008	White-crowned Sparrow in Norfolk	180 (2.6%)

cruising around a North Yorkshire gravel-pit in January 2007. At least that bird was mass-twitted. Better than that was Somerset's infamous Yellow-nosed Albatross *Thalassarche chlororhynchos* in June 2007. Having crash-landed at Brean, it was photographed and released to continue its journey up the Severn – and then cross-country via a fishing lake in Lincolnshire (photographed again) out to the North Sea. And not a single birder caught up with it! Our final nominee was much more obliging. The White-crowned Sparrow *Zonotrichia leucophrys* that came to stay in Cley, Norfolk, in January 2008 hung around until March and helped to raise a staggering £6,400 for the village church restoration fund. In total, 6,988 votes were cast in the poll, and the results are shown in table 1.

With nearly 7,000 votes cast in the spring of 2009, a clear Top 10 emerged. Just squeezing out the Cley White-crowned Sparrow at no. 10 was the Cedar Waxwing in Nottingham in February 1996. It listed the local Tory MP, and then occupant of No. 11 (Downing Street), Ken Clarke, among its many admirers (although it's not clear if he voted for it in this poll). At no. 9 was that charismatic Macqueen's Bustard, the 'Suffolk

Houbara'. Three mind-blowing Pacific seabirds followed, with the Lundy Ancient Murrelet at no. 8, the Swinhoe's Storm-petrels at no. 7 and the second Devon alcid, the Long-billed Murrelet, at no. 6.

At no. 5, the Anglesey Black Lark was perhaps THE most wanted Palearctic passerine, landing on a Welsh clifftop – and so many birders' lists – in June 2003. However, two more passerines attracted even more votes than Black Lark and at no. 4 was the long-staying, often infuriatingly elusive, Red-breasted Nuthatch at Holkham: the only decent American passerine that autumn and on the east coast! The bird that took bronze was golden in every other respect. Another east-coast American, the Golden-winged Warbler discovered in Kent in January 1989 was another long-stayer and truly a bird that was an 'event' as well.

And then, in a remarkable dead heat for top spot, with 885 votes apiece, were two undeniably top birds. The first-summer Slender-billed



Gary Thoburn

276. Long-billed Murrelet *Brachyramphus perdix*, Devon, November 2006.

Curlew at Druridge Bay stayed for four days but took four years to be accepted (*Brit. Birds* 95: 272–278). More than a decade after the sighting, it remains a controversial addition to the British List. This was one of the last accepted sightings of Slender-billed Curlew and this Critically Endangered species is now the subject of an intensive international search for the last surviving individuals. The curlew shares top spot with the 2005 Belted Kingfisher, an April Fool's Day 'mega' that, when it finally settled near Aberdeen, made a lot of birders very happy. It had been a long wait since the Cornish bird



Tim Loseby

277. The scene in Larkfield on the first Saturday of the Golden-winged Warbler *Vermivora chrysoptera* twitch. Still the biggest-ever 'rarity event' in Britain in terms of human participation? Some birders travelled one stop on the double-decker bus in order to get a better view of the gardens where the bird was from the top deck!

Steve Young/Birdwatch



278. Belted Kingfisher *Megascops alcyon*, North-east Scotland, April 2005.

in 1979/80. And many of those who saw it must have voted for it!

This article is intended to be a light-hearted review of some of the highlights of the BBRC era. The very antithesis of rigorous scientific research it may have been, but an online poll that engaged the interest of Britain's keenest birders and reminded them of the continuing relevance of BBRC in the internet age seemed an appropriate celebration of BBRC's 50th. Even so, the results themselves make for interesting reading. Inevitably, voters are more likely to choose something they either saw or at least remember from their own rarity-hunting past. This explains the prevalence of post-1990 records in the top ten, and it is a tribute to the Golden-winged Warbler, the Red-breasted

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Nuthatch and, especially, the Suffolk Houbara that they made the top ten. If the voting had taken place in 1999, it seems likely that the Golden-winged Warbler would have won – and 25 years ago, surely the Suffolk Houbara and all those stunners from the seventies would have featured more prominently.

Despite the ongoing debate about the Northumberland Slender-billed Curlew, it is fascinating that birders clearly regard it as a rarity event

of such mammoth proportions. It stands out as the most significant record BBRC has ever assessed. While all the species dealt with by the Committee are rarities in a UK context, this species may be on the verge of extinction and the first-summer bird at Druridge Bay may yet prove to be the most important bird sighting in Britain since the last Great Auk *Pinguinus impennis* was killed on St Kilda in around 1840. It has reinvigorated the search for the last remaining Slender-billed Curlews in the world and that urgent quest will be supported by this month's British Birdwatching Fair, the theme of which is *Lost and Found*.

#### Acknowledgment

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Ian Lewington



Fig. 1. The Druridge Bay curlew.

# Conservation research news

Compiled by Elisabeth Charman, Rowena Langston  
and Juliet Vickery



## Pacific endurance test

A recent study by Gill *et al.* (2008) has shown how satellite telemetry was used to track the migratory flights of Bar-tailed Godwits *Limosa lapponica baueri* between their breeding grounds in western Alaska and their non-breeding destinations in New Zealand. Previous studies of colour-ringed godwits indicated that they might fly non-stop across the Pacific Ocean and developments in satellite telemetry have now enabled this hypothesis to be tested. Two types of transmitters were deployed: a 26-g battery-powered model was surgically implanted in the coelomic cavity of female godwits and a 10.5-g solar-powered model was fitted externally, by means of a leg-loop harness, to male godwits. Only the external transmitters were suitable for male godwits, which are smaller than females.

The results were truly astonishing. Seven females flew non-stop for between 8,117 and 11,680 km across the Pacific Ocean, taking 6.0–9.4 days. One of these birds flew directly to her New Zealand non-breeding grounds, a distance of 11,680 km, in just 8.1 days. Two males with external transmitters flew in the same direction for 7,008–7,390 km, taking 5.0–6.6 days to do so, before their transmitters stopped functioning. These extraordinary feats

of avian flight endurance set new records, not least in long-distance transit across a major ocean, formerly considered a prominent ecological barrier.

The authors discuss the energetic costs and benefits of a single, long-haul flight compared with shorter flights between stopovers, and conclude that the single transoceanic flight probably minimises overall migration time and total energy cost. Stopovers require diversionary flights and the birds would need to rely on finding high-quality feeding conditions for refuelling. Prior to their southbound migration, the godwits congregate to feed on the intertidal areas of the Yukon-Kuskokwim Delta, among the richest in the world in terms of biomass. This location also has relatively few avian predators, conferring a further advantage to the godwits. In addition, physiological changes, including atrophy of the digestive tract, would require reversal for refuelling.

Gill, R. E., Jr, Tibbitts, T. L., Douglas, D. C., Handel, C. M., Mulcahy, D. M., Gottschalck, J. C., Warnock, N., McCaffery, B. J., Battley, P. F., & Piersma, T. 2008. Extreme endurance flights by landbirds crossing the Pacific Ocean: ecological corridor rather than barrier? *Proc. Roy. Soc. B* doi:10.1098/rspb.2008.1142 Published online.

## An indicator for the effects of climate change on birds

The possible impact of climate change on wildlife is one of the major issues facing conservation scientists today, from measuring and understanding the nature and scale of these impacts, to developing measures to mitigate them. A consortium of European scientists has recently developed a new indicator of the impact

of climate on European bird populations (Gregory *et al.* 2009). Models have already been developed predicting changes in the range of a suite of breeding birds in relation to climatic warming. These so-called 'climate envelope models' predict that climate change will result in an increased geographical range for some species

and a decrease for others. Combining the output from these models with data on long-term population trends for over 120 common breeding birds across Europe shows that, as might be expected, the population trends of those species predicted to lose range have seen a general decline between 1980 and 2005, while the opposite is true for those species predicted to expand their range. The greater the impact of climate change, the greater the increase or decrease in populations of birds in these two groups. The 'gap' between the two diverging trends (i.e. increasing and decreasing species) therefore provides a simple measure of the impact of climate change. The

wider the gap, the higher the value of the index and the greater impact (positive and negative) of climate on birds. This 'Climate Impact Indicator' shows a strong increase over the past 20 years, coinciding with a period of rapid warming, and suggests that climate change is already having a detectable, and largely negative, effect on common bird populations at a European scale.

Gregory, R. D., Willis, S. G., Jiguet, F., Voříšek, P., Klvaňová, A., van Strien, A., Huntley, B., Collingham, Y. C., Couvet, D., & Green, R. E. 2009. An Indicator of the Impact of Climatic Change on European Bird Populations. *PLoS ONE* 4(3): e4678. doi:10.1371/journal.pone.0004678 Published online.

## Challenges in the conservation of long-distance migrants

The decline of long-distance migrants in the UK has been widely reported and is of considerable conservation concern. However, the root cause of the problem, and potential solutions, remain elusive, partly because there could be factors operating at any or all of the stages in a species' yearly cycle: on the breeding grounds, on the wintering grounds and/or during migration.

A recent study (Goodenough *et al.* 2009) used 15 years of nestbox data collected from Nagshead RSPB reserve, in Gloucestershire, to examine causes of Pied Flycatcher *Ficedula hypoleuca* population decline. The breeding population of Pied Flycatchers at Nagshead declined by 73.3% between 1990 and 2004. During the same period, breeding success and the proportion of fledglings per brood also decreased, while clutch size, the number hatched and the proportion hatched per clutch remained stable.

In accordance with previous research, there was a positive relationship between the population size at Nagshead in any one year and the mean number of young fledged per brood in the previous year. In addition, this study was also able to link the winter North Atlantic Oscillation (NAO) index to breeding population size, and found that there was a higher breeding population in years following a winter when the NAO index was low. Such winters are associated with high rainfall in the Sahel region and in southern Europe, which results in more vegetation and generally higher insect abundance, which in turn are assumed to contribute to increased overwinter and

migratory survival.

These two factors were clear, strong predictors of population size; however, there was still unexplained variation in year-to-year population levels at Nagshead. This suggests that other factors, operating on the breeding grounds, during migration or on the wintering grounds, also affect the population. One hypothesis that could not be tested in this study is that Pied Flycatcher prey abundance has fallen or that there is an increasing lack of synchrony between birds and food supplies (see *Brit. Birds* 102: 348).

The implication of results such as these is that factors causing migrant declines cannot always be addressed solely in the UK and this presents a huge challenge for conservation. However, even if the causes of population declines are rooted on the wintering grounds or along migration routes, improving conditions on the breeding grounds in order to increase productivity may help to buffer a species' decline. In the case of the Pied Flycatcher, this may be achieved through habitat management to maintain abundance and diversity of prey host plants, the maintenance of sufficient dead wood for nest holes or, where necessary, the provision of nestboxes.

Goodenough, A. E., Elliot, S. L., & Hart, A. G. 2009. The challenges of conservation for declining migrants: are reserve-based initiatives during the breeding season appropriate for the Pied Flycatcher *Ficedula hypoleuca*? *Ibis* DOI:10.1111/j.1474-919X.2009.00917.x Published online.

## Common Chiffchaffs on the Greek island of Lesvos

On 16th May 2007, in an area of Sweet Chestnut *Castanea sativa* forest at an altitude of c. 600 m below Mount Olympus, the highest deciduous woodland on the Greek island of Lesvos, I found three counter-singing male Common Chiffchaffs *Phylloscopus collybita*. The species may breed sporadically in the area (Brooks 1998), although otherwise it is described in *BWP* as breeding in Greece only in the northern mainland mountains bordering Albania, Macedonia and Bulgaria, where there are several hundred pairs of *P. c. collybita* (hereafter 'collybita').

To my ear, it was immediately obvious that these birds' songs were dissimilar to those of both *P. c. abietinus* (or at least to birds of that race breeding in Finland, where I have heard them) and *collybita*, and I recorded details as follows.

### Song

The birds were in almost constant song within earshot of each other over an extended period, and so were assumed to be exhibiting their normal song. The song phrase was short and fast; the first half to two-thirds of the song consisted of repetitions of the same 'chip' or 'chik' note, this then giving way to a 'grumpy' descending series of 'chook'-type notes. Some songs were preceded by quiet 'chup' or 'chup-up' notes, distinctly different from the 'tret tret' introductory notes of *collybita*.

### Call

An accompanying bird, presumably a female, was heard several times to utter a slightly descending 'psee' note, its timbre close to the call of a Dunnock *Prunella modularis* and quite close to the typical contact call of *tristis*.

### Plumage

Obviously different from *collybita*, being browner and less olive on the upperparts, and paler on the underparts, with some diffuse brown on the flanks. The supercilium was conspicuous, rather long and narrow, and

creamy-coloured. The birds' plumage seemed to be within the range of variation of *abietinus* and hinted at some of the features of Mountain Chiffchaff *P. sindianus lorenzii*.

On purely geographical grounds, it would be expected that chiffchaffs breeding on Lesvos would be of the form *P. c. brevirostris*, described by Kirwan *et al.* (2008) as endemic to Turkey. That form is not, however, universally accepted as a valid race in its own right, while there is debate over its appearance and variability. Roselaar (1995) speculated that it might not prove separable from *collybita*, while Watson (1962) suggested that it may represent an intermediate form between *abietinus* and *lorenzii* (and Lars Svensson, in Dubois & Duquet 2008, suggested that *brevirostris* is a subtle and questionable form of *abietinus*).

The fact that the Lesvos birds described here were so obviously different from *collybita* in appearance, and had an unfamiliar song that might be best described as an 'unusual' *collybita/abietinus* song raises questions as to exactly what these birds are. Birds described as *brevirostris* remain among the most poorly known of the chiffchaff group but, since *brevirostris*-type birds are being reported breeding in other parts of the region (e.g. Syria – see Dubois & Duquet 2008), there may be increasing opportunities to get to grips with this enigmatic form. In particular, recordings of song and photographs of any birds apparently breeding in suitable montane habitat on Lesvos or elsewhere in the region would be of interest.

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# Notes

All Notes submitted to *British Birds* are subject to independent review, either by the Notes Panel or by the BB Editorial Board. Those considered appropriate for BB will be published either here or on our website ([www.britishtobirds.co.uk](http://www.britishtobirds.co.uk)) subject to the availability of space.

## Two male Hen Harriers attending nests in Dumfries & Galloway

In view of Tim O'Donoghue's note (*Brit. Birds* 101: 262), the following observations, in which I recorded two male Hen Harriers *Circus cyaneus* attending nests where only one female had laid, may be of interest. This seems to be not infrequent in Dumfries & Galloway in years when females are scarce in the local population (Dickson 2007). In each of the four examples listed here (table 1), the two males involved were easily identified since one was a brown (2CY) individual.

In all four years, both males were recorded delivering food items to the female. In 1976 the grey male copulated with the female after delivering prey on 12th May (in none of the examples described here was the brown male seen to copulate with the female) and, on 1st June that year, both males were observed chasing

R. C. Dickson

Lismore, New Luce, Newton Stewart, Dumfries & Galloway DG8 0AJ

**Table 1.** Instances in which two different male Hen Harriers *Circus cyaneus* attended a nest, Dumfries & Galloway, 1976–1998.

Year	Clutch size	Brood size	Results
1976	4	–	Probably robbed by Great Black-backed Gull
1978	6	6	Four young fledged
1979	3	1	One subsequently recovered in Athlone, Co. Westmeath
1998	–	–	Did not breed

a Great Black-backed Gull *Larus marinus* from the breeding area.

### Reference

Dickson, R. C. 2007. Hen Harriers' bowing behaviour and cocks' nests. *Scottish Birds* 27: 69–71.

## Snow-burrowing by Robin

On 7th February 2009, in my snow-covered garden in West Bagborough, Somerset, I was watching three Robins *Erithacus rubecula* feeding on scattered oatflakes. There had been a snowfall of c. 30 cm two days previously, and some of the snow was melting that afternoon. The Robins were chasing and fighting each other to get at the oats when suddenly one of them started to burrow obliquely into the soft snow, excavating a 'tunnel' by head-first buffeting. The bird became quite lost to view, remaining so until it emerged about a minute later. Presum-

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ably it had been seeking food at ground level. A few minutes later, the same bird burrowed again in a different spot nearby. It was disturbed by two Blackbirds *Turdus merula* from the second tunnel, but I measured the first at c. 17.5 cm. This behaviour does not seem to have been recorded previously, although Lack (1943) mentioned plunging into water to take small fish.

### Reference

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## Evidence of interspecific egg-dumping between tit species

Egg-dumping, the laying of fertile eggs in another bird's nest, is a well-known phenomenon among nest parasites such as cuckoos (Cuculidae) and cowbirds *Molothrus*. Much less well recorded is the dumping of eggs by individuals of the same species (intraspecific

egg-dumping) and egg-dumping between different non-parasitic species (interspecific egg-dumping), as these behaviours have to be proven by molecular genetic techniques or detailed nest monitoring. This note describes evidence of interspecific egg-dumping involving

Blue *Cyanistes caeruleus* and Willow Tits *Poecile montana*.

As part of an RSPB study into the decline of the Willow Tit, I have been studying this species in Dumfries & Galloway. A territorial pair in an area of damp woodland dominated by birch *Betula* and willow *Salix* was seen excavating a cavity 6 m up in a dying willow tree on 21st April 2008. Visits were made every few days to monitor nesting activity; owing to the height and fragility of the nest-site, no attempts were made to determine the nest contents.

The eggs hatched between 20th and 22nd May, when adults were first recorded at the nest cavity with food. Six provisioning watches, each of 30 minutes' duration, were carried out between 22nd May and 6th June, and the chicks fledged sometime between 16.00 hrs on 6th June and 11.00 hrs on 7th.

During the final provisioning watch on 6th June, both adults were seen to provision at least three Willow Tit nestlings aged approximately 17 days old. The nestlings were seen together at the cavity and at least one left the cavity to wing-stretch before returning to the nest. On one occasion when an adult returned to the nest, a different nestling call was heard and then a nestling Blue Tit poked its head out of the cavity to be fed by the adult Willow Tit. This occurred twice more during the 30-minute watch. The

*Derek J. Gruar*

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nest was revisited later in the day to confirm this behaviour. Again, the adult Willow Tits fed the nestling Blue Tit twice in 30 minutes.

On 7th June, accompanied by Jimmy Maxwell and Lang Stewart, who have studied Willow Tits in Lanarkshire for a number of years, we were able to locate the fledged young at the site. We witnessed a fledgling Blue Tit being fed repeatedly by an adult Willow Tit, from a distance of 5 m (we believe that this was the male, which possessed distinctive white patches in its crown, and which provisioned the female during incubation). The three Willow Tit fledglings were seen with the other adult c. 50–100 m from where the Blue Tit was being fed.

We assume that at some point there must have been a territorial battle between the occupying Willow Tit pair and a pair of Blue Tits. Such behaviour has been well documented from many studies (including that in Lanarkshire) where Willow Tits have been ousted from nest-sites by other tit species. No Willow Tits were ousted by other species from the 14 nests monitored during this project, though territorial battles between Willow and Blue Tits were observed at some nest-sites. I have yet to find any published evidence that egg-dumping has occurred between the two species.

## *Magpie taking adult Common Swift*

On 30th June 2008, at Crégols, Lot, France, I was looking at the end elevation of the church where Common Swifts *Apus apus* were nesting in joints between the masonry where the mortar was missing; some adults were clinging to the face of the stonework. As I watched, a Magpie *Pica pica* flew in from the roof of an adjacent house,

*Harold A. Lilley*

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plucked an adult Swift from the wall and flew down to the path below. The two were hidden from my view but I ran to see what was in progress. The Magpie was standing over the Swift but I surprised the bird and it flew off, followed soon after by the Common Swift taking to the air as well.

**EDITORIAL COMMENT** A note describing a Magpie attacking and killing a Common Swift has been published before in *BB* (*Brit. Birds* 71: 362), but the modus operandi was somewhat different in this case, with the Magpie taking the Swift from a wall, rather than attacking it in flight.

# Reviews

## BIRDS OF THE HORN OF AFRICA

By Nigel Redman, Terry Stevenson and John Fanshawe. Christopher Helm, A&C Black, London, 2009. 496 pages; many colour illustrations. ISBN 978-0-7136-6541-3. Paperback, £29.99.

'A riddle wrapped in a mystery inside an enigma' was Winston Churchill's famous observation of Russia, but he could equally have been describing the birdlife of the Horn of Africa. Within this region live some of the most mysterious and enigmatic birds in Africa. Southern Ethiopia alone is home to such fabled endemics as Stresemann's Bush Crow *Zavattariornis stresemanni*, Prince Ruspoli's Turaco *Tauraco ruspolii* and White-tailed Swallow *Hirundo megaensis* – and Sidamo Lark *Heteromirafra sidamoensis*, recently upgraded to 'Critically Endangered' and the first mainland African species at genuine risk of extinction. And then there are birds beyond mystery and enigma, verging on the mythological: the as-yet undescribed 'cliff swallow' *Petrochelidon* sp. seen several times in the past 20 years and Nechisar Nightjar *Caprimulgus solala*, known only from a single wing until May 2009 when it was reportedly observed in the field for the first time (see p. 474). Perhaps surprisingly, the Horn of Africa has one of the highest concentrations of endemics in Africa, despite the lack of rainforest in this largely arid region, and the authors recognise 51 species endemic to the region (with a further 10 restricted to Socotra).

This is the very first field guide to northeast Africa (Ethiopia, Eritrea, Djibouti, Somalia and Socotra), a fascinating region where the avifaunas of Africa and the Middle East meet. However, it closely resembles *The Birds of East Africa* (Stevenson & Fanshawe 2002), with which it shares 70% of the plates

(20% are new, painted by John Gale and Brian Small, and 10% revised to illustrate regional forms).

The introductory sections include a helpful overview of geography, climate and habitats, a map and gazetteer of the 136 Important Bird Areas (IBAs) in the region, and a glossary of terminology. The field guide is laid out with text and distribution maps facing the plates. The concise text combines key identification pointers, habitat and habits, status and abundance, with the last aimed very much at visiting birders, for example 'uncommon – can easily be missed during a short visit'. The distribution maps have benefited from pioneering atlas work in Somalia, Ethiopia and Eritrea by John Ash, John Miskell and their colleagues and may be some of the most accurate in Africa; they are small but remarkably detailed.

But it is the plates by which all field guides are judged, and John Gale and Brian Small have delivered some of the finest illustrations to be found in any African field guide. I was fortunate to have pre-publication proofs for a trip to Ethiopia in November 2008 and the accuracy of the plates enabled confident identification of virtually every bird encountered. A direct comparison with the hefty *Birds of Africa South of the Sahara* (Sinclair & Ryan 2003), the only other guide that covers this region, clearly demonstrated the superiority of the plates in Redman *et al.*, particularly when it came to the (many) subtle or difficult groups: raptors, gamebirds, bustards (Otididae), larks (Alaudidae), cisticolas are all illustrated to near-perfection. The plates, besides admirably serving their purpose as tools for identification, are aesthetically pleasing in their own right.

In terms of taxonomy, Redman *et al.* have persisted with the Voous order, and they are to be commended for that. Most modern birders have been brought up on Voous and, as the authors state, the aim of

a field guide is to allow its users to find the key page quickly! This guide also errs on the side of taxonomic conservatism with its approach to species boundaries, taking its cue from the African Bird Club [www.africanbirdclub.org](http://www.africanbirdclub.org) checklist, which itself closely follows *The Birds of Africa* (Fry *et al.*, 1982–2004). This is another point to distinguish this guide from Sinclair & Ryan, which is far more liberal in its 'splits'. Redman *et al.* do, however, recognise 27 species that are still regarded merely as races in the February 2009 version of the ABC checklist, including Heuglin's Gull *Larus (fuscus) heuglini*, African Stonechat *Saxicola (torquatus) torquatus* and Siberian Stonechat *S. (t.) manra*, although not the very distinctive black-and-white *albofasciatus* race of African Stonechat found in the Ethiopian Highlands. To underline how up to date the text is, two significant taxonomic updates are included despite being published just before the guide went to press. Bulu Burti Bush-shrike is now regarded as a colour morph of Erlanger's Bush-shrike *Laniarius erlangeri*, one of three new bush-shrike species formerly considered races of Tropical Boubou *L. major*, and Degodi Lark '*Mirafra degodiensis*' of southeast Ethiopia is now regarded as synonymous with the widespread Gillett's Lark *M. gilletti*.

In the introduction, the authors say of the guide: 'Covering every species ever recorded in the five territories included in the book, [our] primary aim... is to enable identification to species level of any bird that may be seen in the region, and in many cases to subspecies level if desired.' This should be the aspiration of every author of every field guide but many fail to deliver. However, the authors of *Birds of the Horn of Africa* can congratulate themselves on an excellent guide that will be indispensable to all visiting birders.

Adrian Pitches

**A CLOSE UP LOOK:  
APPROACHING NATURE  
THROUGH DIGISCOPING**

Co-ordinated by Miguel Rouco

(authors: J. A. Garcia, Q. Marcelo, M. A. Munoz, S. Paz, D. Perez, J. Prieto, M. Rouco, J. Sagardia and C. Vidal). Nayade Editorial, Valladolid, Spain, 2008.

216 pages; many colour figures and photographs. ISBN 978-84-935232-6-8.

Paperback, £25.00.

When digiscoping first emerged, in the late 1990s, there were high hopes that advances in camera engineering would eventually resolve the difficulties associated with this deceptively simple technique, of coupling a terrestrial telescope to a digital camera to produce images of exceptional magnification. However, such are the laws of physics that, working at high magnifications, often in poor light with a minute field of view and a moving subject, all too often leads to lifeless, pixelated, 'flat' images worthy of consigning only to the 'record shot' category. No wonder that, ten years on, competitions like *Bird Photograph of the Year* have struggled to attract

entrants or to award prizes for submissions received. Nevertheless, many natural historians, notably birders, have risen to the challenge and devoted a huge amount of time and, especially, web-forum discussion space to refining digiscoping techniques and providing sources for the ingenious adaptors that are so often needed to couple telescope and camera. As valuable as these resources are, there is often no substitute for a well-illustrated, comprehensive and up-to-date book on matters technological – *Approaching Nature Through Digiscoping* aims to corner this market and is a stunning entry to the digiscoping literature.

Spain is blessed with the kind of light (quality and duration) and relatively settled atmospheric conditions that are all too often lacking in Britain and these have clearly helped to foster the growth of a dedicated and highly skilful band of digiscopers in that country. Carlos Sanchez and Miguel Rouco have assembled a highly experienced team of Spanish digiscoping practitioners to author the texts, which have been translated to a generally high standard with few obvious errors. Twelve chapters cover the basics of photography and optics, digiscoping with both compact and reflex

(SLR) cameras, field techniques, composition and, finally, editing (both of stills and video). Each chapter is pitched at the novice upwards and, with plentiful page space available, takes the reader through successive levels of detail without allowing the technicalities to become overwhelming. Despite the no-doubt welcome sponsorship from Swarovski, the authors discuss equipment from all the quality manufacturers, so owners of Celestron, Kowa, Leica and Zeiss telescopes won't feel left out.

The book is sumptuously illustrated with c. 175 digiscoped bird shots and many more of digiscoping assemblies and visual interpretations of the physics involved in the passage of light between objective and camera chip. The photos constitute what I believe to be the best collection of digiscoped images to date and such has been the confidence of the authors in their print quality that they have allowed publication at sizes up to the full A4 (21 × 30 cm) available. Some have been selected to illustrate the difficulties of digiscoping (showing signs of camera shake, digital noise, etc.), whereas others look great at first but reveal their slightly 'orphan' non-SLR origins through edge artefacts and 'painted' effects (e.g. the African



**279 & 280.** A comparison of digiscoping versus conventional telephotography. These two images of a 'Kumlien's Gull' *Larus glaucooides kumlieni* were taken almost simultaneously at Nimmo's Pier (Co. Galway) in February 2006.

One was acquired with pretty much state-of-the-art conventional telephotography equipment (Canon EOS ID Mark II, Canon 500-mm f4.5 lens; image courtesy of S. A. Stirrup), whereas the other was taken by 'cheap and cheerful' digiscoping using the 'primary focus' technique in which a basic Canon D350 camera was attached via an adaptor to a Kowa TSN823 telescope (1/125 sec., f10.8, ISO 400, -1/3 EV; D. H. Hatton). Clearly, both techniques have succeeded in capturing acceptable images of the bird, showing life-like grey-tone gradations and avoiding the digital pitfall of over-exposed 'burnout' of the whitest areas. Both images were converted from the original RAW files, slightly cropped and minimally processed – but which is which? Answer on p. 477.

Desert Warbler *Sylvia deserti* on p. 1). Overall, however, the set of images will be inspiring to all digiscopers and the fact that each has an accompanying legend detailing the equipment used and the camera settings (F-stop, shutter speed, ISO sensitivity and any exposure compensation) will be a major bonus to those hoping to learn from the 'masters'. Thoroughly impressive too is the authors' determination to provide comparative tables of the performance characteristics of most of the common, and even not-so-common, telescope-camera combinations. Old hands will be

delighted too that these feature data not only from the latest cameras but also from many of the classics, such as the Nikon Coolpix 990 and Contax SL300R, used in the formative days of digiscoping.

Missing is any summary of alternative sources of authoritative information or, perhaps, links to online videos of the digiscoping assembly process in action – but these are minor quibbles. Furthermore, don't expect to be told, for example, what the perfect combination of camera and telescope is or what level of sharpening suffices for all 'jpegs' – the reality is that there is no single answer to these

questions, and each setup, however old the equipment, can be fine-tuned and optimised to deliver acceptable results utilising the principles outlined in the book. There will always be times when the range of your quarry falls into the zone best suited for digiscoping – so if you've not attempted it previously, and even if you think you've seen it all before, take it from me, there is much more to this technique than meets the eye and this is the perfect book for you.

David H. Hatton  
www.kowapower.com

#### SHOREBIRDS OF THE NORTHERN HEMISPHERE

By Richard Chandler,  
Christopher Helm, London,  
2009. 448 pages; 850 colour  
photographs; distribution  
maps for all 134 species.  
ISBN 978-1-408-10790-4.  
Paperback, £29.99

Shorebirds (or 'waders' for Old World readers) have always been a popular group, inspiring us with their great migrations yet simultaneously teasing us with a great variety of identification problems. This new guide sets out to address these identification issues.

It sells itself as describing the shorebirds of the northern hemisphere. However, its exclusion of northern South America, central Africa, Indonesia and the Philippines means that large parts of the northern hemisphere are not covered. While this may not matter very much to most readers, it might have been tidier to adopt a Holarctic boundary.

The guide contains a brief introduction followed by a detailed section on plumage terminology, plumages and moults, with some discussion of aberrant and hybrid plumages, and a useful section on behaviour, focusing on feeding, roosting and preening, though not on breeding biology. The 'meat' of

the book is, however, the main species texts. The selection of species is taxonomically up to date (Wilson's Snipe *Gallinago delicata* is 'split') and includes the recently described 'White-faced' plover *Charadrius* sp. of southeast Asia. The only shorebird of the region not included is the Eskimo Curlew *Numenius borealis* – an altogether understandable exclusion, although it might have been nice to see it featured. Though doubtless heading down the same path, the Slender-billed Curlew *N. tenuirostris* is, however, included.

The species texts follow a standard format and are focused almost exclusively on identification. Short sections cover general identification characters, a succession of identifiable plumage stages and call. Finally there are extremely short sections on status, habitat and distribution (all dealt with together), racial variation, similar species, a useful reference listing and a small map showing breeding, resident and winter ranges.

The texts are relatively short. Although adequate for identifying the more easily recognised species, they are perhaps a little too succinct for the most complex identification problems such as American *Pluvialis dominica* and Pacific Golden Plovers *P. fulva*. For such species, more detailed identification texts may need to be consulted. Encouragingly, there is a

very full coverage of all forms deemed identifiable in the field, including the interesting 'Korean Oystercatcher' *Haematopus ostralegus osculans*.

Each species title is accompanied by a short sentence summarising the appearance of each species. A number of these could have been worded better. For example, the Broad-billed Sandpiper *Limicola falcinellus* is described as having a 'prominent double supercilium that joins at the forehead' whereas this is, of course, not the case. There are similar instances with some other species but I understand that these captions were a late addition by the publisher and not seen by the author. They are in any case a very minor issue. Without exception, the main texts are well composed and accurate. The only error I noticed was the repeated use of 'arquarta' rather than 'arquata' in the Eurasian Curlew *N. arquata* photo captions.

The photographs are, of course, the main selling point of the book, and there is an outstanding collection of quality images of such mouth-watering species as Spoon-billed Sandpiper *Eurynorhynchus pygmaeus*, Bristle-thighed Curlew *N. tahitiensis* and Oriental Plover *C. veredus*. There are also excellent photographs of less familiar forms (from a Western Palearctic perspective) such as Black-tailed

Godwit *Limosa limosa melanuroides*, Bar-tailed Godwit *L. lapponica baueri* and *menzbieri* and Whimbrel *N. phaeopus variegatus*.

Perhaps most remarkable is that so many were taken by the author, although other well-known names such as Hanne and Jens Eriksen and Markus Varesvuo have also contributed stunning pictures. My personal favourites are Pete Morris's flying Bristle-thighed

Curlews. For some species, of course, images of the highest quality are just not available, but there is nevertheless an excellent selection of 'old' (and now iconic) Slender-billed Curlew pictures from both Morocco and Yemen.

Overall, this guide is an excellent introduction to the waders of (most of) the northern hemisphere. Any slight disappointment that the texts are not more com-

prehensive should be more than compensated for by a superb set of images. At 448 pages, this is a very substantial (and quite heavy) paperback and at £29.99 it represents good value for money.

Despite being focused on identification, this guide also acts as a wonderful celebration in pictures of a truly special group of birds.

Andy Stoddart

#### BIRDS OF PAKISTAN

By Richard Grimmett,  
Tom Roberts and Tim Inskipp.  
Christopher Helm, London,  
and Yale University Press,  
New Haven, 2009. 256 pages;  
93 colour plates, maps.  
ISBN 978-0-7136-8800-9.  
Paperback, £24.99.

*Birds of Pakistan* has its origins in the *Birds of the Indian Subcontinent* (BOIS) although Tom Roberts has replaced Carol Inskipp as an author of this guide. Readers familiar with earlier guides produced in this series covering Nepal, Bhutan, Northern India and Southern India will be familiar with the format and style used here. Brief introductory chapters concisely address the expected summary information, of which I found the most engaging to be those dealing with geographical setting, main habitats, migration and bird-watching areas. These are followed by a list of national, regional and international organisations dealing with conservation and wildlife issues in Pakistan, although none of these is specifically orientated towards birds. A shortlist of references, a glossary and a bibliography precede family summaries, which appear to have been taken directly from earlier guides in this series.

The real interest in this book lies in the 93 colour plates, which illustrate all species recorded from Pakistan with the exception of 67 vagrants and extirpated species. Readers familiar with BOIS will immediately recognise the artwork in this book, as all the illustrations

are taken from that source, as they have been for other offshoot regional guides in this series. Accurate colour reproduction of the plates remains something of an issue, and although the reds and oranges still tend to be a bit on the rich side, overall the colours here are a fairly close match to those in BOIS. This minor criticism apart, the plates are of a high standard throughout.

Concise species accounts, which have been largely rewritten for this book, face the plates. Users unfamiliar with the species sequence used by the Oriental Bird Club will be faced with a challenge when trying to locate species quickly, with the likes of woodpeckers (Picidae) and bee-eaters (Meropidae) coming before waders and herons (Ardeidae). Unlike earlier volumes in this series, *Birds of Pakistan* includes four-colour-combination distribution maps, which are a vast improvement over the almost illegible maps in BOIS. Tom Roberts's unparalleled understanding of the birds of Pakistan has added to the authority of this guide and this becomes clear in the distribution maps, which he was largely responsible for. They are based on those in his two-volume *The Birds of Pakistan* and illustrate the distribution of summer breeders, year-round residents, wintering and passage migrants, and irregular year-round visitors, while black squares or triangles denote individual records of vagrants. These maps are so much clearer and more readily understood than anything which has appeared previously in this series. If BOIS should

ever be reprinted, updated maps of this quality would be welcomed.

At the species level, there are several species that appear as the result of taxonomic changes since BOIS appeared in 1998. These include the splitting of Yellow-legged *Larus michahellis* and Caspian Gulls *L. cachinnans*; the renaming of Long-billed Vulture *Gyps indicus* as Indian Vulture and treatment of Slender-billed Vulture *G. tenuirostris* as an extralimital split; the splitting of Indian Spotted Eagle *Aquila hastata* and Lesser Spotted Eagle *A. pomarina*; and the splitting of Golden Spectacled Warbler *Seicercus burkii* into several species including Whistler's Warbler *S. whistleri*, which occurs in Pakistan. The authors have not adopted the wholesale changes proposed in *Birds of South Asia* by Rasmussen & Anderton, commenting that it was best to retain the current taxonomy... and defer adoption of the new splits and lumps until they have been properly analysed and reviewed.

Financial support provided by the World Bank has enabled an Urdu edition to be published, which is to be warmly welcomed. Since there is an increasingly affluent middle class in Pakistan with time and money to spare, it is hoped that the fledgling interest in the wonderful variety of birds found in this marvellous country can be appreciated by ever-increasing numbers. This is a welcome move and one that it is hoped will become increasingly familiar in the future.

Peter Kennerley

# News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

## Lost and found

The 20th anniversary Birdfair takes place this month at Rutland Water with the theme of 'Lost and found birds'. It's the third year running that the Birdfair has supported BirdLife's Preventing Extinctions programme and this year funds will be directed towards some of the most urgent quests in bird conservation: the search for species that may already be lost, but may yet be found.

A good example is this year's 'poster bird', the Cebu Flowerpecker *Dicaeum quadricolor*, a forest bird endemic to the island of Cebu in the Philippines. It was described in 1877 but had disappeared from view by 1903, and in 1959 it was written off because

insufficient forest (apparently) remained to support the species. Happily, half a century later, the Cebu Flowerpecker is still holding on. It was rediscovered in 1992 by tenacious British birder Rob Timmins, who found that there were substantial forest fragments on Cebu – complete with flowerpeckers.

Of the 192 Critically Endangered birds in the world, BirdLife is unaware of an existing population for a staggering 45 species, almost a quarter of the Red List total. High on the priority list for expeditions funded by the Birdfair are the Pink-headed Duck *Rhodonessa caryophyllacea* of southeast Asia and the Western Palearctic's own

enigma, the Slender-billed Curlew *Numenius tenuirostris*. Visitors to the Birdfair can learn more about the search for the 'SBC' in a lecture by Nicola Crockford and Graeme Buchanan of the SBC Group, on the Friday afternoon in Lecture Marquee 1 at 16.00 hrs.

As ever, *British Birds* will be supporting the Birdfair: come and visit us on stands 24/25 in Marquee 3. By a happy coincidence, and as readers will have already realised, August 2009 is the 50th anniversary of the British Birds Rarities Committee and we'll be marking the golden jubilee with a special display on our stand. The Birdfair dates are 21st–23rd August, see [www.birdfair.org.uk](http://www.birdfair.org.uk)

## Lost – and found already

One species that may not require a search-and-rescue expedition after all is the Nechisar Nightjar *Caprimulgus solala*, famously known from only a single wing salvaged from a roadside corpse in southern Ethiopia in 1990. Exciting news filtered out from Ethiopia in May 2009 that a group of birders has rediscovered Nechisar Nightjar, alive and in possession of both wings.

The team, led by Africa's foremost birder, Ian Sinclair, revisited

the remote type location, the Nechisar Plain, and waited for nightfall... as Ian recounted in an e-mail published on various internet forums: 'A tortuous three-hour drive (only 20 km) to the site of the roadkill (just a rutted track) and a long anxiety-filled wait till dusk. Found the usual local nightjars quickly... Donaldson-Smith's (*C. donaldsoni*) and Sombre (*C. fraenatus*)... both fairly small species. And then, eye shine on a very large nightjar in the spot-

lamp. When flushed, the huge skua-like wing patches were striking and brilliantly white... quite unlike any other nightjar in Africa. This was obviously the male... the collected wing has a buffy carpal patch and could be [from] a young male or female. Fuller details to be published later.'

We look forward to publication of the full account. And maybe sea-watchers on African headlands should scrutinise those passing skuas...

## Albatross funds Flood in

Birdfair regulars will remember that the 2000 fair launched the 'Save the Albatross' campaign and raised £122,000 for these stately ocean wanderers. With 18 out of the 22 albatross species threatened with extinction, most notably through birds becoming impaled on the baited hooks of the longline fishing industry, drastic action was needed.

BirdLife and the RSPB set up the Albatross Task Force (ATF) in

2006, placing specialist instructors on fishing vessels to reduce the number of seabirds killed as 'bycatch'. The task force – which first began in South Africa – initially worked with longliners targeting tuna and swordfish but recently it has been extended to the trawling industry too. There are now ATF instructors in seven countries with globally important populations of seabirds.

And this intervention seems to be working: for every 100 albatrosses killed in fisheries in South African waters in 2006, 85 are now being saved by improved fishing practices.

Such outstanding conservation work deserves continued financial support and we are extremely grateful to Bob Flood – author of the paper on dark-rumped *Oceanodroma* petrels in last month's *BB* –

and the other photographers who contributed to that paper – for donating their fees, totalling £400, to the Save the Albatross campaign. What's more, copies of the July issue will be available to seabirders travelling on the Scilly Pelagics ([www.scillypelagics.com](http://www.scillypelagics.com)) with Bob

this season, and all proceeds will also go to the campaign; Bob has already raised more than £2,000 for this appeal.

As a journal that continues to pay its photographers for their contributions, we are always delighted to divert those fees to

conservation charities. The donation of the fee for every *BB* front-cover photo in 2009 to the Fair Isle Bird Observatory Trust is a case in point. Thanks again to all the generous photographers who have supported this cause during the observatory's rebuilding year.

## From Icklesham to Kenya

Since the spring of 2006, *BB* has been making good use of office space in East Sussex. We have been fortunate in that Philip Merricks, our landlord and a long-time supporter of *BB*, has allowed us to use the office on a very favourable basis. But when additional storage space became available at *BB*'s base at Harlequin Gardens, we no longer needed the space at Icklesham.

Because of the generosity of our landlord, *BB* has been able to free up funds to make a charitable

donation of £5,000. This donation will serve as a lasting memorial to former *BB* director Terry Smeeton and staff member Philippa Leegood, both of whom sadly died recently. Our chosen charity was A Rocha Kenya (ARK), which reflects Terry's long-term support for this organisation.

The donation will be applied to ARK's research and monitoring work, specifically that associated with waders and the monitoring of Roseate Terns *Sterna dougallii*,

because of its relevance to the Palearctic. These projects will use a portion of the money, and the balance will fund a six-month internship for a local student to help with data analysis and publication of the results. A small plaque to mark the donation will be sited in a research centre at Watamu, which Terry had earlier helped to fund.

We are delighted that we are able to support A Rocha Kenya in this way.

## First Northumbrian Osprey nest for 200 years ...

The natural recolonisation of northern England by 'Scottish' Ospreys *Pandion haliaetus* continues. Following the establishment of a breeding pair at Bassenthwaite Lake in Cumbria in 2001, the first successful nesting pair in neighbouring Northumberland is rearing three healthy chicks as we go to press. The nest, overlooking Kielder Water, was built on one of several platforms that have been erected in pine trees by Forestry Commission staff. The final touch for these wire-and-sticks constructions is a splattering of white paint to convince over-flying Ospreys that the nest has been used successfully in a previous season!



David Tipling

281. Ospreys *Pandion haliaetus*.

## ... and breeding Ospreys return to Spain too

Meanwhile, the reintroduction of the Osprey to Iberia has been successful. The Andalucian regional government and Doñana Biological Station have released 102 Osprey chicks since 2003 originating from Scotland, Germany and Finland. And this year there have been two successful nests: one

in Odiel (Huelva province) with two chicks, the other at San José del Valle (Cádiz province). This is claimed to be the first successful peninsular breeding in 70 years, although Ospreys reputedly bred on cliffs between Málaga and Granada provinces until the early 1980s (and in southwest Portugal

until the mid 1990s). On the Spanish-owned Islas Chafarinas off the Moroccan Mediterranean coast, Ospreys have bred for the past two years: in 2008 one chick fledged and this year there were two chicks. This follows 15 unsuccessful years when Yellow-legged Gulls *Larus michahellis* intervened.

## Shot, poisoned, trapped: English Peregrines in 2009

This year looks like being one of the worst on record for Peregrine Falcon *Falco peregrinus* persecution. The RSPB has been inundated with reports of Peregrines being poisoned, trapped or shot – and of their chicks being taken from the nest. Reported incidents already number more than 50 for the year, with more waiting to be processed. There were 79 incidents reported for the whole of 2007.

As a result, the RSPB is urging the Government to add the Peregrine Falcon to its list of priority species for wildlife crime enforcement. Examples of incidents reported to the RSPB this year are as follows:

**Shooting** A dead Peregrine was found peppered with shot in the Forest of Dean, Gloucestershire. An X-ray revealed that the bird, a seven-year-old female, had been blasted at close range with a shotgun.

**Poisoning** A female Peregrine

and her chick were found dead on their nest near Sunderland, Durham, next to the body of a pigeon that police suspect was poisoned bait used to kill the Peregrine family. Samples have been sent for testing. In Walsall, West Midlands, a racing pigeon was found with a pill capsule taped to its leg. A tip-off that some pigeon fanciers in the area were targeting Peregrines led to the capsule being sent for tests. Results showed it had been filled with the banned pesticide Aldicarb. Since April, three pigeons have been found tethered to the ground near a Peregrine site in Cumbria. It is suspected that the birds had been laced with poison in an attempt to kill the Peregrines. Samples have been sent for testing.

**Trapping** A Peregrine crash-landed in a back garden near Lichfield, Staffordshire, with its leg caught in a spring trap. It later died of its injuries. A search of nearby quarries by RSPB officers found

three more traps on a ledge used by Peregrines.

**Nest robberies** All five chicks were stolen from a Peregrine nest near Mansfield, Nottinghamshire, within a week of them hatching. It's the fourth year in a row that the nest at this site has failed.

Mark Thomas, RSPB Investigations Officer, said: 'It has been a terrible year. One of the worst I can remember. In the last few weeks, barely a day has gone by without a call about Peregrine persecution. We have had multiple reports of attempts to target Peregrines with poisoned baits and lethal traps and now we have this bird confirmed shot. We urgently need the Government to place the Peregrine on the list of priority species for wildlife crime enforcement and make sure captive birds are properly registered. We [also] need the public to support the RSPB's campaign to end the illegal killing of birds of prey.'

## Puffins go foraging with 'sat navs'

After decades of population growth, England's largest Puffin *Fratercula arctica* colony, on the Farne Islands off the Northumberland coast, suffered a dramatic drop in numbers last year when the breeding population fell by a third. This was despite a healthy local sandeel *Ammodytes* population and consequently healthy numbers of fledged young each year. A complete census of Puffins on the Farnes is carried out every five years, when National Trust wardens check every nesting burrow on the islands. In 2003, there were 55,674 pairs of Puffins but in 2008 only 36,500 pairs were logged. In other words, nearly 40,000 Puffins were missing, presumed dead.

New research into this decline involves fitting 'sat navs' to the Farnes Puffins to find out where they're going – and where the threats to them may be. The GPS devices have to be retrieved when the birds return to their nesting burrows after foraging trips so the information can be downloaded. Time-depth recorders attached to other birds will also provide a picture of how deep and how often the Puffins dive in search of sandeels.

Besides the information collected locally during the summer, the researchers need to gather data during the winter. Before Puffins left the islands at the end of July, geolocators were attached to the rings on some birds. The data collected next year from returning Puffins should provide an outline of the birds' movements while they wintered in the open sea. Dr Richard Bevan of Newcastle University said: 'Technological developments now mean that we're getting closer to finding the pieces of the jigsaw to help solve the Puffin puzzle. These new data will help us to work out where the Puffins are going when they're present on the Farne Islands in summer – and then we can track their winter movements too. Hopefully, we can then begin to understand why numbers have declined so dramatically.'

## Cotingas and Manakins – a request for photographs

*Cotingas and Manakins*, by Graeme Green and Guy Kirwan, is nearing completion. The book contains superb colour plates by Eustace Barnes covering 129 species in the Neotropical families Cotingidae, Oxyruncidae, Pipridae and Tityridae, which include some of the most spectacular and colourful species in the world. The book will also include photographs, and the authors are inviting submissions (preferably digital) from photographers and birders who have taken good photos in the wild (not in the hand).

If you can help, please contact Jim Martin at A&C Black Publishers, e-mail [jmartin@acblack.com](mailto:jmartin@acblack.com).

## Just when you thought it was safe to go back in the hide...

It's not often that birders are portrayed in feature films but a new British film has been set in a hide on the Suffolk marshes. *The Hide* started life as a stage play entitled *The Sociable Plover*, so that might start a twitch down to the local cinema.

The film is a two-hander and takes place within the hide of the title. An obsessive birder is surprised when the hide door opens and a rather menacing character joins him inside – and he's not carrying binoculars. It transpires that the interloper is a murderer on the run who's gratified to learn that you can sit in a hide undisturbed and undetected for hours... unless you're in Norfolk perhaps. The film was directed by Marek Losey, grandson of the great 1960s director Joseph Losey (remember Dirk Bogarde and James Fox in *The Servant?*); the writer is Tim Whitnall and he co-starred in the stage play when it premiered four years ago.

So what other feature films have revolved around birds or birdwatchers? Well, 40 years ago there was *Kes* (Ken Loach, 1969), the story of the dysfunctional Yorkshire teenager and his Kestrel *Falco tinnunculus*. Even further back there was another British film that revolved around a rarity – and this one did its bit for wartime morale too. *Tawny Pipit* (Bernard Miles & Charles Saunders, 1944) was the story of a village community rallying round to prevent the nest of a Tawny Pipit *Anthus campestris* from being ploughed up. There's an egg-collector sub-plot too. All other feathered feature-film titles will be gratefully received at the usual address. And no, that doesn't include *Birdy* (Alan Parker, 1984).

## Children eradicate the House Crow from Socotra

An innovative control programme has been used to remove the alien House Crow *Corvus splendens* from Socotra, the 'Galapagos of the Indian Ocean' and home to ten endemic bird species. The House Crow arrived on Socotra from the Indian subcontinent in 1996 and built up a breeding population of more than ten pairs, which posed a threat to native biodiversity. Numerous attempts to trap them failed but an imaginative scheme to control their numbers was successful. Children were paid a reward for bringing a nest containing young to the Socotra Archipelago Conservation and Development Programme. The last birds were killed by a marksman this spring.

Ship-assisted House Crows have colonised ports and coastal regions throughout northeast Africa and the Middle East; birders may have encountered them at Eilat in Israel, for example. Closer to home, House Crows have established a European foothold in another port, the Hook of Holland, and have been breeding there for more than a decade.

## New Highland Recorder

Al McNee is stepping down as Recorder for Highland. His replacement is Kevin Davis, 14 Forsyth Place, Cromarty, Ross-shire IV11 8XW, tel. (01381) 600545, e-mail kevjangkaren@hotmail.com

**Digiscoping review** The answer to the question on p. 471: plate 279 was taken by Simon Stirrup using a conventional DSLR, while 280 was digiscoped by David Hatton.

# Recent reports

Compiled by Barry Nightingale and Eric Dempsey

This summary of unchecked reports covers early June 2009 to early July 2009.

**Headlines** The hide-and-seek reappearance of the Royal Tern along the Welsh coast gave some the runaround, while a fast-moving Blue-cheeked Bee-eater in Hampshire, then Devon (news came out after its departure), would have created a great deal of running had it been accessible. A male Pallid Harrier in Cambridgeshire was a real surprise and, although not unprecedented, a midsummer River Warbler in northwest Scotland created much interest. Wader highlights included adult Stilt Sandpipers in Co. Wexford and North-east Scotland, while a Terek Sandpiper journeyed south along the English east coast. In the Northern Isles, an Eastern Olivaceous Warbler and an Iberian Chiffchaff were short-stayers but a Lesser Grey Shrike was a little more obliging.

**Black Duck** *Anas rubripes* Long-stayer, Colliford Lake (Cornwall), to 30th June. **Ferruginous Duck** *Aythya nyroca* Long-stayer, Chew Valley Lake (Avon), to 8th July. **Lesser Scaup** *Aythya*

*affinis* Long-stayer, Loch of Benston (Shetland), to 24th June.

**Cory's Shearwater** *Calonectris diomedea* In Co.



Rich Andrews

282. Male Ferruginous Duck *Aythya nyroca*, Chew Valley Lake, Avon, May 2009.

Cork, 37 were seen off Galley Head on 3rd July and 63 were there on 4th, and seven off Ballycotton and three off Old Head of Kinsale on 4th July. Also on 4th July, one 'Scopoli's Shearwater' *C. d. diomedea* 10 km south of Scilly. Great Shearwater *Puffinus gravis* Carnsore Point (Co. Wexford), 21st June; Galley Head, three, 4th July. Wilson's Storm-petrel *Oceanites*

*oceanicus* One from a fishing boat off Slyne Head (Co. Galway), 25th June and another from a pelagic off Scilly, 7th July.

Little Bittern *Ixobrychus minutus* Brading Marsh (Isle of Wight), 28th–29th June; long-stayer, Walton Heath (Somerset) to 9th July. Night Heron *Nycticorax nycticorax* St Mary's (Scilly), 11th–12th, 22nd & 25th June. Squacco Heron *Ardeola ralloides* Long-stayer, Wicken Fen (Cambridgeshire) to 14th June. Cattle Egret *Bubulcus ibis* Recorded from Anglesey, the Co. Cork/Waterford border (up to four), Isle of Wight, Kent and Lancashire & N Merseyside. Great White Egret *Ardea alba* Recorded in Cornwall, Derbyshire, Devon, Essex, Co. Galway, Gwynedd, Kent, Lancashire & N Merseyside, Leicestershire & Rutland, Norfolk, North-east Scotland, Orkney, Suffolk and West Midlands.



Graham Catley

283. Terek Sandpiper *Xenus cinereus*, Gibraltar Point, Lincolnshire, June 2009.

Black Kite *Milvus migrans* Little Haldon and Bishopsteignton (both Devon), 11th June; Steyning (Sussex), 13th June; Walton Heath, 15th June; Crampmoor (Hampshire), 23rd June; St Buryan (Cornwall), 25th June; Stoborough (Dorset), 8th July. Pallid Harrier *Circus macrourus* Toseland (Cambridgeshire), 29th June. Red-footed Falcon *Falco vespertinus* Hatfield Moor (Yorkshire), 14th–16th June; Woolhampton GP (Berkshire), 28th June.

Black-winged Pratincole *Glareola uordmanni* Long-stayer, Holme/Thornham/

Titchwell (Norfolk) to 12th June.  
**Stilt Sandpiper** *Calidris himantopus*  
 The Cull/Tacumshin Lake (Co. Wexford), 23rd June to 3rd July;  
 Loch of Strathbeg (North-east Scotland), 9th–11th July. **Buff-breasted Sandpiper** *Tryngites subruficollis*  
 Cley, 6th–11th July, presumed same  
 Titchwell (both Norfolk), 8th July. **Terek Sandpiper** *Xenus cinereus*  
 Saltholme Pools (Cleveland), 16th–17th June, presumed same  
 Gibraltar Point (Lincolnshire), 17th June. **Spotted Sandpiper** *Actitis macularius*  
 North Cave Wetlands (Yorkshire), 20th–21st June.



Mike Ashforth

284. Spotted Sandpiper *Actitis macularius*, North Cave Wetlands, Yorkshire, June 2009.

**Laughing Gull** *Larus atricilla* Tiree (Argyll), 13th June;  
 St Kilda (Outer Hebrides), 19th June. **Caspian Tern** *Hydroprogne caspia*  
 Blennerville (Co. Kerry), 1st July; Ythan estuary (North-east Scotland), 4th July;  
 Welney, 4th–5th July, then Wigginhall St Germans (both Norfolk), 5th July.  
**White-winged Black Tern** *Chlidonias leucopterus*  
 Cley, 8th July; Fen Drayton GP (Cambridgeshire), 10th–11th July.  
**Royal Tern** *Sterna maxima* Abersoch/Black Rock Sands, 15th June,  
 then Llandudno (all Caernarfonshire), 20th June. **Forster's Tern** *Sterna forsteri*  
 Tacumshin Lake, long-stayer to 27th June.



Steve Young/Birdwatch

285. Adult Royal Tern *Sterna maxima*, Llandudno Bay, Caernarfonshire, June 2009.

**Snowy Owl** *Bubo scandi-acus* Inishturbot (Co. Galway), 8th June;  
 between Inishkea North and the Mullet Peninsula (Co. Mayo), 12th–18th June;  
 long-stayer, St Kilda, 13th June and 1st July. **Blue-cheeked Bee-eater** *Merops persicus*  
 Needs Oare Point



www.irishbirdimages.com

286. Adult Forster's Tern *Sterna forsteri*, Tacumshin Lake, Co. Wexford, June 2009.



John Carter

287. River Warbler *Locustella fluviatilis*, Applecross, Highland, July 2009.



Iain Leach

288. Lesser Grey Shrike *Lanius minor*, Bressay, Shetland, June 2009.



Reston Kilgour

289. Common Rosefinch *Carpodacus erythrinus*, Bradwell, Essex, June 2009.

(Hampshire), 21st June, presumed same Braunton Burrows (Devon), 30th June. European Bee-eater *Merops apiaster* Stowmarket (Suffolk), 11th June; Essington (Staffordshire), 15th June; Knockatallon (Co. Monaghan), 16th June; Cults (North-east Scotland), 16th June; Portland, and possibly the same Durlston CP (both Dorset), 23rd June; Sutton Heath (Suffolk), 27th June, perhaps same Pott Row, 29th June, Stiffkey, 30th June and Cley (all Norfolk), 1st July; Melverley Green (Shropshire), two, 3rd July.

River Warbler *Locustella fluviatilis* Applecross (Highland), 28th June to 11th July. Eastern Olivaceous Warbler *Hippolais pallida* Fair Isle, 21st June. Subalpine Warbler *Sylvia cantillans* Ramsey Island (Pembrokeshire), 23rd June. Iberian Chiffchaff *Phylloscopus ibericus* North Uist (Outer Hebrides), 11th June.

Lesser Grey Shrike *Lanius minor* Bressay (Shetland), 16th–18th June. Woodchat Shrike *Lanius senator* Rhossili Bay area (Glamorgan), 16th–22nd June; Gedgrave (Suffolk), 21st June; Lundy (Devon), 27th June. Rose-coloured Starling *Pastor roseus* Falmouth (Cornwall), 2nd July. European Serin *Serinus serinus* Fairlight Cove (Sussex), 14th June; Portland, several dates between 18th and 28th June, and 4th July.



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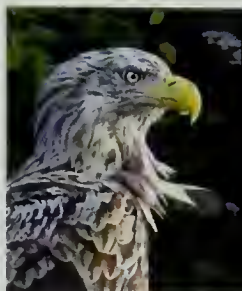
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Identification of Dark-breasted  
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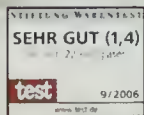
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16 SEP 2009

Volume 102 • Number 9 • September 2009

- 482 Ageing and sexing of Asian chats: Siberian Rubythroat, Siberian Blue Robin, Rufous-tailed Robin and Red-flanked Bluetail *Paul J. Leader*
- 494  From the Rarities Committee's files: Identification of Dark-breasted Barn Owl in Britain *Paul R. French*
- 506 Evidence for age-dependent migration strategies in the Short-toed Eagle *Nicolantonio Agostini, Michele Panuccio, Giuseppe Lucia, Cristiano Liuzzi, Paolo Amato, Antonino Provenza, Marco Gustin and Ugo Mellone*

## Regular features

- |  |   |
|--|---|
| <p>504 BTO research update<br/><i>Mike Tomis, Dawn Balmer</i></p> <p>509 Notes</p> <p>Goosanders taking bread<br/><i>Bernie Zonfrillo</i></p> <p>Spring migration of Eurasian Bitterns<br/><i>Peter Smith</i></p> <p>More Peregrine kleptoparasitism<br/><i>Graham Rees</i></p> <p>Stone-curlew feeding on Grass Snake<br/><i>Pavel Štěpánek</i></p> <p>Dark Collared Doves on St Kilda<br/><i>Will Miles</i></p> <p>Tawny Owl entering house via cat flap<br/><i>Greg Turner</i></p> <p>Midwinter song of Black Redstarts in Cornwall<br/><i>Colin Selway</i></p> | <p>514 Reviews</p> <p><i>The Birdwatcher's Pocket Guide to Britain and Ireland</i></p> <p><i>The Birds of Borneo</i></p> <p><i>Archibald Thorburn, Artist and Illustrator</i></p> <p><i>Gilbert White's Birds: then and now</i></p> <p><i>The Wild Geese of the Newgrounds</i></p> <p><i>Trogons: a natural history of the Trogonidae</i></p> <p><i>Wildfowl of the Northern Hemisphere</i></p> <p>518 News and comment</p> <p><i>Adrian Pitches</i></p> <p>524 Recent reports</p> <p><i>Barry Nightingale and Eric Dempsey</i></p> |
|--|---|



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# Ageing and sexing of Asian chats:

## Siberian Rubythroat, Siberian Blue Robin, Rufous-tailed Robin and Red-flanked Bluetail

*Paul J. Leader*



Red-flanked Bluetail *Tarsiger cyanurus*

*Alan Harris*

**ABSTRACT** Three species of small chat that breed in western Siberia have occurred as vagrants to western Europe: Siberian Rubythroat *Luscinia calliope*, Siberian Blue Robin *L. cyane* and Rufous-tailed Robin *L. sibilans*. A fourth species, Red-flanked Bluetail *Tarsiger cyanurus*, breeds across Siberia west to eastern Finland and now occurs annually in western Europe. This paper provides detailed ageing and sexing criteria for these species; it concentrates on autumn plumages, as these are the most likely to be encountered in western Europe.

**O**f all the vagrant passerines reaching western Europe from eastern Asia, few are more highly sought-after than the smaller chats. Three highly charismatic species of the genus *Luscinia* are long-distance migrants, breeding in Siberia west to at least the Ob River and wintering in southeast Asia: Siberian Rubythroat *L. calliope*, Siberian Blue Robin *L. cyane* and Rufous-tailed Robin *L. sibilans*. In western Europe, all are extremely rare but highly prized autumn vagrants, and their

occasional appearances raise hopes that these may be repeated in future years. Another predominantly Siberian species, Red-flanked Bluetail *Tarsiger cyanurus*, has expanded its breeding range from Russia into eastern Finland, where a small but increasing population is estimated to be in the range of 50–500 pairs (BirdLife International 2004), and a handful also breed in Estonia ([www.birdlife.org](http://www.birdlife.org)). Red-flanked Bluetails also winter in southeast Asia, but vagrants are being recorded with

increasing frequency in western Europe, particularly in autumn, and there were no fewer than eight British records in 2007 and 12 in 2008 (Hudson *et al.* 2008, in press).

#### *Moult strategy and ageing criteria*

Establishing the age and sex of these species in autumn, particularly in a vagrant context, has not been well described in the literature. This paper discusses and illustrates ageing and sexing criteria for each species in the hand, and, with care, many of the features described can also be applied in the field. Emphasis is placed on autumn plumages, which are the most likely to be encountered in western Europe. The criteria described are based upon experience gained in eastern Asia, primarily in Hong Kong, where all four species occur as regular passage migrants and/or winter visitors.

Juvenile plumage in all four species is characterised by its drab and brown appearance, with extensive pale body spotting, and pale tips to the coverts and tertials. With the exception of Red-flanked Bluetail in eastern Finland, none of the species discussed here is likely to be encountered in Europe in juvenile plumage, as this is replaced during the post-juvenile body moult to first-winter plumage on or close to the breeding grounds before the start of autumn migration.

#### *Moult*

After fledging, young birds undergo a partial post-juvenile moult during which the body plumage is replaced, usually together with the lesser, median and a variable number of the greater coverts (beginning with the innermost and continuing towards the outer edge of the wing). Birds in first-

winter plumage thus retain the juvenile tail, primaries, secondaries and tertials, together with any unmoulted juvenile greater coverts. Adults undergo a complete post-breeding moult, after which the entire plumage is of the same age.

#### *Ageing*

First-winter birds in autumn almost always show a moult contrast in the greater coverts (between uniform, adult-type inner greater coverts and retained juvenile outer greater coverts, which are characterised by a pale spot at the tip); establishing the age is straightforward in the hand, but relies on good views in the field.



Paul J. Leader

290. Juvenile Siberian Rubythroat *Luscinia calliope*, Amurskaya Oblast, Russian Federation, 12th July 2007. A typical juvenile chat with extensive spotting above and below; the juveniles of all four species discussed in this paper have similar body feathering, which is replaced prior to the autumn migration.



Paul J. Leader

291. Adult male Siberian Rubythroat *Luscinia calliope*, Hong Kong\*, China, 25th February 2003. Note the distinctive grey wash below the red throat patch, which is characteristic of adult and some first-winter males.

\* Note: 'Hong Kong' refers to the Hong Kong Special Administrative Region, People's Republic of China.

Paul J. Leader



**292.** Adult male Siberian Rubythroat *Luscinia calliope*, Hong Kong, China, 2nd December 2003. There is some variability in the appearance of males, which is not age-related. On this adult, the red throat patch is less intense, and the black on the lores and surrounding the eye is less extensive than on the bird in plate 291. There is a slight pinkish wash to the supercilium and submoustachial.

Paul J. Leader



**293.** First-winter male Siberian Rubythroat *Luscinia calliope*, Hong Kong, China, 1st November 2003. This poorly marked first-winter male shows reduced black feathering around the eye that, together with whitish tips to the red throat feathers, results in a drabber and less contrasting appearance to the head compared with the adult in plate 291. Note also the browner wash to the upper breast, which is typical of first-winter males.

Paul J. Leader



**294.** First-winter male Siberian Rubythroat *Luscinia calliope*, Hong Kong, China, 14th February 2004. This well-marked first-winter male would be inseparable from an adult on the features visible here, and ageing would depend on the pattern of the greater coverts and tertials (see text).

Correspondingly, adults lack moult contrast in the greater coverts. As with other small chats, there are also subtle but characteristic differences in tail-feather shape between adults and first-winters: adults have broader and more rounded tips to the tail feathers, whereas juveniles have narrower and more pointed tips.

### *Siberian Rubythroat*

Ever since the first British record of Siberian Rubythroat, on Fair Isle in October 1975 (Lowe 1979), there has been a lack of clarity in the European literature regarding the ageing and sexing of this species. The presence of traces of red on the throat of the Fair Isle bird led the finders to think that it was probably a first-winter male (Lowe 1979), while discussion relating to the age and sex of more recent British records (e.g. Hunt 1997, Osborn 2001) has further highlighted the problems of limited information. In Hong Kong, where Siberian Rubythroat is a common winter visitor and passage migrant (Carey *et al.* 2001), it shows a relatively high degree of site fidelity, with many birds establishing and returning to the same winter territories. Consequently, year-on-year retraps (i.e. known adults) are quite common, and this has helped to establish the validity of the features discussed below.

### *Sex-related differences*

In general, males have a bright red throat in all plumages other than

juvenile. Females are usually duller and frequently lack red on the throat altogether. Some show a limited amount of red on the throat, but more typically they have pink or off-white throats. However, some adult females appear remarkably similar to males.

#### Adult and first-winter males

In adult and first-winter male plumages, Siberian Rubythroat has a stunning combination of iridescent ruby-red throat, black lores and a well-defined white submoustachial stripe. At the base of the red throat patch there is often a narrow black border, below which the upper breast is distinctly grey. On poorly marked birds, however, the dark border is absent and the upper breast is brown rather than grey. Such poorly marked birds are usually, though not always, first-winter males. In fresh autumn plumage, a few first-winter males may show narrow dark tips to the feathers.

There is slight individual variation to this head pattern, with some birds exhibiting a faint pink wash to the supercilium and submoustachial, and others showing more extensive black lores. This variation is not age-related.

#### Adult female

Although some adult females lack any trace of pink or red on the throat, most have a head pattern that is a washed-out version of the male's. However, a small minority, perhaps older females, show a head pattern



Paul J. Leader

**295.** Adult female Siberian Rubythroat *Luscinia calliope*, Hong Kong, China, 18th December 2004. This is a typical adult female: the throat has a pink wash and the head pattern is a subdued version of the male's. Note also the narrow band of white at the base of the pink throat patch.



Paul J. Leader

**296.** Adult female Siberian Rubythroat *Luscinia calliope*, Hong Kong, China, 14th January 2006. Some adult females lack any trace of pink or red on the throat and in this respect resemble first-winter females.



Paul J. Leader

**297.** Adult female Siberian Rubythroat *Luscinia calliope*, Amurskaya Oblast, Russian Federation, 12th July 2007. The sex of this strongly marked adult female, trapped on the breeding grounds, was confirmed using shape of the cloacal protuberance and extent of the brood patch (cf. Svensson 1992). Note the entirely black bill, which is typical of both sexes in breeding condition.

Paul J. Leader



**298.** First-winter female Siberian Rubythroat *Luscinia calliope*, Hong Kong, China, 6th November 2005. A typical first-winter female, lacking all traces of red on the throat. This bird cannot be reliably aged on features visible here, and ageing relies on the pattern to the tips of the greater coverts and tertials.

Paul J. Leader



**299.** First-winter female Siberian Rubythroat *Luscinia calliope*, Hong Kong, China, 2nd December 2003. On a minority of first-winter females, such as this individual, the supercilium is poorly developed, the lores and throat are brown and the spot at the base of the lower mandible is obscured with brownish feather tips.

Paul J. Leader



**300.** Adult male Siberian Rubythroat *Luscinia calliope*, Hong Kong, China, 14th February 2000. Same bird as in plate 291. Aged as an adult by the uniform greater coverts and tertials. Note also the narrow pale tips to the tail feathers, a feature of adults.

that is strikingly similar to that of a male. Typically, most adult females show an off-white supercilium which is usually poorly defined at the rear, dark brown or black lores (*contra* Svensson 1992), a diffuse, off-white submoustachial, and a pale pink to reddish-pink throat. A distinctive feature of the majority of adult females is a white band of variable width below the throat patch; a feature not shown by males of any age.

Females that closely resemble males (c. 5% of all adult females) can be separated from them by the more diffuse submoustachial (often with slightly darker feather tips, creating a faint mottled effect), narrower supercilium and lack of a dark border to the lower throat. In addition, only exceptionally would a well-marked female show pure grey below the red throat patch and then only as a very narrow border. Such well-marked females can be extremely difficult to separate from males, although smaller individuals with a wing length below 76 mm can be separated in the hand (see table 1).

#### *First-winter female*

First-winter females have a poorly marked head pattern, and only exceptionally show even a trace of pink on the throat. Only one bird, trapped in spring, out of about 50 first-winter females examined, showed any hint of pink on the throat. The supercilium is buff, rarely off-white, the submoustachial is also off-white to buff, although on some birds this is reduced to a pale spot

at the base of the lower mandible. The throat is off-white and contrasts with the grey-brown upper breast, although the border between the two is diffuse and poorly defined. Some are even less well marked, showing an indistinct supercilium that barely extends to the eye, only faintly darker lores, a tiny pale spot at the base of the bill, and a throat which, except for some paler feathering at the base of the lower mandible, is grey-brown and concolorous with the breast and flanks. Such birds often have pronounced speckling or scaling on the underparts which, combined with the poorly marked head pattern, does not fit the generally perceived appearance of Siberian Rubythroat.

#### Age-related differences

First-winters typically moult very few greater coverts, and retained juvenile feathers generally show conspicuous pale spots or tips. These vary from tiny pale spots (c. 1 mm across) to broad buff tips; birds with such broad pale tips often show obvious pale tips to the primary coverts too. These pale tips are subject to wear over the course of the winter and by spring may be almost completely abraded on some birds. Others, however, retain pale tips well into the breeding season. Adult-type tertials and greater coverts lack the pale tips and characteristically have a narrow, well-defined olive-brown fringe.

First-winters that have moulted some greater coverts show a distinct moult contrast between



Paul J. Leader

**301.** First-winter male Siberian Rubythroat *Luscinia calliope*, Hong Kong, China, 26th November 2005. Readily aged as a first-winter by the pale tips to the greater coverts, and the pale tip to the shortest tertial.



Paul J. Leader

**302.** Adult female Siberian Rubythroat *Luscinia calliope*, Hong Kong, China, 2nd December 2004. A typical adult female, showing a pinkish wash to the throat and aged by the lack of pale tips to the greater coverts.



Paul J. Leader

**303.** First-winter female Siberian Rubythroat *Luscinia calliope*, Hong Kong, China, 2nd December 2003 (same bird as in plate 299). Pale tips to the greater coverts readily age this as a first-winter. It is slightly browner than typical adult and first-winter females, and shows faint speckling or scaling to the underparts.

**Table 1.** Wing length (mm) of Siberian Rubythroats *Luscinia calliope* trapped in Hong Kong, 1987–2005.

Siberian Rubythroat	Max.	Min.	Mean	n
Adult male	86	76	81.9	72
Adult female	81	71	77.2	38
First-winter male	86	75	80.5	261
First-winter female	81	71	76.6	88

uniform, adult-type inner greater coverts and retained juvenile outer greater coverts. Very few first-winters appear to moult all the greater coverts and tertials. I have not encountered this among c. 250 first-winters handled; although possible, it must be extremely rare.

A less obvious ageing criterion is the presence or absence of pale tips to the outer tail feathers. Adults show narrow pale tips to the tail feathers, while first-winters typically do not; exceptionally, they may show a faint trace of pale fringing. In the hand, the shape of the tail feathers is a useful character for ageing (see above).

The presence of a pale base to the bill is not age-related (*contra* Hunt 1997) as, outside the breeding season, all Siberian Rubythroats show this. When in breeding condition, both sexes typically have an entirely black bill.

#### Biometrics

Although there is some overlap, males average larger than females, and adults average slightly larger than first-winters (table 1). Note that all wing measurements given in this paper use the maximum-wing-chord method (Svensson 1992).



Peter R. Kennerley

**304.** Adult male Siberian Blue Robin *Luscinia cyane*, Hong Kong, China, 4th April 1992. The blue outer webs to the primaries establish this as an adult rather than a first-summer male.

#### Siberian Blue Robin

This is a fairly straightforward species to age and sex, although there is considerable variation in first-winter male plumage. First-winter females often lack any hint of blue in the plumage, even in the tail, and may present an unexpectedly difficult identification challenge given the skulking nature of this species.

#### Age- and sex-related differences

##### Adult male

Adult males are unmistakable, being entirely blue above, including the wing-coverts, tertials, and outer edges to the primaries and secondaries. The underparts are white, with a black border separating the blue upperparts from the white throat and breast.

##### Adult female

Adult females are rather drab, with grey-brown mantle and scapulars, although some show a hint



Paul J. Leader

**305.** Adult female Siberian Blue Robin *Luscinia cyane*, Honshu, Japan, 7th June, 2009. Adults are aged by the uniform greater coverts and tertials, which lack pale or rufous tips. Some adult females show a hint of blue on the nape and mantle, like this bird, although most lack this and appear rather drab grey-brown.

of blue on the nape and mantle. This is never as pronounced as that on the rump, uppertail-coverts and tail, which vary in colour from bright blue (similar to that of an adult male) to a much duller blue-grey. The greater coverts and tertials are all of the same age and appear uniform brown, lacking any pale or rufous tips.

#### *First-winter male*

The extent of the post-juvenile moult is quite variable in males. Nonetheless, all show at least some bright blue on the rump, uppertail-coverts, tail, lesser and median coverts, and scapulars. Some birds retain all of their juvenile greater coverts but more advanced birds show obvious contrast between replaced inner and rufous-brown juvenile outer greater coverts, as well as unmoulted, brown-edged primaries and secondaries, and appear blue above. Such birds still show a buff wash to the throat and breast, and some scalloping to the throat and upper breast, until the pre-breeding body moult in spring.

#### *First-summer male*

Following the pre-breeding body moult, first-summer males resemble adult males, but the retained juvenile primaries and secondaries are brown-edged and contrast with the blue upperparts and wing coverts.

#### *First-winter female*

First-winter females usually lack all traces of blue in the plumage. Like first-winter males, they may show moult contrast in the greater coverts, juvenile feathers having a distinct buff or rufous fringe. They differ from first-winter males by their uniform dark brown upperparts, including the rump, uppertail-coverts and tail. Such birds are also often quite dark on the throat and breast but still show darker scalloping on the upper breast.



Paul J. Leader

**306.** First-winter male Siberian Blue Robin *Luscinia cyane*, Hong Kong, China, 22nd September 2005. First-winter males lack the distinctive appearance of adult and first-summer males, and instead show a buff wash and some scalloping to the throat and breast, which are retained until the pre-breeding body moult in spring.

Moult contrast in the greater coverts, with two retained juvenile feathers, provides further evidence of its age.



Paul J. Leader

**307.** First-winter male Siberian Blue Robin *Luscinia cyane*, Hong Kong, China, 10th September 2003.

The extent of blue in the upperparts varies individually. All first-winter males show at least some bright blue on the rump, uppertail-coverts, tail, lesser and median coverts, and scapulars, but compared with the bird in plate 306, this individual shows much less blue on the mantle, scapulars and wing coverts. The extent of post-juvenile moult varies individually too; this bird has replaced only two inner greater coverts.

Paul J. Leader



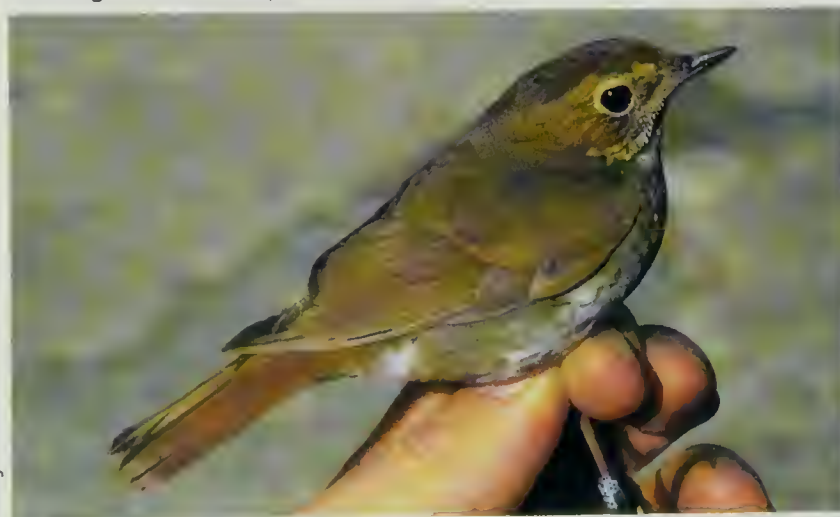
308. First-winter female Siberian Blue Robin *Luscinia cyane*, Hong Kong, China, 7th September 2002. First-winter females usually show uniform dark brown upperparts, including the rump, uppertail-coverts and tail, and lack all traces of blue in the plumage. Like first-winter males, they usually show moult contrast in the greater coverts.

Paul J. Leader



309. Adult Rufous-tailed Robin *Luscinia sibilans*, Hong Kong, China, 4th November 2007. Tail shape and lack of moult contrast in the greater coverts provide the best means of separating adults and first-winters. Males and females of all ages cannot be separated on plumage and biometrics, even in the hand.

Paul J. Leader



310. First-winter Rufous-tailed Robin *Luscinia sibilans*, Hong Kong, China, 11th November 2002. This individual has retained most of its pale-tipped, juvenile greater coverts, which contrast with the plain adult-type feathers. These pale tips often extend as a rufous fringe along the outer web of each greater covert.

### Rufous-tailed Robin

This species appears to lack any sex-related differences in appearance, and there is very little variation between first-winter and adult plumages. Some older references (e.g. La Touche 1925–30) suggested that males have brighter tails than females, and while this may explain the variation in tail colour in this species, this has yet to be confirmed.

### Age-related differences

#### Adult male and female

The lack of moult contrast in the greater coverts (which appear uniform brown, as do the tertials) and the tail-feather shape are the main criteria for ageing.

#### First-winter

First-winters usually retain at least some juvenile greater coverts until the first complete moult, when they are approximately 12 months old. Juvenile greater coverts are brown with a rich buff tip and, frequently, a rufous fringe along the outer web of each covert. First-winters may also show tiny pale tips to the lesser/median coverts and/or the tertials. Any moulted adult-type greater coverts will show contrast with retained (pale-tipped) juvenile coverts.

### Red-flanked Bluetail

With the exception of adult males, Red-flanked Bluetails can be difficult to age and sex accurately, particularly in autumn. Many are simply referred to as 'female or first-winter', even in regions where they occur commonly, which partly reflects the limited nature of the literature but also the subtleties of some of the characters and the diffi-

culties of seeing the most useful features well.

Unlike Siberian Ruby-throat, Red-flanked Bluetail is not faithful to particular wintering sites in Hong Kong and much of the detail provided below is based upon the application of 'first principles' towards ageing and sexing. However, all the features mentioned here were discussed with Yoshimistu Shigeta, who is familiar with Red-flanked Bluetails on the breeding grounds, having handled several hundred recaptured birds of known age. Consequently, the criteria outlined below are believed to be valid and robust.

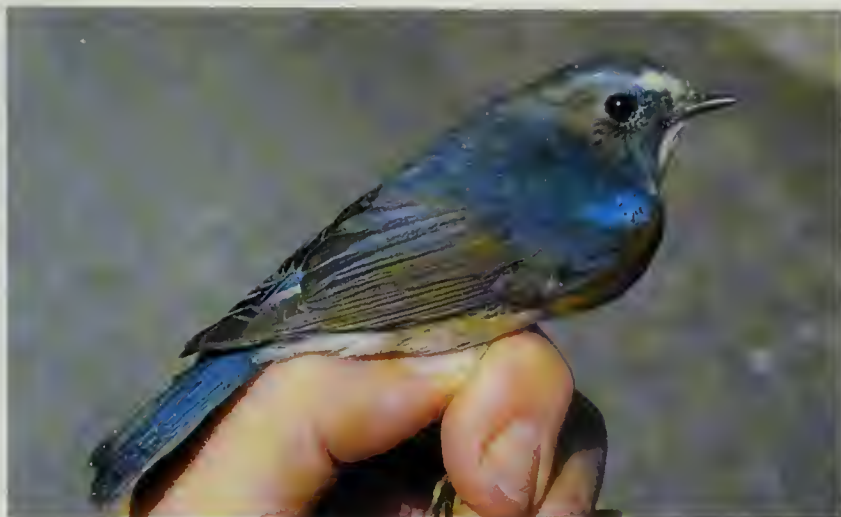
#### Age- and sex-related differences

##### Adult male

Adult males are unmistakable, with bright blue upperparts and tail, a narrow white throat and orange flanks. One particularly variable feature of adult males is the colour of the primaries and secondaries, especially the outer webs. Many show a mixture of brown and blue outer webs to the primaries, and very few birds show either entirely blue or entirely brown primaries. Breeding birds in Japan show only individual, not age-related variation (Y. Shigeta *in litt.*), and all adult males trapped in Hong Kong have shown extensive individual variation in this feature (but not in other age-related features). Cramp *et al.* (1988) suggested that adult males occur in two colour morphs (blue – the typical male, and brown – which resembles the adult female) but there is no evidence for this, and it may relate to confusion with first-year males that breed in a female-like plumage.

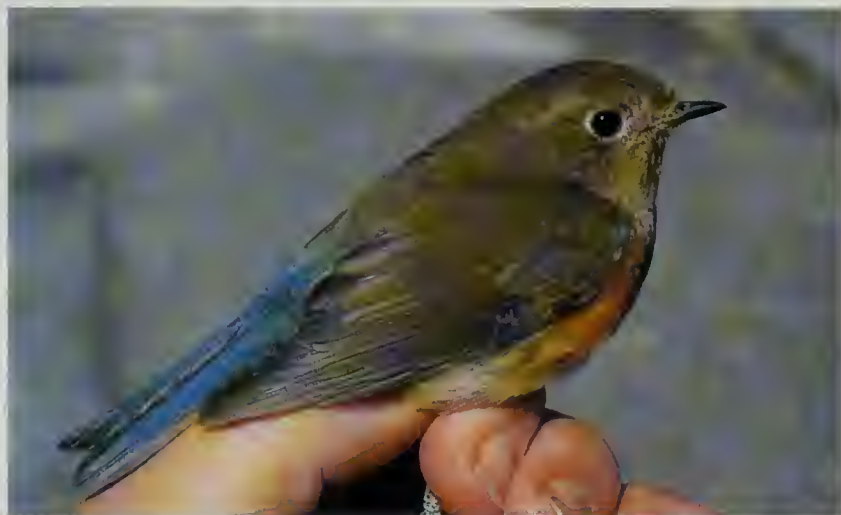
##### Adult female

Adult females are typically brown above with contrasting blue rump, uppertail-coverts and tail, and they are difficult to separate from first-



Paul J. Leader

**311.** Adult male Red-flanked Bluetail *Tarsiger cyanurus*, Hong Kong, China, 12th December 2000. Adult males are unmistakable, with bright blue upperparts and tail, a narrow white throat and orange flanks. There is variability in colour and extent of blue on the outer webs of the primaries: many show a mixture of brown and blue outer webs to the primaries, and very few show either entirely blue or entirely brown primaries.



Paul J. Leader

**312.** Adult female Red-flanked Bluetail *Tarsiger cyanurus*, Hong Kong, China, 12th December 2000. Adult females are particularly difficult to separate from first-winters of either sex. Differences in tail-feather shape provide the most reliable means of ageing. Supporting features include a uniform outer web to the greater coverts that contrasts with a darker inner web, and unmarked tertials.

winters of either sex. They typically show a uniform outer web to the greater coverts (which contrasts with the darker inner web when visible) and plain tertials (see below for first-winters). Very occasionally, they also show blue on the lesser coverts and/or scapulars.

In the hand, adult females are readily separable from first-winters by the shape of the tail-feather tips: broad and rounded on adults and narrow and more pointed on first-winters.

##### First-winter male

Tail-feather shape (see above) is the single most reliable criterion for separating first-winters from adults. First-winter males otherwise

Paul J. Leader



**313.** First-winter male Red-flanked Bluetail *Tarsiger cyanurus*, Hong Kong, China, 23rd December 2000. This bird closely resembles the adult female in plate 312, but can be aged by the slightly narrower and more pointed tips to the tail feathers, while the pale-fringed tertials are perhaps slightly more pointed, and a diffuse, pale buff fringe forms a very subtle wing-bar along the tips of the outer greater coverts.

Paul J. Leader



**314.** First-winter Red-flanked Bluetail *Tarsiger cyanurus*, Hong Kong, China, 20th November 1999. This first-winter, thought to be a female, has poorly marked pale tips to the greater coverts but was aged using tail-feather shape.

Paul J. Leader



**315.** First-winter Red-flanked Bluetail *Tarsiger cyanurus*, Hong Kong, China, 23rd December 2000. This first-winter shows extremely pronounced pale tips to the greater coverts.

closely resemble adult females, but show either a small pale spot at the tip of each greater covert or, more commonly, a pale buff fringe. In the latter case, the buff fringes form a subtle wing-bar, but this may be extremely diffuse and many birds are not easily aged using this feature. The tertials are also usually pale-fringed, and are subtly more pointed than those of adults.

A small proportion of first-winter males show blue on the lesser coverts and/or scapulars; rarely, some adult females also show this. Consequently, lesser-covert and/or scapular colour cannot be relied upon in isolation to age birds showing this feature as first-winter males.

#### *First-winter female*

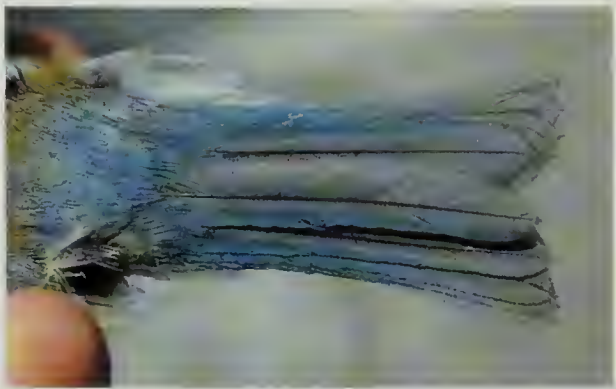
Again, tail-feather shape is the most reliable feature to distinguish adults from first-winters. Separation of first-winter males and females is extremely difficult and in some cases impossible. First-winter females tend to have slightly paler, greyer tail feathers than males and, although there is some overlap, first-winters with pale grey-blue tails (see plate 319) can be safely sexed as females. Furthermore, first-winter females do not show blue on the lesser coverts or scapulars. The majority of first-winters cannot be sexed, even in the hand (table 2).

#### *Biometrics*

Although there is some overlap, adult males tend to be slightly larger than adult females (table 2). It can also be seen that the wing length of first-winter males is consider-



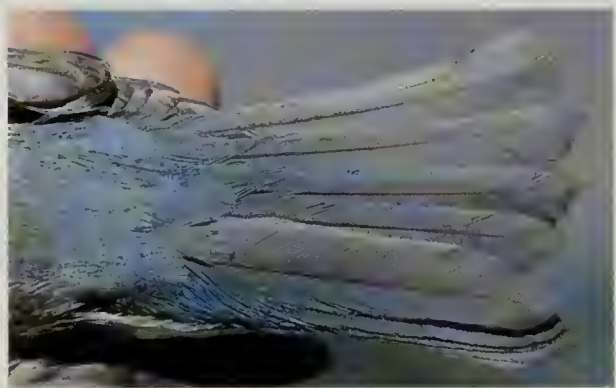
**316.** Adult male Red-flanked Bluetail *Tarsiger cyanurus*, Hong Kong, China, 20th December 2000. Note the broad, rounded shape to the feather tips, which is particularly obvious on the central pair of tail feathers.



**317.** Adult female Red-flanked Bluetail *Tarsiger cyanurus*, Hong Kong, China, 20th December 2000. The tail feathers of Red-flanked Bluetail are generally more pointed than those of *Luscinia* chats. Although the tail feathers of this adult appear quite pointed, the central pair are wider at the tip, and slightly more rounded, than those of a first-winter.



**318.** First-winter male Red-flanked Bluetail *Tarsiger cyanurus*, Hong Kong, China, 14th November 1999. Compared to those of the adults in plates 316 and 317, the individual rectrices of this first-winter have narrower and more pointed tips, particularly the central pair.



**319.** First-winter female Red-flanked Bluetail *Tarsiger cyanurus*, Hong Kong, China, 23rd December 1999. The tail of this first-winter female shows a slight greyish cast to the blue feathering, which males lack. Tail shape as for first-winter male (see plate 318).

**Table 2.** Wing length (mm) of Red-flanked Bluetails *Tarsiger cyanurus* trapped in Hong Kong, 1989–2005.

Red-flanked Bluetail	Max.	Min.	Mean	n
Adult male	85	77	80.6	82
Adult female	83	71	77.8	157
First-winter male	82	72	78.4	100
First-winter (unsexed)	82	73	77.2	295

ably shorter than that of adult males and overlaps with that of all unsexed birds, confirming that first-winter birds cannot be safely sexed using wing length.

#### Acknowledgments

I would like to thank Yoshimistu Shigeta of the Yamashina Institute for Ornithology, Japan, for his assistance and comments on aspects of ageing chats during the breeding season.

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From the Rarities Committee's files

# Identification of Dark-breasted Barn Owl in Britain

*Paul R. French*

**ABSTRACT** A BBRC review of the identification criteria of 'Dark-breasted Barn Owls' *Tyto alba guttata* concluded that only those birds with completely buff underparts were safely identifiable as *guttata*. Many British claims of *guttata* show varying amounts of white below, and are thought to originate from the wide intergrade zone between *guttata* and nominate *alba*, although variation within *alba* may also account for some darker-breasted birds.

This paper forms the basis for assessing future claims of *guttata*. Observers and county records committees are encouraged to apply these criteria to previous records where possible.



## *Introduction*

The dark-breasted form of the Barn Owl *Tyto alba guttata* [hereafter *guttata*] has for many years occurred in Britain as a vagrant. Although none of the world's races of Barn Owls has yet been found to be migratory, dispersal of continental *guttata* is more pronounced (e.g. over 54% of recoveries of chicks ringed in a German study were found more than 50 km from the natal site; Bairlein 1985) than that of British (white-breasted) *T. a. alba* [hereafter *alba*], individuals of which on average move some 12 km from their natal site (Wernham *et al.* 2002). In those years when good breeding success is followed by a widespread crash in vole *Microtus* populations (a key element of the species' diet), a marked increase in the dispersal of *guttata* is evident, and the Germans have even applied the phrase 'Wanderjahren' to such years.

The range of *guttata* encompasses southern Sweden (although it now may be extinct there),

Denmark, the Netherlands, Germany, Poland, western Russia, Austria, Hungary, Switzerland and Bulgaria (Bunn *et al.* 1982; Mátics & Hoffmann 2002) or, more specifically, to the east of the 3°C January isotherm in central Europe (Hagemeijer & Blair 1997). Nominate *alba* is found in Britain, western and southern France, Iberia, Switzerland, Italy and North Africa (Bunn *et al.* 1982). A zone of intergradation is found in eastern France, the Netherlands, Belgium, western Germany, central Switzerland, Hungary and the central Balkan area (*BWP*). There is extensive interbreeding between the two races in these areas, resulting in birds of somewhat variable appearance, with the depth and distribution of colour varying individually. When combined with the plumage variability inherent in all Barn Owl races, this presents considerable problems when it comes to assessing the racial identification of vagrants.

Kehoe (2006) included *guttata* in the list of

taxa thought to be sufficiently rare in Britain to be considered by BBRC. Following that report, BBRC set out to establish whether *guttata* was identifiable out of range and to come up with a set of criteria against which future records could be assessed, and this paper presents a summary of the findings. A review of past records of *guttata* is beyond the scope of this paper, but observers and county recorders are encouraged to submit past records to BBRC that are thought to meet the acceptance criteria.

### Identification

#### White-breasted Barn Owl

The first step towards identifying *guttata* in Britain is to become fully familiar with the resident population of nominate *alba*. The majority of *alba* should be easily separable from *guttata*. Nonetheless, it should be borne in mind that there is considerable variation within *alba*, and that the sexes may also differ markedly. On average, males are paler than females, and many individuals have unmarked silky white underparts, yellowish-toned upperparts, pale sides to the neck and pale remiges and rectrices. Females can look similar to males, but are usually slightly darker above with more grey markings, have more extensive black spotting below and show darker and more barred remiges and rectrices. They also usually show a buff wash to the upper breast. The ratio of grey to buff on the upperparts is approximately equal for the darkest females. Dark spots can extend from the neck sides down onto the breast, belly and flanks, and even onto the thighs and feathered tarsi. The underwing-coverts may also be spotted. The buff wash to the upper breast varies in extent, but is usually not as dark as on *guttata*. The belly is invariably white, as are the thighs on the vast majority of birds (perhaps all). Importantly, the facial disc is always predominantly white, with darker markings restricted to the area immediately in front of the eye.

#### Dark-breasted Barn Owl

A 'classic' *guttata* is extremely distinctive, and should cause no real identification problems. The base colour to the upperparts is a deep, rich buff. This may be strongest on the scapulars, wing-



Neil Smith

320. White-breasted Barn Owl *Tyto alba alba*, Lincolnshire, July 2009. A classic *alba*: note the mostly unmarked, silky white underparts, particularly the belly and thighs, and the largely white facial disc, darker markings being restricted to the area immediately in front of the eye.



Paul French © NHM, Tring

321. White-breasted Barn Owls *Tyto alba alba*, one ringed as a chick in 2004 in Yorkshire (left), one collected in Co. Meath. Note the extensive buff wash to the breast of the Yorkshire bird, and the faint buff wash and extensive spotting of the Irish bird. Birds similar to these in Britain have been thought to be *guttata* in the past.

Günter Bachmeier



322. Dark-breasted Barn Owl *Tyto alba guttata*, Bavaria, Germany, March 2002. This is a classic *guttata* with the deep buff of the underparts extending onto the feathered tarsi. In addition, note the liberal spotting across the breast, the predominantly grey scapulars, the dark markings around the eyes radiating across the facial disc and the dark grey tips to the primaries.

coverts and remiges and contrasts with the more yellowish hues of many *alba*. Dark grey marbling covers more than half of the upperparts of *guttata*, typically two-thirds or more. The grey is especially dense and prominent on the crown, where it may be the only colour (rarely the case in all but the darkest *alba*). Individual variation is marked, and some birds show almost solidly grey mantle, scapulars and coverts. Dark buff wraps around the sides of the head and onto the breast, extending down across the entire underparts, including the belly, feathered tarsi, undertail- and underwing-coverts. It may be darkest on the breast, but is generally fairly uniform in intensity over the underparts. Any bird showing an obvious contrast between dark breast and pale belly is not *guttata*. The underparts of both sexes are liberally spotted, unlike those of most *alba*. The size and intensity of spotting does vary, but should at least be present.

The two races differ consistently in facial pattern. In particular, *guttata* shows a prominent dark surround to the eye; this can be almost purplish in colour, and radiates outwards from the eyes to cover varying amounts of the facial disc. This seems to be present on all *guttata* to some degree, but appears less prominent among individuals from the western parts of the range. The edge of the facial disc is also darker in *guttata*, on average.

Michiel Schaap (www.michielschaap.nl)



323. Dark-breasted Barn Owl *Tyto alba guttata*, Gelderland, the Netherlands, July 2005. This brood of four juveniles illustrates that there is some variation among *guttata*. Note that the bird on the far right has more extensive dark markings around the eyes compared with the other three. This may be primarily sex-related, as females are on average slightly darker and more heavily spotted.



Chris van Rijswijk (www.birdshooting.nl)

**324.** Dark-breasted Barn Owl *Tyto alba guttata*, the Netherlands, July 2004.

A good example of *guttata*, this bird exhibits extensive dark spotting across the entire underparts and underwing-coverts. The legs and undertail-coverts are buff.

Another useful distinction between the two races is the pattern of the remiges. The primaries of *guttata* have prominent dark grey tips and, on the closed wing, these form a well-marked line of dark grey that is much more distinctive than in *alba*. Furthermore, the cross bars on the primaries are usually darker and more extensive in *guttata*, typically extending right across the feather, a pattern which is not

usually found in *alba*; this is often apparent in photographs of birds in flight. At present, there are no known differences between the vocalisations of *alba* and *guttata*, although research into this is continuing (Mark Constantine and Arnoud van den Berg pers. comm.).

The type specimen of *guttata* (plates 327–329) was collected in eastern Germany by Brehm in 1831. It is slightly paler than the ‘classic’ (dark) *guttata* specimens from Germany held in the Natural History Museum (NHM) at Tring, and these

darker birds seem prevalent in the core parts of the range.

#### *Intergrades*

There has been discussion and confusion over the identification of vagrant *guttata* in Britain for many years and, as a consequence, inconsistent recording. Just how extensive does the buff on the underparts have to be before a Barn Owl can safely be identified as *guttata*? In a study on Barn Owls in Hungary, Mátics & Hoffmann (2002) classified those birds with entirely buff-coloured underparts as *guttata* while only those with entirely white underparts were attributed to *alba*. Experience in Britain shows that *alba* can in fact show buff tones to the upper breast at least, but reference to the original type



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**325.** Comparison of underparts of Dark-breasted Barn Owl *Tyto alba guttata*. This tray contains 12 *guttata* specimens from Germany, chosen at random from the NHM collection. The extent of buff underneath is consistent, apart from on the bottom right-hand bird. This individual clearly lacks buff below, but is heavily spotted. Its origin and identity are open to debate, but it does illustrate the potential for confusion in all parts of the Barn Owl’s range.



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**326.** Upperparts of Dark-breasted Barn Owl *Tyto alba guttata*, same birds as lower six in plate 325. Note the subtle variation in the extent and intensity of grey above. The ‘white *guttata*’ is still the bird on the far right, but in this view it is impossible to pick out.

Margaret Hart © Ornithology Dept, AMNH



Margaret Hart © Ornithology Dept, AMNH



Margaret Hart © Ornithology Dept, AMNH



327–329. The type specimen of Dark-breasted Barn Owl *Tyto alba guttata* was collected at Altenburg, Germany (c. 80 km west of Dresden), and is beginning to show its age, but the main features are still visible. The dark surround to the eyes is most intense immediately next to the eye (as in nominate *alba*), but then radiates out across the facial disc. The underparts are slightly paler buff than on *guttata* in the NHM, and they are also more lightly spotted. Note, however, that the buff extends all the way down the belly and onto the feathered tarsi. The upperparts are heavily marked with grey, although not as extensive as on most other *guttata*. The dishevelled state of the upper mantle makes it hard to be certain what it looked like in life. Note the strong barring on the tail.

specimen (plates 327–329) and to birds in the core range of *guttata* suggests that their definition holds water. The main problem, however, is the extensive zone of intergradation and the variability of intergrades, many of which look confusingly similar to *guttata*. The key areas to concentrate on are the legs and the belly/undertail area. Pure *guttata* will be buff in these areas, while intergrades will be white. Other key points to note include the exact extent of dark around the eyes, the exact base colour to the upperparts and the extent of grey marbling above.

In parts of continental western Europe, particularly from the Netherlands south to France, intergrades are common and widespread (*BWP*), while studies in Hungary have shown that the transition zone between *alba* and *guttata* there is at least 500 km wide (Mátics & Hoffmann 2002). Many British records of *guttata* probably originate from intergrade zones in western Europe, and this is borne out by ringing recoveries. Of the 18 foreign-ringed Barn Owls recovered in Britain, ten were ringed in the Netherlands, five in Germany, one in Denmark and two in Belgium (Mark Grantham, BTO Ringing Scheme *in litt.*). It is possible that the Barn Owl population in East Anglia contains a small number of immigrants from the near continent that remain to breed, and the instance of a female *guttata* found nesting in Norfolk and subsequently



Graham Catley



Graham Catley

**330 & 331.** Barn Owl *Tyto alba*, Lincolnshire, 2008. This interesting bird is either a fairly dark *alba*, almost certainly a female, or an intergrade. The darker remiges have quite prominent barring, while the darker buff of the neck sides extends onto the upper breast and then fades into pale buff across the lower breast. Small dark spots extend down the flanks and onto the underwing-coverts. Note the obvious contrast between the white thighs and undertail-coverts with the rest of the underparts in the top photo. In the lower photo, with a slightly different background and light conditions, note how the underparts appear deeper and more uniformly buff. Although hard to see from this angle, this bird also showed extensive grey markings to the crown and mantle. This individual might even have been identified as *guttata* by inexperienced observers in brief views. It illustrates the difficulties in applying a name to every individual.

Paul French © NHM, Tring



332. Comparison of primary-tip coloration between *alba*, *guttata* and an intergrade. The two specimens on the left are *alba*, the two on the right are *guttata* and the bird in the middle is an intergrade. Note the darker primary tips of *guttata*.

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333. Comparison of five intergrades between *alba* and *guttata*. All of these specimens originate from France. The amount of buff is variable, as is the quantity and prominence of spotting. All the specimens have variable amounts of white on the underparts, but this collection shows just how difficult this may be to see.

Kevin Durose



334. Barn Owl *Tyto alba*, Crowland, Lincolnshire, March 2009. This striking bird shows extensive buff underparts but, crucially, has white legs and undertail-coverts. The observers were rightly cautious of identifying this bird as a *guttata*, but other birds very similar to this have been recorded as such in the past. Birds like this occur in eastern England with some regularity, and it could be that genuine *guttata* that remain to breed produce offspring like this, perhaps for several generations.

found dead (in 2008) reinforces this. That bird had been ringed on 4th June 2007 as one of six chicks in a nest at Bingerden, near Doesburg, Overijssel, the Netherlands (<http://www.birdguides.com/webzine/article.asp?a=1378>). Barn Owls are largely nocturnal and inhabit farmland areas on which few birders concentrate, so there could be more dark birds in eastern England than we realise. There is also a potential problem related to the previously unrestricted release of captive-bred Barn Owls into the British countryside. The ancestry of these birds is unknown and it is quite possible that intergrades or even *guttata* were released.

It would be interesting to collate all sightings of presumed intergrades, to find out just how common they are, to see whether any kind of occurrence pattern is emerging, and whether conditions in East Anglia favour darker birds compared with other parts of Britain (for example, factors such as the relative abundance of mice and voles, climate and proximity to the continent may all play a role). The key difficulty, of course, is in determining the dividing line between a dark *alba* and an intergrade, and plates 330 & 331 illustrate one such difficult individual.

*Taxonomy and discussion*  
Considering that *alba* and *guttata* interbreed across a large area, and intergrades of variable appearance are common, any future split seems unlikely. Even the recent nine-way split of

Barn Owl (Konig & Weick 2008) retained *guttata* as a race of *alba*.

Work recently undertaken in central Europe has demonstrated that pairing between the two races is random and that mixed pairings may produce offspring which resemble pure individuals of either race (Mátics & Hoffmann 2002), which helps to explain the extensive intergrade zone described previously. This, together with the fact that at least one pair of (apparently) pure *alba* in Britain has produced dark-breasted offspring (French 2006), calls into question the true status of *guttata* and whether it is possible to identify it safely in the field outside the core breeding range. Roulin (2004) showed that diet differs significantly between the two races, both in sympatry and in allopatry, with *guttata* feeding mostly on Common Voles *Microtus arvalis* and *alba* mainly on mice *Apodemus*. A consistent difference in prey selection such as this may be sufficient to maintain the status quo regarding the distribution of the two races. Interestingly, *guttata* also seems to be more strictly nocturnal than *alba* (Alan Ball pers. comm.) and that could be linked to the activity pattern of favoured prey. In other species, different colour morphs have been shown to maintain different feeding strategies, for example Pacific Reef Herons *Egretta sacra*



Nigel Blake



Nigel Blake

**335 & 336.** Barn Owl *Tyto alba*, Welney, Norfolk, March 2003. This presumed intergrade was identified as *guttata* at the time. However, despite the bird having a buff breast and belly and extensive grey on the upperparts, the legs, undertail- and underwing-coverts remain white, while the dark surround to the eyes is quite limited and the barring of the primaries is narrow and indistinct. This is a good example of an intergrade at the *guttata* end of the scale. Similar birds may account for a significant number of published British records of *guttata*.

(Rohwer 1990). Whether this is sufficient to maintain subspecies status rather than simply treating as different colour morphs is open to debate and beyond the scope of this paper.

#### Concluding comments

Although it is not in doubt that pure *guttata* does occur in Britain occasionally, it does seem that records are somewhat less common than currently thought. Intergrades may make up a significant proportion of migrant Barn Owls from the near continent and, indeed, some claims of *guttata* may even be of birds within the variation shown by *alba*. Nonetheless, *guttata* is identifiable in the field providing that the following key features are seen (and described or photographed) well, preferably in a variety of light conditions and ideally with some or all of the supplementary features described also.

#### Key features of *guttata*

1. Dark buff underparts, extending right down onto belly, legs and undertail.
2. Extensive dark markings around the eye, spreading out across the facial disc.
3. Extensive grey markings over the entire

upperparts, with clearly more grey than buff visible.

#### Supplementary features

4. Mostly (preferably all-) grey crown.
5. Bold dark bars across the outer primaries.
6. Dark grey tips to the primaries.
7. A darker brown edge to the facial disc.

BBRC's view is that a pragmatic approach is to accept records of birds clearly showing all the key features of *guttata* listed above, and to treat those records that fall short on one or two features as probable intergrades. This effectively ignores the (admittedly small) possibility that an acceptable *guttata* could have been born in Britain to non-*guttata* parents, but at the present time this approach seems most realistic.

#### Acknowledgments

I would like to thank Mark Adams and Katrina Cook at NHM for allowing access to specimens, and Margaret Hart and Paul Sweet in the ornithology department of the American Museum of Natural History (AMNH) for providing images of the type specimen of *guttata*. Chris van Rijswijk supplied many photos of Dutch *guttata* and intergrades, and much useful discussion. Alan Ball and Kevin Durose provided very useful comments on darker-breasted *alba* in Lincolnshire. Several BBRC members, in



337. Barn Owls *Tyto alba*, Gelderland, the Netherlands, June 2007. This brood of intergrades all show strong buff coloration to the upper breast, which contrasts sharply with the whitish belly, and dense black spotting. Birds like this occur regularly on the near continent. This brood was raised at the same nest-site as the brood shown in plate 323 and it seems likely that one of the *guttata* parents was subsequently replaced by an intergrade.



Michiel Schaap (www.michielschaap.nl)

**338.** Dark-breasted Barn Owl *Tyto alba guttata*, Gelderland, the Netherlands, August 2008. The dark buff base colour to the coverts and primaries is evident, as is the extensive dark grey marbling to the scapulars. The dark grey primary tips form a distinctive line along the inner edge of the closed wing. The only white area on the face is immediately below the beak, with the rest of the facial disc suffused with purple-brown, strongest immediately around the eyes and then fading towards the outer edge.

particular Brian Small and Adam Rowlands, assisted with my work at NHM. Mark Constantine provided a stimulating discussion on owl vocalisations. Thanks also to Günter Bachmeier, Nigel Blake, Graham Catley, Kevin Durose, Michiel Schaap and Neil Smith for providing images for use here; and to Arnoud van den Berg, Dick Groenendijk and Willem van Rijswijk and all the photographers who have posted on various websites, particularly [www.birdpix.nl](http://www.birdpix.nl) and [www.birdfocus.nl](http://www.birdfocus.nl). Even though they have not been used here, images from these sites were consulted during the preparation of this paper.

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## Urban birds are lazy!

It may be something that you have long suspected: that urban birds, like their human counterparts, are inherently lazy! Thanks to the efforts of some 5,806 'citizen scientists' and subsequent analysis by BTO researchers, we now have the proof to support this seemingly controversial statement. The finding relates to the time at which birds first arrive at garden feeding stations during the winter. Rural populations of familiar species, such as Robin *Erithacus rubecula*, Blackbird *Turdus merula* and Greenfinch *Carduelis chloris*, were found to arrive at bird tables and hanging feeders several minutes earlier, on average, than their urban counterparts.

The research, carried out through the BTO Shortest Day Survey and in association with the *Today* programme on BBC Radio 4, set out to establish which birds arrived first at garden feeders in winter and why. Winter is a testing time for many small birds, low temperatures and long nights taking their toll on the energetic reserves that they can maintain. Lower temperatures mean that birds have to burn off more of their fat reserves in order to maintain their body temperature at a safe level, while longer nights extend the period over which the birds must survive without feeding. Consequently, many small birds are under pressure to replenish their reserves early in the morning. BTO researchers Nancy Ockendon, Sarah Davis and Mike Toms predicted that the time at which particular species arrived at garden feeding stations would be related to the amount of energy reserves lost overnight, balanced by other factors such as their ability to find and handle food in the low light conditions of dawn, roosting behaviour and habitat.

Participants in this online survey were asked to watch their garden feeding stations from before first light, noting down the time at which they could first see their bird feeders and then the arrival times of the first individual of each species. By looking at the pattern of arrival times across species, the researchers discovered a clear order, with Blackbird and Robin the first

to arrive (on average some 15–20 minutes after first light), followed by other species, and Greenfinch and Common Starling *Sturnus vulgaris* the last to arrive (roughly 45 minutes after first light). This pattern was examined in relation to eye size, testing the possibility that birds with bigger eyes relative to their body size would be able to forage earlier, and this was indeed the case: birds with larger eyes were able to start foraging earlier, implying that small birds are limited by their visual acuity around dawn.

The seemingly more surprising finding was that there were clear differences in arrival times between urban and rural populations. Why should urban populations of a particular species appear later than their rural counterparts? Well, a number of factors may operate differently between the two habitats. Urban areas are well known for the degree of light pollution, in the form of street and security lighting, but this would be expected to cause birds to rise earlier in the city, not later. Another factor is heat pollution – the waste heat escaping from factories, residential properties and other buildings can increase the temperature in urban areas by as much as 8°C, particularly in larger cities, compared with surrounding rural areas, creating what is known as an 'urban heat island'. Higher overnight temperatures mean that small birds roosting in urban areas use fewer fat reserves than their country cousins. And that means that urban populations can afford to be more leisurely come the morning, the need to replenish reserves being less urgent than for birds that have spent a colder night elsewhere.

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Mike Toms, Head of Garden Ecology

## Bird Atlas update on Spotted Flycatchers

During September, Spotted Flycatchers *Muscicapa striata* will be on the move towards their wintering grounds in Africa, south of the Sahara. Now is a good time to take stock of the records of Spotted Flycatchers received for the Bird Atlas and ask if we can plug any of the gaps in distribution. If you recorded Spotted Flycatchers breeding this summer, is there a dot in the 10-km square on the map? Confirming breeding Spotted Flycatchers is usually fairly straightforward – by observing adults carrying food for young or even locating a nest-site in a garden.

Long-term monitoring has shown that Spotted Flycatchers have declined by 86% between 1967 and 2006 in the UK, but how will this be reflected in the distribution of the species? Provisional data show that they are still widely distributed but there are now some quite large gaps appearing. In Ireland, the number of records received so far is low, which may in part reflect observer effort, but perhaps also genuine scarcity too. If you can fill in any gaps in distribution, please submit your records, either online at [www.birdatlas.net](http://www.birdatlas.net) or



**Fig. 1.** Provisional breeding distribution of Spotted Flycatcher *Muscicapa striata*. Three levels of breeding evidence are shown: possible (small dot), probable (medium dot) and confirmed (large dot).

via a Roving Record form from BTO (tel. 01842 750050).

*Dawn Balmer, Atlas Coordinator*

## The Lincolnshire Peregrines with a taste for game

On 1st July, a leg bearing a Belgian ring was found beneath a Peregrine Falcon *Falco peregrinus* nest on the church in Grantham, Lincolnshire. The remains were reported as those of a Common Quail *Coturnix coturnix*, which was met with some disbelief initially at the BTO. However, the Belgian Ringing Scheme quickly confirmed that it was an adult female Quail, ringed on 5th May 2009 at Tielt, 40 km inland of Oostende. Belgian ringers catch and

ring migrant Quails at night, and over 200 a year are caught at some sites. By contrast, in 100 years of ringing in Britain & Ireland, only 59 birds have been ringed in total, generating just two short-distance recoveries, and this is our first overseas movement.

More on this, and details of a British-ringed Hobby *F. subbuteo* found in a Spanish Peregrine nest, can be found on 'Demog Blog' at <http://btoringing.blogspot.com/>

This new feature will appear occasionally and its aim is to update *BB* readers with particular items of research or news from the BTO. We recognise that many *BB* readers are also BTO members, so shall try to include items that do not appear in *BTO News* or have a different angle from an article there. *Eds*

# Evidence for age-dependent migration strategies in the Short-toed Eagle

The Short-toed Eagle *Circaetus gallicus* is a summer visitor to central Italy, with a breeding population of at least 350 pairs (Baghino *et al.* 2009). Most pairs are concentrated along the Tyrrhenian coast flyway used by birds returning from African wintering grounds (Agostini *et al.* 2002b). Very few breed in southern Italy, despite the availability of suitable habitat, and it has been suggested that this distribution reflects the species' relatively recent colonisation of Italy (Campora & Cattaneo 2006; Agostini & Mellone 2008). On migration, most Italian breeders appear to follow a circuitous route rather than crossing the central Mediterranean, entering and departing Europe via the Strait of Gibraltar, and travelling through northwest Italy, France and Spain (Agostini *et al.* 2002a,b; Premuda 2004). For example, during 2005–07, c. 800 Short-toed Eagles, mostly adults, were observed annually migrating northwards along the Tyrrhenian coast at Mount Colegno during the second half of September (Premuda 2005, 2006, 2007).

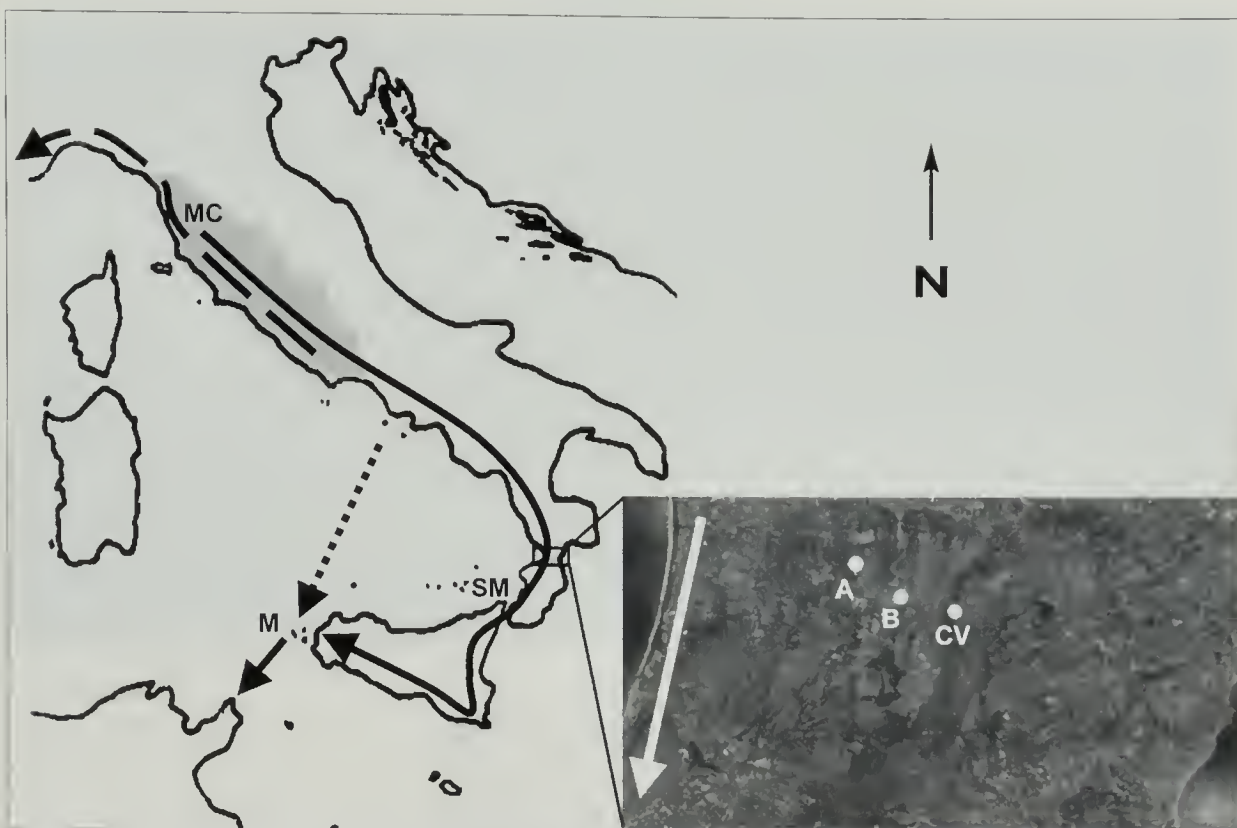
Since 2000, however, a regular passage of Short-toed Eagles has been noted each autumn moving south along the Central Mediterranean flyway. Many thousands of raptors follow this route, mostly Honey-buzzards *Pernis apivorus*, Marsh Harriers *Circus aeruginosus* and Black Kites *Milvus migrans*, which takes them south through the Italian Peninsula and Sicily before crossing the Mediterranean to North Africa. Many of these Short-toed Eagles cross the Mediterranean via Marettimo, a small, mountainous island some 30 km off western Sicily and 130 km northeast of Tunisia, at the narrowest point of the central Mediterranean. Passage of Short-toed Eagles at Marettimo occurs mostly during the first half of October (Agostini *et al.* 2002b, 2004b; Gustin & Provenza unpubl.) and most of the birds aged during preliminary observations have proved to be juveniles. Surveys of migrating raptors were carried out on Marettimo in 2002 (3rd–19th October) and 2007 (3rd–15th October).

In 2002, a total of 202 Short-toed Eagles was



Michele Panuccio

339. Raptor observation point, Marettimo, Italy, October 2007.



**Fig. 1.** The study area. **A** and **B**: watchpoints on the Calabrian Apennines used in this study. **CV**: watchpoint on the Calabrian Apennines used during surveys in 1990s. **SM**: Strait of Messina. **M**: Marettimo. **MC**: Mount Colegno. Grey area: approximate breeding range of Short-toed Eagles *Circaetus gallicus* in central Italy. Solid arrow: flyway hypothesised for juveniles in this study. Dashed arrow: flyway of adults en-route to the Strait of Gibraltar. Dotted arrow: alternative pathway of juveniles through the Tyrrhenian Sea, previously suggested by Agostini *et al.* (2004b).

recorded, in 16 flocks (of 2–49 birds, mean 12.2) plus seven single birds. Three flocks, of 2, 42 and 39 birds, left the island heading towards North Africa and one individual was seen to return towards Sicily. For the remaining birds it was not possible to establish the direction of departure. In 2007, 170 Short-toed Eagles were recorded, in 17 flocks (of 2–35 birds, mean 9.1) plus 16 single birds. Of these, flocks of three and 12 continued towards the Tunisian coast; flocks of 24 and four, plus two single birds remained on the island; two flocks, of 19 and 16 birds, flew back towards Sicily; and the direction of departure of the others was not recorded. Of the total of 372 individuals noted in these two years, it was possible to establish the age of 112: 89 (79%) were juveniles, 17 (15%) were immatures, and six (5%) were adults. In addition, during 2nd–15th October 2007, a total of eight migrating Short-toed Eagles, all travelling singly, was counted along the Calabrian Apennines, a migration bottleneck in southern continental Italy (fig. 1). Of these, six were aged: five were juveniles and one was an adult. Previous surveys in the area in the 1990s confirmed that this species is an uncommon migrant (Agostini & Logozzo 1997).

These results suggest that most of the Short-toed Eagles using the Central Mediterranean flyway in autumn are juveniles. Most adults use the Tyrrhenian coast flyway (as above), although some juveniles follow older birds along this route, in late September. However, many juveniles migrate later in the autumn, probably following the coast rather than the inland mountain chain (fig. 1) and migrating singly or in small, loose flocks, thus making monitoring difficult from observation posts along the Calabrian Apennines. It has been suggested that juveniles follow an innate north-east–southwest direction in autumn, leading them directly to western Sicily from breeding areas in north-central Italy, across the Tyrrhenian Sea. The hesitation shown by Short-toed Eagles at Marettimo when facing the open sea suggests that this is unlikely, however. Flocks over Marettimo probably build up as the birds wait for favourable weather conditions in western Sicily. After crossing the Strait of Messina and reaching the south coast of Sicily, juvenile Honey-buzzards make the 400-km sea crossing to Libya via Malta (Agostini *et al.* 2002c, 2004a), but Short-toed Eagles appear more likely to follow the coast to western Sicily,



340. Short-toed Eagles *Circaetus gallicus* migrating through Marettimo, Italy, October 2007.

where they wait for good weather before departing (fig. 1). On 12th October 2004, a migrating flock of 70 Short-toed Eagles was observed on the southwest coast of Sicily, c. 60 km southeast of Marettimo (Marchese unpubl. data).

We presume that birds returning to Italy in spring follow experienced birds – through northwest Africa, across the Strait of Gibraltar, and to breeding sites in Italy via Spain and France – which prefer the longer, but safer and easier route rather than using the Central Mediterranean flyway.

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# Notes

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## Goosanders taking bread

I can perhaps throw some light on the note by Robin Sellers (*Brit. Birds* 102: 279) regarding Goosanders *Mergus merganser* in Cumbria eating bread. It seems likely that these birds had previously visited Hogganfield Loch, in Glasgow. Goosanders have congregated at this loch in winter for the past 20 years or more, ranging from a few birds up to flocks of 150 or more. The larger flocks are usually present in autumn, when huge shoals of young Roach *Rutilus rutilus* are preyed upon, sometimes co-operatively.

Roach are attracted to the duck and swan feeding areas of the park when people throw bread into the water. When some of it falls to the loch bed, the Roach congregate to feed. Twenty years ago, Goosanders approached the edge of the loch cautiously and, if they were successful in catching a fish, quickly made off into open water. Gradually they learnt that they were not going to be molested and became increasingly bold. By 1995 this was regular practice each winter.

In due course it appeared that when the weather was coldest, fish were being ignored and the Goosanders were taking bread exclusively, fighting for crusts among the other waterfowl. Eventually they were seen regularly coming out of the water and competing for bread on land with other species (plates 341 & 342).

When competing for chunks of bread in the water, Goosanders are amazingly fast and will often run over the backs of Mute Swans *Cygnus olor* to grab a slice. In the winter and spring of 2008/09, c. 30 birds were

present and appeared to be happily eating bread most of the time, the long-term effects of which remain to be seen. Most of the 'redheads' appear to be immature males, with adult females being in a very small minority. One adult male has been hand-caught at Hogganfield and ringed.

Typically, when these Goosanders (some identified as the same individuals on the basis of distinctive moult patterns) venture to other lochs and waters in the area (e.g. Gadloch and Antermony Loch), they revert to becoming wild



Bernie Zonfrillo



Bernie Zonfrillo

341 & 342. Goosanders *Mergus merganser* and Mute Swans *Cygnus olor* at Hogganfield Loch, Glasgow, May 2009.

and unapproachable but will tag onto other ducks when fed bread, seemingly knowing that they are safe.

The bread-eating habit of Goosanders in Glasgow was reported briefly in the *1999 Scottish Bird Report* (Murray 2001) and referred to birds that had been seen taking bread on the River Kelvin in Glasgow, and also on the River Cart in Paisley. Most, if not all, of these birds would probably have spent some time at Hogganfield Loch, where this habit appears to have originated.

Smew *Mergellus albellus* have also been

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**EDITORIAL COMMENT** Steve Campbell also wrote to *BB* to report the predilection for bread of the Goosanders at Hogganfield and it will be interesting to see how widespread this behaviour might become. We shall not publish every incidence separately, but we encourage readers to let us know if they see Goosanders taking bread and we shall publish a summary in due course.

### Spring migration of Eurasian Bitterns

The recent item on visible migration of Eurasian Bitterns *Botaurus stellaris* (*Brit. Birds* 101: 692) recalled my own observations of the departure of wintering Bitterns at Winterset Reservoir, Yorkshire, where since 1993 up to five birds have wintered regularly in small *Phragmites* reedbeds, being present between October and March.

At 18.50 hrs on 12th March 1999, I observed a Bittern flying around the reservoir calling 'kau' repeatedly in the dusk light. At the time I did not realise the significance of what I had observed. Some years later it all became clearer when I observed several wintering Bitterns depart on spring migration in a similar fashion.

On 13th March 2002, two birds were roosting in the *Phragmites* at 18.35 hrs, as usual. At 18.40 hrs, one took flight and flew around in large circles, gradually gaining height and calling repeatedly. After five minutes, two Carrion Crows *Corvus corone* began to mob it and it quickly returned to the reedbed to roost. Both birds were still present on 16th March; at 18.45 hrs one took flight, calling, and was quickly followed by the second bird. Both birds flew around together in circles, gaining height and calling 'kau' repeatedly before they flew off high to the northeast, still calling, at 18.55 hrs, about 44 minutes after sunset.

On 19th March 2003, one Bittern emerged

recorded eating bread at Hogganfield Loch (Forrester *et al.* 2007) and, for the record, other diving ducks doing the same include Pochard *Aythya ferina*, Tufted Duck *A. fuligula*, Greater Scaup *A. marila* and Common Goldeneye *Bucephala clangula*.

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Murray, R.D. (ed.) 2001. *1999 Scottish Bird Report*. SOC, Edinburgh.

from the main reedbed at 18.55 hrs and was quickly joined by a second. Both circled higher and higher, calling repeatedly, then a third joined them briefly before dropping back into the reedbed to roost, while the original two flew off high to the east, still calling, at 19.05 hrs, around 49 minutes after sunset. On 20th March, one Bittern rose from the main reedbed at 18.55 hrs, circled higher and higher while calling repeatedly, and flew off east at 19.00 hrs, still calling, about 42 minutes after sunset.

On 15th March 2004, two Bitterns emerged from the reedbed at 18.45 hrs and attempted to gain height. Although it was a mild evening, a moderate to fresh southwesterly made it difficult for them to do so and at 18.50 hrs they flew off east at a moderate height, still calling, some 39 minutes after sunset.

On the basis of my observations, I fully support the views of Provost & Massez (2008), who suggested that co-ordinated watches at dusk might give us a better idea of how many Bitterns there are in Europe in winter. Bitterns are extremely difficult to find in reedbeds during the winter, even at sites like Winterset, where the reedbeds are small and scattered. It is impossible to know how many winter in large reedbeds like those at Minsmere (Suffolk), Stodmarsh (Kent), Blacktoft Sands (Yorkshire) and Leighton Moss (Lancashire) from casual

daytime observations, owing to the vast areas of reed involved and the birds' secretive nature.

Checking sites at dusk in spring, particularly in mid March, is an excellent way to locate Bitterns as they embark on spring migration. The birds are so vocal as they fly around prior to departure that they are readily picked up in the dusk light and can effectively be 'counted out' during the passage period from late February to early April. Mild evenings with light winds and clear skies provide the optimum conditions for

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departures but, as observed on 15th March 2004, birds will leave on windy evenings as long as conditions are mild and there is a following wind. Any site, large or small, can be checked, as long as the observer is there at the critical time of up to an hour after sunset.

#### Reference

Provost, P., & Massez, G. 2008. La migration pré-nuptiale du Butor étoilé [*Botaurus stellaris*] mise en évidence en France. *Ornithos* 15 (3): 181–186.

## More Peregrine kleptoparasitism

Following Simon King's note describing a Peregrine Falcon *Falco peregrinus* robbing a Hobby *F. subbuteo* (*Brit. Birds* 102: 406), the following may be of interest. During the autumn, both Peregrines and Merlins *F. columbarius* frequently hunt over the sea off Strumble Head, Pembrokeshire, in pursuit of diurnal migrants. On 17th October 1989, a

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Peregrine dashed out to sea to intercept a Merlin carrying a passerine in its talons. When the Peregrine closed in, the Merlin dropped its prey (which the larger bird caught adroitly and carried to land) before attempting evasive action. On 24th October 1996, an effectively identical event was witnessed at the same locality.

**EDITORIAL COMMENT** Nigel Collar has described a similar incident involving a Peregrine and a Merlin (see *Brit. Birds* 95: 142), and we should perhaps have added a comment to that effect as a postscript to Simon King's recent note. It seems worth putting Graham Rees's observations on record, however, as they support Nigel Collar's suggestion that such behaviour may not be exceptional.

## Stone-curlew feeding on Grass Snake

The Stone-curlew *Burhinus oedicnemus* is a regular breeding bird in Romania, with an estimated population of some 400–800 pairs (BirdLife International 2004). On 4th June 2008, I watched a Stone-curlew catch a juvenile Grass Snake *Natrix natrix* near its breeding site, in Dobrogea region (plate 343). The bird caught its prey in short grassland at the edge of a saltmarsh. It struggled with the snake for some time, but finally swallowed it. Taking the average bill length of c. 40 mm (BWP), I estimated the size of the snake at c. 250 mm. BWP confirms that the main diet of Stone-curlews is chiefly terrestrial invertebrates, especially beetles (Coleoptera), and small vertebrates, but snakes are

not mentioned, nor are they by Vaughan & Vaughan Jennings (2005). The species is clearly



Pavel Štěpánek

**343.** Stone-curlew *Burhinus oedicnemus* with Grass Snake *Natrix natrix*, Dobrogea region, Romania, June 2008.

a resourceful feeder though, since Vaughan & Vaughan Jennings (2005) included beached dolphins (Cetacea) and human corpses during the First World War as recorded food items!

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## Dark Collared Doves on St Kilda

On 27th May 2008, a strikingly dark-looking Collared Dove *Streptopelia decaocto* was seen with four others of normal appearance around the radar base on Hirta, St Kilda, Outer Hebrides. The difference in coloration between the dark bird and the others was considerable, and my first impression, at long distance, was that the bird might be a different species.

Small numbers of Collared Doves were recorded daily on Hirta between 20th May and

observed perching there for long, and both dark and normal birds were seen on the chimney. Furthermore, the fresh corpse of a dark Collared Dove found on 12th June bore no obvious traces of soot particles.

Rather than being darkened by loose particles, perhaps the birds' feathers had been permanently stained by emissions, either from the small chimney on Hirta or another source elsewhere. Dark Collared Doves have not been

recorded on St Kilda before, although the species has been recorded annually in small numbers since 1965, without breeding (Harris & Murray 1978; Murray 2002). The dark birds did not conform to descriptions of any unusual subspecies of Collared Dove, such as *S. d. intercedens* (Sri Lanka), *S. d. stolickzae* (central Asia) or *S. d. xanthocyclus* (Burma), none of which has ever been recorded as a vagrant to the UK (BWP; Gibbs *et al.* 2000; Forrester *et al.* 2007).



Will Miles

344. Dark Collared Dove *Streptopelia decaocto* (left), St Kilda, Outer Hebrides, June 2008.

28th June 2008 (plate 344), with a peak count of 12 on 2nd June. Between 28th May and 14th June, I saw several 'dark' birds, with a maximum of 4 together on 2nd June. These dark individuals were not seen daily, although typical birds were seen every day and, since the species was only ever encountered in a small area of the island, around the radar base, they were probably absent rather than unrecorded.

One possible explanation for the dark plumage could be that the birds had received a dusting of soot from the chimney of the small power station on the base, upon which the doves sometimes perched, yet birds were never

#### Acknowledgment

I am grateful to the National Trust for Scotland for support given to visitors to St Kilda.

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## Tawny Owl entering house via cat flap

In November 2008, I delivered nestboxes for Tawny Owls *Strix aluco* and Barn Owls *Tyto alba* to a house in Moreton-in-Marsh, Gloucestershire. In conversation with the householder, I was amazed to learn that the reason she wanted a Tawny Owl box was that, on more than one occasion, a Tawny Owl had entered her house through a cat flap on the front door. The large house was in a quiet part of the village, with adjacent woodland and a large garden with plenty of shrubbery. The cat flap was just a standard cat flap, roughly 20 cm square, situated low down on the front door. I was even shown a photograph of the Tawny Owl perched on a bookshelf in the living room! I am unaware of any similar behaviour by this species.



Photographer unknown

345. Tawny Owl *Strix aluco* resting in library, Gloucestershire, 2008.

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## Midwinter song of Black Redstarts in Cornwall

Black Redstarts *Phoenicurus ochruros* regularly overwinter in the Cornish town of Wadebridge, taking advantage of the relatively mild climate. During winter 2007/08, I was aware of at least four individuals in the town, two males, two females, each maintaining a fairly small winter territory (approx. 250 m × 100 m). One male, which I believe may have been the same individual returning for its fourth winter to the same territory (and present again in winter 2008/09), was heard singing on sunny days throughout winter 07/08, even before Christmas and daily during March. A duller male, perhaps a first-winter, maintained a territory in the centre of town, and was also heard singing on sunny

days throughout the winter. It was a surprise to me to discover birds singing in the depths of winter and I am not aware that this has been recorded in the UK before. The Wadebridge Black Redstarts usually leave the town in early April.



Colin Selway

346. Male Black Redstart *Phoenicurus ochruros*, Wadebridge, Cornwall, March 2008.

Colin Selway

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# Reviews

## THE BIRDWATCHER'S POCKET GUIDE TO BRITAIN AND IRELAND

By Peter Hayman and  
Rob Hume. Mitchell Beazley,  
London, 2008. 328 pages.  
ISBN 978-1-8453-343-5-2.  
Hardback, £9.99.

It is 30 years since *The Mitchell Beazley Birdwatcher's Pocket Guide* first appeared. At that time, at just 192 pages, it was widely welcomed as one of the best handy guides to British birds. So you might think that, with almost the same name, this book would simply be a reprint – but you'd be wrong.

Starting from scratch, Peter Hayman created a completely new set of illustrations for a much bigger Mitchell Beazley book entitled *Bird: the ultimate illustrated guide to the birds of Britain and Europe*. Co-produced with Rob Hume, that tome appeared in 2007 and included a CD of 250 bird sounds (see *Brit. Birds* 101: 218). This pocket book is a condensed version of that, including a concise descriptive text but without maps, seasonal information or recordings. It probably has more images per square centimetre than any other bird book I possess. In total, some 3,500 illustrations of around 430 species have been included.

## THE BIRDS OF BORNEO. BOU CHECKLIST SERIES 23.

By Clive F. Mann.  
British Ornithologists' Union &  
British Ornithologists' Club,  
2008. 456 pages; 68 colour  
photographs.  
ISBN 978-0-907446-28-6.  
Hardback, £50.00.

Borneo is a truly great place for birds. There are up to 50 endemic birds (depending on one's taxonomic inclinations), some of the most magnificent forests in the

This means that many species have been allotted only half a page, although some get a full page. The latter include birds that some people might say were easy to identify. But this is where Peter Hayman excels – he takes an 'easy' bird like the Corn Bunting *Emberiza calandra* and gives us no fewer than 12 illustrations of it to really convey the character of a species that many people think of as dull.

The book has the full range of European breeding species plus regular visitors but excludes most vagrants. The exception is Ring-billed Gull *Larus delawarensis*, although I would also have included Pectoral Sandpiper *Calidris melanotos* and Ring-necked Duck *Aythya collaris*. Although not mentioned in the index, Iberian Chiffchaff *Phylloscopus ibericus* is included on the Common Chiffchaff *P. collybita* page, and Scottish Crossbill *Loxia scotica* joins the rest of the Common Crossbill *L. curvirostra* complex.

Hayman's distinctive style is one that you either like or you don't. Every bird is illustrated facing the same way – and that's how I like to see them portrayed in field guides. Let's forget guides that are designed to make things look nice. A field guide is like a car manual: you need everything laid

out clearly so that you can see the detail to help you solve the problem. So each species is depicted on the ground or perched and in flight (often, but not always, from below). Both adult and immature plumages are shown in most cases – especially with the non-passerines. There is also close-up detail on tail patterns where this aids identification. Closely related similar species are briefly mentioned – often with a comparison sketch.

I found myself squinting at the pages. It's all a bit of a squeeze (9 cm × 19 cm) and the publisher could easily have used a larger page without losing the appeal of being pocket-sized. In addition, each family is introduced with a double page of general information and a generic photo, and I feel sure that users of the book would have happily dropped these pages to allow more space for the real meat.

At £9.99 this has to be the best value you can get in pocket guides, with 350 illustrations for every £1 spent. There will be some who remember Hayman's first Mitchell Beazley guide from 30 years ago and will think that they have now passed the days when such book will be of use to them. They may have improved their skills over the years, but then so has Hayman.

*Keith Betton*

world and, in Sabah, a good tourist infrastructure. Not surprisingly, Sabah is an increasingly popular destination for visiting birders and there is an ever-growing interest in birdwatching, at least in Malaysia, so the appearance of an up-to-date checklist of the birds of this wonderful island is to be welcomed.

The format of the BOU Checklists is now well established. In the current volume, a brief introductory section includes entries on the 'History of Borneo', 'Geography, Geology, Topography and Climate', 'Vegetation', 'Other Fauna', 'History of Ornithology in Borneo', 'The

Borneo Avifauna', and 'Bird Conservation'. These introductory sections are brief, with fewer than 20 pages of text, and 'Bird Conservation' is covered in just 22 lines!

The meat of the Checklist is, of course, the species accounts. These include world range, distribution in Borneo (broken down into the four political entities that occupy the island: Sarawak, Sabah, Kalimantan and Brunei), habitat and, where appropriate, breeding and taxonomic notes. The taxonomic approach is happily not too cautious. The author recognises Dulit Partridge *Rhizothera dulitensis*,

Bornean Frogmouth *Batrachostomus mixtus*, Black-headed Pitta *Pitta ussheri*, White-crowned Shama *Copsychus stricklandii* and Montane Blue-winged Leafbird *Chloropsis kinabaluensis*, but hedges his bets with Borneo Bulbul *Pycnonotus [melanicterus] montis*, Black-browed Babbler *Trichastoma perspicillatum*, Mulu Short-tailed Babbler *Trichastoma [malaccense] feriatum*, Bornean Black Laughingthrush *Garrulax [lugubris] calvus*, Bornean Whistling Thrush *Myophonus [glaucinus] borneensis* and Cream-bellied Munia *Lonchura pallidiventer*. Inevitably, the distributional sections are hard going, with a stream of data and references. Quite a few recent field observations are included but, inevitably, most visiting birders do not submit records to anyone and their data is thus lost to science. On a minor note, I found the copy-editing to be a little slipshod, with, for example, parentheses opened but not closed, which can obscure the sense of the material.

Unfortunately, and most probably owing to the editorial policy of the BOU Checklists, the species entries lack much of a feel for the birds. Too much reliance is placed on the list of records and the status codes (e.g. WVN for 'winter visitor

from north'). I would have liked to have seen a few introductory sentences that would really have painted a picture for the reader. Thus, for Whistling Hawk-cuckoo *Hierococcyx nasicolor*, a 'WVN', it would have added so much to have included something like: 'following the recent three-way split of Hodgson's Hawk-cuckoo *Hierococcyx fugax (sensu lato)*, is difficult or impossible to identify in the field. The very few records of birds trapped or collected suggest that it is a winter visitor, but its status and relative abundance compared to Javan *H. fugax* and Rufous Hawk-cuckoos *H. hyperythrus* remains uncertain.' There are a lot of other mysteries to be solved in Borneo, and the reader could so easily have been pointed to them and enthused to help solve them. Indeed, I would have liked to have seen much more input from the author; for example, he should not need to reference every statement of habitat, for surely he has a wealth of experience and can share it with us?

The colour plates depict a variety of habitats (42 photographs) and a selection of birds (26 photographs). The photographs are of good quality, but the birds are not labelled with place or date, and only nine depict endemic species. I do wonder why they are included at

all, however, for the habitat shots are mostly anonymous (one bit of tropical forest does look very much like another...) and this is not a field guide. The book is finished off with an extensive gazetteer and 31 pages of references.

This latest BOU Checklist has to be judged in the context of the other available literature, and Borneo is relatively well served. The gigantic fourth edition of Bertram Smythies's *Birds of Borneo*, completely revised and updated by Geoffrey Davison, appeared in 1999, while F. H. Sheldon *et al.* produced the very comprehensive *Ornithology of Sabah: history, gazetteer, annotated checklist, and bibliography*, in 2001. I appreciate that the BOU Checklists are, first and foremost, a collection of data, but I feel that an opportunity has been lost. With more of an input of the author's undoubted knowledge and experience of the Bornean avifauna and a more affordable price (perhaps facilitated by dropping the photographs and making it a softback), this checklist could have found its way into the backpack of every visiting birder, rather than just the shelves of a few libraries and bibliophiles.

Simon Harrap

ARCHIBALD THORBURN,  
ARTIST AND ILLUSTRATOR:  
THE PRINTS AND PROOFS  
1889–1934

By David Waters.  
Langford Press, Peterborough,  
2009. 181 pages; many  
colour illustrations.  
ISBN 978-1-904078-27-2.  
Hardback, £38.00.

Thorburn enthusiast David Waters set himself the task of researching and cataloguing all the prints and artist's proofs ever issued featuring the work of Archibald Thorburn, the great wildlife painter who was most prolific between the late 1880s and his death in 1935. A good many are beautifully reproduced here and

make up the bulk of this book, which is a treasure trove for the Thorburn buff. The subjects are mainly gamebirds, since Thorburn's typical patrons were the landed gentry and the well-to-do country-sport fraternity; for most 'ordinary' people, the price of the prints was well beyond their means.

David Waters emphasises that this is not a biography of the great man but he presents many small details, insights and observations. I was immediately hooked by the mass of chronological, historical detail of the print runs, printing methods, publishers and costs and found it hard to put down; I have to say that I was absorbed. How very pleasant it is to learn the history of the development of the mechanical printing process via

Thorburn's print output; for me a happy combination.

Thorburn knew his market and exploited it thoroughly, taking advantage of the revolution in print, and became a very successful man. He reused favourite postures again and again, in order to keep up with demand for his work, and there are some shapes (that partridge/grouse one, rump on, with head turned slightly to one side) that he could surely draw in his sleep. That is not to deride his work, he painted to the market and without doubt he remains one of the greats. While his ducks and, in particular, his flying birds are not as great as my boyhood memories suggest (and, of course, modern 'freeze frame' photographic images were not available for him to

study), his gamebirds remain in my eyes par excellence, and his trademark treatment of background is both extremely clever and instantly recognisable.

So, although I found it fascinating, I do realise that this book hits my rather specific and spe-

cialised range of interests. I do hope that there are legions of Thorburn fans out there willing to buy this book, because it deserves to be a success. Certainly, the only collector I know immediately ordered the book when I showed it to him. As well as admirers and

collectors of Thorburn's work, this book will appeal to country sportsmen and women, wildlife artists of all skill levels and those with an interest in the history and care of limited edition prints.

Alan Harris

**GILBERT WHITE'S BIRDS:  
THEN AND NOW**

By John Eyre.

University of Chichester, 2009.

32 pages.

ISBN 978-0-948765-87-2.

Paperback, £4.00 incl. p&p  
from p.foster@chi.ac.uk

Who is the true 'father of British ornithology'? Francis Willughby, John Ray and even Charles Darwin come to mind, but for many that credit must go to Gilbert White. Published in 1789, *The Natural History and Antiquities of Selborne* was one of the first great diaries of a British naturalist and, with his enquiring mind, White was probably more in tune with today's birdwatchers than any of his contemporaries. Perhaps as an indication of its significance at the time, a year after the book was published, Gilbert White was given the greatest honour for any bird-

watcher. Having described a new species of thrush from Asia, John Latham decided to name it as White's Thrush *Zoothera dauma*.

In this publication – the third in a series from the Selborne Museum – John Eyre selects the bird content of White's writings and organises them into themes. In terms of the changes between then and now, White saw greater numbers of passerines and the Red Kites *Milvus milvus* have disappeared – exterminated after his time. They are not far away, however, and within ten years they will surely be back around Selborne. But he did not know the Dartford Warbler *Sylvia undata*, which was very rare owing to winters in the 1700s so severe that in some years fairs were held on the frozen River Thames.

A checklist of the birds that White mentioned in his letters poses some interesting questions. Although he was instrumental in sorting out the differences among

the various *Phylloscopus* warblers, I was surprised that White did not know the Garden Warbler *Sylvia borin* – it was recognised as a summer migrant only after his death. There is also debate about whether he should have known the Cirl Bunting *Emberiza cirlus*, described only in 1766 and first listed for the UK after 1800. Since White was such a good observer, I feel sure that had they been present he would have found them.

Illustrated with line-drawings by David Thelwell, this booklet is as much about White as it is about his birds. It looks at his life as a naturalist and it brings together in one place many of his key findings. Gilbert White would have been shocked to be called a 'trailblazer', a word invented long after his death, but for me that is exactly what he was. In James Fisher's words, White was 'the man who started us all birdwatching'.

Keith Betton

**THE WILD GEESE OF THE  
NEWGROUNDS**

By Paul Walkden.

The Friends of WWT

Slimbridge, Gloucestershire,  
2009. 80 pages; eight colour  
plates; many black-and-white  
illustrations and photographs.

ISBN 978-0-9561070-0-8.

Paperback, £17.00.

This slim volume was published privately by the Friends of WWT Slimbridge, to honour and celebrate the centenary of the birth of Sir Peter Scott. It is very much a paean to a man widely regarded as one of the most important pioneers of bird conservation, both in

this country and around the world. Aside from founding the Wildfowl & Wetlands Trust, identifying Slimbridge as a likely site for Lesser White-fronted Geese *Anser erythropus*, overseeing the creation of a series of wildfowl centres, describing a new subspecies of goose, being Chancellor of a University, founding the World Wildlife Fund (and acting as both Chairman and President) and rescuing the Hawaiian Goose *Branta sandvicensis* from near-extinction, he was also a successful artist, published an array of books, won National Championships for sailing and gliding, raced in the Americas Cup, won the MBE and the DSC (twice) in the Second World War, and was knighted and

made a Companion of Honour by the Queen. Indeed, reading the chronology of his life (space limitations mean I have had to leave much of it out!) makes me realise how little I achieved in my own career!

The text itself comprises six sections, dealing with the WWT, the River Severn, White-fronted and other geese at Slimbridge, ringing and rocket netting, and wildfowling. Each section is written in an easy style, although the nit-picker would suggest that a bit of careful editing would not have come amiss. For instance, Greenland White-fronted Goose is variously described as a species and subspecies, being called both *A. albifrons flavirostris* and *A.*

*flavirostris*. There are also some graphs and diagrams at the back listing the arrival dates and maximum numbers of White-fronted and Pink-footed Geese *A. brachyrhynchus* at Slimbridge and

elsewhere. These are interesting and significant, though a little more discussion would probably have helped the audience to whom this book is likely directed. That said, this is a pleasing contribution

to the memory of a great man, and is nicely illustrated by some of his own distinctive images.

David Parkin

#### TROGONS: A NATURAL HISTORY OF THE TROGONIDAE

By Joseph M. Forshaw, illustrated by Albert Earl Gilbert. Lynx Edicions, Barcelona, 2009. 292 pages; 69 colour paintings; 39 maps. ISBN 978-84-96553-51-4. Hardback, £86.38.

This is the third review of the family to appear in a decade, following that by the most productive modern writer of monographs, Paul Johnsgard, published in 2000, and Nigel Collar's work for *HBW* in 2001. Another work on trogons is justified presumably by the family's abiding popularity. However, this folio-sized book lists but 33 post-*HBW* references in its Bibliography.

Forshaw recognises four tribes, five genera, ten subgenera (one afforded generic status by Collar) and 39 species within Trogonidae. Rightly, he ignores proposed species-level revisions to, for example Violaceous Trogon *violaceus*, White-tailed *T. viridis* and Black-tailed Trogons *T. melanurus*, none without merit but not published in the technical literature. Following introductory sections covering the expected subjects are

the lavishly illustrated species accounts. These comprise 'distribution', 'description', 'subspecies', 'habitats and status', 'movements', 'habits', 'calls', 'feeding', 'breeding', and 'eggs', and offer detail beyond *HBW*, but with significant gaps. The author considers vocals difficult to describe in words, making it doubly surprising that he doesn't reference the many audio guides covering trogon voices. Gilbert's artwork is beautiful, Resplendent Quetzal *Pharomachrus moccino* merits a special foldout to accommodate 'that' tail, but backgrounds are occasionally inappropriate and the Citreoline Trogons *Trogon citreolus* look oddly superimposed.

As intimated, the paucity of (especially) recent literature accessed is a notable flaw. Taking just one species, Cuban Trogon *Priotelus temnurus* is incorrectly mapped for several cays (frequented by birders) where it is unknown. Nominate *temnurus* is cited for Cayo Romano, but records thereon, and on Cayo Coco, are unconfirmed. The extensive biometric and mass data presented by Arendt *et al.* (2004, *Proc. West. Found. Vert. Zool.* 81) are ignored. Twice now has unsupported speculation concerning an undescribed subspecies been made, but the dis-

tinctly questionable diagnosability of *vescus* on the Isle of Youth (Todd 1916, *Ann. Carnegie Mus.* 10: 146–296) goes unremarked. Forshaw repeats Collar in claiming that the species is more numerous at higher altitudes, but it is suitable habitat and nesting holes that determine abundance, which is why this trogon is as numerous at sea level in Zapata as anywhere. Discussions of vocals and breeding are mildly compromised by a failure to study even the recent Cuban field guide! Similar failings punctuate other accounts, for example Pavonine Quetzal *Pharomachrus pavoninus* not mapped east of the Madeira, when it reaches the Tapajós-Xingu interfluvium (i.e. further even than the text admits).

Birders are used to fantastic productions from Lynx, making this a letdown. Whereas the recent decision to update and reissue *Curassows and Related Birds* was exciting and the resulting publication fairly priced, the same is not true of *Trogons*. If it had been half the price, included paintings from *HBW* to show the many undepicted subspecies, and the literature had been adequately reviewed, it could have commanded respect.

Guy M. Kirwan

#### WILDFOWL OF THE NORTHERN HEMISPHERE

By Ray Hutchins. Merlin Publications, 2008. 191 pages; many colour illustrations. ISBN 978-0-954-30701-1. Paperback, £14.99. Available in the UK exclusively from NHBS [www.nhbs.com](http://www.nhbs.com)

The author is a wildfowl enthusiast and accomplished artist and has produced a delightful small (21 × 15 cm) landscape-bound book in which each species of wildfowl is given a double-page spread showing adult male and female standing and (smaller) swimming, plus a map. Opposite the plates are descriptions

of plumage, range, migration, breeding, voice and food, plus an explanation of the names as well as an indication of numbers and conservation status. The plates are excellent throughout if occasionally a little dark, though this may be down to the printing, and capture the 'jizz' of each species very well. There are

short sections on wildfowl reserves by country, including WWT and RSPB reserves in the UK, and brief accounts of the wildfowl skeleton and respiratory systems, as well as ringing and trapping. Even though one could argue for the addition of illustrations of immatures, and after allowing for a small number of textual errors, the author/artist deserves congratulations on his achievement in producing a book that should have a wide appeal.

Malcolm Ogilvie

# News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

## Common Cranes nest in the Fens

With the appearance of two juvenile birds at the RSPB's Lakenheath Fen reserve, it appears that Common Cranes *Grus grus* have nested successfully in the East Anglian Fens for the first time in four centuries. The Fens, which once stretched from Cambridge to Lincoln, were the last stronghold of the Common Crane before it became extinct as a British breed-

ing species in about 1600.

Norman Sills is the site manager at Lakenheath Fen, an area of fenland recreated from carrot fields in the 1990s: 'Seeing young Cranes flying over the reserve makes me realise that all our hard work has been worthwhile. These are fantastic birds, but when we dreamt of creating this reserve, 14 years ago, Cranes were

not on our list of prospects. The conservation focus for the reserve was to secure a nesting population of Eurasian Bitterns *Botaurus stellaris*; a feat we have also achieved.'

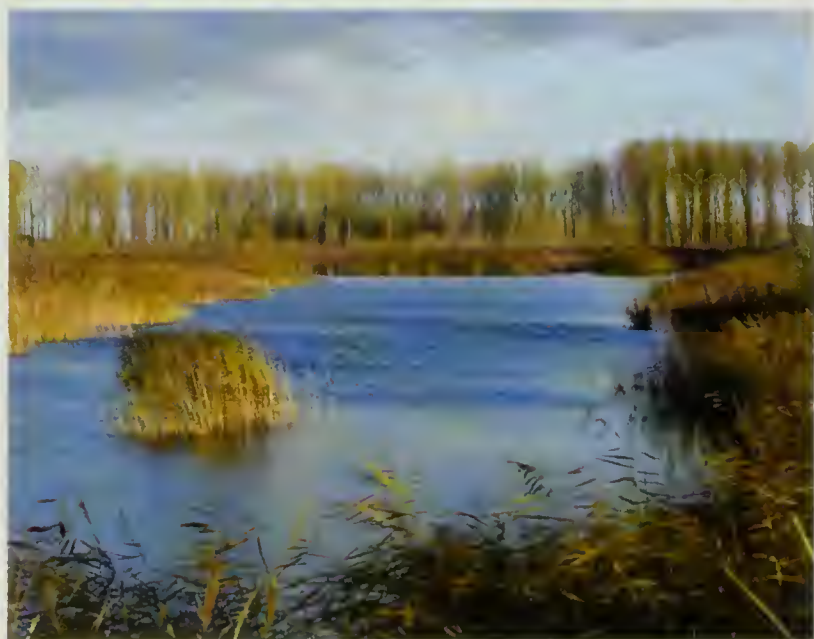
A small population of Cranes became established in the Norfolk Broads in 1981, but the two pairs of these elegant birds that nested at Lakenheath represent the first time that more than one pair of Cranes has nested at a single site away from the Broads.

So the species appears to be naturally reintroducing itself as suitable breeding habitat becomes available. But, as with the privately funded Great Bustard *Otis tarda* reintroduction programme, which recently yielded its first breeding success (*Brit. Birds* 102: 415), the RSPB now wants to launch an artificial reintroduction scheme for Cranes, at a cost of £1.5 million. Dr Mark Avery, the RSPB's Director of Conservation, said: 'It is clear that Cranes are yearning to become more widely established in the UK, and two pairs nesting at Lakenheath is clearly an important step in their UK-wide recovery. However, it isn't the only step that we need to take to consolidate the future of this British bird. The RSPB is also involved in a reintroduction programme known as the Great Crane Project, where we hope initially to re-establish this bird in the west of Britain on the Somerset Levels and Moors.'

The RSPB has recently launched a £1.5-million appeal to help fund Crane reintroduction in the UK. Chris Madden, the RSPB appeals organiser, said: 'The carefully planned Great Crane Project starts with taking eggs from healthy populations overseas, incubating the eggs and nurturing the chicks. The project will then release them into a protected environment.'



Chris Gomersall (rspb-images.com)



Chris Gomersall (rspb-images.com)

347 & 348. Common Cranes *Grus grus* at Lakenheath Fen RSPB Reserve, summer 2009.

## A better season for Shetland's seabirds

There can be few more gladdening experiences than to be out in a small boat on a warm, calm, summer's day, surrounded by a feeding frenzy of seven or eight species of seabird, individuals popping to the surface with decent-sized sandeels *Ammodytes* in their bills. But that was an experience to be had around much of Shetland this year, breaking a run of poor or indifferent breeding seasons for many species. Arctic Terns *Sterna paradisaea* did particularly well compared with recent years, fledging three figures of young from some colonies; Great Skuas *Stercorarius skua* had a good season; and Arctic Skuas *S. parasiticus* had an almost 'normal' breeding season. However, for other species, such as Common Guillemot *Uria aalge* and Kittiwake *Rissa tridactyla*, the season is better described as reasonable rather than a bumper one, halting rather than reversing recent trends. There have also been some unexplained anomalies, such as the virtual desertion of Fair Isle by breeding Shags *Phalacrocorax aristotelis* and continued low numbers and breeding success of Common Guillemots there, and the failure of Red-throated Divers *Gavia stellata* to rear young in certain areas. For those involved in seabird monitoring, August is a time for number crunching, adding yet more data points to graphs, and realising just how drastic some changes have been. At Sumburgh Head RSPB Reserve at the southern tip of Mainland, counts of Razorbills *Alca torda* were 16% higher than in 2008, but still remain 70% lower than in 2000. At the other end of the islands, a census of the Unst Kittiwake colonies (542 nests) found that numbers had more than halved since the 1998/99 Seabird 2000 census (1,140), and had declined by almost 90% since 1987 (4,979). The days are past when one can simply headline a 'good' or a 'bad' breeding season for a suite of different seabird species in even a restricted geographic region such as Shetland, and we keep our fingers crossed for 2010.

(Contributed by Martin Heubeck)

## OAP alive and well at 34

BTO ringers on the Shiant Islands (a small group of islands between the Outer Hebrides and the Scottish mainland) have found the two oldest Puffins *Fratercula arctica* in Britain. And one of these OAPs (Old Age Puffins) is, at 34 years of age, also the oldest currently known in Europe.

The British longevity record for the Puffin was first broken on 5th July 2009 when EX08155, originally ringed on the islands on 27th June 1977, was recaptured. The record-breaker was ringed by Ian Buxton in 1977, who was also part of this year's team, so Ian was reunited with the bird 32 years later!

But then, just five days later, the record was broken again. On 10th July, Ian recaptured EB73152, ringed on 28th June 1975, making it over 34 years old (and older than three of the expedition members). This is now the oldest recorded Puffin in Europe, beating an Icelandic 33-year-old. Amazingly, it not only still had its original metal ring, but also its colour ring, allowing it to be identified as a Shiant's bird 'in the field'.

David Steventon, founder of the Shiant's Auk Ringing Group, and a member of the original expeditions in the 1970s, commented: 'These longevity records were almost inevitable, as ringing data shows that adult survival rates are about 92%. Therefore, we would expect that about 25 of the 441 birds ringed in 1975 might still be alive in 2009. There could even be a handful of birds alive that were ringed back in 1970, so there is the potential to break the record again in the next few years. Compared with recent years, Puffins are having a good breeding season in 2009, bringing in good-sized sandeels for their young.'

## Guillemots breed in eastern USA for first time since 1800s

For the first time in more than a century, a Common Guillemot egg has been discovered south of the Canadian border on the east coast of the USA (where, of course, the birds are known as murre). 'We are absolutely elated,' said Dr Stephen Kress, Director of Audubon's Seabird Restoration Program. 'The return of the Common Murre to its long-lost nesting grounds shows that conservation works – even against all the odds.'

The egg was discovered on Matinicus Rock, one of 50 islands in Maine Coastal Islands National Wildlife Refuge, the first time since 1883 that the species has nested on the east coast of the USA. Guillemots have been lured to the islands by the use of decoy birds, artificial eggs and a sound system that emits Guillemot calls. 'We have high hopes for the successful hatching of this egg, and for greater numbers of murre in years to come,' added Dr Kress.

Although widespread on the Pacific coast from Alaska to California, and breeding in Canada's Maritime Provinces, Guillemots were eliminated from their Maine breeding sites in the 1800s by people hunting them for food. Collection of the birds' eggs was also a common pursuit at the time and may also have contributed to their disappearance.

Audubon (the RSPB equivalent in North America) has spent 17 years trying to bring Guillemots back to the islands. And it's not the first seabird that Audubon has helped to restore to Maine. Pioneering the use of decoys and bird calls, the team began working to attract Atlantic Puffins to the Maine coastal islands in 1973; four breeding pairs nested at Eastern Egg Rock in 1981 after an absence of nearly a century. At least 40 seabird species in 12 countries have benefited from seabird restoration techniques developed by Audubon.

## Volunteers needed for seabird research on Tristan da Cunha

The Tristan da Cunha archipelago is one of the world's last truly remote areas. The inhabitants form the most isolated community on earth since the islands can be reached only by boat, a six-day voyage from Cape Town. The archipelago has four endemic seabirds (Tristan Albatross *Diomedea dabbenena*, Atlantic Yellow-nosed Albatross *Thalassarche chlororhynchos*, Spectacled Petrel *Procellaria conspicillata* and Atlantic Petrel *Pterodroma incerta*) and Gough Island is rightly considered the greatest seabird colony in the world. And an island with an extraordinary ecological problem – supersize House Mice *Mus musculus* that are preying on albatross chicks. Readers can help to persuade the Government to take account of this problem by signing this petition: <http://petitions.number10.gov.uk/Territories>

Together with the world's smallest surviving flightless bird (the Inaccessible Rail *Atlantisia rogersi*), a flightless moorhen *Gallinula comeri*, four island-endemic buntings *Nesospiza* and a bizarre, storm-petrel-eating thrush *Nesocichla eremita*, the archipelago is considered both an Important Bird

Area and an Endemic Bird Area by BirdLife International (see Peter Ryan's recent article, *Brit. Birds* 101: 586–606).

Isolation and logistical obstacles have conspired to ensure that the seabirds are not as well studied as their conservation status suggests they should be. In recent years there has been a resurgence of interest in the islands and some truly groundbreaking research has been done (such as that on the mice referred to above). However, the conservation status of many breeding seabirds in the archipelago is poor, and basic data are often lacking. For some species on Tristan there has never even been a proper census.

But now, BirdLife South Africa, the Save the Albatross Fund and African Affinity are hoping to establish annual research expeditions to the archipelago by 'citizen scientist' ringers and birders. The first expedition is planned for 21st February to 12th March 2010. A major objective will be to assist the Tristan Conservation Department to census and ring an entire generation of young Atlantic Yellow-nosed Albatrosses at Tristan and Nightingale study colonies. The long-term information gathered

from such an exercise would allow us to learn more about their annual breeding success, dispersal patterns, annual survival rates and recruitment into the population.

If this becomes an annual expedition, there is potential for several other worthy studies to be initiated. In addition to ringing nestling Atlantic Yellow-nosed Albatrosses, chicks and/or adults of Broad-billed Prion *Pachyptila vittata*, Soft-plumaged Petrel *Pterodroma mollis*, White-faced Storm-petrel *Pelagodroma marina*, Black-bellied Storm-petrel *Fregetta tropica*, Tristan Skua *Stercorarius antarctica*, Great Shearwater *Puffinus gravis*, Antarctic Tern *Sterna vittata* and Tristan Thrush could be ringed and (in subsequent years) retrap data gathered.

There is a rich history of human settlement and a fascinating island culture on Tristan, and of course the voyage there and back is generally a pelagic birding festival. Anyone interested in joining the initial expedition in 2010 should contact Ross Wanless [rosswanless@gmail.com](mailto:rosswanless@gmail.com) or Malcolm Wilson [shoebill@mweb.co.za](mailto:shoebill@mweb.co.za)

(Contributed by Malcolm Wilson)

## British List approaches 600

The BOU Records Committee has admitted a further four species to the British List, taking the total to 587.

The new additions are Pacific Diver *Gavia pacifica* (juvenile, near Harrogate, North Yorkshire, 12th January to 4th February 2007); Yellow-nosed Albatross *Thalassarche chlororhynchos* (immature, Brean, Somerset, 29th–30th June 2007 and subsequently in Lincolnshire); Glaucous-winged Gull *Larus glaucescens* (third-winter, Hempsted, Gloucestershire, 15th–16th December 2006, and subsequently at two other localities); and Brown Flycatcher *Muscicapa dauurica* (first-summer, Fair Isle, 1st–2nd July 1992). Full details will appear in next month's BBRC report.

All of these birds have intriguing stories attached to them, most notably the albatross, which crash-landed in Somerset, was taken into care, filmed, released and reappeared on the other side of the country on a fishing lake. And at no stage were Britain's avid listers aware of its passage across the country!

Special mention must be made of the Brown Flycatcher found by then-Fair Isle warden Paul Harvey in 1992. The BOURC rejected the record at the time citing an unproved potential captive origin but, after autumn birds in 2007 and 2008, the committee has altered its view. Vindication for Paul, 17 years after the event.

With the official British List now standing at 587, the unofficial

N&c sweepstake to hazard a guess at Britain's 600th species has added urgency. A shrewd suggestion comes from Nick Dymond on Shetland: 'How about Ménétries's Warbler *Sylvia mystacea* for the 600th, preferably in my garden at Scousburgh?!' Following Britain's first Olive-tree Warbler *Hippolais olivetorum* just down the road in 2006, it's a decent bet...

And while we're contemplating milestones and the British List, it appears that Britain's top twitchers, Ron Johns and Steve Webb, may be neck and neck on an improbable 543 species seen in Britain (& Ireland). As a percentage (90%+) of the combined British and Irish total of c. 595 species, that is quite some achievement.

## Rarities on RSPB reserves

As we celebrate BBRC's 50th anniversary, the RSPB has marked the milestone by its own analysis of rarities on its reserves.

The rarest of them all, in vagrant terms, is Indigo Bunting *Passerina cyanea*. A young male was found on Ramsey Island, Pembrokeshire, in October 1996, and this is still the only accepted record for Britain. Seven other species made their first appearance in Britain on an RSPB reserve, although two of them (Audouin's Gull *Larus audouinii* and Trumpeter Finch *Bucanetes githaginens*) were first found nearby and only later moved to the reserve. One of the most celebrated rarities from RSPB reserves almost belongs to the 'firsts' category. The Black Lark *Melanocorypha yeltoniensis* at South Stack, Anglesey, in 2003 gave some 4,000 or so birders their first taste of the species in Britain, but it also prompted the re-examination of some notes made about a bird seen in 1984 at Spurn, Yorkshire. The Spurn bird was re-identified as Britain's first Black Lark, and the South Stack one became the second. Other extreme rarities recorded from RSPB reserves are shown in table 1.

Very rare birds always attract a crowd, but one of the strongest contenders for the title of 'Britain's most-watched bird' is one of our more frequent vagrants. For almost 12 years, visitors to RSPB Titchwell in Norfolk could see a resident

**Table 1.** Birds on RSPB reserves that have been recorded on ten occasions or fewer in Britain since 1950.

Species	British records	RSPB records
Indigo Bunting <i>Passerina cyanea</i>	1	1
Hudsonian Godwit <i>Limosa laemastica</i>	2	1
Black Lark <i>Melanocorypha yeltoniensis</i>	2	1
Grey-tailed Tattler <i>Tringa brevipes</i>	2	1
Siberian Blue Robin <i>Luscinia cyane</i>	2	1
Barrow's Goldeneye <i>Bucephala islandica</i>	3	1
Oriental Pratincole <i>Glareola maldivarum</i>	3	2
Audouin's Gull <i>Larus audouinii</i>	4	1
White-tailed Lapwing <i>Vanellus leucurus</i>	5	1
White-throated Needletail <i>Hirundapus caudacutus</i>	5	1
Red-necked Stint <i>Calidris ruficollis</i>	6	1
Canvasback <i>Aythya valisineria</i>	7	1
Black Scoter <i>Melanitta americana</i>	8	2
Slender-billed Gull <i>Chroicocephalus genei</i>	9	2
Lesser Crested Tern <i>Sterna bengalensis</i>	9	3
Buff-bellied Pipit <i>Anthus rubescens</i>	10	1

Black-winged Stilt *Himantopus himantopus* among the local Oystercatchers *Haematopus ostralegus* and Avocets *Recurvirostra avosetta*. Tens of thousands of people probably saw Sammy the stilt, and anyone who has seen a Black-winged Stilt in Britain is quite likely to have done so on an RSPB reserve: almost 40% of the stilts seen in Britain in the last ten years have been on RSPB reserves. Rare waders in general are particularly well represented on RSPB reserves: 110 have been recorded in the last ten years, just under 20% of the total for the whole of Britain. Other well-represented species are

Red-breasted Goose *Branta ruficollis*, Glossy Ibis *Plegadis falcinellus*, Gull-billed Tern *Gelochelidon nilotica*, Caspian Tern *Hydroprogne caspia*, Great Reed Warbler *Acrocephalus arundinaceus* and Penduline Tit *Remiz pendulinus*. RSPB reserves have hosted more than one-fifth of all the British records of these species in the last ten years. And the top RSPB reserve for rarities? Minsmere in Suffolk, whose manager just happens to be BBRC Chairman Adam Rowlands!

(Contributed by Mark Gurney)

## Slender-billed Curlew flying squad

The first comprehensive survey of the non-breeding range of Slender-billed Curlew *Numenius tenuirostris* will be undertaken during the winter of 2009/10 under the aegis of the International Waterbird Census. Surveys will extend from Morocco to Japan, and concentrate on the shores of the Mediterranean, Black, Red and Caspian Seas, the Pannonian Plain (central Europe), the Persian Gulf and the coasts of the South Asian subcontinent. The focus is on

finding wintering and moult sites, with the hope of trapping and satellite-tagging any birds found. If we are to have any chance of bringing the Slender-billed Curlew back from the brink of extinction, we need to know where it breeds, where it spends the winter and its migration routes. Only then will we be able to put conservation measures in place to give the species a chance.

When the 'Minsmere Curlew' appeared in Suffolk in 2004, we

realised that satellite transmitters had become small enough to put on a Slender-billed Curlew. A prototype was sent over from the USA, but by the time it arrived the bird had gone (subsequent analysis proved that it was an unusual Eurasian Curlew *N. arquata*). We took the opportunity to see what information we could get if we put the tag on a Whimbrel *N. phaeopus*. A bird was caught at Wheldrake Ings in Yorkshire on 2nd May 2005 and the tag fitted.

The exercise was a stunning success – ‘Wally’ migrated to Iceland then returned south in the autumn and wintered in West Africa. You can follow its movements at [www.whimbrel.info](http://www.whimbrel.info)

If Wally had been a Slender-billed Curlew, then within a few months we would have known where critical places in this species’ lifecycle are and would now be putting our efforts into conserving Slender-billed Curlews on these critical sites. A team of expert

curlew catchers is now on standby. As soon as the SBC identification panel lets us know that there is a chance that a sighting really is a Slender-billed Curlew, three or four of us will drop everything and fly to that country!

If we caught a Slender-billed Curlew, we would fit a satellite tag, metal and coloured rings and take some feather samples for stable-isotope analysis. Those samples will tell us more about where the bird grew its feathers, just in case

the satellite tag does not work. When the bird leaves the site, it is down to the satellite tag to do its job and, hopefully, conservation efforts will be quickly under way in the countries where the species occurs.

We have got two tags prepared and ready to go. It’s just down to that army of birdwatchers to find a Slender-bill. We are waiting for the call!

(Contributed by Nigel Clark, BTO)

### Slender-billed Curlew has a price on its head

Four members of the Cley Bird Club are offering USD 1,000 for a photograph of a live Slender-billed Curlew taken in the Middle East. Because of the identification challenges posed by the species, any photograph will have to be verified by the Slender-billed Curlew Inter-

national Verification Panel, which comprises wader experts with past experience of the species.

Richard Porter, who has organised this reward, and is helping with the forthcoming winter surveys in the Middle East, plans that \$500 will go to the photogra-

pher and \$500 to a conservation cause in the country where the photograph was taken. Already, two photographs – taken in Iraq last winter – have been submitted but sadly they were not proven to be of Slender-billed Curlews.

### Economic value of Red Kite reintroduction

The Red Kite *Milvus milvus* reintroduction scheme in northeast England has formally ended after five successful years, with at least 30 pairs of kites now breeding in Gateshead’s Derwent Valley and beyond, following the release of 94 Chilterns-bred birds in 2004–06. The Gateshead scheme has seen the most rapid establishment of a sustainable kite population in Britain since the reintroduction programme began 20 years ago.

The *Northern Kites* team commissioned a socio-economic report on the impact that this high-profile project has had and the results make interesting reading for agen-

cies contemplating future reintroductions. The headlines include: ecotourism has added more than £160,000 per annum to the economy of the Lower Derwent Valley; total economic activity catalysed by the kites project is more than £1.72 million; *Northern Kites* engaged with 36,000 schoolchildren in the region (every local primary school ‘adopted’ a kite); the Red Kite-branded buses running from Newcastle to Cossett carry an environmental message to more than 2.5 million people every year; and the ‘Northern Kite’ beer is now the Wylam Brewery’s best-seller!

The aim of the five-year project was to engage people living on the urban fringe of Tyneside with wildlife. This has been amply achieved. The final act was the unveiling of a 16-metre frieze on the local Tesco store depicting Red Kites through the seasons. This is the first time that this multinational has consented to an artwork being wrapped around one of its supermarkets.

Congratulations to Keith Bowey and the *Northern Kites* team on mission accomplished. The full economic impact of the project can be found at [www.northernkites.org.uk/socio.html](http://www.northernkites.org.uk/socio.html)

### Birding is a \$36-billion business in the USA

Compelling evidence of the economic – and hence political – clout of birders comes from a detailed survey in the USA. The US Fish and Wildlife Service study *Birding in the United States: a demographic and economic analysis* established that, in 2006, there were 48 million birders in the USA – more than a fifth of the population.

A birder was defined as someone who has taken a trip one mile or more from home for the primary purpose of observing birds and/or closely observed or tried to identify birds around the home. Thus, people who happened to notice birds while they were mowing the lawn or picnicking at the beach were not counted

as birders. Trips to zoos and observing captive birds also did not count.

The 48-million US birders spent an estimated \$36 billion on birding goods and services annually (or approx. \$750 each). This was subdivided into ‘trip expenditure’ of \$12 billion and equipment expenditure of \$24 billion. For trip

expenditure, 57% was allocated for food and accommodation, 35% for transport, and 7% for other costs such as guides, entrance fees, and so on.

With the multiplier effect, birding expenditure of \$36 billion

in 2006 generated \$82 billion in total industry output across the USA. It was further calculated that birding expenditure in 2006 created 671,000 jobs and \$28 billion in employment income. And, no doubt of most interest to

the US Government, birding-related recreational spending generated \$10 billion in taxes: \$6 billion in State revenue and \$4 billion in Federal revenue. Phew! See [http://library.fws.gov/Pubs/birding\\_natsurvey06.pdf](http://library.fws.gov/Pubs/birding_natsurvey06.pdf)

## New to science: bald bulbul discovered in Laos

An odd songbird with a bald head living in a rugged region in Laos has been discovered by scientists from the Wildlife Conservation Society (WCS) and the University of Melbourne, as part of a project funded and managed by the mining company MMG (Minerals and Metals Group).

The species has been named Bare-faced Bulbul *Pycnonotus hualon* because of the lack of feathers on its face and part of its head, and is the only example of a bald songbird in mainland Asia. It is the first new species of bulbul – a family of about 130 species – described in Asia in over 100 years. A description of the new species has been published in the July issue of *Forktail*, the journal of the Oriental Bird Club.

‘This is exciting news and a great discovery,’ said Dr Lincoln

Fishpool, BirdLife’s Global Important Bird Areas Coordinator. ‘It highlights the importance of this region for birds and biodiversity.’

The thrush-sized bird is greenish-olive with a light-coloured breast, a distinctive featherless, pink face with bluish skin around the eye extending to the bill and a narrow line of hair-like feathers down the centre of the crown. The bird seems to be primarily tree-dwelling and was found in an area of sparse forest on rugged limestone karsts – a little-visited habitat known for unusual wildlife discoveries.

‘Its apparent restriction to rather inhospitable habitat helps to explain why such an extraordinary bird with conspicuous habits and a distinctive call has remained unnoticed for so long,’ said Iain Woxvold, lead author of the paper.

Fortunately, much of the bird’s presumed habitat falls within legally protected areas in Laos. However, quarrying of limestone looms as a potential threat to wildlife in this area, along with habitat conversion for agriculture.

In 2002 in this same area, Rob Timmins of WCS described the Kha-nyou or Laotian Rock Rat *Laonastes aenigmamus*, a newly discovered species of rodent so unusual that it represents the lone surviving member of an otherwise extinct genus.

The Bare-faced Bulbul will be assessed in due course by the BirdLife Taxonomic Working Group; BirdLife will then evaluate its extinction risk category for the IUCN Red List (for which BirdLife is the official Red List Authority).

## New County Recorder details

Jon Cook has taken over from Dan Carmichael and John Ogilvie in Angus & Dundee; his contact details are 76 Torridon Road, Broughty Ferry, Dundee DD5 3JH, tel. 01382 738495, e-mail [1301midget@tiscali.co.uk](mailto:1301midget@tiscali.co.uk)

Hampshire recorder John Clark has changed his e-mail to [johnclark50@sky.com](mailto:johnclark50@sky.com)



349. Fair Isle warden Deryk Shaw looks on as the remaining chunk of the old observatory, his home for ten years, was removed this summer. As we went to press, the site was clear and the foundations ready for the arrival of the new building, which is being put together in Orkney before being shipped to the island sometime this month. Thanks to those BB contributors who continue to donate their fees for photographs and text to the Obs Appeal [www.fairislebirdobs.co.uk](http://www.fairislebirdobs.co.uk)

Jane Reid

# Recent reports

Compiled by Barry Nightingale and Eric Dempsey

This summary of unchecked reports covers early July 2009 to early August 2009.

**Headlines** Unfortunately, the main contenders were mostly short-stayers, including a Black-browed Albatross off the Cornish coast, Blue-cheeked Bee-eater and Zitting Cisticola in Kent, and a Brown-headed Cowbird in Pembrokeshire – just how many have there been this year? Best of the rest was a much more obliging Great Spotted Cuckoo in Norfolk, and record numbers of Wilson's Storm-petrels in western sea areas. As usual, rare waders were a key feature of this period: the Collared Pratincole, presumably the same from earlier in the summer, relocated in Yorkshire; an initially controversial Pacific Golden Plover in Norfolk stayed long enough to be enjoyed; Ireland's third Terek Sandpiper appeared in Co. Dublin and may have subsequently crossed the Irish sea to the Dee Estuary; and a Marsh Sandpiper was a good record for Scilly.

**Ferruginous Duck** *Aythya nyroca* Long-stayer at Chew Valley Lake (Avon), sporadically to 6th August; Skinflats Lagoons (Forth), 25th July, same Loch Gelly (Fife), 26th July to 6th August; Buckden GP (Cambridgeshire), 1st August.

**Black-browed Albatross** *Thalassarche melanophris* Porthgwarra (Cornwall), 26th July and 2nd August. **Zino's/Fea's Petrel** *Pterodroma madeiralfeae*, Galley Head (Co. Cork), 2nd August. **Wilson's Storm-petrel** *Oceanites oceanicus* From pelagics off Scilly, one on 20th July, at least five on 23rd, at least four on 24th, two 27th, one 31st, then at least nine near Seven Stones on 1st August. Off Cornwall, one 18 km

WNW of Padstow on 25th July, then five 32 km NNW of Padstow, two off Porthgwarra, and two 10 km NW of St Ives all on 1st August. In Ireland, one off Bridges of Ross (Co. Clare), 29th July, and at least 27 there on 1st August; 14, Brandon Point (Co. Kerry), 1st August. In Wales, one past Strumble Head (Pembrokeshire), 1st August.

**Little Bittern** *Ixobrychus minutus* Long-stayer, Walton Heath (Somerset), to 24th July. **Cattle Egret** *Bubulcus ibis* Colyford Common (Devon), 19th–25th July; Lodmoor (Dorset), 21st July; Padworth Lane GP (Berkshire), 30th–31st July; Chew Valley Lake, two adults and a juvenile



Gary Thoburn

**350.** Adult and juvenile Cattle Egret *Bubulcus ibis*, Chew Valley Lake, Avon, August 2009. Britain's first breeding record of Cattle Egret, in Somerset in 2008, has been quickly followed by the second.

30th July, with an adult to 5th August, juvenile to 7th August. Great White Egret *Ardea alba* Records from Co. Donegal, Hampshire, Kent, Orkney, Scilly, Shetland, Somerset and Suffolk.

Black Kite *Milvus migrans* Hen Reedbeds, 14th July, possibly same Woodbridge (both Suffolk), 24th July; Stanwick GP (Northamptonshire), 2nd August.

Collared Pratincole *Glareola pratincola* Pulfin & High Eske NR, 20th–23rd July, then Tophill Low (both Yorkshire), 24th–25th July. American Golden Plover *Pluvialis dominica* Roonagh Lough (Co. Mayo), 10th July; Cley/Blakeney (Norfolk), 16th–17th July. Pacific Golden Plover *Pluvialis fulva* Breydon Water (Norfolk), 22nd July to 2nd August. White-rumped Sandpiper *Calidris fuscicollis* Welney (Norfolk), 31st July to 2nd August; Montrose Basin (Angus), 1st–3rd August. Terek Sandpiper *Xenus cinereus* Swords Estuary (Co. Dublin), 9th July; possibly the same, Dee Estuary (Cheshire & Wirral), 14th–15th July. Lesser Yellowlegs *Tringa flavipes* Edenside (Fife), 21st–22nd July; Aberlady Bay (Lothian), 22nd July to 7th August; Wheldrake Ings, 22nd July, presumably same Paull Holme Strays (both Yorkshire), 24th and 26th–30th July; Hunstanton (Norfolk), 30th July. Marsh Sandpiper *Tringa stagnatilis* St Mary's (Scilly), 29th July to 7th August; Bough Beech Reservoir (Kent), 6th August.

Franklin's Gull *Larus pipixcan* Graemeshall Loch/Holm areas (Orkney), 12th–31st July. Caspian Tern *Hydroprogne caspia* Coombe Hill Meadows NR (Gloucestershire), 2nd August. Whiskered Tern *Chlidonias hybrida* Ogston Reservoir (Derbyshire), 30th July; Fiskerton Fen (Lincolnshire), 2nd August. White-winged Black Tern *Chlidonias leucopterus*



James Kennerley

351. Adult Pacific Golden Plover *Pluvialis fulva*, Breydon Water, Norfolk, July 2009.

Freiston Shore (Lincolnshire), 4th August; Snettisham (Norfolk), 6th August; Staines Reservoir (Greater London), 7th August. Forster's Tern *Sterna forsteri* Tacumshin Lake (Co. Wexford), long-stayer to 8th July.

Great Spotted Cuckoo *Clamator glandarius* Salt-house, 23rd–24th July, same Kelling, 24th July and 5th August, and Weybourne (all Norfolk), 1st–5th August. Snowy Owl *Bubo scandiacus* Tory Island (Co. Donegal), 29th July.

Alpine Swift *Apus melba* Brixham (Devon), 27th July. Blue-cheeked Bee-eater *Merops persicus* St Margaret's at Cliffe (Kent), 22nd July. European Bee-eater *Merops apiaster* Landguard (Suffolk), 20th July.



Will Wagstaff

352. Adult Marsh Sandpiper *Tringa stagnatilis*, St Mary's, Isles of Scilly, July 2009.

Phil Chantler



353. Blue-cheeked Bee-eater *Merops persicus*, St Margaret's at Cliffe, Kent, July 2009.

Zitting Cisticola *Cisticola juncidis* Whitstable (Kent), 26th July. River Warbler *Locustella fluviatilis* Long-stayer, Applecross (Highland), to 14th July. Great Reed Warbler *Acrocephalus arundinaceus* Fair Isle, 15th July.

Lesser Grey Shrike *Lanius minor* Graven (Shetland), 27th July. Rose-coloured Starling *Pastor*

*roseus* Bude (Cornwall), 5th–6th August. European Serin *Serinus serinus* Skomer (Pembrokeshire), 17th July. Two-barred Crossbill *Loxia leucoptera* Fair Isle, 23rd–24th July. Brown-headed Cowbird *Molothrus ater* Undisclosed location (Pembrokeshire), 13th–15th July.

Hugh Harrop



354. Lesser Grey Shrike *Lanius minor*, Graven, Shetland, July 2009.



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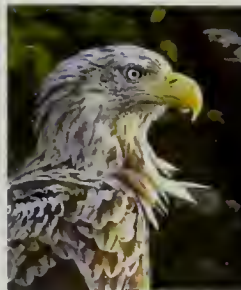


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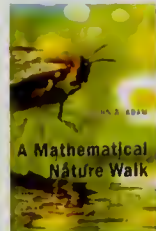
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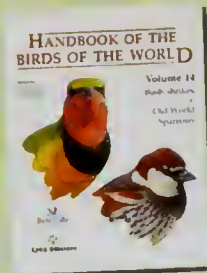
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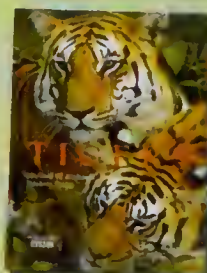


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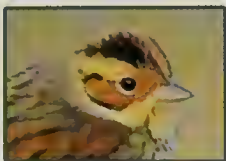
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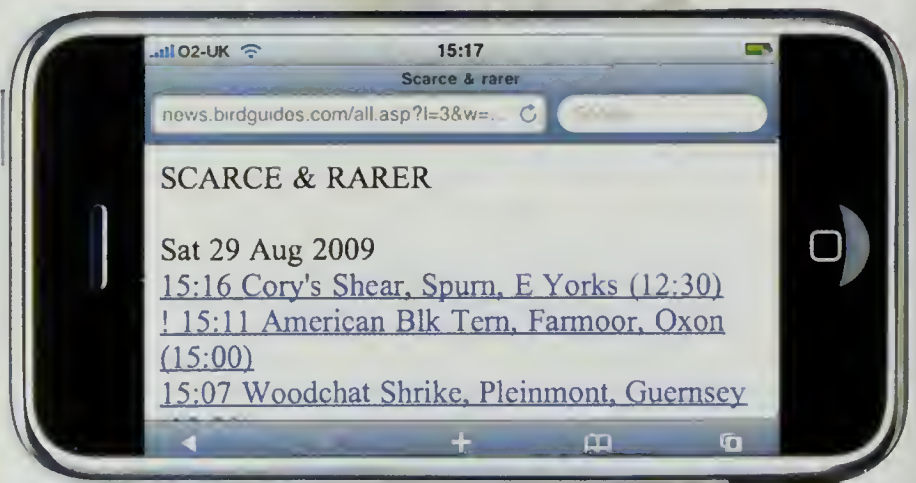
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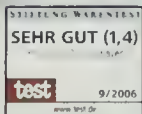
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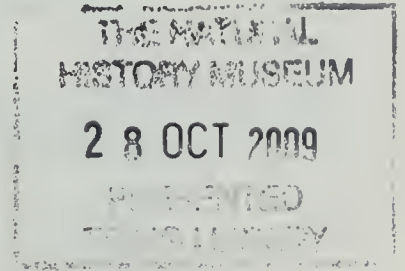
# British Birds

Volume 102 • Number 10 • October 2009

528



Report on rare birds in Great Britain in 2008  
*Nigel Hudson and the Rarities Committee*



## Regular features

602 Note  
Spanish Sparrows apparently  
migrating through the Maltese  
Islands *Joe Sultana*

This month's cover painting by James McCallum shows a Siberian Thrush *Zoothera sibirica* on Fair Isle. In addition to donating his fee for the reproduction in *BB* to the Fair Isle Bird Observatory appeal, James has donated the original to the same cause; you can bid for his framed painting in an auction, details of which are available on the Fair Isle website [www.fairislebirdobs.co.uk](http://www.fairislebirdobs.co.uk).



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# Report on rare birds in Great Britain in 2008

*Nigel Hudson and the Rarities Committee*

This is the 51st annual report of the British Birds Rarities Committee, closely following the 50th anniversary of the announcement of the formation of the 'Rarity Records Committee', which appeared in the August 1959 issue of *British Birds*. Our annual report continues to present a record of the statistically rare species and subspecies that have occurred in Britain. Since 1959, BBRC has assessed records relating to over 350 species and at least 26 distinctive subspecies, along with claims of a number not yet accepted onto the British List. Over that period, there has been a total of 69 voting members, who have considered over 40,000 records: no mean feat for a panel operating on a voluntary basis, and we take this opportunity to express our gratitude to all those, past and present, who have been involved with the Committee.

Within the first five years of the Committee's operation, it became clear that collating and assessing records of lesser rarities (to help judge range expansion and migration phenomena) was impractical (*Brit. Birds* 57: 305), so statistical thresholds to define a national rarity (based on frequency of occurrence) were introduced. Approximately 65 species and subspecies have been removed from the BBRC list since 1959, and these account for about half the records that have been assessed by the Committee over the years. From 1st January 2009, Cattle Egret *Bubulcus ibis*, White-billed Diver *Gavia adamsii* and Parrot Crossbill *Loxia pytyopsittacus* joined this group of 'former BBRC species' (*Brit. Birds* 102: 275). Recently, the geographical boundaries for determining rarity status have been questioned (*Brit. Birds* 102: 403–404), but we remain convinced that a national

approach to status is the only way to deal with this issue consistently.

One of the original objectives of the Committee was to overcome the inconsistency that arises when different individual bodies determine the validity of rare-bird records, and to provide a more uniform standard of assessment for national rarities. Another aim was to bring together all the records in one place by publishing an annual report. As set out in the introduction to the first annual report, individual records have comparatively little value, but when analysed collectively may help to explain (for example) the origins of migratory movements, trends in range expansion and differences in occurrence patterns between adults and first-years. Our long-term dataset is of increasing value for investigating such questions and we are encouraged by the positive response from our readership, both in Britain and abroad; we shall continue to attempt to improve the presentation of the report in this respect.

Another original aim of the Committee, the intention to pass on to observers the knowledge gained by appraising the identification criteria of particular groups, was also important. The publication of papers relating to bird identification and assessment issues has been a key means of sharing this knowledge and we are pleased to continue this important tradition. In the current volume of *BB* there are BBRC papers on 'Ehrenberg's Redstart' *Phoenicurus phoenicurus samamensis*, variant stonechats *Saxicola*, Wilson's Snipe *Gallinago delicata* and 'Dark-breasted Barn Owl' *Tyto alba guttata*. Papers currently in preparation include:

- ageing autumn male Falcated Duck *Anas falcata*;

- identification of Caspian Gull *Larus cachinnans*;
- separation of Pied *Oenanthe pleschanka* and 'Eastern Black-eared Wheatears' *O. hispanica melanoleuca*;
- identification of Isabelline Shrike *Lanius isabellinus* forms;
- identification of 'Eastern Woodchat Shrike' *Lanius senator niloticus*;
- separation of Black-headed *Emberiza melanocephala* and Red-headed Buntings *E. bruniceps*.

In addition, there are articles in preparation on the assessment of the not-proven 2003 Hampshire Black Kite *Milvus migrans* and the 2006 Isles of Scilly Booted Warbler *Hippolais caligata* (see p. 582). The last two records reflect the difficulties of separating closely related species or potential hybrids. The issue of potential hybrids was also a factor in a claim of Canvasback *Aythya valisineria* in Yorkshire in October/November 2008, and in this case it was felt that the suggestion of a hybrid influence was too significant for the record to be accepted.

With regard to the presentation of this report, in consultation with County Recorders we have modified our procedure for records where the original observers have not provided a submission but the recorder has gathered information for assessment. In particular, recorders expressed concern regarding the publication of their names in relation to such records, even when they appear as 'per A. N. Other', but are happy for us to attribute these as 'per County Recorder'. Please note that we are loathe to publish subsequent corrections, as these affect the flow of the report, so we encourage observers to submit their records as soon as possible to ensure that the correct attribution of finder/identifier is published in the appropriate annual report. For the sake of consistency, we have also removed reference to organisations responsible for managing sites (e.g. RSPB/WWT) from the species accounts, as these have not always been included in the past. However, we do recognise that these organisations provide great locations for rare birds and this change in presentation is in no way intended to underestimate this. We have also removed the comment 'possibly same' from the species accounts and will in future link only those records that we are convinced involve the same individual (and are included as such in our statistics).

	2008	2007	2006
Acceptances – current year	660	527	362
Not Proven – current year	67	81	61
Acceptances – previous years	103	57	107
Not Proven – previous years	40	32	55
<b>TOTAL</b>	<b>870</b>	<b>697</b>	<b>585</b>
Updates & corrections	45	49	31
Number of taxa in accepted records	134	130	128

The number of submissions processed (not the number of birds involved) shows an increase of 20%–25% for each of the last two years. It is true that in 2008 some 160 submissions involved Cattle Egrets, many of which were relatively easy to assess, but even so there has been a genuine underlying increase in our assessment rate.

Excluding Cattle Egrets, where we are still working with recorders to get a full picture of the massive influxes in 2007 and 2008, we currently have another c. 80 submissions for 2008 to deal with, split 50:30 between those which are proving difficult to assess and those received too late for inclusion in this report. We are also aware of fewer than 30 records (excluding Cattle Egrets) that have been reported in the birding media but for which we have no submission. Recorders have pursued most of these and we estimate that about half could be attributed to provable accounts – if so, that would mean some 97–98% of rarity records in Britain have been submitted to BBRC this year; a slight increase on last year's estimate of 95% and a trend that we hope will continue.

Another trend that we hope will continue is that some 87% of claims in the past 12 months have been accepted compared with 84% the previous year and 80% the year before that. Initially, we assumed that this might be explained by a higher proportion of records supported by photographs, but in fact that proportion has been fairly constant (65–70%), in the last two years at least.

This report contains some stunning rarities, with four new species and two new subspecies for Britain (although first records of all were prior to 2008). These involve Pacific Diver *G. pacifica* (three records), Yellow-nosed Albatross *Thalassarche chlororhynchus*, 'Scopoli's Shearwater' *Calonectris diomedea diomedea*, Glaucous-winged Gull *Larus glaucescens* (two records), 'Amur Wagtail' *Motacilla alba leucopsis* and Brown Flycatcher *Muscicapa dauurica* (three

records). Other highlights include:

- 2nd American Purple Gallinule *Porphyrio martinica*
- 2nd 'American Black Tern' *Chlidonias niger surinamensis*
- 3rd Black Lark *Melanocorypha yeltoniensis*
- 4th & 5th Hooded Mergansers *Lophodytes cucullatus*
- 4th & 5th White-crowned Sparrows *Zonotrichia leucophrys*
- 4th Cretzschmar's Bunting *E. caesia*
- 5th Swinhoe's Storm-petrel *Oceanodroma monorhis* (the first accepted field record of this species for Britain)
- 5th Audouin's Gull *Larus audouinii*
- 5th Pacific Swift *Apus pacificus*
- 5th Spectacled Warbler *Sylvia conspicillata*
- 5th & 6th Brown Shrikes *Lanius cristatus*
- 6th Green-backed Heron *Butorides virescens*
- 6th Eleonora's Falcon *Falco eleonora*
- 6th Caspian Plover *Charadrius asiaticus*
- 6th Zitting Cisticola *Cisticola juncidis*
- 6th & 7th 'Balearic Woodchat Shrikes' *Lanius senator badius*
- 8th Crag Martin *Ptyonoprogne rupestris*
- 8th Siberian Thrush *Zoothera sibirica*
- 10th Sykes's Warbler *H. rama*

Other very rare occurrences in a British context include a grey-morph Gyr Falcon *F. rusticolus* and a juvenile Stilt Sandpiper *Calidris himantopus*. Significant influxes of both Cattle Egrets and Two-barred Crossbills *Loxia leucoptera* are also reported. Also included in the report for the first-time are 'Dark-breasted Barn Owl' and 'Northern Long-tailed Tit' *Aegithalos candatus caudatus*. However, we are aware that we are not receiving reports for all the claims of rare taxa that we have identified for consideration (see Kehoe 2006; [www.bbrc.org.uk/currentrarespecies.htm](http://www.bbrc.org.uk/currentrarespecies.htm)) and we repeat our request for these to be submitted so that their true status can be assessed. We apologise that some records that have been submitted are still being considered. It has taken longer than we expected to determine consistent criteria for assessment, but these are now in place for most of the forms and we hope to tackle the backlog during the coming year.

Ongoing reviews include those of records of Redhead *Aythya americana*, North Atlantic Little Shearwater *Puffinus baroli*, Slender-billed Curlew *Numenius tenuirostris*, 'southern skuas' *Stercorarius* spp., Royal Tern *Sterna maxima* and 'Ehrenberg's Redstart'. A file for the first record

of Lesser Canada Goose *Branta hutchinsii* is in the final stages of preparation. We are also continuing to investigate the potential occurrence of the Nearctic form of Great White Egret *Ardea alba egretta* and historical records of Great Snipe *Gallinago media*. We are also looking at Orphean Warbler *Sylvia hortensis* records to establish whether any beyond the first can be attributed to subspecies, and those of Subalpine Warbler *S. cantillans* to establish which can be attributed to the eastern race *S. c. albistriata*. All pending claims of the nominate form of Arctic Redpoll *Carduelis hornemanni hornemanni* are being assessed together to enable a consistent approach. Other significant files in circulation concern the first records of vagrant Greater Canada Goose *B. canadensis*, Madeiran Storm-petrel *Oceanodroma castro*, Elegant Tern *Sterna elegans* and Alder Flycatcher *Empidonax alnormi*. BBRC has accepted the identification of recent records of Yelkouan Shearwater *Puffinus yelkouan*, Egyptian Vulture *Neophron percnopterus*, Amur Falcon *F. amurensis*, Citril Finch *Carduelis citrinella* and Lesser Sand Plover *Charadrius mongolus* (in the last case the 1991 North-east Scotland bird previously accepted as Greater Sand Plover *C. leschenaultii*) and the submissions have now been passed to BOURC for consideration. Significant records for which we are still awaiting (or have only recently received) submissions include several Wilson's Snipes, 'Hudsonian Whimbrel' *Numenius phaeopus hudsonicus*, the 'Azorean Yellow-legged Gull' *Larus michahellis atlantis* from Cornwall and a Buff-bellied Pipit *Anthus rubescens* from Scilly in 2008. For further details of the Committee's recent work, see *Brit. Birds* 102: 274–277.

The issue of whether some of the records contained in our report were genuine vagrants or of captive origin is one that causes the Committee significant headaches. For example, we followed the BOURC review that took account of pre-2000 records of Hooded Merganser and have considered only records subsequent to the Outer Hebrides bird (*Brit. Birds* 101: 525). Nonetheless, it does seem arbitrary that a short-stayer in Kent is now considered in our totals, while similar records prior to 2000 are not treated the same way. Whilst the Dorset bird (see pp. 535, 599) was considered a presumed escape, partly because of its protracted stay, this is not necessarily an obstacle to the acceptance of vagrants. The American Purple Gallinule is

another example where concern was raised by voting members regarding the circumstances of the bird's discovery. While there is no question over the observer who the bird was handed to, the uncertain date of the discovery and the unusual inland location create a sense of unease. Then again, it bears some similarity to the record of a dead Yellow-billed Cuckoo *Coccyzus americanus* at RSPB Headquarters, also in Bedfordshire, in December 1990 and it seems right that these records should be treated consistently and that both should appear in the main body of our report. Ultimately, while confirming identification is in most cases a precise and (relatively) easily defined process, determining provenance will, in most cases, never be an exact science. BBRC has to work on the best evidence available and attempt to make consistent judgments. We depend upon receiving as much detail as possible from local records committees and individuals with relevant information, together with accurate observations of whether birds show rings or other markings, or plumage wear consistent with captive origin.

Decisions relating to provenance are more critical for species that are being considered for acceptance to the national list and we have taken the opportunity to update BOURC decisions as appendices to our report, to clarify the current position with species that have previously been considered by BBRC and appeared in Category D (Appendix 2). Also included are a number of records that were submitted to BBRC for consideration and then passed to BOURC once the identification was accepted. These have not appeared in Category D, but have been accepted straight into Category E by BOURC. They are published here (Appendix 3) following enquiries about the status of some claims.

The withdrawal of the infamous Chipping Ongar Hermit Thrush *Catharus guttatus* (p. 576) is also published, the first admission of deliberate deception of BBRC. While the principal observer who withdrew the record made it clear that he had no issue with BBRC, and he felt that we had assessed the evidence fairly in the circumstances, we clearly cannot condone such behaviour, regardless of any supposed justification. Such records merely undermine the value of our ornithological record, and ultimately cause disappointment and regret to all concerned.

Fifty years on, the Committee remains true

to its original aims and objectives. However, have we also moved with the times to ensure that we are relevant to the birding community? Inevitably, our decisions are not always accepted universally. Most frequently, observers are disappointed when their records are considered not proven, but in the case of some high-profile records our decisions are called into question by a wider audience. We have tried to put information into the public domain regarding the assessment process and shall continue to do so. Inevitably, we will sometimes be considered too conservative in our approach and, less frequently, we will be accused of coming to a favourable decision where there is a body of opinion that a record should be considered unsafe. We understand that no assessment process of rare-bird records is failsafe, but we endeavour to make every effort to ensure that our decisions are robust and consistent. The benefits of having a single body to assess and publish rarity claims is clear and has no doubt assisted the analysis of vagrancy patterns, which recently include that by Slack (2009) and online versions by BirdGuides and Rare Bird Alert. We intend to continue to adapt and improve our procedures to ensure that this service continues well into the future.

### *Adam Rowlands*

#### Acknowledgments

Once again, we wish to thank all the observers and photographers who sent details of their rarity observations to BBRC, either directly or via recorders or the BirdGuides or Rare Bird Alert online galleries. We also continue to express a significant amount of gratitude to county and regional recorders and their records committees for the invaluable work that they undertake in supporting the BBRC function. Thanks also to all those individuals who updated information on earlier sightings through correspondence following the posting of Work in Progress files throughout the year. While they may not be acknowledged in the report, their contribution remains very significant for improving the accuracy of the information provided. BBRC continues to be supported financially by Carl Zeiss Ltd, whose sponsorship for the last 28 years has been vital in enabling the Committee to undertake its function. BirdGuides has continued to assist, particularly by enabling the submission of photographs for consideration by BBRC. We also would particularly like to thank Javier Blasco-Zumeta, Mark Constantine and Magnus Robb from The Sound Approach team, Nils van Duivendijk, Dick Forsman, Chris Gibbins, Mark Grantham, Trinus Haitjema, Andrew Harrop, Mark Holling, Steve Howell, Chris Kehoe, Peter Kennerley, Paul Leader, Ian Lewington, Bob McGowan, Tim Melling, Killian Mullaney, Robert Mulvihill, Tor A. Olsen, Urban Olsson, Brian Patteson, Robert Prŷs-Jones and the staff at the Natural History Museum (Tring), Michael Schaad, Chris van

Rijswijk, Keith Vinicombe and Roger Wilkinson for assistance with various issues during the course of the year. Previous BBRC members have also assisted the Committee with a number of duties during the year, including Colin Bradshaw, Alan Dean, Paul Harvey, John Martin, Jimmy Steele, Andy Stoddart, Reg Thorpe and Grahame Walbridge. John Marchant continued in his role

as Archivist and Brian Small in the role of Museum Consultant. Rob Fray, Andy Musgrove and Keith Naylor provided the Secretary with valuable support. Arnoud van den Berg and the *Dutch Birding* team provided significant support by providing electronic examples of papers from that journal for reference purposes.

### Systematic list of accepted records

The principles and procedures followed in considering records were explained in the 1958 report (*Brit. Birds* 53: 155–158). The systematic list is set out in the same way as in the 2007 report (*Brit. Birds* 100: 694–754). The following points show the basis on which the list has been compiled:

1. The details included for each record are (1) county; (2) locality; (3) number of birds if more than one, and age and sex if known (in the case of spring and summer records, however, the age is normally given only where the bird concerned was not in adult plumage); (4) if photographed or sound-recorded (and this evidence assessed by the Committee); (5) if trapped or found dead and where specimen is stored, if known; (6) date(s); and (7) observer(s), in alphabetical order.
2. In general, this report is confined to records which are regarded as certain, and 'probables' are not included. In cases of the very similar Eastern *Phylloscopus orientalis* and Western Bonelli's Warblers *P. bonelli*, however, we publish indeterminate records, and this also applies to those of frigatebirds *Fregata*, Zino's/Fea's Petrel *Pterodroma madeira/feae* and Booted *Hippolais caligata* and Sykes's Warblers *H. rama* (see also *Brit. Birds* 94: 395).
3. The sequence of species, English names and scientific nomenclature follow the 'British Birds' List of Birds of the Western Palearctic, see [www.britishbirds.co.uk/bblast.htm](http://www.britishbirds.co.uk/bblast.htm)
4. The three numbers in parentheses after each species name refer specifically to the total number of individuals recorded in Britain (i) to the end of 1949, (ii) for the period since 1950, but excluding (iii) those listed here for the current year. The decision as to how many individuals were involved is often difficult, but a consensus view is represented by 'presumed same' (counted as the same in the totals); records for which it is less certain whether the birds involved were the same or not are counted as different in the totals. An identical approach is applied to records of a particular species recurring at the same, or a nearby, locality after a lapse of time. In considering claims of more than one individual at the same or adjacent localities, the Committee requires firm evidence before more than one is accepted.
5. The breeding and wintering ranges for each species are given in parentheses at the end of each species account.
6. The following abbreviations have been used in the main text of the report: BO = Bird Observatory, CP = Country Park, GP = Gravel-pit, Resr = Reservoir, SF = Sewage-farm.

### Red-breasted Goose *Branta ruficollis* (9, 65, 0)

Cumbria Easton, adult, 16th–17th February, photo (G. Hogan, A. Latham), and 21st March, photo (per Cumbria Recorder); presumed same Skinburness, 6th March, photo (per Cumbria Recorder); also seen Dumfries & Galloway.

Dumfries & Galloway Caerlaverock, adult, 26th December 2007 to 6th February, photo, see also *Brit. Birds* 101: 520; also seen Cumbria.

Hampshire Warblington and Black Point, Chichester Harbour, adult, 10th November 2007 to 6th March, photo; presumed same Lymington and Hurst area, 31st October into 2009 (E. J. Wiseman *et al.*), see also *Brit. Birds* 101: 520; also seen Sussex.

Sussex West Wittering and East Head, Chichester Harbour, adult, 30th November 2007 to 5th March, photo; presumed same Thorney Island, 12th–13th February, photo (C. B. Collins), see also *Brit. Birds* 101: 520; also seen Hampshire.

The records from northwest England and southwest Scotland are fairly typical, involving a single bird

moving around with Barnacle Geese *B. leucopsis*. However, the bird in southern England is more intriguing. It first arrived in Dorset (together with 1,000+ Brent Geese *B. bernicla* and two Black Brants *B. b. nigricans*) on 4th November 2006 and remained at Ferrybridge and Middlebere, in Poole Harbour, until early 2007. During its stay it made the mistake of visiting Abbotsbury Swannery for a morning, and also spent a week with Common Shelducks *Tadorna tadorna* at Wareham water meadows. Its 'wildness' was questioned at this time but it subsequently rejoined the Brent Goose flock and made its way east with them (after another brief visit to Ferrybridge). It reappeared in late 2007 (when it didn't make it as far west as Dorset) and the general pattern was repeated in 2008, when it spent a week with Greater Canada Geese *B. canadensis* before rejoining the Brent flock.

The provenance of such birds is always going to be impossible to establish with certainty, although the consistent arrival date (in all three years), general behaviour and location of this bird appear to favour a wild origin. Are the few occasions when it left the company of the Brents in favour of 'less suitable' hosts a sign of previous captivity? Similarly, there is nothing to stop a feral bird tagging along with a large Brent Goose flock, while arrival and departure at the 'right' time of year is not a guarantee of wild origins. In such situations, a pragmatic approach seems justified and 'innocent until proved guilty' is appropriate here.

(Breeds Taimyr Peninsula, Siberia. Migrates SW to winter in coastal regions of W Black Sea in Romania & N Bulgaria. Small numbers regularly winter in the Netherlands, Greece & Turkey. Some may still use former wintering areas along Caspian Sea.)

### Black Duck *Anas rubripes* (0, 33, 1)

Cornwall Butter's Tor Moor, Bodmin, adult male, 23rd May (per Cornwall Recorder); presumed same as Colliford Resr 2007, *Brit. Birds* 101: 520.

Pembrokeshire Marloes Mere, female, 16th March to 19th May, photo (D. Astins *et al.*).

This is not one of the most inspiring of BBRC species, yet its rarity in Europe, combined with the distribution of records, suggests that it is not popular in waterfowl collections and that records are likely to be of genuine vagrants. With records concentrated along the western seaboard, from Iceland and Ireland to Spain and the Azores (where it possibly bred in 2000), the natural vagrancy pattern is well established.

The 2008 records listed here keep generally to form. Many birders in the last 30 years will have added this species to their British List courtesy of long-stayers in Wales or the southwestern counties, and the Cornish bird falls into that mould (it was seen again in 2009). Despite this species' drab appearance, a twitchable Black Duck in the Midlands or on the east coast would be much appreciated. If a suspect is found, due care and attention should be paid to the bill, tail pattern and speculum to ensure that a hybrid can be ruled out.

(Breeds E North America from Labrador S to North Carolina & W to Manitoba. Most are resident or dispersive but N breeders migrate to winter in coastal SE USA.)

### Blue-winged Teal *Anas discors* (10, 220, 1)

Cleveland Saltholme Pools, adult male, 14th November, photo (J. Blackburn, J. Grieveson, R. Hardy *et al.*).

2007 Cleveland Haverton Hole, adult male, 31st August to 15th October, photo (M. A. Blick *et al.*).

2001 Kent Stodmarsh and Grove Ferry, male, 14th November 1999 to 31st January (per Kent Recorder); presumed same as Stodmarsh 1999, *Brit. Birds* 93: 522–523.

1997 Derbyshire Monsal Dale, 2nd March to 20th April, photo; note revised dates, *Brit. Birds* 91: 467.

(Breeds from S Alaska, across much of temperate Canada to SC USA. Migratory, wintering in S USA, Mexico, Caribbean & N South America.)

### Lesser Scaup *Aythya affinis* (0, 129, 14)

Avon Blagdon Lake, adult male, 15th–20th March, photo (R. M. Andrews, C. Craig, R. Mielcarek, N. Milbourne); presumed same Barrow Gurney Resr, 21st March to 5th April, photo (C. J. Stone *et al.*), and Chew Valley Lake, 7th April to 1st May, photo (A. H. Davis, R. Mielcarek *et al.*).

Clyde Balgray Resr, Barrhead, male, 21st July to 17th August, photo (J. J. Sweeney *et al.*). Hogganfield Loch, Glasgow, two males, 19th October to 31st December, photo (C. J. McNerny *et al.*).

- Cornwall Dozmary Pool, adult male, 13th–25th April, photo (S. Bearhop, S. C. Votier *et al.*).
- Dumfries & Galloway Loch Magillie and Soulseat Lochs, adult male, 3rd March to 8th April, photo (C. Baines, P. Berry). Auchenreoch Loch, male, 30th March to 24th April, photo (A. T. & C. I. Bushell *et al.*).
- East Glamorgan Cosmeston Lakes CP, first-winter male, 26th December into 2009, photo (G. N. Smith *et al.*).
- Gloucestershire Lydney Lakes, male, 31st October to 17th November, photo (N. J. & V. E. Phillips *et al.*); presumed same Frampton-on-Severn, 22nd November to 7th December, photo (N. Goatman *et al.* per Gloucestershire Recorder).
- Leicestershire & Rutland Swithland Resr, male, 23rd–29th March, photo (B. Croxtall, S. M. Lister *et al.*).
- Nottinghamshire Holme Pierrepont, adult male, 26th October into 2009, photo (A. M. Clewes *et al.*).
- Outer Hebrides Coot Loch, Benbecula, adult male, 21st December 2007 to 18th March, photo, see also *Brit. Birds* 101: 520–522; presumed same Loch Fada, Benbecula, 18th–28th March, photo (per Outer Hebrides Recorder), and Loch an Fhaing, Grimsay, 1st April (per Outer Hebrides Recorder).
- Oxfordshire Appleford, first-winter male, 30th December 2007 to 17th February, photo, see also *Brit. Birds* 101: 520–522.
- Perth & Kinross Kirkgate, Loch Leven, adult male, 3rd–10th February (K. D. Shaw, J. J. Squire *et al.*), presumed same as Burleigh Sands 2007, *Brit. Birds* 101: 520–522. Orwell, Loch Leven, adult male, 23rd September (J. J. Squire); presumed same Kirkgate, Loch Leven, 22nd October (A. Carroll, J. S. Nadin, K. D. Shaw *et al.*), and Loch Leven, 26th December (K. D. Shaw).
- Shetland Papil Water, Fetlar, female, 11th November 2007 to at least 7th January, photo, see also *Brit. Birds* 101: 520–522; presumed same Kirk Loch, Yell, intermittently 5th–24th February (B. H. Thomason *et al.*), and Easter Loch, Unst, 15th–16th February (G. Bundy, M. G. Pennington).
- Somerset Torr Resr, adult male, 2nd March, photo (B. A. Taylor); presumed same 22nd December, photo (B. A. Taylor *et al.*); also seen Wiltshire.
- Upper Forth Blair Drummond, adult male, 19th March to 6th April, photo (N. Bielby, A. Lauder *et al.*).
- Warwickshire Draycote Water, first-winter male, 26th November 2007 to 5th March, photo, see also *Brit. Birds* 101: 520–522.
- Wiltshire Stourton, adult male, 20th February to 1st March, photo, presumed same as Stourton 2007, see below; also seen Somerset.
- Yorkshire Cleasby GP, adult male, 7th–8th May, photo (S. C. Bell, R. C. Taylor *et al.*).
- 2007 Clyde Hogganfield Loch, Glasgow, male, 2nd June, photo (J. J. Molloy).
- 2007 Northumberland Linton Pond and area, two, pair, 26th–30th May, photo, note revised location and dates, *Brit. Birds* 101: 520–522.
- 2007 Upper Forth Airthrey Loch, adult male, 2nd April, photo (I. Hartley).
- 2007 Wiltshire Stourton, adult male, 20th October intermittently to 26th December, photo, note revised dates, *Brit. Birds* 101: 520–522.

(Breeds from C Alaska through Canada to Hudson Bay & S to Washington & South Dakota. Isolated populations E of Great Lakes. Winters along both coastlines of USA, in E from New Jersey to Mexico, W Indies, C America to N Colombia.)

### King Eider *Somateria spectabilis* (68, 137, 6)

- Argyll Machrihanish, adult male, 28th February (J. McGlynn) and 5th March (E. Maguire), presumed same as Machrihanish 2007, *Brit. Birds* 101: 522–523; also seen Ayrshire.
- Ayrshire Troon Harbour, adult male, 11th–13th March, photo (per Ayrshire Recorder); presumed same Girvan, 27th March to 1st June, photo (per Ayrshire Recorder) (*Brit. Birds* 101: plate 179); also seen Argyll.
- Devon Appledore and Skern Northam, Torridge Estuary, first-winter male, 18th February to 3rd May, photo (N. Bastin, D. Churchill, M. Shakespeare); presumed same Appledore, 12th October to 8th November, photo (M. Darlaston *et al.* per Devon Recorder).
- Fair Isle South Harbour, first-summer male, 18th–21st May, photo (M. T. Breaks *et al.*); also seen Shetland.
- Fife Ruddon's Point, first-winter male, 27th March, photo (M. Ramage per Fife Recorder), presumed

same as Leven 2007, *Brit. Birds* 101: 522–523.

**North-east Scotland** Girdle Ness, Aberdeen, first-winter male, 1st December 2007 to 10th April, photo, see also *Brit. Birds* 101: 522–523. Peterhead, adult male, 20th March (M. Innes).

**Orkney** North Ronaldsay, first-winter male, 3rd–22nd April (P. A. Brown, R. J. Butcher, P. J. Donnelly *et al.*).

**Shetland** Mousa Sound, adult male, 10th November 2007 to 23rd March; presumed same, 29th October into 2009 (per Shetland Recorder), see also *Brit. Birds* 101: 522–523. Scord/Virkie, Mainland, first-summer male, 25th and 27th May, photo (P. M. Ellis, R. M. Fray, J. D. Okill *et al.*); also seen Fair Isle. Clift Sound, adult male, 4th–5th October (B. Stoneham per Shetland Recorder), presumed same as Wester Quarff 2007, *Brit. Birds* 101: 522–523. Bluemull Sound, Fetlar, female, 28th November, photo (B. H. Thomason per Shetland Recorder).

**Yorkshire** Flamborough Head, adult male, 24th–30th April, photo (V. Rushworth, J. Sheldon *et al.*).

(Breeds from Kanin Peninsula E across Arctic Siberia, including Novaya Zemlya & W Svalbard, Arctic Alaska, N Canada & N Greenland. European population winters along ice-free coasts of White Sea, N Norway & Iceland. Pacific population winters in Bering Sea.)

### Hooded Merganser *Lophodytes cucullatus* (0, 4, 1)

**Fife Tayport**, female, 26th October to 15th November, photo (P. & R. Blackburn *et al.*) (*Brit. Birds* 102: plates 27 & 355).

**2005 Kent Chilham**, adult female, 4th–10th December, photo (J. P. Martin, J. P. Mitchell *et al.*).

This species was admitted to Category A of the British List on the basis that the female or immature at Oban Trumisgarry, North Uist, Outer Hebrides, from 23rd October until 1st November 2000, may well have been a bona fide vagrant. However, the fact that BOURC saw fit to give this one bird the benefit of the



Mark Caunt

**355.** Female Hooded Merganser *Lophodytes cucullatus*, Tayport, Fife, November 2008.

doubt does not mean that previous records did not involve potentially genuine vagrants, nor that every subsequent sighting should be regarded as any more credible. The simple fact is that the majority of Hooded Mergansers seen in an apparently wild state in Britain and Europe will have escaped from captivity. However, some may be completely innocent of this charge, but deciding which individuals deserve recognition as being the genuine article and which should be damned will never please everyone. Being a relatively short-stayer on a loch in Scotland, the Fife female escaped severe condemnation, but a long-staying drake at Weymouth, Dorset, did itself no favours by outstaying its welcome and appears only in Appendix 3 of this report. That said, birders are free to make up their own minds as to whether the Dorset bird deserved the benefit of the doubt. It certainly would not have been the first wild bird, finding itself lost and alone, to adapt to an opportunistic lifestyle, and it could certainly be argued that arriving as an immature, finding itself a suitable haven, and then simply staying put is far from a hanging offence... See also comments in the introduction to this report.

(Breeds S Alaska, E across S Canada & N USA to Newfoundland, & S to Oregon, Virginia & locally almost to Gulf coast. Winters coastally, from S limit of breeding range to California & Florida.)

### Pacific Diver *Gavia pacifica* (0, 3, 0)

**Pembrokeshire Llys-y-Fran Resr**, second-winter, 16th January to 11th February, photo (R. Dobbins, A. Rogers *et al.*) (*Brit. Birds* 101: plate 96; plate 356); presumed same as Llys-y-Fran Resr 2007, see below.



**356.** Second-winter Pacific Diver *Gavia pacifica*, Llys-y-Fran Resr, Pembrokeshire, February 2008.

2007 Cornwall Mount's Bay, Penzance, adult, 17th February to 10th March, photo (L. M. & M. D. Fuller *et al.*); presumed same Marazion, 23rd–29th November, photo (J. P. Martin *et al.*).  
 2007 Pembrokeshire Llys-y-Fran Resr, juvenile, 2nd February to 20th March, photo (D. J. Astins, J. G. Brown, P. K. Grennard *et al.*).  
 2007 Yorkshire Farnham GP, juvenile, 12th January to 4th February, photo (J. E. Atkinson, J. R. Mather *et al.*) (*Brit. Birds* 100: plates 79 & 80).

Even though the identification and vagrancy potential of Pacific Diver had been flagged up in recent years, no-one could have anticipated the remarkable sequence of three different individuals (two juveniles and an adult) in Britain in early 2007, let alone the reappearance of two of these same individuals at the same sites the following winter.

The identification of non-breeding Black-throated *G. arctica* and Pacific Divers was seen as particularly challenging until quite recently, being described as 'an unresolved challenge' (Kaufman 1990) and the winter plumage as 'indistinguishable' (*BWP*). Perhaps unsurprisingly, the close scrutiny received by such obliging vagrants as those listed here has helped to crystallise some aspects of the species' field characters, particularly in relation to the nominate form of Black-throated Diver (most previous studies compared Pacific Diver with the green-throated *G. a. viridigularis*, which breeds sympatrically with Pacific Diver in Alaska and northeast Siberia). These first British records also galvanised a review of the taxonomy of Black-throated and Pacific Divers, which BOU now regards as two separate species.

The appearance of these three Pacific Divers coincided with a widespread influx of Great Northern Divers *G. immer*. The breeding range of Pacific Diver extends to Baffin Island in the Canadian Arctic, and possibly even western Greenland, so vagrancy potential is very high. Indeed, although the Pacific Diver is primarily a species of Pacific waters in the winter months, it has become apparent that birds occur on the eastern seaboard of North America rather more commonly than had been previously thought, being considered regular off Massachusetts, USA, in the early spring. This is, however, also the most pelagic species of diver in North America, so small numbers might reach the continental shelf off Britain & Ireland (and remain undiscovered) on a regular basis. Only in circumstances which precipitate an influx of divers into coastal and inland waters would such birds be detected. At any rate, now that Pacific Diver is firmly on the radar of British rarity finders, it seems not unreasonable to predict that the next record is not too far away.

(Breeds NE Siberia from lower Indigirka River E to Chukotskiy Peninsula, & N North America from Alaska E to Hudson Bay & S Baffin Island. Winters in Pacific Ocean, in Asia S to Japan & E China, & in North America S to Baja California & Sonora, Mexico.)

### White-billed Diver *Gavia adamsii* (7, 334, 33)

Caithness Dunnet and Murkle Bays, first-summer, 20th May (J. & R. Smith).

Durham Whitburn, 31st October (P. Hindess); also seen Northumberland. Whitburn, adult, 1st November (P. Hindess).

Highland Loch Ewe, Gairloch, two, 16th–22nd April (A. Carroll, C. J. Pendlebury, K. D. Shaw *et al.*).  
 Gruinard Bay, two adults, 20th April (A. Carroll, C. J. Pendlebury, K. D. Shaw); presumed same

Gruinard Bay, 13th May (per Highland Recorder). Scourie Bay, adult, 27th–28th May, photo (C. D. Baggott, M. Jackson *et al.*).

Kent Dungeness, adult, 26th April (P. Saunders *et al.*).

Moray & Nairn Burghead, adult, 24th April to 4th May (M. J. H. Cook *et al.*).

North-east Scotland Girdle Ness, Aberdeen, 15th November (I. J. Kelman).

Northumberland Newbiggin, adult, 31st October (D. Dack, S. Holliday, A. McLevy *et al.*). Newbiggin, 31st October, photo (G. Bowman, S. Sheppard *et al.*); presumed same Low Hauxley, 31st October, photo (M. J. Carr, I. Fisher), and Stag Rocks, Bamburgh, 31st October, photo (A. D. Mould); also seen Durham.

Orkney North Ronaldsay, adult, 15th–17th April (J. K. Batten, P. A. Brown, R. J. Butcher *et al.*). North Ronaldsay, four (three adults, one first-summer), 2nd–4th May (P. A. Brown, R. J. Butcher, R. Simpson *et al.*). Rerwick Head, Mainland, adult, 15th April (K. E. Hague). Water Sound, South Ronaldsay, adult, 2nd July to 14th December, photo (P. Higson *et al.*) (plate 357).

Outer Hebrides Port Nis and Skigersta, Lewis, two adults, 4th April to 14th May, photo (M. S. Scott *et al.*). Tolsta Head and Tiumpan Head, Lewis, three adults, 7th May, photo (M. S. Scott). Mangersta, Lewis, 27th May (G. & S. McAdam). Sound of Harris, Harris, adult, 18th April (A. Carroll, C. J. Pendlebury, K. D. Shaw). Sound of Taransay, Harris, adult, 18th April (A. Carroll, C. J. Pendlebury, K. D. Shaw).

Shetland Kirkabister, Mainland, 10th November 2007 to 2nd March (note revised dates, *Brit. Birds* 101: 526–527); presumed same 29th October into 2009, photo (G. F. Bell *et al.*). Mousa Sound, 30th March to 1st April (R. Riddington *et al.*). Mousa Sound, 16th April, photo (M. Heubeck *et al.*). Bluemull Sound, Fetlar, adult, 12th November 2007 to 7th January, photo (M. Devine, M. Smith, B. H. Thomason *et al.*). Bluemull Sound, Fetlar, adult, 14th November 2007 to 15th March, photo; note revised dates, *Brit. Birds* 101: 526–527. Bluemull Sound, Fetlar, adult, 2nd–16th November, photo (B. H. Thomason); presumed same as one of previous two. Kettla Ness, West Burra, adult, 30th March to 9th April, photo (R. A. Haywood). Uyea, Unst, adult, 18th May (R. M. Tallack, B. H. Thomason). Out Skerries, adult, 30th May, photo (M. S. Chapman, R. W. Tait), and 6th June (A. Homer).

Yorkshire Long Nab, Scarborough, adult, 29th October (N. W. Addey).

2007 North-east Scotland Girdle Ness, Aberdeen, adult, 9th November (I. Kelman, M. Lewis).

2006 At sea Sea area Irish Sea, 5 km off Corsewall Point, nr Stranraer, adult summer, 24th April, photo (S. Pinder, E. Wakefield per Dumfries & Galloway Recorder).

The 2008 total of 33 is the highest ever, which is a fitting end to this species' term on the BBRC list. No fewer than 171 have been accepted over the past ten years, which include eight years with ten or more, and White-billed Diver is now more accurately described as a scarce migrant than a national rarity, even though it remains hard to come by away from the northern and northwestern extremities of Britain.

Seasonal occurrence patterns were discussed in the 2006 BBRC Report (*Brit. Birds* 100: 701–702), which recognised (i) a southward autumn passage, evident from the efforts of sea-watchers at popular east-coast headlands; (ii) a tiny number of wintering birds, mainly in the Northern Isles; and (iii) a return spring passage, seen mainly in the Northern Isles and



**357.** Adult White-billed Diver *Gavia adamsii*, Water Sound, South Ronaldsay, Orkney, July 2008.

David Edgar

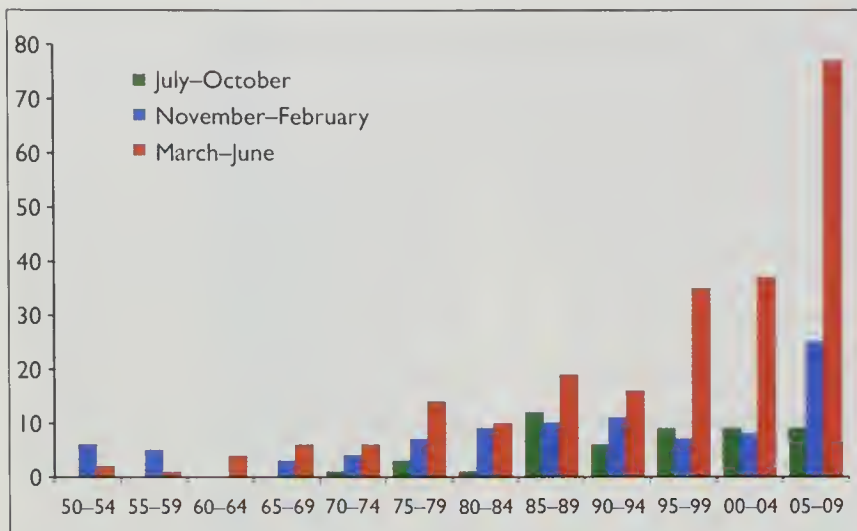


Fig. 1. Records of White-billed Divers *Gavia adamsii* in Britain since 1950.

the Outer Hebrides. A fairly steady increase in the winter and spring records was apparent between about 1965 and 1995, but since then numbers in spring have soared (fig. 1).

This surge in spring records coincided with a sharp increase in observer coverage on Lewis in the late 1990s. Several keen birders took up temporary residence there, taking advantage of the need for ornithological survey work

for various prospective windfarms. Not surprisingly, birding being more a religion than a job, their attention turned to the nearby coast when off-duty, and as a result they discovered the small but regular spring passage past Lewis. Since then, others have broadened the search and it now seems that, with a bit of effort, spring White-billed Divers can be found virtually anywhere off the Outer Hebrides and the northwest coast of the Scottish mainland.

We still have little idea where most of these passage birds spend the winter. They are seldom seen in the southern North Sea or off the west coast during December to February. Wherever they are, they must be beyond the range of land-based telescopes; perhaps off the west coast of Ireland?

(In W Pal., rare and sporadic breeder along Arctic coasts of European Russia, E from Yamal Peninsula & Novaya Zemlya. Also breeds in coastal regions of Siberia, N Alaska & Canada E to Mackenzie River & Baffin Island. Winters at sea, in NE Atlantic, S to S Norway, but distribution poorly known.)

### Black-browed Albatross *Thalassarche melanophris* (1, 22, 1)

Argyll Machrihanish, adult, 27th October (E. Maguire).

(Breeds on islands in S South Atlantic & Indian Oceans. In non-breeding season, disperses N throughout southern oceans as far as Tropic of Capricorn.)

### Yellow-nosed Albatross *Thalassarche chlororhynchos* (0, 1, 0)

2007 Lincolnshire Manton, Messingham, immature *T. c. chlororhynchos*, 2nd–3rd July, photo (P. Condon per Lincolnshire Recorder) (*Brit. Birds* 100: plates 512 & 513; 102: plates 270 & 358); also seen Somerset.

2007 Somerset Brean Down, immature *T. c. chlororhynchos*, 29th–30th June, photo (P. Kidner per J. R. Best); also seen Lincolnshire.

Many a devoted seawatcher must have daydreamed about a Yellow-nosed Albatross skimming the wave-tops, coming *just* close enough to secure the identification... before tipping into the next trough of a mighty swell and then throwing itself into a majestic arcing glide. Many a pelagic seabirder must have imagined the gasp of unsurpassable joy and wonder as the big bird coming in with the Fulmars *Fulmarus glacialis* at the back of the boat slides past the starboard side before settling on the water, allowing confirmation as, yes, a Yellow-nosed Albatross – the first in British waters. Nobody, except perhaps the criminally unromantic, would have pictured Britain's first Yellow-nosed waddling uncertainly over the turf of a Somerset down or swimming about among Greylag Geese *Anser anser* on a fishing lake in Lincolnshire – it just wouldn't be right. That *was* what really happened, though. The fact that there was no opportunity for birders to enjoy this South Atlantic mega just added insult to injury.

By any measure, this was a truly remarkable record, but made all the more so by prior and subsequent events. First, one was found in a cow pasture (what is it with pastures?) in Maine, USA, in late April. It was taken into care and released about three weeks later. Then there was a subadult off the Norwegian coast the day before the Somerset record, behaving impeccably around a fishing boat, with further records in the same general area over the next few days. Then, after the British record(s) came

another, perhaps the same individual, sliding down the western coast of Sweden towards Malmö before apparently heading inland, no doubt in search of some comfy inland fields. It is difficult to know how many birds were involved but there were clearly at least two in northwest Europe, and maybe more. There was something unusual happening, but we will probably never understand events like this. These were not the first



Paul Condon

**358.** Immature Yellow-nosed Albatross *Thalassarche chlororhynchos*, with Greylag Goose *Anser anser*, Manton, Lincolnshire, July 2007.

records for the North Atlantic, however; in fact, it is the second-commonest albatross in the North Atlantic as a whole (Olney & Scofield 2007) and there are previous records off Norway and in the Bay of Biscay, so no-one should give up hope.

One advantage of the unexpected circumstances of the British albatross was that a detailed analysis of the shape of the culminicorn was possible, which proved essential in determining subspecific identity. While this might seem unnecessarily esoteric, the South Atlantic and Indian Ocean races of Yellow-nosed Albatross are a potential future split, and this could prove invaluable in our ability to assign the record to species in the future – something that may be extremely difficult in a more ‘conventional’ encounter.

(South Atlantic breeding race *T. c. chlororhynchos* restricted to Tristan da Cunha group and Gough. More numerous Indian Ocean race *T. c. carteri*, sometimes treated as distinct species, breeds on several islands in S Indian Ocean, with majority on Amsterdam Island. Both races disperse widely in southern oceans (except S Pacific), with *chlororhynchos* regular N to 15°S in S Atlantic.)

### Zino’s/Fea’s Petrel *Pterodroma madeiralfae* (0, 33, 1)

Cornwall Gwennap Head, 25th August (B. Richards *et al.*).

(Zino’s confined to C mountains of Madeira where entire world population is c. 130–160 pairs; non-breeding range unknown. Fea’s breeds in Madeira archipelago (Bugio) & Cape Verde Islands. In non-breeding season disperses throughout N Atlantic.)

### Cory’s Shearwater *Calonectris diomedea*

#### Mediterranean race, ‘Scopoli’s Shearwater’ *C. d. diomedea* (0, 1, 0)

2004 At sea Sea area Sole, 9 km S of St Mary’s, 2nd August, photo (E. A. Fisher, R. L. Flood, B. Thomas *et al.*).

The first accepted record of this form for Britain (Fisher & Flood 2004; BOU 2009) was clinched by Bryan Thomas’s outstanding photographs, which won the 2005 Carl Zeiss Award (Bradshaw *et al.* 2005). Although Scopoli’s had been anticipated as a vagrant, it also seemed likely that the viewing opportunities provided by pelagic trips were the most likely means of confirming the relatively subtle features that distinguish it from the North Atlantic breeding race *C. d. borealis* – and the pioneering team on Scilly duly delivered. The key differences in underwing pattern, size and structure upon which identification is based were set out by Gutiérrez (1998). Nonetheless, the difficulties of field identification should not be underestimated and Howell & Patteson (2008a) highlighted the individual variation that may make identification of lone vagrants more problematic. BBRC will continue to take a critical view of all claims, and photographic evidence is certainly desirable.

The discovery of a breeding population of Scopoli’s (hereafter *diomedea*) on the Atlantic coast of

France in 2006 (Mays *et al.* 2006; Robb *et al.* 2008), demonstrates that some are breeding closer to Britain than was appreciated at the time of the Scilly sighting and this population could increase the potential for vagrancy, if birds foraging in the Bay of Biscay are displaced into British waters. Satellite tracking has established that birds from the eastern Mediterranean disperse into the mid Atlantic outside the breeding season (Ristow *et al.* 2000). Records of non-breeding *diomedea* from the Atlantic coast of North America, where *borealis* is more abundant (Thibault *et al.* 1997; Howell & Patteson 2008a) confirm that immatures (like many young seabirds) are great travellers. The Scilly bird was most likely a wandering immature, or otherwise non-breeding bird, since both adults and young leave the Mediterranean basin between mid October and mid November, with adults returning in February and March to breed. Systematic observations of the wintering populations off southern Africa indicate that *borealis* is the predominant form there, outnumbering *diomedea* on average by a factor of 6:1 (Camphuysen & van der Meer 2001), although this study was published before an appreciation of the variation within *borealis*, and the non-breeding range and migration routes of *diomedea* remain poorly defined.

A *diomedea* off southern Sweden on 7th May 2005 (Erterius 2005; Fågelåret 2005: 81) suggests that observers farther along the south coast of Britain and even on the east coast should be alert to this form. Recent molecular studies (Gómez-Díaz *et al.* 2006; Gómez-Díaz & González-Solís 2007) and analyses of vocalisations (Bretagnolle & Lequette 1990; Robb *et al.* 2008) indicate that elevating *diomedea* to species status is a future possibility, which may create interesting challenges for land-based seawatchers (and local records committees) when encountering 'Cory's' shearwaters. In Holland, where the two forms are treated as separate species, the CDNA has recorded 13 records of *Calonectris* shearwaters, with five assigned to *borealis* (all collected) and none to *diomedea*.

(Breeds widely throughout W and C Mediterranean Sea but local in east. Disperses widely outside breeding season, including N Atlantic where distribution is poorly known.)

### Swinhoe's Storm-petrel *Oceanodroma monorhis* (0, 5, 0)

2005 At sea Sea area Sole, 17 km S of St Mary's, 21st July (E. A. Fisher, R. L. Flood *et al.*).

This belated acceptance represents the first 'at sea' record of this species in British waters, with all previous records relating to trapped individuals. The at-sea identification of Swinhoe's has developed relatively recently (e.g. Howell & Patteson 2008b), but has been hampered for a number of years by the difficulties involved in obtaining field experience of this storm-petrel of the Pacific and Indian Oceans. None of the BBRC members who assessed this record had personal experience of the species in the field (although some had seen British birds in the hand). An independent review of the dark-rumped petrel seen from the MV *Chalice*, southwest of Scilly on 3rd August 1988 (Garner & Mullarney 2004), concluded that that bird was also a Swinhoe's, but the submission to BBRC (see Hume *et al.* 1997) failed to claim it as this species; and without a formal claim by any of the original observers, it cannot be considered for the national record. The theory that it was a Swinhoe's has recently been supported by Flood (2009), who made a strong case that all records of dark-rumped *Oceanodroma* storm-petrels in the North Atlantic relate to Swinhoe's.

Flood (2009) also provided a useful summary of records of Swinhoe's Storm-petrel, both accepted and under review, in the North Atlantic. He speculated that the likely route taken by European vagrants was either via the Red Sea and then overland into the Mediterranean or (more likely) around the southern tip of Africa, with birds following the Agulhas Current from the southwest Indian Ocean towards the southern tip of South Africa and then migrating north with European Storm-petrels *Hydrobates pelagicus* to the North Atlantic. Robb *et al.* (2008) analysed occurrence dates and showed that the Scilly record occurred in the peak period for records from Britain, France and Ireland, where 62% had been found in the last ten days of July. The fact that all the previous accepted British records have been along the North Sea coast, and that there have been three individuals in Norway, indicates that there is potential for this species to occur anywhere along the British coastline but, in the south at least, the identification pitfall of distant European Nightjar *Caprimulgus europaeus* should be borne in mind.

(Breeds on offshore islands in NE Pacific from Peter the Great Bay nr Vladivostok, Russia, S to N Honshu, Japan, the Korean Peninsula & islands off E China. Migrant through East & South China Seas & Straits of Singapore to winter in tropical Indian Ocean.)

## American Bittern *Botaurus lentiginosus* (32, 7, 1)

Pembrokeshire St David's Airfield, 30th November, found dead, photo (R. Dobbins, R. Taylor).

This species has a particularly unfortunate track record in Britain. Of the 40 records, only eight have survived more than a couple of days. The propensity for expiring after making the crossing is mostly related to the weapons borne by earlier generations of field ornithologists, but several have presumably succumbed to exhaustion before being found. The one listed above continues the general trend; its mortal remains were found on the edge of a marsh next to St David's Airfield, and the state of the corpse indicated that it had been dead for perhaps a few weeks.

Of those American Bitterns for which an accurate finding date is known, the peak arrival time is late October and November (fig. 2). Many of those that were shot in the winter presumably involve birds that had arrived the previous autumn and were attempting to see out the winter on this side of the Atlantic.

It is interesting that there has been such a dramatic decline in sightings in modern times. This is the first record since May 1999, and the one before that was the well-watched bird at Marton Mere in Lancashire & N Merseyside, way back in 1991. Compare that with 24 records (all shot or otherwise 'obtained') in the nine-

teenth century. There were even multiple arrivals, including a remarkable run of records in the 1870s when no fewer than eight were shot between 1870 and 1876 (with another four in Ireland and one on the Channel Islands). The two birds in 1876 were within about 20 km of each other in Hampshire.

No doubt many, if not most, American Bitterns are ship-assisted to some degree, and the geographical spread of British & Irish records may support this. Most have turned up along the English Channel and Irish Sea coasts, reflecting the main shipping routes into Liverpool, Southampton and London. Is it a coincidence that the 'glory days' of the American Bittern in Britain (and Ireland) broadly coincided with the zenith of passenger travel across the Atlantic on luxury liners? (And that as aircraft replaced shipping as the traveller's choice of transatlantic crossing in the twentieth century, so American Bitterns became rarer over here.) Of course, there are still plenty of ships crossing the Atlantic nowadays, but perhaps passengers were more inclined to feed stowaways that could not hunt for themselves. Modern cargo vessels may be more unforgiving in the case of a piscivorous bird.

Of course there could be other factors at work here and, although perhaps not the best means of monitoring a secretive marsh-dweller, the US Fish & Wildlife Service Breeding Bird Surveys between 1965 and 1979 showed a significant decline of 2.4% per year in populations in the USA (Robbins *et al.* 1986), although a similar survey in Canada failed to show any significant trends (Gibbs & Melvin 1992). So population decline is certainly possible, but is at present unquantified.

(Widespread across Canada, mostly S of 60°N, and throughout USA except southern states. Northern breeders migrate to winter mostly S of 40°N in USA and into C America.)

## Little Bittern *Ixobrychus minutus* (c. 260, 224, 2)

Dorset Lodmoor, female, 17th–20th May, photo (N. Fowler *et al.*).

Pembrokeshire Brooksgrove, Haverfordwest, male, 7th–10th May, found dead, photo (G. & S. Davies, R. Haycock).

2003 Lincolnshire Spalding, male, 12th–13th May, photo (D. Harris, K. & R. Heath, K. Seaton).

All these records fell within the peak spring period, from early May to early June (fig. 3). As would be expected of a spring overshoot, the vanguard arrive in southwest and southeast England, which account for over 70% of records during March and April but just over 60% in May as sightings become more widespread, particularly in eastern England. June arrivals are much more widely scattered,

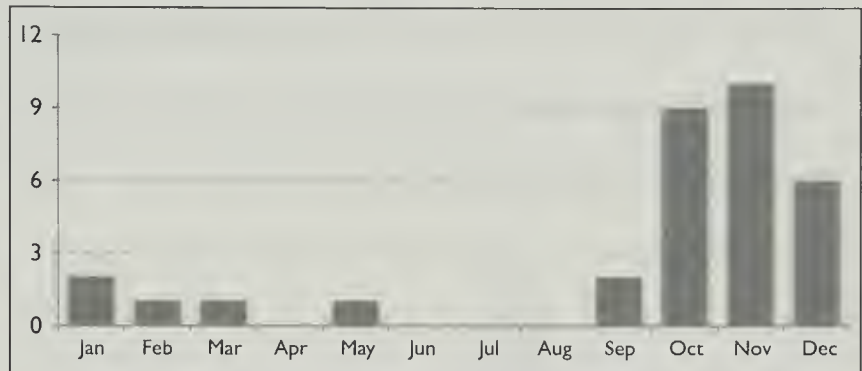


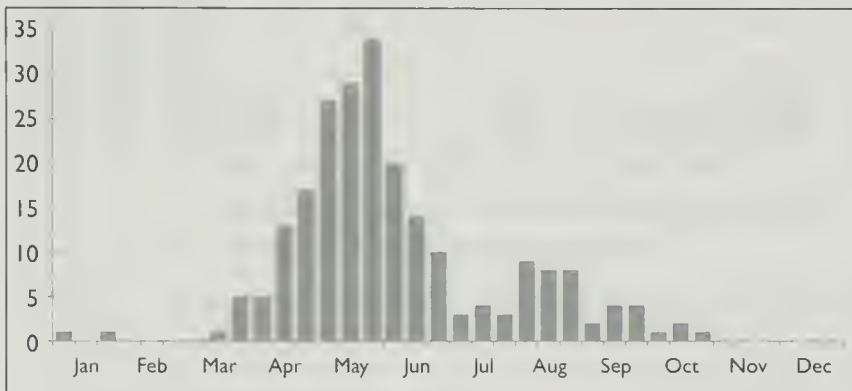
Fig. 2. Records of American Bitterns *Botaurus lentiginosus* in Britain (all records, where finding date known).

Decade	Total
1950s	27
1960s	41
1970s	75
1980s	30
1990s	34
2000s (so far)	19

yet southern and eastern England still account for 73% of records.

Historically, another peak in numbers was apparent, in August. Although not all of those August birds were aged, of those that were more than 70% were identified as either juvenile or immature, which accords well with the post-fledging dispersal period given by *BWP*. Initial post-fledging dispersal shows no obvious pattern in direction (*BWP*), but the high percentage of August records from southeast and eastern England (72%) suggests that birds came from the nearby Dutch population rather than southern Europe. The fact that 88% of all August records occurred

before 1978, with just one in this month in the last 25 years, no doubt reflects the declining European breeding population (Hagemeijer & Blair 1997; BirdLife International 2004). The table shows that numbers rose until the 1970s (when there were some notable influxes), but have since declined. This is in contrast to the fortunes of many southern herons, whose numbers have continued to increase to the point where many are no longer considered by BBRC. The Little Bittern's decline has been attributed to habitat loss and droughts affecting the African wintering grounds, although other factors in the breeding areas cannot be dismissed. Little Bittern is now extremely rare in autumn, and observers would be well advised to be aware of the identification features of Least Bittern *I. exilis*, as the Little



**Fig. 3.** Records of Little Bitterns *Ixobrychus minutus* in Britain, 1950–2008.

(Widespread, patchy and declining in Europe N to 53°N. To E, breeds to 60°N in Russia, & E to Kazakhstan & NW China. W Pal. population migratory, wintering mainly in E Africa, S from Sudan & Ethiopia. Other populations largely resident or dispersive in N Indian subcontinent, sub-Saharan Africa & Australia.)

Bittern's North American counterpart may follow in the recent footsteps of Great Blue Heron *Ardea herodias* and Little Blue Heron *Egretta caerulea*, both of which have finally asserted their credentials in a British and Irish context in recent autumns after a number of observations from the Azores.

### Green-backed Heron *Butorides virescens* (1, 4, 1)



Dave Stewart

**359.** First-winter Green-backed Heron *Butorides virescens*, West Hythe, Kent, October 2008.

Kent West Hythe, first-winter, 19th October to 9th November, photo (Mr & Mrs Young per I. A. Roberts, P. Trodd *et al.*) (*Brit. Birds* 101: plate 385; plate 359).

This popular bird was the sixth record for Britain. With finding dates of the previous five spanning 24th September to 27th November, the Kent bird falls neatly into the pattern established thus far. The geographical spread of the records is less clear, with two in the west (Cornwall 1889, Anglesey 2005), and the rest on the east side of the country (previous records in Yorkshire 1982, Lothian 1987 and Lincolnshire 2001). Given that West Hythe is close to the busy English Channel shipping lanes, and that two previous records were not far from the Humber, it is possible that some British records may have been (quite legitimately) ship-assisted.

(Breeds SE Canada throughout E USA & Mexico. N populations winter from S USA through C America to N South America.)

### Squacco Heron *Ardeola ralloides* (69, 70, 1)

Somerset Chilton Trinity Ponds, adult, 1st June, photo (J. Andrews).

(W Pal. breeding population small and fragmented, centred on Mediterranean basin, from S Spain to Black Sea & E to Kazakhstan, with large population in Danube Delta. Northern populations migratory, wintering in N tropical Africa. African population largely resident.)

### Cattle Egret *Bubulcus ibis* (3, 272, 168)

Anglesey Malltraeth Marsh, 1st February (K. Maurice).

Buckinghamshire Haversham, 30th November to 9th December, photo (P. Nye *et al.*).

Cambridgeshire Elton, 23rd February, photo (B. Stone *et al.*); presumed same Winwick, 24th February to late April (E. McMahon, K. P. Royles *et al.*), and Caldecote, Folksworth, 26th February to 2nd March (A. Frost *et al.*); also seen Northamptonshire. Ouse Washes, adult, 15th June (D. A. Griffiths, G. Hirons, M. S. Peck *et al.*). Buckden Marina and Brampton, two adults, 1st–8th November, photo (M. L. Hawkes, J. Lindsell); presumed same Fen Drayton GP, 9th November (M. J. Everett *et al.*).

Ceredigion Dol-y-bont and Llandre, adult, 3rd January to 11th May, photo (C. DeCarle, R. Jones *et al.*).

Cheshire & Wirral Poynton, 22nd December 2007 to 16th April, photo. Neston, 23rd December 2007 to 10th January, photo, see also *Brit. Birds* 101: 528–530; presumed same Burton, 25th–26th January, photo (C. Jones, K. McNiffe, D. Steel *et al.*). Hoylake Langfields, 20th April to 8th May, photo (R. Smith *et al.*). Lemon Pool, Doddington, 4th July, photo (C. Lythgoe, D. Meakin).

Cleveland Saltholme Pools, 15th November, photo (R. C. Taylor *et al.*).

Cornwall Halsetown, St Ives, five, 22nd December 2007 to 17th January, photo. Gannell Estuary, Crantock, Newquay, eight, 27th December 2007 to 6th January, see also *Brit. Birds* 101: 528–530. The Lizard, 1st January (A. R. Pay). Morvah, 5th January, photo (D. Parker *et al.*). Culdrose, 6th January (A. R. Pay). Drift Resr, 20, 25th January, photo (D. Parker *et al.*), presumed same as Sancreed and Drift 2007, with two additional birds from nearby sites, *Brit. Birds* 101: 528–530. Bellevue Farm, Stithians Resr, three, 2nd February (P. Stronach). Trevollard, Liskeard, three adults, 10th February, photo (P. Edmonds). Stithians Resr, one 12th–28th February and two on 15th, photo (P. A. Fraser). Landulph, adult, 24th–25th February, photo (P. Edmonds, R. Gould); also seen Devon. Trelissick, 11, 25th March (D. Eva). Laddock, 4th–8th April, photo (P. Freestone, S. Wilcock *et al.*).

Cumbria Grinsdale, Carlisle, 16th–21st February, photo (C. Middleham, D. Welch *et al.*). Brampton, Carlisle, 17th–18th October, photo (M. & M. J. Gardner *et al.*); presumed same Crosby-on-Eden, 20th October (per Cumbria Recorder). Urswick, adult, 13th–27th November, photo (D. Jewell, H. Stables *et al.*). Whasset, two, 23rd–29th November, photo (B. Airey, P. A. Robinson *et al.*).

Devon Powderham, Exe Estuary, 26th December 2007 to 27th January, photo, see also *Brit. Birds* 101: 528–530. Southcote Valley, Bideford East, five, 1st–30th January (D. Churchill *et al.*). Woodbury, 12th January (M. Knott *et al.*). Exmouth, two, 16th–21st January, photo (M. Knott *et al.*). Bradford Holsworthy, 19th January to 20th February (J., J. M. & M. Elliott). Warleigh Point and Tamerton Foliot, adult, 4th February to 24th March (P. Edmonds *et al.*); presumed same Bere Alston, Plymouth, 17th February (P. Edmonds, R. Gould); also seen Cornwall. Saltram, Plymouth, two adults, 6th–20th February, photo (R. Eynon & P. Edmonds). Drake Memorial Park, Saltram, two, 8th February, photo

- (L. H. & R. H. Hurrell). Alston Hall, Holbeton, 9th February (L. H. & R. H. Hurrell). Cofflete Creek, Brixton, five, 9th February, photo (L. H. & R. H. Hurrell), presumed same Tamerton Foliot and area, 14th March to 4th May (P. Edmonds, R. Gould). Islay Marsh, Yelland, Barnstaple, 15th February (D. Churchill *et al.*). Drake Memorial Park, Saltram, 19th February, photo (L. H. & R. H. Hurrell *et al.*). Fremington Pill, Barnstaple, two adults, 16th–26th March (M. Payne, D. Pointon *et al.*). Exeter, adult, 19th March (H. Cook). Clampitt Bickington, five, 19th April (D. Churchill, M. Shakespeare, J. E. Wicks). South Huish, Thurlestone, 25th–26th May (R. Burrige, A. J. Livett *et al.*). Thurlestone, 26th–28th May (J. Ray *et al.*). South Huish, Thurlestone, three adults, 29th May (A. Blake, R. Burrige, A. J. Livett). Colyford Common, Seaton, 22nd–23rd August, photo (M. Knott *et al.*). Dorset Upwey and Buckland Rippers, six, 24th November 2007 to 20th March, photo, see also *Brit. Birds* 101: 528–530. Bere Regis, adult, 12th January to 18th March (J. Phillips *et al.*). Frampton Water Meadows, 21st January to 9th February (M. Adams). Abbotsbury, 21st February (S. A. Groves *et al.*). East Holme, adult, 22nd February to 18th March, photo (D. Liley *et al.*). Abbotsbury and West Elsworth, 26th February to 27th April (S. A. Groves *et al.*). Christchurch Harbour, 20th March (D. N. Smith). Lytchett Bay, 19th April to 1st June, photo (S. Robson *et al.*). Lodmoor, 26th–27th May (G. Walbridge *et al.*). Lodmoor, adult, 17th July (J. Lowther); presumed same Radipole Lake, 18th July (per Dorset Recorder). Ower, Poole Harbour, 10th August (S. Robson, M. Smith); presumed same Studland, Poole Harbour area, 17th–27th August (S. W. Smith *et al.*). Abbotsbury, 28th September (S. A. Groves). Studland and Ballard Down, 18th October to 1st November (S. W. Smith *et al.*). Lytchett Bay, 25th October (S. Robson, M. Smith). Dumfries & Galloway Cardoness, 24th December 2007 to 11th January, photo; see also *Brit. Birds* 101: 528–530 (*Brit. Birds* 101: plate 62). Essex Abberton Resr, adult, 12th–13th April, photo (A. Kettle). Gloucestershire Saul Warth and Frampton-on-Severn, 9th December 2007 to 22nd June, photo, see also *Brit. Birds* 101: 528–530. Frampton-on-Severn, adult, 17th April to 22nd June, photo (J. King *et al.*). Gower Hunt's Bay, Pennard, 28th February to 12th March, photo (H. Grenfell, G. Rutt *et al.*). Greater Manchester Horrocks's Flash, Wigan, 4th–30th May, photo (R. Thorpe *et al.*). Gwent Goldcliff Lagoons, adult, 6th–11th July, photo (M. Jenkin, H. Jones). Hampshire Harbridge, 27th December 2007 to 27th March, photo, see also *Brit. Birds* 101: 528–530. Brockenhurst, 25th–26th January (R. Cooke, R. Ship). East of Sowley, two, 6th February to 1st May, photo (R. Coomber *et al.*). Titchfield Haven, 29th May (R. J. Carpenter, M. Pink *et al.*). Priors Farm, Selborne, 28th–29th December, photo (M. R. Lawn *et al.*). Park Shore, Beaulieu Estuary, 31st December into 2009, photo (N. R. & S. Jones *et al.*). Isles of Scilly Porth Hellick and Trewince, St Mary's, 26th–27th April, photo (R. Brown, J. Cumming, R. Mawer). Higher Moors, St Mary's and St Agnes, four, 13th–14th May, photo (R. L. Flood *et al.*). Old Grimsby, Tresco and roaming, five, 29th December into 2009, photo (R. L. Flood *et al.*) (*Brit. Birds* 102: plate 104). Kent Walmer Castle, adult, 19th April, photo (S. Reynaert *et al.*). Harty, Sheppey, 18th November (P. Clark, M. Coath *et al.*). Lancashire & North Merseyside Eccleston, St Helens, 5th April, photo (T. Ferguson, S. Tomlinson). Leighton Moss, 28th June, photo (D. Talbot per Lancashire & North Merseyside Recorder). Marshside, 27th October to 7th November, photo (D. Nickeas *et al.*). Downholland Moss, three, 1st November, photo (D. Williams per Lancashire & North Merseyside Recorder). Bescar and Martin Mere, 22nd November (K. Brides *et al.*). Leighton Moss, 28th November to 1st December (E. & E. Prince, G. Thomas). Preesall, two, 30th November, photo (I. Latham). Lincolnshire Saltfleet, 30th–31st January, photo; presumed same Little Cawthorpe, 3rd February, photo, and Legbourne, 4th–18th February, photo (all per birding information services). Norfolk Stiffkey, adult, 4th–13th April, photo (S. J. M. Gantlett, A. I. McElwee *et al.*). Burnham Norton, 10th–11th May (per Norfolk Recorder); presumed same Holkham, 17th–24th May (A. I. Bloomfield, P. J. Heath *et al.*). Blakeney and Cley, 12th–15th August, photo (per Norfolk Recorder). Northamptonshire Park Lodge, Fotheringhay, 23rd February, photo (B. Stone *et al.*); also seen Cambridgeshire. Nottinghamshire Attenborough, adult, 2nd–3rd May, photo (D. & J. Goodwin per Nottinghamshire

- Recorder); presumed same Lound GP, 6th–9th May, photo (P. Cadman, I. Hunt *et al.*).
- Oxfordshire Dorchester-on-Thames, adult, 6th November into 2009, photo (A. Williams *et al.*).
- Pembrokeshire Sandy Haven and Hasguard Cross area, adult, 17th October to 30th December, photo (D. J. Astins *et al.*) (*Brit. Birds* 102: plate 75). West Angle, 9th December, photo (C. Hurford).
- Hubberton, 9th–26th December, photo (C. Hurford *et al.*). Trefasser, Strumble Head, five, 15th–29th December, photo (R. Dobbins, R. Johns *et al.*). Dale, 17th December into 2009, photo (K. J. S. Devonald *et al.*).
- Shropshire Ellesmere Canal Wharf area, 7th–14th November, photo (per Shropshire Recorder).
- Somerset Wet Moor, 29th December 2007 to 11th February, photo, see also *Brit. Birds* 101: 528–530.
- Tadhil, Leigh-on-Mendip, adult, 1st January to 4th February, photo (J. Cole, J. Hansford *et al.*). Chapel Cleeve, adult, 1st January to 28th March, photo (C. Gladman *et al.*). Steart, 10th–14th January, photo (R. L. Musgrove *et al.*). Westhay, adult, 4th February, photo (J. M. Sage per Somerset Recorder).
- Stretcholt and West Huntspill, three, 5th–15th February, photo (R. L. Musgrove, J. J. Packer, R. Pratt).
- Muchelney Ham, adult, 11th February; presumed same 2nd–15th March, then Wet Moor, 17th March (all per D. Chown). South Moor, Andersea, five, 25th March to 6th April, photo (J. A. Hazell), presumed same as following sightings: undisclosed site, up to five (four adults, one juvenile), 22nd April to 3rd August, photo; Catcott Lows Reserve, two adults, 21st–22nd May, two adults with a juvenile, 15th September, photo; Shapwick Heath NNR, five, 1st September to 18th October, photo; Meare Village, two adults, 17th September; Sharpham, six, 1st November to 24th December, photo (all J. A. Hazell) (plate 360). Steart, three adults, 21st April (J. R. Best). Dunster Beach, adult, 22nd April, photo (C. Gladman).
- Staffordshire Barton-under-Needwood, 29th November to 2nd December, photo (per Staffordshire Recorder).
- Sussex East Lavant and Chichester GP, two, 7th December 2007 to 7th April, photo; note revised dates, *Brit. Birds* 101: 528–530; two more (four total), 7th April, photo (M. Collins per Sussex Recorder).
- Combe Haven, Hastings, 31st December 2007 to 20th January and 23rd–26th January (per Sussex Recorder); previously presumed same as East Lavant 2007, now regarded as new, *Brit. Birds* 101: 529; plus second individual, 23rd–26th January. Lewes Brooks, Rodmell and Piddinghoe, 1st January to 15th March, photo (per Sussex Recorder). Pevensey Levels, 10th February, one of two from Combe Haven, photo (C. A. Holt). Hooe Levels, Pevensey, two adults, 18th March (P. James). Coombes, Lancing, up to three, intermittently, 14th–27th April (M. Perryman *et al.* per C. Melgar). Iford Brooks, Lewes, 22nd April (H. Gordon). Pagharn Harbour, two, intermittently, 26th April to 25th July, photo, presumed same as East Lavant (I. Lang *et al.*). Norman's Bay, Pevensey, 13th May (A. S. Grace); presumed same Piddinghoe, Rodmell and South Heighton, 14th–16th May, photo (A. Parker per Sussex Recorder). Sidlesham, four adults, 8th–16th October (N. Paul *et al.*); presumed same Castle Water, Rye Harbour, 19th–23rd October (C. Bentley *et al.*).
- Wiltshire Britford, Salisbury, 19th December 2007 to 17th March, photo (B. Greenough *et al.* per Wiltshire Recorder).
- 2007 Cambridgeshire St Neots, 26th–29th December, photo (per Cambridgeshire Recorder); presumed same Abbotsley, 27th December (S. L. Blain); note revised location, dates and observer, *Brit. Birds* 101: 528–530.
- 2007 Cornwall Penventon Farm, Helston, nine, 24th December (D. Parker *et al.*).
- 2007 Dorset Hengistbury Head, 7th November (D. N. Smith).
- 2007 Essex Holland Haven, 2nd April (P. Bruce, S. Cox *et al.*).
- 2006 Sussex Piddinghoe, eight, 2nd January to 1st April, photo; note revised dates, *Brit. Birds* 100: 704–705.
- 1987 Derbyshire Thornsett area, 20th December 1986 to 7th January; note revised dates, *Brit. Birds* 80: 522, 81: 542.

The Cattle Egret is one of the most adaptable and opportunistic of species, and its world range has expanded considerably in recent years. Its ability to take advantage of human activity is a key factor and, while livestock farming is clearly important, man-made grasslands, golf courses and crop fields are readily adopted as feeding areas. Originally native to Spain, Portugal and tropical Africa, the species began to spread into South Africa in the early twentieth century and crossed the Atlantic to colonise South America in the 1930s before moving north into the USA a decade later (Crosby 1972). The

Jeff Hazell



360. Cattle Egrets *Bubulcus ibis*, breeding pair with fledged juvenile, Somerset, summer 2008.

eastern race *B. i. coromandus* is widespread in Asia south to Australia.

In Europe, range expansion was also dramatic. The first breeding record in France was in the Camargue in 1968, and by 1974 some 98 pairs were breeding there (*BWP*). In subsequent years it continued to move northwards, although it remained an extremely rare bird in Britain: the six in 1981 were described as 'an extraordinary influx' in that year's BBRC Report. Between 1982 and 1991, a total of just 21 were seen, including 14 in 1986, but there were also several blank years. The group of eight together in Hertfordshire in spring 1992 is still remembered as a significant and memorable event. Numbers in the decade 1992–2001 increased somewhat, with a total of 75, which included 13 in both 1998 and 2001. However, the record total of 29 in 2006 was a clear pointer to what was to come, and the unprecedented arrival of Cattle Egrets in late 2007 was described in last year's report.

The birds from that influx were obviously still very much in evidence in early 2008. The largest numbers were in the southwest, in Cornwall in particular, and it is also worth noting that southwest Ireland experienced a similar invasion, with at least 35 recorded in January 2008. As the year progressed, more birds began to be reported farther north and east, including the first records for Ceredigion and Oxfordshire. Given that this species has a history of turning up at virtually any time of year, it is difficult to be sure whether these individuals were part of the original influx or new arrivals. However, it appeared that most had vacated Cornwall by early spring, when the centre of gravity had shifted to the dairy-farming counties of Devon and, particularly, Somerset. With so many birds in the country, there was much speculation as to the likelihood of possible breeding and this was eventually realised when a pair successfully raised a single youngster in Somerset: the first confirmed breeding record for Britain.

Towards the end of 2008 there was evidence of a second influx, with five on Scilly and eight in Pembrokeshire (conceivably one group of five could have travelled between the two areas, though they are counted separately in the species totals). One or two probably new birds were also seen in Cornwall and elsewhere at this time, details of which have yet to be submitted – perhaps a sign that 'Cattle Egret fatigue' had set in. It is impossible to be absolutely certain of the number of new birds seen in 2008, but a great deal of local effort has gone into generating the summary presented here and it seems likely that odd missing records are balanced by the inevitable occasional duplication, and we feel that the total of 168 is about right. Since the BBRC files had been bursting at the seams with submissions for this species, members heaved a collective sigh of relief when it was finally removed from the list of official rarities with effect from January 2009 (*Brit. Birds* 102: 274–277).

(In Europe, common and widespread in S Spain & Portugal, and range expanding north in France. N populations disperse outside breeding season, mostly into Africa. Widespread resident throughout much of Africa, S USA, N & C South America. Distinctive race, *coromandus*, sometimes treated as a full species, breeds S & SE Asia N to S China & Japan, & Australia.)

**Black Stork *Ciconia nigra* (22, 151, 12)**

Buckinghamshire Nether and Upper Winchendon, adult, 9th June (J. Gearing, T. Watts). Near Tring, 23rd June (W. Pegram).

Cambridgeshire Stow Longa, 2nd July (A. Pocock). Witcham, Ely, adult, 26th July (D. Hopkins).

Cleveland Scaling Dam, 6th May (M. A. Blick).

Cumbria Skirwith, Penrith, 11th May, photo (A. Thompson).

Durham Greenside, juvenile, 8th–9th August, photo (M. Newsome *et al.*); presumed same Clara Vale and Crawcrook, 11th–15th August, photo (per Durham Recorder) (*Brit. Birds* 101: plate 253); also seen Norfolk/Northumberland/Yorkshire.

Essex Shoebury, 23rd June (R. Clark).

Kent Chartham and Seaton, first-summer, 18th–19th July, photo (R. Collins, C. Powell *et al.*).

Norfolk Caister-on-Sea, juvenile, 3rd September (B. Jones); presumed same Great Yarmouth, 3rd September (K. R. Dye, B. Jarvis); also seen Durham/Northumberland/Yorkshire.

Northumberland Newburn Riverside CP, juvenile, 10th–11th August, photo (I. Fisher *et al.*); also seen Durham/Norfolk/Yorkshire.

Orkney Birsay Moors and Evie area, Mainland, adult, 21st–26th May, photo (M. Gurney, A. C. Knight, A. J. Leitch *et al.*); presumed same Cottascarth, Isbister, Mainland, 26th May, photo (per Orkney Recorder), and Rousay and Westray, 26th May, photo (per Orkney Recorder); also seen Shetland.

Shetland Ronas Hill and Sullom Voe area, Mainland, adult, 28th–30th May, photo (G. F. Bell, S. J. Minton *et al.*); presumed same Norwick, Unst, 1st June, photo (G. F. Bell); also seen Orkney.

Surrey East Grinstead, adult, 5th June (N. Driver); also seen Sussex.

Sussex Arlington Resr, 18th May (C. Davis, N. Greenaway); presumed same Cuckmere Valley, 18th May (D. Barber), and Willingdon Levels, Eastbourne, 28th May (P. G. Muzzall). Weirwood Resr, adult, 5th June (N. Driver); also seen Surrey.

Yorkshire Dalton, Huddersfield, juvenile, 20th August (D. Sykes), presumed same as following sightings: Stillingfleet Ings, 23rd–25th August (H. Swinglehurst per Yorkshire Recorder); Wharfe Ings, 26th–29th August, photo (R. S. Slack *et al.*); Seavy Carr, Melbourne, 30th August (per Yorkshire Recorder); Spurn, 1st–2nd September (A. A. Hutt *et al.*); also seen Durham/Norfolk/Northumberland.

2006 Cumbria Brampton, Carlisle, 8th June (M. & M. J. Gardner).

2006 Lincolnshire Welton-le-Marsh, adult, 20th June (E. J. Mackrill *et al.*).

A good year, and the equal-third-highest annual total since 1950, behind 23 in 1991 and 15 in 1995, and matching the 12 in 2002. Given the ability of displaced individuals to roam widely, it is difficult to determine precisely how many were involved in such a good year for this species, and most are not tracked as accurately as the juvenile which journeyed along the east coast in August and early September 2008. For example, could the two sightings in Buckinghamshire, representing the first from that county, be of the same individual seen two weeks apart and missing in the meantime? The difficulty of identifying particular individuals hampers the analysis of vagrancy patterns for this species, but some general trends are apparent when assessing the records since 1950. Overall, Black Stork sightings are becoming more frequent (see table below), which, although affected by the increasing number of observers to some extent, also reflects the expansion of the European breeding population since the 1930s (Hagemeijer & Blair 1997).

The analysis of arrival dates in fig. 4 gives the initial impression of a broad spread throughout the occurrence period, from early April to late October, but there is a spring peak in arrivals, in May and early June, and an autumn peak in late August. Given that birds return to their breeding areas between late March and late April, the relatively late arrival in Britain suggests that a proportion of non-

Decade	Total
1950s	2
1960s	1
1970s	16
1980s	28
1990s	68
2000s (so far)	48

breeding immatures are involved. The photographs and description of the Kent bird show it to be a first-summer, with significant contrast between the worn, brownish juvenile upperwing-coverts and remiges, and fresh, black body feathers; birds older than this are difficult to age with confidence. There is little published information on the age of first breeding for Black Storks, and on the movements of pre-breeding birds, but studies of White Storks *C. ciconia* have shown that first- and second-summer birds typically wander south of the breeding areas, returning in

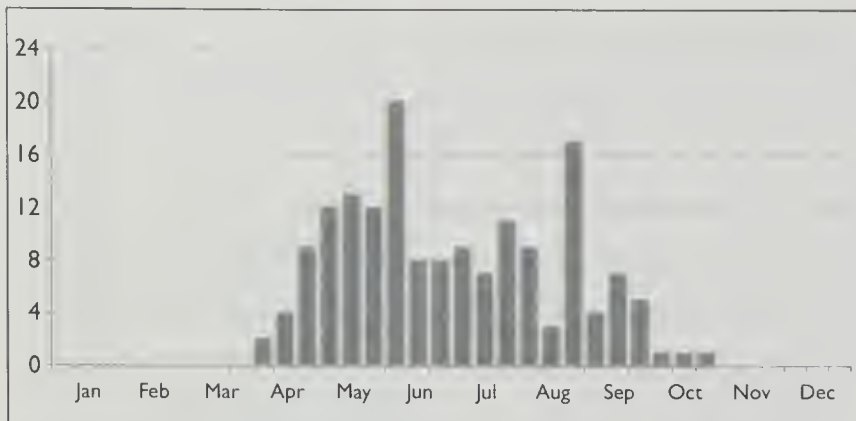


Fig. 4. The arrival pattern of Black Storks *Ciconia nigra* in Britain, 1950–2008.

increasing numbers from their third summer, but not for some 10–12 years would all the members of a cohort be expected to be back in the breeding area (Creutz 1988). The peak autumn period for Black Storks in Britain is in keeping with the timing of autumn departure of European breeders (BWP).

Geographically, the south-coast counties of England account for nearly 45% of all British records, which suggests a broad front of birds arriving from breeding areas to the south. The August/September juvenile in 2008 could perhaps have come from a breeding population to the east, where the species is more abundant, but during 1950–2008 more than half (53%) of the August to October records have occurred in the south-west while only 8% have arrived in eastern England, so the evidence for eastern origin at this season is not compelling.

(Breeds from C Iberia & E France through C Europe to Russia and, in small numbers, into N Greece & Turkey. To E, breeds widely in small numbers in forested temperate regions of Russia & Siberia to Russian Far East. Most are migratory, wintering in Africa, S & SE Asia.)

### Glossy Ibis *Plegadis falcinellus* (340, 121, 5)

Cambridgeshire Between Earith and Sutton, 23rd September (D. Clifton); presumed same Sutton Gault, Ouse Washes and Fen Drayton, 28th September to 12th October, photo (B. S. Martin, M. S. Peck *et al.*).

Cheshire & Wirral Inner Marsh Farm, adult, 16th–17th July, photo (G. Davies, P. Nickless *et al.*); also seen Greater Manchester/Lancashire & N Merseyside/Yorkshire.

Dorset Ferrybridge, 17th May (R. Ford, H. G. Wood Homer); also seen Hampshire/Somerset.

Essex Rainham Marshes, 21st October (P. Coghlan).

Greater Manchester Pennington Flash, adult, 7th December, photo (J. Lyon, R. Thorpe, I. Woosey *et al.*); also seen Cheshire & Wirral/Lancashire & N Merseyside/Yorkshire.

Hampshire Keyhaven, first-summer, 17th–19th May, photo (T. Parminter *et al.*); also seen Dorset/Somerset.

Lancashire & North Merseyside Warton Bank, adult, 1st December 2007 to 8th March, photo, note revised locations and dates, *Brit. Birds* 101: 532–534; also seen Cheshire/Greater Manchester/Yorkshire and presumed same as following sightings: Warton Bank, 2nd–9th November, 11th–12th December; Marshside, 9th–11th March, 6th April, 13th May to 26th July, 14th November to 10th December; Brockholes, 1st May; Inskip, 3rd–10th May (T. Sharples); Piling Marsh, 22nd June; Martin Mere, 4th July (all per Lancashire & N Merseyside Recorder).

Lincolnshire Donna Nook, Howden's Pullover and Huttoft Bank, second-winter, 30th January to 19th March, colour-ringed in Spain (S. Lorand *et al.*) (*Brit. Birds* 101: plate 97).

Somerset Meare Heath and Ham Wall, 16th May, photo (J. P. Martin, M. Passman *et al.*); also seen Dorset/Hampshire.

Staffordshire Belvide Resr, adult, 21st October, photo (D. Mayfield per Staffordshire Recorder).

Yorkshire Spurn and Patrington Haven, adult, 27th July (B. Richards, I. Smith *et al.*), presumed same as following sightings: Boshaw Whams, Holmfirth, 31st July (B. Armitage); Allerton Bywater, 17th–22nd August, photo (J. Martin *et al.*); Swillington Ings, 23rd August to 1st September and 19th September to 1st November, photo; presumed same Fairburn Ings, 6th September, photo (all per birding information services unless stated); also seen Cheshire & Wirral/Greater Manchester/Lancashire & N Merseyside.

2006 Devon Woolacombe, 8th September (A. & J. Gardiner *et al.*).

(Regularly breeds France & Spain; otherwise, European breeding range centred N & W of Black Sea in Ukraine &

Romania, with small, declining population in Balkans. To E, breeds from Volga River to Kazakhstan. Palearctic population migratory, most wintering in E Africa, but W European population wintering Morocco & Mediterranean basin. Resident or dispersive populations occur in Africa, S Asia, Australia, E USA & the Caribbean.)

### Eleonora's Falcon *Falco eleonora* (0, 5, 1)

Essex Maldon, first-summer, 13th September, photo (R. Neave) (plate 361).

Retrospective identification of birds from photographs became a recurring theme throughout 2008. A picture may paint a thousand words but, in this computer age, it is a digital image posted on the internet or e-mailed to the right person that can clinch a tricky identification. When Russell Neave spotted an unfamiliar all-dark falcon circling over his Essex garden, he figured that photographs would prove more useful than scribbled notes in what was likely to be a brief observation – and how right he was! Russell subsequently began to suspect that the bird may have been an Eleonora's Falcon and, once the resultant shots were circulated electronically, the feedback strongly supported this suspi-



**361.** First-summer Eleonora's Falcon *Falco eleonora*, Maldon, Essex, September 2008.

cion, and Dick Forsman confirmed that it was indeed a second-calendar-year Eleonora's. A series of photographs was obtained of the bird hunting insects, and they illustrate that first-summer females can appear relatively stocky and robust. Not every individual of this species is quite as lean, long-winged and long-tailed as most field-guide images portray, it seems. There are now six records of this sought-after falcon in Britain, but none has proved twitchable; all have been seen only by their finders. All have occurred between mid June and October, which is no surprise given that this summer migrant to northwest Africa and the Mediterranean arrives in May but does not settle down to breed until late summer. Vagrants occur almost annually in western Europe, north to the Baltic, so another may be on the cards soon; if the next British sighting involved a longer-staying bird, it would certainly attract a most appreciative audience!

(Breeds from Canary Islands & coastal Morocco E through Mediterranean basin to Cyprus. Many colonies small and restricted to offshore islands. Most numerous in Aegean Sea, but increasing in Balearics. Migrates through E Africa to winter S to coastal Mozambique & Madagascar.)

### Gyr Falcon *Falco rusticolus* (222, 155, 2)

Isles of Scilly Garrison to Golf Course, St Mary's, first-winter, white-morph, 8th–10th December, photo (D. M. & N. A. J. Hudson, W. H. Wagstaff *et al.*); presumed same St Martin's and Tresco, 27th December into 2009, photo (per Isles of Scilly Recorder) (*Brit. Birds* 102: plate 125).

Outer Hebrides Balranald, North Uist, first-winter, white-morph, 22nd April, photo (S. E. Duffield, T. Fountain *et al.*).

2007 Outer Hebrides Stornoway, Isle of Lewis, first-winter, grey-morph, 11th–14th November, photo (A. Leslie, E. Neilson, M. S. Scott).

(In Europe, most numerous in Iceland & Norway, smaller populations breeding N Sweden, Finland & Arctic Russia. To E, breeds across Arctic Siberia, Alaska, N Canada & Greenland. European birds mostly resident but high-Arctic breeders from N Canada & Greenland migratory, occasionally wintering S to NW Europe.)

**Little Crake *Porzana parva* (70, 36, 1)**

Devon Exminster Marshes, adult male, 9th–23rd April, photo (A. J. Bellamy, L. Sumpter *et al.*) (*Brit. Birds* 101: plate 144).

(Fragmented distribution across temperate steppe of W Pal., from Austria through Ukraine & European Russia to W Siberia, C Kazakhstan & NW China. Small numbers occasionally breed to N & W, reaching the Netherlands, Finland & Spain. Most winter in NE & E Africa, although some W to Senegal.)

**American Purple Gallinule *Porphyrio martinica* (0, 1, 1)**

Bedfordshire Southill Park, immature, found dead in April or May, photo (A. Jeeves, B. Nightingale, B. Squires).

Almost 50 years after the only other British record (a first-winter on St Mary's, Scilly, on 7th November 1958), this first-winter was one of the most unexpected records of 2008. The bird was found dead by a gamekeeper at some point during the spring of 2008 and came to light only by chance six months later when the keeper met local birder Barry Nightingale (*BB's Recent Reports* compiler), visiting Southill Park on a regular WeBS count visit, and asked him if he could help to identify a strange bird in the freezer... Given the unusual circumstances of its discovery and the inland locality, the provenance of this bird is uncertain. BBRC's enquiries revealed that only one public bird collection in Britain holds the species, although it is suspected that more may be kept in private collections.

American Purple Gallinule has an established track record of vagrancy to the east of its breeding range, with many records coming from the South Atlantic islands, in particular Tristan da Cunha, and also South Africa where it is now recorded almost annually (might the species have colonised unnoticed?). There are 15 previous records from the Western Palearctic: Azores (6), Britain (1), Canary Islands (1), Cape Verde Islands (1), Iceland (2), Madeira (1), Norway (1), Switzerland (1, although in Category D of the national list) and one at sea and taken to the Faeroe Islands. These various records cover nine different months, including three in April and May, and so potentially the timing of the Bedfordshire bird is not without precedent.

(Breeds USA from South Carolina to Texas, and south through C America and Caribbean to N Argentina. Northern populations migratory, wintering to south of breeding range.)

**Black-winged Stilt *Himantopus himantopus* (134, 242, 12)**

Bedfordshire Willington GP, pair, 1st May, photo (D. H. Ball *et al.*); also seen Essex/Kent/Northamptonshire.

Cheshire & Wirral Neumann's Flash, pair (bred, produced at least one young, which did not fledge), 25th April to 21st June, photo (P. Antrobus, J. Gregory, V. Kuijt *et al.*); same Ashton's Flash, 27th–29th June, photo (per Cheshire & Wirral Recorder); also seen Hampshire.

Cornwall Windmill Farm, The Lizard, three, 7th–14th April, photo (A. R. Pay *et al.*).

East Glamorgan Kenfig Pool, male, 27th April to 4th May, photo (M. J. Bevan *et al.*); also seen Gwent.

Essex Abberton Resr, pair, 2nd May, photo (R. J. W. Ledgerton *et al.*); also seen Bedfordshire/Kent/Northamptonshire.

Gwent Newport Wetlands, male, 5th–9th May, photo (N. Casburn, C. Jones, D. Wall *et al.*); also seen East Glamorgan.

Hampshire Ibsley Water, 10th May (T. M. J. Doran *et al.*). Beaulieu Lake, pair, 30th June, photo (per A. H. Pulsford); also seen Cheshire & Wirral.

Kent Elmley and Oare Marsh, pair, 3rd–4th May, photo (G. Coultrip *et al.*); also seen Bedfordshire/Essex/Northamptonshire. Dungeness, adult, 28th May, photo (P. Akers, R. Price, D. Walker).

Northamptonshire Summer Leys, pair, 1st May, photo (J. E. Ward *et al.*); also seen Bedfordshire/Essex/Kent.

Somerset Kings Sedgemoor, two, 6th May (J. Leece).

(Breeds along Atlantic coast of France & locally throughout Mediterranean basin to Black Sea. To E, breeds from S Siberia & C Asia to NW China & S to Hong Kong. Most European birds winter in sub-Saharan Africa &, increasingly, in SW Iberia. Asian breeders winter across S & SE Asia & S China. Other distinctive races occur in Australasia, the Americas & Hawaii.)

## Collared Pratincole *Glareola pratincola* (32, 64, 1)

Kent Swale, Sheppey, 8th May, photo (D. Faulkner *et al.*).

(Breeds locally in Mediterranean basin from N Africa & S Iberia to Black Sea, most in S Spain, Portugal & Greece. To E, breeds across SW Asia to Pakistan & Kazakhstan but distribution highly fragmented. Winters sub-Saharan Africa. Other race resident in Africa.)

## Killdeer *Charadrius vociferus* (4, 46, 1)

Outer Hebrides Balranald, North Uist, 2nd–3rd May, photo (S. E. Duffield *et al.*).

Shetland Exnaboe and Virkie, Mainland, adult female, 6th March intermittently to 15th April, photo (R. Riddington *et al.*); presumed same Mousa, 2nd April (J. G. Brown), and Noss, 11th April (C. J. R. Dodd, A. D. Taylor); presumed same as Burra, Exnaboe and Virkie 2007, *Brit. Birds* 101: 536–537.

(Breeds S Alaska, S Canada & throughout USA to Mexico. Northern breeders migratory, wintering S USA & Mexico to Columbia. Other races resident in Caribbean & South America.)

## Greater Sand Plover *Charadrius leschenaultii* (0, 13, 1)

Lothian Dunbar, probably first-summer, 19th–20th September, photo (H. & M. Eden *et al.* per C. D. Scott) (*Brit. Birds* 101: plate 337; plate 362); also seen North-east Scotland.

North-east Scotland Ythan Estuary, probably first-summer, 12th–19th September, photo (D. Cooper, B. Kay *et al.*); also seen Lothian.

This is the first September occurrence of a species that, with only 14 records to date, remains a great rarity. Curiously, the first British record (at Pagham Harbour, Sussex, from 9th December 1977 to 1st January 1978) and the third (at Chew Valley Lake, Avon, from 17th November 1979 to 10th February 1980) bucked the ensuing trend by occurring in midwinter. All subsequent records have fallen between April and September, with July and August being the best months to look for a Greater Sand Plover.

Clarification of the key identification features of the two main groupings of the Lesser Sand Plover *C. mongolus* complex has brought greater confidence in separating the two species. Unravelling the three races of Greater Sand Plover has received less attention, and, as with Lesser, there is a credible possibility that Greater Sand Plover may encompass more than one species.

So far, accepted records of Greater Sand Plover in Britain have not attributed individuals to racial level with any certainty. However, the general appearance of two photographed adult males (in Lothian in 1999, Yorkshire/Norfolk in 2004), and that of others elsewhere in northern Europe, best fits *C. l. crassirostris* and *C. l. leschenaultii* (and mostly the former), rather than *C. l. columbinus* (which breeds as close as central Turkey and the near Middle East). Since a particularly striking adult male of the eastern form *C. l. leschenaultii* reached Florida, USA, in May 2009, it is conceivable that all forms of Greater Sand Plover are potential vagrants to Britain.



John Malloy

**362.** Greater Sand Plover *Charadrius leschenaultii*, Dunbar, Lothian, September 2008.

(W Pal. race *C. l. columbinus* breeds locally in C Turkey, Jordan & perhaps Armenia. Other races breed from E Caspian Sea across C Asia to Mongolia & NW China. Winters along tropical coasts of E Africa, Persian Gulf, Indian subcontinent, SE Asia & Australia.)

### Caspian Plover *Charadrius asiaticus* (2, 3, 1)

Fair Isle Upper Stoneybrek/Pund, female, 1st–2nd May, photo (J. M. Reid *et al.* per Fair Isle Recorder) (*Brit. Birds* 101: plate 159; plate 363).

This species remains a top-class rarity in Britain, although four of the six British Caspian Plovers have occurred since 1988. The male on St Agnes, Scilly, in the spring of 1988 was almost 100 years after the first record, of two together at Great Yarmouth, Norfolk, in May 1890. A second bird in 1988, at Aberlady, Lothian, provided the only contemporary opportunity to catch up with this species in mainland Britain, and one that will live long in the memory of those fortunate enough to have arrived before the bird left early on its second morning. An elusive female was then seen in Shetland in spring 1996 and the Fair Isle bird in 2008 arrived just before the 20th anniversary of the St Agnes record. Five of the six individuals seen in Britain have been in spring, between 1st May and 3rd June, with the Lothian bird on 12th–13th July presumably being a midsummer wanderer marooned in northwest Europe rather than a migrant.



Paul Baxter

**363.** Female Caspian Plover *Charadrius asiaticus*, Fair Isle, May 2008.

The Caspian Plover is an extremely rare vagrant elsewhere in northwest Europe too, having been recorded only in France (August 1980, April 1985 and August 1988), Norway (June 1978), and Finland (June 2005). All British records relate to individuals in their second calendar-year or older, a rather atypical vagrancy pattern.

It is believed that most Caspian Plovers make the journey from East Africa to their central Asian breeding grounds in a single flight, with only small numbers breaking the journey, particularly in Iran (Delaney *et al.* 2009). Moreover, the number of migrants pausing in the Middle East in spring appears to be significantly higher than in autumn, suggesting that the species may be more prone to encountering inclement weather in spring, perhaps increasing the chance of westward displacement. In autumn, it seems that birds are rarely displaced from a southwesterly route between central Asia and Africa (*BWP*). The species' clear preference for drier habitats may lead to it being overlooked as a vagrant, since it is likely to shun the wetland areas combed by wader watchers searching for rarities. The possibility of Oriental Plover *C. veredus* should also be borne in mind in a vagrant context. In the wake of a record in Finland in May 2003, the potential for this eastern counterpart of Caspian Plover to appear in northwest Europe should not be underestimated.

(Breeds on steppe grasslands of C Asia N and E of the Caspian Sea, from region of Dagestan in S Russia to E Kazakhstan. Winters eastern and southern Africa from E Sudan to South Africa, west to Namibia.)

### Pacific Golden Plover *Pluvialis fulva* (2, 61, 5)

Argyll Barrapol, Tiree, 8th October (W. Allan, J. Dickson).

Cumbria Anthorn, adult, 19th–24th August, photo (D. J. Robson *et al.*); also seen Dumfries & Galloway.

Dumfries & Galloway Dornock and Browhouses, adult, 6th–12th September, photo (A. T. & C. I.

Bushell, J. Nadin *et al.*); also seen Cumbria.

Orkney North Ronaldsay, adult, 27th July to 6th August, photo (J. K. Batten, P. A. Brown *et al.*). North Ronaldsay, adult, 22nd August to 7th September, photo (P. A. Brown *et al.*).

Suffolk Havergate Island, adult, 3rd August, photo (D. Fairhurst *et al.*).

(Breeds across Siberian tundra from Yamal Peninsula E to Chukotskiy Peninsula, including New Siberian Islands, & W Alaska. Small numbers winter regularly Kenya & Persian Gulf, main wintering range from Indian subcontinent to S China & S Japan, S through SE Asia to Australia, New Zealand & islands in C Pacific.)

### Sociable Lapwing *Vanellus gregarius* (3, 38, 1)

Isles of Scilly Old Town area and Trewince, St Mary's, 12th–20th October, photo (D. C. Palmer, C. W. Woodhead *et al.*) (*Brit. Birds* 101: plate 387; plate 364).

The Sociable Lapwing has been a symbol of conservation concern in recent years, having suffered a catastrophic decline in numbers (in northern Kazakhstan, a decline of 40% during 1930–1960 was followed by a further halving of numbers during 1960–1987), combined with a massive contraction in its range. By the early years of the present decade, when it was listed as Critically Endangered, it was clear that the bird was globally threatened. Belik (2005) even suggested that the only way of preventing its extinction was a captive-breeding programme. Happily, recent fieldwork has shown the population to be larger than once feared. Extrapolation of the results of survey work in Kazakhstan in 2006 suggests that the total breeding population could be in the order of 5,600 breeding pairs, although work is continuing to verify that estimate, while a satellite-tagged bird from central Kazakhstan was tracked to Turkey in October 2007, leading to the discovery of a flock containing no fewer than 3,200 individuals ([www.birdlife.org](http://www.birdlife.org)). Nonetheless, the species retains its place on the IUCN Red List.

A gradual decline in British records is also evident, from no fewer than 11 in the 1970s, through nine in the 1980s and seven in the 1990s, to just four in the current decade. Consequently, this first for Scilly was a welcome and much-admired highlight of October 2008. There was some initial confusion over the ageing of this individual, but the excellent photographs obtained allowed a detailed analysis of its plumage, and it seems highly likely to have been a first-summer moulting to second-winter plumage.



Steve Young

364. Sociable Lapwing *Vanellus gregarius*, St Mary's, Isles of Scilly, October 2008.

(Breeds from Volga & Ural Rivers E across steppes of SE Russia & W/C Asia to E Kazakhstan; now rare and declining throughout much of range. Most migrate to winter in NE Africa, smaller numbers to Pakistan & NW India.)

### Semipalmated Sandpiper *Calidris pusilla* (0, 85, 2)

Devon Dawlish Warren, juvenile, 26th August to 6th September, photo (J. E. Fortey, I. Lakin, K. Rylands *et al.*) (*Brit. Birds* 101: plate 299).

Outer Hebrides Balranald, North Uist, adult, 20th July, photo (S. E. Duffield *et al.*).

(Breeds on tundra of W Alaska, E across Arctic Canada to S Baffin Island & coastal Labrador. Has bred extreme NE Siberia. Migrates across Great Plains & E seaboard of USA to winter in C America & coasts of tropical South America to Brazil & Peru.)

**Least Sandpiper *Calidris minutilla* (4, 29, 0)**

1988 Derbyshire Middleton Moor, 17th–19th July; note revised dates, *Brit. Birds* 82: 523.

(Breeds in C & S Alaska, E across N Canada to Labrador & Newfoundland. Winters in S USA, C America, the Caribbean & South America, S to Brazil & N Chile.)

**Baird's Sandpiper *Calidris bairdii* (1, 210, 5)**

Argyll Add Estuary, Crinan, juvenile, 15th September, photo (J. Dickson).

Cambridgeshire Paxton Pits, juvenile, 27th August to 7th September, photo (M. R. Davis *et al.*).

Outer Hebrides Balgarva, South Uist, adult, 13th–14th August, photo (S. E. Duffield, J. B. Kemp *et al.*).

Rubha Ardvule, South Uist, adult, 16th–20th August, photo (J. B. Kemp *et al.*).

Somerset Brue Estuary, juvenile, 20th–21st October (N. Calbrade, J. A. Hazell, B. J. Hill *et al.*).

2006 Suffolk Orfordness, juvenile, 26th August intermittently to 3rd September, photo (D. Crawshaw, M. C. Marsh, G. Stannard). Orfordness, juvenile, 1st and 7th October (D. Crawshaw, M. C. Marsh, S. H. Piotrowski *et al.*).

2005 Argyll Loch Gruinart, Islay, juvenile, 22nd–26th September (J. How, C. R. McKay).

The five in 2008 constitute a fairly average showing, although well below some recent totals – the three best years on record are 2004 and 2005, each with 12, followed by 2001 with nine. There has been a steady increase in the number of records per decade since 1950, doubtless reflecting the growth in the number of active birders.

Decade	Total
1950s	2
1960s	20
1970s	31
1980s	46
1990s	55
2000s (so far)	61

Juveniles comprise 76% of all records and the three in 2008 show a fairly typical spread of arrival dates – from late August to mid October – although September, which accounts for almost 60% of all sightings, is clearly the prime time for finding a Baird's. August and October contribute a further 32% of all records, split almost equally between the two, and there are just two November records: Blithfield Reservoir, Staffordshire, on 2nd–7th November 1996 and Portland, Dorset, on 18th–19th November 1967. In addition, there is the remarkable record of one that wintered at Staines Reservoirs in Greater London, present from 14th

October 1982 to 24th April 1983. Spring records remain exceptional: just five have turned up in May (Cleveland 1979, Norfolk 1983, Yorkshire 1995, Hampshire 2000 and Argyll 2007), and two in early June (Argyll 1979 and Derbyshire 2006). A third June record, from Northumberland, was found on 28th, and is perhaps best considered an early autumn migrant.

Baird's Sandpiper has occurred in most counties and is a target for many inland reservoir and gravel-pit stalwarts; the one in 2008 at Paxton was a notable first for Cambridgeshire. Predictably, the top county is Cornwall, with 28 records, followed by the Outer Hebrides (19), Scilly (16) and Norfolk (15). However, with 14 of its 19 records in the past ten years, the Outer Hebrides would seem, on current form at least, destined to overhaul Cornwall in the near future. The first British record was also in the Outer Hebrides, on St Kilda, on 28th September 1911, and the recent surge presumably reflects greater observer coverage in Britain's northwesternmost archipelago more than a shift in weather patterns.

(Breeds in extreme NE Siberia on Chukotskiy Peninsula & Wrangel Island, E across N Alaska & Arctic Canada to N Baffin Island & NW Greenland. Migrates through North American interior to winter in South American Andes, from S Ecuador to Tierra del Fuego.)

**Stilt Sandpiper *Calidris himantopus* (0, 24, 3)**

Cumbria Campfield Marsh, juvenile, 22nd September to 1st October, photo (D. J. Robson *et al.*); also seen Isle of Man/Outer Hebrides.

Gloucestershire Coombe Hill Meadows, adult, 15th–21st August, photo (L. Brown, L. Skipp *et al.*).

Isle of Man Glascoe Dubh, juvenile, 17th September, photo (R. Irving, C. Wormwell); also seen Cumbria/Outer Hebrides.

Leicestershire & Rutland Rutland Water, adult, 27th May, photo (S. M. Lister, C. R. Prescott, J. Wright *et al.*).

Outer Hebrides Rubha Ardvule, South Uist, juvenile, 14th–15th September, photo (A. Stevenson); also seen Cumbria/Isle of Man.



**Fig. 5.** Adult Stilt Sandpiper *Calidris himantopus*, Rutland Water, Leicestershire & Rutland, May 2008.

(Breeds on tundra of NE Alaska to Hudson Bay, Canada. Migrates through interior & E USA to winter C South America from E Bolivia & S Brazil to NE Argentina. Occasionally winters N to Mexico, Caribbean & S USA.)

### Broad-billed Sandpiper *Limicola falcinellus* (15, 208, 4)

Essex Wallasea Wetlands, juvenile, 4th–6th October, photo (J. Delve *et al.*).

Gwent Goldcliff Lagoons, adult, 6th–7th May, photo (T. Chinnick, M. Pointon, D. M. Spittle *et al.*).

Lincolnshire Alkborough Flats, adult, 16th–18th May, photo (G. P. Catley, N. Drinkall, C. & W. Gillatt).

Yorkshire Spurn, 24th–26th May, photo (A. A. Hutt *et al.*).

(Nominate European race breeds in boreal forest bogs of N Norway, Sweden & Finland, and into Arctic Russia, where distribution uncertain. This race migrates through E Mediterranean, Black & Caspian Seas to winter in Persian Gulf, W India & Sri Lanka, with small numbers in coastal E Africa. E race *sibirica* breeds from Taimyr Peninsula to Kolyma River delta, and winters from Bay of Bengal through coastal SE Asia to Australia.)

### Great Snipe *Gallinago media* (532, 151, 4)

Cleveland South Gare, 7th September (N. A. Preston *et al.*).

Northumberland Holy Island, 31st May to 2nd June, photo (G. Bowman, C. G. Knox, L. A. Robson *et al.*).

Shetland Quendale, Mainland, 12th September (S. J. Minton).

Yorkshire Speeton Moor, 17th–18th September, photo (K. Clarkson *et al.*).

(Scarce and local breeder in Norway & Sweden, which hold most of declining European population. Smaller and fragmented population breeds from Poland to Estonia. Also breeds E through European Russia, W & N Siberia to Yenisey River. Winters in sub-Saharan Africa.)

### Long-billed Dowitcher *Limnodromus scolopaceus* (6, 186, 2)

Devon Bowling Green Marsh, first-winter, 24th October 2007 to 29th March, photo; note revised dates, *Brit. Birds* 101: 540.

Dorset The Fleet, Rodden Hive, 1st–12th February, photo (D. J. Chown *et al.*).

Outer Hebrides Loch Bee, South Uist, 16th November intermittently to 22nd December, photo (P. R. Boyer, J. B. Kemp *et al.*); presumed same North Bay, South Uist, 14th–17th December, photo (A. Stevenson *et al.*).

2007 Cleveland Seal Sands, first-winter, 13th–14th November, photo (G. Joynt, P. Shepherd, R. M. Ward *et al.*).

(Breeds primarily Arctic Siberia, where breeding range expanding W to Lena River delta. North American range restricted to coastal tundra of W & N Alaska, E to Mackenzie River. Migrates through USA to winter coastal S USA to N/C America.)

**Upland Sandpiper**  
*Bartramia longicauda*  
(9, 34, 1)

North-east Scotland  
Loch of Strathbeg,  
5th–6th May, photo  
(D. & S. Parnaby *et al.*) (plate 365).

(Breeds in temperate and subarctic interior North America from SE Alaska through NW & C Canada to mid-west & NE USA. Migrates through interior USA E of Rocky Mountains, Gulf of Mexico & Caribbean to winter in South America from S Brazil to Argentina.)



Matt Slaymaker

**365.** Upland Sandpiper *Bartramia longicauda*, Loch of Strathbeg, North-east Scotland, May 2008.

**Terek Sandpiper** *Xenus cinereus* (0, 68, 2)

Cleveland Saltholme Pools, 5th–17th July, photo (G. Icton *et al.*).

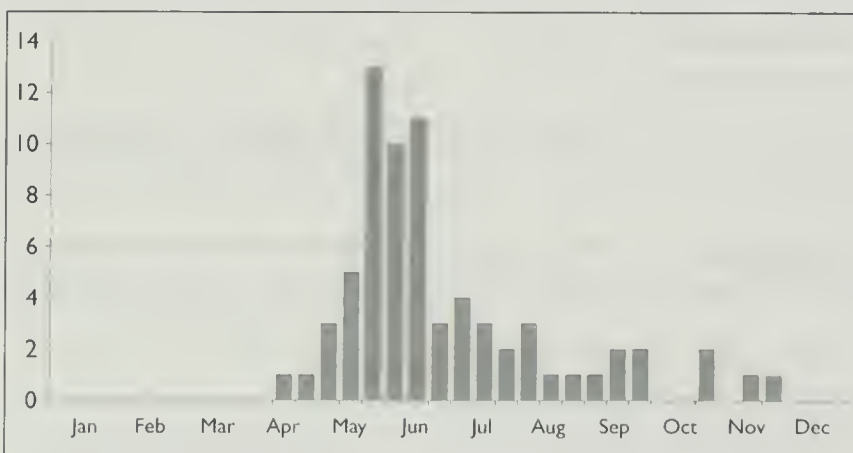
Kent Lydd, 1st–8th June, photo (C. Turley, D. Walker *et al.*); also seen Sussex.

Sussex Rye Harbour, 31st May, photo (K. & O. J. Leyshon *et al.*); also seen Kent.

2005 Kent Cliffe, 24th–27th May, photo (W. E. Oddie per Kent Recorder).

The majority of Terek Sandpipers seen in Britain have appeared between the last week of May and the third week of June (fig. 6). Following this obvious peak, records tail off steadily to late July, with nothing to suggest whether these are late northbound migrants, early returners, or midsummer wanderers. Later in the year, autumn records are few and far between. Terek Sandpipers have occurred in all months between April and November, however, and three have overwintered.

There were just six British records before 1970, but then 12 in the 1970s, 17 in the 1980s and 21 during the 1990s. Only 14 so far during the present decade hints at an end to this upward trend. The



**Fig. 6.** The arrival pattern of Terek Sandpipers in Britain, 1950–2008.

breeding population in Europe outside Russia is estimated to be 415–680 pairs (BirdLife International 2004); the small breeding population in Finland, in the North Gulf of Bothnia, has decreased in recent years, while the fortunes of other populations are unknown. Terek Sandpiper remains a common bird in Russia, however, and there it

is thought to be stable or fluctuating (BirdLife International). Perhaps this apparent levelling-off of British records simply suggests that observer coverage has reached saturation point in some areas at least (two-thirds of all Tereks have been seen along the coast between Northumberland and Hampshire).

(European range restricted to small populations in Finland, Latvia, Belarus and Ukraine. To E, breeds widely but locally throughout N Russia to E Siberia. Winters widely along coasts of S & E Africa to Persian Gulf, Indian subcontinent, SE Asia & Australasia.)

### Spotted Sandpiper *Actitis macularius* (5, 147, 2)

East Glamorgan Lisvane Resr, Cardiff, first-winter to first-summer, 20th October 2007 to 28th April, photo, see also *Brit. Birds* 101: 542 (*Brit. Birds* 101: plate 160).

Orkney Gretchen Loch and Bridesness, North Ronaldsay, juvenile, 28th–30th September, photo (P. Brown, R. J. Butcher *et al.*).

Staffordshire Tittesworth Resr, juvenile, 22nd November to 18th December, photo (S. Gibson *et al.*) (*Brit. Birds* 102: plate 28).

Upper Forth Kinneil Lagoon, adult, 24th December 2007 to 14th April, photo, see also *Brit. Birds* 101: 542.

(Breeds over much of North America from W Alaska to Newfoundland & S to California, Texas & North Carolina. Some winter in coastal USA to S of breeding range but most winter in C America, Caribbean & N South America, S to N Argentina & Chile.)

### Greater Yellowlegs *Tringa melanoleuca* (6, 23, 0)

2007 Lincolnshire Baston GP, 25th September, photo (J. Jones).

(Breeds from S Alaska across subarctic Canada E to Labrador & Newfoundland. Migrates throughout USA to winter in coastal S USA, C America, Caribbean & South America.)

### Lesser Yellowlegs *Tringa flavipes* (19, 266, 10)

Angus & Dundee Montrose Basin, first-winter, 10th November 2007 intermittently to 9th March, photo, see also *Brit. Birds* 101: 544–545.

Cambridgeshire Berry Fen, 19th and 22nd April, photo (R. Grimmett *et al.*); presumed same Ouse Washes, 20th April, photo (R. M. Patient *et al.*).

Cleveland Saltholme Pools, juvenile, 13th–14th October, photo (C. Dodsworth, J. Grieveson *et al.*).

Fife Guardbridge and Eden Estuary, juvenile, 3rd–24th September, photo (A. R. & S. K. Armstrong *et al.*).

Hampshire Park Shore, Beaulieu Estuary, 21st September (D. J. Unsworth).

Isles of Scilly Porth Hellick and Lower Moors, St Mary's, 30th April to 1st May, photo (W. H. Wagstaff *et al.*).

Norfolk Cley, adult, 24th June to 7th July, photo (J. Miller, A. J. L. Smith *et al.*).

Northumberland Druridge Pools area, 10th–15th May, photo (A. Cowell, D. Elliot, I. Fisher *et al.*).

Outer Hebrides Brevig, Barra, juvenile, 2nd October, photo (C. Scott *et al.*).

Suffolk Southwold Town Marsh, first-winter, 21st December 2007 to 9th February, photo, see also *Brit. Birds* 101: 544–545; presumed same as following sightings: Southwold Town Marsh, 12th–13th July and 5th December into 2009 (B. J. Small *et al.*); Walberswick, 2nd February; Dingle Marshes, 6th–14th May (D. Fairhurst, P. Green *et al.*); Minsmere, 15th–28th June (intermittently), photo (D. Fairhurst, P. Green *et al.*) (per birding information services unless otherwise stated).

Sussex Sidlesham Ferry, 18th–22nd April, photo (O. Mitchell, J. Shillitoe *et al.*).

Yorkshire Swinemoor, Beverley, 22nd–26th April, photo (E. J. Hediger, R. Lyon *et al.*).

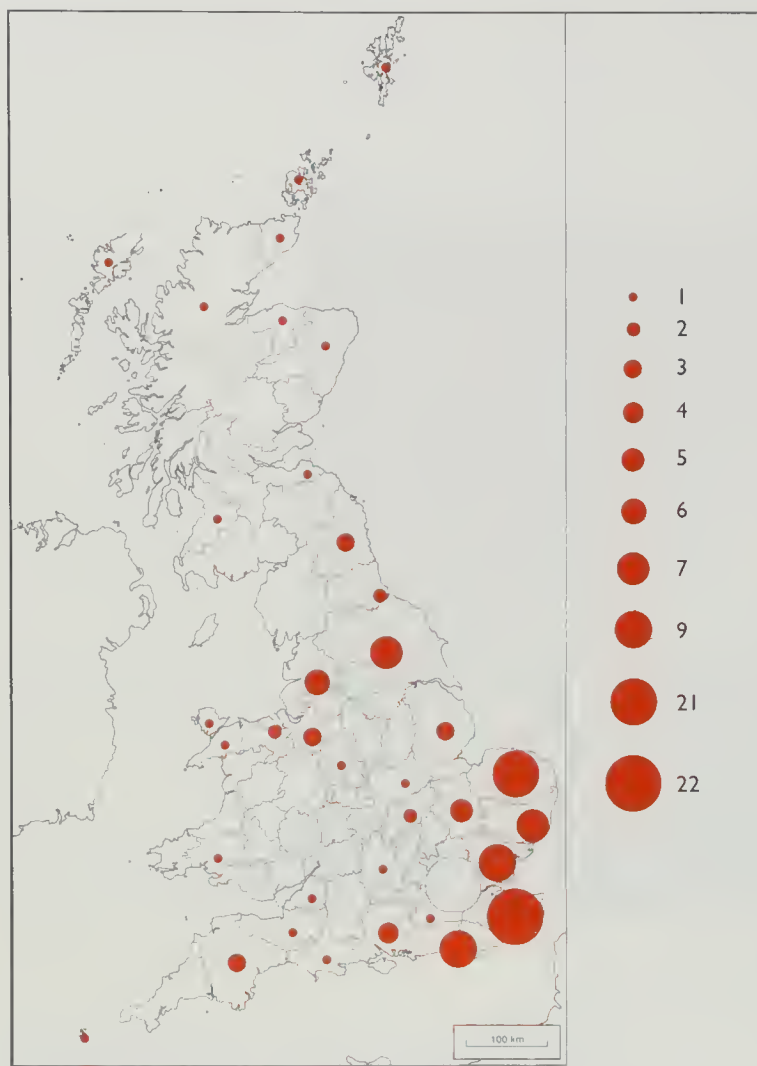
(Breeds throughout much of subarctic Alaska & Canada, east to James Bay. Migrates through USA, where some overwinter, but majority winter from Caribbean & C America to Chile & Argentina.)

### Marsh Sandpiper *Tringa stagnatilis* (6, 124, 4)

Devon Bowling Green Marsh, juvenile, 31st August, photo (M. Knott *et al.*).

Essex Maldon and Heybridge Basin, first-winter, 24th–30th August, photo (J. R. Buchanan *et al.*).

Leicestershire & Rutland Rutland Water, adult, 27th–30th May, photo (M. G. Berriman, S. M. Lister,



**Fig. 7.** Accepted records of Marsh Sandpipers *Tringa stagnatilis* in Britain, 1950–2008.

M. Mulvey *et al.*).

Norfolk Hickling Broad, juvenile, 18th–30th August, photo (A. Kane *et al.* per Norfolk Recorder).

This is a relatively ‘reliable’ rarity, averaging around four records per annum and rarely missing a year, with peaks of ten in 1984 and again in 1999. Nonetheless, this elegant *Tringa* is still a great bird to find, particularly at an inland site, so it was astonishing that the Leicestershire bird had to share its star billing with a Stilt Sandpiper *Calidris himantopus* at the same site earlier that same day! The southeast and East Anglia are the best regions for finding a Marsh Sandpiper (fig. 7). Since 1950, Kent takes the top spot with 22, closely followed by Norfolk (21), Sussex (9), Essex (9) and Suffolk (7); elsewhere, only Yorkshire (also with 7) comes close.

(Occasionally breeds Finland & Baltic countries to Ukraine & W Russia. To E, breeds commonly in forest-steppe region of Siberia to Mongolia & NE China. Winters throughout sub-Saharan Africa, especially E Africa, & Indian subcontinent E to S China & SE Asia; also Australia.)

### Wilson’s Phalarope *Phalaropus tricolor* (0, 220, 6)

Lancashire & North Merseyside Seaforth, first-summer male, 3rd–4th June, photo (S. J. White *et al.*) (*Brit. Birds* 101: plate 181).

Lincolnshire Alkborough Flats, 16th–21st September, photo (G. P. Catley, N. Drinkall, W. Gillatt *et al.*); also seen Yorkshire.

Norfolk Cley and Salthouse, first-winter, 7th–17th October, photo (per Norfolk Recorder).

North-east Scotland Loch of Strathbeg, first-winter, 1st September, photo (J. Kamp *et al.*).

Northumberland Grindon Lough, adult, 13th–17th August, photo (R. Craig, I. Fisher, R. S. Forster *et al.*).

Outer Hebrides Balgarva, South Uist, first-winter, 21st September (C. Johnson, J. B. Kemp *et al.*).

Yorkshire Blacktoft, 17th–18th September (M. J. Pilsworth *et al.*); also seen Lincolnshire.

(Breeds interior W Canada south to California & throughout mid-west states of USA; also S Ontario. Most migrate through interior USA & winter in South America from Peru S to Argentina & Chile.)

### Laughing Gull *Larus atricilla* (1, 183, 0)

2007 Kent Dungeness, adult, 6th June (D. Walker).

2005 Cornwall Nanjizal, first-winter, 4th–7th November (K. A. Wilson *et al.*). Marazion and Newlyn, first-winter, 8th–21st November (K. A. Wilson *et al.*). Nanjizal, two first-winters, 19th–28th December, one trapped (K. A. Wilson *et al.*).

1980 Derbyshire Ogston Resr, 29th–30th November, note revised dates, *Brit. Birds* 74: 474.

(Locally common from Nova Scotia, S along E seaboard of USA to Florida & Gulf coast, the Caribbean, & C America to N Venezuela. Southern populations largely resident but N breeders winter within southern breeding range.)

### Franklin's Gull *Larus pipixcan* (0, 59, 1)

Avon Chew Valley Lake, second-winter, 19th January to 17th February, photo (R. Mielcarek, J. C. C. Oliver, K. E. Vinicombe *et al.*), presumed same as following sightings: Chew Valley Lake 23rd–24th and 27th–28th March (per birding information services); Royal Portbury Dock, Bristol, 15th–16th March, photo (C. J. Stone *et al.*); Keynsham, Somerdale, 18th–23rd March, photo (J. Aldridge *et al.*); Blagdon Lake, 26th March, photo (N. Milbourne); also seen Dorset/Gloucestershire/Somerset/Warwickshire. Dorset Wareham, second-winter, 17th January (J. A. Lidster *et al.*); also seen Avon/Gloucestershire/Somerset/Warwickshire.

Gloucestershire Newnham-on-Severn, second-winter, 7th April (N. J. Phillips); also seen Avon/Dorset/Somerset/Warwickshire.

Somerset Torr Resr, second-winter, 13th January (B. A. Taylor *et al.*); presumed same 25th March (B. A. Taylor); also seen Avon/Dorset/Gloucestershire/Warwickshire.

Warwickshire Brandon Marsh and Draycote Water, second-winter, 16th–21st April, photo (R. E. Harbird, J. Judge, E. G. Phillips *et al.*); also seen Avon/Dorset/Gloucestershire/Somerset.

2007 Devon Braunton, River Caen, first-summer, 29th August; photo, note revised ageing, *Brit. Birds* 101: 546.

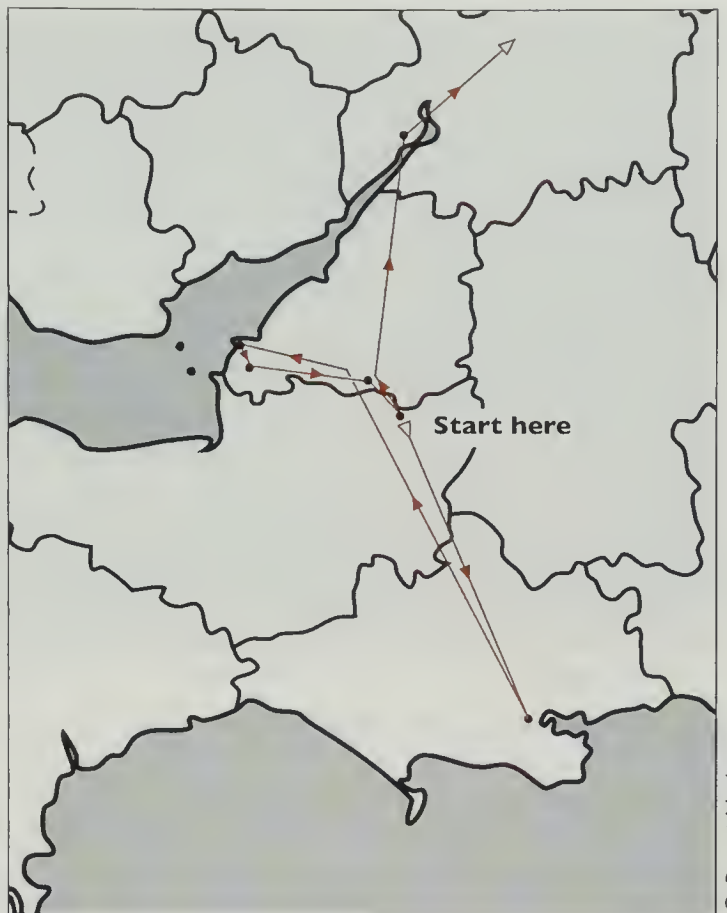
(Breeds locally throughout interior provinces of temperate W Canada, E to Great Lakes & S to mid-west USA. Winters along Pacific coast of South America, from Guatemala to Chile.)

### Audouin's Gull *Larus audouinii* (0, 4, 1)

Lincolnshire Huttoft Bank, near-adult, 15th August (K. Atkin, P. Haywood per G. P. Catley); presumed same Chapel Point area, 17th–23rd August, photo (K. Durose, D. Jenkins *et al.*) (*Brit. Birds* 101: plate 297; plate 366).

Given that the first Audouin's Gull for Britain was found as recently as 2003 (the Dungeness bird in May of that year), this charismatic gull is on course for becoming an almost annual visitor. And, considering the population growth in at least some of the small number of breeding colonies (see Gutiérrez & Guinart 2008), this is perhaps to be expected. The Lincolnshire bird arrived almost a year to the day after the previous record, at Seaton Marshes, Devon, and was almost another 'one that got away'. Initially seen, identified and photographed by Keith Atkin and Pete Haywood, this county first promptly flew off and disappeared for almost two days before being relocated a few kilometres to the south. This habit of disappearing continued for the remainder of its nine-day stay in the area – easily a record for a species that has previously tended to hang around for no more than a day.

In a genus noted for identification headaches, taxonomic upheavals and rampant hybridisation, Audouin's Gull is an oasis of phenotypic stability. However, two strange gulls in Ireland, in Co. Down in February 2006 and Co. Kerry in July 2009, illustrate that nothing is ever quite as straightforward as it seems. The Kerry bird showed a deep-red bill and appeared to have long, dark legs although other



**Fig. 8.** The single Franklin's Gull *Larus pipixcan* seen in 2008 was a well-travelled and remarkably well-documented bird, as this map of its movements shows.

Kevin Durose



**366.** Audouin's Gull *Larus audouinii*, Chapel Point, Lincolnshire, August 2008.

features (such as the short primary projection, pale eye colour, a broad white tertial crescent and its large overall size) pointed towards an aberrant Herring Gull *L. argentatus*. The Belfast bird in 2006 was even more suggestive of Audouin's Gull, and came complete with a pale-tipped red bill, white head contrasting with soft grey breast, and white tertial crescent

limited or lacking. However, this bird was actually *too* grey, with this colour extending down over the rump and tail, the underwings and even the trailing edge of the wing. It was obviously not acceptable as an Audouin's, but it is still unclear as to what exactly it was. The take-home message is that observers should be aware that a large gull with a red bill is not *necessarily* an Audouin's.

(Breeds throughout Mediterranean basin from Spain E to Greece & Turkey, with majority at Ebro Delta & Chafarinas Islands, Spain. Majority winter along the Atlantic seaboard of Africa, from Morocco to Senegal & Gambia.)

### American Herring Gull *Larus smithsonianus* (0, 17, 1)

Outer Hebrides Stornoway, Lewis, first-winter, 18th January, photo (M. S. Scott).

2007 Cornwall Mousehole, first-winter, 9th–20th March, photo (M. Ahmad *et al.*); presumed same Sennen area, 21st March to 30th May, photo (K. A. Wilson per M. Ahmad)].

1998 Isles of Scilly Porth Mellon, St Mary's, first-winter, 18th December 1997 to 8th April, photo (per Isles of Scilly Recorder); note revised location and dates, *Brit. Birds* 91: 479.

1994 Cheshire & Wirral Ashton's Flash, first-winter, 24th February to 4th March; note revised location and dates, *Brit. Birds* 89: 504.

(Breeds S Alaska E across C & N Canada to S Baffin Island, Labrador, Newfoundland & NE coastal region of USA. Many resident, others winter S to S USA & Mexico. Other races breed Mongolia to C Siberia, & NE Siberia.)

### Glaucous-winged Gull *Larus glaucescens* (0, 1, 1)

Cleveland Saltholme, Cowpen and nearby, adult winter, 31st December into 2009, photo (D. Braithwaite, C. Brown, J. T. Collett *et al.*) (*Brit. Birds* 102: plates 76, 77 & 367).

2007 Carmarthenshire Ferryside, third-winter, 2nd–5th March, photo (D. Davidson); also seen Gloucestershire/Greater London/Surrey.

2007 Gloucestershire Hempsted, third-winter, 16th–17th March, photo (J. D. Sanders per Gloucestershire Recorder), presumed same as Hempsted 2006, see below; also seen Carmarthenshire/Greater London/Surrey.

2007 Greater London/Surrey Beddington SF, third-winter, 18th April, photo (J. P. Allan, G. D. J. Messenbird); also seen Carmarthenshire/Gloucestershire.

2006 Gloucestershire Hempsted, third-winter, 15th–16th December, trapped, photo (J. D. Sanders, P. Stewart *et al.*); also seen Carmarthenshire/Greater London/Surrey.

It must have been a mighty shock for the Gloucester gull-watchers when this distinctive-looking gull first appeared in December 2006, initially in the field then, next day, in a net! Photographs (in the field and in the hand) and biometrics were sufficient to identify it as this species, with the heavy build, thick bulbous bill, broad wings, wing-tip pattern, mantle shade and bare-part colour all helping the identification.

Having presumably been lurking unnoticed somewhere for two months, despite the addition of colour rings, the bird resurfaced in South Wales in early March and allowed many birders to catch up with it. Unfortunately, this cameo appearance coincided with the BBRC AGM in Edinburgh, resulting in much wailing and gnashing of teeth from the stranded committee members.

It made a final, brief, appearance in London in April, via Gloucestershire again, to once more tantalise those who missed out the previous month.

Glaucous-winged Gull has, perhaps surprisingly, reached the Western Palearctic on two occasions prior to these records: the Canary Islands in February 1992 and, perhaps the same bird, in Morocco in January 1995. Some individuals are long-distance migrants that regularly winter in small numbers south to Baja California, Mexico, with exceptional records south to El Salvador. They can also be highly pelagic, being seen up to 1,000 km offshore in the North Pacific. Records from inland locations and eastern North America are rare but increasing, and it has occurred east and south to Wisconsin and Texas, USA, and, exceptionally, to Newfoundland, Canada.

The main identification concern is that this species is rather variable in appearance, and hybridises with several other gulls, mainly Western Gull *L. occidentalis*, but also American Herring *L. smithsonianus*, Glaucous *L. hyperboreus* and Slaty-backed Gulls *L. schistisagus*. Hybrids actually make up the majority of large gulls in some areas of the Pacific Northwest (e.g. coastal Washington state). First-generation hybrids usually show obviously mixed characters but hybrid swarms with a whole spectrum of forms do occur. The problem is establishing where variation within Glaucous-winged Gull ends and signs of introgression with other taxa begins, and this is to some extent arbitrary. Malling Olsen & Larsson (2004), and Howell & Dunn (2007) helped us to work out species limits, as did direct input from Steve Howell and Steve Heinel, both of whom have extensive experience of this species and its hybrids on the west coast of North America. While the 2006/07 bird was duskiest on the head and breast and showed more dark in the tail than most third-winter Glaucous-winged Gulls, it was considered that this was within the range of variation expected for the species and that it showed no features to suggest hybrid influence.

Feathers collected from the bird when it was trapped in Gloucestershire were sent for genetic analysis, which placed it in the North Pacific Beringian clade. Although it was impossible to rule out influence from other gull taxa with certainty, the results did not show any traits indicative of it being a hybrid, and thus supported the field identification as Glaucous-winged Gull.

As was the case with Pacific Diver *Gavia pacifica*, few would have predicted a second individual, in 2008, so soon after the first record of this seemingly rather unlikely vagrant (and, in 2009, a report of a third). Both of the later records were identified from digital photographs posted on the internet; perhaps this is how Britain's first Slaty-backed Gull will be found?

(Breeds in coastal N Pacific from Kamchatka & Komandorskiye (Commander) Islands, Russia, E throughout Aleutian Island chain to coastal S Alaska, & British Columbia. Widely hybridises with Slaty-backed Gull *L. schistisagus*, Glaucous Gull *L. hyperboreus*, American Herring Gull *L. smithsonianus* and Western Gull *L. occidentalis* where ranges overlap. Winters within and to S of breeding range, regularly reaching Honshu & Hokkaido, Japan, & coastal China occasionally S to Hong Kong. Common in winter (but many hybrids) along W coastline of North America, scarce S to Baja California, Mexico.)



**367.** Adult Glaucous-winged Gull *Larus glaucescens* (right), with Herring Gulls *L. argentatus*, Saltholme, Cleveland, January 2009.

Stef McElwee

**Ross's Gull *Rhodostethia rosea* (1, 88, 2)**

Lancashire & North Merseyside Marton Mere, adult, 31st March, photo (M. Jones, M. & P. McGough *et al.*) (*Brit. Birds* 101: plate 145); presumed same Fairhaven, 15th April to 16th May, photo (J. Alden *et al.*) (plate 368); found dead at Fairhaven, specimen at Liverpool Museum.

Northumberland Seaton Sluice, adult, 25th March (T. R. Cleeves, M. Hepple).

While January in Shetland may be statistically and emotionally the right time to see a Ross's Gull in Britain, there is a wide scatter of records both geographically (fig. 9) and temporally of this legendary and endearing gull, so two in England in March are not as surprising as they may at first seem. In fact, there are more records from England (46) than Scotland (41), with the other three sightings coming from Wales.

After the recent removal of an inland record in Yorkshire in the nineteenth century (Melling 2005), the first for Britain became a first-winter found moribund at sea between Whalsay and Out Skerries, Shetland, on 28th April 1936 (Kay 1942; Pennington 2005). There were no other records until four in the 1960s, which were followed by 16 in the 1970s, 22 in the 1980s and 29 in the 1990s. It is interesting to note a likely downturn since 2000, with just 19 since then.

More than half the grand total of 91 appeared in midwinter, between December and February, and January is clearly the peak month for arrivals, with 29. Nine of those were in Shetland, but as a whole the winter records are widely scattered and broadly reflect the overall pattern. A few birds are found in autumn and there is a clear tendency for these to turn up in Scotland (10 of the 16 birds found before December). No fewer than four have been seen as early as August, all between 9th and 15th, and rather widespread geographically (two in Argyll, singles in Yorkshire and Dorset), but one bird in Argyll was aged as an 'immature' (presumably a first-summer) and so may have been present all summer. Spring sightings are commoner than those in autumn and tend to be in England, which accounts for 19 of the 27 located between March and June. A few of the March records, especially those in Scotland, seem to be new arrivals but many spring birds must have arrived during the previous winter, and several have been either wanderers or, like the 2008 Lancashire bird, long-stayers.

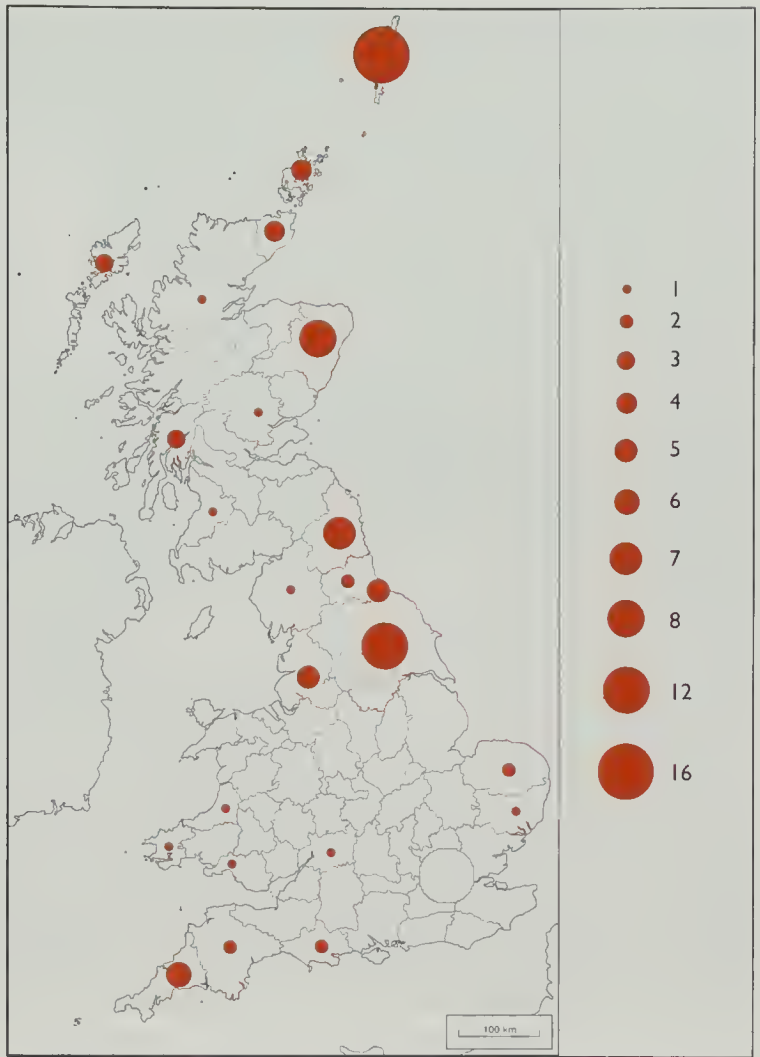
For a bird that one might expect to be blown in from the North Atlantic, it is interesting to note the easterly bias in records: north 26%, west 31%, east 43%. Excluding spring records, these become 31%, 31% and 38% respectively. This suggests that most are arriving from the east, which reflects the fact that the main breeding range lies in northeast Siberia, with only small and sporadic numbers breeding in Canada and Greenland (Olsen & Larsson 2003; McGhie & Logunov 2005). There does appear to be a



Iain Leach

**368.** Adult Ross's Gull *Rhodostethia rosea*, Fairhaven, Lancashire & North Merseyside, May 2008.

substantial population of non-breeding birds which summer relatively close to Britain, among the pack ice between north Greenland and Franz Josef Land (Meltofte *et al.* 1981; McGhie & Logunov 2005). Wintering areas are largely unknown, but are assumed to be along the edge of the Arctic pack ice, and movements are still poorly understood; at Point Barrow in Alaska, USA, there is a heavy autumn passage in September and October, but there is little evidence of return passage there (Densley 1979). To add to the enigma, Ross's Gull is one of those vagrants that goes against the accepted logic, with adults being more frequent than immatures; only 16 of the 91 seen in Britain have been aged as first-winters or first-summer (sometimes published as 'immature'). A few others have been aged as second-winters, but not all birds of this age are distinguishable from adults. At all ages, the main identification pitfall is Little Gull *Hydrocoloeus minutus*, which is slightly smaller but which shares the dark underwing of adult Ross's and the 'W' pattern on the upperwing of first-winters.



**Fig. 9.** Accepted records of Ross's Gulls *Rhodostethia rosea* in Britain, 1950–2008.

(Locally common on tundra of NE Siberia from Lena River E to at least Kolyma River. In Canada, rare and local breeder in W Hudson Bay region, perhaps elsewhere. Siberian birds migrate E past Point Barrow, Alaska in September to unknown wintering area assumed to lie near edge of pack ice, perhaps in Bering Sea or N Pacific, S to N Japan.)

### Bonaparte's Gull *Chroicocephalus philadelphia* (8, 150, 9)

Angus & Dundee Fishtown of Usan, adult, 11th November 2007 to 10th February, photo, see also *Brit. Birds* 101: 548–549.

Caithness Thurso, adult, 25th March, presumed same 16th–20th April, photo (S. Laybourne *et al.*).

Devon Bowling Green Marsh, first-summer, 20th–21st May, photo (M. Knott *et al.*).

East Glamorgan Ogmores-by-Sea, adult, 15th–16th January, photo (N. P. Roberts *et al.*).

Highland Loch Ruthven, first-summer, 3rd–14th June, photo (per birding information services).

Lancashire & North Merseyside Marton Mere, first-summer, 3rd May (P. Ellis, M. & P. McGough).

Stocks Resr, first-summer, 10th–11th May, photo (M. Watson *et al.* per Lancashire & North Merseyside Recorder).

North-east Scotland Peterhead and Ugie Estuary, Aberdeen, adult, 25th November 2007 to 25th March, photo, see also *Brit. Birds* 101: 548–549. Loch of Strathbeg, adult, 16th March (D. Parnaby *et al.*); presumed same Ugie Estuary, 22nd–23rd March, photo (per birding information services).

Outer Hebrides Ardivachar, South Uist, adult, 18th–19th January, photo (S. E. Duffield *et al.*); presumed same Howmore, South Uist, 4th–20th April, photo (S. E. Duffield *et al.*).

Somerset Cheddar Resr, first-winter, 22nd–28th March, photo (J. J. Packer).

(Breeds widely across N North America from W & C Alaska through Canada to James Bay. Winters locally on ice-free rivers and lakes in N USA, & S along both coasts of USA to Mexico & Caribbean.)

### Ivory Gull *Pagophila eburnea* (84, 51, 1)

Shetland Lerwick, Mainland, juvenile, 21st November, photo (G. F. Bell); presumed same Oddsta, Fetlar, 14th–15th December, photo (B. H. Thomason *et al.*) (*Brit. Birds* 102: plate 78).

(In Europe, breeds only in Svalbard. Elsewhere, restricted to islands in the high Arctic between Franz Josef Land & Arctic Canada, with small numbers in N & SE Greenland. Wintering range poorly known, but apparently within or close to edge of pack ice.)

### Gull-billed Tern *Gelochelidon nilotica* (51, 278, 1)

Argyll Crossapol, Tiree, adult, 29th September to 2nd October, photo (M. J. McKee, C. Turner, T. Warrick *et al.*) (*Brit. Birds* 101: plate 338; plate 369).



Michael McKee

369. Adult Gull-billed Tern *Gelochelidon nilotica*, Crossapol, Tiree, Argyll, September 2008.

(Small population in N Germany & Denmark. Widespread though local in Spain but colonies are isolated & small elsewhere in Europe. To E, breeds discontinuously from Turkey & SW Russia through Kazakhstan, Mongolia & NW China, with isolated population in NE China. European population winters coastal W Africa, S to Gulf of Guinea. Asian populations winter Persian Gulf to Indian subcontinent & SE Asia. Other races occur Australia & the Americas.)

### Caspian Tern *Hydroprogne caspia* (26, 258, 2)

Lancashire & North Merseyside Formby Point, 4th August (B. McCarthy).  
Nottinghamshire Collingham Pits, 23rd July, photo (G. Ellis *et al.*).

(Isolated and declining European population breeds Baltic coasts of Estonia, Sweden & Finland to head of Gulf of Bothnia. To E, fragmented populations from Black Sea coast of Ukraine across steppe-lake region of C Asia to NW Mongolia & E China. European birds winter W Africa to Gulf of Guinea, Asian birds winter on coasts to S of breeding range. Other populations in Australia, S Africa & North America.)

### Whiskered Tern *Chlidonias hybrida* (23, 133, 12)

Breconshire Llyn Login, Mynydd Epynt, adult, 23rd May, photo (A. King); presumed same Llangorse Lake, 27th–28th May (J. Porter *et al.*).

Cambridgeshire Sutton Gault, Ouse Washes, adult, 8th June (A. L. & S. L. Cooper); presumed same Fen Drayton GP, 8th June, photo (R. M. Patient *et al.*); also seen Lincolnshire.

Cheshire & Wirral Inner Marsh Farm, adult, 9th–20th May, photo (A. Morgan, S. Skelton, C. E. Wells *et al.*); also seen Denbighshire/Caernarfonshire.

Denbighshire/Caernarfonshire Conwy, 9th May, photo (S. Culley, K. Webster, B. Winters-Jones *et al.*); also seen Cheshire & Wirral.

Devon Tamar Lake, 8th May (A. Gladwin, D. E. Paull).

Dorset Radipole Lake, adult, 5th–7th May, photo (A. Taylor *et al.*) (*Brit. Birds* 101: plate 182); presumed same Lodmoor, 7th May (D. Croxson per Dorset Recorder).

East Glamorgan Kenfig Pool, adult, 4th May, photo (N. Donaghy, C. & M. Moore *et al.*) (plate 370).

Gloucestershire Frampton-on-Severn, adult, 10th–13th May, photo (D. Paynter *et al.*).

Hampshire Hurst Spit and Normandy Marsh, adult, 6th May (P. R. Durnell, M. P. Moody, M. Ward).

Kent Stodmarsh and Collard's Lake, adult, 30th May to 5th June, photo (S. Ashdown, M. Wilson *et al.*).

Lincolnshire  
Barton-upon-  
Humber, adult, 7th  
June (G. P. Catley);  
also seen Cambs.

Norfolk Holkham,  
adult, 28th April,  
photo (A. I. Bloom-  
field, I. & J. Miller  
*et al.*).

North-east Scotland  
Loch of Strathbeg,  
5th–9th June, photo  
(D. Goulder *et al.*).

Somerset Berrow,  
5th May, photo  
(M. Capel, J. Packer,  
B. E. Slade).

(Breeds in scattered  
colonies through S & E  
Europe from Iberia to  
Poland. Numerous and widespread from N Black Sea E to W Kazakhstan, with Volga/Ural River complex holding most of European population. Winters tropical W & C Africa & from Nile Delta to E Africa. Other populations in Indian subcontinent, E Asia, S Africa & Australia.)



Steve Hinton

**370.** Adult Whiskered Tern *Chlidonias hybrida*, Kenfig Pool, East Glamorgan, May 2008.

## Black Tern *Chlidonias niger*

### North American race, 'American Black Tern' *C. n. surinamensis* (0, 1, 1)

Outer Hebrides North Bay, South Uist, juvenile, 17th November, photo (J. B. Kemp *et al.*).

The long-awaited second British record and, like the first, in Avon on 3rd–11th October 1999, a juvenile. An excellent find, the South Uist bird was over a month later than any of the other British and Irish records. Ireland has now notched up five since 1999; four of them were also juveniles, between 3rd September and 5th October, but the other was an instructive first-summer in Co. Wexford from 16th July to 1st August 2006. A clear western bias to records is thus already apparent, but in terms of timing the whole of the autumn period has potential for the next record. Indeed, the three Icelandic records were all June birds, so perhaps the next challenge is to find a summer adult in Britain.

Black Terns in North America declined at an average rate of about 3% per year (61% overall) from 1966 to 1996 (see <http://www.pgc.state.pa.us/pgc/cwp/view.asp?a=486&q=152603>), though more recently the population has levelled off or even increased slightly. The species still occupies most of its former range in North America and the breeding population there is estimated to be in the low to mid hundreds of thousands, so further British records are to be expected. A taxonomic review of Black Terns is overdue, so the next twitchable bird should attract quite a crowd.

(Breeds widely throughout temperate interior Canada & N USA. Migrates through interior & coastal USA to winter Panama to N South America, S to Peru & Venezuela.)

## Barn Owl *Tyto alba*

### Central European race, 'Dark-breasted Barn Owl' *T. a. guttata* (–, –, 2)

Norfolk Southery, female, 12th July, found dead, photo (V. King). Hopton-on-Sea, 16th September, found dead, photo (J. Burton per P. Allard).

Dark-breasted Barn Owl (hereafter *guttata*) was included in the list of rare races to be considered by BBRC (Kehoe 2006) and this is the first time that it appears in this report. The female found dead along the A10 near Southery had earlier been discovered at a nest containing three eggs by ringers carrying out regular monitoring work. The bird had been ringed as a chick in 2007 near Doesburg, Overijssel, the Netherlands (French 2009). This is the first confirmed breeding record of *guttata* for Britain, although breeding has probably occurred before; for example, Forrester *et al.* (2007) noted the

discovery in Scotland of ringed birds from the range of *guttata* in eastern Germany, in Argyll in July 1994 and Caithness in April 2001. The appearance (and indeed the fate) of the offspring of the Southery bird is unknown, but they would have been expected to show characteristics intermediate between *guttata* and nominate *alba* – and to have appeared very similar, in fact, to many claims of *guttata* that just fail to make the grade.

The Southery bird originated from an area in the Netherlands that is within the intergrade zone, yet it showed all the key features of pure *guttata*. Several other submissions of *guttata* were received during the past year, but none showed the requisite detail needed to eliminate the possibility of intergrades (see French 2009 for further details).

(Resident to the north of *T. a. alba*, from the Netherlands and Denmark, east to western Russia and south to Bulgaria, largely to the east of the 3°C January isotherm. Intergrades with nominate *tyto* are frequent towards the western and southern limits of its range.)

### Snowy Owl *Bubo scandiacus* (c. 200, c. 360, 7)

Highland Munloch Bay, adult male, 15th June, photo (N. Picozzi).

Moray & Nairn North-east of Ben Macdui, Cairngorms, immature/female, 16th February, photo (per Moray & Nairn Recorder).

Outer Hebrides Balranald, North Uist, female, 6th–14th May, photo (B. Rabbitts *et al.*), presumed same 19th June to 4th July, 7th August (P. B. Murray), 17th August to 27th September and 3rd–4th November (A. MacDonald); and Paiblesgarry, North Uist, 12th November (P. B. Murray) (all per Outer Hebrides Recorder unless stated). Grenitote, North Uist, male, 10th May to 17th June, photo (J. Boyle *et al.*). Hirta, St Kilda, three: adult male, 22nd May to 3rd July, photo (M. Hallet, W. T. S. Miles *et al.*); subadult male, 17th July to 10th August, photo (W. T. S. Miles, W. Shaw *et al.*); subadult male, 19th September to 6th October, photo (W. T. S. Miles, S. Money, R. Tallack).

The records from Scotland are fairly typical, with Ben Macdui regularly attracting this species. This is rugged terrain and it must be a real thrill to encounter a Snowy Owl in the middle of winter in such a wild place. Five different birds were recorded in the Outer Hebrides, maintaining the pattern of recent years.

In late 2008, there was a small pulse of records in western Europe and the Atlantic islands, with sightings in the Azores (the second record for the islands), three on the Channel Islands, one in Belgium (possibly seen in Denmark in 2009) and one in the Netherlands (where it was found on Texel and then tracked east in 2009 as it moved from Texel to Terschelling, on to Ameland and then Denmark, where it became the first record there for seven years). There was also at least one recorded in southwest England, on Scilly and in Cornwall, details of which have yet to be submitted. The westerly distribution of these sightings and the fact that there were large numbers in southern Canada and northern USA in autumn/winter 2008/09 after a boom in the Arctic lemming (*Arvicolinae*) population in summer 2008 (*Birding World* 22: 46) strongly suggest a transatlantic origin. The movements of the Dutch bird suggest that it knew a quicker way back to the Arctic!

(Occasionally breeds N Scandinavia & Iceland, depending on availability of small mammals. Outside Europe, erratic circumpolar breeder across tundra & N islands of Arctic Russia, Siberia, Alaska, Canada & N Greenland. Most disperse S in winter but some resident or nomadic if food available.)

### Common Nighthawk *Chordeiles minor* (1, 18, 2)

Cornwall Church Cove, Lizard, 7th October, photo (M. Bonfield) (plate 371).

Isles of Scilly Porthloo Lane, St Mary's, male, 6th October, found dead, photo (A. Cunningham, T. Francis *et al.*).

The two in 2008 mark the end of a nine-year gap since the last British record. The bird in Cornwall was seen arriving over the sea, and then photographed (plate 371), by just one lucky observer who must have been thrilled by such an experience, while the Scilly bird was, sadly, a road casualty.

All of the British Common Nighthawks have turned up between 11th September and 4th November so the timing of these two is entirely typical. Scilly continues to dominate the picture, accounting for two-thirds of all records but, surprisingly, the Church Cove bird was the first for Cornwall. Others have been found as far north as Orkney, suggesting that arrivals may occur across



Martin Bonfield

**371.** Common Nighthawk *Chordeiles minor*, Church Cove, Lizard, Cornwall, October 2008.

a broad front, but the likelihood of discovery after making landfall is low, at least away from the intense concentration of observer effort on the Isles of Scilly in mid autumn. The pattern of occurrence is difficult to interpret, with a tendency towards short runs punctuated by longer gaps. Perhaps cyclical patterns of extreme weather events off the east coast of the USA and in the Caribbean are important?

Just over half of the 20 birds since 1950 (there was just one record before that, a female shot on Scilly in September 1927) have been aged as first-winters but at least one adult male has also occurred. There is uncertainty over the age and sex of the remainder, and British birders may not be familiar with the criteria. Adult males should be obvious, with a solid white throat patch and broken white sub-terminal tail band. Females and young birds both lack the white tail band and are more difficult to separate; adult females usually have a solid buffy throat patch, but in young birds this is either lacking or largely obscured by dark feather tips, which create a barred appearance. On the ground, immatures in autumn are most easily distinguished from adults by narrow white fringes to the primary tips and the lack of a tiger-barred tertial pattern.

(Breeds throughout temperate North America, S to Panama & Caribbean. Winters South America, S to C Argentina. Some migrate over W Atlantic; occurs on passage in Bermuda & Lesser Antilles.)

**Pallid Swift *Apus pallidus***  
(0, 67, 1)

Isles of Scilly St Agnes and St Martin's, 28th April to 4th May, photo (D. Page, W. H. Wagstaff *et al.*) (plate 372).

(Locally common throughout Mediterranean basin from Iberia to Greece, but rare or absent from many regions. Outside Europe, breeds locally from Mauritania & Canary Islands across NW Africa & Middle East to Arabian Peninsula & coastal S Iran. Most winter N African tropics, but some remain in S Europe.)



Will Wagstaff

**372.** Pallid Swift *Apus pallidus*, St Agnes, Isles of Scilly, May 2008.

## Pacific Swift *Apus pacificus* (0, 4, 1)

Yorkshire Beacon Ponds, Kilnsea, 22nd June (J. W. Cooper, J. M. Turton *et al.*); presumed same Spurn and Kilnsea, 26th June (T. McEvoy *et al.*).

Reading the credits for the 'swifts with a white rump' entries in 2008, who wouldn't envy Terry McEvoy and Mick Turton? Mick's double whammy began with the first sighting of Britain's fifth Pacific Swift at Spurn and continued ten days later with one of the 'assists' to Dave Waddington's Little Swift *A. affinis* at Old Moor RSPB reserve.

Terry managed to trump even this by finding the (presumed same) Pacific Swift four days later on 26th June, followed a mere 20 minutes after that by Britain's 23rd Little Swift in the same airspace at Spurn. No wonder some incredulity was expressed over the sightings! With an annual flypast of thousands of Common Swifts *A. apus* in June and July in a suitable southwesterly airflow, Spurn has to be one of the best places in Britain to hunt for rare swifts. Many of these passing Common Swifts are thought to be non-breeding first-summer birds, whose whereabouts away from the Yorkshire coast are unknown, though waifs and strays are clearly attracted to them and get caught up in their movements. The last British record of Pacific Swift was also at Spurn, in July 2005 (see *Brit. Birds* 100: 60).

Identification of Pacific Swift, if seen well, is not problematic (although observers should keep in mind the potential for White-rumped Swift *A. caffer* to occur here). In comparison with Pacific, White-rumped is noticeably smaller and slimmer, and appears darker, with a more tapered rear end (since the deeply forked tail is rarely spread). An aberrant Common Swift with a white rump patch also needs to be eliminated, although this would probably show white feathering elsewhere in the plumage. Pacific Swift of the nominate form, which breeds in western Siberia, is slightly larger and conspicuously longer-winged than Common Swift, the difference being quite striking when the two are seen together. Late spring through to summer is a classic time for this species, a time of year when the next White-throated Needletail *Hirundapus caudacutus* might be expected – and few would bet against that being at Spurn!

(Breeds W Siberia E to Kamchatka & Japan, S to Vietnam. Northern breeders winter throughout SE Asia & S to Australia. Other races breed Himalayas, & Indochina to Malay Peninsula.)

## Little Swift *Apus affinis* (0, 22, 1)

Yorkshire Spurn, 26th June (T. McEvoy *et al.*); presumed same Old Moor, 2nd July, photo (J. Hewitt, J. M. Turton, D. M. Waddington *et al.*).

This particular Little Swift fits in well with the established pattern of the majority of the less-than-annual records of this species, with 17 of the 23 having occurring in May and June. Singles have appeared in late April, mid July and mid August, and there is a cluster of three records in November.

One intriguing aspect of British records, hitherto unaddressed, is that at least two of those in May (Isle of Wight on 5th–6th May 1997 and Nottinghamshire on 26th–29th May 2001) can be aged from photos as juveniles in fresh plumage. This would necessitate the parent birds' breeding season beginning no later than February of the same year. That would seem to exclude northwest Africa as the origin, as the birds there begin laying only in mid April (*BWP*). The bird at Cromer, Norfolk, on 12th–13th November 2005 also appears to have been a juvenile, although this is perhaps less surprising.

This raises interesting questions over the geographical origins of Britain's Little Swifts, which may be travelling farther than generally appreciated. Furthermore, it seems an opportune moment to note that, while less likely to occur, the sister taxon, House Swift *A. nivalensis*, with its greater tendency to show a shallow tail fork, narrower white rump band and more uniformly dark vent and undertail-coverts (fading to paler grey and contrasting more with the black belly in Little Swift) should not be written off as a potential vagrant.

(Isolated population in NW Africa, increasing and expanding in Morocco. Breeds locally and discontinuously in Middle East from Israel to SE Iran & N along Euphrates River to SE Turkey. Largely resident, but some Middle East populations migratory. Elsewhere, resident or dispersive throughout sub-Saharan Africa & Indian subcontinent to Sri Lanka.)

**European Roller *Coracias garrulus* (196, 111, 0)**

1962 Kent Canterbury, 26th June to 2nd July; presumed same Wye, Ashford, 5th–15th July, previously accepted as two birds but now presumed same, *Brit. Birds* 56: 403.

(NW Africa and S Europe from Portugal to Greece, and locally through Balkan countries and E Poland to Estonia & E to Ukraine. More numerous from Turkey & S Russia to S Urals, SW Siberia and C Asia to W China and N Pakistan. Some winter equatorial W Africa but most in E Africa from Kenya to Zimbabwe.)

**Calandra Lark*****Melanocorypha calandra*  
(0, 14, 1)**

Fair Isle Barkland and Setter, 20th–22nd April, photo (S. J. Davies *et al.*) (*Brit. Birds* 101: plate 162; plate 373).

(Abundant on steppe grasslands of Iberia & Morocco but uncommon & local throughout much of Mediterranean basin. To E, breeds Ukraine, Turkey & SW Russia to Kazakhstan, NW China & Afghanistan. European & S Asian populations resident or nomadic, while N Asian populations disperse S of breeding range, wintering S to Persian Gulf coast of Iran.)



Mark Breaks

373. Calandra Lark *Melanocorypha calandra*, Fair Isle, April 2008.

**Black Lark *Melanocorypha yeltoniensis* (0, 2, 1)**

Norfolk Winterton Dunes, male, 20th–21st April, photo (S. Offord *et al.*) (*Brit. Birds* 101: plate 163; plate 374).

The third British record, following the birds at Spurn, Yorkshire, in 1984 and South Stack, Anglesey, in 2003 (*Brit. Birds* 98: 306–313). Interestingly, this record conforms to the vagrancy pattern analysed in that paper, being a male in spring. It arrived during a period of sustained east and southeasterly winds, which were a product of extensive high-pressure systems east of the Black Sea in the days preceding the bird's discovery. It may have been encouraged to make landfall at Winterton as a consequence of the light rain and overcast conditions associated with an occluded frontal system that developed over the area on 20th April. Although it remained overnight and was seen well from first light on 21st, at just after 07.00 hrs it shuffled along the path, disappeared behind a tuft of Marram grass *Ammophila arenaria* and never reappeared; it presumably departed, unseen, in the more favourable weather conditions. An entertaining account, which captures perfectly the experience of discovering such a magnificent rarity, can be found in Offord (2008). Lindroos & Tenovuo (2002) is a valuable reference for observers searching for this species in a vagrant context.

(Largely resident on grassy steppes of C Asia from Lower Volga region of SE Russia, E to NE Kazakhstan. Outside breeding season, nomadic flocks remain within breeding range, some occasionally W to Ukraine & E to Xinjiang, China.)



Mike Lawrence

374. Male Black Lark *Melanocorypha yeltoniensis*, Winterton Dunes, Norfolk, April 2008.

**Crag Martin *Ptyonoprogne rupestris* (0, 7, 1)**

Sussex Upper Beeding, Truleigh Hill, 21st September (P. Clement).

(Breeds NW Africa & Iberian Peninsula N to S Germany & E through Mediterranean & C Asia, N to Baikal region of S Siberia, S to Tibetan Plateau & E to NE China. S European population mostly resident but Asian populations migratory, wintering in NE Africa, & NW India to NC China.)

### Olive-backed Pipit *Anthus hodgsoni* (1, 310, 8)

Isles of Scilly Municipal Dump and Buzza Hill, St Mary's, 12th October, photo (S. Huggins *et al.*). Middle Town, St Agnes, 20th–23rd October, photo (M. Walford *et al.*) (*Brit. Birds* 101: plate 388).

Orkney North Ronaldsay, 8th November (P. A. Brown, R. J. Butcher, P. J. Donnelly *et al.*).

Shetland Toab, Mainland, 5th November, photo (R. M. Fray *et al.*). Beosetter, Bressay, 7th November (G. F. Bell, M. S. Chapman).

Yorkshire Spurn, 24th September, photo (M. J. Pilsworth *et al.*). Spurn, 15th October (R. J. Swales *et al.*). Flamborough Head, 5th November (P. Cunningham *et al.*).

(European range restricted to N Urals. Widespread across C & E Siberia to N China, Kamchatka, Kuril Islands & Japan. Winters widely across S China, Taiwan & throughout N & C parts of SE Asia. Those in Himalayas & mountains of WC China winter throughout Indian subcontinent.)

### Pechora Pipit *Anthus gustavi* (4, 75, 2)

Outer Hebrides Knock-cuien, North Uist, 4th–5th October, photo (S. E. Duffield, J. B. Kemp, B. Rabbitts *et al.*).

Shetland Isbister, North Roe, Mainland, 14th October (M. S. Chapman, R. W. Tait).

(Breeds within narrow region of scrub-tundra and taiga of subarctic Eurasia, from Pechora region of NE Russia across Siberia to Chukotskiy Peninsula & Kamchatka. Migrates through E China & Taiwan to wintering areas in Philippines, N Borneo & N Sulawesi. Isolated race, *menzbieri*, breeds NE China & Amur River region of SE Russia.)

### Buff-bellied Pipit *Anthus rubescens* (1, 11, 3)

Orkney North Ronaldsay, 3rd–13th October, photo (P. A. Brown, R. J. Butcher, P. J. Donnelly *et al.*).

Outer Hebrides Hirta, St Kilda, 19th September to 3rd October, sound recording, photo (W. T. S. Miles, S. Money, R. M. Tallack). Smerclate-Garrynamonie, South Uist, 1st–2nd November, photo (S. E. Duffield, J. B. Kemp, A. Stevenson).

2007 Cornwall Nanjizal and Sennen area, first-winter, 26th October to 17th November, photo (M. T. Elliott, K. A. Wilson *et al.*).

(North American race *A. r. rubescens* breeds W Greenland, N & NW Canada, & Alaska, winters W & S USA, Mexico & C America. Asian race *japonicus* vagrant to W Pal., breeds NE Siberia W to Baikal region, winters N Pakistan & NW India to S & E China, S Korea & S Japan.)



Fig. 10. Buff-bellied Pipit *Anthus rubescens*, Hirta, St Kilda, Outer Hebrides, September 2008.

**Citrine Wagtail *Motacilla citreola* (0, 196, 21)**

Breconshire River Usk, Brecon, first-summer male, 5th June, photo (K. Noble *et al.*).

Denbighshire/Caernarfonshire Conwy, first-summer male, 30th April, photo (J. & M. Hughes, R. Sandham, J. Wheldrake *et al.*).

Dumfries & Galloway Caerlaverock, male, 4th June, photo (A. T. & C. I. Bushell, K. & M. Naylor *et al.*).

Fair Isle Da Water, female, 11th–13th May, photo (M. T. Breaks *et al.*). Shirva, first-winter, 16th–23rd August, photo (M. T. Breaks *et al.*). Wester Lothar, first-winter, 23rd August (S. J. Davies). Da Water, first-winter, 1st–2nd September (D. N. Shaw *et al.*) (*Brit. Birds* 101: plate 301). Havens and Gully, first-winter, 4th–8th September, photo (S. J. Davies *et al.*). South Harbour area, first-winter, 6th October (J. P. Cook, M. A. Golley).

Isles of Scilly Porth Hellick, St Mary's, first-winter, 2nd–6th September, photo (E. A. Fisher *et al.* per Isles of Scilly Recorder); presumed same Porthloo, St Mary's, 16th–18th September, photo (J. M. Turton *et al.*).

Norfolk Titchwell, first-summer female, 27th–29th May, photo (P. Eele *et al.*).

Orkney North Ronaldsay, first-winter, 2nd–8th August (P. A. Brown, R. J. Butcher, A. E. Duncan *et al.*).

Stenness village, Mainland, first-winter, 10th August (E. R. Meek *et al.*).

Outer Hebrides Balranald, North Uist, first-winter, 28th September to 1st October, photo (A. Hogg, A. Stevenson, R. Vernon *et al.*). Castlebay, Barra, first-winter, 1st–3rd October, found dead, specimen now at National Museum of Scotland, photo (K. Gillon, C. Scott *et al.*).

Shetland Vidlin, Mainland, first-winter, 3rd September (M. S. Chapman *et al.*). Garth's Voe, Sullom Voe, Mainland, first-winter, 8th–10th September, photo (J. R. McCallum *et al.*). Quarff, Mainland, first-winter, 12th September (R. A. Haywood). Vatshoull, Whalsay, first-winter, 17th September, photo (J. Dunn, J. L. Irvine).

Suffolk Landguard Point, adult, 29th August, photo (P. J. Holmes *et al.*).

Yorkshire Spurn, female, 10th May, photo (N. Pickering, R. Scally *et al.*).

2007 Shetland Foula, first-winter, 12th September (B. H. Thomason).

(Nominate race breeds in N Russia, from E Kola & Kanin Peninsula across N Siberia to Taimyr Peninsula & S to C Siberia. To south, small numbers now breed regularly in Belarus, Baltic countries and occasionally S Finland; otherwise from Ukraine & S Russia, E across Kazakhstan & Mongolia to N China. Black-backed race *calcarata* breeds C Asia to Tibetan Plateau. Winters throughout Indian subcontinent, S China & SE Asia to peninsular Thailand.)

**White Wagtail/Pied Wagtail *Motacilla alba*****Chinese race, 'Amur Wagtail' *M. a. leucopsis* (0, 1, 0)**

2005 Durham Seaham, male, 5th–6th April, photo (S. G. Addinall *et al.*).

An unexpected addition to the British List, but perhaps not the last from the black-and-white wagtail complex that is *M. alba*, which includes at least nine different taxa (races or species, according to taxonomic bent). In addition to our most familiar forms (White Wagtail *M. a. alba* and Pied Wagtail *M. a. yarrellii*), three others have reached western Europe as extralimital vagrants: Masked Wagtail *M. a. personata*, Moroccan Wagtail *M. a. subpersonata* and Amur Wagtail *M. a. leucopsis*. The Seaham individual is the only Amur Wagtail to have been identified in Britain and represents a first for the Western Palearctic, although another has been photographed subsequently in Norway (at Farsund, Vest-Agder, in November 2008). Amur Wagtail is unique in that it is black-backed yet white-throated in breeding plumage; its black bib is reduced to an isolated black 'breast-plate', surrounded by white. This handsome wagtail is obviously white-faced (the literal translation of '*leucopsis*', and 'White-faced Wagtail' was formerly the English name in widespread use in eastern Asia), while there is much white in the wing and the flanks are white too. Both males and females are quite straightforward to identify in adult-like plumage (although care must be taken to eliminate partial albino Pied Wagtail), but immatures are inevitably more tricky. Wagtails are kept in captivity, but the possibility of the Durham bird being an escape is considered negligible. Although Amur Wagtail has an easterly breeding range, from eastern Mongolia and throughout much of lowland China from the Amur River south to Hong Kong, it has also reached Australia and Oman. It is plainly prone to erratic vagrancy, and the fact that there are now two European records bodes well for the future. Birders certainly have every reason to look carefully at their pied wagtails, and Amur is just one of several eastern or southern forms that British

birders should be aware of.

(Breeds E Mongolia S to Tibetan Plateau & E throughout C & E China, N to Amur River & S to Hong Kong. Northern population winters to S of breeding range from E Nepal to Yangtze valley & S to C Thailand.)

### Dipper *Cinclus cinclus*

#### North European race, 'Black-bellied Dipper' *C. c. cinclus* (–, 1, 1)

Fair Isle Wirvie Burn and Finniquoy Gully, first-winter, 5th December 2007 to 13th March, trapped, photo, see also *Brit. Birds* 101: 556–557.

Norfolk River Glaven between Glandford and Hunworth, 1st November into 2009, photo (per Norfolk Recorder) (*Brit. Birds* 102: plate 128).

(Breeds Scandinavia, Baltic countries & W Russia. Outside the breeding season, resident or dispersive to S & W of breeding range.)

### Thrush Nightingale *Luscinia luscinia* (1, 167, 12)

Dorset Portland Bill, male in song, 18th May, sound recording (M. Barrett, R. Newton, G. Walbridge *et al.*).

Fair Isle Houll, first-winter, 18th–19th August, trapped, photo (D. N. Shaw *et al.*). Auld Haa, 13th–15th September (D. N. Shaw, P. Walsh *et al.*).

Norfolk Holme, first-winter, 14th–18th September, trapped, photo (G. D. M. Andrews, S. Barker *et al.*).

Shetland Grutness, Mainland, 30th May, photo (V. Emmanuel, C. & N. Oliver, R. Riddington *et al.*).

Northdale, Unst, first-summer, 30th May, trapped, photo (A. I. & S. J. McElwee, M. G. Pennington *et al.*). Foula, 4th June, photo (J. Gilroy). Still, Fetlar, 15th–16th September, photo (B. H. Thomason).

Virkie, Mainland, 22nd September (R. M. Fray, M. J. Lawson *et al.*).

Suffolk Minsmere, male in song, 5th–8th June, photo (D. Brougham, I. Levett, J. A. Rowlands *et al.*).

Wiltshire Westdown, Salisbury Plain, adult, 9th August, trapped, photo (G. A. J. & P. A. Deacon).

Yorkshire Spurn, first-summer male, 29th May, trapped, photo (G. E. Dobbs, A. A. Hutt *et al.*).

(Widespread throughout E Europe with population increase during 20th century. Range still expanding NW into SW Norway, and locally abundant in S Scandinavia & Baltic countries. C European range extends from Denmark, SE to Romania & Ukraine, and through temperate European Russia to S Siberia. Winters E Africa, from S Kenya to Zimbabwe.)

### Red-flanked Bluetail *Tarsiger cyanurus* (2, 46, 12)

Fair Isle Kenaby, first-winter/female, 24th September, photo (M. T. Breaks *et al.*).

Isles of Scilly Salakee, St Mary's, first-winter/female, 21st October, photo (J. Headon *et al.*). Newford and Trenoweth, St Mary's, first-winter male, 28th October, photo (R. Jolliffe *et al.*).

Kent Ramsgate, first-winter male, 1st–2nd November, photo (R. H. Bonser, A. R. Lawson *et al.*).

Lincolnshire Chapel Six Marshes, first-winter male, 6th November, photo (G. P. Catley, E. J. & M. Mackrill *et al.*).

Norfolk Muckleburgh Hill, first-winter/female, 31st October to 4th November, photo (M. A. Nash *et al.*) (*Brit. Birds* 101: plate 390). Brancaster, first-winter, 4th November, photo (R. Campey, J. Crossthwaite per Norfolk Recorder).

Blakeney Point, first-winter/female, 6th November, photo (J. Gilroy *et al.*).

Northumberland Holy Island, first-winter, 7th–14th November, photo (A. D. Mould *et al.*) (*Brit. Birds* 102: plates 29 & 375).

Orkney North Ronaldsay, first-winter male, 25th–26th September, photo (P. A. Brown, R. J. Butcher, K. Woodbridge *et al.*).

Shetland Harrier, Foula, first-winter/female, 25th September (P. R. Gordon, M. S. Scott *et al.*).

Suffolk Hollesley Bay, first-winter, 2nd November, trapped, photo (R. A. Duncan *et al.*).

Red-flanked Bluetail has undergone a remarkable change in status in recent years. Little did anyone among the crowds watching the long-stayer at Winspit, Dorset, in 1993, realise that this once-mythical bird would become more or less annual over the coming decade. That is only part of the story, however, and fig. 11 illustrates just how dramatic the increase has been. The 12 in 2008 represent (another) new record total, beating the previous best of eight set in 2007. Astonishingly, 40 of the 60 records have occurred in the past decade, and 27 of those in the last five years. A burgeoning European



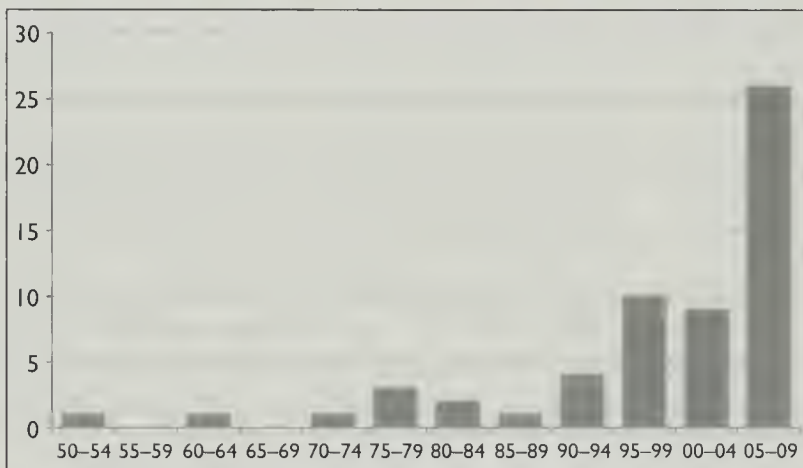
Tom Tams

**375.** First-winter Red-flanked Bluetail *Tarsiger cyanurus*, Holy Island, Northumberland, November 2008.

breeding population is no doubt a major factor, and estimates suggest that there are now 50–500 pairs in Finland alone (BirdLife International 2004). The population trend in European Russia is unknown, and we can only speculate about a similar increase there, spilling over into Finland. Saying all of that, we have surely not yet reached the point where this increasing regularity dulls the surge of adrenalin and excitement that comes to anyone who

first claps eyes on this eastern gem, perhaps in the shady understorey of an east-coast copse. Surprisingly, the North Ronaldsay bird was the first for Orkney.

(Small population breeds NE Finland but main range extends through cool temperate forests of N Eurasia from E Russia & Siberia to Kamchatka, N Japan & NE China. Winters S China, Taiwan & S Japan through SE Asia to N peninsular Thailand. Distinctive race *rufilatus* of Himalayas & W China, sometimes treated as distinct species, descends to lower elevations during winter.)



**Fig. 11.** Records of Red-flanked Bluetails *Tarsiger cyanurus* in Britain since 1950.

## Common Stonechat *Saxicola torquatus*

### Eastern race, 'Siberian Stonechat' *S. t. maurus* (1, 326, 10)

Dorset Bere Regis, first-winter male, 27th September to 9th October, photo (D. S. Dicker *et al.*).

Fair Isle Da Water, first-winter, 26th September, photo (S. J. Davies, M. Maher *et al.*).

Kent Bockhill, Kingsdown, first-winter/female, 30th October to 2nd November, photo (P. Chantler *et al.*).

Norfolk West Runton, first-winter male, 24th–25th September, photo (A. P. Benson *et al.*). Stiffkey, first-winter male, 26th September, photo (G. Dunmore, J. Furse *et al.*).

Shetland Out Skerries, first-winter male, 1st–12th October, photo (S. Dunstan, N. Riley *et al.*). Sumburgh, Mainland, first-winter male, 8th October, photo (D. Fairhurst, J. Hague *et al.*). North Collafirth, Mainland, 19th–20th October (R. M. Fray, B. H. Thomason *et al.*).

Yorkshire Easington, 1st–4th November, photo (L. J. Degnan *et al.*). Withernsea, male, 1st November, photo (C. C. Robinson *et al.*).

2007 Cleveland Hummersea, first-winter/female, 29th September (I. Kendall).

2007 Yorkshire Barmston, first-winter/female, 30th September to 1st October, photo (D. Waudby *et al.*).

(Breeds widely across N Asia from N Urals S to N Caspian Sea, Mongolia & N China, E to Kolyma basin, Okhotsk coast & N Japan. Winters from N Indian subcontinent to S China & SE Asia. Other races occur S Asia & Africa.)

### Isabelline Wheatear *Oenanthe isabellina* (1, 26, 0)

2007 Isles of Scilly Peninnis Head, St Mary's, 3rd October, photo (A. & N. Machin, J. Starbuck-Machin *et al.*).

(European population breeds along Black Sea coast from E Greece N to Ukraine & SW Russia. In Asia, breeds widely across arid grasslands from Turkey through Kazakhstan, Mongolia & N China, S to Iran & N Pakistan. Winters from N Sahel zone to E Africa, and throughout Middle East from Arabian Peninsula to S Iran, Pakistan & NW India.)

### Pied Wheatear *Oenanthe pleschanka* (2, 52, 1)

Yorkshire Reighton, female, 8th–16th November, photo (A. Norris *et al.*); presumed same Bempton Cliffs, 16th–18th November, photo (per birding information services).

2006 Isles of Scilly Bryher, first-winter male, 20th October, photo (J. K. Higginson *et al.*).

Surprisingly, the two birds listed above comprise the first entry for this species since the 2004 report (*Brit. Birds* 98: 672–673), and Pied Wheatears have been rather less frequent in recent years than the average of 2.2 per year described in the 2003 report (*Brit. Birds* 97: 597–598). While our understanding of wheatear identification is improving, this species is still capable of creating a real headache for the Committee. A 'textbook' first-winter male is arguably comparatively straightforward to identify, but autumn birds can be extremely variable in appearance. We have received several recent claims consisting purely of written descriptions that have proved insufficient to rule out 'Eastern Black-eared Wheatear' *O. hispanica melanoleuca*, which reinforces the belief that this is still one of the trickiest species pairs that BBRC has to deal with. The bird on Bryher in 2006 (above) was also a difficult one and the record submission, and particularly the selection of images submitted with it, was the subject of much debate.

(European range centred on Black Sea, reaching E Romania & Bulgaria. To E, small numbers in S & E Ukraine, but occurs widely across S Russia, S Siberia, Kazakhstan & Mongolia to N China, E to Gulf of Bohai. Winters in NE & E Africa, & SW Arabian Peninsula.)

### Desert Wheatear *Oenanthe deserti* (9, 95, 7)

Devon Between Instow and Yelland, first-winter male, 12th November, photo (R. Doble, M. Shakespeare, J. Turner *et al.*).

Highland Balnakiel Beach, Durness, male, 24th–28th December, photo (S. Fenwick *et al.*).

Kent Sandwich Bay, female, 7th–12th November, photo (J. N. Hollyer, P. Redman *et al.*).

Lancashire & North Merseyside Crosby Marine Park, male, 12th October, photo (J. Dempsey, M. Garner *et al.* per Lancashire & N Merseyside Recorder).

Lincolnshire Saltfleet Haven, female, 8th–14th November, photo (S. N. Thomson *et al.*) (*Brit. Birds* 101: plate 391).

Northumberland Lynemouth, Newbiggin, male, 9th–12th November, photo (D. Elliot, I. Fisher *et al.*).

Suffolk Easton Bavents, Southwold, first-winter male, 4th–10th November, photo (B. Buffery, J. & J. Geeson, T. McGeever *et al.*).

Yorkshire Cromer Point, Burniston, male, 26th November 2007 to 2nd January, photo, see also *Brit. Birds* 101: 558–559 (*Brit. Birds* 101: plate 63).

2003 Norfolk Blakeney Point, first-winter female, 9th–10th November, photo; note revised sex, *Brit. Birds* 97: 599.

(Breeds widely but discontinuously across arid and desert regions of N Africa from Morocco to Middle East, N to S Caucasus, and across C Asia from C Iran & N Pakistan to Mongolia & N China. Some N African birds resident, but many winter in Sahara & Sahel region of N Africa from Mauritania E to Ethiopia & Somalia. Asian breeders winter Arabian Peninsula to NW India.)

### White's Thrush *Zoothera dauma* (27, 39, 5)

Fair Isle Rippack, 1st October, photo (E. A. Riddiford, G. D. Wyatt *et al.*). Hesswalls, 1st October (D. N. Shaw). Quoy and Midway, first-winter, 8th October, photo (R. J. Nason *et al.*) (*Brit. Birds* 101: plate 340; plate 376). North-east Scotland Parkhill, Dyce, 18th–24th October, photo (P. A. A. Baxter *et al.*).



Rebecca Nason

376. White's Thrush *Zoothera dauma*, Fair Isle, October 2008.

Shetland Kergord, Mainland, first-winter, 13th–18th October, photo (P. Stronach *et al.*).

(Palearctic race *Z. d. aurea* widespread in C & S Siberia from Yenisey River to Ussuriland, S to N Mongolia, extreme NE China, Korean Peninsula & Japan. Small population extends W to foothills of European Urals. Winters widely across S China, Taiwan & S Japan to Indochina & C Thailand. Nominate race resident or altitudinal migrant in Himalayas, SW China & Taiwan.)

### Siberian Thrush *Zoothera sibirica* (0, 7, 1)

Fair Isle Guidicum, first-winter male, 25th September, photo (D. N. Shaw *et al.*) (*Brit. Birds* 101: plate 341; plate 377).

Finding a male Siberian Thrush on the west cliffs of Fair Isle must be one of those stories your grandchildren will hear about (regularly), and this remains one of the most sought-after and hoped-for of all Asian species. The fact that this was the commoner of two rarities found by this particular Fair Isle warden *in two days* (the other was a Brown Flycatcher *Muscicapa dauurica*, see pp. 585–586) proves that lightning really can strike twice! It remains much rarer than its close relative, the White's Thrush *Zoothera dauma*, despite being equally retiring. This may be due in part to the Siberian

Thrush breeding farther east but, with three of the eight British records having occurred in the last ten years, perhaps we can look forward to this stunning creature on a more regular basis? A genuinely twitchable bird on the mainland would obviously be extremely popular.

(Breeds C & E Siberia from Yenisey & Lena Rivers, S to NE Mongolia, & E to NE China, Amurland, Sakhalin, & N Japan. Winters C Burma, Indochina & Thailand S to Singapore, Sumatra & Java.)



Deryk Shaw

377. First-winter male Siberian Thrush *Zoothera sibirica*, Fair Isle, September 2008.

### Hermit Thrush *Catharus guttatus* (0, 6, 0)

1994 Essex Chipping Ongar, 28th October to 2nd November, photo (F. & N. Pepper); previously accepted (*Brit. Birds* 89: 516) but now withdrawn by observers.

The publication of this retraction is a particular disappointment, and it appears to represent the first instance of an observer admitting to the deliberate deception of the Committee. The record was formally withdrawn just prior to the publication of an article outlining the circumstances of the fraud (*Birdwatch* 204: 46–47). The record had been accepted in 1995, but was reviewed in 2002 following representations from the local committee. This review included correspondence with contacts in North America, to establish whether any of the features (of either the bird or the person holding it) visible in the photographs could establish unequivocally that the images were taken at a North American ringing station or outside the late October/early November period. In fact, our correspondents suggested that the way the bird was being held was atypical for North American ringers and also that plumage characters pointed to a bird trapped in autumn. Although the Committee felt that the concerns expressed about the record were significant, and that the evidence to support deceit was quite strong, members felt that they were not sufficiently compelling to overturn the record, especially as the observer was adamant that these allegations were unfounded. Ultimately, in instances such as this, where the evidence provided leaves no question about the identification of the bird, it is extremely difficult for BBRC to question the integrity of the observers. Although we seek to make our judgments as robust as possible, ultimately we are open to fraud if the intention is to deceive. We hope that Nigel Pepper, who admitted the fraud in the *Birdwatch* article referred to, may have set a precedent for any other observers involved in similar cases in the past. Although we hope that no other significant frauds exist, we would prefer to have them exposed by the admission of the individuals concerned. BBRC relies on the trust and support of the birding community in Britain to be able to undertake its role and it is disappointing that this cannot always be relied upon.

(Breeds C and S Alaska and east across boreal and temperate region of Canada, south through Rocky Mountains to N Mexico, and in NE USA south through Appalachian Mountains. Winters in S USA and Mexico, south to Guatemala and El Salvador.)

### Grey-cheeked Thrush *Catharus minimus* (0, 48, 2)



Tom Tams

Dorset Portland, first-winter, 8th October, trapped, photo (M. Cade, P. Morgan *et al.*).

Isles of Scilly Chapel Fields and Troy Town, St Agnes, 14th–22nd October, photo (G. Gordon *et al.*) (*Brit. Birds* 101: plate 392; plate 378); presumed same Porthmellon, St Mary's, 26th–31st October, photo (per Isles of Scilly Recorder); presumed same Bryher, 4th November (J. Higginson, C. Ridgard per Isles of Scilly Recorder).

**378.** Grey-cheeked Thrush *Catharus minimus*, St Agnes, Isles of Scilly, October 2008.

(Breeds extreme NE Siberia E throughout Alaska & N Canada to Labrador & Newfoundland. Migrates across E USA to winter in N South America.)

## Zitting Cisticola *Cisticola juncidis* (0, 5, 1)

Kent Swalecliffe, 13th September, photo (G. J. A. Burton *et al.*) (*Brit. Birds* 101: plate 342).

Zitting Cisticola is the only representative of its family in the Western Palearctic and, thankfully, the Committee is not faced with the identification challenges posed by some of its relatives in Africa, nor some of the names that go with them! This record, the sixth for Britain, is the second for Kent; the previous one, in 2006, was also an autumn bird. Elsewhere, there is an autumn record from Norfolk, and three spring records, all from Dorset. For a couple of decades now, this species has been mooted as a potential colonist and indeed two did turn up at the same time in Dorset in 2000, although sadly at opposite ends of the county. It has bred in the Channel Islands and the breeding population in northern France has increased in recent years, raising expectations that it may nest somewhere in southern England before too long.

(Resident throughout Mediterranean basin, & N along Atlantic seaboard of W France. Elsewhere, other races breed throughout Indian subcontinent, S China & S Japan to SE Asia & N Australia, & in sub-Saharan Africa.)

## Pallas's Grasshopper Warbler *Locustella certhiola* (1, 36, 4)

Fair Isle Busta Geo, juvenile, 23rd September, photo (S. J. Davies *et al.*). Auld Haa, juvenile, 1st October, photo (J. P. Cook *et al.*) (*Brit. Birds* 101: plate 344; plate 379).

Shetland Punds, Foula, 2nd October (N. D. & P. J. Wright *et al.*).

Yorkshire Spurn, juvenile, 14th September, trapped, photo (G. J. Speight, B. R. Spence, P. Wragg *et al.*) (*Brit. Birds* 101: plate 343).

Pallas's Grasshopper Warbler is arguably the most difficult of the regular British rarities to find, at least away from Shetland; on the mainland, it is almost a lottery. The finder of the Spurn bird, Graham Speight, described how it flushed at his feet, even though John Hewitt, who was just a few paces ahead of him on the same path, had not disturbed it.

A quartet in a single autumn has been equalled only twice before, in 1997 and 2004, and bettered only by the five in 1998. Although there is an upward trend in the number of accepted records, Shetland and Fair Isle maintain their dominance. Fair Isle accounts for almost half of the total (20 records), while the 14 on Shetland constitute just over a third. The Shetland records have been spread around the islands, chiefly Foula (5) and Mainland (4), but also Out Skerries (2), Whalsay (2) and Unst (1). Shetland and Fair Isle combined account for 83% of all British records, almost exactly the same proportion as for Lanceolated Warbler *L. lanceolata*.

The Spurn bird is the first for Yorkshire, and only the seventh away from Shetland, following two records for both Norfolk (1976, 2001) and Northumberland (1985, 2001), and singles for Dorset (1996) and Orkney (1992). As with Lanceolated Warbler, the paucity of records from Orkney is somewhat surprising.

Arrival dates span the period from 13th September to 26th October, with over three-quarters in the last ten days of September and the first ten days of October. The arrival date of the Spurn record is the second-earliest, just behind two on 13th September (at Cley, Norfolk, in 1976 and Portland, Dorset, in 1996). Again as with Lanceolated Warbler, the possi-



379. Juvenile Pallas's Grasshopper Warbler *Locustella certhiola*, Fair Isle, October 2008.

Mark Breaks

bility of August arrival dates might seem remote, but this is an early migrant in eastern Asia and there are precedents from continental Europe. There is an old record from Helgoland, Germany, on 13th August 1856, and more recently one from Ouessant, France, on 31st August 1987. The latest arrival is currently the one on the Farne Islands, Northumberland, that turned up on 26th October 1985. Quite why so many of the few records away from Shetland should be at either end of the main cluster of records (in terms of finding date) and whether this is significant are interesting but unanswered questions.

(Breeds across Siberia from Irtysh River in W Siberia, N to 64°N, & E to Yakutia & Sea of Okhotsk, & to the south from SW Siberia & NE Kazakhstan through Mongolia to Ussuriland & N & NE China. Winters from Sri Lanka & NE India to S China, & S throughout SE Asia.)

### Lanceolated Warbler *Locustella lanceolata* (7, 109, 4)

Fair Isle Bull's Park, 23rd September, photo (M. A. Maher *et al.*). Gilsetter, 23rd September (M. A. Maher *et al.*).

Shetland Sumburgh Head, Mainland, 12th September, photo (J. R. McCallum *et al.*). Hametoun, Foula, 15th–16th October (J. M. & T. P. Drew, K. Gibb, M. A. Wilkinson).

No surprises here then, with all four in Shetland (now deemed to cover two recording areas, since Fair Isle has its own Recorder and produces its own report). But for one observer to find two on the same day, as happened on Fair Isle on 23rd September, is still remarkable.

Two-thirds of all records have come from Fair Isle; such a predominance of records in one (tiny) recording area is unparalleled for a regular vagrant such as Lanceolated Warbler. That proportion is slowly declining, however, as records elsewhere in Shetland have increased; there had been just four up to 1990, but there were eight in the 1990s, and so far ten since 2000. These records have come principally from Mainland (six, all bar one from around Sumburgh), Out Skerries (six) and Foula (five), but there have also been three on Unst and singles on Whalsay and Bressay. Together, the recording areas of Fair Isle and Shetland account for 84% of all records. It is remarkable that so few have been found in Orkney (one in 1910 and two in 2003) and in the rest of Scotland (one on the Isle of May in 1987 and another on an oil rig in the Forties oilfield in 1978). In this context, it is perhaps surprising that as

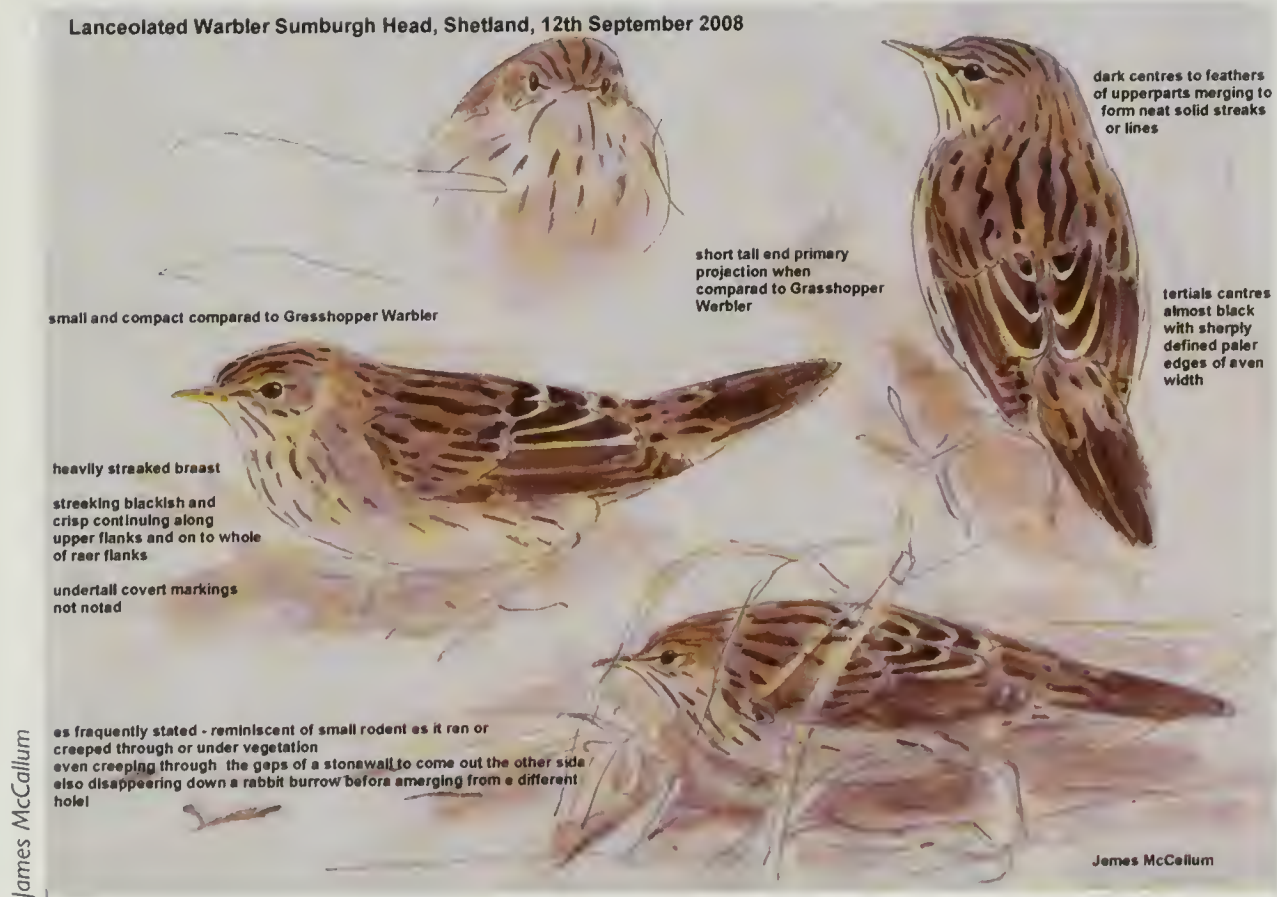


Fig. 12. Lanceolated Warbler *Locustella lanceolata*, Sumburgh Head, Shetland, September 2008.

many as 11 have been seen in England – scattered between Scilly and Northumberland – with three more in Wales, all on Bardsey (Caernarfonshire).

September is *the* month for finding a ‘Lancy’, and 77 of the 120 records have been in this month, with the earliest on 1st September, on Out Skerries in 2000 (an August record would still seem rather strange, though!). Most of the 40 October records have been early in the month and just three have been found in November: on Fair Isle on 1st November 1960, and, significantly perhaps, two of the English records – in Prior’s Park, Tynemouth, Northumberland, on 13th November 1984 and shot at North Cotes, Lincolnshire, on 18th November 1909.

The identification criteria for Lanceolated Warbler are well established (Riddiford & Harvey 1992) but, even in the home of the Lancy, observers need to remember that Grasshopper Warbler *L. naevia* is a scarce migrant in Shetland and still the commoner of the two species. A good view of the tertial pattern in particular is essential.

(Singing males regular in eastern Finland. To E, discontinuously from C Urals E across much of Siberia to Kamchatka, Kuril Islands, Hokkaido & NE China. Winters in Indian subcontinent, from Nepal E through NE India into SE Asia & Philippines.)

### River Warbler *Locustella fluviatilis* (0, 33, 2)

Orkney Burnbraes, Evie, Mainland, male in song, 8th–17th June, photo (S. Green, B. Ribbands *et al.*).  
Sussex Beachy Head, male in song, 30th May, sound recording (D. Cooper, M. R. Eade *et al.*).

(Breeds C & E Europe from Germany to C Finland, & E through C Russia to W Siberia. Southern limit extends to Croatia & Ukraine. Migrates through Middle East & NE Africa to winter in E Africa.)

### Savi’s Warbler *Locustella luscinioides* (–, 414, 3)

Fair Isle Finnickuoy, 22nd May, trapped, photo (M. T. Breaks *et al.*).  
Kent Sandwich Bay, 29th September (I. Hodgson).

Norfolk Hunsett Mill Marsh, male in song, 9th–10th May (M. Chipperfield, P. J. Heath).  
2007 Somerset Ham Wall, male in song, 24th April to 3rd June (D. J. Chown *et al.*).

(Breeds W Europe, from Iberia to the Netherlands; range contracting to SE but expanding to NE, into Baltic countries. To E, occurs through temperate Russia S through Ukraine to Black Sea coasts, & E across C Asia to NW China & W Mongolia. European birds winter in W Africa from Senegal to N Nigeria; Asian birds winter in NE Africa.)

### Paddyfield Warbler *Acrocephalus agricola* (1, 66, 6)

Caernarfonshire Bardsey, first-winter, 11th October, trapped, photo (S. D. Stansfield *et al.*).  
Devon Lundy, adult, 29th October, trapped, photo (J. Smith *et al.*).

Fair Isle Setter, 13th September, photo (M. T. Breaks, P. D. King *et al.*).

Shetland Skaw, Whalsay, first-winter, 17th August, trapped, photo (B. Marshall *et al.*).  
Burrafirth, Unst, first-winter, 9th–11th September, photo (R. M. Tallack *et al.*).  
Virkie, Mainland, first-winter, 20th–21st September, photo (R. M. Fray, M. J. Lawson *et al.*) (*Brit. Birds* 101: plate 345; plate 380).

(In Europe, restricted to Black Sea coasts from N Bulgaria & Danube Delta E to Ukraine. To E, breeds widely across steppes of S Russia & SW Siberia, Kazakhstan, NW China & W Mongolia, S to Uzbekistan & N Pakistan. Winters throughout Indian subcontinent N of Sri Lanka.)



Hugh Harrop

**380.** First-winter Paddyfield Warbler *Acrocephalus agricola*, Virkie, Shetland, September 2008.

## Blyth's Reed Warbler *Acrocephalus dumetorum* (9, 80, 6)

Argyll Carnan Mor, Tiree, male in song, 3rd June, photo (J. Bowler).

Isles of Scilly Chapel Fields, St Agnes, first-winter, 12th October, photo (G. Gordon *et al.*); presumed same 16th–29th October, photo (C. Heyworth *et al.*).

Shetland Ham, Foula, first-winter, 24th September to 3rd October, photo (B. H. Thomason *et al.*).

Quendale, Mainland, first-winter, 24th September (K. Britten, C. Gooddie, G. Hogan *et al.*). Sumburgh

Head, Mainland, first-winter, 24th September, trapped, photo (K. Britten, C. Gooddie, R. Harris *et al.*).

Norwick, Unst, 12th October, photo (B. H. Thomason *et al.*).

(Breeds widely throughout S Finland, Baltic countries & European Russia to 64°N. To E, extends across C Siberia to Lake Baikal & upper Lena River, S through W Mongolia & NW China, Kazakhstan & Tajikistan to N Pakistan. Winters throughout Indian subcontinent S to Sri Lanka & E into NW Burma.)

## Great Reed Warbler *Acrocephalus arundinaceus* (7, 219, 8)

Avon Chew Valley Lake, male in song, 12th May (A. H. Davis *et al.*).

Buckinghamshire Willen Lake, Milton Keynes, male in song, 11th May, sound recording, photo (K. O'Hagen).

Hertfordshire Amwell, male in song, 20th–21st May, photo (M. Illett, B. Reed).

Isle of Man Calf of Man, male in song, 30th May, trapped, photo (R. Cope, I. Lycett).

Isles of Scilly Porth Hellick, St Mary's, 20th–27th March (R. L. Flood *et al.*).

Norfolk Cley, 21st May (N. R. Rogers *et al.*).

Suffolk Lakenheath Fen, male, 11th May (L. Gregory *et al.*); presumed same 8th–9th June (L. Gregory, D. F. Walsh *et al.*). Minsmere, in song, 17th–18th May (P. Eele, J. A. Rowlands *et al.*); presumed same 29th–30th May (D. Fairhurst *et al.*).

A typical bunch of spring songsters, although the eight in 2008 constitute the joint third-best year on record, together with 1998 and 1976, and just behind 1969 and 1978, with nine. Singing males are difficult to overlook, so the fact that the massive increase in observer effort in the last 30 years has not resulted in an upward trend in annual totals (fig. 13) suggests that the decline in the European population is reflected in these figures. Nonetheless, given that the two Suffolk males managed to disappear for long periods, how many females do we miss in our reedbeds?

The bird on Scilly in March is, by quite some margin, the earliest ever in Britain. Few arrive in southern Europe from African wintering grounds before mid April (*BWP*), so a March record is most unexpected. There are just four April records, the earliest of which was at Slapton, Devon, on 13th April 1981, with the other three in the last four days of the month. Most of the other records fall within the classic time slot of May and June, which accounts for 83% of all British records.

Autumn records remain very unusual, with the latest arrival being one trapped at Thurlestone, Devon, on 15th November 1972. Autumn birds, between August and November, account for less than 10% of all British records and have declined significantly since the 1960s and 1970s, as the figures in the table show.

Great Reed Warblers have occurred in almost every county along the North Sea and English Channel coasts. The best two counties are at

Decade	Autumn records
1950s	1
1960s	5
1970s	8
1980s	2
1990s	4
2000s (so far)	1

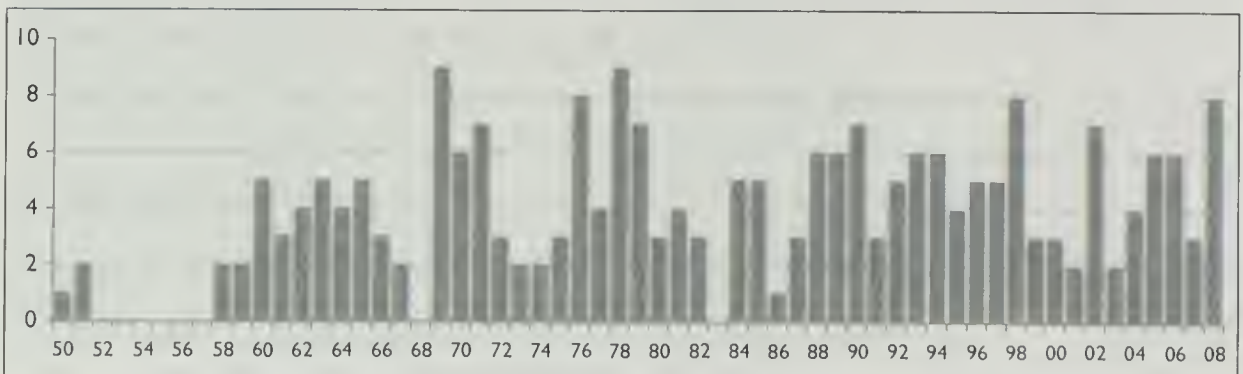


Fig. 13. Records of Great Reed Warblers *Acrocephalus arundinaceus* in Britain since 1950.

either end of the North Sea: Kent with 35 and Shetland (with Fair Isle) on 29. Respectable totals are also held by Sussex (16), Suffolk (15), Norfolk (14), Yorkshire and Devon (both 10). Forrester *et al.* (2007) suggested that many of those reaching Scotland are birds bound for Fennoscandian breeding grounds and displaced by easterly winds, whereas those reaching Kent and the south coast are much more likely to be overshooting breeding grounds on the near continent, where there are populations breeding as close as Nord Pas de Calais in northern France.

The bird at Willen Lake is the first for Buckinghamshire. Since there have been records from many inland counties across the country, this is a species that could be discovered at just about any water-body with a half-decent reedbed, but it is still a very good bird to find.

(Breeds discontinuously throughout much of continental Europe from Iberia to Greece, N to S Sweden & Finland, & E across S Russia, Turkey & Caucasus to W Siberia. C Asian race *zarudnyi* breeds from Volga to NW China & W Mongolia. Winters throughout C & S Africa.)

### Eastern Olivaceous Warbler *Hippolais pallida* (0, 11, 2)

Dorset Portland, 17th May, trapped, photo (M. Cade, E. Cockburn, P. Morgan *et al.*).

Shetland Harrier, Foula, first-winter, 23rd–25th September, photo (P. R. Gordon, M. S. Scott *et al.*) (*Brit. Birds* 101: plate 346; plate 381).

This is still a considerable rarity in Britain, so two in a year is a good haul. Prior to these, the two most recent records were from the same recording areas as those in 2008, with one at Portland on 31st August 2003 and another at Sandwick and Hoswick, Shetland, on 18th–28th August 2002. The Portland bird in 2008 is the first for May, although there is one other spring record (on Fair Isle on 5th–13th June 1995) and a midsummer/early autumn bird at Portland, yet again, on 4th–5th July 1999. Altogether, nine of the 13 records are accounted for by three counties, with three in Shetland/Fair Isle, three in Dorset (all at Portland) and three on Scilly (St Mary's in October 1984 and October 1985, and St Agnes in September/October 1998). The remaining four birds were in Kent and on the Isle of May in September 1967, in Suffolk in



Pete Gordon

381. First-winter Eastern Olivaceous Warbler *Hippolais pallida*, Foula, Shetland, September 2008.



Hugh Harrop

382. Sykes's Warbler *Hippolais rama*, Sumburgh, Shetland, September 2008.

August 1995 and in North-east Scotland in September 2000. The slight but rather surprising bias to the southwest is reinforced by the Irish total of three, all in Co. Cork.

Anyone lucky enough to find a pale or sandy-coloured *Hippolais* in Britain will know immediately that they face an identification dilemma, a problem that will often be compounded by the skulking nature of the bird. Even in the hand, a series of accurate measurements will often be necessary to confirm the identification. The split of Eastern and Western Olivaceous Warblers *H. opaca* was adopted by BOU in 2002 (Knox *et al.* 2002; Parkin *et al.* 2004) and a subsequent review concluded that all British records of 'Olivaceous Warbler' were of the Eastern species. The Western Olivaceous Warbler is yet to be recorded in Britain, although it breeds as close as northeast Spain. The two species are challenging to separate but Western Olivaceous differs in vocalisations, structure (including bill shape), behaviour (including a lack of tail-dipping) and plumage, with slightly warmer brown upperparts that lack a pale panel in the closed wing, even in fresh plumage (Svensson 2001).

Booted Warbler *H. caligata* is relatively easy for seasoned observers to exclude from the equation, that species being perhaps more likely to be confused with Paddyfield Warbler *Acrocephalus agricola*. Ruling out Sykes's Warbler *H. rama* is a bigger challenge and, although recent identification papers have concentrated on separating Sykes's and Booted (e.g. Svensson 2003), some Sykes's Warblers have initially been identified as Eastern Olivaceous – for example a bird in Shetland in 1993 (Osborn 1993) and another in Ireland in 1990 (McGeehan 1990; *Irish Birds* 7: 241–250). As many people will be aware, Britain's only Olive-tree Warbler *H. olivetorum* was also first identified as an Eastern Olivaceous (Harrop *et al.* 2008), and Upcher's Warbler *H. languida* (a long-distance migrant originating only slightly to the east of Olive-tree in southern Turkey and overlapping widely with Eastern Olivaceous throughout central Asia) must now be another possibility to be considered.

(Breeds throughout Balkans from Croatia to Greece & Turkey, S Caucasus, S Kazakhstan, Uzbekistan, Iraq, Iran & N Afghanistan. Migrates through Middle East to winter in E Africa.)

### Booted Warbler *Hippolais caligata* (1, 111, 3)

Isles of Scilly Big Pool, St Agnes, 17th September (G. Gordon *et al.*).

Kent Bockhill, Kingsdown, 16th August, photo (N. L. Jarman, G. Segelbacher).

Shetland Sumburgh, Mainland, first-winter, 20th–21st August, photo (P. V. Harvey, R. Riddington *et al.*) (*Brit. Birds* 101: plate 302; plate 383).



Hugh Harrop

**383.** Sykes's Warbler *Hippolais rama*, September 2008 (left) and Booted Warbler *H. caligata*, August 2008, both Sumburgh, Shetland. This montage provides an instructive comparison of these two individuals, in terms of both structure (note in particular the proportionately longer bill of Sykes's, the higher, more domed head profile of Booted compared with the flatter-headed Sykes's, and the slightly longer tail of Sykes's, although the last feature is not easy to judge here) and plumage (note especially the more uniform wing of the Sykes's, and the slightly stronger head pattern of the Booted).

2006 Isles of Scilly Green Farm, St Mary's, 15th–22nd October, trapped, DNA analysis, photo (J. Askins, K. Webb *et al.*).

A paper that discusses the much-debated bird at Green Farm, St Mary's, in 2006, will appear in the next issue of *BB*.

The bird at Sumburgh was notable in that it turned up in the very same area of thistles that yielded a Sykes's Warbler *H. rama* little over a month later. The photographs of the latter

were an important part of the submission to BBRC and the comparison between the two birds featured in plate 383, in similar pose, is interesting.

(Range expanding W, now breeding in S Finland. To E, breeds C Russia & W Siberia to Yenisey valley, C & N Kazakhstan to W Mongolia & W Xinjiang province, China. Winters N & peninsular India, S to Karnataka.)

### Sykes's Warbler *Hippolais rama* (0, 9, 1)

Shetland Sumburgh, Mainland, probably first-winter, 25th September, photo (P. V. Harvey, R. Riddington *et al.*) (*Brit. Birds* 101: plate 347; plates 382 & 383).

(Breeds S Kazakhstan to W Xinjiang province, NW China, S locally to Persian Gulf states, Iran, Afghanistan & N Pakistan. Winters N & W India, occasionally S to Sri Lanka.)

### Spectacled Warbler *Sylvia conspicillata* (0, 4, 1)

Suffolk Westleton Heath, adult male in song, 10th May, photo (D. Beamish, B. J. Small, J. Warnes *et al.*).

This, the fifth for Britain, fits nicely into the emerging pattern of males in spring. The breeding population of Spectacled Warbler in Europe is judged to be stable by BirdLife International (2004) and, as a short-distance migrant, it seems likely that this species will always remain a great rarity here. Arrival dates in the spring cover the period 26th April to 3rd June, a large spread for such a low number of records. There are two races breeding in Europe, and the British records are all assumed to belong to the nominate race, which is widespread in the Mediterranean, although many birders will be more familiar with the resident *S. c. orbitalis* on Madeira and the Canary Islands.

(Breeds Canary Islands, NW Africa and W Mediterranean including Spain, S France and Italy including Sicily and Sardinia; also Cyprus, Israel and W Jordan. Some populations resident, others migrate to winter in N Africa, mostly north of Sahara.)

### Sardinian Warbler *Sylvia melanocephala* (0, 74, 1)

Devon Berry Head, adult female, 12th–21st November, photo (M. Langman *et al.*) (*Brit. Birds* 102: plate 32).

(Largely resident or dispersive throughout Mediterranean basin, from NW Africa & Iberia to S France, N Italy & E to W Turkey & Israel. Some winter in N Africa from Sahara S to Mauritania & S Libya.)

### Arctic Warbler *Phylloscopus borealis* (11, 272, 4)

Fair Isle Auld Haa, first-winter, 25th September, photo (R. M. Fray, S. J. Minton *et al.*).

Norfolk Scolt Head, 13th September (N. M. Lawton, N. Williams *et al.*).

Shetland Exnaboe, Mainland, 14th–19th September, photo (C. Bradshaw, R. M. Fray *et al.*). Out Skerries, 26th–27th September (S. Dunstan *et al.*).

One of the commonest species still assessed by BBRC, Arctic Warbler has been recorded in every year of the Committee's existence except 1963, with the most in any one year being 16, way back in 1981.

Arctic Warblers nearly always occur in Britain between August and October and records in other months are very unusual. Eight have appeared between 21st June and 10th July, all on Fair Isle or in Shetland apart from one trapped at Titchwell, Norfolk, on 5th July 1975. Arctic Warblers winter in southeast Asia but breed as close as northern Norway; they do not reach their Scandinavian breeding grounds until mid June and it is generally believed that birds reaching Britain at this time of year are late spring overshoots. Two others have been recorded in late July (both on 30th, both on Fair Isle), and there are a couple of early August records from the same island, but almost all August records are from mid month onwards. Around two-thirds of all British records are in September (as were all four in 2008), while October sightings only just exceed the total for August. Probably only two birds have ever been seen in November: what must have been the same bird at two adjacent sites in Durham during 12th–17th November 1984 (currently accepted as two individuals) and another in Shetland on 10th November 2007.

It will come as no surprise that Fair Isle (73) and Shetland (72) account for over half the records. Every recording area along the east coast except Borders has had at least one record, and Orkney (21), Yorkshire (15), Norfolk (14), Northumberland (14) and Lincolnshire (8) all manage reasonable tallies.

Relatively few make it further than the east coast, and most of these follow the classic pattern, concentrating in southwest England later in the autumn. No fewer than 38 have reached the southwest though (with 24 of these on Scilly), where the overall temporal pattern is quite different from that in the Northern Isles, with more than half arriving in October.

Although many individuals are quite distinctive, separating this species from Greenish Warbler *P. trochiloides* is not always straightforward (e.g. Bradshaw & Riddington 1997, van der Vliet *et al.* 2001). Particularly in late autumn, observers also have to consider 'Two-barred Greenish Warbler' *P. t. plumbeitarsus*, which has occurred in Britain on at least four occasions (Bradshaw 2001; Stoddart 2003), and the ultimate prize of an Eastern Crowned Warbler *P. coronatus*, which has turned up in the Western Palearctic on four occasions: Germany in 1843, Norway in 2002, Finland in 2004 and the Netherlands in 2007.

(Breeds locally in N Scandinavia, becoming widespread across N Russia E to extreme NE Siberia, S to Baikal region, Ussuriland & NE China. Other races breed in Alaska, & Kamchatka through Kuril Islands to N Japan. Migrant through E China to winter widely in SE Asia to Java, Philippines & Sulawesi.)

### Hume's Warbler *Phylloscopus humei* (0, 93, 10)

Cleveland Norton, Stockton-on-Tees, 10th February to 24th March, photo (G. Joynt, K. Ryan *et al.*) (*Brit. Birds* 101: plate 148). North Gare, 1st November (R. C. Taylor *et al.*).

Cornwall Cot Valley, first-winter, 23rd December 2007 to 23rd February, sound recording, trapped, photo (P. Clark, P. Fraser, K. A. Wilson *et al.*).

Norfolk Wells Woods, Holkham, 7th–8th November (J. McCallum, R. G. Millington).

North-east Scotland Easter Muchalls, 8th November, photo (P. A. A. Baxter). Balmedie CP, 9th November (P. A. A. Baxter).

Northumberland St Mary's Island, 7th–15th November, sound recording, photo (A. Curry, M. S. Hodgson *et al.*).

Orkney Bridesness, North Ronaldsay, 7th–8th November, photo (P. A. Brown, R. J. Butcher, R. J. Simpson *et al.*).

Shetland Baltasound, Unst, 1st–5th November, photo (M. G. Pennington, R. M. Tallack, B. H. Thomason *et al.*). Symbister, Whalsay, 4th–7th November (J. Dunn, J. L. Irvine, C. Simpson). Gardie House, Bressay, 11th–13th November, photo (G. F. Bell, M. S. Chapman, S. J. Minton *et al.*) (*Brit. Birds* 102: plate 33).

Sussex Belle Tout Wood, Beachy Head, 30th December 2007 to 14th January, sound recording, photo, see also *Brit. Birds* 101: 566 (*Brit. Birds* 101: plate 64).

2000 Anglesey Soldier's Point, Holyhead, 19th November, photo, previously erroneously published as accepted (*Brit. Birds* 98: 679) while further information was sought, now considered not proven.

Along with Desert Wheatear *Oenanthe deserti*, Hume's Warbler is becoming an increasingly realistic late-autumn target for would-be rarity finders. The earliest autumn record involved one at Holkham, Norfolk, on 6th October 2007 but, as those listed above suggest, the first half of November is the peak arrival period. November discovery dates now account for over half of all British records, although midwinter birds are becoming increasingly frequent and almost one-fifth of all records have turned up during December to February (fig. 14).

With 10 records, 2008 becomes the third-best year ever, following 11 in 2000 and the glut in 2003 that numbered an impressive 28. Predictably, the east-coast counties are most favoured with Norfolk (18), Yorkshire (16) and Northumberland (11) leading the way. Nonetheless, there are now records from all south-coast

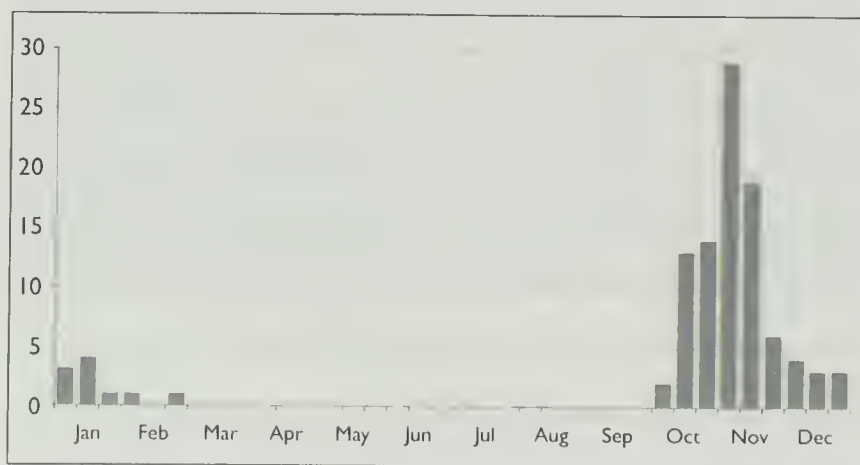


Fig. 14. The arrival pattern of Hume's Warblers *Phylloscopus humei* in Britain.

counties with the exception of Hampshire, although few have made it to the west coast. There are just three accepted records for Wales, two from Caernarfonshire and one from Pembrokeshire, while the only record from north-west England is from Cumbria. Yellow-browed Warblers *P. inornatus* are increasingly being found inland, and the Hume's Warbler at Westport Lake, in landlocked Staffordshire on 20th December 1994, should provide encouragement for birders at inland sites – a Yellow-browed Warbler in the local tit flock is a great find but there is a chance that it might prove to be something even more special.

It is not too long ago that this species was split from Yellow-browed Warbler, so it is not surprising that some past records of Yellow-browed have been re-identified as Hume's. With the late-autumn peak now firmly established, any 'yellow-browed' at this time will doubtless be given a thorough grilling. Dull Yellow-browed Warblers remain the main potential pitfall, but careful observation and, ideally, a recording of the call should lead to an accurate identification of a Hume's.

(Breeds in Altai Mountains to W Mongolia, S through Tien Shan & Pamirs to NE Afghanistan, NW Himalayas & mountains in NW China. Winters S Afghanistan to N India, E to W Bengal. Another race breeds in C China from Hebei to S Yunnan, W to lower slopes of Tibetan Plateau.)

### Western Bonelli's Warbler *Phylloscopus bonelli* (1, 84, 2)

Isles of Scilly Newford Duck Pond, St Mary's, 18th September (R. L. Flood *et al.*).

Shetland Lunna, Mainland, first-winter, 27th September, photo (C. Gooddie, R. Harris, G. Hogan *et al.*) (*Brit. Birds* 101: plate 349).

2006 Caernarfonshire Bardsey, 24th–25th September, trapped, photo, previously accepted as Eastern/Western Bonelli's Warbler (*Brit. Birds* 100: 743) but with additional information now attributed to Western Bonelli's Warbler.

(Breeding range centred on SW Europe from Iberia to N France, S Germany, Italy, Austria, and locally in mountains of N Africa. Winters along S edge of Sahara, from Senegal & S Mauritania to N Cameroon.)

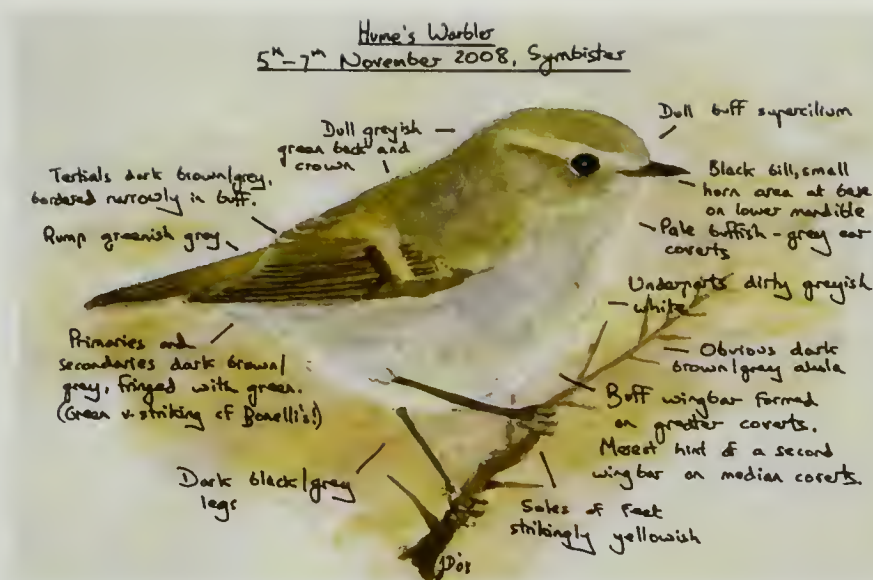
### Brown Flycatcher *Muscicapa dauurica* (0, 2, 1)

Fair Isle Ward Hill, first-winter *M. d. dauurica*, 24th–25th September, photo (D. N. Shaw *et al.*) (*Brit. Birds* 101: plate 350; plate 384).

2007 Yorkshire Flamborough Head, adult *M. d. dauurica*, 3rd–4th October, photo (R. Baines, P. Cunningham *et al.*) (*Brit. Birds* 100: plate 331).

1992 Fair Isle The Plantation, first-summer *M. d. dauurica*, 1st–2nd July, trapped, photo (P. V. Harvey *et al.*) (*Brit. Birds* 85: plate 297); previously accepted but included in Category D (*Brit. Birds* 87: 567). After review by BOURC, now accepted into Category A of the British List and becomes the first British record.

This charismatic little flycatcher finally finds itself a well-deserved place on the British List, despite two false starts (the first turning up on an unlikely date, the second being an adult). The first-winter on Fair Isle in 2008 arrived at the same time as a Siberian Thrush *Zoothera sibirica* (on the same island) and a Brown Shrike *Lanius cristatus* in Yorkshire (at the very same locality that the 2007 Brown Flycatcher had been seen), and it is difficult to imagine a better supporting cast. Now that the vagrancy



**Fig. 15.** Hume's Warbler *Phylloscopus humei*, Symbister, Whalsay, Shetland, November 2008.



384. First-winter Brown Flycatcher *Muscicapa dauurica*, Fair Isle, September 2008.

potential of this species has been well established, it may be opportune to remind ourselves that Dark-sided (Siberian) Flycatcher *M. sibirica* is also a potential vagrant. Any birder lucky enough to encounter a compact, but rather large-headed, brown-and-white flycatcher sporting a prominent pale eye-ring will already be onto a winner. However, before pronouncing it a Brown Flycatcher,

check for diffuse streaking on the sides of the breast; it may be even rarer than you think.

(Breeds S Siberia from S Yenisey Valley & N Mongolia, E to Amurland, Sakhalin & Kuril Islands, & S to NE China & N Japan. Migrates to winter from E Himalayas east to S China & S to Sri Lanka, Indochina & Malay Peninsula to Java, & Philippines & Borneo.)

### Long-tailed Tit *Aegithalos caudatus*

#### Northern race, 'Northern Long-tailed Tit' *A. c. caudatus* (–, 4, 0)

2004 Sussex Lewes, four, 24th January to 17th February, varying numbers with maximum of four on 31st January 2004, photo (D., D. R. & J. F. Cooper, J. W. King, K. Kraaijeveld *et al.*); it is presumed that one was same as Lewes 2003, see below.

2003 Sussex Lewes, 19th December (K. Noble *et al.* per Sussex Recorder).

This is the first time that this attractive form has appeared in this report, following the request for submissions of white-headed *caudatus* made by Kehoe (2006). Although the occurrence of this race in Britain has not been closely monitored, it appears to be genuinely rare and best treated as a national rarity, even though it appears subject to occasional small influxes associated with continental irruptions. The Sussex birds occurred during one such influx, coinciding with the discovery of a small party in Suffolk, the details of which have yet to be formally submitted to BBRC (Small 2004).

A recent analysis of identification and status of this taxon in the Netherlands (Jansen & Nap 2008) is a key reference and suggested that *caudatus* should be treated as a national rarity in that country too. The key identification feature of *caudatus* in a western European context is the pure white head, contrasting sharply with the black mantle at the base of the nape. Kehoe suggested that *caudatus* can show faint grey streaking on the sides of the head behind the eye, but Jansen & Nap found no evidence for this in pure individuals that had completed post-juvenile moult. Kehoe's comments referred to birds from the core range of *caudatus* showing limited, wispy grey streaks behind the eye, quite unlike the darker head stripes of the British and European races *rosaceus* and *europaeus*. In a vagrant context, any suggestion of grey streaking on the head, or darker neck sides, should be considered to indicate potential intergradation with central European *europaeus*. Such presumed intergrades can show extensively white heads and represent a significant pitfall. Supporting characters for true *caudatus* include whiter underparts that lack any hint of a darker gorget across the breast, and typically with a limited area of pink from the lower belly to the vent. Broad white fringes to the tertials and extensive pale pink and/or white in the scapulars can appear striking in the most extreme examples of *caudatus*, but are not a prerequisite for acceptance since apparently pure *caudatus* may resemble *europaeus* in this respect. One of the Sussex birds appeared to show darker markings on the breast (a potential intergrade character), but it was felt that all four should be accepted as the descriptions and photographs supported identifi-

cation as the nominate form. Given the complexity of the issues surrounding the diagnosis of out-of-range *europaeus*, along with the suggestion that this form may have been involved in significant influxes to England (Brown & Grice 2005), claims of this form are not required by BBRC, but documentation of any potential intergrades would assist the development of the Committee's criteria for acceptable *caudatus* and would be welcomed.

(N and E Europe, and N Asia east through Siberia and N Mongolia to Kamchatka, Hokkaido and NE China. Largely resident or dispersive outside the breeding season.)

### Penduline Tit *Remiz pendulinus* (0, 212, 5)

Dorset Hengistbury Head, juvenile, 29th September (D. N. Smith).

Greater London/Essex Rainham Marshes, two, adults, 19th December into 2009, photo (per London Recorder) (*Brit. Birds* 102: plate 107); presumed same as Rainham Marshes 2007, *Brit. Birds* 101: 567.

Kent Sandwich Bay, 13th October (P. Old).

Nottinghamshire Attenborough, adult male, 28th–29th November, photo (S. Browne *et al.*).

Sussex Pett Level, juvenile, 4th October, trapped, photo (M. J. Grantham *et al.*).

Wiltshire Waterhay, first-summer female, 13th April, trapped, photo (J. Wells *et al.*).

2006 Kent New Hythe GP, 4th April (J. M. Warne). Grove Ferry, 9th November, photo (M. Coath).

(Widely but locally distributed throughout C & E Europe, from Denmark, Germany & Italy NE to C Sweden & Estonia. Absent from much of NW Europe but locally numerous in Spain. To E, breeds from S Russia to Volga River. Largely resident or dispersive in Europe. Other races, sometimes regarded as separate species, occur in C Asia & from S Siberia to NE China, & winter NW Indian subcontinent, S China & S Japan.)

### Brown Shrike *Lanius cristatus* (0, 4, 2)

Outer Hebrides Claddach-vallay, North Uist, 18th November, photo (P. R. Boyer, B. Rabbitts) (plate 385); presumed same 23rd–24th November, photo (S. E. Duffield, P. & J. Hill, B. Rabbitts *et al.*).

Yorkshire Flamborough Head, adult *L. c. cristatus*, 24th–25th September, photo (A. M. Allport *et al.*).

With two records this year, the British tally for this splendid shrike now stands at six. In line with several other Asian species, records of Brown Shrike have increased significantly in recent years, with five of the six since 2000 and only the grainy Kodachrome images of the first one (at Grutness, Shetland, in 1985) to remind us what an outstanding rarity it used to be. Of particular interest is the relatively high proportion of adults among the six records – three have been adults and only two first-winters (the Outer Hebrides 2008 bird was not aged). Moreover, the only Irish record (Co. Kerry, 1999) was also an adult. This seems to fly in the face of conventional wisdom on vagrancy, but it may in fact illustrate shortcomings in our own interpretation of such theories. Firstly, we may be too quick to assume that most individual vagrants and scarce migrants are immature birds. Many species are difficult to age, even in the hand, and adults may (in reality) represent a larger proportion of vagrants than we imagine. Secondly, what becomes of our vagrants? We seem willing to accept that a (perhaps increasing?) proportion of 'our' Siberian vagrants are spending the winter in undiscovered locations in Iberia and the Maghreb, but then what? If these individuals survive, will they migrate back to their natal area and then return to their Western Palearctic wintering grounds? If a Brown Shrike following that route-map lives to be five years old, then we have five autumns in which to find it on our shores!

The Flamborough bird was an adult and, as the first on the mainland, was justifiably popular. The uniformly brown crown, nape and mantle suggest that it belonged to the widespread nominate race, which has an extensive breeding range and is the form



Paul Boyer

385. Brown Shrike *Lanius cristatus*, Claddach-vallay, North Uist, Outer Hebrides, November 2008.

which breeds closest to Europe. Adults are relatively straightforward to identify, but first-years present more of a headache, and may this be another reason for their rarity? Both the Scilly bird in 2001 and the North Uist bird in 2008 caused controversy. Observers confronted with a confusing small 'brown' shrike are best advised to take detailed notes on (or get photographs that show) the bill, tail and wing structure, plumage and overall colour tones. The standard reference remains Worfolk (2000).

(Breeds from Ob River basin in S Siberia, E to Sea of Okhotsk & Kamchatka, N Japan & throughout much of E China. Nominate *cristatus* winters Indian subcontinent & throughout SE Asia to Philippines, N Borneo & Indonesian islands.)

### Lesser Grey Shrike *Lanius minor* (21, 155, 4)

Argyll Balephuill, Tiree, adult male, 6th August (J. Bowler).

Dorset Corfe River Meadows, Middlebere, female, 2nd–15th August, photo (S. Smith, P. & Y. Williams *et al.*) (*Brit. Birds* 101: plate 254); also seen Norfolk.

Essex Rettenden, 10th–11th October, photo (D. Acfield, V. Kinsler *et al.*); also seen Norfolk.

Norfolk Hickling Broad, female, 21st–24th June, photo (A. Kane per Norfolk Recorder); also seen Dorset. Sheringham and Weybourne, adult female, 24th–28th September, photo (K. B. Shepherd *et al.*); also seen Essex.

Northumberland Long Nanny, Newton by the Sea, male, 3rd–7th June, photo (G. Woodburn *et al.*) (*Brit. Birds* 101: plate 183; plate 386).

Photographic evidence proved the link between the two Norfolk individuals and the subsequent sightings in Dorset and Essex respectively. The increasing quality of photographic images of rare birds in Britain may enable more of these links to be made between observations in the UK (and elsewhere in Europe) in the future; might this indicate that we are actually receiving fewer rare birds than our statistics have traditionally indicated?

(European range centred E of Balkans to E Poland, with small numbers W through N Mediterranean to S France & NE Spain. To E, breeds locally from Black Sea coasts, across S Russia & Kazakhstan to NW China & SW Siberia. Migrates through E Africa to winter in S Africa, from Namibia to S Mozambique & N South Africa.)



386. Male Lesser Grey Shrike *Lanius minor*, Long Nanny, Northumberland, June 2008.

Southern Grey Shrike  
*Lanius meridionalis*  
Central Asian race,  
'Steppe Grey Shrike'  
*L. m. pallidirostris*  
(0, 19, 1)

Lincolnshire Grainthorpe Haven, first-winter, 7th–26th November, photo (per birding information services) (*Brit. Birds* 101: plate 393; 102: plates 34 & 387).

2005 Lincolnshire Sutton Bridge, first-winter, 16th November, photo (K. Fisher per Lincolnshire Recorder).

(Migratory race *pallidirostris* breeds in semi-desert regions of C Asia from lower Volga E to Gobi Desert in S Mongolia, and S to NE Iran, Afghanistan and N Pakistan. Winters NE Africa, Arabian Peninsula, and S Iran to Baluchistan, Pakistan.)



Iain Leach

387. First-winter 'Steppe Grey Shrike' *Lanius meridionalis pallidirostris*, Grainthorpe Haven, Lincolnshire, November 2008.

Woodchat Shrike *Lanius senator*

West Mediterranean islands race, 'Balearic Woodchat Shrike' *L. s. badius* (0, 6, 1)

Somerset North Hill, Minehead, first-summer female, 29th–30th June, photo (B. Gibbs, C. Gladman, R. Musgrove *et al.*).

2007 Cornwall Nanjizal, first-summer male, 5th–10th May, trapped, photo (K. A. Wilson).

The identification criteria for this insular form of Woodchat Shrike were established only recently (Small & Walbridge 2005), and our understanding of its frequency and pattern of occurrence is still emerging. Although the nominate form of Woodchat Shrike occurs with sufficient regularity to be considered a scarce migrant, and records of this race have not been assessed by BBRC since 1990, so far the indications are that *badius* will continue to remain a rarity. Nonetheless, and even with only seven records to date, a pattern of sorts is beginning to emerge, with arrivals occurring from early May to late July.

Given that adults and first-summerers have made it to Britain, the outstanding challenge that remains is to find the first British record of a juvenile in autumn. Due to the lack of white at the base of the primaries, and the white scapular markings being obscured at times, there is arguably more chance of a juvenile *badius* being overlooked as a juvenile Red-backed Shrike *L. collurio* than as nominate *senator*. Securing the identification of a juvenile *badius* will require very accurate assessment of the presence or absence of white at the base of the primaries; the deeper and 'squarer' appearance of the bill, apparent on spring birds, may also be helpful. With one record of a juvenile in northwest Europe already in the bag (on Utsira, Norway, on 26th–29th September 1972), perhaps the first one for Britain is not far off.

At the other end of the spectrum, the eastern form *niloticus* has been suspected on more than one occasion in recent years (although no formal submissions have been made). Recent research (BBRC in prep.) has established a number of criteria for identifying *niloticus*. As with *badius*, *niloticus* has

occurred once in northwest Europe (a first-winter in Sweden in November 2007), which bodes well for British birders looking beyond the current horizon for what's next.

(Restricted to islands in W Mediterranean including Balearics, Corsica & Sardinia, E to Elba & Capraia. Winters in W Africa, from Ivory Coast to N Cameroon.)

### Red-eyed Vireo *Vireo olivaceus* (0, 107, 5)

Argyll Caolas, Tiree, 9th October, photo (W. Allan, J. Dickson, E. MacKinnon).

Cornwall Trevilly Farm, Sennen, 11th–17th October, photo (J. Hewitt, C. Winyard *et al.*).

Devon Wembury, 13th October (S. C. Votier).

Isles of Scilly Garrison, St Mary's, 8th–13th October, photo (S. West *et al.*) (*Brit. Birds* 101: 699, plate 395). Gugh, 9th–15th October, photo (L. Amery, L. Pitcher *et al.*).

(Breeds throughout S Canada, & USA E of Rocky Mountains. Migrates throughout E USA to winter in N South America. Other races resident in South America.)

### Two-barred Crossbill *Loxia leucoptera* (73, 112, 59)

Durham Old Cassop, juvenile, 17th September, photo (S. Percival per Durham Recorder).

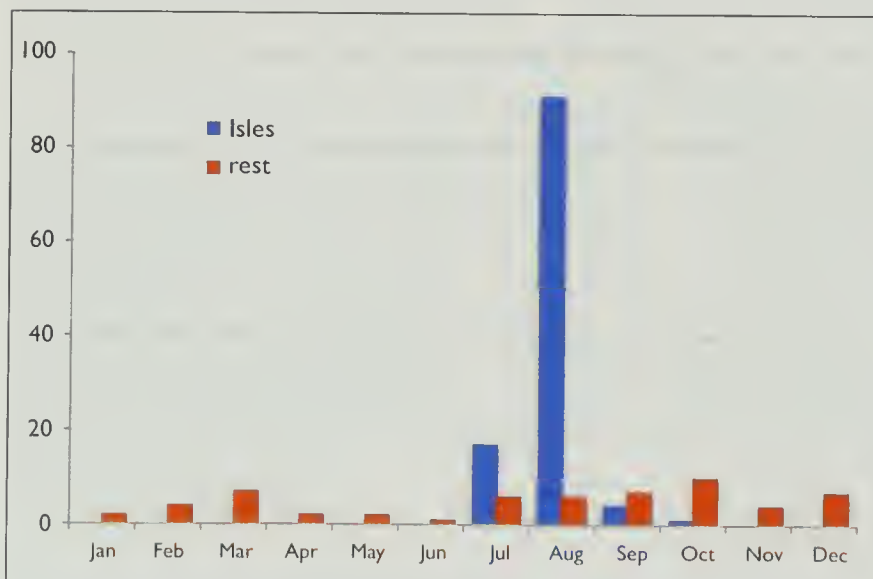
Fair Isle Easter Lothar and Skadan, four, one male, three females, 25th July to 2nd August, photo (S. J. Davies, M. Johnson *et al.*). Bunes, up to 11 (ten juveniles, one female), 5th–18th August, photo (M. T. Breaks, P. Holt *et al.*).

Orkney Dale, Mainland, adult male, 20th July, photo (R. E. Matson *et al.*). Queenamidda, Rendall, Mainland, juvenile, 29th July to 2nd August, trapped, photo (A. & A. Leitch, B. Ribbands *et al.*). Stenness, Mainland, juvenile, 29th July to 1st August, found injured, taken into care and released, photo (S. Manson, N. & R. McCance *et al.*). Stronsay, female, 3rd August, photo (R. Goodwin). North Ronaldsay, two juveniles, one 6th August only, photo (M. Berg, P. A. Brown, R. J. Butcher *et al.*), one 6th–11th August, trapped, photo (R. J. Butcher, R. J. Simpson *et al.*). Hestily, South Ronaldsay, four, three females, one male, 7th August (M. Berg, P. Higson, A. Mitchell).

Outer Hebrides Borve, Harris, male, 30th–31st July, photo (R. Goodman, D. Oakley per Outer Hebrides Recorder). Tarbert, Harris, male, 7th–8th August, photo (D. Cameron per M. S. Scott). Hirta, St Kilda, first-summer female, 3rd–7th August, photo (R. Riddington, S. C. Votier *et al.*) (plates 388 & 389).

Shetland Lamba Ness, Unst, male, 26th July, photo (P. Nadin). Norwick, Unst, female, 5th August (S. J. Davies, K. Moyes). Haroldswick, Unst, juvenile, 10th August (S. E. Duffield). Sandgarth, Mainland, adult female, 28th–29th July, photo (M. S. Chapman *et al.*). Eshaness, Mainland, juvenile, 30th July to 3rd August, photo (M. S. Chapman *et al.*). Sumburgh Head, Mainland, 18, two males, three females, 13 juveniles, 6th–20th August, one on 6th, seven on 7th, 13 on 8th, 18 on 9th, decreasing to five on last date,

photo (J. G. Brown, J. Dunn, P. M. Ellis, R. M. Fray, P. V. Harvey, R. A. Haywood, S. J. Minton *et al.*) (*Brit. Birds* 101: plate 255). Voe, Mainland, adult male, 18th August (M. S. Chapman). Frakkafeld, Lerwick, Mainland, juvenile, 22nd August, photo (P. V. Harvey, A. Nicol). Houbie, Fetlar, juvenile, 8th August, photo (G. Taylor). Tresta Beach, Fetlar, juvenile, 12th–13th August, photo (B. H. Thomason). Windhouse, Yell, juvenile, 8th–9th August (A. Frei, D. Preston).



**Fig. 16.** The arrival pattern of Two-barred Crossbills *Loxia leucoptera* in Britain, 1950–2008, showing the Outer Hebrides and Northern Isles ('Isles') separately from the rest of Britain.



**388 & 389.** First-summer female Two-barred Crossbill *Loxia leucoptera*, St Kilda, Outer Hebrides, August 2008.

Yorkshire Bilsdale, male, 27th October to 23rd November, photo (P. Urquhart *et al.*) (*Brit. Birds* 101: plate 396; 102: plate 35). Oakworth, male, 29th–30th October, photo (J. Barker).

These records represent easily the largest-ever influx of this species to Britain, with 59 individuals accepted so far, more than a third of all the Two-barred Crossbills ever accepted by BBRC! The last influx involved a mere 23 birds, between August 2002 and March 2003, while the only other recent influxes involved 23 in August 1987 and 26 between July 1990 and April 1991. Altogether, over three-quarters of the birds recorded since 1950 have occurred in these four invasions.

The 2008 influx was associated with a relatively small arrival of Common Crossbills *L. curvirostra*, which began in late May in the Northern Isles and continued right through the summer. In Scandinavia, an influx of Two-barred Crossbills began in July and showed a very clear peak in records in late July (see <http://artportalen.se>). The first Two-barred Crossbill to reach Britain was an adult male at Dale, Orkney, on 20th July, and another 12 arrived over the next two weeks, including two in the Outer Hebrides, the first recorded there since 1910. The main influx, however, was during 5th–10th August, when 40 were found, all in the Northern Isles, apart from one more in the Outer Hebrides. Two remarkable flocks in Shetland accounted for the lion's share. At Sumburgh Head, a group of six found on 6th August gradually increased to a peak of 18 (two males, three females and 13 juveniles) on 9th August, while on Fair Isle a flock of nine juveniles was present on 6th–7th August. Both flocks were feeding on cliffs or coastal grassland on the seeds of Thrift *Armeria maritima*. The largest recent flock in Britain prior to 2008 was six on Foula, Shetland, in August 1987, but there are two older records: an extraordinary flock of about 20, from which four specimens were obtained, at Ampthill, Bedfordshire, on 3rd January 1890 and a flock of nine, all shot, and of which two specimens are still extant, at Castlesteads, Cumbria, on 25th March 1846.

Most birders could only look on from afar as, with just three exceptions, the invaders were restricted to Scottish islands. Those three were all photographed at garden bird-feeders in northeast England: a one-day juvenile in September in Durham; a male in Yorkshire in late October, which was taken by a Eurasian Sparrowhawk *Accipiter nisus* before news could be circulated; and a popular male for about a month at Bilsdale in the North Yorkshire Moors, which had already been present for a couple of weeks before its presence was revealed in November.

Irruptions of Two-barred Crossbills into Britain typically begin later than invasions of Common Crossbills, in late summer. In the Northern Isles, where such influxes are usually first noted and most obvious, virtually all records are during July to September, with a clear peak in August; just two have arrived in June (both pre-1950) and one in October (fig. 16). Elsewhere in Britain, records are spread more evenly throughout the year, with new birds located in every month, although more than half of

the post-1950 records are from July to October, and often from coastal sites, linking in with the arrivals in the Northern Isles. It is clear, however, that once Two-barred Crossbills have moved into forested areas they are hard to locate and may stay in the country for many months.

In 2008, 58% of birds were juveniles, but these arrived later than adults: only 3/13 prior to 5th August, but 31/46 subsequently. In the previous influxes there were just two juveniles (10% of aged birds) in 2002/03 and nine (38%) in 1990/91, but over 90% in 1987.

It is sometimes forgotten that the Western Palearctic lies at, or just beyond, the western limit of the regular breeding range of Two-barred Crossbill, and that the species breeds only irregularly in Fennoscandia and usually only following invasions (*BWP*). Over large parts of its range, the principal food source is the seeds of larch *Larix*, and although spruce *Picea* seeds are more important in other areas (including Fennoscandia and the Murmansk region) this may simply reflect local availability (*BWP*). It has been suggested that the reason why Two-barred Crossbill shows less irruptive behaviour compared with Common Crossbill is because larch cones may remain on the tree for two to three years, so the species suffers less from extreme fluctuations in food supply (Slack 2009).

All British records of Two-barred Crossbills are thought to involve the Palearctic race *L. l. bifasciata* (Harrop *et al.* 2007). The North American race *L. l. leucoptera* (known as 'White-winged Crossbill') is slightly smaller and has a narrower bill than its Palearctic counterpart, but could conceivably occur as a vagrant in Britain. Intriguingly, there was an unusual midsummer irruption in southeast Canada and the northeastern United States in 2008; influxes usually occur in midwinter in North America (*Birding World* 21: 339).

(Old World *L. l. bifasciata* is local resident within larch *Larix* forests of N Eurasia from N Russia to E Siberia, reaching Sea of Okhotsk & S to Baikal region. Breeds irregularly in Finland and very occasionally Sweden & Norway. In non-breeding season occasionally disperses as far as NW Europe. Nominate *leucoptera* breeds across N North America.)

### Trumpeter Finch *Bucanetes githagineus* (0, 11, 3)



Mike Lawrence

**390.** First-summer male Trumpeter Finch *Bucanetes githagineus*, Blakeney Point, Norfolk, May 2008.

Norfolk Blakeney Point, first-summer male, 31st May to 4th June, photo (J. Moss, P. Nichols *et al.*) (plate 390).

Outer Hebrides North Rona, male, 25th May, photo (S. Bain, M. Gray, J. McMillan *et al.*).

Sussex Telscombe Cliffs, male, 4th–6th June, photo (S. Munday *et al.*).

(Largely resident, from Canary Islands, SE Spain and deserts of N Africa, E through Middle East to S Iran & Pakistan. E populations in particular dispersive, some wintering E to deserts of NW India.)

### Blackpoll Warbler *Dendroica striata* (0, 38, 1)

Pembrokeshire Marloes Mere, 7th October, photo (M. Spirito).

(Breeds widely across North America from W Alaska E throughout Canada to Newfoundland, S to Maine. Migrates through E USA to winter in South America from Panama to Chile & E Argentina.)

### White-crowned Sparrow *Zonotrichia leucophrys* (0, 3, 2)

Fife Leuchars, 17th–18th May, photo (J. Harwood).

Norfolk Cley, adult male, 3rd January to 14th March, photo (R. & S. Bending, C. Wheeler *et al.*) (*Brit. Birds* 101: plates 65 & 94; plate 391).



Kit Day

391. Adult male White-crowned Sparrow *Zonotrichia leucophrys*, Cley, Norfolk, February 2008.

Nearctic sparrows are known to overwinter occasionally in western Europe, but the Norfolk White-crowned was the subject of one of the biggest and best-organised twitches of all time. In fact, this male was a media favourite and did much to change the public profile of twitching. During the ten weeks that this popular bird remained in residence at Cley, an extraordinary £6,378 was donated voluntarily by appreciative visitors, and the cash was channelled directly into restoration of the village church. Rather fittingly, the fund aided the renovation of the west window of St Margaret's, the impressive leaded window that directly overlooks the site of the twitch. In recognition of twitchers' generosity, the church window will feature an image of this famous sparrow, fittingly immortalised for posterity in stained glass.

Previous British records of White-crowned Sparrow include singles on Fair Isle, on 15th–16th May 1977, and in Yorkshire, at Hornsea Mere on 22nd May 1977, plus a first-winter at Seaforth Docks, Lancashire & N Merseyside, on 2nd October 1995. The last bird (along with the record of one seen aboard *Queen Elizabeth II* in Southampton Water, Hampshire, on 26th September 1988) indicates the most likely method by which Nearctic sparrows (and many other transatlantic vagrants) reach Europe – as ship-borne stowaways. However, simple ship-assistance is deemed allowable as a vagrancy aid, and it probably (in some cases certainly) played some part in half a dozen other European records of this species. Given the location and time of year, it seems unlikely that the Norfolk White-crowned Sparrow arrived by boat direct from America; it is more likely that it crossed the Atlantic (by some means or another) at a previous time, and relocated to Cley in the winter. The Fife bird was seen in a garden and begs the obvious question: might it have been the Cley sparrow searching out similar hospitality as it migrated north?

(Breeds C and N Alaska east across N Canada to Labrador and N Newfoundland, and S through Rocky Mountains in USA from C California to N New Mexico. Winters from SW Canada south throughout much of S USA, and south to C Mexico.)

### White-throated Sparrow *Zonotrichia albicollis* (1, 31, 2)

Hampshire Old Winchester Hill, first-winter, 5th November into 2009, photo (K. McCoy, D. Mead, J. Rowe *et al.*) (*Brit. Birds* 102: plate 156).

Lancashire & North Merseyside Heysham, 6th May, trapped, photo (R. A. Cadman, A. J. Draper *et al.*) (*Brit. Birds* 101: plate 164).

(Breeds North America from SE Yukon E to Newfoundland, S to Great Lakes & N USA to New Jersey. Winters SE USA, from Massachusetts S to Florida, Texas & into N Mexico & California.)

**Dark-eyed Junco**  
*Junco hyemalis*  
(0, 30, 3)

Kent Dungeness, first-winter female, 7th–9th April, photo (D. Bunney, D. Walker *et al.*).

Somerset East Coker, male, 16th–18th November, photo (T. Farr *et al.*) (*Brit. Birds* 102: plates 36 & 392).

Yorkshire Newby, first-summer male, 13th April, photo (D. Platt).



Rob Laughton

**392.** Male Dark-eyed Junco *Junco hyemalis*, East Coker, Somerset, November 2008.

(Breeds throughout North America from tree line of N Alaska & Canada, S to S California, N Texas & N Georgia. British records of forms previously recognised as Slate-coloured Junco, breeding throughout N & E of range, S to Georgia. Northern populations migratory, wintering to S of breeding range.)

**Cretzschmar's Bunting** *Emberiza caesia* (0, 3, 1)

Orkney Sangar, North Ronaldsay, first-winter male, 19th–21st September, photo (P. J. Donnelly *et al.*) (*Brit. Birds* 101: plate 352; plate 393).

With gaps of from 10 to 19 years between each of the four British records, this attractive bunting gets no commoner; and with all of the records being either in Orkney or on Fair Isle, it gets no more accessible either! This is the second for Orkney (following a male on Stronsay on 14th–18th May 1998). The other two, also males, were both on Fair Isle, on 10th–20th June 1967 and 9th–10th June 1979.

The North Ron bird was a particularly bright male, so bright in fact that some found it difficult to

believe it was anything other than an adult. However, some young males in autumn can appear very similar to adults, and restricted spotting on the lower throat may be the only pointer towards immaturity. Based on the specimen collection at the Natural History Museum at Tring, Ian Lewington found that when the post-juvenile moult is as advanced as was shown by this bird,



Stuart Piner

**393.** First-winter male Cretzschmar's Bunting *Emberiza caesia*, North Ronaldsay, Orkney, September 2008.

the best feature for ageing is the shape and pattern of the tail feathers. Retained juvenile tail feathers are narrow and pointed, with the dark centre breaking through to the tip, and photographs revealed that the tail of the North Ronaldsay bird matched this pattern precisely. Thus, despite its colourful plumage, this individual was confidently aged as a first-winter.

(Breeds SE Europe and SW Asia from Albania and S Greece through S Turkey and Cyprus to N Israel and W Jordan. Winters NE Africa.)

### Yellow-breasted Bunting *Emberiza aureola* (8, 224, 2)

Shetland Aith, Fetlar, 12th September (R. M. Fray, B. H. Thomason). Brough, Whalsay, 13th–14th September, photo (J. Atkinson, J. Dunn, J. L. Irvine *et al.*).

(European range restricted to small and declining population in C Finland, centred on Gulf of Bothnia. To E, breeds widely across Russia & Siberia to Kamchatka, S to NE China & NE Hokkaido. Winters locally from E Nepal through Himalayan foothills to NE India, and widely throughout SE Asia.)

### Black-headed Bunting *Emberiza melanocephala* (7, 179, 3)

Outer Hebrides Kentangaval, Barra, adult male, 21st September, photo (A. Stevenson).

Shetland Brough and Oddsta, Fetlar, male, 4th–29th June, photo (S. McBurnie, B. H. Thomason *et al.*).

Yorkshire Fylingthorpe, Whitby, male, 28th May, photo (P. L. & S. J. Rawson).

Hormone-driven males in late spring, overshooting their breeding range, continue to account for the majority of Black-headed Bunting records in Britain. The three males in 2008 follow a fairly typical pattern, evident since the early 1960s, of an average of between one and five records each year. In that time, three exceptional years, 1992 (14 records), 1993 (11) and 2000 (15), stand out from the rest.

While adult males, especially in worn and highly colourful spring plumage, are one of our more striking and easily recognisable vagrants (though escaped weavers *Ploceus* can present something of a pitfall), females and immatures remain one of the toughest identification challenges in British birding owing to their similarity to female and immature Red-headed Buntings *E. bruniceps*. For that reason, a record of a female Black-headed (or Red-headed) Bunting from Fair Isle in June 2007 remains under consideration. One aspect of the separation of these two species that has yet to be investigated properly is the nature of their calls. Both species utter a variety of calls, but in some cases the structure of the call clearly differs between the two species, a fact highlighted by Mark Constantine at the BBRC AGM in March 2009 (cf. *BWP*). Since these differences can only be assessed properly using sonograms, it seems timely to highlight the immense value of sound recordings, particularly with some difficult species pairs and cryptic taxa. Sometimes a mobile phone or MP3 player is all that's needed to move from the frustrating realm of equivocal plumage description to species-diagnostic recordings of calls. Red-headed and Black-headed Buntings in female and immature plumages are one such pairing in which calls may yet prove decisive in an otherwise seemingly intractable identification conundrum. A review of the status of Red-headed Bunting by BOURC has just been completed, and this species is retained in Category D (BOURC in prep.).

(Breeds from C Italy to Greece, Turkey, N Iraq & W Iran, N through Caucasus to Ukraine & S Russia. Winters in W & C India.)

### Bobolink *Dolichonyx oryzivorus* (0, 26, 3)

Cornwall Porth Joke, 11th October, photo (M. Edyvean, S. G. Rowe *et al.*).

Isles of Scilly Castella Down, St Agnes, 21st October (G. Gordon, C. Ridgard *et al.*).

Shetland Hametoun, Foula, 28th September, photo (P. R. Gordon, M. S. Scott *et al.*).

(Breeds widely across S Canada & N USA, S to NE California & New Jersey. Winters Peru to S Brazil & N Argentina.)

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## Appendix I. Records of former BBRC species, removed from the list prior to 2008

### Brent Goose *Branta bernicla*

#### North American & East Siberian race, 'Black Brant' *B. b. nigricans*

2005 Isle of Wight Bembridge, adult, 16th January, photo (G. R. Sparshott).

### Green-winged Teal *Anas carolinensis*

1959 Norfolk Lower Bure Marshes, adult male, 15th June; note that date should have read 'c. 1959' and not specifically 15th June 1959, *Brit. Birds* 101: 574.

### Red-crested Pochard *Netta rufina*

1960 Derbyshire Locko Park, Spondon, 27th July to 12th October; note revised dates, *Brit. Birds* 54: 181.

### Ferruginous Duck *Aythya nyroca*

2005 Avon Chew Valley Lake, adult male, 25th March, photo (R. Mielcarek, G. Thoburn); presumed same, 3rd July (A. H. Davis) and same as Chew Valley Lake 2004, see below. Chew Valley Lake, female, 3rd July (A. H. Davis); presumed same 6th–27th September, photo (per R. Mielcarek, K. E. Vinicombe), presumed same as Chew Valley Lake 2004, see below.

2004 Avon Chew Valley Lake, female, 20th February intermittently to 30th June, photo (R. Mielcarek, R. Palmer, M. Pearce *et al.*); presumed same 15th August to 15th September, photo (per R. Mielcarek, K. E. Vinicombe), presumed same as Chew Valley Lake 2003, see below. Chew Valley Lake, adult male, 23rd February intermittently to 30th June, photo (R. Mielcarek *et al.*), presumed same as Chew Valley Lake 2003, see below.

2003 Avon Chew Valley Lake, female, 10th April to 3rd September, photo (R. Mielcarek, K. E. Vinicombe *et al.*); presumed same as Chew Valley Lake 2002, *Brit. Birds* 96: 557. Chew Valley Lake, adult male, 18th April to 2nd September, photo (R. Mielcarek, K. E. Vinicombe *et al.*).

1999 Derbyshire Carsington Water, 21st November to 9th December; note revised dates, *Brit. Birds* 93: 523.

1999 Kent Seaton GP, male, 9th–16th January; note revised dates, *Brit. Birds* 94: 464, also published as new bird but now presumed same as Ashford, then Stodmarsh, *Brit. Birds* 93: 523.

### Little Egret *Egretta garzetta*

1989 Derbyshire Trent and Dove confluence, Newton Solney, 17th–24th August, note revised dates, *Brit. Birds* 83: 444; presumed same Willington GP, 19th–27th August (per Derbyshire Recorder), presumed same as one of the Ogston Resr 2000 birds, *Brit. Birds* 83: 444.

### Black Kite *Milvus migrans*

2005 Cornwall Trethewey, first-summer, 21st April (R. A. Hargreaves, M. Wallace *et al.*).

2003 Cambridgeshire Fen Drayton GP, 15th May (R. M. Patient).

2002 Highland Rhifail, Strath Never, Sutherland, 4th June (M. G. Archer); note revised observer, *Brit. Birds* 96: 560.

### Red-footed Falcon *Falco vespertinus*

2005 Argyll Tod Hill, Kintyre, female, 12th July (P. Ullrich).

1975 Derbyshire Church Wilne Resr, 6th–7th July; note revised dates, *Brit. Birds* 69: 333.

### Caspian Gull *Larus cachinnans*

1999 Derbyshire Poolsbrook CP, 12th–14th March. Ogston Resr, 8th–10th December; note revised dates, *Brit. Birds* 96: 576.

### White-winged Black Tern *Chlidonias leucopterus*

2002 Lincolnshire River Witham, Greetwell, adult, 18th November (R. Hayes).

1991 Kent Dungeness, adult, 28th–30th May (N. Driver *et al.*).

### Red-rumped Swallow *Cecropis daurica*

1988 Kent Sandwich Bay, two, 26th April, photo (P. K. Worsley *et al.*).

### Greenish Warbler *Phylloscopus trochiloides*

1981 Kent Sandwich Bay, 21st August; note revised dates, *Brit. Birds* 75: 522.

### Radde's Warbler *Phylloscopus schwarzi*

2005 Kent Sandwich Bay, 7th–9th October, trapped, photo (per Sandwich Bay BO).

### Arctic Redpoll *Carduelis hornemanni*

1995 Derbyshire Barbrook Plantation, male 19th–24th December, first-winter 17th to at least 19th December, another first-winter 24th–25th December; note revised location. Williamthorpe Resr, 20th–21st December; note revised dates, *Brit. Birds* 90: 508.

### Circumpolar Arctic race, 'Coues's Redpoll' *C. h. exilipes*

2006 Lothian Aberlady, 19th December 2005 to 18th March, photo (A. Brown, I. Thomson, R. Wilson *et al.*).

### Little Bunting *Emberiza pusilla*

1993 Kent St Margaret's at Cliffe, 29th September (J. & P. Chantler).

## Appendix 2. Records where identification accepted, but placed in Category D (see *Ibis* 136: 253)

### Ross's Goose *Anser rossii*

Norfolk Holkham, Burnham and Branthill, 29th September 2007 to 18th March, photo; note also revised locations and dates, *Brit. Birds* 101: 575.

2007 Northumberland Hauxley and East Chevington, adult, 20th–30th September, photo (I. Fisher, F. Golding *et al.*).

More records of what are presumably returning individuals, arriving in Britain with overwintering Pink-footed Geese *Anser brachyrhynchus*. The BBRC database is clearly incomplete for this species, with several records missing from 2008, and we hope to rectify this in due course. BBRC wishes to encourage the submission of all sightings of Ross's Geese accompanying Arctic-breeding geese. So far, they have been recorded with Greylag *A. anser*, Pink-footed and Barnacle Geese *Branta leucopsis* but it is conceivable (assuming they originate from Canadian breeding grounds) that Ross's Geese may arrive with 'Greenland White-fronted Geese' *A. albifrons flavirostris*. The Canadian population of Ross's Goose is currently estimated to be over a million birds, and increasing by an average 8% per annum over the last decade ([www.fws.gov/migratorybirds/NewReportsPublications/PopulationStatus/Waterfowl/StatusReport2009\\_Final.pdf](http://www.fws.gov/migratorybirds/NewReportsPublications/PopulationStatus/Waterfowl/StatusReport2009_Final.pdf)). Ross's Geese already breed on Baffin Island and it may not be too long before their range overlaps with that of Greenland White-fronts.

### Falcated Duck *Anas falcata*

Anglesey Llyn Traffwll, male, 17th–29th May (M. Duckham, M. Hughes *et al.*).

Devon Countess Wear Sewage Works, returning adult male, 30th January to 4th May, photo (M. Knott *et al.*); note

that age in 2006 now thought to have been first-winter, see *Brit. Birds* 100: 751, 101: 575.  
Kent Broad ditch Pond, Southfleet, male, 18th January into 2009, photo (D. Payne *et al.*).

### Marbled Duck *Marmaronetta angustirostris*

2007 Leicestershire & Rutland Rutland Water, first-winter/female, 1st–3rd September, photo (M. G. Berriman, S. M. Lister *et al.*).

2006 Suffolk North Warren, 28th October, photo (I. Paradine *et al.*); presumed same Minsmere, 8th–10th November, photo (D. Fairhurst *et al.*).

## Appendix 3. Records where identification accepted, but considered a likely escape and placed in Category E (see *Ibis* 136: 253)

### Lesser White-fronted Goose *Anser erythropus*

Norfolk Holkham Fresh Marsh, Burnham Overy and Cantley Marshes area, adult, 12th January to 28th February (M. C. Buckland, M. A. Hollingworth); presumed same as Holkham 2007 (*Brit. Birds* 101: 576).

Yorkshire Stapleton GP, adult, 26th August (S. C. Bell).

2006 Cleveland Saltholme Pools, adult, 15th June (J. L. Sharpe *et al.*).

2006 Derbyshire Sutton Brook Lakes, adult, 21st–26th February (R. M. R. James *et al.*).

All these records are thought to involve captive or feral birds, not vagrant Lesser White-fronts from the declining wild population, which is classified as Vulnerable by BirdLife International. The Fennoscandian population alone has declined dramatically; standing at more than 10,000 birds in the early twentieth century, current estimates now suggest that Norway has 35–45 pairs, Finland 0–5 pairs and Sweden five pairs ([www.birdlife.org](http://www.birdlife.org)).

During 1998–2008 the world population (now estimated to be 20,000–25,000 individuals) was thought to have decreased by 30–49%, principally due to hunting; the similarity to White-fronted Goose *A. albifrons* makes regulation and enforcement doubly difficult.

Since 1979, reintroduction schemes have been initiated in both Finland (where the purity of the stock has been questioned with respect to introgression with White-fronted Geese) and Swedish Lapland (where feral Barnacle Geese *Branta leucopsis* have been used to guide fostered Lesser White-fronted Geese to winter in the Netherlands. Numbers wintering here are slowly increasing and since 1987 they have been accompanied by wild-born young (von Essen 1991; Ruokonen *et al.* 2000).

Colour-marked individuals from these projects were noted in Britain in the 1990s and more individuals from these projects in the future are possible. The last accepted vagrant, one of only two in the last ten years, was at the traditional locality of Slimbridge, Gloucestershire, in February 2002. The presence of feral birds at sites such as Holkham and the Yare Valley in Norfolk, which also support wintering White-fronted Geese – the favoured carrier species – makes it increasingly difficult to determine the provenance of Lesser White-fronts in Britain. Nonetheless, BBRC wishes to encourage the submission of all records of Lesser White-fronted Goose that are believed to be of wild origin, or carry a ring linking the bird to a reintroduced population.

### Red-breasted Goose *Branta ruficollis*

2007 Flintshire Gresford Flash, 5th February (J. Newton).

2007 Highland Balnakiel, adult, 24th–25th May, photo (H. G. Huxley).

### Falcated Duck *Anas falcata*

Staffordshire Copmere, male, 26th November 2007 to 5th April (D. W. Emley, S. J. Turner *et al.*).

### Cinnamon Teal *Anas cyanoptera*

2004 Outer Hebrides Loch Tuamister, Lewis, adult male, 13th May to 16th June, photo, previously included in Category D but after review by BOURC now moved to Category E (*Brit. Birds* 98: 693; BOU 2007).

### Hooded Merganser *Lophodytes cucullatus*

Dorset Portland, first-summer male, 5th–7th June, photo (C. E. Richards *et al.*); presumed same Weymouth, 15th June into 2009, photo (C. E. Richards *et al.*).

### Chinese Pond Heron *Ardeola bacchus*

2004 Hampshire East Dean, adult, 13th November, photo (*Brit. Birds* 98: 641–642; BOU 2007); also seen Norfolk.

2004 Norfolk Eccles-on-Sea, adult, 31st October, photo (*Brit. Birds* 98: 641–642; BOU 2007); also seen Hampshire.

**Cattle Egret *Bubulcus ibis***

Norfolk East Wretham, 31st March (A. Roberts). This individual was considered an escape by the local Recorder.

**Eurasian Black Vulture *Aegypius monachus***

1978 Breconshire Builth Wells area, adult, 29th November 1977 to 20th February 1978, photo, previously included in Category D but after review by BOURC now moved to Category E (*Brit. Birds* 86: 538; BOU 2009).

**Blue Jay *Cyanocitta cristata***

2003 Lancashire & North Merseyside Thornton, Crosby, 5th June, photo (B., G. & G. Millward); presumed same Sefton, 7th June, photo (D. Rothwell), added to Category E (BOU 2009).

**Chestnut Bunting *Emberiza rutila***

2002 Fair Isle Quoy, adult female 4th–7th September, trapped, photo, previously included within Category D but after review by BOURC now moved to Category E (*Brit. Birds* 96: 606; BOU 2009).

2000 Durham Whitburn, first-summer male, 17th May, photo.

1998 Norfolk Salthouse, male, 30th May to 1st June, photo (BOU 2009).

1994 Shetland Out Skerries, adult female, 2nd–5th September, trapped, photo, previously included within Category D but after review by BOURC now moved to Category E (*Brit. Birds* 88: 556; BOU 2009).

1986 Caernarfonshire Bardsey, immature male, 18th–19th June, trapped, previously included within Category D but after review by BOURC now moved to Category E (*Brit. Birds* 81: 594; BOU 2009).

1986 Fair Isle Observatory, first-summer male, 15th–16th June, trapped, previously included within Category D but after review by BOURC now moved to Category E (*Brit. Birds* 80: 568; BOU 2009).

1985 Isle of May First-year/female, 11th June, trapped, previously included within Category D but after review by BOURC now moved to Category E (*Brit. Birds* 80: 568, 81: 594; BOU 2009).

1974 Shetland Foula, male, 9th–13th June, previously included within Category D but after review by BOURC now moved to Category E (*Brit. Birds* 70: 444, 88: 556; BOU 2009).

**Blue Grosbeak *Passerina caerulea***

1986 Gloucestershire Newent, 9th May, caught by cat, previously included within Category D but after review by BOURC now moved to Category E (*Brit. Birds* 80: 569; BOU 2009).

1977 Borders Ettrick, male, 22nd May, found dead (A. Brown, R. W. Forrester, R. H. Hogg *et al.*) (BOU 2009).

1972 Highland Kiltarlity, Inverness, adult male, 10th–11th March, previously included within Category D but after review by BOURC now moved to Category E (*Brit. Birds* 66: 360; BOU 2009).

1970 Shetland Out Skerries, adult male, 23rd–26th August (BOU 2009).

**Northern Cardinal *Cardinalis cardinalis***

2003 Avon Portbury, 27th May, photo, added to Category E (BOU 2007).

**Appendix 4. List of records not accepted**

This list contains all current records not accepted after circulation to the Committee. It does not include (a) those withdrawn by the observer(s) after discussion with the Secretary; (b) those which, even if circulated, were not attributed by the observer(s) to any definite species; (c) those mentioned in 'Recent reports' in *British Birds* if full details were unobtainable; or (d) certain escapes. In the vast majority of cases, the record was not accepted because we were not convinced that the identification was fully established; only in a very few cases were we satisfied that a mistake had been made.

2008 Lesser White-fronted Goose Siblyback Resr, Cornwall, 9th December. Blue-winged Teal Drakelow, Derbyshire, 15th November. Carsluth, Wigtown Bay, Dumfries & Galloway, 15th September. Canvasback *Aythya valisineria* Flask Lakes, Nosterfield, Yorkshire, 29th–30th October and 8th November. Lesser Scaup Appledore, Devon, two, 11th October. Airthrey Loch, Upper Forth, 24th April. King Eider Islay, Argyll, 8th April. Hartlepool Headland, Cleveland, 12th November. Bufflehead *Bucephala albeola* Holker Lane, Walton, Lancashire & N Merseyside, 23rd March. White-billed Diver Girdle Ness, North-east Scotland, 31st October. Fea's/Zino's Petrel Point Lynas, Anglesey, 20th July. Sea area Lundy, 12 km NW of St Ives, 21st August. Turnberry Point, Ayrshire, 23rd August. St Ives, Cornwall, 3rd October. Little Bittern Kennet and Avon Canal, Wiltshire, 22nd May. Cattle Egret Off M11, Cambridgeshire, 1st April. Mount Hawke, Cornwall, 17th August. Stanton-by-Bridge, Derbyshire, 6th December. Budleigh Salterton, Devon, 11th December. Bonelli's Eagle *Aquila fasciata* Wanstead Flats, Greater London, 28th April to 24th July. Lesser Kestrel *Falco naumanni* Stiffkey, Norfolk, 4th October. Pacific Golden Plover Newtown Estuary, Isle of Wight, 26th–27th August. Semipalmated Sandpiper Frodsham Marsh, Cheshire & Wirral, 12th Sep-

tember. Red-necked Stint *Calidris ruficollis* Walmsley Sanctuary, Cornwall, 31st August. Baird's Sandpiper Luce Bay, Dumfries & Galloway, 7th September. Cley, Norfolk, 14th October. Great Snipe Easter Lothe, Fair Isle, 24th April. Long-billed Dowitcher Bogside Flats, Ayrshire, 8th September. 'Hudsonian Whimbrel' *N. p. hudsonicus* Skelfling and Kelling, Yorkshire, 22nd June. Terek Sandpiper Loch Euphort, North Uist, Outer Hebrides, 12th June. Wilson's Phalarope Baleshare, North Uist, Outer Hebrides, 28th May. American Herring Gull Hannafore, Looe, Cornwall, 23rd October. Bonaparte's Gull Hell's Mouth, Cornwall, 27th April. Old Grimsby, Tresco, Isles of Scilly, 21st April. Forster's Tern *Sterna forsteri* Hill Head, Hampshire, 5th September. Brünnich's Guillemot *Uria lomvia* Cley, Norfolk, 24th July. Sheringham, Norfolk, 25th July. Dark-breasted Barn Owl St Benet's Level, Norfolk, 21st December 2007 to 5th January. Wacton Common, Norfolk, 1st February to 5th April. Wacton Common, Norfolk, 23rd July and 8th August. Snowy Owl Sailor's Grave, Argyll, 3rd February. Pacific Swift Landguard Point, Suffolk, 26th April. Upper Bittell Resr, Worcestershire, 2nd May. Lesser Short-toed Lark *Calandrella rufescens* Dawdon, Durham, 21st April. Pechora Pipit Fetlar, Shetland, 30th September. Black-bellied Dipper Wirvie, Fair Isle, 12th–13th April. Thrush Nightingale Finniouy, Fair Isle, 13th August. Red-flanked Bluetail Tangham Forest, Suffolk, 6th January. Siberian Stonechat East Devon Commons, Devon, three, 10th April. White's Thrush Avon Gorge, Avon, two, 9th December. Hartlepool Headland, Cleveland, 8th October. Siberian Thrush Sharpshoe Clappers, Bedfordshire, 21st October. Whiteparish, Wiltshire, 21st October. Eyebrowed Thrush *Turdus obscurus* Bromyard, Herefordshire, 18th February. Savi's Warbler Brean Down, Somerset, 8th May. Great Reed Warbler Seil Island, Argyll, 12th–13th May. Sardinian Warbler Spiggie, Mainland, Shetland, 3rd June. Western Bonelli's Warbler Nanjizal, Cornwall, 18th September. Collared Flycatcher *Ficedula albicollis* Lundy, Devon, 12th May. Nutcracker *Nucifraga caryocatactes* Wimborne Minster, Dorset, 17th November. Dylife, Montgomeryshire, two, 24th July. Two-barred Crossbill Bircher Common, Herefordshire, 11th December. Trumpeter Finch Needs Ore Point, Hampshire, 10th May. Pine Bunting *Emberiza leucocephalos* Spurn, Yorkshire, 22nd April. Yellow-breasted Bunting Thornham, Norfolk, 1st November. Black-headed Bunting Land's End, Cornwall, 27th September.

2007 King Eider Hamars Ness, Fetlar, Shetland, 17th November. Yellow-nosed Albatross River Yeo, Avon, 30th June. Carsington Water, Derbyshire, 2nd July. Masked Booby *Sula dactylatra* St Catherine's Point, Isle of Wight, 19th May. Saker Falcon *Falco cherrug* Isle of May, 18th April to 16th May. Landguard Point, Suffolk, 10th September. Gyr Falcon Downholland Moss, Lancashire & N Merseyside, 12th October. 'Baltic Gull' *L. f. fuscus* Sandbach, Cheshire & Wirral, 7th January. Slimbridge, Gloucestershire, 9th September. Angler's CP, Wintersett, Yorkshire, 15th October. American Herring Gull Tresco, Isles of Scilly, 28th April to 1st May. Snowy Owl Durness, Highland, 3rd October. Bawdsey, Suffolk, 10th November. Blyth's Pipit *Anthus godlewskii* Brew Pool, Cornwall, 20th October to 1st November. Blyth's Reed Warbler Rainham Marshes, Greater London/Essex, 4th–6th October. 'Caspian Reed Warbler' *A. scirpaceus fuscus* Manchester, 2nd August. Eastern Olivaceous Warbler Manchester, 2nd August.

2006 American Bittern Lisheard, Cornwall, 7th April. Lesser Kestrel *Falco naumanni* Little Marlow, Buckinghamshire, 17th September. Gyr Falcon Nosterfield, Yorkshire, 15th January. Black-winged Stilt Salmesbury, Lancashire & N Merseyside, 21st June. Bridled Tern *Onychoprion anaethetus* The Minch, Highland, 23rd June. Pallid Swift Spurn, Yorkshire, 11th June. Pechora Pipit Flamborough Head, Yorkshire, 24th September. Black-headed Bunting Holme, Norfolk, 17th August and 13th September.

2005 Laughing Gull Gosport, Hampshire, 10th November. Pallid Swift Tynemouth Priory, Northumberland, 6th November.

2004 Red-footed Falcon Swallow Moss, Staffordshire, 2nd May. Gyr Falcon Glen Kyllachy, Highland, 2nd April. American Herring Gull Stornoway, Lewis, Outer Hebrides, 8th February. 'Ehrenberg's Redstart' *P. p. samamiscus* Abbey Pool, Tresco, Isles of Scilly, 10th–12th October.

2002 North Atlantic Little Shearwater *Puffinus baroli* Fife Ness, Fife, 9th September. Northern Cardinal Eccles, Greater Manchester, 1st September.

2001 Booted Warbler Hill of Rattar, Caithness, 27th September.

2000 White-winged Black Tern Bough Beech Resr, Kent, 14th August.

1996 Ehrenberg's Redstart *P. p. samamiscus* Winspit, Worth Matravers, Dorset, 28th September.

1995 Pine Bunting Middle Down, Tresco, Isles of Scilly, 22nd October.



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# Note

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## Spanish Sparrows apparently migrating through the Maltese Islands

The Spanish Sparrow *Passer hispaniolensis* is an abundant breeding resident in Malta (Sultana & Gauci 1982) which appears to form separate 'town and country' populations, each with its own pattern of behaviour (Summers-Smith 1977–78). This species has a more obvious pattern of migratory behaviour than other *Passer* species (Summers-Smith 1988) but there is little evidence that Maltese sparrows are migratory. Of 25,459 Spanish Sparrows ringed in the Maltese Islands up to the end of 1999, only 13 were recovered beyond 5 km, while just two crossed from one island to the other (distances of c. 11 km and 21 km respectively; data from BirdLife Malta Ringing Scheme Reports). Bannerman & Vella Gaffiero (1976) claimed that 'Past historians have asserted [that it] migrates in large numbers to Sicily where farmers allege that it causes considerable damage to the corn fields and have consequently named it *il ladro Maltese*, the Maltese robber', although there is no evidence that those birds originated from Malta.

Sultana (2007) documented the first autumn records of migrating Spanish Sparrows in the Maltese Islands, when flocks were recorded coming in off the sea during the last ten days of October each year from 2003 to 2006 (table 1). They occurred in the morning of days with light to moderate southerly winds and were all heading south; their flight resembled that of migrating flocks of *Carduelis* finches, being undulating yet unhurried, and they uttered somewhat agitated contact calls almost continuously. Local sparrow flocks heading towards their evening roost sites employ a much more direct flight. On 23rd October 2006, on Comino, some of the sparrows from two

migrating flocks were attracted down by the calls of local resident sparrows but, less than a minute after landing, they left to continue in the same direction. No migrants were recorded in 2007, but the first records of migrating birds in spring were made in 2008. These spring birds were migrating between NNW and NNE, in moderate to fresh west to northeasterly winds.

**Table 1.** Records of apparently migrating Spanish Sparrows *Passer hispaniolensis* in the Maltese Islands.

Date	Locality (M)=Malta, (G)=Gozo	Numbers
22.10.2003	Ghadira (M)	4 flocks, largest c. 150
23.10.2003	Ghadira (M)	2 flocks, each of c. 40
22.10.2004	Ghadira (M)	1 flock, c. 60
23.10.2004	Qawra (M)	2 flocks, 14, 20
22.10.2005	Comino	1 flock, 20+
29.10.2005	Qawra (M)	1 flock, 50+ coming in off the sea
31.10.2005	Ghadira (M)	2 flocks, each of c. 75
23.10.2006	Ghadira (M)	3 flocks, 150+, 20+, 15+
	Comino	2 flocks, 250+, 100+
	Ramla Valley (G)	3 flocks, 100+, 50+, 50+
24.10.2006	Ramla Valley (G)	2 flocks, each of c. 25
25.10.2006	Ramla Valley (G)	2 flocks, each of c. 25
26.10.2006	Ramla Valley (G)	2 flocks, each of c. 400–500
27.10.2006	Marsalforn Valley (G)	1 flock, c. 200
04.04.2008	Ghadira (M)	4 flocks, each of 20–25
06.04.2008	Ghadira (M)	2 flocks, each of 40+
13.04.2008	Marfa Ridge (M)	At least 5 flocks, c. 200 birds in all

### Acknowledgments

I wish to thank Charles Gauci for the Ghadira records, Raymond Galea and Charles Coleiro for the Qawra and Marfa Ridge records and Joe Theuma for the records from the Ramla and Marsalforn Valleys.

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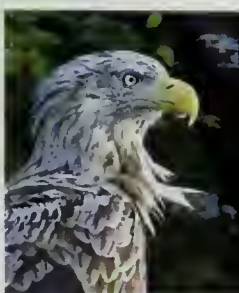
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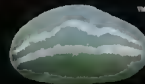
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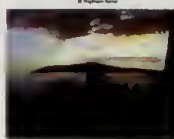
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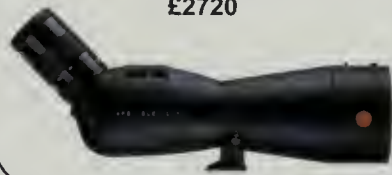
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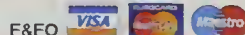


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# British Birds

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Separation of Willow Tit and Marsh Tit

The Green Farm Booted Warbler

The history of Sykes's Warbler



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# British Birds

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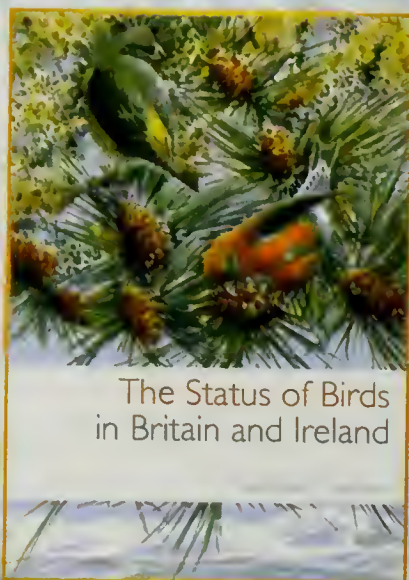
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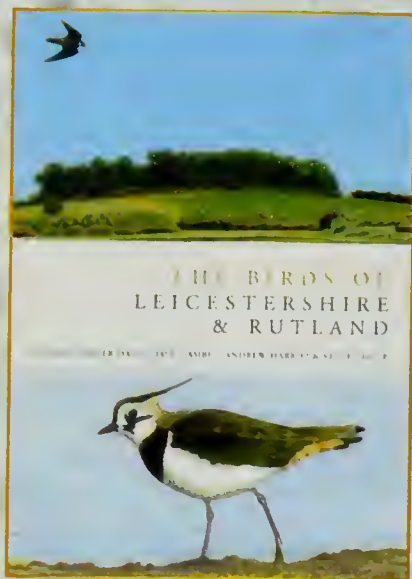


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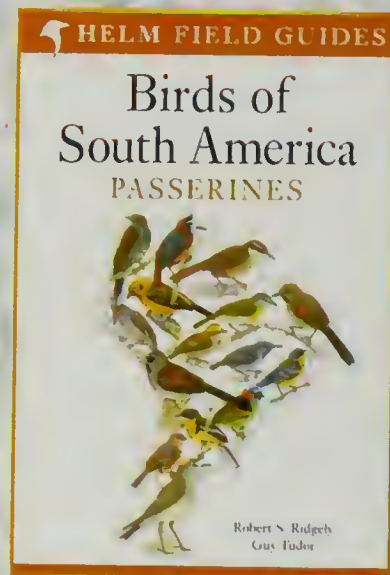
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# British Birds

Volume 102 • Number 11 • November 2009

BRITISH BIRDS  
NOVEMBER 2009

- 5 NOV 2009

- 604 Separation of Willow Tit and Marsh Tit in Britain: a review  
*Richard K. Broughton*
- 617  From the Rarities Committee's files: The Green Farm Booted Warbler  
*James A. Lidster*
- 622  From the Rarities Committee's files: The history of Sykes's Warbler in Britain  
*Roger Riddington*

## Regular features

- 627 Conservation research news  
*Guy Anderson, Rob Field and Juliet Vickery*
- 629 Letters  
Job vacancy: defender of British and Irish subspecies *D. I. M. Wallace*  
Has the flight mode of Honey-buzzard evolved to mimic that of Common Buzzard?  
*Mick Cunningham*  
Nightjars at sea *Ian Lewis*  
The recent status of Blyth's Pipit in southern Siberia *Magnus Hellström*
- 634 Notes  
Common Shelduck predating eggs of Common Coot *Robin Edwards*  
Common Buzzard attempting to kill Tawny Owl *Paul Jerem*  
Mediterranean Gulls in Hampshire *Colin Allen*  
Unusually large assembly of Hoopoes *Graham Bundy*  
Green Woodpecker using a natural tree hole as a nest chamber  
*W. R. P. Bourne*  
Unusual Blackbird breeding behaviour *Patrick S. Thompson*
- Variation in the eyelid colour of Long-tailed Tits *Gillian Westray*  
Fledgling Great Tits feeding on wasp larvae *Gillian Westray*  
Common Raven nesting with Grey Herons *Robin J. Prytherch, David Warden and Chris Klee*  
Common Chaffinches eating seeds of Monterey Pine from grounded cones  
*A. P. Radford*
- 639 Reviews  
*An Atlas of Wader Populations in Africa and Western Eurasia*  
*Birds of Ethiopia and Eritrea*  
*A Photographic Guide to the Birds of Jamaica*  
*Birds of the Cotswolds: a new breeding atlas*  
*Birds New to Norfolk: the accounts of their discovery and identification*  
*National Geographic Complete Birds of the World*
- 643 News and comment  
*Adrian Pitches*
- 647 Recent reports  
*Barry Nightingale and Eric Dempsey*



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# Separation of Willow Tit and Marsh Tit in Britain: a review

Richard K. Broughton

**ABSTRACT** Separation of the British races of Willow Tit *Poecile montana* and Marsh Tit *P. palustris* is notoriously difficult. Numerous identification criteria have been proposed during the past 50 years, based primarily on information gained from examination of birds in the hand, although none are judged to be wholly reliable. The best separation feature for birds in the field is considered to be voice, yet the vocal repertoires of both species have not been fully documented. Despite some work to assess the reliability of distinguishing characteristics, some current texts continue to place emphasis on discredited criteria for field identification, or on those of use only for in-hand examination.

This paper reviews the separation criteria in the current literature in order to clarify the most important and reliable characters for the separation of this species pair. New information is provided from examination of skins and live birds, and on diagnostic vocalisations. A clarification of the races occurring in Britain is also provided. Recommendations are made for the key criteria to be used for field, photographic and in-hand identification, with a primary focus on voice, bill marks, cheek pattern, plus wing and tail measurements and the presence or absence of a clear wing panel.

## Introduction

In Britain at least, separation of the Willow Tit *Poecile montana kleinschmidti* and the Marsh Tit *P. palustris dresseri* has been problematic ever since 1897, when it was first discovered that the Willow Tit was present here. The question of separating the two in the field remains one of the biggest challenges offered by resident species and is difficult even in the hand; this species pair is the only one to be given a dedicated appendix in the *Ringers' Manual* (Redfern & Clark 2001). In addition, the BTO Garden BirdWatch survey combines records of Marsh and Willow Tits owing to persistent confusion (Chamberlain *et al.* 2005), while one popular photographic field guide even contains a misidentified image.

The continuing problems of identification

have conservation implications. Both species have undergone significant changes in population and/or range in recent decades (Baillie *et al.* 2009) and both are Red-listed (Eaton *et al.* 2009). The Willow Tit, in particular, has become so scarce that in many areas county recorders now require a description to accompany records, and many birders lack sufficient experience with one or both species owing to their progressive scarcity in recent times (Vinicombe 2005). While the current BTO/BWI/SOC Atlas project offers an opportunity to assess the status of both species, accurate identification is vital for this to be successful.

Perrins (1964) tackled the problem by summarising a suite of differences between the two species, but concluded that voice was the only certain means of identification. These criteria

were included in later texts (e.g. Perrins 1979, *BWP*) and form the basis of the distinguishing characteristics contained in modern field guides, although some of these lack emphasis when conveying the degree of subjectivity and variability involved. Meanwhile, work during the past decade has sought to quantify the reliability of the differences quoted in the current literature (Scott 1999; Broughton *et al.* 2008a), but this may be too recent or too specialised to have influenced the texts on many bookshelves.

The aim of this paper is to review and update the criteria for the separation of Willow Tits and Marsh Tits that are published in current reference material and leading field guides. It is hoped that clarification of the most important features for identification will help county recorders, birders and Atlas workers to separate the two species accurately. Identification of birds in the field, in photographs, and in the hand is considered.

The identification criteria in each source reference were compared against each other, with the more systematic approaches taking precedence. Further evaluation was based on field experience of both species during long-term research (e.g. Broughton *et al.* 2006, 2008a) and from systematic examination of selected features on 46 specimens of each species after the post-juvenile moult (six live birds and 40 skins in the Natural History Museum, Tring).

### Distribution

The Willow Tit appears to be undergoing severe range contraction in Britain. Comparison between the New Breeding Atlas (Gibbons *et al.* 1993) and (unvalidated) sightings in 2008 ([www.birdtrack.net](http://www.birdtrack.net)) indicates that the species has been lost from much of southern England, and this is reflected in county reports (e.g. Bacon & Jordan 2004). There were an estimated 8,500 territories in Britain in 2000 (Robinson 2005), but the continued decline over subsequent years (Baillie *et al.* 2009) implies that there may now be far fewer than this. The Marsh Tit, by contrast, is still widely yet thinly distributed across southern Britain and the British population was 52,800 territories in 2000 (Robinson 2005). Both species are declining and extremely localised in Scotland (Forrester *et al.* 2007). The relative abundance of the two species is not equal across Britain; for example, Marsh Tits do not occur on the Humberhead Levels but are locally common in the

woods of Cambridgeshire, a situation that is reversed for Willow Tits. However, while geography may be suggestive of identification, particularly where breeding birds are concerned, individuals may also occur as 'accidentals' many tens of kilometres from breeding populations despite the species' typically poor dispersal capabilities (Wernham *et al.* 2002; Forrester *et al.* 2007).

### Behaviour and habitat

Both species are generally regarded as woodland birds (Fuller *et al.* 2005) and in some areas both species may breed in the same wood. The Willow Tit is considered to prefer early successional and scrubby habitats, however, such as Alder *Alnus* carr, old hedgerows and overgrown gravel workings or brownfield sites (Lewis *et al.* 2009; *BWP*), although there are no detailed studies published on the territory requirements of this species in Britain (an area that requires urgent attention). There is good evidence that the Willow Tit's decline has been concentrated in woodland and farmland habitats, however, and that populations in wetter environments (such as carr or wet scrub) have been less affected (Siriwardena 2004).

The Marsh Tit appears to show a greater preference for more extensive woodlands, such as old-growth deciduous woods with a tall, mature canopy and well-developed understorey, and territory size in such habitats averages 4–5 ha (Broughton *et al.* 2006). Both species can occur in a variety of habitats, however, from downland scrub to wooded streams and conifer plantations, and habitat is ultimately an unreliable guide to identification. This is particularly so for lone birds or during the non-breeding season, when both species may also frequent gardens near to breeding territories. Svensson *et al.* (1999) stated that Willow Tits do not visit bird tables in winter, while Marsh Tits will, but this is incorrect; both species are frequent visitors to feeders close to breeding sites when given the opportunity (e.g. Willow Tits at Potteric Carr NR in Yorkshire, and Marsh Tits at Paxton Pits NR in Cambridgeshire).

The only helpful behavioural difference between the two species involves nesting activity, with Willow Tits excavating their own nest hole in rotten wood while Marsh Tits are secondary hole-users that never initiate a hole from scratch (Wesołowski 1999). Marsh Tits will nevertheless commonly enlarge existing

Marcus Conway



394. Adult or first-winter Willow Tit *Paecile montana*, South Yorkshire, January 2008. Note the plain whitish cheek patch, being of a similar colour both on and behind the ear-coverts, which extends to the dark cap on the nape. A subtle warm buff 'collar' is present on the neck sides, contrasting sharply with the grey-brown mantle and wing. The bill appears to be uniformly dark, with no pale marks on the upper mandible, although reflected light makes interpretation of this feature difficult. The presence of a wing panel is also difficult to determine, as light reflecting off the edges of the tertials and secondaries is obscuring the degree of any contrast between the feather margins and the mantle. Note the small bib, which has previously been regarded as characteristic of a Marsh Tit *P. palustris*.

Mark Hancox



395. Adult or first-winter Marsh Tit *Poecile palustris*, Worcestershire, December 2008. Typical of many sightings at mid range, there are few identification features clearly visible on this bird. The presence or absence of pale bill marks or pale wing panel cannot be determined conclusively, but note the check pattern: whitish ear-coverts contrasting with a cold grey-brown wash on the neck sides and rear of the cheek patch is strongly indicative of a Marsh Tit.

holes, carrying away the chippings in the manner of Willow Tits, and may also evict Willow Tits from their own nests or occupy similar holes excavated by Lesser Spotted Woodpeckers *Dendrocopos minor*.

### Cap colour and gloss

A frequent separation criterion appearing in the literature is cap gloss, with the cap of Marsh Tits being described as glossy black and that of Willow Tits as matt, dull or sooty-black or very deep brown (e.g. Perrins 1979, Svensson *et al.* 1999, BWP). Scott (1999) found that Willow Tits could also show a glossy black cap, however, while female Marsh Tits may also have dull caps with deep brown tones (Harrap & Quinn 1995). Examination of specimens showed considerable overlap of cap gloss, with 28% of Willow Tits showing slight or obvious gloss and 7% of Marsh Tits showing no gloss (fig. 1a).

Plumage gloss may vary considerably with viewing conditions and is of little use at distance. Lighting will have a significant bearing in photographs, as even a matt surface may reflect in strong light and a glossy surface will appear dull in deep shade (figs. 2a–b & 3a–d).

A further complication, mentioned in all sources, is that juvenile Marsh Tits have consistently dull black or deep brown caps (as do juvenile Willow Tits) and retain these until the end of the post-juvenile moult, in late September (figs. 2c–d). Cap gloss is therefore a highly unreliable characteristic, being difficult to assess in the field, open to misinterpretation in photographs, and variable in the hand.

### Cap shape

Many sources state that the cap of the Willow Tit extends farther down the nape than that of the Marsh Tit, or onto the mantle. This was primarily advocated as a feature to use on birds in the hand, but Scott (1999) found no practical difference in the cap shape of the two species and regarded the feature as too subjective to be of any value. My examination of specimens also



Fig. 1a. Assessment of cap gloss on a sample of Willow *Poecile montana* and Marsh Tits *P. palustris* (40 skins and 6 live birds per species).

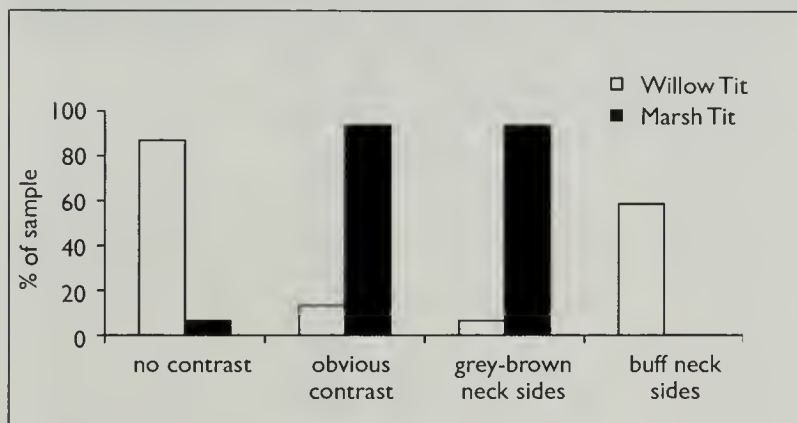


Fig. 1b. Assessment of cheek pattern on a sample of Willow *Poecile montana* and Marsh Tits *P. palustris* (40 skins and 6 live birds per species). Comparison of contrast between colour of ear-coverts and neck sides, and presence of warm buff or cold grey-brown tones on the neck sides.

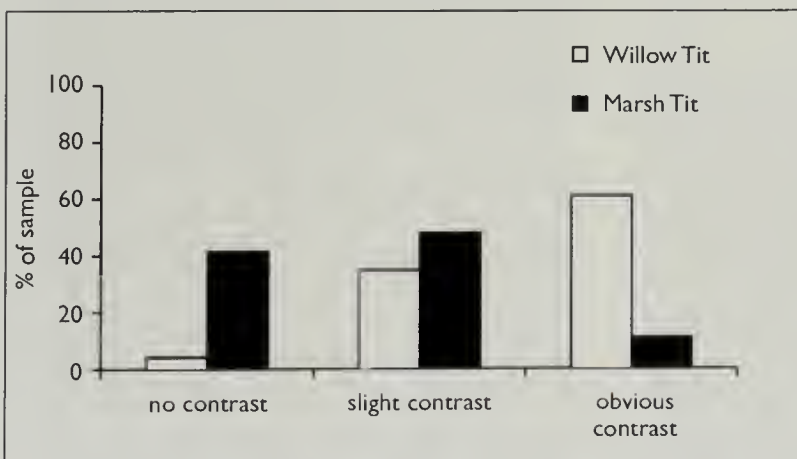


Fig. 1c. Assessment of 'wing panel' on a sample of Willow *Poecile montana* and Marsh Tits *P. palustris* (40 skins, 6 live birds per species), comparing contrast between colour of the fringes of tertials and secondaries with that of the mantle.



**Fig. 2.** Adult and juvenile plumages of Marsh *Poecile polustris* and Willow Tits *P. montana*: 2a adult Marsh Tit (February, © Gorth Peacock); 2b adult Willow Tit (December, © John Spink); 2c juvenile Marsh Tit (July); 2d juvenile Willow Tit (August, © www.grayimages.co.uk).

suggested little value in this feature, with 46% of Marsh Tits adjudged to have the cap extending onto the mantle and 20% of Willow Tits having the cap extending only to the nape. Posture of the bird will clearly influence the appearance of the cap shape on specimens and in photographs, and it may be difficult to assess on individuals under most viewing conditions in the field. Furthermore, even where side-by-side comparisons have been attempted, the feature appears to be of little use (Scott 1999; pers. obs.).

### Bib

Differences in the shape and size of the bib area on the throat are mentioned in all sources, with Willow Tits reportedly showing a relatively large, diffuse bib and Marsh Tits showing a smaller, neater bib. Again, this difference was highlighted primarily for birds in the hand, although Scott (1999) showed bib features to be unreliable due to significant overlap (figs. 2 & 3). Bib size is variable within both species, and is related to sex (King & Muddeman 1995), social rank (Hogstad & Kroglund 1987) and also age (Harrap & Quinn 1995). Added to this variability and overlap apparent in the hand is the difficulty in assessing subtle differences in the size or shape of

the bib in the field, and the problematic effect of posture and angle of the bird in photographs (fig. 3). Consequently, the bib is not a particularly useful identification feature.

### Cheek area

The majority of sources specify differences in the appearance of the pale cheek area of both species. Scott (1999) did not examine this character, although several authors agree on the principal differences (Harris *et al.* 1989; Harrap & Quinn 1995; Svensson *et al.* 1999; Gosler & Clement 2007; BWP). The key distinction lies with the pattern of colouring on the ear-coverts and the sides of the neck, which together make up the pale cheek patch. On Marsh Tits, the ear-coverts are a clean whitish colour that frequently contrasts with a pale, cold grey-brown wash on the side of the neck (fig. 1b). The transition between the white ear-coverts and grey-brown neck is often quite distinct, following the curve of the ear-coverts themselves (figs. 2a & 3c). This results in many Marsh Tits appearing to have a much smaller white 'face' than Willow Tits.

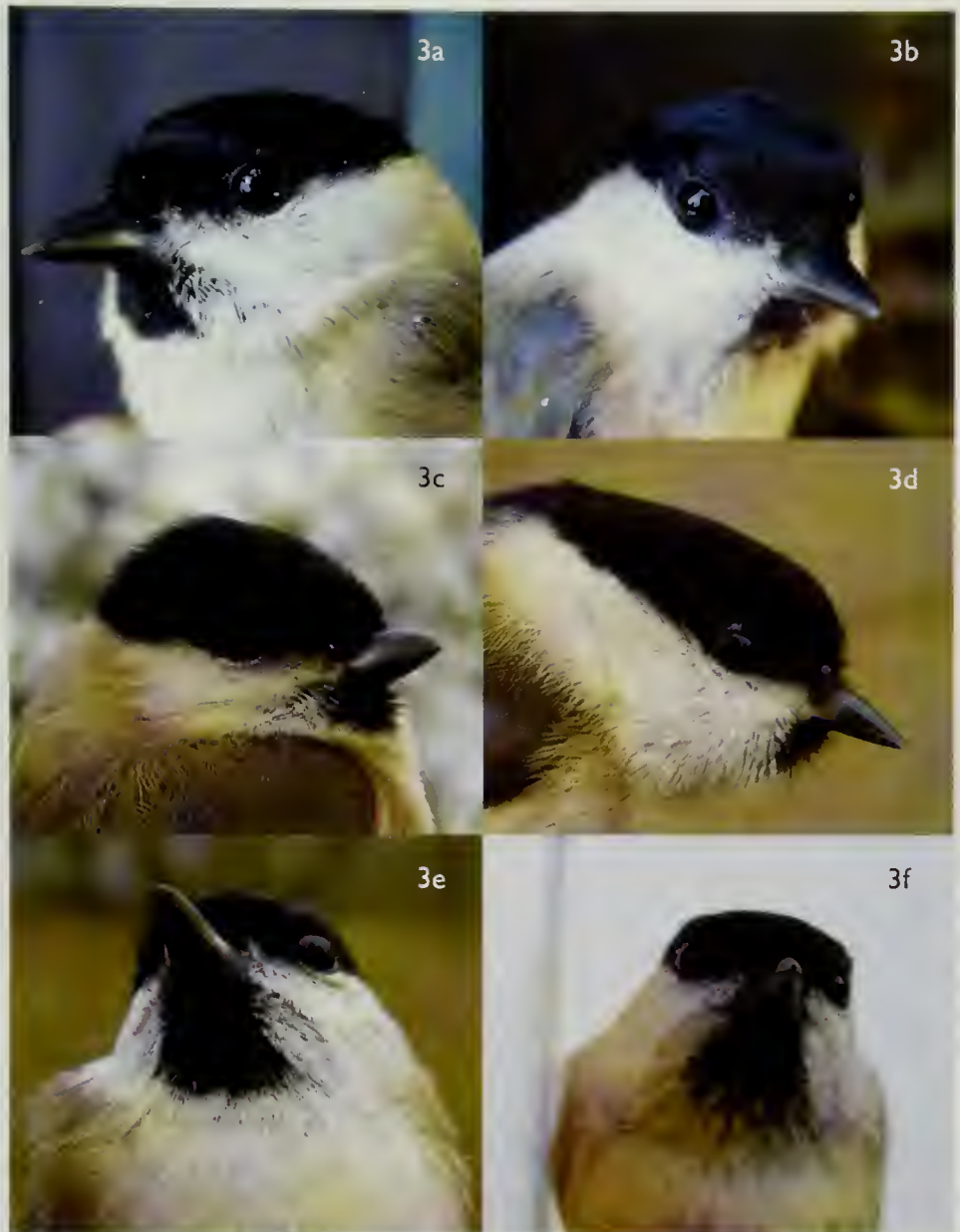
The Willow Tit's cheek is whitish or with a faint buff wash, but there is usually no abrupt

colour transition behind the ear-coverts (figs. 1b & 3d). Instead, Willow Tits frequently show a subtle colour gradient from the ear-coverts to the sides of the neck, with an increasing warm buff suffusion. Where the cheek meets the mantle, the warm buff suffusion can contrast sharply with the grey-brown of the mantle (fig. 2b). In the field, the Willow Tit appears to have a larger, more uniform whitish cheek area in comparison with the 'two-toned' whitish and grey-brown cheek area of the Marsh Tit.

Examination of specimens revealed a moderately high degree of reliability for these differences, with 87% of Willow Tits assessed showing no distinct contrast in the cheek area and 94% of Marsh Tits showing

a clear contrast between whitish ear-coverts and pale grey-brown neck sides (fig. 1b). No Marsh Tits displayed warm buff tones to the neck sides, while warm buff was present to some degree on 59% of Willow Tits.

Juveniles are more problematic, as both have wholly whitish cheeks and lack any grey-brown or buff on the neck (figs. 2c–d). Cheek pattern may nevertheless represent one of the better field characters for identification after the post-juvenile moult (i.e. from October onwards), with less overlap than for other plumage features. Particular caution must be exercised on worn adults or potential juveniles, and exposure of photographic images may also create difficulties by misrepresenting contrast or colour.



**Fig. 3.** Caps, cheek patterns, bibs and bills of Marsh *Poecile palustris* and Willow Tits *P. montana*: 3a adult male Marsh Tit; 3b adult male Willow Tit; 3c first-winter female Marsh Tit (© Katie Fuller); 3d first-winter female Willow Tit; 3e adult male Marsh Tit; 3f adult male Willow Tit.

### Bill

Bill morphology is of no practical use (see *BWP* for overlapping measurements). Dewolf (1987) suggested that Belgian Marsh Tits showed pale cutting edges to the mandibles that Willow Tits lacked, and this was reported in Svensson (1992). Redfern & Clark (2001) described British Marsh Tits as displaying a white cutting edge to the lower mandible that was lacking in Willow Tits. Broughton *et al.* (2008a) found a significant difference in markings on the bill, but not as previously described: both species displayed pale cutting edges to the lower mandible, but 97% of Marsh Tits showed a pale mark on the upper mandible, on the bill sides below the nostril, which was lacking on 96% of



**Fig. 4.** Variation in 'wing panel' of Willow *Poecile montana* and Marsh Tits *P. palustris*: 4a first-winter Marsh Tit (February); 4b first-winter Marsh Tit (December); 4c adult Willow Tit (February); 4d adult Willow Tit (February); 4e first-winter Willow Tit (February).

Willow Tits (fig. 3). This characteristic mark appears to be the single most reliable and objective physical feature for separating Marsh Tits and Willow Tits, although it may be very difficult to see in the field. It is often readily apparent in photographs, however, although note that reflected light may obscure or mimic the feature.

#### *Colour of flanks/underparts*

The flanks or underparts of the Willow Tit are commonly described as being a warm buff colour and those of the Marsh Tit as being paler or colder grey-brown (Perrins 1979; Harris *et al.* 1989; Harrap & Quinn 1995). Scott (1999) found some overlap with birds in the hand and, although buff flanks were an unambiguous characteristic for all the Willow Tits studied, almost half of the Marsh Tits showed buff flanks too (figs. 2a–b). In addition, 78% of Marsh Tit specimens that I examined showed 'warm buff' flanks, although only 6% of Willow Tits displayed atypical greyish-brown flanks. Furthermore, juveniles of both species tend to have rather pale underparts (fig. 2c–d) until the post-juvenile moult. Individual variation, observer subjectivity (in both perceiving and describing colour), field conditions and colour saturation or lighting in photographs could strongly influence the recording of flank colour and, consequently, little weight should be attached to this feature.

#### *Wing panel*

Many sources consider the pale creamy or buff fringes on the tertials and inner secondaries of the Willow Tit as one of the best distinguishing features; these fringes form a distinct pale 'panel' on the closed wing that contrasts with the mantle (figs. 4c–d). In comparison, the wing of the Marsh Tit is more uniform in appearance (fig. 4a). Some authors urge caution, however,

stressing that worn Willow Tits may show no pale panel, while fresh Marsh Tits may show a subtle pale panel (Harrap & Quinn 1995; Gosler & Clement 2007; *BWP*). Scott (1999) found that half of the Marsh Tits he studied showed pale fringes on the secondaries, but Harrap & Quinn (1995) stated that Marsh Tits are never as well marked as Willow Tits. This is not so, however, as some Marsh Tits can display a very prominent wing panel (fig. 4b). As with Scott (1999), examination of specimens also revealed a high degree of overlap in the presence of a wing panel, with 59% of Marsh Tits showing some degree of contrast in the wing (fig. 1c). In addition, 'standard' Marsh Tits may also appear to show wing panels in photographs owing to glare or reflectance on the edge of the secondaries, and this may be misinterpreted. While broad creamy margins to the tertials and secondaries are strongly supportive of Willow Tit (fig. 4c), many individuals are less well marked (e.g. figs. 2d & 4e) and the presence or absence of a wing panel is of more limited value than is widely believed, and should be used with caution.

#### *Tail*

There is no practical difference in tail length (Harrap & Quinn 1995, *BWP*), or in the extent of white on the outer tail feathers (Harrap & Quinn 1995); both species have a whitish margin to the outer web of the outermost tail feather and no difference between them was apparent when assessing skins or birds in the hand. There is, however, a statistically significant difference in the relative lengths of the tail feathers (du Feu & du Feu 1996; Scott 1999). The difference in length between the outermost tail feather and the longest (innermost) tail feathers is at least 4 mm in the Willow Tit, compared with less than 5 mm in the Marsh Tit, although this has an error rate of up to 23%

(Scott 1999; Redfern & Clark 2001). Viewed from below, the Willow Tit shows a 'stepped' appearance of four successively longer tail feathers from the outermost inwards, compared with two or three in the Marsh Tit (du Feu & du Feu 1996). This contributes to a subtly different tail shape: while the tail of both species has rounded corners, those of the Willow Tit are the more rounded, although this is not obvious in the field (Vinicombe 2005). Although examination of the tail may be of some value for ringers, it is of no practical use for field or photographic identification owing to overlap and the very small measurements involved.

### Size, structure and plumage

The Willow Tit is marginally smaller than the Marsh Tit on average, but there is considerable overlap (*BWP*) and this feature is of limited practical value (Willow Tit range 55–63 mm, Marsh Tit range 58–67 mm). Many sources suggest that the Willow Tit has a different shape from the Marsh Tit, the former being described as 'big-headed', 'bull-necked' or 'short-necked' (Harris *et al.* 1989; Jonsson 1992; Svensson *et al.* 1999; Redfern & Clark 2001), while the Marsh Tit is 'smaller-headed' (Jonsson 1992; Gosler & Clement 2007; *BWP*), although any difference is 'not striking' (Svensson *et al.* 1999). The larger pale cheek area and longer contour feathers of the Willow Tit (Harrap & Quinn 1995) may generate this effect, which is nevertheless highly subjective and heavily reliant on posture and 'fluffing up' of the plumage (figs. 2a–d). The plumage texture of the Willow Tit is often described as 'loose' compared with the 'sleek' appearance of the Marsh Tit, and this effect may also be due to the longer feathers of the former, which have fewer interlocking barbs (Perrins 1979; Harrap & Quinn 1995; my unpublished data).

Juvenile feathers also have fewer barbs than those of adults (Svensson 1992), which results in a loose-textured plumage, and this applies to juvenile Marsh Tits as well as Willow Tits. Moulting Marsh Tits also have scruffy plumage during the summer, and the degree of subjectivity involved in assessing such qualities as 'looseness' and 'sleekness', or 'big-headed' and 'small-headed', is an obvious barrier to their reliability.

### Voice

Voice is generally regarded as being the most

certain means of identification, although the full range of vocalisations has not been described previously. Willow and Marsh Tits have extensive vocal repertoires based on the 'chick-a-dee' call structure, as with the congeneric New World chickadees (Haftorn 1993; Harrap & Quinn 1995; *BWP*). In these species the major call type is composed of broadly analogous initial 'chick-a' notes and a variable number of wide-band 'dee' notes at the end, hence *chick-a-dee*. While many calls in the vocal repertoires of Willow and Marsh Tits are very similar, such as simple contact calls, components of the 'chick-a-dee' call are diagnostic, along with two other call types.

### 'Chick-a-dee' calls

The Marsh Tit's 'explosive' or 'sneezing' *pitchou* call (also written *pichay* or *pitchuu*) is the 'chick-a' note equivalent and is highly distinctive; the Willow Tit produces nothing similar. The call is used in a variety of contexts and is frequently followed by a varying number of *dee* notes to form the full 'chick-a-dee' call, for example *pitchou dee* or *pitchou dee-dee-dee* (fig. 5b). Not all elements of the call may be given, however, and some may be repeated or given in isolation. A complex variety of calls are therefore possible, such as *pit dee-dee*, a simple *chou*, or *pit-it-it*.

The 'chick-a-dee' call of the Willow Tit differs in always lacking the explosive *pitchou* of the Marsh Tit, with the 'chick-a' elements instead being composed of rather thin, high *si*, *zi* or *tsit* notes. The 'dee' notes are also diagnostic, being longer and more buzzing or 'nasal' than those of the Marsh Tit, the full call being transcribed as *si-si dzee dzee*, *si-zur-zur* or *zi-zi taah taah taah* (Harris *et al.* 1989; Harrap & Quinn 1995; Svensson *et al.* 1999). Again, repetition or omission of call elements is common but the key difference is the length of the 'dee' notes, the Willow Tit's generally being 0.25–0.50 seconds long and the Marsh Tit's being 0.2 seconds or less (Harrap & Quinn 1995; *BWP*; figs. 5a & 5b).

Constantine *et al.* (2006) asserted that Willow Tits may emit 'dee' notes on their own (e.g. a *dzee dzee* call) whereas Marsh Tits always include an introductory note such as *pitchou* (e.g. *pitchou dee-dee* rather than just *dee-dee*). This is not always the case for Marsh Tits, however, and a string of stand-alone 'dee' notes is possible (Harrap & Quinn 1995; pers. obs.).

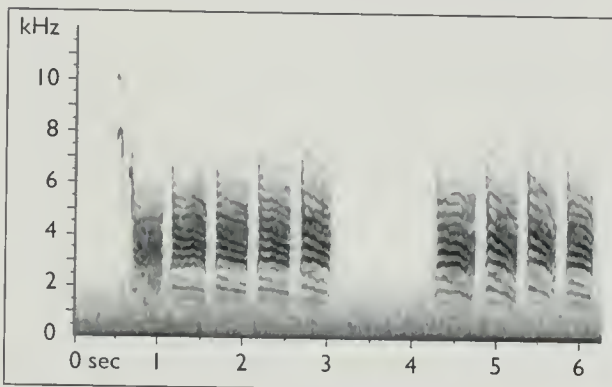
### Juvenile begging calls

The begging calls of fledged juveniles are also diagnostic and can be heard in late May and June for a week or two after fledging. Those of the Willow Tit are a series of 2–5 notes that descend the scale and have been described as a ‘loud... musical’ *dee-doo-derr*, *jzee jzee jzee* or *d'dze'dze'dzah* (fig. 6a) (Lewis 1985; Harrap & Quinn 1995; Vinicombe 2005). The juvenile begging calls of the Marsh Tit have not previously been described, but fledglings are said to be much less vocal than Willow Tit fledglings (Vinicombe 2005; *BWP*). Recent work contradicts this; Marsh Tit fledglings are in fact highly

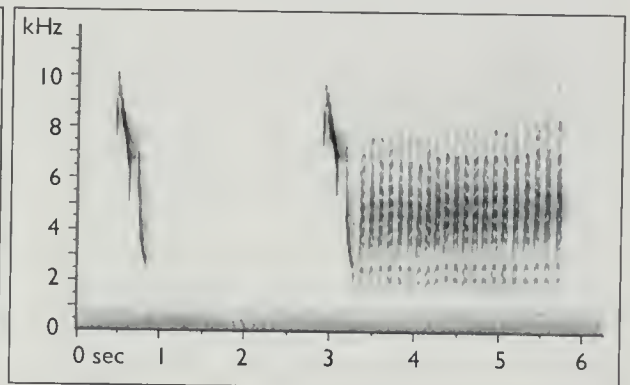
vocal (pers. obs.) and the main begging calls consist of a thin, squeaking *eehs-it* and a trisyllabic, sometimes descending *eehs-is-it* (fig. 6b). The latter is possibly analogous to the descending *dee-doo-derr* of fledgling Willow Tits but, at just c. 0.3 seconds long, is much shorter.

### Song

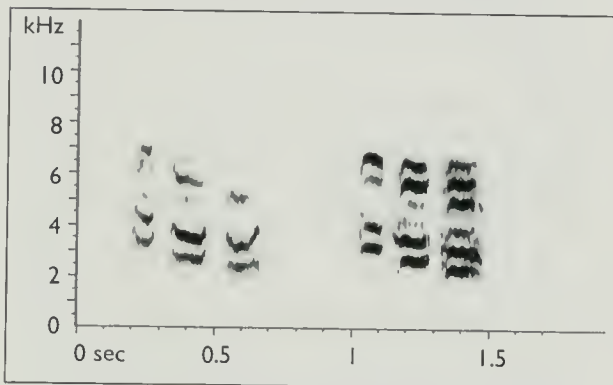
The common songs of Marsh Tit and Willow Tit are also distinctive. The British Willow Tit has one true song, which is a ‘melancholy’, ‘slow’ series of descending notes that are reminiscent of the introductory notes of Wood Warbler *Phylloscopus sibilatrix* song, for example *tsui tsui*



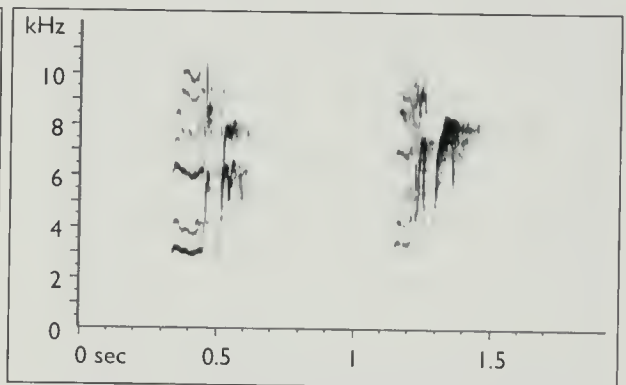
**Fig. 5a.** Willow Tit *Poecile montana* ‘chick-a-dee’ calls, the first call containing initial *zi-zi* (‘chick-a’) notes followed by five wide-band *taah* (‘dee’) notes. The second call lacks introductory notes.



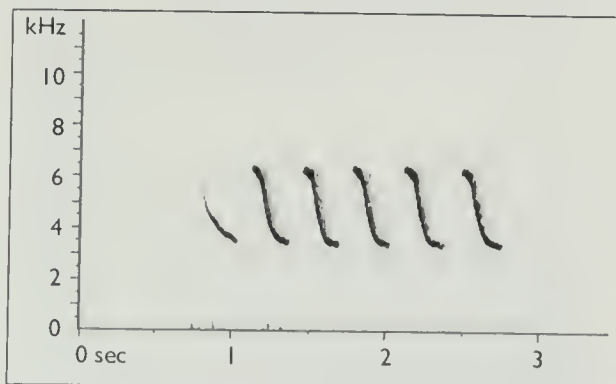
**Fig. 5b.** Marsh Tit *Poecile palustris* ‘pitchou’ call and full ‘chick-a-dee’ call, the latter containing a *pitchou* element and 21 ‘dee’ notes.



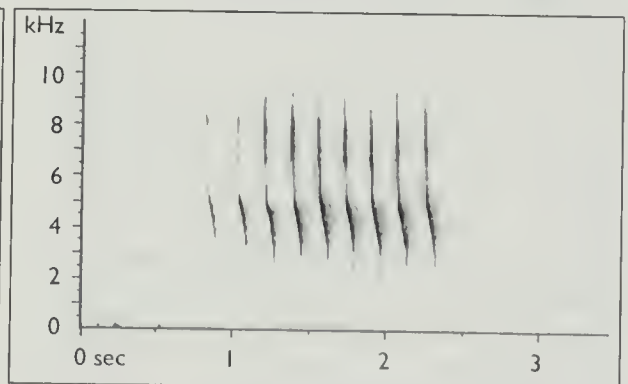
**Fig. 6a.** Two Willow Tit *Poecile montano* fledgling begging calls: *dee-doo-derr*.



**Fig. 6b.** Two Marsh Tit *Poecile palustris* fledgling begging calls: *eehs-it*.



**Fig. 7a.** Willow Tit *Poecile montana* song: *tiu-tiu-tiu...*



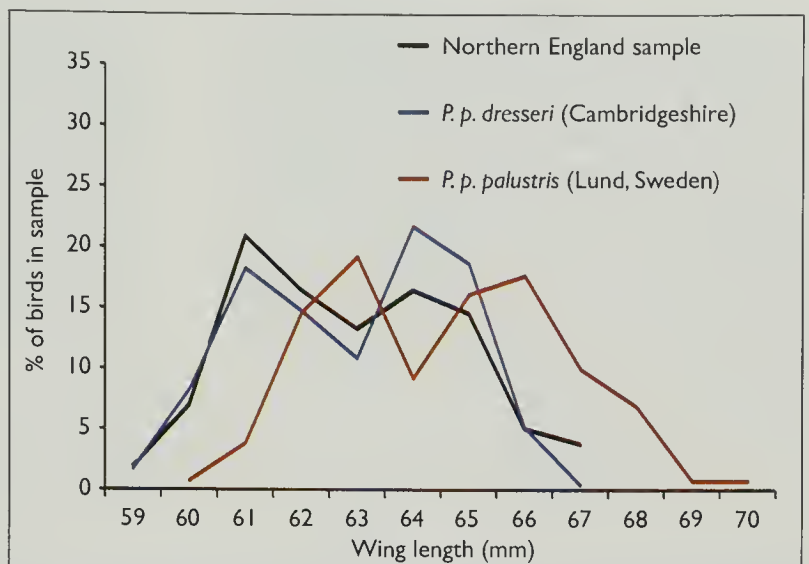
**Fig. 7b.** Marsh Tit *Poecile palustris* common song variant: *schip-schip-schip...*

*tsui...*, *pew pew pew...* or *tiu tiu tiu...* (Harris *et al.* 1989; Svensson *et al.* 1999; Vinicombe 2005; fig. 7a). Other song types attributed to British Willow Tits appear to refer to 'gargle' calls, brief jumbles of wheezing and musical notes given by *Poecile* species during aggressive interactions (Harrap & Quinn 1995; *BWP*). Marsh Tit 'gargles' are not dissimilar, and their variability and infrequency means that they have little value for identification.

In contrast to the Willow Tit, the Marsh Tit has a large variety of true song types. Males may switch between several 'rapid ringing', 'bell-like rattles' such as a monotonous *schip-schip-schip...* (fig. 7b), a rapid Greenfinch *Carduelis chloris*-like *chipchipchip...* or a Coal Tit *Parus ater*-like *wita-wita-wita* (Harris *et al.* 1989; Svensson *et al.* 1999; *BWP*). The Marsh Tit song is delivered at c. 6–10 notes per second, commonly in bouts of 8–19 notes, compared with the Willow Tit's 2–7 notes delivered at a slower rate of c. 3 per second. One Marsh Tit song variant is very similar to that of the Willow Tit, however, consisting of a much slower series of descending notes: *tiu tiu tiu...* (Harrap & Quinn 1995; pers. obs.), but this appears to be uncommon (0.5 % of 660 song bouts, pers. obs.). Song is generally given from February to May, both sexes may sing, and newly independent juveniles may also sing briefly in June/July (Broughton 2008; *BWP*; pers. obs.).

#### Other races occurring in Britain

There are just three British records of the Fennoscandian race of Willow Tit *P. m. borealis* (Dudley *et al.* 2006), which is paler and greyer than the British race and less of an identification problem.



**Fig. 8.** Distribution curves of Marsh Tit wing lengths by percentage of birds in the sample. Bird samples derived from northern England (subspecies to be defined,  $n = 165$ ), Cambridgeshire (*Poecile palustris dresseri*,  $n = 230$ ) and Sweden (*P. p. palustris*,  $n = 130$ ).

Harrap & Quinn (1995) and *BWP* stated that Marsh Tits in northern England and Scotland are of the larger, greyer, nominate race, which also occurs in northern and central Europe. The source evidence for this claim appears erroneous, however, with the measurements provided being well within the range of British *P. p. dresseri* rather than *P. p. palustris* (Clancey 1947; *BWP*). In order to test the claim, I made a comparison of wing lengths of birds from northern England (Cumbria and Northumberland; BTO ringing data) with those of *dresseri* from Cambridgeshire (Broughton *et al.* 2008b) and *palustris* from Sweden (Nilsson 1992). Wing length in Marsh Tits varies with age and sex, creating a bimodal distribution (Nilsson 1992; Broughton 2008b), so samples were checked to ensure that there were similar proportions of males, females, adults and first-years in each (table 1). Sex was not determined for the northern England sample, however, although the shape of the wing-length distribution curve matched that of the other samples (fig. 8), suggesting a similar proportion of the sexes. The curves for the

**Table 1.** Wing-length measurements and proportions of adults, first-years, male and female birds in samples of Marsh Tits from northern England (subspecies to be defined), Cambridgeshire (*Poecile palustris dresseri*) and Sweden (*P. p. palustris*).

Subspecies and/or origin of sample	Mean wing length (mm)	SE	Range (mm)	n	% adults	% first-years	% male	% female
Northern England	62.9	0.2	59–67	165	49.7	50.3	?	?
<i>P. p. dresseri</i> (Cambridgeshire)	62.9	0.1	59–67	230	55.2	44.8	56.5	43.5
<i>P. p. palustris</i> (Lund, Sweden)	64.6	0.2	60–70	130	51.5	48.5	51.5	48.5

northern England and *dresseri* samples followed each other very closely, with both peaks in exactly the same positions, while the *palustris* sample was offset by an increase of 2 mm. There was also no difference in the ranges of wing lengths of the northern England and *dresseri* samples, nor in the mean values (table 1, two-tailed t-test:  $t_{339} = 0.07$ ,  $P = 0.945$ ), but the mean of the *palustris* sample was significantly greater than that of the northern England sample (table

1, two-tailed t-test:  $t_{269} = 6.82$ ,  $P < 0.001$ ), again by 2 mm. This indicated that the northern England sample was from the same population as the *dresseri* group, and different from *palustris*. Finally, visual examination of birds from Cumbria and Cambridgeshire showed no difference in coloration, providing further evidence that birds in northern England (and Scotland) belong to *P. p. dresseri* and not *P. p. palustris*.

**Table 2.** Identification criteria for the separation of British Willow *Poecile montana* and Marsh Tits *P. palustris*. While those plumage criteria of high reliability will identify most birds correctly, none is conclusive in isolation and a combination of features is recommended for successful identification.

	Willow Tit	Marsh Tit	
Song <sup>1</sup>	One song type of slow c. 2–7 descending whistling notes, at c. 3 notes per second	Variable, usually rapid mono- or disyllabic rattle of c. 8–19 notes, at c. 6–10 notes per second	
Chick-a-dee call <sup>2</sup>	Does not include <i>pitchou</i> note. Terminal <i>dee</i> notes long, $\geq 0.25$ secs. Typically <i>zi-zi taah taah taah</i>	Full call includes <i>pitchou</i> note. Terminal <i>dee</i> notes short, $\leq 0.2$ secs. Typically <i>pitchou-dee-dee-dee</i>	
Juvenile begging call	Slow call of 2–5 descending notes, $\geq 0.4$ secs: e.g. <i>dee-doo-derr</i>	Rapid, high call of 2–5 even or descending notes, $< 0.3$ secs: e.g. <i>eche-is-it</i>	High reliability: little overlap
Bill	Unmarked upper mandible	Whitish marks on proximal area of upper mandible	
Cheeks <sup>3</sup>	No contrast between whitish cheek and whitish neck sides; may be warm buff suffusion towards mantle	White check contrasts with grey-brown neck sides behind the ear-coverts	
Wing panel	Margins of secondaries and tertials often broad and pale buff/cream, contrasting strongly with mantle	Margins of secondaries and tertials often only slightly paler than mantle, with no strong contrast	
Tail	Outer pair of tail feathers $> 4$ mm less than tip of closed tail	Outer pair of tail feathers $< 5$ mm less than tip of closed tail	Medium reliability: significant overlap
Wing length	55–63 mm	58–67 mm	
Cap <sup>4</sup>	Black, with slight or no bluish gloss, or deep brown	Black, with obvious or slight bluish gloss	
Bib	Diffuse at margins, may cover whole throat	Well defined, restricted to upper throat	Low reliability: substantial overlap, high subjectivity

<sup>1</sup> Marsh Tit has a rare song variant that is very similar to Willow Tit song.

<sup>2</sup> Caution is required as full call may not be given.

<sup>3</sup> Does not apply to juveniles, which show clean whitish cheek and neck sides in both species until majority of post-juvenile moult is completed by September.

<sup>4</sup> Juveniles of both species have dull black or deep brown caps until late September.

## Conclusions

Separating British Willow Tits and Marsh Tits remains difficult and many of the published identification criteria have been shown to be unreliable or highly subjective. With experience, separation of these two species can be straightforward, but it may not be possible to assign all individuals to species (particularly juveniles and those not seen or heard well) and it is best to leave these birds unidentified.

Features such as cap, bib, structure, colour of underparts, habitat and behaviour (except that of extensive nest excavation) appear to have limited or negligible value for identification, owing to the degree of overlap. Tail shape is of use only in the hand. Wing panel is more useful and less subjective, but is also undermined by a large degree of variation, overlap and misinterpretation, and should be used with caution, as a supporting characteristic only. Cheek pattern has less overlap than wing panel and appears to be a more reliable plumage feature (discounting juveniles), particularly the subtle warm buff neck sides on Willow Tits (where present) and a clear transition from white to cold grey-brown on Marsh Tits. Cheek pattern may also be easier to see than wing panel in the field. Bill marks offer the most objective and reliable visual means of separation but may be very difficult to see in the field or obscured on photographs and are therefore primarily of use for birds in the hand. Where visible, however, presence or absence of bill marks has a very high degree of reliability on its own.

Voice remains the most reliable distinguishing feature in the field, notably the diagnostic *pitchou* call of the Marsh Tit, which is unequivocal for identification. The longer, more buzzing 'dee' note of the Willow Tit's 'chick-a-dee' call is also diagnostic once learnt, although confusion may be caused by unfamiliarity or where county recorders receive only an ambiguous written description. Furthermore, lone birds or those visiting feeders may not call at all. Song is very useful, although the slow Marsh Tit variant is a potential pitfall. Juvenile begging calls are also diagnostic but are of limited value due to their brief availability.

While some identification criteria have been refined and improved, some discarded and the reliability of others quantified, the technique for the separation of Marsh and Willow Tits remains much as that stated by Perrins (1964) – in that no single physical feature is conclusively

diagnostic, and a combination of several features must be used (table 2). Assessment of the following characteristics, in descending order of reliability and importance, is recommended for accurate separation: voice, presence/absence of bill marks (primarily in the hand or on photographs), cheek pattern, tail feather lengths (only in the hand), and presence/absence of broad pale margins to the tertials and secondaries that contrast strongly with the mantle. Bib shape and cap gloss may occasionally be useful but should be used only with extreme caution as minor supporting features.

## Acknowledgments

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POSTSCRIPT: Note that calls to accompany the sonograms in figs. 5–7 are available on the *British Birds* website [www.britishbirds.co.uk/sounds.htm](http://www.britishbirds.co.uk/sounds.htm)

Mark Hancox



396. Adult or first-winter Marsh Tit *Poecile palustris*, Worcestershire, February 2009. The cheek pattern shows a clear demarcation between the whitish ear-coverts and the cold grey-brown wash on the neck sides, giving little contrast between the rear of the cheek patch and the mantle when compared to Willow Tit. Small pale marks are discernible at the proximal end of the upper mandible. Combined presence of both of these features will identify almost all non-calling Marsh Tits correctly, after the post-juvenile moult. Note the thick-necked appearance, due to posture, which may have been wrongly considered as suggestive of Willow Tit *P. montana*.

From the Rarities Committee's files

# The Green Farm Booted Warbler

James A. Lidster



On 15th October 2006, Kris Webb found an interesting *Hippolais* warbler at Green Farm on St Mary's, Isles of Scilly. This bird came to generate much interest and debate throughout the course of its stay, and beyond; many birders were of the opinion that it was undoubtedly a Sykes's Warbler *H. rama*, while others believed that it was a Booted Warbler *H. caligata*. Without doubt this was a challenging individual, as it appeared to show features that fitted both species. It was an adult bird, and its worn and faded appearance fell outside the range of experience of many observers familiar with fresh, first-winter Booted Warblers in Britain in autumn. Given that Sykes's Warbler is still an extreme rarity in Britain, and that there has yet to be an easily accessible, mainland record, many birders were unfamiliar with that species' appearance in the field. Nonetheless, many had preconceived ideas of what Sykes's should look like and positions quickly became entrenched. In such circumstances, there is always a danger that weight of opinion will sway discussion in favour of the rarer option; in this case focusing on pro-Sykes's characters, while neglecting pro-Booted features. During the evaluation of this record, BBRC consulted widely with observers familiar with both species and their opinions and expertise formed an important part of the assessment process – which ultimately concluded that the bird was a Booted Warbler.

BBRC is aware that some observers consider the decision reached to be flawed. This is inevitable with difficult and contentious records, and this was a particularly challenging

record to assess. This short paper aims to present a balanced account of the identification process and to set out the reasons for the decision to accept the bird as a Booted Warbler (*Brit. Birds* 102: 582). BBRC will reassess records, as long as additional evidence comes to light that points to an incorrect decision having been made. In this case, if any firsthand evidence is submitted to the Committee which suggests that this identification may be incorrect, then the record will be reconsidered.

## *Appearance in the field*

Establishing that this bird was one of the smaller *Hippolais* warblers was quite straightforward: its sandy-brown upperparts, pale underparts, characteristic face pattern, leg colour and behaviour soon narrowed down the options. Although at times there was a suggestion of Eastern Olivaceous Warbler *H. pallida* about it, the lack of a pale panel in the secondaries and its relatively small size pointed to it being either Booted or Sykes's.

By the end of the first day of its stay, the bird was being broadcast as a Booted Warbler, but after a night of debate in the pubs on St Mary's, serious questions were being asked about that diagnosis by the following morning. If it was a Booted Warbler, why did it appear so long-billed? Why were the tertials so plain (lacking the expected darker centres and paler fringes)? Why did the bill appear to lack dark sides to the tip of the lower mandible? Furthermore, the general impression was of a 'gangly' and 'elongated' warbler, quite different from the usual compact and *Phylloscopus*-like structure of Booted.

When I first saw the bird, on 17th October, my immediate thoughts were that it 'felt' more like a Sykes's Warbler, with its flat head, relatively long bill and plain wings all influencing this impression. On the other hand, the head pattern seemed quite distinct, although assessing this was difficult. On some of the photos, and in the field, the bird appeared to have a fairly broad supercilium, extending (and flaring) beyond the eye, with a dark border to the upper edge – a classic Booted feature. Clearly this was an interesting individual. After several visits to watch the bird, I had become more confused than when I started!

As part of an internal (unpublished) BBRC review, Paul Harvey and Grahame Walbridge had previously established criteria for separating Booted from Sykes's Warblers in the field. Summarising their findings, a Sykes's Warbler, in comparison with a Booted, should:

- be shorter-winged (with a very short primary projection) and longer tailed;
- appear small-headed (perhaps as a result of the generally longer bill) and slimmer (perhaps as a function of the longer tail and typically more horizontal stance with quite long-looking legs, which in combination can suggest an *Acrocephalus* warbler);
- have a long but fine-looking bill in a side view; the bill should appear fine-pointed but broad-based from below;
- be paler, sandier-buff than Booted, with the wings appearing very uniform;
- not show any rusty or buff tones to breast sides or flanks;
- show a plainer head pattern;
- show more prominent white tips to the second-outermost tail feathers;
- never show a distinct dark tip to the lower mandible;
- show grey tones to the legs;
- perhaps be more vocal than Booted (although more work is clearly needed on calls);
- show a preference for taller vegetation (trees/bushes) when they are available rather than the low cover favoured by Booted; and
- show variable tail movement (including cocking and spreading) on a frequent basis.

Applying these criteria to the Green Farm bird in the field proved to be less than straightforward, as good views are required to establish these generally subtle features clearly. For example, Sykes's should show a fine, relatively

long and pointed bill when viewed from the side, with a broad base when viewed from below. Establishing this in the field proved to be impossible – the tip of the lower mandible seemed to change shape depending on the light. Similarly, judging the relative wing and tail length was also difficult in the field and deemed of little real value at the time. Clearly, some features are particularly difficult to be certain about in the field.

### Behaviour

Behaviour can often be important when attempting to separate otherwise very similar species and this can be conveyed only by careful observation and field notes or video sequences. Still photographs rarely portray behaviour adequately. Throughout its stay the bird favoured a weedy field, where it fed close to the ground, only seeking shelter in the surrounding hedges and taller trees when disturbed. Although behaviour and habitat preferences are generally regarded as relatively 'soft' identification features (especially in a vagrant context), this would be a pointer towards Booted, with Sykes's normally preferring to feed in taller bushes and scrub. During the many hours that I watched the bird, I did not notice any distinctive tail movements, and none was mentioned in any of the submissions made to BBRC.

### Call

Another potentially useful feature would have been a sound recording of the bird's call. Although this situation may be changing gradually, in autumn 2006 very few birders in Britain were carrying any form of sound-recording equipment. Initially BBRC entertained hopes that the bird's call may have been picked up on camcorder footage, but sadly that was not to be the case. Constantine *et al.* (2006) compared the (very subtle) differences in call between Booted and Sykes's Warblers; they considered the calls of Booted to be somewhat longer in duration, and to sound like somebody striking a match. Sykes's gives shorter calls, sounding more like a tongue-click. Jännes (2002) noted that the tone of the *chrrt* call of Booted, compared with that of Sykes's, is drier (lacking an audible 's'-sound), slightly more grating, and also sounds somewhat lower-pitched. Compared with Booted, the lack of a grating quality (no audible 'r'-sound in the call) and the presence of a strong 's'-sound gives Sykes's a more 'liquid'

quality. Unfortunately, only one person claimed to have heard the call of the Green Farm bird and as he had no previous experience of the call of Sykes's, the transcription was of limited value.

#### Identification in the hand

On 20th October, the bird was trapped and it was hoped that biometrics and wing formula would resolve the controversy. While the bird was being processed by Jim Askins, I telephoned Grahame Walbridge to check which measurements should be taken to ensure that the identification could be established beyond doubt. Grahame confirmed that the key features that needed to be measured precisely were bill, tail and wing length, the length of the first primary (P1), and the position of P2 relative to the other primaries (primaries numbered ascendantly).

Comparing the measurements of the Green Farm warbler with those of known Booted and Sykes's Warblers, it can be seen that both bill length and tail length would be right at the lower end of the range for Sykes's Warbler, but well within the range of Booted. Furthermore, the second primary (P2) would be exceptionally long for Sykes's (P2 = 6/7), placing it within the top 5% of all Sykes's, but close to the mean for Booted Warbler. In fact, P2 fell closer to the tip of P6 than P7, making it an even less likely fit for Sykes's. The measurements and wing formula do not rule out Sykes's, but it was considered that the likelihood of a short-billed, short-tailed Sykes's also having an exceptionally long P2 would be statistically remote. In short, combined with field characters discussed above, support for Sykes's is lacking while identification as

Booted Warbler is strongly supported. The biometrics and photographs of the bird in the hand were sent to Lars Svensson, who replied that, in his view, the bird's appearance and biometrics pointed towards Booted Warbler.



Andy Booth



Jon Hall



Martin Goodey

397–399. The Green Farm Booted Warbler *Hippolais caligata*, St Mary's, Isles of Scilly, October 2006.

**DNA analysis**

During processing, some feathers from the bird were lost, which presented the opportunity for mitochondrial-DNA analysis. Urban Olsson kindly agreed to undertake this work. After analysing the feathers sent to him, he commented: 'I can give you an identification based on the cytochrome-*b* gene. Your bird differs 0.5% from published sequences of *caligata* and 6.6% from *rama*, which means that there are only two options: either the bird is a Booted Warbler, or it is a hybrid, with a Booted Warbler as the mother. I have no reason to suspect the latter scenario, but the method I use does not rule out that possibility.'

**BBRC circulation**

The submission to BBRC consisted of photographs and video recordings of the bird in the field, a full set of biometric data taken when the bird was trapped, together with in-the-hand photographs, plus my additional notes and

comments. On its first circulation it was accepted by all ten voting members as a Booted Warbler; the biometric data was crucial, and without it the bird would almost certainly have been accepted only as Booted or Sykes's. Most members drew attention to the fact that they understood the problems involved with the identification of this bird in the field, with several contradictory features being noted. It should also be pointed out that during circulation the results of the DNA investigation had not been received, and so this did not influence members when making their decisions. Given the difficulties of assessing this record, it was felt that a short summary of the comments made by voting members would be helpful to enable readers to understand how the decision to accept as Booted Warbler was reached.

**Wing and tail structure**

Wing and tail measurements were key factors in the identification of this bird. The length of P2,

Wing length			60.5								
Bill to feathering			10.1								
Bill to skull			14.3								
Bill width at feather base			3.5								
Tarsus			20.4								
Tail length			48								
Tail graduation			3								
Tail/wing ratio			0.79								
Weight			9.7 g								
				<b>Table 1.</b> Biometrics and wing formula of the Green Farm Booted Warbler <i>Hippolais caligata</i> . The positions of all primaries are measured from the tip of the longest primary (P3), which formed the wing point (wp); except P1, which is measured from the tip of the longest primary covert (pc), and the distance between the tips of P2 and P1. Primaries with suffix 'e' are emarginated. All measurements in mm unless otherwise stated. The bird was aged as an adult based on the extent of plumage wear, and bleaching to the primary tips.							
P1	P2	P3e	P4e	P5e	P6	P7	P8	P9	P10	P2-P1	
pc+4.5	4	wp	0.5	1.5	3.5	6	8	10.5	11.5	24	

**Table 2.** Measurements (mm) and wing structure of the Green Farm Booted Warbler *Hippolais caligata*, trapped on St Mary's, Isles of Scilly on 20th October 2006. This table includes comparative data collated by Paul Harvey and Grahame Walbridge on behalf of BBRC, together with additional data from Svensson (2003) and David Pearson (*in litt.*).

	Green Farm warbler	Sykes's Warbler	Booted Warbler
bill (to skull)	14.3	14.0-16.8	12.0-15.0
wing length	60.5	57-66	56-65
tail length	48	46-57	40-51
tail/wing ratio (x100)	79.3	78.1-93.2 (only 3% <81.0)	68.9-82.1 (only 2% >81.0)
position of P1 (P1>pc)	4.5	3.5-10	2-8
P2 = P5/6			2%
P2 = P6			8%
P2 = P6/7	✓	5%	50%
P2 = P7		7%	21%
P2 = P7/8		44%	18%
P2 = P8		24%	1%
P2 = P8/9		15%	
P2 = P9		4%	
P2 = P9/10		1%	

a straightforward measurement for an experienced ringer to take, fell between P6 and P7. According to Svensson (2003), only 5% of his sample of *ranna* had P2 falling between P6 and P7, while 50% of his Booted sample met this criterion. Tail length is a good fit for Booted but is extremely short for Sykes's – falling within the lower end of the range for Sykes's. The tail/wing ratio clearly points to Booted.

### Bill structure

At 14.3 mm, bill length is undoubtedly on the short side for *ranna* and fits *caligata* much better. To some voters, the bill structure looked like that of *caligata* – shortish, deeper-based with the culmen slightly curved. Sykes's has a longer, proportionately less deep bill, with almost parallel sides (straighter, less decurved). Other views were also voiced, however, with one member commenting that the bird in the photos submitted didn't look like a Booted Warbler to him: 'though in-hand postures can be quite different from field views, of course. The bill looks too long, the head rather flat, the eye rather small and, all in all, it must be quite close in appearance to Sykes's.'

### Plumage

Plumage was not considered to be particularly helpful one way or the other, although many members considered that the conspicuous supercilium was a better fit for Booted. The rather plain appearance to the upperparts, particularly the tertials and coverts, gave the bird little contrast above and it rather resembled Sykes's in this respect, although the fact that it was a worn adult may be a significant factor here.

### Conclusions

Despite the measurements favouring Booted, all fell within the overlap zone for both species and no single measurement proved diagnostic for

either species. However, all fell well within the range for Booted but much closer to the limits for Sykes's, making Booted a better overall fit. Field observation of plumage characters and bill structure suggested Sykes's but the prominence of the supercilium, particularly behind the eye, favoured Booted, and behaviour was also more in keeping with Booted.

This was clearly a challenging individual and its importance to BBRC in our understanding of this difficult species pair cannot be underestimated. It provided a valuable opportunity to check that we are separating the two species correctly, and we can only learn from this. Acceptance as Booted Warbler based on biometrics, morphology and behaviour proved to be unanimous and is consistent with the guidelines BBRC has developed in its approach to this species pair. When the results of the mtDNA investigation, which provided important supporting evidence to back up the field and in-hand identifications, were later added to the discussion, this bolstered confidence in our criteria.

### Acknowledgments

BBRC would like to express its gratitude to the many people who contributed to the discussion on this bird, provided useful input into the bird's identity, and explained the ins and outs of analysing ringing data, including Mashuq Ahmad, Jim Askins, Martin Cade, Paul Harvey, Nick Hopper, Peter Kennerley, Nit Lawrence, Ian Lewington, Richard Millington, Dr Urban Olsson, Ralph Parks, David Pearson, Rare Bird Alert, Roger Riddington, Brian Small, Lars Svensson, Grahame Walbridge, Kris Webb and BBRC members past and present. Special thanks to Andrew Booth, Martin Goodey and Jon Hall from <http://bumbling-bears.fotopic.net/> for supplying photographs.

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From the Rarities Committee's files

# The history of Sykes's Warbler in Britain

Roger Riddington

**ABSTRACT** The first accepted Sykes's Warbler *Hippolais rama* in Britain was trapped on Fair Isle in August 1959. That record is described here, along with the taxonomic and field identification progress that led to the Fair Isle bird being accepted as the first for Britain. The species remains a great rarity, although there are now ten records for Britain, seven of these since 2000.



## Introduction

The spate of 'new to Britain' accounts in *BB* during the past five years is a reflection of a number of factors, among them an editorial policy to maintain the tradition of documenting the first accepted records of new species and subspecies for Britain (something that was in arrears by the early part of the present decade), and an increase in species and forms new to Britain in recent years. Some recent accounts have described birds that occurred some considerable time ago (e.g. Murray 2009). Although the finder's account of the circumstances of the observation has often been published elsewhere, soon after the event, there is generally much of interest to report from subsequent assessments by BBRC and BOURC, while (for example) records elsewhere in the Western Palearctic, population trends and an analysis of weather patterns associated with the first and subsequent arrivals all add value to a later account.

None in the recent series goes back quite so far, and has such a convoluted history, as that of Sykes's Warbler *Hippolais rama* in Britain. Adding the traditional 'new to Britain' suffix in the title would be stretching it in this particular case, since the first record was over 50 years ago.

Some of the information in this short article has been published before, although some important elements have not been previously published and there seems merit in bringing the information together in one place, for the record. The various strands to the story are presented in chronological order.

## William Henry Sykes

Saluted by Mearns & Mearns (1998) as one of the great pioneers of Indian ornithology, W. H. Sykes (1790–1872) entered the Bombay army in 1804 and served in various military campaigns in India in the early years of the nineteenth century. During his time in India he made extensive zoological collections, and his 'Catalogue of Birds of the Raptorial and Incessorial orders observed in the Dukhun', published in *The Proceedings of the Zoological Society* in 1832, appears to have been the first systematic catalogue of birds for any part of India. In that report, he first described 'Sykes's Wagtail' *Motacilla flava beema* (the 'flava wagtail' of southeast Russia that winters in India), as well as what was to become known as Sykes's Warbler *Hippolais rama*. The use of the vernacular name 'Sykes's Wagtail' was first used by Ticehurst, in *British Birds* in 1907, but the wide-

spread use of 'Sykes's Warbler' is a much more recent development. Until the early years of the present decade, *H. rama* was treated as conspecific with *H. caligata*, and the vernacular name of Booted Warbler was used to encompass both. The two taxa are essentially central Asian breeding species, with the range of *rama* lying to the south of that of *caligata*, from southern Kazakhstan to northwest China, Iran, Afghanistan and northern Pakistan. An isolated population breeds in mangroves on both sides of the Persian Gulf, although the true taxonomic status of these birds is yet to be fully established.

#### Fair Isle, August 1959

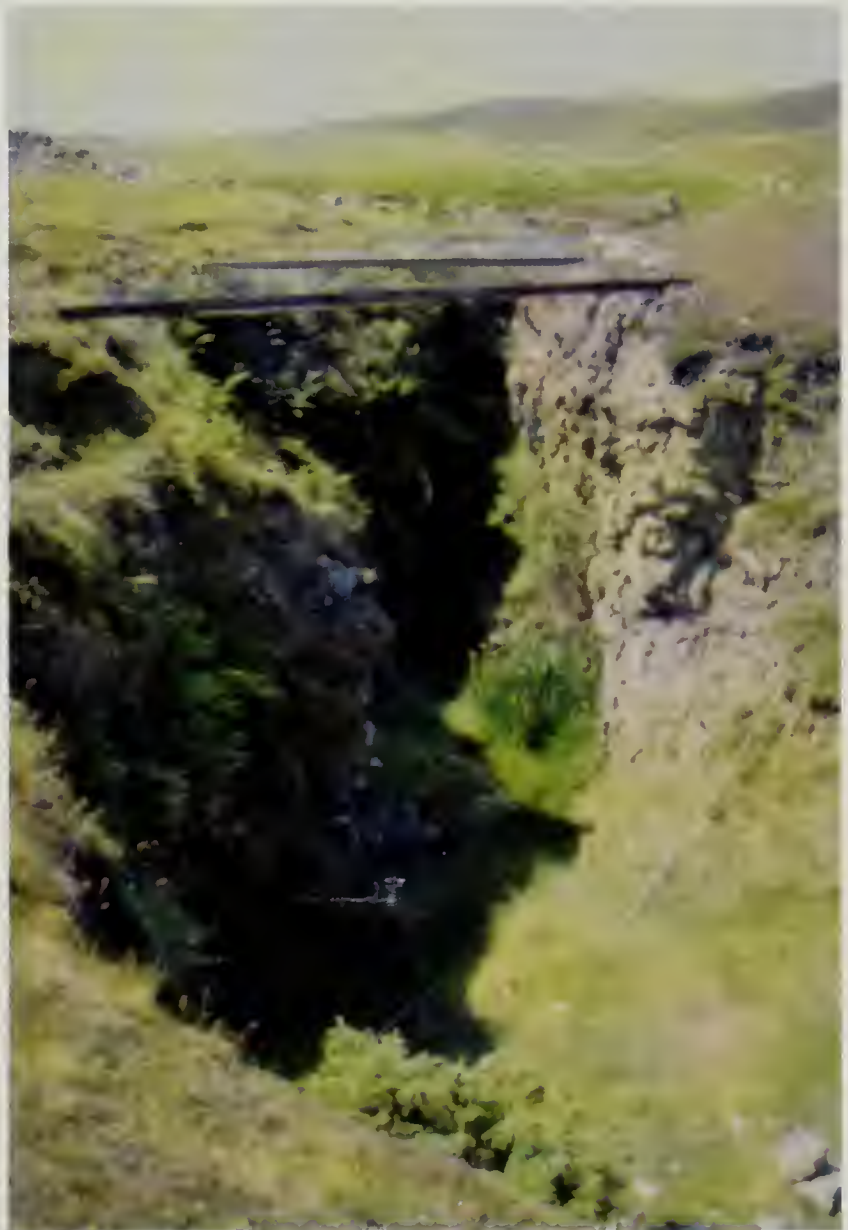
The observatory 'chatty log' sets the scene for 29th August 1959, a day of light northwesterly winds, bright periods and few showers. It was a generally quiet day for birds, although an Icterine Warbler *H. icterina* and three Barded Warblers *Sylvia nisoria* remained on the isle and notable unexpected arrivals included two Common Rosefinches *Carpodacus erythrinus* and an early Jack Snipe *Lymnocyptes minimus*. A handful of guests were staying at the observatory, and one of these, J. Bazey, accompanied assistant warden Roy Dennis on the first round of the Heligoland traps. Driving the Gully trap (an underwhelming name for the impressive Heligoland trap that spans the deep ravine of the Gilsetter Burn; plate 400), they trapped what was eventually accepted as Britain's first Sykes's Warbler.

At the time, this was only the second British (and Fair Isle) record of 'Booted Warbler' (*sensu lato*), the first being a specimen of *H. (c.) caligata* that had been shot by George Stout on the island in September 1936. None of the staff or visitors to Fair Isle in August 1959 had had any prior experience of 'Booted

Warblers', although the small observatory skin collection contained a specimen of Eastern Olivaceous Warbler *H. pallida elaeica* that was useful for direct comparison. The bird trapped in the Gully that day was examined at the observatory by Peter Davis, the Fair Isle warden; the accuracy of his description and careful measurements (see Davis 1960) proved a key factor in the bird's subsequent elevation to a first for Britain.

The following description was taken of the bird in the hand (Davis 1960):

*Upper-parts, head, wing-coverts and upper tail-coverts:* pale sandy grey-brown (without any olive tint), a little darker on the crown; a fairly distinct buffish-white superciliary, most obvious in front of the eye, and narrow orbital ring of the same colour. *Flight-feathers:* rather darker than



400. The Gully trap, Fair Isle, June 2003.

upper-parts, with buff edgings to the outer webs; outermost tail-feathers with buff-white outer webs, and penultimate pair marked buff-white at the tips of the outer webs. *Under-parts and axillaries*: silvery-white, with a buff tinge on the flanks and across the breast. *Soft parts*: bill (slender for a *Hippolais*) with dark horn upper mandible, lower tipped same but very pale pinkish at base; inside of mouth daffodil yellow; legs pale brown with blue-grey overtone, as in the commoner *Hippolais* species; iris dark olive. *Measurements*: wing 62.5 mm, bill 15.5, tarsus 21, tail 53 (outer feathers 50); bill 3.5 mm wide at base of nostrils. *Wing-formula*: 1st +8, 3rd and 4th longest, 2nd -6, 5th -1, 6th -3.5, 7th -5, 8th -8.5; 3rd to 5th emarginate, 6th slightly so; secondaries equal to 10th primary. *Weight*: 8.4 g at 06.30 GMT. The entire plumage (including body-feathers) appeared worn and faded; the tips of the longest primaries were slightly chipped, the tail more abraded.

Davis's account in 1960 compared the biometrics of the Fair Isle bird with those of (then) *H. c. caligata*, *H. c. rama*, *H. p. elaeica* and *H. p. opaca*. Notably, even at that time, Davis considered it more likely to have been an example of *rama* than nominate *caligata*, based on his measurements. The bird itself was released after being measured and promptly disappeared. It was rediscovered on 31st August, close to the observatory at Mavers Geo, where it was watched in the field for almost an hour.

#### *Taxonomic and field-identification progress*

As described above, in 1959 and for another four decades or more, 'Booted Warbler' was considered a polytypic species by most authorities, with subspecies *caligata* and *rama* (though Stepanyan 1978, 1983 and Sibley & Monroe 1993 were exceptions). In 2002, BOURC published their decision to treat these two taxa as the separate species we have today, Booted Warbler *H. caligata* and Sykes's Warbler *H. rama* (Knox *et al.* 2002; Parkin *et al.* 2004). During the intervening period, the identification of and the literature concerning *Hippolais* warblers evolved, from the Ringers Guides by Kenneth Williamson (Williamson 1960; an early draft of which was available to Peter Davis on Fair Isle in 1959 – Williamson was his predecessor as Fair Isle warden), through Wallace

(1964) and various field guides, to the detailed paper by Lars Svensson in 2001 and an update two years later (Svensson 2001, 2003).

#### *Lerwick, October 1993*

A *Hippolais* warbler found in Shetland at Seafield, Lerwick, on 22nd October 1993, and which remained until 9th November, was initially a source of no little controversy (Osborn 1993). Early opinion favoured Booted Warbler on the basis of the plumage characters, but by the end of the second day the bird's structure, particularly its rather long bill, and its tail-flicking behaviour, seemed to point to Eastern Olivaceous Warbler. The bird was eventually trapped, measured and well photographed in the hand, and in due course was accepted by BOURC as the first record of *rama* for Britain (BOURC 1999) – at that time still regarded as a subspecies of Booted Warbler.

The experience gained from the Lerwick bird was retrospectively helpful to Irish observers still puzzling over another difficult *Hippolais*, on Cape Clear Island, Co. Cork, in October 1990. That bird, initially accepted as an Olivaceous Warbler, was subsequently reidentified, and accepted as Ireland's first (and, at the time of writing, still only) record of *rama* (McGeehan 1990; *Irish Birds* 7: 241–250).

#### *BBRC review of 'Booted Warblers'*

Spurred on by a mixture of the events and records described above, particularly the acceptance of the Lerwick *rama*, BBRC initiated a review of previous records of Booted Warblers, chiefly to investigate whether any of them might also be safely attributable to *rama*. This unpublished review was carried out by Paul Harvey and completed in February 2002. Harvey used all available information from published accounts, together with unpublished data (mainly biometrics) from Shetland/Fair Isle in particular, and established criteria for dealing with old records. In reviewing these old records, it was felt that it would be impossible to identify a Sykes's Warbler retrospectively based solely on written plumage descriptions, either of birds in the field or of birds in the hand. Given that photographs of most of the birds under consideration did not exist, this meant that biometrics of trapped birds were the key.

Svensson (2001) highlighted five key measurements for separating Sykes's and Booted

Warblers. These are 1) tail length, 2) tail/wing ratio, 3) bill length, 4) length of first primary, and 5) length of second primary. In summary, the BBRC review identified potentially acceptable individuals of *rama* as those for which two of the independent measurements (note that tail and tail/wing ratio are not independent) were diagnostic, after reasonable measurement errors were accounted for, as long as there were no indications to the contrary within the plumage description. The review identified two individuals as good candidates for Sykes's Warbler, and these were subsequently accepted by both BBRC and BOURC.

As described above, the first British record was found to be the Fair Isle bird of August 1959, also thought to be *rama* by Peter Davis (and Svensson 2001). For this individual, the bill-to-skull measurement (15.5 mm) was 1 mm longer than the longest measurement recorded for *caligata* (according to Svensson 2001), while the tail (53 mm) was 2 mm longer than the longest measurement recorded for *caligata*. In addition, tail/wing ratio (0.85) was well beyond the range of *caligata*, the first primary was 8 mm longer than the tip of the primary coverts (at the very limit of the *caligata* range) while P2 was very short (=7th–8th) – only 19% of *caligata* have P2 as short or shorter than this.

Another bird trapped on Fair Isle, on 20th August 1977, was accepted as the second British Sykes's Warbler. The bird was caught in the Observatory Heligoland trap and examined by, among others, Roger Broad, the warden, Mike Peacock and Martin Sutherland (Pennington *et al.* 2004); it remained on the island until 27th August. Again, bill length and tail length were longer than the range given for *caligata*, tail/wing ratio was well beyond the range for *caligata* and P2 was extremely short – shorter than that of 99% of *caligata*.

Once these two birds had been accepted, the Lerwick 1993 bird became the third record of Sykes's Warbler for Britain; these records were published as the first three British records in the BBRC report for 2003 (*Brit. Birds* 96: 594–595).

The review also highlighted two other records, on Fair Isle on 8th September 1968 and on Bardsey on 25th–26th September 1998 (*Brit. Birds* 100: 738), which also showed characters that suggested *rama*, but in both cases inconsistencies with the measurements or the submission in general meant it was felt that the individuals were not safely identifiable as *rama*.

### Subsequent records

A further seven records of Sykes's Warbler have been accepted in Britain. In 2000, one was trapped at Portland on 1st July (*Brit. Birds* 94: 489); in 2002, one was seen at Sheringham, Norfolk, on 23rd August (*Brit. Birds* 97: 606), another was trapped on North Ronaldsay, Orkney, on 26th August (*Brit. Birds* 98: 677) and a third was seen at Beachy Head, Sussex, on 31st August (*Brit. Birds* 97: 606); in 2003, two more were trapped in the Northern Isles, one on North Ronaldsay from 29th September to 1st October and another on Unst, Shetland, during 4th–8th October (*Brit. Birds* 97: 606); and the most recent record concerned one at Sumburgh, Shetland, on 25th September 2008 (*Brit. Birds* 102: 583). The fact that three of these were accepted as field-only records, two of them as early as 2002 when most birders were only dimly aware of the species, is notable, and gives hope to rarity hunters in future autumns. All three of the non-trapped birds were photographed, and the images of the Sussex bird won the Carl Zeiss Award for 2004 (*Brit. Birds* 97: 542–544). The fact that five of the ten British records involve birds that arrived in August, with another in early July, is also notable. Diagnosability issues remain with some individuals, and the species is retained in the category where records of Booted/Sykes's will be considered and published. Records accepted as indeterminate comprise those on Fair Isle, 8th September 1968; at Land's End, Cornwall, 10th–15th September 2002; and Tarbart Ness, Highland, 19th August 2006.

Elsewhere in Europe, Sykes's Warbler remains a real rarity. Slack (2009) listed two Norwegian records (11th September 1983, 20th September 1997; details of a third, in September 2008, have not yet been submitted), two Swedish records (3rd September 1995, 19th August 2002), and singles from the Netherlands (11th October 1986), Finland (9th October 1997), Iceland (14th September 2002) and Germany (30th September 2003).

### Acknowledgments

I am grateful to Paul Harvey for a copy of his unpublished BBRC review, Deryk Shaw for copies of the Fair Isle chatty log, and Paul Harvey and Adam Rowlands for reading a draft of this paper.

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## Looking back

### *One hundred years ago:*

'MARSH-WARBLER BREEDING IN KENT AND WORCESTERSHIRE. I have recently had brought in to me for identification a nest and five eggs which undoubtedly belong to [*Acrocephalus*] *palustris*. They were taken by an entomologist and sent to my friend as a peculiar clutch of Reed-Warbler's eggs. They are typical and rather larger than those from the Continent; the nest is very much like the one described by me in Vol. II., p. 183, of this magazine, except that it is rather deeper on the inside. It was found on an old rubbish-heap, overgrown with nettles and cow-parsnip, on June 22nd, near Birchington. The four supports round which the nest is built consist of nettle and corn, one of the nettle and two of corn are apparently of last year's growth. The eggs were quite fresh. It may interest Mr. W. Davies (*cf.* p. 157) to know that I have in my collection a clutch of four eggs of the Marsh-Warbler with a Cuckoo's egg, taken in Worcestershire on June 25th, 1904. They were sent to my correspondent as the nest and eggs of a Reed-

Warbler. The nest was typical, but the eggs are unusual, though they have the characteristic peppered specks which are one of the principal distinguishing features in the eggs of *A. palustris*. I believe this to be, with one exception, the only British record of the Cuckoo having used the nest of the Marsh-Warbler. Mr. Warde Fowler records the one other in the "Zoologist" (Vol. X., p. 403). Percy F. Bunyard.' (*Brit. Birds* 3: 185, November 1909)

'DIMORPHISM IN THE CROSSBILL. So far as the material at my immediate command goes, the upper mandible of the Common Crossbill (*Loxia curvirostra*) is sometimes to the right of the lower, and in some individuals to the left. The muscles for opening and closing the jaws, and those parts of the skull to which they are attached, are far larger on the side to which the lower mandible is twisted. The bird thus provides an instance of pure dimorphism, which is a much rarer thing than dichroism in British birds; indeed, it is probably the only case. Fredk. J. Stubbs.' (*Brit. Birds* 3: 194–195, November 1909)

# Conservation research news

Compiled by Guy Anderson, Rob Field and Juliet Vickery



## Climate change affects both phenology and abundance of Golden Plover chick food

The European Golden Plover *Pluvialis apricaria* is one species in Britain that may well be susceptible to climate change. If changing temperatures cause craneflies (Tipulidae), a key food resource, to emerge before or after the period of peak chick food requirements, food availability for both adults and chicks would be low and productivity reduced. Recent research (Pearce-Higgins *et al.* 2009) suggests that climate change may inflict a 'double whammy' on the plovers by reducing the overall population size of craneflies as well. The Environmental Change Network provides long-term data on cranefly numbers and shows that they are closely synchronised with temperature in the preceding August – high temperatures are usually followed by low numbers emerging the following year. Interestingly, Golden Plover populations were negatively correlated with the August temperature *two* years earlier – they were lower if the August two years earlier was hotter. This is just what we might predict, since plovers

breed poorly when craneflies are scarce and this is reflected in a lower population the following year. For Golden Plovers, reduced prey abundance combined with changes in the timing of emergence of a key prey species could result in severe population declines. One possible way to mitigate this impact may be to block the drainage ditches cut into blanket bogs for forestry or agriculture. Higher water levels will help to reduce desiccation of the larval craneflies and help to sustain populations in the face of warming climate. More broadly, the work highlights the complexity of the relationships between species and their environments and how difficult it may be to predict possible impacts of climate change.

Pearce-Higgins, J.W., Dennis, P., Whittingham, M. J., & Yalden, D.W. 2009. Impacts of climate on prey abundance account for fluctuations in a population of a northern wader at the southern edge of its range. *Global Change Biology*. DOI:10.1111/j.1365-2486.2009.01883.x  
Published online

## Post-Soviet steppe grazing and Sociable Lapwings in Kazakhstan

The Sociable Lapwing *Vanellus gregarius* underwent a severe and prolonged population decline during the twentieth century. Once abundant on the steppe grasslands of European and Asian Russia, Ukraine and Kazakhstan, the species is now extinct in over half its former range and post-breeding flocks in Kazakhstan declined from tens of thousands in the 1900s to just tens in the late twentieth century.

There is uncertainty over the causes of such a precipitous decline, with suggestions that habitat change due to the loss of domestic and

wild grazers, poor productivity, and hunting on passage and in wintering areas may all be partly culpable. A recent study (Kamp *et al.* 2009) has examined the habitat associations of breeding Sociable Lapwings in central Kazakhstan, in one of their last known breeding strongholds. It was found that breeding colonies (this species really is 'sociable') were more likely to be close to villages and rivers, and that, within colonies, nest-sites were more likely to be placed in areas most heavily grazed by livestock. Despite this being an area of very low (human) population

density, most Sociable Lapwing nests were within 2 km of settlements. Such areas of suitable breeding habitat made up only 6–8% of the total study region (30,000 km<sup>2</sup>).

The authors discuss this link to domestic grazers in the context of social change in Kazakhstan and Russia. The decline of the Sociable Lapwing coincided with the conversion of vast areas of steppe grassland to arable farmland, and the subsequent intensification of arable management during the Soviet period. This period was also characterised by the hunting, to near extinction, of the wild ungulate populations of Saiga Antelope *Saiga tatarica* and Wild Ass *Equus hemionus*. However, more recent declines in Sociable Lapwings coincided with the end of the former Soviet Union. During the 1990s, the collapse of large, state-owned farming companies, and the loss of the large wide-ranging herds of herbivores that they owned led to reduced grazing over large areas. All these factors will have severely altered the availability

and distribution of short, grazed grasslands favoured by breeding Sociable Lapwings, and have forced the remaining population into a highly 'synanthropic' (ecologically associated with humans) breeding pattern.

Continuing economic and social change in Kazakhstan is likely to alter the farming of the steppe further. The management of domestic grazing animals is likely to change, and the area of steppe under intensive arable management likely to increase, both of which may have negative implications for Sociable Lapwings and other steppe breeding species. Understanding the relationship between human activities and Sociable Lapwings will help predict the consequences of such changes.

Kamp, J., Sheldon, R. D., Koshkin, M. A., Donald, P. F., & Biedermann, R. 2009. Post-Soviet steppe management causes pronounced synanthropy in the globally threatened Sociable Lapwing *Vanellus gregarius*. *Ibis* 151: 429–439. DOI:10.1111/j.1474-919X.2009.00938.x  
Published online

## Ground-nesting birds suffer most from agricultural intensification

A recent study in France (Bas *et al.* 2009) suggests that ground-nesting birds have been hit harder by agricultural intensification than birds nesting in field-boundary habitats. The abundance of breeding farmland birds in more than 7,000 study plots across France, surveyed between 2001 and 2006, was compared with measures of agricultural production intensity (composite scores incorporating livestock stocking rates and crop yields). Thirteen of the 19 ground-nesting bird species studied showed lower abundance in areas with higher production intensity, whereas only five of 24 hedge-nesting species did so.

Hedge-nesting species clearly have the potential to be affected by agricultural intensification – for example through loss of insect or weed-seed food – but this study suggests that it is those species nesting directly within cropped or grazed areas that suffer most. This is perhaps not surprising when some of the components of increased production intensity are considered: more uniform and more rapid crop growth leading to reduced variation in vegetation structure and reduced ground access (and hence fewer nesting opportunities); and increased

applications of fertilisers and pesticides and earlier harvesting of crops, all increasing the chances of nest destruction from agricultural operations. Higher stocking rates and grazing intensity can also reduce the variation in vegetation structure, reduce nesting opportunities and increase the risk of nests being trampled.

The results of this study probably apply equally to the UK and other parts of Europe. Indeed, many of the UK's most threatened farmland birds (e.g. Grey Partridge *Perdix perdix*, Northern Lapwing *Vanellus vanellus* and Sky Lark *Alauda arvensis*) are ground-nesters, which rely on suitable field areas and vegetation structure for successful breeding. Clearly, the 'farmland bird problem' will not be solved by simply planting more hedges. Measures that apply to the cropped or grazed field areas, and that radically improve their suitability as nesting habitats, are vital if Europe's farmland birds are ever to recover from decades of population decline and range loss.

Bas, Y., Renard, M., & Jiguet, F. 2009. Nesting strategy predicts farmland bird response to agricultural intensity. *Agriculture, Ecosystems and Environment* 134: 143–147.

## Job vacancy: defender of British and Irish subspecies

Eaton *et al.* (2009) acknowledged that the listing for races of conservation concern in *BoCC3* may have been 'less robust than that for species'. They noted also that the BOU checklist of the birds of Britain, last revised in 2006 (Dudley *et al.* 2006), did not provide 'a definitive starting point' for their purposes, owing to differences of opinion on the validity of some races. In the last decade, I have raised this issue in letters or conversations with six members of the BOU Records Committee, BirdLife International and two national museums and also three old friends expert in taxonomy and conservation. My main point was that our duty of care for endemic taxa would never be exercised properly until there had been a reassessment of them using modern study disciplines. The professional responses varied, from expressions of little or no belief in the study value of subspecies to admissions of insufficient resources to judge species, let alone subspecies. They contrasted sharply with our elders' enthusiasm for the task. Depressingly, I concluded that there was no chance of concerted establishment will to address the problem.

Nonetheless, after the introduction of some subspecies into the UK Biodiversity Action Plan (see, for example, Eaton *et al.* 2007) and the listing of even more in *BoCC3*, the British conservation lobby clearly desires a new drive towards a definitive subject list. The forthcoming *Status of Birds in Britain and Ireland* (D. T. Parkin & A. G. Knox in prep.) will certainly help since, apart from some measured commentaries in Forrester *et al.* (2007), no review of subspecies, backed by careful museum research, has appeared since those of *BWP*, two decades or more ago. Yet, of those enshrined in the Witherby *Handbook*, about 20 are regularly mentioned in local bird reports while, among the listing fraternity at least, vagrant races now glitter (e.g. Garner 2008). I contend that a willing workforce of skilled observers and ringers could assist our conservators and museum workers to establish which taxa have subspecific validity – and hence which merit conservation action.

In contrast to the BOURC Taxonomic Subcommittee's limited mention of subspecies in its long trek to new species parameters (Knox *et*

*al.* 2002), the RIACT group of BBRC has recently called for attention to over 100 races. The major new European works in preparation by Kees Roselaar, Hadoram Shirihai and Lars Svensson will doubtless be a further spur to action, but it is surely better to accept the thrust of *BoCC3* now rather than later, and prioritise the redefinition of the endemic/near-endemic British and Irish subspecies, i.e. those for whose breeding habitats we have most responsibility. There are only about 50 of them but as the termini of evolutionary paths across Eurasia, they are surely more precious than all their vagrant competitors or yet more expensively re-introduced raptors.

I am in little doubt that some of the *BoCC3* targets will prove illusory. I recognise annually rufous-toned Sky Larks *Alauda arvensis* (*scotica*) and Meadow Pipits *Anthus pratensis* (*whistleri*) as migrant morphs, particularly in autumn, but after 15 years of searches within their claimed breeding ranges, I have found none in situ. Conversely, I have faith that the Hebridean Song Thrush *Turdus philomelos hebridensis* is real and even wanders well away from the northwest (e.g. Mather 1986). For such puzzles, those who regard DNA and like patterns to be the new sine qua non can be supplied with feathers but nothing will actually happen in the current void of organised field effort.

There is no good reason for taxonomic confusion or indolence to fog our most individual birds any longer. If the Outer Hebridean Corn Bunting *Emberiza calandra* (*clanceyi*) is real, it needed a personal action plan yesterday. Who precisely is to fight its corner? Job clear; holder(s) not so.

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## Has the flight mode of Honey-buzzard evolved to mimic that of Common Buzzard?

Duff (2006) argued that the plumage of juvenile Honey-buzzards *Pernis apivorus* has evolved to mimic that of the Common Buzzard *Buteo buteo*. He suggested that this lends juvenile Honey-buzzards a more aggressive appearance, which lessens the chance of attack by Northern Goshawks *Accipiter gentilis*. In Prytherch (2009), which described the social behaviour of the Common Buzzard, a key feature is that less dominant individuals adopt a flat-winged soaring profile in the presence of dominant birds, for example when intruding into occupied breeding territories (although an adult moving through its territory in the absence of intruders also adopts a flat-winged posture; p. 250). Combridge (2000) drew attention to the flat-winged soaring posture habitually adopted by juvenile Common Buzzards from about June to 'autumn', and indeed juveniles are generally less dominant than adults in most species.

A flat-winged soaring posture is generally seen as an identification feature for Honey-buzzards at all ages. It occurs to me that the period between June and autumn is the time when

adult Honey-buzzards might come into contact with Common Buzzards. Could the Honey-buzzard's habitual flat-winged mode of soaring have evolved to mimic that used by less dominant Common Buzzards so that adult Honey-buzzards avoid conflict with breeding pairs of their larger and more abundant relative? I also wonder whether the different shapes of adult and juvenile Honey-buzzards are similarly adaptive – adult Honeys being shaped more like the less dominant juvenile Common Buzzards, whilst juvenile Honey-buzzards are shaped more like the more dominant adult Common Buzzards. I am a non-specialist raptor enthusiast so these speculations are not authoritative, but perhaps those more qualified to comment will respond.

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## Nightjars at sea

Bob Flood's recent paper (Flood 2009) reignited discussion on whether many of the claimed 'all dark' storm-petrels seen from shore in western Europe are really European Nightjars *Caprimulgus europaeus* and reminded me of the following incident.

During a *Birdquest* tour to Oman and Bahrain in autumn 2007, we were making the 18-km crossing from the mainland of Oman to the island of Masirah on a vehicle ferry on the morning of 1st November. Our leader, Mike Watson, had informed us that previous groups

had seen European Nightjars on this crossing, yet a series of (at least six) petrel-like birds seen out of sight of land still caused excitement in case they proved to be Jouanin's Petrels *Bulweria fallax*. They were, however, European Nightjars and at least two approached the ferry, one landing below the parked lorries, another coming to rest on the rail in close proximity to passengers (plate 401). Some appeared to follow the ferry (plate 402), while others didn't; and it seems possible that those that did not approach the ferry closely could have been recorded as

petrels given the relatively rough seas that day.

We speculated as to whether these birds were diurnal migrants (although those we saw were apparently heading east towards Masirah rather than west towards Africa), migrants waiting for darkness before making landfall (Nightjars at sea off the Dorset coast have been seen mainly in the evening but the Oman birds were seen mid morning so would have had a long wait for darkness), or feeding on invertebrates migrating across or blown over the sea.

#### Reference

Flood, R. L. 2009. 'All-dark' *Oceanodroma* storm-petrels in the Atlantic and neighbouring seas. *Brit. Birds* 365–385.



Ian Lewis



Mike Watson

**401 & 402.** European Nightjars *Caprimulgus europaeus* seen from the ferry between mainland Oman and Masirah, November 2007.

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## The recent status of Blyth's Pipit in southern Siberia

Blyth's Pipit *Anthus godlewskii* is a characteristic inhabitant of the Mongolian steppes. Glutz von Blotzheim & Bauer (1985), Cramp (1988) and Alström & Mild (2003) defined the northern boundary of its range approximately from the eastern Altay Mountains, east via the southern slopes of the Sayan Mountains and in the region southwest, south and southeast of Lake Baikal, north to 53°N. These references suggest that it occurs regularly in the southern parts of the Republic of Buryatia, which is confirmed by local Russian ornithologists. However, population density in this area is very low, and the bird is restricted to fragments of rocky and hilly steppe that continue across the border from

Mongolia. I am not aware of any reference to the species being other than scarce in this region.

During a trip to the southern and southwestern parts of Buryatia in May/June 2008, I was surprised to find Blyth's Pipits in substantial numbers in several areas, including the lower reaches of the Tunkinskiy valley where the species did not formerly occur (T. Dorzhiev *in litt.*; pers. obs. 2005). In the area between Ulan Ude and the Mongolian border, the species was recorded in most of a number of randomly selected stops along the main roads. During the same period, Krister Mild travelled in Buryatia and subsequently shared notes from



**Fig. 1.** North-central part of the breeding range of Blyth's Pipit *Anthus godlewskii* (green; from Alström & Mild 2003). Observations from 2008 are plotted in orange.

his trip. A compilation of our observations is shown in table 1.

Southern Buryatia is situated on the northern edge of the breeding range of Blyth's Pipit, and thus population fluctuations are not unexpected. However, it was also notable that, in 2008, breeding birds were found in a wider variety of habitats than described earlier, including the (normal) dry and hilly steppe-slopes, but also in flat meadow landscape and, most surprisingly, small and rather wet pastures deep into the conifer taiga north of Ulan Ude. Dorzhiev (*in litt.*) confirmed that an increase in numbers and an expansion of the breeding range have taken place in Buryatia during the present decade, and that the species is now found in wetter habitats too. Nonetheless, compared with reports covering most years between 2001 and 2006, 2008 stands out as an exceptional year.

In a European context, and with potential vagrancy in mind, it would also be interesting to learn more about the current situation in the northwestern part of the breeding range. I have few recent data from this area, but

Magnus Hellström



**403.** Blyth's Pipit *Anthus godlewskii*, Ulan Ude, Russia, May 2008.

Magnus Hellström



**404.** Breeding habitat of Blyth's Pipit *Anthus godlewskii* in the northern suburbs of Ulan Ude, Russia. Around 20 singing birds were present here in 2008.

during a trip to the Altay Mountains in 2007 I visited several locations from Barnaul, Russia, southeast to the Great Lake basin in north-west Mongolia. Despite suitable habitat, for example in the Chuya Steppe, Blyth's Pipit was not recorded in the Russian Altay, where it is said to occur (Alström & Mild 2003). Farther south-east, in Mongolia, two colonies were found

on the east and southeast side of the Kharkhira massif, and a few single birds were recorded as probable migrants. Otherwise, the species was absent from large areas of seemingly optimal habitat. Set against published data, the observations from Altay in 2007 cannot be interpreted as signs of a population increase or range expansion, but unfortunately I have no reference to the situation in Altay during 2008.

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**Table 1.** Records of Blyth's Pipit *Anthus godlewskii* in Buryatia, spring 2008.

no.	Ulan Ude area		
c. 5	Pokrovka, c. 70 km NNW of Ulan Ude	52°9'25"N	107°16'44"E
c. 20	Northern suburbs of Ulan Ude	51°53'21"N	107°39'53"E
6	Talgoy, c. 15 km SE of Ulan Ude	51°43'38"N	107°27'14"E
10	c. 5 km SW of Klyuchi	51°38'55"N	107°8'34"E
5	W of Orongoi	51°31'52"N	106°58'42"E
10	12 km S of Gusinoozersk	51°10'42"N	106°31'51"E
no.	Borgoi area		
c. 60	3 km S of Beloozersk	50°37'26"N	105°43'7"E
11	E of Beloozersk	50°39'1"N	105°43'24"E
c. 10	c. 8 km SE of Beloozersk	50°35'18"N	105°46'23"E
15	c. 3 km W of Beloozersk	50°32'3"N	105°9'35"E
40	c. 5 km SE of Beloozersk	50°36'36"N	105°44'43"E
no.	Tunkinskiy valley		
c. 30	5 km SE of Ulbugay	51°46'18"N	102°21'7"E
2	S of Ulbugay	51°47'46"N	102°19'59"E
>5	c. 11 km SW of Ulbugay	51°43'37"N	102°13'23"E

#### Acknowledgments

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## Looking back

### *One hundred years ago:*

'ORTOLAN BUNTINGS IN NORFOLK. An unusual number of Ortolan Buntings (*Emberiza hortulana*) have appeared in Norfolk this autumn. I can vouch for the following at Cley:—Sept. 11th, one; Sept. 13th, two; Sept. 14th, one; Sept. 16th, one; Sept. 23rd, one. Three or four more birds, believed to have been of this species, were seen between these dates, but their identification was not so certain as to warrant their being recorded. F. I. Richards.' (*Brit. Birds* 3: 196, November 1909)

'MANX SHEARWATER IN WARWICKSHIRE. A Manx Shearwater (*Puffinus anglorum*) was picked up at Brownsover about two miles from Rugby, on the night of September 7th, and brought next morning to Mr. H. Boughton Leigh, with whom I was staying. The bird was a female in good condition. Mr. Gunn, of Norwich, to whom it was sent for preservation, mentions having received other examples from Wolverhampton and Dennington (Suffolk) at about the same time. A. L. Butler.' (*Brit. Birds* 3: 202, November 1909)

# Notes

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## Common Shelduck predated eggs of Common Coot

Robin Edwards



On 10th May 2009, I spent an hour in the East Hide at Minsmere, Suffolk, and witnessed some unexpected behaviour from a female Common Shelduck *Tadorna tadorna*, which attacked the nest of a pair of Common Coots *Fulica atra*. I watched the Shelduck taking three eggs; each in turn was taken around 10 m or more from the Coots' nest and destroyed, although not eaten (plate 405).

405. Female Common Shelduck *Tadorna tadorna* with the egg of a Common Coot *Fulica atra*, Minsmere, Suffolk, May 2009.

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## Common Buzzard attempting to kill Tawny Owl

On 1st December 2008, while walking through Coed Crafnant North Wales Wildlife Trust reserve, Meirionnydd, my partner and I were surprised to see a Common Buzzard *Buteo buteo* rise from the Bracken *Pteridium aquilinum* in front of us gripping, and apparently

being held by, a rather damaged-looking Tawny Owl *Strix aluco*. The buzzard failed to get enough lift to take off and the two sunk back into the bracken, out of sight. After waiting in silence for a few minutes, we approached to find the two birds grasping each other's legs with

Paul Jerem



Paul Jerem

406 & 407. Common Buzzard *Buteo buteo* and Tawny Owl *Strix aluco*, Coed Crafnant, Meirionnydd, December 2008.

such concentration that we were able to get within a metre or two without them showing any sign of letting go or fleeing. I took a couple

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**EDITORIAL COMMENT** Although it is not unusual that diurnal raptors such as buzzards will kill owls, including Tawnies (e.g. Mikkola 1976), the photographs of this encounter merit publication.

**Reference**

Mikkola, H. 1976. Owls killing and killed by other owls and raptors in Europe. *Brit. Birds* 69: 144–154.

## Mediterranean Gulls in Hampshire

During the springs of 2008 and 2009, a concentration of Mediterranean Gulls *Larus melanocephalus* has been evident between Calshot and Lepe, on the Solent coast of Hampshire. The gulls gather in large numbers in a spent gravel working known as Badminton GP, along with larger numbers of Black-headed Gulls *Chroicocephalus ridibundus* and much smaller numbers of large gulls. In spring 2009, there were regular counts of over 500 Mediterranean Gulls, with a peak of 554 on 1st April – mostly adults, with fewer than 40 first- and second-summers. Numbers gradually dwindled to fewer than 20 by the beginning of May.

When the numbers peaked, many birds could be seen feeding in the adjacent pig fields, often following the mechanical pig-feed spreader. Upon closer observation, they could sometimes be seen swallowing the pig-feed pellets. It would seem that this artificial food supply provided a major attraction to the area. Occasionally, pellets were carried to the gravel-pit and the birds could be seen swallowing the pellets whole. I understand that these pellets consist of mixed cereal grains and can contain some additives to aid digestion (lecithin) and to promote growth (copper sulphate). The pellets are approximately 3 cm long and 1.8 cm in diameter but are frequently broken or crushed

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of photos (plates 406 & 407) before we left them to it.

into smaller pieces. Non-natural food items for Mediterranean Gulls listed in *BWP* are limited to 'rubbish and sewage outside of the breeding season', so the intake of these feed pellets as a food source may be considered unusual at the beginning of the breeding season, and they are perhaps the main reason for the local concentration of this species.

Also of interest is that many colour-ringed Mediterranean Gulls were observed in the area in spring/summer 2009 by local birder Paul Winter, including no fewer than 75 for which the data of origin are known. Most of these originated from Belgium (40, incl. 22 ringed as pulli) or France (15, incl. 10 ringed as pulli), yet included significant numbers ringed in Germany (11, incl. 9 as pulli), plus a few from Poland (4, all ringed as pulli) and Hungary (4, incl. 2 ringed as pulli) and one British-ringed bird. The land currently used as pig fields is part of an area due to be cleared for gravel extraction; it remains to be seen whether the area is similarly attractive to Mediterranean Gulls next spring, without the pigs.

**Acknowledgments**

I wish to thank Mark Moody for his help with this note and Paul Winter for his colour-ring observations (<http://patchwatch.co.uk/pbadgulls.asp>).

## Unusually large assembly of Hoopoes

The Hoopoe *Upupa epops* is usually referred to as solitary; *BWP* refers to small family parties of 8–10, with one group of 12 in Switzerland seemingly the maximum noted, while del Hoyo *et al.* (2001) mention small,

loose flocks of up to 25 outside the breeding season and small feeding flocks of fewer than 10 in pre- and post-breeding periods. A brief mention of an unusually large assembly (Bundy & Morgan 1969) may be worth

repeating here, and in more detail.

At the Libyan airport (then known as Idris airport), 28 km south of Tripoli, unusually large assemblies were recorded in the autumns of 1964 and 1965. Counts were made from August to October at a small, well-watered cricket pitch of about 0.4 ha, surrounded by mature tamarisk *Tamarix*. This area was in a generally arid, partially cultivated coastal zone and no doubt proved a magnet for feeding birds, both resident and migrant. Hoopoes bred in small numbers in the surrounding buildings, a population estimated at about five pairs, and small numbers also overwintered.

On 27th August 1964, 138 were counted on the cricket pitch and on 29th there were 105+. On 23rd September there were 80, then 90 on 25th, 98 on 16th October and 12 on 30th October. From early November that year only six remained to winter, but there was a small

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influx of 23 on 12th November. In 1965, a similar pattern was recorded but only during September, the bulk of migrants passing earlier than in 1964. A loose 'flock' of 35+ was seen on 9th–10th August, when a few juveniles were food soliciting. On 6th September, 120 were counted and numbers peaked at 172 on 9th; numbers dwindled to 40 by 20th and to 10 by the month's end.

Although the pitch was maintained in a similar state throughout the year, there were no such assemblies in spring, when migrants of other species were much more conspicuous. Doubtless the pitch was a productive feeding ground in autumn, in an otherwise arid region.

#### References

- Bundy, G., & Morgan, J. H. 1969. Notes on Tripolitanian birds. Part II. *Bull. BOC* 89: 151–159.  
del Hoyo, J., Elliott, A., & Sargatal, J. (eds.) 2001. *Handbook of the Birds of the World*. Vol. 6. Lynx Edicions, Barcelona.

## Green Woodpecker using a natural tree hole as a nest chamber

The reports by Alan Prowse and Ken Smith (*Brit. Birds* 102: 143, 282) of Great Spotted Woodpeckers *Dendrocopos major* using natural holes as nest cavities recall the following. In the late 1940s, I noticed a Green Woodpecker fly from an isolated Ash *Fraxinus excelsior* tree on

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the South Downs near Clayton, Sussex; on inspecting the tree I found a nest and eggs in what appeared to be a large natural knot-hole where a branch had been lost. The hole may have been trimmed to fit, but not much.

## Unusual Blackbird breeding behaviour

In spring 2008, I recorded some unusual Blackbird *Turdus merula* breeding behaviour. On 15th March, a female Blackbird began to build a nest in my back garden in East Boldon, Durham. The female laid four eggs and these began to hatch on 12th April. The next day, three young were in the nest. On 27th April, I saw both the male and the female feeding two young, which by now were large and visibly exercising on the nest. Shortly after, and with both young still in the nest, I was surprised to see the female begin building a new nest around 60 cm from her current one. Both young left the nest the following day. Blackbirds do occasionally commence their next breeding attempt before the young have left the nest, and certainly before the young are fully independent

(Snow 1958). The fact that this female began to build her next nest before her first brood fledged may partly explain what happened next.

On 1st May, the female laid the first egg of her second clutch in the new nest, and the second egg on 2nd, between 17.00 and 18.00 hrs. On the morning of 3rd May there were still two eggs in the nest but at 16.00 hrs, I was astonished to see a fledgling Blackbird sitting on this new nest. While watching, the female appeared, fed the fledgling on the nest and then squeezed onto the nest beside the young bird, presumably from her first brood. Both birds were gone by 17.00 hrs and the nest now held three eggs! The next morning the nest still contained three eggs. At 14.00 hrs, a fledgling appeared on the nest again and at 15.30 hrs, it was still on the nest

(and therefore the eggs) and fed by the male. On checking at 20.00 hrs, I noted that the female was sitting alone on the nest. The fledgling was not seen near the second nest again and the female went on to lay five eggs, which hatched on 17th May. I can find no recorded evidence of this behaviour in Blackbirds, or indeed other

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**EDITORIAL COMMENT** Angela Turner has commented that Barn Swallows *Hirundo rustica* have been known to return to a nest with newly laid eggs after fledging too.

### Variation in the eyelid colour of Long-tailed Tits

During the spring of 2008, I was brought a nestling Long-tailed Tit *Aegithalos caudatus* (it was actually a case of mistaken identity; it was supposed to be a House Martin *Delichon urbicum!*), which I subsequently managed to rear successfully. This proved to be a most delightful interlude as the bird had a bright and charming character.

Perrins (1979) commented that the rim of the eyelids of Long-tailed Tits is either orange or pink when seen at close quarters, and that the colour for an individual bird can vary, although the reasons

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birds. Although such behaviour may often go unrecorded, it is probably more likely to occur where a pair still has attendant young when they commence their next breeding attempt.

#### Reference

Snow, D.W. 1958. *A Study of Blackbirds*. Allen & Unwin, London.

for such variation are not fully understood. In the case of the youngster that I reared, I found that the prospect of some tasty food morsel brought about an immediate and strong deepening of the eyelid colour, from pink to dark crimson, which lasted about five minutes before fading back to normal. During the few weeks spent caring for the bird, I did not observe anything else which had this effect.

#### Reference

Perrins, C. M. 1979. *British Tits*. Collins, London.

### Fledgling Great Tits feeding on wasp larvae

During the summer of 2005, wasps *Vespula* moved into an empty nestbox in my garden; they soon filled up the interior and started building onto the outside. In a matter of days this structure had reached an overall size of almost 50 cm across. Then one day I noticed that a newly fledged Great Tit *Parus major* had started to peck at the structure. Within minutes, another eight youngsters joined in and soon the tits had pulled the outer section of the nest apart; surprisingly, the adult wasps put up no defence whatsoever.

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Over the next few days the tits returned and completely cleaned out all the grubs from the inside of the box. By this time all the wasps had deserted. At no time did I observe any adult Great Tits and the youngsters were clearly very recently fledged. Adult Great Tits are known to take wasps (e.g. Birkhead 1974, *BWP*), but I am not aware of any records of fledglings feeding on the larvae.

#### Reference

Birkhead, T. R. 1974. Predation by birds on social wasps. *Brit. Birds* 67: 221–229.

**EDITORIAL COMMENT** These two notes were kindly passed on to *BB* by Chris Perrins, who was contacted initially by Gillian Westray. An old country name for the Great Tit is 'Bee-biter'; there are a number of references to them raiding bees' nests and taking adults, and in many cases these may relate to drone honeybees collected from a hive near the nest-site. However, this habit pales into insignificance compared with that of the Hungarian Great Tits that have discovered a taste for hibernating Common Pipistrelle *Pipistrellus pipistrellus* bats (Estok *et al.* 2009)!

Estok, P., Zsebok, S., & Siemers, B. M. 2009. Great Tits search for, capture, kill and eat hibernating bats. *Biology Letters*, DOI: 10.1098/rsbl.2009.0611 | Published online

## Common Raven nesting with Grey Herons

We pay at least three visits each spring to Denny Island, Chew Valley Lake, Avon, to monitor the colony of Grey Herons *Ardea cinerea* there. The island is well wooded with a mixture of mature deciduous and coniferous trees, with much fallen wood.

On 15th April 2009, we were surprised to hear Common Ravens *Corvus corax* calling anxiously over part of the heronry. The noise soon died away and we assumed that a prospecting bird was responsible. There is already one tree-nesting pair elsewhere on the lake margin, but we thought it unlikely to be these birds since their nest is 2.1 km away. But, on 1st May, we heard more Raven calls and then, as RJP was checking the heronry, an almost full-grown Raven nestling moved onto the side of one of the old Grey Heron nests. This nest had been marked as 'not in use' on our previous visit. We could see a few droppings and some wool on the sides; it was well built up, but without the copious droppings expected on an occupied heron nest. It was 12.2 m high in a Scots Pine *Pinus sylvestris*, close to the trunk about two-thirds up, so below the general canopy but with an outlook on one side to the lake. It was one of several closely spaced pines in the area, many of which contained Grey Heron nests.

On 13th May, the Raven chick, now a fledgling, was presumably still nearby in the trees to judge by the brief but noisy presence of the adults. The nearest active heron nest was less

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than 3 m away in an adjacent pine and contained large, feathered chicks. Astonishingly, within 15 m of the Ravens' nest there were 15 trees containing heron nests, 11 of them active in 2009 (compared with 21 in 2008). The missing 10 pairs of Grey Herons did not, however, disperse elsewhere in the heronry since the distribution of nests elsewhere was almost exactly the same as in 2008, with the overall total down by 12 (51 down to 39). The 'loss' of some nests, almost all close to the Ravens' nest, may have been due to the disturbance at the time of nest establishment. Otherwise the reduction may have been due to higher mortality during the previous cold winter (January/February 2009), although at another heronry (at Cleeve), 13 km to the northwest, numbers were up slightly. Or did some move from Denny Island to Cleeve?

Ratcliffe (1997) mentioned three examples of Ravens nesting in a heronry, in Radnorshire in 1942, Devon in 1945 and Ayrshire in 1946, and suggested that Ravens may gain some advantage of concealment from the presence of the herons. We thought it worth drawing attention to this type of nest-site in view of the presently increasing numbers and range of Common Ravens across lowland Britain.

### Reference

Ratcliffe, D. 1997. *The Raven*. Poyser, London.

## Common Chaffinches eating seeds of Monterey Pine from grounded cones

On several occasions in late March and early April 2009, I saw either a single male or single female Common Chaffinch *Fringilla coelebs* probing forcibly under the scales of cones of Monterey Pine *Pinus radiata* which I had collected beneath a local tree after winter snowfall and left in a pile in my Somerset garden. The winged seeds were extracted, mandibulated and the edible part swallowed. Monterey Pine cones are normally retained on branches for several years, with the scales remaining tightly closed; I understand that in California seeds are usually

released in response to the heat during forest fires, but release may occur earlier when cones are knocked to the ground.

According to BWP, Chaffinches will snatch falling conifer seeds in flight but seldom take them from hanging cones. There is no separate mention of Monterey Pine, a common introduced species in southwest England. In my recent observations, I was surprised at the vigour with which Chaffinches attempted to elevate the cone scales to extract the seeds.

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# Reviews

## AN ATLAS OF WADER POPULATIONS IN AFRICA AND WESTERN EURASIA

By Simon Delany, Derek Scott, Tim Dodman and David Stroud.  
Wetlands International and International Wader Study Group,  
Wageningen, the Netherlands, 2009.

524 pages; colour photographs, maps, tables.  
ISBN 978-90-5882-047-1. Hardback, £70.00.

This attractive volume is a heavy-weight in several senses: in avoirdupois, in authorship, in scholarship, and in the very considerable value of the large amount of data recorded between its covers. A4 in size, it weighs almost 2 kg, with 524 pages on quality paper (though with some show-through). The four main editors, who have themselves made major written contributions, have been assisted by a considerable number of other contributors. The number of wader species covered is similarly substantial – 90 in total, including the extinct Canary Islands Oystercatcher *Haematopus meadewaldoi* (just in case it is still around?). Casual Arctic breeders, such as White-rumped *Calidris fuscicollis* and Pectoral Sandpipers *C. melanotos* (whose breeding ranges appear to be spreading west), are not included.

The compilers are to be particularly commended in choosing to include African breeding species, a logical decision since many of the Eurasian species spend the non-breeding season in Africa. There is much less information available concerning the African species, so it is good to have it here, even if there are some bold guesses regarding the

various population sizes.

For conservation purposes it is important to define the geographical limits of the different populations (biogeographic populations, as opposed to subspecies), and defining these is one of the principal aims of the book. In total, while 149 subspecies of the 90 species are recognised, there are 230 biogeographic populations. Another of the features of the book is the identification of 'Key Sites', defined as locations where 1% or more of a population have been counted since 1990. The Key Sites are listed and mapped for each species. There is also a most useful compilation of Key Sites listed by country, which forms a 66-page appendix.

The Species Accounts, which form the vast majority of the book, range from a single page (Canary Islands Oystercatcher), to 10 pages per species (Avocet *Recurvirostra avosetta* and Black-tailed Godwit *Limosa limosa*), though more typically there are 3–5 pages per species. Each account commences with a single photograph of the species concerned (some better than others), and then follows a standard format, with discussion of geographical distribution, move-

ments, population limits and sizes, conservation status, habitat and ecology, and the key sites for the species concerned. Each of these sections is a thorough and up-to-date review of what is known. A detailed distribution map is provided for each species, usually occupying a full page, covering both breeding and non-breeding areas for all populations, and indicating the locations of the key sites.

Even the most avid wader enthusiast is hardly likely to read this book from cover to cover, but it amply repays dipping into; no-one can fail to learn from it. Moreover, its conservation value is immense, and it will be invaluable to those concerned with wader and wetland conservation. Species and areas for which there is a lack of data are highlighted, and this will surely stimulate further research.

The amount of work needed to produce this atlas was clearly very considerable, and all involved are to be congratulated for putting such a volume of data on record. Its publication highlights the need for similar compilations for the Americas, and for eastern Asia and Australia, particularly the Far East, where the threats to wader populations seem to be particularly great, centred on the all-important Yellow Sea area.

This is a book that every wader enthusiast with an interest in Europe or Africa will want for their library, though some may balk at the price.

*Richard Chandler*

## BIRDS OF ETHIOPIA AND ERITREA

By John Ash and John Atkins.  
Christopher Helm, A&C Black,  
London, 2009. 463 pages;  
872 distribution maps; many  
colour and black-and-white  
photographs and tables.  
ISBN 978-1-4081-0979-3.  
Hardback, £45.00.

Eleven years ago, John Ash and John Miskell published the groundbreaking *Birds of Somalia*, mapping bird distributions for what was probably the least-known country in Africa. With this new book, Ash and John Atkins complete a survey of the birdlife of the Horn of Africa in unprecedented depth and scholarship. This is a hugely important account of the birds and their environment, in the

historical and wonderful country of Ethiopia, which was a volcanically explosive landscape until about four million years ago, and then became a southern glacial outpost in the ice ages. Its heart is a great mass of lava, rising to over 4,000 m, bisected by the Rift Valley, and isolated by desert, river and sea, leading to both speciation and relative impoverishment. Together with Eritrea, it has some 32

endemic species, remarkable for the fact that they represent no less than 22 families – including an ibis (Threskiornithidae), a goose (Anatidae), a rail (Rallidae), a plover (Charadriidae), a pigeon (Columbidae) and others. On the other hand, there are just four bulbuls (Pycnonotidae), compared with 25 in neighbouring Kenya, and half as many sunbirds (Nectariniidae) and bush-shrikes (Malaconotidae) as in Kenya. Of the 837 species recorded from the region, 490 breed, while Palearctic migrants account for about 190.

From a conservation standpoint, the situation is not encouraging. The human population has risen from about 24 million in 1970 to nearly 80 million today, putting huge pressure on the environment and, at this rate of growth, an ultimately unsustainable burden. However, there is much progress being made, with the Ethiopian Wildlife and Natural History Society, in conjunction with other organisations, spearheading the identification of Important Bird Areas, and strategies for implementation of conservation measures. In this context, *Birds of Ethiopia and Eritrea* constitutes an extremely valuable base-

line of data, not only for bird distribution, but also for many aspects of the environment. These are covered in the introductory chapters, which deal with such subjects as topography and hydrology, soils, vegetation, climate and rainfall, bird habitats, conservation, breeding seasons and migration. A following section, with 15 explanatory maps in colour, addresses the methodology and sources of information.

Caroline Ash has contributed an interesting chapter on the history of ornithological research, and its often-colourful pioneers, in the context of the sometimes turbulent social and political history. There are superb colour photos of 29 endemic species, though the habitat photos are in black and white.

About 100,000 records, of which nearly three-quarters are taken from the authors' own observations, form the basis for the maps, resulting from 13 years of intensive work, while the senior author's records date back over 30 years. The literature has been combed for the remainder, and sources are listed in the 25-page bibliography. The maps are based on a grid of one-degree numbered

squares, each divided into four, lettered, half-degree squares. In the informative text accompanying the maps, data can thus be located down to these half-degree squares. Considering how much of the country can seem difficult of access, it is amazing how few tetrads there are from which there are no records, and the authors themselves have visited no less than 70% of the total.

The maps, tinted brown rather than light grey as in the *Birds of Somalia*, are large and clear, set three to a page, and measure 7 x 7 cm, allowing a generous half-column text of up to 20 or so lines per species. In addition to status and migration, there is much data on breeding, so that when used in conjunction with the new Helm field guide to the *Birds of the Horn of Africa* there is now a wealth of information for conservationists and birders. I can wholeheartedly recommend this extremely impressive and well-produced book for anyone interested in African birds and their conservation – and it sets a high benchmark for anyone engaged in similar projects.

Martin Woodcock

#### A PHOTOGRAPHIC GUIDE TO THE BIRDS OF JAMAICA

By Ann Haynes-Sutton, Audrey Downer and Robert Sutton. Christopher Helm, A&C Black, London, 2009.

304 pages; numerous colour photographs; many maps.

ISBN 978-1-4081-0743-0.

Paperback, £24.99.

The latest of a 'rush' of recent guides to the Greater Antilles, this book updates a photographic guide to Jamaica published almost 20 years ago. The wealth of new data garnered since makes it inherently valuable for the updated distribution maps (far superior to anything previously available for this endemic-rich island) and status details alone.

Following the introduction are the species accounts, divided into breeding and regular species, with casual visitors being treated summarily and without photographs, *contra* the publisher's catalogue. This is sensible: I haven't seen any of the 'vagrants' on Jamaica in six visits. In the first section, each double-page spread features 1–4 species, with emphasis on endemics, specialities, etc. Texts cover local names, taxonomy (but no discussions thereof), description, similar species, voice, and habitat and behaviour, with one or more of these sometimes omitted. Scaly-naped Pigeon *Patagioenas squamosa* appears short-changed, perhaps accidentally? An inset box shows overall range, Jamaican status and a colour-coded map.

The shortcomings of photographic guides are well known, but

these authors have done well. Many relevant plumages are portrayed, not just adults, and the majority were taken either on Jamaica or on nearby island groups. The quality and percentage taken by the principal photographer, Yves-Jacques Rey-Millet, are stunningly high. One could argue that more text might have been jettisoned, letting the captions do the work. When different subspecies are portrayed, as on p. 129, how they differ from those on Jamaica needs stating. The caption to Ring-tailed Pigeon *Patagioenas caribaea* on p. 127 is inappropriate, the Jamaican Mango *Anthracothorax mango* on p. 162 with white in the tail-sides (not tips) is aberrant (which is unclear) and the species' name is omitted on p. 288.

'Slips' are acceptably few, although Isla de San Andrés belongs to Colombia (not

Columbia; p. 134) and Mississippi Kite *Ictinia mississippiensis* has not only been seen recently but documentation published (unlike for

many vagrants). Despite this guide's portability, I can't see many potential users investing, especially if they already own the pocket-size

West Indian field guide, unless they plan to visit only Jamaica.

Guy M. Kirwan

**BIRDS OF THE  
COTSWOLDS:  
A NEW BREEDING ATLAS**

By Iain Main, Dave Pearce and  
Tim Hutton. Liverpool  
University Press, 2009.  
234 pages; 100 colour photos;  
280 colour maps.  
ISBN 978-1-84631-210-6.  
Hardback, £24.99.

The last ten or twelve years have seen a series of excellent regional avifaunas appear: those covering Dorset, Essex, the Isle of Man, Norfolk, Shetland, Suffolk and Wiltshire immediately spring to mind. Many have combined traditional accounts of the distribution and abundance of birds with results from 'atlas' fieldwork. And certainly, the presence of maps greatly enhances their appeal – at least to this reader. The advances in publishing technology have also made massive improvements to the style and presentation of these books, with colour images, maps and diagrams freely inserted where needed, rather than being collected together in sections at the back.

While it is fun to read about the exotics found at migrant hotspots in Shetland and Norfolk, it can be argued that detailed local studies are more important than an account of Britain's first record of

Natterer's Chatterer. This modest little book is exactly that sort of thing. The Cotswolds are not a migrant trap and probably rarely feature in pager reports. However, the authors have drawn together an overview of the distribution of about 100 species that breed more or less regularly in their area. Ninety of these are discussed in detail, including a double-page spread with tetrad maps showing the present distribution, that of an earlier survey (1983–87) and a third showing gains and losses between the two. The last of these is especially interesting, showing devastating reductions in previously widespread birds such as the Common Cuckoo *Cuculus canorus*, Tree Pipit *Anthus trivialis*, Garden Warbler *Sylvia borin*, Common Starling *Sturnus vulgaris*, Tree Sparrow *Passer montanus* and Corn Bunting *Emberiza calandra*. Willow Tits *Poecile montana* have gone from two-thirds of the tetrads occupied only 20 years earlier. Equally alarming must be the declines of regionally more local species such as the Common Nightingale *Luscinia megarhynchos*, Grasshopper Warbler *Locustella naevia* and, surprisingly to me, Dipper *Cinclus cinclus*. Only partly offsetting these, the authors report increased numbers of Common Buzzards *Buteo buteo*, Coal Tits *Periparus ater*, Eurasian Nuthatches

*Sitta europaea* and Pied Wagtails *Motacilla alba*, the last being found in over twice as many tetrads as in the 1983–87 survey, an even higher increase than the BTO Breeding Bird Survey regional data suggest.

Nor are the authors afraid to undertake a degree of self-criticism! Several species that appear to have increased in numbers may have been under-recorded in the earlier survey. The Eurasian Treecreeper *Certhia familiaris* is a case in point: it is apparently much more widespread now, but the authors suggest that this may simply be down to observers working harder for this latest atlas in some of the heavily wooded parkland. The increases in Coal and Long-tailed Tits *Aegithalos caudatus*, however, seem to be real and unrelated to changed observer effort.

While we know many of these results from BTO surveys, it is salutary to observe them at a local level. Congratulations to the authors and their hard-working recorders on a lovely book, which is enhanced by a series of delightful photographs, almost all taken by members of the local bird club. I don't suppose that this book will feature as BB 'Bird Book of the Year', but it is a model to which other local avifaunas should aspire.

David T. Parkin

**BIRDS NEW TO NORFOLK: THE ACCOUNTS OF THEIR  
DISCOVERY AND IDENTIFICATION**

By Keith Dye, Mick Fiszer and Peter Allard. Wren Publishing,  
Sheringham, 2009. 412 pages; many colour plates and black-and-white  
illustrations. ISBN 978-0-9542545-3-7. Hardback, £38.50.

Old enough to have seen the pre-war bird-limers of Yarmouth's Denes, I am a sucker for this book. Evocatively, it retells the tales of the first examples of the 400-odd birds on the county list. I write '400 odd' because although the number of

birds treated is stated to be 428, my count is 432 species together with at least 51 subspecies, and not including 32 Category D forms, seven 'recent removals' and 19 'possibles'. It is an amazing inventory for just one county and some may

view its contents as too liberal. For example, the much-debated Cley harrier of the 1957/58 winter is unequivocally listed as a Northern Harrier *Circus cyaneus hudsonius*. In truth, the mighty hawk remains, after 51 years, no more than a probable with the certain first (from Scilly in 1982/83) argued over for only half as long. Does another controversy lurk in the story of an eastern Sky Lark *Alauda arvensis dulcivox* in 1998? I see in it the substance not of that race but

of its partly sympatric congener, the Oriental Sky Lark *A. gulgula*. More cogently, other firsts to Norfolk's avian stock will surely be added by the biggest county residency of rarity hunters in Britain.

Blessed with bird-holding habitats and perceptive observers, Norfolk has acted for six centuries as a main engine of British ornithology. This is made clear in a succinct introduction, which itemises the county's unique treasure of historical references, and even includes a touching lament for the fabled Wisbech sewage-farm, lost in 1985. A chronology of bird recording (from early pot content through the nineteenth-century zenith of collection to the rise of field study) precedes the systematic list. This presents an undivided compound of Category A, B and C taxa. At least 32 of these represent firsts for

county and nation, and these are accorded the fullest treatments of up to four pages. Overall, the 541 species texts and mentions fill 372 rich pages.

Generally, the individual accounts begin with the earliest dated specimen or bird and, where possible, its provenance is established in topical references (dating back to 1519) and extended for modern rarities by enthusiastic finders' tales. For me, the old stories fascinate most. The first Sanderling *Calidris alba* is clinched in 1668, Sir Thomas Browne calling it the 'May chitt', noting its lack of 'an heel' and advising that after a month off passage, they 'grow very fatt and are accounted a dayntie dish'. The shift from lip-smacking 'yum-yum' to today's hysterical 'mega' shows how the human valuation of wild birds has changed!

In the middle of the book, Richard Richardson's fond painting of the first-ever British family of Collared Doves *Streptopelia decaocto* leads in 18 well-lit photographs of mounted specimens and skins, and 14 more variably illuminated shots of recent rarities. These provide a welcome break from the texts, which are otherwise only thinly sprinkled with black-and-white vignettes. The species accounts offer no hint of the full status in Norfolk and, to set what is a truly wonder-filled catalogue of firsts into context, it is best to have a copy of Taylor *et al.* *The Birds of Norfolk* (1999) close to hand. Otherwise, the three authors and the publisher have done their bird-glorious county a considerable service – and initiated a new genre of county bird books?

*D. I. M. Wallace*

**NATIONAL GEOGRAPHIC  
COMPLETE BIRDS  
OF THE WORLD**

Edited by Tim Harris.  
National Geographic Society,  
Washington DC, 2009.  
384 pages; c. 900 colour  
photographs and illustrations;  
193 distribution maps.  
ISBN: 978-1-4262-0403-6.  
Hardback, £20.00.

I always worry when I see the word 'complete' in a book's title as generally it proves to be misleading! To me, the title suggests that every bird in the world is covered – when in fact it is the 193 bird families

that get the treatment. The team of ten authors has described each family under the headings of Structure, Plumage, Voice, Habitat, Movements, Diet, Breeding and Taxonomy. There are 19 families which each represent just one species, while the Tyrant Flycatchers (Tyrannidae) span no fewer than 400 species! As a result, the texts vary in length, but are mostly between 350 and 1,000 words. The order used is that adopted by Howard & Moore and scientific names are allocated somewhat inconsistently in the text and elsewhere. A distribution map accompanies each section and with these are statistics on the number

of genera and species within each family, together with information on conservation status and distribution. The choice of photographs is good and in some cases paintings are used instead. Scattered throughout the book are fact boxes with information about various aspects of ecology and behaviour pertinent to the family in question. It is quite useful to have a series of concise texts about the world's bird families in one volume. It seems that other publishers take the same view, as in the last three years at least two other attractive books have covered the same ground.

*Keith Betton*

**Also received:**

**RAPTORS: A FIELD GUIDE TO  
SURVEY AND MONITORING**

By Jon Hardey, Humphrey Crick, Chris Wernham, Helen Riley, Brian Etheridge and Des Thompson. The Stationery Office, Edinburgh, 2009. 370 pages, numerous line-drawings and figures; colour photographs of chicks and feathers; includes a CD of raptor vocalisations.

ISBN 978-0-11-497345-2.

Paperback, £18.99.

Second edition (see *Brit. Birds* 100: 249 for review of first edn), extensively revised and updated, with a new colour photographic guide to raptor feathers.

**EUROPEAN REPTILE  
AND AMPHIBIAN GUIDE**

By Axel Kwet. New Holland,  
London, 2009.  
250 pages; many colour

photographs; distribution maps.

ISBN 978-1-84773-444-0.

Hardback, £14.99.

**RSPB WHERE TO DISCOVER  
NATURE IN BRITAIN AND  
NORTHERN IRELAND**

By Marianne Taylor.  
Christopher Helm, A&C Black,  
London, 2009. 352 pages; many  
colour photographs and access  
maps. ISBN 978-1-4081-0864-2.  
Paperback, £12.99.

# News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

## Researchers migrate south for the winter

The BTO and RSPB have joined forces and sent research teams to Africa following steep declines in migrant birds that winter south of the Sahara. Recent figures suggest that more than 40% of all migratory species passing between Europe and Africa have declined in the last three decades. Alarming, one in 10 of these are considered to be of global conservation concern.

The project will involve researchers monitoring birds along a corridor stretching from Ghana's Atlantic coast to northern Burkina Faso, spanning a range of habitats from coastal rainforest to the edge of the Sahara desert. The RSPB's Dr Danaë Sheehan, who will be monitoring birds in West Africa, said: 'The drastic declines of some of our best-loved summer visitors such as the Common Cuckoo [*Cuculus canorus*], Turtle Dove [*Streptopelia turtur*] and Common Nightingale [*Luscinia megarhynchos*], is one of the greatest concerns currently raging in conservation... Although we have a reasonable understanding of these birds in the UK, we have little or no idea what's happening to these birds in their wintering grounds, but it's clear that without help these declines are likely to continue, reducing the populations of these summer visitors to dangerously low levels.'

Chris Hewson, Research Ecolo-

gist at the BTO, commented: 'If we are to reverse these alarming declines, we need to act now. To do this we need to better understand where these birds spend the winter months and what pressures they face there. If we can find this out, we will be in a strong position to help secure their future... Ongoing research is focused on the potential causes of the declines during the breeding season here in the UK. However, problems on the wintering grounds could also be driving the declines, in particular, the increase in the human population and the associated change of land use. These birds are facing a double whammy, and to help them we need to be looking at both ends of their migration.'

A number of potential causes for the declines of migrants have been suggested, including: climate change, particularly changes in rainfall patterns, and land degradation. Predicted increases in human population and climatic variability in West Africa are likely to exacerbate these threats.

Of 105 widespread countryside birds in the UK, eight out of 12 of those declining most rapidly since the mid 1990s are summer migrants. According to the latest bird population estimates, published in the 2008 Breeding Bird Survey report, between 1995 and 2007 the following summer

migrants suffered the greatest population declines: Turtle Dove down 66%; Wood Warbler *Phylloscopus sibilatrix* down 60%; Pied Flycatcher *Ficedula hypoleuca* down 51%; Yellow Wagtail *Motacilla flava* down 49%; Whinchat *Saxicola rubetra* down 43%; Common Nightingale down 41%; Spotted Flycatcher *Muscicapa striata* down 38%; and Common Cuckoo down 37%.

The team of researchers will be counting and ringing birds at several 'points' in both Ghana and Burkina Faso, across a breadth of habitats, from dense tropical rainforest to semi-desert. By recording birds at these points several times during the year, researchers hope to build up a detailed picture of the movements and habitat preferences of European migratory birds wintering in Africa.

The conditions for fieldwork will be extreme, especially in the semi-desert areas where temperatures are expected to reach 40°C in the shade. High humidity, Elephants *Loxodonta africana* and malarial mosquitoes are some of the other hazards faced by fieldworkers – it's not *quite* like a Breeding Bird Survey back in Britain!

The Sussex Ornithological Society has provided £5,000 towards the project and Porzana Ltd has donated the rings.

## Syrian Bald Ibis shot by hunter

Conservationists trying to prevent the extinction of the Bald Ibis *Geronticus eremita* are distraught that one of the last remaining wild birds in the Middle East has been shot by a hunter in Saudi Arabia, bringing the known wild Middle Eastern population of this Critically Endangered species to just four individuals.

Formerly, the range of this species extended across parts of southern and central Europe, North Africa and the Middle East. It even features in the hieroglyphs of Ancient Egypt. Following a huge population and range decline, the bulk of the wild population of 210 birds now occurs in Morocco, but a tiny population was rediscovered

in 2002, in Syria.

A satellite-tracking project led by BirdLife and the International Union for Conservation of Nature (IUCN), in collaboration with the Desert Commission of the Syrian Government, established that the Syrian adults migrate to the Ethiopian highlands each winter, but the wintering area of younger

birds remains a mystery. So two young birds were fitted with satellite tags, and it is one of these birds – a female – that was shot.

'We were excited that tagging a subadult ibis may have helped us to solve the mystery of where young ibises spend the winter, but now we may never know,' said Eng. Ali Hamoud, of the Syrian Desert Commission. 'The shooting of a young bird from such a tiny population is devastating news and it shows that hunting is a major threat to this species.'

Dr Jeremy Lindsell, the RSPB scientist in charge of the ibis satellite-tracking project, said: 'Recovery of the population from this frighteningly low level is going to be exceedingly difficult, but everyone involved in the project believes we must do everything we can to provide hope for this culturally

important icon of the Middle East. The tiny Syrian population has been breeding very well since its discovery, although it has suffered two poor years. The low rate of return of young birds to the colony shows that they are being lost somewhere on migration. We are starting to discover what the problem might be.'

Three birds from a semi-captive population in Turkey were released last year to see if they would migrate. They flew south as far as Jordan, but subsequently were found dead. Initially, it was feared they had been poisoned, but later it was realised that the birds had been electrocuted, emphasising that other threats can have a devastating impact on the future of the Bald Ibis in the Middle East.

More satellite-tagged birds released from Turkey this year flew south as far as Saudi Arabia but

they too disappeared not much more than 100 km from where the Syrian bird was shot. Although their fate has not been established, researchers believe that these birds too may have succumbed to hunters. On migration, the remaining ibises nesting in Syria pass through Jordan, Saudi Arabia, Yemen, Djibouti, Eritrea, finally wintering in Ethiopia.

Sharif Jbour, of BirdLife in the Middle East, said: 'Now that the threats to this species are becoming clear, we will be doing all we can to address them. It is essential for the future of this population that they have safe passage through the region during their migration. With so many countries involved this is a great challenge but we already have high-level support in many of these countries, so we are hopeful of change.'

### Kate Humble is new RSPB President

BBC presenter Kate Humble was elected President by RSPB members at the society's AGM last month. She's only the second female President in the 120-year history of the society – but her predecessor, the Duchess of Portland, did serve for 60 years! Currently on screen in the BBC *Autumnwatch* series, she's a familiar face as presenter of *Spring-*

*watch* and *Animal Park* and for her recent appearance on *Who Do You Think You Are?*

Kate takes over the reins from a fellow broadcaster, Julian Pettifer. She said: 'I'm not an academic or a specialist, but I do love learning new things and asking questions – I'm never afraid to ask. If I can communicate some of the amazing things I learn about wildlife on an

almost daily basis and spark the same interest in others, that would be great. I'm extremely proud to be asked to be President of such a highly respected and popular organisation. With over one million members behind it, the work of the RSPB is rightly renowned for making a huge difference for birds, other wildlife and the environment.'

### Nigel Collar nominated for \$100,000 prize

BirdLife's Dr Nigel Collar has been nominated to receive the Indianapolis Prize – the world's leading award for animal conservation, worth \$100,000. 'I'm honoured to be listed alongside some of the world's greatest conservationists,' said Dr Collar.

Dr Collar is one of 29 conservationists vying for the prize, and has been nominated for his three decades of groundbreaking fieldwork and research on the world's birds. Nigel has served BirdLife as Director of Science and Director of Development, and since 2001 has worked as Leventis Fellow in Conservation Biology.

Between 1981 and 2001 he worked as compiler of the BirdLife International Red Data Book, and has published profiles of the threatened bird species of Asia, the Americas and Africa. In recent years, Nigel has pursued urgent conservation issues, including census work on Great Bustards *Otis tarda* in Spain and fieldwork projects in Ethiopia, São Tomé and Angola. He also currently supports and co-supervises nine students on threatened species in Peru, Brazil, Botswana, Cyprus, Cambodia and the Philippines, and plans to focus on issues affecting gazelles and bustards in Africa's Sahelian zone.

'Conservation has been Nigel's single guiding light throughout his career,' said Ade Long, BirdLife's Head of Communications. 'Many species have had their status improved through his advocacy, activities, interventions, books and papers. However, what is perhaps less well known about Nigel's achievements are the large number of conservationists who have benefited from his advice, support and inspiration – especially during his time at BirdLife.'

The Indianapolis Prize nominees' work spans the globe, representing a range of species from insects to mammals, and includes

amphibians, elephants, bats, wolves and sharks, among many others. The Nominating Committee will review the applications and select the six finalists, who will be announced in the spring of 2010. The Prize Jury will then determine the winner, who will be announced in mid 2010 and honoured at the next Indianapolis Prize Gala, to be held on 25th September 2010 in Indianapolis. Other nominees include the Australian Rodney Fox – a world authority on the Great White Shark *Carcharodon carcharias*, who has a tooth embedded in his wrist from an attack in 1963.

In addition to receiving the largest individual monetary award for animal conservation in the world of \$100,000, the recipient is awarded the Lilly Medal, an original work of art that signifies the winner's contributions to conserving some of the world's most threatened animals. For further information on the prize, see [www.indianapolisprize.org](http://www.indianapolisprize.org)

## Revamp for Scottish Birds

Discussions between the Scottish Ornithologists' Club (SOC) and the editors of *Birding Scotland* has seen a major reshuffle of ornithological publications in Scotland. In July, *Scottish Birds*, which provided reviewed papers and notes of Scottish interests, combined with the SOC's club magazine *Scottish Bird News* and with *Birding Scotland* to produce a splendid new, all-colour *Scottish Birds*, which it is hoped will meet the needs of the broad church of Scottish birders. The journal will be provided quarterly to all members of the SOC. A copy of the new journal can be viewed on the SOC website at [www.the-soc.org.uk/publications.htm](http://www.the-soc.org.uk/publications.htm)

## Messina raptor camp 2010

In spring 2010, WWF-Italy, Associazione Mediterranea per la Natura, and NABU will again be organising the international camp for the protection of migrating raptors and storks at the Strait of Messina. The camp will be held from 12th April to 23rd May 2010. Visit [www.migrazione.it](http://www.migrazione.it) for more details and to find out how you can participate in this excellent project.

## Owls and Kestrels share tenancy of nestbox

In the recession, renting out a room to a friend is one way of cutting housing costs. And it seems that some birds have adapted to co-tenancy too. Barn Owls *Tyto alba* are particularly generous hosts as they've been recorded sharing a nestbox with Common Kestrels *Falco tinnunculus*, Stock

Doves *Columba oenas* and Jackdaws *Corvus monedula*.

But the reason in this case is not to cut heating bills (although an overcrowded nestbox must get pretty warm); it seems that lack of available nest-sites has forced these hole-nesters into co-habitation. Removal of old trees and redundant farm buildings has exacerbated the housing crisis.



**408.** Youth hostels for birds: a Barn Owl *Tyto alba* youngster is seemingly content to share a dorm with a family of Common Kestrels *Falco tinnunculus*. This photo was taken in Lincolnshire in 2009, and the same nestbox was also shared by the same two species in 2008.

## Banggai Crow – back with a bang

An Indonesian crow known only from two specimens taken in 1900 has been rediscovered after more than a century. Indonesian ornithologists collected two specimens of Banggai Crow *Corvus unicolor* from Peleng island, east of Sulawesi, in 2007 and these have been authenticated by Oriental bird expert Pamela Rasmussen (a regular collaborator with BirdLife's Dr Nigel Collar – see above), who compared them with the type specimens held at the American Museum of Natural History.

She also established that Banggai Crow is a valid taxon, distinct from the sympatric Slender-billed Crow *C. enca*. 'The morphometric analysis I did shows that all four *unicolor* specimens are very similar to each other, and distinctly different from *enca* specimens. We also showed that the two taxa differ in eye colour – an important feature in *Corvus* – as well,' Ms Rasmussen said. 'Not only did this confirm the identity of the new specimens but also the specific distinctness of *Corvus unicolor*, which has also long been in doubt.'

Banggai Crow is restricted to the Banggai Islands and is listed as Critically Endangered. The first European birders to 'twitch' the newly rediscovered crow were Filip Verbelen and Frank Rheindt and Filip's superb photo can be seen on the Oriental Bird Club images database <http://orientalbirdimages.org> and, topical as ever, in the latest volume (14) of the *Handbook of the Birds of the World*, just published.

And, having provided a photo of the final Oriental crow for the Oriental Bird Images collection, Filip Verbelen has now completed the pittas section too. His superb Sula Pitta *Pitta dohertyi* picture means that all members of this colourful family found within the Oriental Region can be seen on the Images website.

## Madagascar wildlife under siege

Asity Madagascar (BirdLife in Madagascar) has joined a group of Malagasy civil society organisations, Voahary Gasy, calling for an end to the plundering of natural resources in the national parks of northeast Madagascar. Following the change of government in March this year, all but essential humanitarian aid has been withdrawn by the international community, leaving Madagascar's national park and forestry services with little or no funding. Loggers have moved into the protected areas, stripping the forests of valuable hardwoods such as rosewood, ebony and mahogany. They work for influential business people who are in possession of illegal but 'official' documentation permitting them to export these hardwoods.

Local communities who depend on forest resources and on tourism have been threatened and attacked when opposing these illegal and highly destructive activities. A new trade in bushmeat has developed. Lemurs in particular are being killed in large numbers, and some hunters are supplying restaurants 'to order'.

A number of endemic birds are largely or entirely confined to pristine primary forest in northeast Madagascar, among them the

Endangered Madagascar Serpent Eagle *Eutriorchis astur* and Vulnerable Helmet Vanga *Euryceros prevostii* and Bernier's Vanga *Oriolia bernieri*. With the complete breakdown of the enforcement of protected-area regulation, and armed gangs operating with impunity in the forests, it has not been possible to assess the impact on these and other threatened species.

The Malagasy NGOs which have come together to form Voahary Gasy are calling for an immediate halt to exports of hardwoods, particularly rosewood, the enforcement of protected area regulation, the creation of a task force to combat environmental crime, and a campaign to raise awareness within Madagascar of the nature and extent of the destruction of the island's remaining forests.

Voahary Gasy also emphasises that the range of new and extreme threats to Madagascar's environment and biodiversity is very broad and not restricted to the northeast of the country (although most severe here) or to precious hardwoods. Other parts of the country, and valuable resources such as reptiles, sharks (caught for their fins, which are made into soup) and rare plants, are also affected or at least at risk. Asity Madagascar is

working with other groups to control or prevent problems in the far southeast, where the largest expanse of lowland forest, Tsitongambarika, is under threat, and similar initiatives are taking place elsewhere.

Global Witness and the Environmental Investigation Agency are currently preparing a detailed report on the illegal timber trade in Madagascar, due to be released in the coming weeks.

Ms Voninavoko Raminoarisoa, Co-ordinator of Asity Madagascar, warned that if this situation is allowed to continue, many of the conservation gains in Madagascar, including the efforts of local communities to protect their resources, will be lost. 'These events are a disaster for Madagascar, profiting a tiny number of individuals at immense cost to the country's economy and extraordinary heritage,' said Dr Roger Safford, Senior Programme Manager at BirdLife International. 'The global community must help to resolve the situation, but the emergence of Voahary Gasy is a very positive step, showing the commitment of Malagasy institutions and individuals to lead in publicising and tackling the problems.'

## Tape-luring... for Lions

Birders' use of tapes/CDs/MP3 files to lure more skulking species into view can be contentious. Frequent playing of a bird's song or calls at known localities for the species is a dubious practice. And if the bird is a rare breeder, which then deserts the locality, then 'tape-luring' is criminally irresponsible. But, until now, no-one has ever regarded tape-luring as a health and safety issue... unless you seek to tape out Lions *Panthera leo*, for example.

So, a request for advice on tape-luring of Lions posted on the African Bird Club's newlist AfricanBirding by a French birder was greeted with a mixture of incredulity, outrage – and guidance. It transpired that tape-luring of Lions has indeed been done successfully in Zimbabwe and South Africa. In the latter country it was done by bovine TB researchers who wanted to attract Lions so that they could be tranquiliser-darted and examined. A more sinister use of tape-luring was by the operators of hunting concessions bordering conservation areas.

But a respondent from Tanzania advised the message sender that he was likely to be prosecuted if he tape-lured Lions. That or masticated.

## Correction

Jeremy Gates contacted us to point out that the Common Quail *Coturnix coturnix* that featured in the BTO research update in the September issue of *BB* (a Belgian-ringed bird whose remains were found in a Lincolnshire Peregrine Falcon *Falco peregrinus* nest this summer) was in fact not the first overseas ringing recovery of this species for the BTO. The ringing report in the 1965 *Surrey Bird Report* lists a record of a Quail ringed at Cranleigh on 3rd May 1965 (ring number CX56993), by L. & J. Weller, that was shot at Torres de Berrelen (Zaragoza), Spain, on 15th September 1965.

# Recent reports

Compiled by Barry Nightingale and Eric Dempsey

This summary of unchecked reports covers early August 2009 to early October 2009.

**Headlines** Without any doubt the race winner for the main prize in this exciting period just has to be the Tufted Puffin in Kent, despite stiff competition from the Scottish islands – Blackburnian Warbler on St Kilda, Sandhill Crane, Yellow-billed Cuckoo and Eyebrowed Thrush in Orkney, and two Veerys and a Taiga Flycatcher in Shetland. In the southwest and Ireland, seabird highlights were to the fore, with Black-browed Albatross sightings on Scilly and off Co Mayo, several Fea's Petrels (with another along the east coast), good numbers of Wilson's Storm-petrels, single Madeiran Storm-petrel and Red-billed Tropicbird, while on land Audouin's Gull, Little Crake and Steppe Grey Shrike were notable. Eleanora's Falcon in Greater London and Essex was another big hitter in the rarity stakes, while inland finds of Pallid Harrier, American Black Tern and another Steppe Grey Shrike proved popular, not to mention an unprecedented and widespread influx of Glossy Ibises.

By comparison, a seasonal spread of shorebirds (including Hudsonian Whimbrel, Upland and Solitary Sandpipers), pipits (including a brace of Buff-bellied and no fewer than nine Pechoras on Shetland) and warblers (including Zitting Cisticola, a Pallas's Grasshopper Warbler away from Shetland and two Eastern Olivaceous) were (almost) relegated to also-rans.

**American Wigeon** *Anas americana* Records from Co. Cork (two) and Oxfordshire. **Black Duck** *Anas rubripes* Walmsley Sanctuary (Cornwall), 16th September. **Blue-winged Teal** *Anas discors* Titchfield Haven, 28th August, same Portsmouth (both Hampshire), 31st August; South Uist (Outer Hebrides), three, 14th September; North Bull Island (Co. Dublin), 16th September to 3rd October; Haverton/Saltholme Pools (Cleveland), 23rd–29th September and 5th October; Weston-Super-Mare (Somerset), 28th September; Tacumshin Lake (Co. Wexford), 4th October.

**Ferruginous Duck** *Aythya nyroca* Records from Avon, Buckinghamshire, Fife, Northamptonshire, Perth & Kinross, Staffordshire and Suffolk. **Lesser Scaup** *Aythya affinis* Draycote Water (Warwickshire), 1st–7th October. **King Eider** *Somateria spectabilis* River Witham near Boston and Freiston Shore (Lincolnshire), 5th September intermittently to 4th October. **Hooded Merganser** *Lophodytes cucullatus* Scaling Dam Reservoir, 25th August, then Port Clarence/Saltholme Pools area (all Cleveland), 1st September to 3rd October.

**White-billed Diver** *Gavia adamsii* Burray (Orkney), 5th October.

**Black-browed Albatross** *Thalassarche melanophris* St Mary's (Scilly), 21st September; Annagh Head (Co. Mayo), 22nd September.

**Fea's Petrel** *Pterodroma feae* At sea, 300+ km west of Co. Kerry, 20th August; from pelagic off Lyme Bay (Dorset), 22nd August; Porthgwarra (Cornwall), 30th and 31st August, 2nd September, and perhaps one of same off Prawle Point (Devon), 31st August; Mizen Head and Galley Head (Co. Cork), 3rd October; Spurn/Kilnsea (Yorkshire), presumed same Farne Islands (Northumberland), 5th October. **North Atlantic Little Shearwater** *Puffinus baroli* Bridges of Ross (Co. Clare), 20th August; Pendeen (Cornwall), 28th August; Hurlstone Point (Somerset), 29th August. **Wilson's Storm-petrel** *Oceanites oceanicus* In Ireland: five on a pelagic off Dingle, 7th August, with two Brandon Point (both Co. Kerry), 28th August; at least 20 from Bridges of Ross between 8th August and 3rd September, incl. six on 19th August and five on 20th; one, Annagh Head, 16th August; three 100 km west of Achill (Co. Mayo) on 25th August, with one in same area on 26th and three on 29th; Cape Clear Island (Co. Cork), 29th August. Elsewhere, a total of 25 on pelagics off Scilly during 8th–29th August; also from pelagics, two off St Ives on 15th August and at least four off Pendeen (both Cornwall) between 20th August and 3rd September; Seaforth (Lancashire and N Merseyside), 5th September; Plymouth (Devon), 26th September. **Madeiran Storm-petrel** *Oceanodroma castro* Pendeen, 3rd September. **Red-billed Tropicbird** *Phaethon aethereus* At sea, 25 km south of Old Head of Kinsale (Co. Cork), 8th September.

Night Heron *Nycticorax nycticorax* Records from Cambridgeshire and Scilly. Cattle Egret *Bubulcus ibis* Records from Avon, Gloucestershire (up to four), Hampshire (two), Kent, Somerset (two) and Sussex. Great White Egret *Ardea alba* Records from Cambridgeshire (two), Cumbria, Dorset, Flintshire, Co. Galway, Greater London, Hampshire, Kent (two), Lancashire & N Merseyside (two), Leicestershire & Rutland, Lincolnshire (two), Norfolk, Northamptonshire, Oxfordshire, Pembrokeshire, Powys (three), Shetland, Somerset (two), Suffolk, Sussex, Co. Tipperary, Warwickshire, Worcestershire and Yorkshire. Glossy Ibis *Plegadis falcinellus* A widespread influx was evident during September, although the overall picture was inevitably confused by wanderers relocating. The first were in Ireland, with 12 at Killag on 1st September and eight at Tacumshin (both Co. Wexford) on 5th September (and five between Killag and Tacumshin to 15th September, with one to 4th October); several of these were ringed and originated from the Cota Doñana. The first in Britain was at Kidwelly on 3rd September, then 25 at Pembury (both Carmarthenshire) on 4th, with ten to 6th September. There were 12 at Alaw Estuary (Anglesey) on 17th, ten over Bardsey (Caernarfonshire) on 18th, then ten at St Dogmaels and nine at Nevern Estuary (both Pembrokeshire) the same day. In

Kent, one at St Nicholas-at-Wade on 4th, Stodmarsh 6th–11th and Oare Marshes 11th–12th September, then five Dungeness 21st September to 4th October. At Canvey Island (Essex) seven 5th, then in Suffolk various sightings from 8th, including three Boyton Marshes 25th–27th September. In Cambridgeshire, at Ouse Washes seven, presumably same as Essex, 7th–16th, one to 22nd, with four Little Thetford 27th September and one Paxton Pits 1st–2nd October perhaps some of same. In Norfolk up to three Caistor St Edmund from 19th September, with several other sightings in Norfolk into October perhaps referring to some of same. Six flew over Collyford Common (Devon), then Wyke Regis and Radipole (both Dorset) and then Pennington Marshes (Hampshire), all 19th September. In Avon, four Chew Valley Lake on 26th September. Six at Martin Mere (Lancashire & N Merseyside) 24th, and three Halesworth (West Midlands) 25th and seven Kent Estuary (Cumbria), also 25th September. In Somerset, many records of singles, also four Catcott Lows, 3rd October. Numerous sightings elsewhere, mainly singles, in Argyll, Ceredigion, Co. Cork, Cornwall, Derbyshire, Essex, Glamorgan, Hertfordshire, Lincolnshire, Northumberland, Nottinghamshire, Sussex and Yorkshire, with reports tailing off in October.



409. Juvenile Blue-winged Teal *Anas discors*, Portsmouth, Hampshire, August 2009.



Bryan Thomas

410. Black-browed Albatross *Thalassarche melanophris*, St Mary's, Isles of Scilly, September 2009.

Black Kite *Milvus migrans* Records from Cornwall, Devon, Dumfries & Galloway and Kent. Pallid Harrier *Circus macrourus* Near Haddenham, 6th–7th September, and near Willingham (both Cambridgeshire), 8th–9th September. Red-footed Falcon *Falco vespertinus* Records from Kent, Norfolk and Suffolk. Eleonora's Falcon *Falco eleonora*e Rainham Marshes (Greater London), 20th September,

presumed same Great Warley (Essex), 5th October. Gyr Falcon *Falco rusticolus* Hummersea (Cleveland), 12th September.

Little Crake *Porzana parva* Radipole Lake, 5th September. Baillon's Crake *Porzana pusilla* Kilnsea, 7th October. Sandhill Crane *Grus canadensis* South Ronaldsay (Orkney), 22nd (at least) to 29th September, then various locations



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411. Glossy Ibises *Plegadis falcinellus*, Tacumshin Lake, Co. Wexford, September 2009.

James Hanlon



412. Male Pallid Harrier *Circus macrourus*, near Haddenham, Cambridgeshire, September 2009.

as it headed south between Sarclet and Dunbeath (Highland) on 29th.

Collared Pratincole *Glareola pratincola* Frampton Marsh (Lincolnshire), 8th–9th August, presumed same Swaffham Prior Fen (Cambridgeshire), 11th August. American Golden Plover *Pluvialis dominica* At least 13 during the period in Ireland: Cork, Derry (three), Dublin (three), Kerry, Limerick, Mayo (two), Waterford, Wexford. Another 14 in Britain: Argyll (three), Orkney (four), Outer Hebrides (three), Scilly, Shetland (two) and Somerset. Pacific Golden Plover *Pluvialis fulva* Pagham Harbour (Sussex), 9th August; Tیره (Argyll), 30th August to 1st September.

Semipalmated Sandpiper *Calidris pusilla* Cress-

Lee Gregory



413. Adult Sandhill Crane *Grus canadensis*, South Ronaldsay, Orkney, September 2009.

well Pond (Northumberland), 19th–25th August; South Uist, 20th August; Tacumshin Lake, 22nd August; Smerwick Harbour (Co. Kerry), 31st August to 9th September; Inchydoney (Co. Cork), 31st August to 3rd September; New Passage (Gloucestershire), 26th September. White-rumped Sandpiper *Calidris fuscicollis* Records from Co. Dublin, Essex (two), Kent, Co. Kerry, North-east Scotland and Co. Wexford. Baird's Sandpiper *Calidris bairdii* Tacumshin Lake, 7th–9th August; Hickling Broad (Norfolk),

8th–12th August; Blackrock Strand/Carrahane (Co. Kerry), 30th August to 22nd September; Davidstow Airfield (Cornwall), 2nd–15th and 24th September; Marazion Marsh (Cornwall), 3rd–21st September; Traeth Dulas, 4th–9th September, perhaps same Alaw Estuary (both Anglesey), 15th September; North Uist (Outer Hebrides), 6th September; South Uist, 10th–12th September, another 2nd October; Tیره, 19th September, with two 26th–28th September; Lewis (Outer Hebrides), 29th September. Stilt Sandpiper *Calidris himantopus* Langness (Isle of Man), 10th September. Buff-breasted Sandpiper *Tryngites subruficollis* Impressive numbers in Ireland, with high counts including six in off the sea at Bridges of Ross on 29th August, six at Tacumshin Lake on 18th September and five at Lough Foyle (Co.

Derry) on 28th September. In Britain, records from Argyll (two), Cambridgeshire, Cleveland, Cornwall (up to five), Durham, Isle of Wight (first for the county), Lincolnshire, Norfolk, Northumberland, Outer Hebrides (up to four), Scilly (at least three), Shetland (four or five), Sussex and Yorkshire.

Long-billed Dowitcher *Limnodromus scolopaceus* Doonbeg (Co. Clare), 7th September; South Uist, 12th September and 2nd–6th October;

Ballo Reservoir (Fife), 13th–19th September; Lough Beg (Co. Derry), 14th September; near Fleetwood Marsh, 19th September, presumed same Marshside RSPB (both Lancashire & N Merseyside), 24th–25th September; Tresco (Scilly), 22nd September to 8th October; Chew Valley Lake, 23rd September to 2nd October; Inner Marsh Farm (Cheshire & Wirral), 26th September, with two 27th September to 7th October; Rahasane Turlough (Co. Galway), 28th September to 2nd October; The Geragh (Co. Cork), 29th September to 3rd October. ‘Hudsonian Whimbrel’ *Numenius phaeopus hudsonicus* South Uist, 12th September. Upland Sandpiper *Bartramia longicauda* Reiss (Highland), 28th September. Terek Sandpiper *Xenus cinereus* Barrow Harbour (Co. Kerry), 10th–14th September; Robertstown Creek (Co. Limerick), 17th September. Spotted Sandpiper *Actitis macularius* Tíree, 31st August; Nethertown (Co. Wexford), 5th–7th September; Blackrock Strand, 17th–22nd September; Birsay (Orkney), 5th October. Solitary Sandpiper *Tringa solitaria* Annagh Head, 22nd September. Lesser Yellowlegs *Tringa flavipes* Aberlady Bay (Lothian), long-stayer to 8th October; St Mary’s, 12th–28th August and 10th September; Loch of Strathbeg (North-east Scotland), 16th–18th

September. Marsh Sandpiper *Tringa stagnatilis* Levington Creek (Suffolk), 30th August. Wilson’s Phalarope *Phalaropus tricolor* Martin Mere, 21st–23rd August and 27th–29th August, same Marshside RSPB, 24th August, and Crossens Marsh (all Lancashire & N Merseyside), 26th August; Bowling Green Marsh, 2nd–3rd September, same Exminster Marshes (both Devon), 4th–7th September.

Laughing Gull *Larus atricilla* Barra (Outer Hebrides), 13th September. Franklin’s Gull *Larus pipixcan* Deerness, 10th September, same Loch of Tankerness (both Orkney), 13th September. Audouin’s Gull *Larus audouinii* St Mary’s, 13th August. Bonaparte’s Gull *Chroicocephalus philadelphia* Traeth Dulas, 27th September.

Caspian Tern *Hydroprogne caspia* Swords Estuary (Co. Dublin), 22nd August; Dunaney Point (Co. Louth), 15th September. ‘American Black Tern’ *Chlidonias niger surinamensis* Farmoor Reservoir (Oxfordshire), 28th August to 3rd September. White-winged Black Tern *Chlidonias leucopterus* Records from Hampshire, Isle of Wight (two), Kent (two), Oxfordshire, North-east Scotland and Yorkshire. Common Tern *Sterna hirundo* Large numbers moving off Spurn (Yorkshire) in



414. Juvenile Buff-breasted Sandpiper *Tryngites subruficollis*, Tacumshin Lake, Co. Wexford, September 2009.

Steve Young/Birdwatch



415. Juvenile Long-billed Dowitcher *Limnodromus scolopaceus*, Inner Marsh Farm, Cheshire & Wirral, September 2009.

late August, including 29,500 passing north from the roost in one hour on 21st, and 40,990 past on 28th.

Tufted Puffin *Lunda cirrhata* Oare Marshes, 16th September.

Yellow-billed Cuckoo *Coccyzus americanus* Deerness, 25th September; Almondbank (Perth & Kinross), found dead c. 3rd October. Snowy Owl *Bubo scandiacus* St Kilda (Outer Hebrides), intermittently during 5th–29th September; Lewis, 12th–15th and 26th September and 7th

Nic Hallam



416. Juvenile 'American Black Tern' *Chlidonias niger surinamensis*, Farmoor Reservoir, Oxfordshire, September 2009.



Murray Wright

417. Adult Tufted Puffin *Lunda cirrhata*, Oare Marshes, Kent, September 2009.

October; in Ireland, singles on Tory Island (Co. Donegal), the Mullet Peninsula (Co. Mayo) and Island Eddy (Co. Galway). **Alpine Swift** *Apus melba* Records from Devon, Greater London, Hertfordshire, Kent and Norfolk. **European Bee-eater** *Merops apiaster* Abberton Reservoir (Essex), 18th September.

Large movements of hirundines included 22,000 **Barn Swallows** *Hirundo rustica* south past Spurn on 8th September, 1,100 an hour past Studland Bay (Dorset) on 10th September, and

'thousands' on Scilly on 12th September; and 20,000 **House Martins** *Delichon urbicum* past Christchurch Harbour (Dorset) on 10th September. **Red-rumped Swallow** *Cecropis daurica* St Mary's, 13th September.

**Olive-backed Pipit** *Anthus hodgsoni* On Shetland: Foula, 4th October (with two there on 6th); Quendale, 6th October; Kergord, 7th–9th October; Sullom, 8th October. Also Newbiggin-by-the-Sea (Northumberland), 7th October. **Pechora Pipit** *Anthus gustavi* On Shetland: Fair



Hugh Harrop

418. Pechora Pipit *Anthus gustavi*, Whalsay, Shetland, October 2009.

Steve Minton



419. Buff-bellied Pipit *Anthus rubescens*, Foula, Shetland, October 2009.

Isle, 30th September to 1st October; Foula, 30th September to 7th October; Virkie, 2nd–3rd October; Whalsay, 2nd–7th October; Voe 3rd–8th October; Brae, 4th–6th October; Unst, 3rd–4th October; Out Skerries, 5th–7th

October; Scalloway, 8th October. Red-throated Pipit *Anthus cervinus* Spurn, 16th September; Northam Burrows (Devon), 19th September; Burnham Overy (Norfolk), 26th September; Unst, 2nd October and Gott (Shetland), 5th

Rob Brookes



420. First-winter Citrine Wagtail *Motacilla citreola*, Unst, Shetland, September 2009.



Jason Atkinson

421. Veery *Catharus fuscescens*, Foula, Shetland, October 2009.

October. Buff-bellied Pipit *Anthus rubescens* Foula, 29th September to 3rd October; Clahane Strand (Co. Clare), 1st–4th October. Citrine Wagtail *Motacilla citreola* Saltholme Pools, 23rd–24th August; Loch of Strathbeg, 28th

August; Marazion Marsh, 29th August to 7th September; Nethertown, 8th September; Churchtown (Co. Wexford), 9th September; St Mary's, 10th–11th and 14th September; Killylodon (Co. Mayo), 13th September; St Kilda



Kevin Woodbridge

422. First-winter Eyebrowed Thrush *Turdus obscurus*, North Ronaldsay, Orkney, October 2009.

Rebecca Nason



423. First-winter Blyth's Reed Warbler *Acrocephalus dumetorum*, Fair Isle, October 2009.

(Outer Hebrides), 13th–18th September; Unst, 19th–21st September; Quendale, 21st and 25th September; Dungarvan (Co. Waterford), 26th–29th September.

*Catharus fuscescens* Foula, 1st–4th October; Whalsay, 2nd–7th October. Eyebrowed Thrush *Turdus obscurus* North Ronaldsay (Orkney), 5th–6th October.

Thrush Nightingale *Luscinia luscinia* Gibraltar Point (Lincolnshire), 19th September. Veery

Zitting Cisticola *Cisticola juncidis* Pegwell Bay (Kent), 6th–8th September (possibly arriving

John Carter



424. First-winter Arctic Warbler *Phylloscopus borealis*, Lund, Unst, Shetland, September 2009.



Brydon Thomason

425. First-winter Taiga Flycatcher *Ficedula albicilla*, Fetlar, Shetland, September 2009.

well before then), and occasionally between 21st September and 2nd October. Pallas's Grasshopper Warbler *Locustella certhiola* St Kilda, 4th October. Lanceolated Warbler *Locustella lanceolata* Scatness (Shetland), 7th October. River Warbler *Locustella fluviatilis* Fair Isle, 5th–7th October. Aquatic Warbler *Acrocephalus paludicola* Records from Gwent, Hampshire, Powys and Warwickshire. Paddy-field Warbler *Acrocephalus agricola* Bardsey, 17th September. Blyth's Reed Warbler *Acrocephalus dumetorum* Blakeney Point (Norfolk), 17th–20th September; Voe (Shetland), 2nd–7th October; Fetlar (Shetland), 4th October; Fair Isle, 5th October; Sullom, 7th October. Great Reed Warbler *Acrocephalus arundinaceus* St Mary's, 23th August. Eastern Olivaceous Warbler *Hippolais pallida* Mizen Head, 10th–11th September; Stronsay (Orkney), 14th September. Booted Warbler *Hippolais caligata* Blakeney Point, 11th September; Channerwick (Shetland), 11th–12th September; Spurn, 12th–14th September; Marsden Quarry (Durham), 29th September.

Subalpine Warbler *Sylvia cantillans* Calf of Man (Isle of Man), 15th September. Greenish Warbler *Phylloscopus trochiloides* Records from Cheshire & Wirral, Co. Cork, Durham (two), Fair Isle (one or two), Lincolnshire (two), Norfolk, North-east Scotland, Suffolk and York-



Mike Vickers

426. First-winter 'Steppe Grey Shrike' *Lanius meridionalis pallidirostris*, Lound Gravel-pits, Nottinghamshire, October 2009.

Will Miles



427. First-winter Blackburnian Warbler *Dendroica fusca*, St Kilda, Outer Hebrides, September 2009.

shire (two). Arctic Warbler *Phylloscopus borealis* Landguard (Suffolk), 1st–2nd September. On Shetland: Fair Isle, 16th–19th September; Whalsay, 18th–20th September; Unst, 20th–22nd September; Scalloway, 22nd–27th September; Yell, 28th–29th September; Wester Quarff, 4th October, with two there on 5th–8th; Out Skerries, 7th October; Swining, 7th October. Pallas's Leaf Warbler *Phylloscopus proregulus* Badbury Rings (Dorset), 16th September.

Taiga Flycatcher *Ficedula albicilla* Fetlar, 23rd September to 5th October; same Gloup, Yell, 9th October.

Mark Wilkinson



428. Received as we were going to press, this is a remarkable shot of 'east meets west' on Foula, Shetland: Pechora Pipit *Anthus gustavi* and Veery *Catharus fuscescens*, October 2009.

Isabelline Shrike *Lanius isabellinus* Achill Island (Co. Mayo), October 4th. Lesser Grey Shrike *Lanius minor* Trimley Marshes (Suffolk), 14th September. 'Steppe Grey Shrike' *Lanius meridionalis pallidirostris* St Martin's (Scilly), 25th September, same St Mary's, 26th September; Lound GP (Nottinghamshire), 4th–8th October. Woodchat Shrike *Lanius senator* Records from Cornwall, Shetland, Somerset and Yorkshire.

Rose-coloured Starling *Pastor roseus* Records from Co. Cork, Cornwall (at least three), Devon (three), Dorset (at least two), Greater Manchester, Orkney (one or two), Scilly (two), Staffordshire and Sussex. Red-eyed Vireo *Vireo olivaceus* St Andrews (Orkney), 2nd October.

European Serin *Serinus serinus* Three records from Dorset. Arctic Redpoll *Carduelis hornemanni* Records from Shetland (at least 12, most/all being nominate *hornemanni*), Orkney (two) and Outer Hebrides.

Blackburnian Warbler *Dendroica fusca* St Kilda, 12th–14th September.

Yellow-breasted Bunting *Emberiza aureola* St Mary's, 20th September. Black-headed Bunting *Emberiza melanocephala* Galley Head, 11th–15th September; Farne Islands, 14th September.



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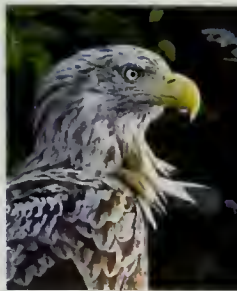
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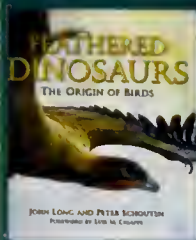
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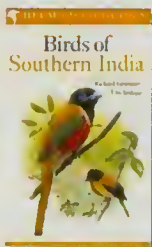


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What makes a good alien?

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Ruddy Ducks in the UK

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Britain's first Baikal Teal



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Front-cover photograph: Whooper Swans *Cygnus cygnus*, Shetland, January 2009. Roger Riddington  
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# British Birds

Volume 102 • Number 12 • December 2009

- 660 What makes a good alien? Dealing with the problems of non-native wildfowl *Tony (A. D.) Fox*
- 680 Progress of the UK Ruddy Duck eradication programme *Iain Henderson*
- 691 Britain's first Baikal Teal *Andrew H. J. Harrop and Robert Y. McGowan*
- 697 Stable-hydrogen isotope analyses suggest natural vagrancy of Baikal Teal to Britain *Stephen C. Votier, Gabriel J. Bowen and Jason Newton*

## Regular features

- |  |   |
|--|---|
| <p>700 BTO research update<br/><i>Mark Grantham and Chas Holt</i></p> <p>703 Reviews<br/><i>Rare Birds Where and When: an analysis of status &amp; distribution in Britain and Ireland. Volume 1: Sandgrouse to New World Orioles.</i><br/><i>North Norfolk's Wildlife: discovering its birds and natural history</i><br/><i>The Ultimate Site Guide to Scarcer British Birds</i><br/><i>The Birdwatcher's Yearbook 2010</i></p> | <p>706 News and comment<br/><i>Adrian Pitches</i></p> <p>708 Recent reports<br/><i>Barry Nightingale and Eric Dempsey</i></p> |
|--|---|

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# What makes a good alien?

## Dealing with the problems of non-native wildfowl

Tony (A. D.) Fox



Mandarin Ducks *Aix galericulata*

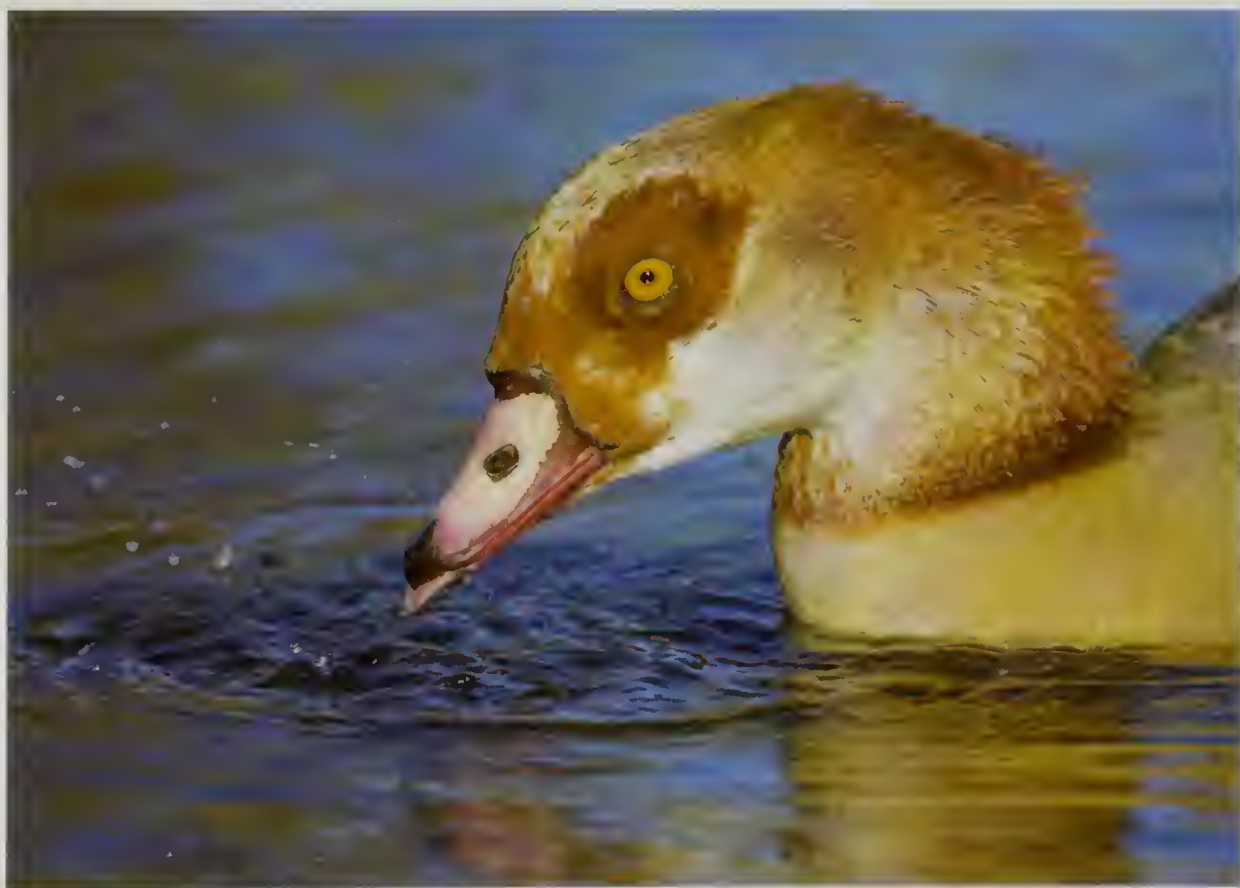
Richard Allen

**ABSTRACT** Humans have been introducing species outside their native ranges as a source of food for thousands of years, but introductions of wildfowl have increased dramatically since the 1700s. The most serious consequence of this has been the extinction of endemic forms as a result of hybridisation, although competition between alien and native forms may also contribute to species loss. Globally, non-native wildfowl have yet to cause major disruption to ecosystem functions; introduce new diseases and parasites; cause anything other than local conflicts to agricultural and economic interests; or create major health and safety issues in ways that differ from native forms.

The fact that this has not happened is probably simply the result of good fortune, however, since many introduced plants and animals have had huge consequences for ecosystems and human populations. The potential cost of greater environmental and economic damage, species extinction, and threats to the genetic and species diversity of native faunas means that we must do all we can to stop the deliberate or accidental introduction of species outside their natural range. International legislation to ensure this is remarkably good, but domestic law is generally weak, as is the political will to enforce such regulations. The case of the Ruddy Duck *Oxyura jamaicensis* in Europe will show whether control of a problem taxon can be achieved and underlines the financial consequences of dealing with introduced aliens. This paper was originally presented as the 58th Bernard Tucker Memorial Lecture to the Oxford Ornithological Society and the Ashmolean Natural History Society, in November 2008.

There is nothing new about aliens – we have been living among them in Britain for a very long time. But fear not, we are not talking about creatures from outer space! Here, I define an alien as ‘a group of individuals of a species, subspecies or population that would not occur in an area without interference from humans’. This definition therefore includes species like the Mallard *Anas platyrhynchos*, which can represent a threat to their own native integrity through introgression from domestic or other non-native forms. Using this definition, humans have been creating alien species for many thousands of years. Initially, the process was driven by the simple need for food. The change from an essentially hunter-gatherer lifestyle to a sedentary existence required becoming highly adept at plant and animal husbandry, to provide food. This relied upon cultivation of non-native alien forms imported outside their normal biogeographic ranges. Hull-less six-rowed barleys *Hordeum vulgare* were first introduced to Britain around 3,000 years BC (Clark 1967) and, by the Bronze Age, spelt *Triticum spelta* and emmer wheat *T. dicoccon* were the most commonly cultivated

cereals (Harding 2000), introduced from the ‘fertile crescent’ of modern-day Israel, Lebanon, parts of Jordan, Syria, Iraq, Kuwait, southeast Turkey and southwest Iran, where these species originated. The Romans brought apples *Malus domestica* (a vast improvement on native crab apples *M. sylvestris*), sweet chestnuts *Castanea sativa*, cherries *Prunus* spp. (introduced to Britain between 68 and 42 years BC; Pliny 1601) and the jungle fowl *Gallus gallus*, which gave rise to modern chickens. They probably also brought Rabbits *Oryctolagus cuniculus* and Common Pheasants *Phasianus colchicus*, which we now know to be readily self-supporting in the wild in Britain. Much later, Europeans explored the globe, bringing more exotic food items back to Europe including, most notably, the potato *Solanum tuberosum* agg., cultivated in South America for some 7,000 years and brought to the Canary Islands around 1562 (Hawkes & Francisco-Ortega 1993). Not all aliens could thrive without human help to tip the balance of competitive interactions with native forms. Even so, all are good reminders of our long history in the introduction business and the reliance upon aliens for food.



Simon Stirrup

**429.** Egyptian Goose *Alopochen aegyptiacus*, Norfolk, December 2006. Domesticated Egyptian Geese constituted the most important source of bird meat on tables in Egypt until about 2,300 years BC (Kear 1990). Not until the recently acquired habit of foraging on silage clamps became widespread did this alien species begin to appear in European farmyards.

*What creates an alien in the first place?*

Ducks, geese and swans (the Anatidae) were among our earliest and most successful attempts at domestication to produce tame flesh. The Greylag Goose *Anser anser* was one of the very first birds known to be domesticated, some 5,000 years ago (Sossinka 1982), and is the source of modern farmyard geese and the rich spoken tradition of stories and nursery rhymes that involve this familiar domesticated bird (Kear 1990). The Swan Goose *A. cygnoides* of eastern Asia was also probably domesticated for food at a very early stage (Crawford 1984). In all likelihood, Mallards were also brought into domestication long ago in many parts of the Old World, given the wide range of Mallard-type breeds now in existence. Egyptian Geese *Alopochen aegyptiaca* were the primary source of avian food for the Egyptians until about 2,300 years BC, finally disappearing as farm animals only after Egypt was conquered by the Persians in 525 BC (Kear 1990). Farmyards were therefore free of this species until free-flying naturalised birds began to forage on silage clamps in Europe in recent years. The first exotic wildfowl species to be introduced into Europe must have been the Muscovy Duck *Cairina moschata*, which was already widely kept throughout South America and the West Indies when the Conquistadores reached the New World; birds were brought back to Spain

in the mid 1500s, reaching Britain somewhat later in the following century (Donkin 1989). Some alien Anatidae species were therefore relatively easy to domesticate and rear in captivity and were thus quick to attain importance in the staple diet of many human societies, making them a familiar feature of Britain and much of Europe by the early eighteenth century.

But alien wildfowl really started to take off in the philanthropic years of the mid 1700s, when some Europeans could suddenly travel on their new-found wealth and engaged their curiosity in finding out about the great diversity of the globe. This was the time of the great British estates, when landowners wished to show off their wealth and power with impressive landscaped gardens and lakes, the period when Lancelot ('Capability') Brown created over 170 exotic country gardens, complete with serpentine lakes and landscaped ponds (Turner 1999), complemented by stocks of exotic wildfowl. The grounds of Holkham Hall, Norfolk, for example, were laid out by Brown in 1762, when Egyptian and Canada Geese *Branta canadensis/hutchinsii* were introduced immediately. As Janet Kear remarked: 'wildfowl in captivity look better than other birds'; they seem to adapt well to such conditions and many species breed and thrive under a variety of conditions (Kear 1990). The Holkham Egyptian and Canada Geese reproduced, and unpinioned,



Rebecca Nason

**430.** Greylag Geese *Anser anser*, Suffolk, May 2008. Greylag Geese were among the very first domesticated birds some 5,000 years ago (Sossinka 1982), as well as the source of many modern 'farmyard geese' and the rich spoken tradition of stories and nursery rhymes that involve this familiar bird (Kear 1990).

free-flying offspring dispersed to become some of the first free-flying alien wildfowl in the UK. It was a time when it was fashionable to possess the most recently discovered representatives of exotic floras and faunas of foreign shores. Canada Geese from the New World were introduced to many a country estate, as were Black Swans *Cygnus atratus* from the very far reaches of the Empire (imagine the novelty value in a continent with swans only of the very purest white!). Later, people could afford to enjoy the ornamental beauty of wildfowl in the form of bright and exotic species, such as the Mandarin Duck *Aix galericulata*, which has now been kept in captivity for many decades and (as a frequent deliberate or unintentional escape) has now established feral populations in several European countries. The Canada Goose was also found to be a good quarry species and, as a suc-

cessfully self-replicating alien replacement for the Greylag Goose (likely extirpated from much of Britain by exploitation in earlier times), was able to exploit the niche of a large avian herbivore without serious competitors in an increasingly favourable agricultural environment.

Elsewhere, Mallards have been introduced throughout most of the world at some time, driven by the species' familiarity to Europeans as they themselves colonised much of the globe. In this way, the species was introduced into New Zealand by the 'acclimatisation societies' there, in an attempt to make their new home feel more familiar by the presence of such European taxa – together with the non-European Canada Goose (which is now also among the most common birds in that country), brought in as quarry by hunter associations.

More recently still, the expansion of private

#### **Box 1.** What do we mean by an alien and how big is the problem?

The working definition of an alien adopted for this paper is simple – it is a species, subspecies or geographically discrete population that would not occur in a specific geographical area without interference by humans. In reality this may mean: a taxon (i) introduced as a breeding bird to a region where it formerly occurred only outside the breeding season; (ii) one introduced entirely from outside its previous known range; (iii) one imported in captivity outside its normal range and allowed to escape; and (iv) domesticated taxa that have established themselves in the wild (Owen *et al.* 2006).

A recent review (Banks *et al.* 2008) of the 77 responses to a questionnaire sent to all 116 signatories to the African-Eurasian Waterbird Agreement found that the greatest numbers of non-native waterbird species were in Europe (an average of 7.7 species per nation in 37 countries), with fewer in Asia Minor and the Middle East (4.3 species in 7 countries), Africa (1.2 in 29), Asia (0.3 in 4) and northeast Arctic Canada and Greenland (none in these two regions). Britain reported the greatest number (72 species). This article is restricted to the non-native Anatidae species, of which there are many. The most commonly introduced species to the AEWA area was the Mandarin Duck *Aix galericulata*, recorded in South Africa and 16 different European states. Mute Swan *Cygnus olor*, Black Swan *C. atratus*, Bar-headed Goose *Anser indicus*, Greylag Goose *A. anser*, Canada Goose *Branta canadensis/hutchinsii*, Egyptian Goose *Alopochen aegyptiacus*, Ruddy Shelduck *Tadorna ferruginea*, Wood Duck *Aix sponsa* and Ruddy Duck *Oxyura jamaicensis* were all recorded from 10 or more countries, based on data from Blair *et al.* (2000) and Rehfish *et al.* (2006). Canada Geese are especially long established in Europe, having been introduced to England in the seventeenth century and to Sweden and other parts of Europe since 1933 as well as to New Zealand and other parts of the globe (Callaghan & Kirby 1996). Flicking through the Wetland Bird Survey Annual Reports since 1999/2000 reveals no fewer than 56 different species of ducks, geese and swans occurring regularly as escapes or escapes/vagrants in the UK (out of 77 species listed on Category E of the BOU list), which make our regularly occurring 27 'native' species look positively depauperate (e.g. Austin *et al.* 2008)!

Nevertheless, the problem is not evenly spread over the globe – latitude is inversely correlated with non-native species richness in many groups, but there is no doubt that human population and local plant species richness both have a major influence, because we tend to occupy the most productive and biologically diverse habitats of the planet. However, the presence of high densities of humans also increases the degree of disturbance to natural habitats and the probability of importation of non-native species into the areas of the planet that we most like to occupy (McKinney 2006).

collections of waterbirds has increased the numbers of escaped exotic birds, especially in Europe. Intercontinental transport now enables us to move the flora and fauna of the world around with an ease never before possible and the increasing pressures of the global food industry and the enhanced affluence of communities across the globe mean that movement of birds occurs now on a scale unimaginable in earlier times. Although most introduced birds seem not to settle and establish viable populations in unfamiliar territory (Lever 1987; Kear 1990), this does of course mean that the risk of deliberate or unintentional introductions of exotic wildfowl around the world is now greater than ever before (see Box 1).

### *Why all the fuss – how do aliens affect our flora and fauna?*

Aliens are frequently cited as causing a wide range of problems to the native flora and fauna they become established within, as well as causing specific problems for us and the agricultural systems upon which we depend. Frustratingly, there is generally very little good supporting evidence for many of the effects for which aliens stand accused. Let us explore some of the mechanisms by which aliens are supposed to have had effects on native organisms and systems.

### *Hybridisation*

Bibby (2000) found it chilling that aliens were 'the only form of pollution which spontaneously self-replicates', but perhaps even more insidious is that some aliens hybridise with native forms to create a potentially bleak route to the extinction of the latter. Much of the focus on problems associated with introduced wildfowl has arisen from the highly controversial (but now extensively well-researched) case study of the Ruddy Duck *Oxyura jamaicensis*. As described in more detail elsewhere in this issue (Henderson 2009, pp. 680–690), Ruddy Ducks escaping from captivity in England in the middle part of the twentieth century led to the establishment of a feral population of 6,000 individuals by 2000 (Kershaw & Hughes 2002; Hughes *et al.* 2006). This in itself caused no obvious problems in Britain, since there were no apparent competitive or other adverse interactions with the native avifauna (Hughes 1992). Of far greater concern was the increasing numbers of Ruddy Ducks occurring in conti-

ental Europe, apparently resulting largely from the population establishing in Britain. In Spain, the arrival of the Ruddy Duck threatened the outstandingly successful conservation efforts to pull the White-headed Duck *Oxyura leucocephala* back from the brink of extinction in western Europe. Soon after the arrival of the Ruddy Duck there, hybrids between the two species were found and there was a clear risk of creating a hybrid swarm of *Oxyura* ducks of mixed genotype, resulting in the certain disappearance of the White-headed Duck as the genetic entity we recognise today (Muñoz-Fuentes *et al.* 2006).

The White-headed Duck represented an endangered taxon dependent on ephemeral Mediterranean wetlands. It had become a flagship for habitat conservation in a part of the world where the pressures of drinking water supply, agriculture and climate change are placing enormous strains on water management. All the positive ground won in the battle to protect the White-headed Duck was suddenly potentially undermined by the arrival of the Ruddy Duck. Conservation plans for the White-headed Duck highlighted the need for action to save the species (Anstey 1989; Green & Hughes 1996; Li & Mundkur 2002; Hughes *et al.* 2006), which led to the development of a strategy to eradicate the Ruddy Duck from the Western Palearctic (see Henderson 2009).

Recent estimates of the cost of the Ruddy Duck eradication have been in the order of £3.6 to £5.4 million, a very substantial amount of money in relation to other conservation budgets. However, it is perhaps instructive to compare the relative costs of control of a species like the Ruddy Duck with those of other groups to put the problem in perspective. In the UK, it is estimated that, of the very many invasive plant species that have become established, just nine cause really serious economic consequences, amounting to an expenditure of £300 million per annum (Williamson 2002). Intriguingly, this compares with the adverse costs of native plant species (most significantly agricultural weeds) of over twice that amount, but resulting from a very much broader range of species and conflicts.

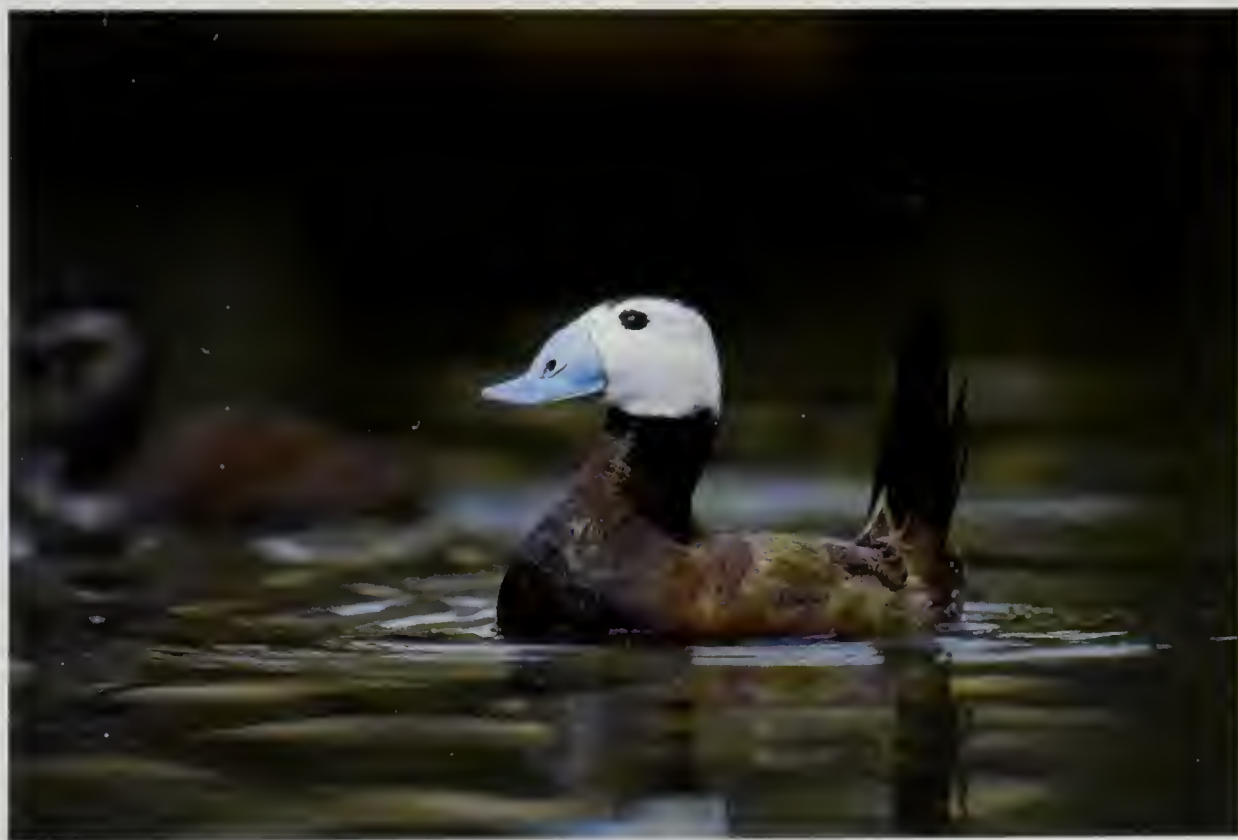
Although the 'Ruddy Duck issue' is perhaps the most well-known hybridisation problem faced by the Anatidae in western Europe, it is by no means an isolated case. Unlike the accidental introductions of Ruddy Ducks to western

Europe, Mallard introductions have been purposeful through vast areas of the planet where the species was not formerly native. This extensive introduction has contributed to the decline of dabbling ducks of many forms within their native range (see Box 2).

The major problem is that although classically 'good' bird species can be considered separable on the basis of their inability to hybridise (e.g. Helbig *et al.* 2002), the reality is that even very distinct species within the same genus are capable of producing fertile hybrids, despite genetic evidence of prolonged separation (Price 2006). Genetic studies suggest that Ruddy Ducks have been geographically isolated from White-headed Ducks for some 2–5 million years (McCracken *et al.* 2000), yet we know to our cost that these 'good' species will interbreed. In other words, the fact that two taxa have been subject to prolonged separation, and have had time to accumulate highly specific adaptations to the respective environments in which they have evolved, does not necessarily mean that the two cannot hybridise. Indeed, it is clear from the ability of the Mallard to

hybridise with a vast array of dabbling ducks that the need is very much to protect species from the direct threat of extinction through the creation of hybrid swarms (Rhymer 2006). This is especially the case where previously isolated taxa are exposed to congeners that are more abundant and/or aggressive. Of course, some degree of gene flow is normal, indeed healthy, between different populations to ensure diversity and support the fundamental processes of evolution (Arnold 1997). However, 'sudden' shock hybridisation of an isolated form confronted by exposure to a dominant congener presents the risk of extinction by introgression (resulting in a hybrid swarm that threatens the genetic integrity of the original form) or (where hybrid offspring are infertile) from other effects on the fitness of the less dominant species that may equally exacerbate rarity or result in extinction (Allendorf *et al.* 2001; Rhymer 2006).

This is really the main issue – not whether we as humans prefer to see the White-headed Duck as a species because we like it and prefer it over a hybrid swarm of crosses with Ruddy



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**431.** Male White-headed Duck *Oxyura leucocephala*, Spain, April 2005. Towards the end of the twentieth century, the White-headed Duck had become an icon for wetland conservation management in southern Europe. In Spain, the species had been successfully dragged from the brink of looming extinction as a result of over-hunting and habitat destruction. In a part of the world where water-resource management is complex and difficult, the saving of a species that depended on ephemeral Mediterranean wetlands was rightly regarded as a major triumph. All of these conservation gains were suddenly potentially compromised by the appearance in the region of the alien Ruddy Duck *O. jamaicensis*, and a new threat: hybridisation.

**Box 2.** Hybridisation problems caused by Mallards.

The Mallard *Anas platyrhynchos* in particular has been introduced purposefully for hunting or other reasons in many parts of the globe. Even in continental North America, where the Mallard was originally native, the introduction of the species to areas not formerly occupied has wrought havoc with the duck populations of that continent. For instance, introductions, in combination with changing land use that has reduced the amount of prairie parkland habitat favoured by its close relative, the North American Black Duck *A. rubripes*, and increasing artificial and urban wetlands that favour Mallards, have brought two formerly isolated species into increasing proximity and encouraged genetic introgression (Kirby *et al.* 2001, 2004; Mank *et al.* 2004). However, it remains the subject of considerable controversy as to the extent to which these factors affect the relative abundance of the two species (Heusmann 1974, 1988; Meredino *et al.* 1993). Escaped and introduced Mallards have hybridised with the local subspecies of the Mottled Duck in Florida (the so-called 'Florida Duck' *A. fulvigula fulvigula*; Mazourek & Gray 1994) and the Gulf Coast (*A. f. maculosa*). Both of these sympatric forms are derived from the North American Black Duck and as all these subspecies belong to a 'mallardine' clade they readily produce fertile hybrids with Black Ducks and Mallards (McCracken *et al.* 2001). The resultant gene flow is increasingly involving more introgression with Mallards, but on top of this, habitat destruction and excessive hunting could eventually reduce the Mottled Duck to the point where the hybridisation with Mallards would threaten to make it disappear as a distinct taxon (Rhymer & Simberloff 1996). Introductions and changes in land use have encouraged the expansion of the Mallard into parts of northern Mexico, facilitating hybridisation with the Mexican Duck *A. diazi*, which formerly bred in areas where the Mallard was only a winter visitor, and was therefore genetically isolated (Aldrich & Baer 1970; Hubbard 1977). Such was the subsequent degree of introgression between the two species that the American Ornithologists' Union declared the two forms conspecific 25 years ago (AOU 1983), despite apparently pure forms of *diazi* just managing to survive in central Mexico (McCracken *et al.* 2001). Mallards introduced to Hawaii have hybridised with the local dabbling duck, the Koloa *A. wyvilliana*, to the point that only one population (that on the island of Kauai) is not polluted by the Mallard genotype, which tends to dominate the hybrid swarms created everywhere else (Rhymer 2001). The Grey Duck *A. superciliosa superciliosa* was originally an important hunting quarry species in New Zealand, but since the 1990s has been listed as endangered, simply because it now verges on extinction through competition and hybridisation with Mallards, ironically introduced for sport (Rhymer *et al.* 1994, 2004; Williams & Basse 2006) and the same could well happen in Australia, where the same species is also present (*A. superciliosa rogersi*; Paton *et al.* 1992, Rhymer *et al.* 1994). The endangered endemic Meller's Duck *A. melleri* of Madagascar is threatened by hybridisation with game-farm Mallards kept by indigenous peoples on Lac Alaotra, a prime site for the rare species (Young & Rhymer 1998). Deliberate and accidental introductions of the Mallard to southern Africa are also starting to threaten the genetic integrity of the Yellow-billed Duck *A. undulata undulata* (Rhymer 2006) and BirdLife South Africa supports a Mallard eradication programme (Berruti 1992).

Ducks, but whether we should allow a species introduced artificially to eradicate the genetic adaptation accumulated over many thousands of years through our carelessness over a handful of decades. Mallards will continue to thrive in the heartlands of Europe and North America, but the endemic forms that disappear into the resulting hybrid swarms will mean the eradication of genetic information of native forms that may well show unique adaptations to local environments. In this way we are losing genetic diversity within the system, just as vitally as we are physically losing species as they disappear into these hybrid swarms.

**Demographic ascendancy**

Even if there is no direct genetic exchange between a native and an alien form, there may be differences in the ability of the two forms which mean that the balance of breeding success over death rate favours the more rapid expansion of one species where both compete for the same resources. One of the few examples of where such an analysis has been undertaken is with regard to the Grey Duck *Anas superciliosa* and the Mallard in New Zealand, where Williams & Basse (2006) suggested that greater breeding success and recruitment and/or annual survival rates of Mallards would give



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**432.** The Grey Duck *Anas superciliosa* was originally an important hunting quarry species in New Zealand. Since the 1990s, it has been listed as endangered, because it now verges on extinction as a result of competition and hybridisation with the Mallard *A. platyrhynchos*, ironically introduced there for sport.



K.A. Rodgers

**433.** Throughout many parts of New Zealand it is becoming difficult to find individuals of pure Grey Duck *Anas superciliosa* phenotype, so widespread has introgression with Mallards *A. platyrhynchos* become. This is certainly true in the Auckland area, where this adult female and her brood were photographed. Despite her prominent facial stripes, the traces of Mallard ancestry in this bird are all too obvious.

them an edge over Grey Ducks. Their review of the available data suggested no significant difference in annual adult survival estimates (partly because of the poor precision of the estimates), but that annual Mallard recruitment rates in the 1960s and 1970s averaged approximately 15% above the levels needed to maintain a stable population size (i.e. against contemporary survival rates) while those of the Grey Duck were 5% below (Williams & Basse 2006). This discussion was somewhat academic since genetic introgression (which created a hybrid swarm dominated by the Mallard phenotype) was already threatening to exterminate the Grey Duck and its phenotype from New Zealand after not much more than 100 years (Thomson 1922; Williams & Basse 2006).

### Competition

Although many alien waterfowl are accused of some form of competition with native forms, evidence to this effect is rarely forthcoming. Indeed, the demonstration of competitive effects between two species is difficult enough under any circumstances, and almost impossible to be convincing without some form of complex modelling of the interactions or manipulation experiments. All too often, one species has disappeared following the arrival of another before any such effects can be demonstrated. It has often been speculated that the interspecific aggression between Canada Geese and Greylag Geese has some effect on the native species in particular (Madsen & Andersson 1990). However, the only study of these interactions

in Sweden showed that despite the fact that Canada Geese evicted Greylags from their territories, both species were increasing within the study area (Fabricius *et al.* 1974). In recent years, the naturalised Canada Goose and re-establishing Greylag Goose have also shown parallel increases in abundance throughout much of England (Austin *et al.* 2008). We should therefore prudently conclude that at those densities there was no apparent interspecific effect, although we cannot be sure that in the absence of the Canada Geese, Greylags would not have increased even faster, nor can we come to conclusions about what happens under conditions of differing relative densities of the two species. Only for the Grey Duck in New Zealand is there some evidence that Mallards have been responsible for the displacement of a native species (Williams & Basse 2006). In this case, the 10–15% difference in mass and 10% difference in linear measurements means that Mallards can use their size advantage to physically displace and exclude Grey Ducks at feeding sites (Marchant &



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**434.** Greater Canada Goose *Branta canadensis*, Warwickshire, January 2006. Canada Geese were introduced to many newly created country estates in Britain in the eighteenth and nineteenth centuries. A good quarry species and a successfully self-replicating alien replacement for the Greylag Goose *Anser anser* (itself probably eliminated from much of Britain previously through over-exploitation), the Canada Goose was seemingly able to exploit the niche of a large avian herbivore without serious competition in the agricultural landscapes of the twentieth century.

Higgins 1990; Williams & Basse 2006). Mallards dominate access to food at public feeding sites and usurp Grey Ducks from nest-sites as well, with the result that sites formerly occupied solely by the endemic have been taken over by Mallards following colonisation, with ultimate loss of the native Grey Duck from large areas of formerly occupied territory.

There is also much speculation about how the influence of humans can affect the relative abundance of different habitats that may tip the competitive balance between two species in favour of the alien. Again, the well-studied case of the Mallard and Grey Duck in New Zealand offers some evidence in this respect. The New Zealand environment has altered radically since the arrival of European colonists, especially through the loss of a quarter of indigenous forests and their replacement largely by intensively managed grassland and pastoral agriculture (Wards 1976). Almost 90% of natural wetlands (to which the Grey Duck traditionally resorted) had been lost by 1970 causing a direct reduction in range and abundance (Balham 1952; Cromarty & Scott 1996). It has been suggested that Mallards are better able to exploit artificial wetlands, such as stock ponds in open habitats and urban waters, but the fact is that

Grey Ducks were just as adept at exploiting these modified or artificial habitats and it may be that the physical or behavioural displacement of the Grey Duck by the Mallard is more to blame in enabling the invading species to occupy the full range of habitats that the Grey Ducks formerly had to themselves in New Zealand (Williams & Basse 2006).

#### *Interference to ecosystem function*

Although not strictly confined to non-native wildfowl, information relating to the extra loading of nutrient inputs to wetlands subject to artificial stocking and introduction of wildfowl suggest that artificially high concentrations of these birds could add significantly to the mobilisation of carbon, nitrogen and phosphorus in freshwater systems (Callaghan & Kirby 1996). This conclusion was made largely on the basis that waterbirds are often the principal source of nitrogen and phosphorus in lake systems (e.g. Manny *et al.* 1994, Marion *et al.* 1994) and that concentrations of phosphorus in particular have such consequences for freshwater trophic systems that relatively modest increases can significantly degrade wetland biodiversity (Søndergaard *et al.* 2005; Jensen *et al.* 2006). However, convincing case studies



Simon Stirrup

**435.** Muscovy Duck *Cairina moschata*, Cambridgeshire, August 2006. Among the first exotic wildfowl species to be introduced into Europe must have been the Muscovy Duck, already widely kept throughout South America and the West Indies when the Conquistadores reached the New World; birds were brought back to Spain in the mid 1500s, reaching Britain somewhat later in the following century (Donkin 1989).

demonstrating cause and effect are frustratingly rare and we have to accept that large concentrations of native waterbirds aggregated at critical sites will have precisely the same effect. Recent studies in Denmark showed that lakes stocked with reared Mallards for hunting had significantly higher phosphorus concentrations in the water than those not subject to stocking, but again it was not possible to establish cause and effect, especially because variation among unstocked lakes was so high (Noer *et al.* 2008). These authors also cautioned that any effects from Mallard stocking on lake biodiversity was highly dependent on nutrient status, with acidic, nutrient-poor waterbodies being more sensitive to change as a result of relatively modest elevations in phosphorus concentrations.

With this possible exception, few if any introduced alien waterfowl have caused any major effects to ecosystem function in the way that, for example, the alien Water Hyacinth *Eichhornia crassipes* has caused serious and widespread damage to freshwater ecosystems in Africa, the USA, Australia and India (Gopal 1987) or the introduction of predators such as the American Mink *Mustela vison* to Britain has affected the population dynamics of native prey species (e.g. Craik 1997). The literature is awash with appalling tales of how the introduction of predators has had catastrophic effects on the ecosystems, flora and fauna of island complexes in particular (e.g. Holdaway 1999, Croll *et al.* 2005, Kurle *et al.* 2008). Who would have thought that the introduction of the humble

House Mouse *Mus musculus* could threaten a population of Tristan Albatrosses *Diomedea dabbenena* (Wanless *et al.* 2007)? While it is hard to imagine that introduced waterfowl could seriously affect ecosystem function, the fact that this has not happened to date is purely good fortune and it is essential to maintain vigilance to avoid problems in the future.

#### Disease and parasites

Recent concern over highly pathogenic avian influenza has again brought home how perilously little we know about the prevalence and ecology of the most common of avian diseases, and parasites sit very close behind. We have little idea which avian species could potentially be vectors for which pathogens or parasites, nor can we predict what effect these may have once established elsewhere on native species. It has taken several years of painstaking research to show that infection by the caecal nematode *Heterakis gallinarum* from farm-reared Common Pheasants determines the worm burdens of wild Grey Partridges *Perdix perdix*, supporting the



Kit Day

**436.** Grey Partridge *Perdix perdix*, Norfolk, March 2007. The impact of alien species is not always readily apparent. Research has shown that infection by the caecal nematode *Heterakis gallinarum* from farm-reared Common Pheasants *Phasianus colchicus* influences the worm burdens of wild Grey Partridges, thus supporting the hypothesis that parasite-mediated apparent competition with the Pheasant may be a factor contributing to declines of Grey Partridges in Britain (Tompkins *et al.* 2002).

hypothesis that parasite-mediated apparent competition with the Pheasant may be a factor contributing to declines of Grey Partridges in Britain (Tompkins *et al.* 2002). Some native Hawaiian species, for instance, are now confined to higher altitudes because these are the only refuge from diseases hosted by introduced avian species in the lowlands (Bibby 2000); others have been driven to extinction by Avian Malaria *Plasmodium relictum* (LaPointe *et al.* 2005). Introduction and stocking of wildfowl often concentrate naïve birds at artificially high densities, which greatly enhance the probabilities of rapid spread of waterborne pathogens. Duck Viral Enteritis (DVE or duck plague), for example, has been associated almost exclusively with captive-reared or non-migratory waterfowl in Europe, Asia and North America, and Mallards and Muscovy Ducks are especially susceptible (Gough 1984; Brand 1988; Brand & Docherty 1988; Gough & Alexander 1990). Sporadic outbreaks in wild waterbirds often follow contact with captive or released individuals, but asymptomatic birds can also spread the virus for years through deposition of their faeces (Burgess *et al.* 1979; Burgess & Yuill 1982). Thus, escapes from captivity and the release of wildfowl for hunting have the potential to promote the incidence of DVE in wild populations with potentially catastrophic effects.

#### Damage to agriculture and habitats

The Rose-ringed Parakeet *Psittacula krameri* has been established in England as a breeding species for almost 40 years (Pithon & Dytham 1999; Butler 2003). Yet, while the spectacle of free-flying parakeets is enjoyed by many, the birds have become unnervingly numerous, to the extent that it would be hard to eradicate the species should it become a real pest to fruit production or be

shown to have serious consequences for our native fauna, for example. While there are well-documented cases of the impacts of species such as the Canada Goose on agriculture in areas in which they have been established, it is generally possible to find ways of resolving local 'pest' conflicts that fall well short of total eradication. The effects on native flora and fauna are less easy to demonstrate and are very much less well understood away from the direct genetic, demographic or behaviour effects we have considered above. There are reports of Canada Geese damaging reedbeds in England through grazing or trampling and suggestions of changes to water chemistry as a result of



Kit Day

**437.** Rose-ringed Parakeet *Psittacula krameri*, Kent, March 2006.

Rose-ringed Parakeets are an undeniably spectacular addition to the avifauna of some parts of southeast England, whether it be as the great flocks coming into roost at Esher rugby club or as birds seen at close range monopolising garden feeders. Established for almost 40 years as a breeding bird in England, this alien species has become unnervingly numerous, however, to the extent that it would be hard to eradicate should it become a significant agricultural pest or be shown to have serious consequences for our native fauna.

**Box 3.** International legislation relating to introductions of non-native species.

In the UK, several international conventions and legislative instruments have something to say about aliens and the introduction of non-native species. The most important are as follows:

**EU Birds Directive (1979) Article 11**

'Member States shall see that any introduction of species of bird which do not occur naturally in the wild state in the European territory of the Member States does not prejudice the local flora and fauna.'

**Bern Convention (1979) Article 11 (2)**

Contracting parties undertake... 'to strictly control the introduction of non-native species'.

**Convention on Biological Diversity (Rio 1992) Article 8 (h)**

Contracting parties are committed to action to... 'prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species'.

**African-Eurasian Migratory Waterbird Agreement (1999) Article III**

Contracting parties shall... 'prohibit the deliberate introduction of non-native waterbird species into the environment and take all appropriate measures to prevent the unintentional release of such species if this introduction would prejudice the conservation status of wild flora and fauna; when non-native waterbird species have already been introduced... shall take all appropriate measures to prevent these species from being a potential threat to indigenous species'.

deposition of nutrients by such geese (e.g. Owen *et al.* 2006), but the true ecological or financial extent of these effects, although hard to measure, are probably local.

*Health and safety*

Some alien species, particularly the Canada Goose outside its native range, have been reported causing damage to amenity areas, creating threats to public health in parks and water areas and threats to air safety (Watola *et al.* 1996; Owen *et al.* 2006). However, most of these largely site-based local conflicts can potentially be resolved by local management options, rather than providing grounds for wide-scale extirpation of alien waterfowl species.

*What about legislation to help with these problems?*

The unintentional, accidental or deliberate introduction of non-native wildfowl has already occurred in many parts of the world so, in some cases, use of legislation now would be closing the stable door after the horse has bolted. Most countries in the world now have environmental legislation designed to protect indigenous flora and fauna and general biodiversity, some of which specifically addresses introduced non-native forms. Hence, there are a number of international agreements and conventions which oblige the UK Government to take certain steps with respect to introduced wildfowl (Box 3), although despite such obligations

introductions of alien waterbirds still occur. While there could be some interpretation needed over what constitutes 'appropriate measures to prevent these species from being a potential threat to indigenous species', the requirements on governments within the African-Eurasian Waterbird Agreement (AEWA) area are clear. The existence of these international conventions, treaties, agreements and policies are sufficient to provide a supra-national framework to prevent introductions and control introduced species where these have become established. However, a recent review of legislation at national and provincial level found this largely inadequate because few signatory states to international instruments incorporate their principles into their own domestic legislation (Shaw 2006). Obviously, legislation is not the only solution to the problem. However, given the limited resources of most administrations to enforce nature conservation legislation under normal circumstances, such a legislative framework provides the impetus for action by government agencies, and the key lever that conservationists and non-governmental organisations can use in critical situations.

*How do we deal with problematic aliens once established?*

In the continental USA, 50,000 alien species have been recorded as free-living, and even if only a small fraction of these cause problems, it

is clear that the effect is potentially significant. The 'Tens Rule' states that only around 10% of the species that arrive will become established and, of these, only about 10% will have an ecological effect (Williamson 1996). Non-native species in the USA are thought to have contributed to declines among 42% of threatened species, also costing the economy \$137 billion per year (Pimentel *et al.* 2000). Alien or introduced non-native species are ranked as the single most important factor affecting biodiversity after habitat loss (Simberloff 2004). Where it is clear that there is a need to deal with a non-native form that threatens some aspect of the native biodiversity, how can we deal with such problem aliens? The answer to this deceptively simple question is 'with great difficulty' and in the case of the Defra project to reduce the Ruddy Duck population in the UK, 'at huge expense'. In situations where aliens have become established and there is no measurable or perceived conflict, perhaps there is no reason to act; even so, when aliens are established at low population levels, future problems may not yet be apparent. Where there is local conflict analogous to that inflicted by native fauna, local management solutions can generally be found – for example removing grazing non-native

Canada Geese from the vicinity of airports or amenity grasslands. However, where biodiversity or other legislation to protect wildlife is being seriously compromised by the presence of an alien form, clearly the problem deserves an appropriate and prompt response. In situations where hybrid introgression into a genome or direct competition threatens the very existence and integrity of a species, this seems to be a clear case where eradication is a justified and appropriate response to the level of threat.

In 1996, the Council of Europe published a landmark set of 23 action plans for the most globally threatened bird species on the continent, which included one for the White-headed Duck (Green & Hughes 1996). Part of the action-planning process is to consider threats and risks to the various species, flag up the solutions and develop a prioritised set of actions to improve on the current conservation status of each of these species. The White-headed Duck plan urged Britain to undertake a Ruddy Duck control programme as quickly as possible, starting with the regional trials and continuing to the national scale if these were shown to be effective. The Bern Convention subsequently produced a strategy for the complete eradication of the Ruddy Duck in the



Simon Stirrup

**438.** Male Mandarin Duck *Aix galericulata*, New Forest, Hampshire, April 2007. A recent review found that the most commonly introduced species to the AEWA (African-Eurasian Waterbird Agreement) area was the Mandarin, recorded in South Africa and no fewer than 16 different European states (Banks *et al.* 2008).

Western Palearctic (Hughes *et al.* 1999). Hence, at the international level, a thorough assessment of the impacts of allowing this particular alien to remain was undertaken, a set of prioritised actions were forthcoming and it was up to national agencies to take measures to fulfil the needs. As a result of co-ordinated international actions and financial support under the EU Life Programme, 11 different states were taking action against Ruddy Ducks by 2002 and birds have been controlled in Iceland, Belgium, France, Portugal, Spain, Morocco and Britain (Hughes *et al.* 2006; CSL 2007). This programme has been carefully researched and planned from the outset and surely represents an appropriate (if unfortunate) response to the problem in hand. Let the Ruddy Duck continue to increase and the White-headed Duck would probably disappear as a species. This decision by the UK Government has been highly controversial and several conservation bodies have lost members who resigned over the organisation's support for the eradication programme. Yet the threat from the Ruddy Duck is as real and as

certain as the toll taken by mink and introduced rats to offshore seabird colonies, where the control of 'vermin' is not opposed by those who prefer to see breeding seabird colonies restored by their removal. Control of animals is unpleasant; even those responsible for the Ruddy Duck cull have had severe misgivings about shooting a non-quarry species during the breeding season when it shows little fear of humans. But are we not being overly sentimental when we object to culling introduced species such as the Ruddy Duck? After all, we permit our cats to slaughter an estimated 25–29 million birds every year (Woods *et al.* 2003), we unintentionally kill up to 27 million birds on our roads every year (Erritzoe *et al.* 2003), several million more birds are shot annually for sport, and many more birds die as a direct result of various human activities without a thought. Surely culling 1,000–2,000 Ruddy Ducks per year for a short period is worth the effort? If we are serious about saving the White-headed Duck, there are simply no other choices.



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**439.** Female Ruddy Duck *Oxyura jamaicensis*, Arizona, USA, January 2009. Having quickly established a British population numbering around 6,000 birds by the end of the twentieth century, following accidental releases from the WWT headquarters at Slimbridge, the Ruddy Duck has become the subject of an intensely controversial eradication programme, designed to safeguard the Globally Threatened White-headed Duck *O. leucocephala* population in southern Europe.

*What makes a good alien – what determines its distribution and abundance?*

If we could predict what makes a 'good alien', we could perhaps identify species that are more likely to be successful and potentially destructive in their invasiveness; in turn, it would then be easier to prevent the establishment of certain taxa in the first place, or be more effective in targeting actions once established. One suggested approach is to look for life-history traits that characterise rare or invasive species, considering these types at opposite ends of a spectrum (Van Kleunen & Richardson 2007). In practice, however, it is very difficult to identify what features affect the ability of an exotic to thrive outside its normal range. For example, most ducks are relatively short-lived but have large clutch sizes (compared with geese or swans), which in theory makes them better able to expand their populations rapidly once first established into new habitats where some feature of ecological space was unoccupied and permitted their colonisation. Yet life-history traits are moulded by the very ecological context that an organism finds itself in. The demography (i.e. the balance between survival and reproductive output that determines how fast the population changes from year to year) of Canada Geese in their native North America may be very different from that in Europe, where predation pressures, competition from other geese and food availability are not the same. By inhabiting wooded wetlands in southern England, the Mandarin exploits a food resource (including acorns) and nesting resources (cavities, partly enhanced by the provision of artificial nestboxes) that are free of competition from other Anatidae, while in North America introduced Mandarins would potentially suffer greater competition with native Wood Ducks *Aix sponsa*. And who would have guessed that Egyptian Geese would find an opportunity unexploited by most birds in feeding on the exposed faces of silage clamps? The freedom from competition from native forms undoubtedly has a major influence on the demography of an invasive species, which may be difficult to predict from conditions in its native range. As Colin Bibby put it 'introduced species have a nasty habit of being unpredictable' (Bibby 2000), despite the fact that relatively few of the 56 alien wildfowl recorded in the UK in the last nine years have successfully established themselves as self-per-

petuating populations (Banks *et al.* 2008). That certainly does not mean that they will not do so in the future.

Nonetheless, some aspects of ecology may help to identify the potential success of an introduced alien. The humble Mallard, for example, has been widely domesticated and introduced throughout much of the known world with devastating consequences. It is a species that willingly hybridises with at least two species of goose, 41 different duck species, guinea fowl and even chickens (Rehfishch *et al.* 2006) as well as indulging in homosexual necrophilia (Moeliker 2001), so here surely is a species to handle with extreme caution. As we saw in the cases of the North American Black Duck *Anas rubripes* and the Grey Duck, the species is also able to adapt to opportunities from human activities on available wetland environments: loss of parkland habitat in North America and possibly the creation of pastoral agricultural and stock ponds in New Zealand may have favoured the invasive Mallard over the native forms in two different continents.

*How do we deal with the problem in the future?*

We now have no excuse. We are aware of the issues raised by introduced species and we see the havoc they can wreak. We are painfully aware of the most troublesome species and the enormous costs of fixing some of the problems they cause (such as the Ruddy Duck in Europe). For yet others, like the Grey Duck of New Zealand, we may well be far too late to be able to save very much at all before a unique subspecies of bird completely disappears into a hybrid swarm where the genotype is dominated by the Mallard phenotype. The fact is that when dealing with established aliens, prevention is far better than cure – we need to stop all further introductions of non-native forms; and, where they have occurred, ensure that the species do not spread. We have good information systems in place now, including the new EU consortium DAISIE (Delivering Alien Invasive Inventories for Europe; [www.europe-aliens.org](http://www.europe-aliens.org)) created to address the need to gather and integrate information on current invasions across Europe through the development of an online, peer-reviewed database of alien species. In Britain, the Non-native Species Secretariat is developing the Non-native Species Strategy, covering all taxa and launched in May 2008

([www.nonnativespecies.org](http://www.nonnativespecies.org)). Their work relies on fundamental knowledge about the nature and extent of the problem, so we need to be better at recording and monitoring non-native species in Britain to contribute to the development of these initiatives. This is the key role for birders, submitting counts via county bird clubs, WeBS counts, atlas work or the Rare Breeding Birds Panel. Linking information on the status of aliens at both country- and Europe-wide levels as well as globally should improve understanding and prediction of invasion dynamics and help to prevent their spread into new areas (Pysek & Hulme 2005). We have some good international legislation in place to do this, especially the Convention of Biological Diversity and, in the specific case of wildfowl and the Africa-Eurasia region, AEWA, but there is a desperate need for improvement when translating this into domestic legislation and into effective action on the ground. It is clear that current legislation needs to be further augmented and far more strictly enforced. We must stop escape events, whether they are accidental or deliberate, in order to reduce the likelihood of new aliens becoming established in the future. But we must be (i) ready to eradicate these escapes where their presence represents a clear threat to native biodiversity and (ii) to do so at the early stages before a population is self-sustaining. Thanks to the great foresight of the UK Government and the African-Eurasian Waterbird Agreement Secretariat (who funded

the process), there are interim conservation guidelines in place to assist states in avoiding introductions of non-native waterbirds, which, if followed, can go a long way to minimising the problems and for dealing with serious issues when they arise (Box 4).

I must end on a personal note, because I agree emphatically with the late Colin Bibby (2000) when he said that the problem of introduced species was an important and neglected area of British ornithology. Quite apart from the ecological or economic damage that they may or may not do, I simply do not like to see alien species. We have seen the damage wrought by the American Mink, *Coypu Myocastor coypus* and Grey Squirrel *Sciurus carolinensis* and, to me, the fact that we tolerate the presence of aliens represents the lack of care we increasingly show for our natural biodiversity. They represent a form of litter (and in many cases self-sustaining, increasing litter at that), which we have carelessly tossed into the rich natural ecosystems that are still adapting to the conditions that have existed only since the last glaciation. This reflects our increasing disregard for our environment and our distance from nature. We have been lazy and sentimental in our attitude to escapes and deliberate introductions, but we need to think again. The scientific and conservation communities have not been good at leading public understanding of the problems caused by non-native species. An understandable lack of public support for any killing of

**Box 4.** Outline summary of the interim AEWA guidelines on the avoidance of introductions of non-native waterbird species (summarised from Owen *et al.* 2006).

1. Establish baseline information on importation, captive holdings and established free-living populations of non-native waterbird species.
2. Develop and maintain monitoring programmes to periodically revise the baseline information.
3. Undertake environmental risk assessment to establish levels of potential threat posed by each non-native waterbird species, so as to prioritise action.
4. Establish or improve legislation to prevent the deliberate introduction of non-native waterbird species and allow their control where established populations exist.
5. Introduce measures to prevent escapes of non-native waterbird species from captive collections.
6. Introduce measures to prevent the import of high-risk waterbird species, where the risk is established as a result of the risk assessment undertaken in (3) above, backing legislation with enforcement.
7. Design control strategies to limit or remove high-risk non-native waterbird species, test and report on their feasibility. Implement education programmes and raise awareness among key stakeholders, derive public support for control measures where implemented and establish monitoring systems to track success of such control measures.

animals has also created a lack of political will to tackle the control of non-native species. At least we now have the international legislation to do something about them, even though national legislation remains woefully inadequate. We need to be vigilant and not to be afraid to take action to stop many of these exotics before they get too numerous and their impacts become a problem. We fail to do so at our peril.

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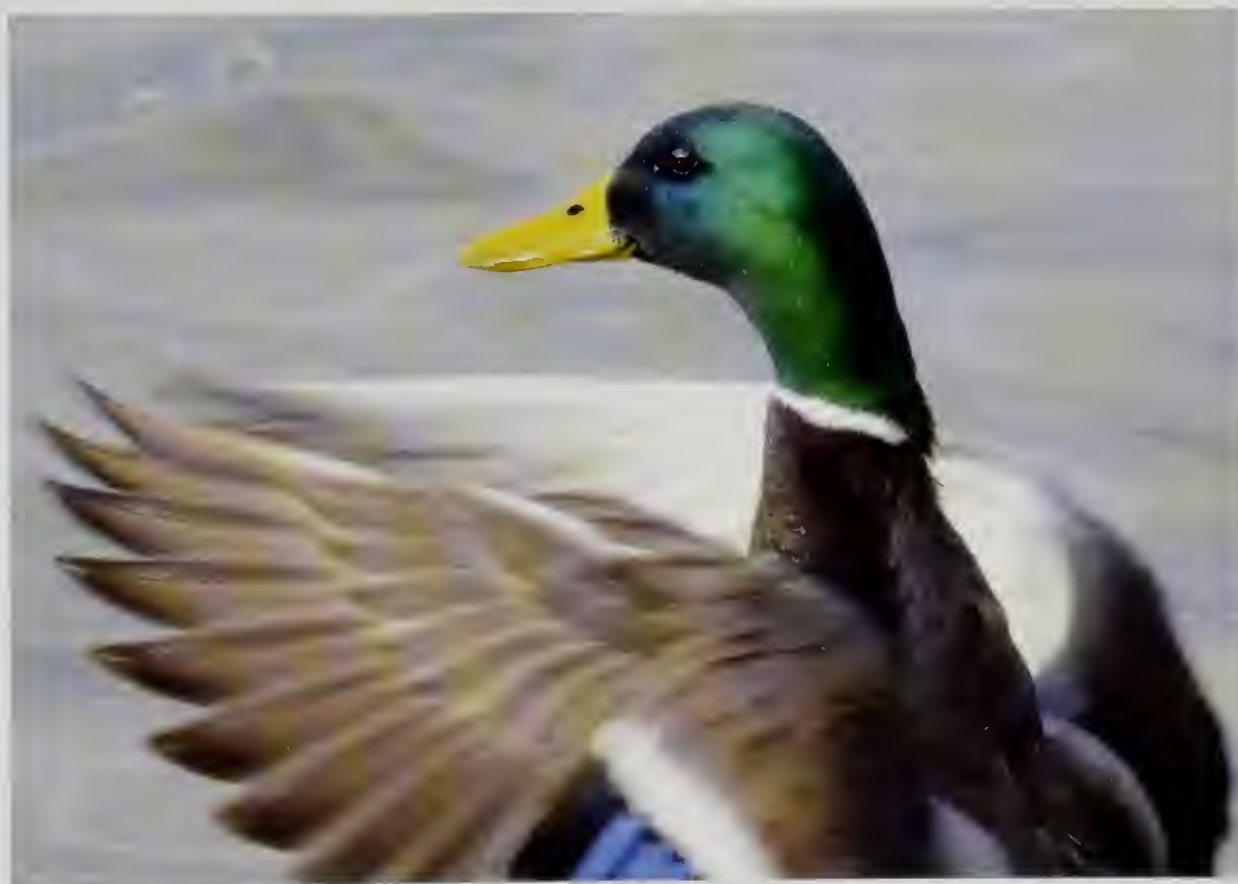
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**440.** Male Mallard *Anas platyrhynchos*, Norfolk, February 2009. The Mallard has been widely domesticated and introduced throughout much of the known world, sometimes with devastating consequences for other wildfowl. It willingly hybridises with at least two species of goose, no fewer than 41 different duck species, guinea fowl and even chickens (Rehfishch et al. 2006).

## Progress of the UK Ruddy Duck eradication programme

Iain Henderson



Alan Harris

Ruddy Ducks *Oxyura jamaicensis* and Tufted Ducks *Aythya fuligula*

**ABSTRACT** The non-native Ruddy Duck *Oxyura jamaicensis* became established in the UK in the 1960s following escapes and releases. During the 1970s and 1980s it spread throughout the UK and was seen with increasing frequency in mainland Europe. Hybridisation with the Endangered White-headed Duck *O. leucocephala* was first recorded in Spain in 1991, and this is now regarded as the greatest threat to the long-term survival of the latter species.

A programme aiming to protect the White-headed Duck by eradicating Ruddy Ducks from the UK began in 2005. Over 6,200 Ruddy Ducks have been culled at over 110 sites across England, Scotland and Wales under this programme, and data suggest that by winter 2008/09 the UK population had been reduced by almost 90%.

### Introduction

On a global scale, invasive non-native species are second only to habitat loss as a cause of extinctions (Lowe *et al.* 2000). This can result from competition, habitat degradation or hybridisation. The Ruddy Duck *Oxyura jamaicensis* is a native of the Americas, where it has a stable population of around 500,000 birds (Wetlands International 2006), but is an introduced species in Europe. The UK population

originates from four males and three females imported to the Wildfowl & Wetlands Trust (WWT) at Slimbridge, Gloucestershire, in 1948. A captive-breeding programme started in 1949 but, following a series of escapes in the mid to late 1950s and the deliberate release of three immature females in 1961 (Hudson 1976), a small feral population became established in southwest England. Breeding in the wild appears to have first occurred in 1960, at Chew

Valley Lake, Avon (King 1976), and during the 1960s and early 1970s the breeding range spread slowly to other counties – Staffordshire in 1961, Gloucestershire by 1963, Shropshire in 1965, and Cheshire in 1972 (Hudson 1976). From the mid 1970s, the size of the UK Ruddy Duck population began to grow much more rapidly, and the range began to expand significantly. Breeding was first proved in Northern Ireland in 1973 (Allen & Mellon 2006) and by 1997 the UK breeding population had spread as far as Orkney (*Scottish Bird Report* 1997). In January 2000, the UK population was estimated at c. 6,000 birds (Kershaw & Hughes 2002).

### *Ruddy Ducks in Europe*

The period of growth and spread of the UK population was reflected on the Continent, where the number of records increased at a mean annual rate of 21% between 1976 and 1996 (Hughes *et al.* 1999). DNA analysis has been carried out comparing Ruddy Ducks from North America with specimens from Europe, including captive birds in the UK and wild birds culled in Iceland, the UK, France and Spain. The results confirm that the European Ruddy Duck population (including the birds shot in Iceland) is likely to derive solely from the captive population in the UK (Muñoz-Fuentes *et al.* 2006). Although captive birds are also present in some European countries, the close correlation between the rise in the UK popula-

tion and the increase in records in mainland Europe suggests that escapes from captivity are not the main source of birds in Europe. In addition, the appearance of winter flocks of 30–40 birds in France (winter 1995/96) and Spain (January 1997, following freezing conditions across northern Europe) cannot be explained by escapes from captivity (Hughes 1996). By 1999, annual breeding attempts were believed to occur in at least six countries in the Western Palearctic, in addition to the UK: Iceland, Ireland, the Netherlands, Belgium, France and Morocco (Hughes 1999). However, in the last ten years the development of the populations in these countries has been patchy, and only the Netherlands and France appear to have breeding populations of more than ten pairs. The Netherlands had approximately 16–20 breeding pairs in 2008 (Erik van Winden pers. comm.) while France had around 40–60 breeding pairs in 2007 (Alain Caizargues pers. comm.). Ruddy Ducks in France are concentrated in the northwest of the country and numbers have continued to increase slowly, despite 120–140 birds being culled annually in recent years. In the Netherlands, however, peak winter counts have fallen in recent years, from 97 in winter 2005/06 to 60 in winter 2008/09. This fall has occurred without any control of the population in the Netherlands, and suggests that there may be movement of birds between southeast England and the Netherlands, and



441. Male White-headed Duck *Oxyura leucocephala*, southern Spain, April 2008.

that control of the population in the UK has been responsible for the decline in numbers.

Numbers of Ruddy Ducks in other European countries remain very low but, given the experience in the UK, it is important to avoid complacency. In Belgium, one pair attempted to breed in 2006 but the birds disappeared before they could be culled. Another pair attempted to breed in 2007 but the two birds were successfully shot (Wouter Fayvets pers. comm.). In 2008, three pairs were recorded in a Special Protection Area at Antwerp Harbour, and seven young raised. Because of the presence of other breeding waterbirds (most notably a Eurasian Spoonbill *Platalea leucorodia* colony), the shooting of these birds was not possible. Up to five pairs were present in this area in May 2009 (Wouter Fayvets pers. comm.) and two adult males, three adult females and five pulli were shot in August 2009 (Hans van Gossum, pers. comm.). Numbers in the Republic of Ireland appear to have fallen in line with the decline in the UK population, despite no organised control programme, and most records are now of single birds. Comprehensive data from Morocco are difficult to obtain but one possible Ruddy Duck × White-headed Duck hybrid was reported near Rabat, with two White-headed Ducks, in April 2009 (Ana Iñigo *in litt.*). In Germany, only one breeding pair has been recorded since 2000 – in Lower Saxony in 2001, 2002 and 2003 (Gerhard Adams pers. comm.). Although there have been rare observations during the breeding season in northwest Germany in more recent years, no broods have been confirmed (Friederike Woog *in litt.*). No birds have been recorded in Iceland since a single male in April 2004 (Oli Nielson pers. comm.).

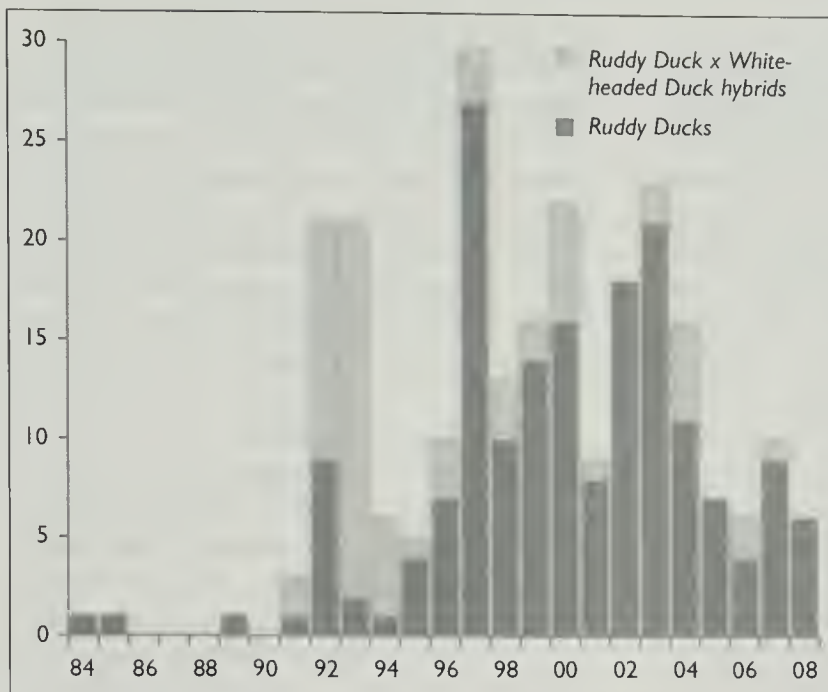
#### *White-headed Ducks and the threat posed by the Ruddy Duck*

The White-headed Duck is listed as Endangered on the IUCN Red List of Threatened Animals (Hughes *et al.* 2006; IUCN 2009). It belongs to the same stiff-tail genus as the Ruddy Duck but the two species have been geographically isolated without any gene flow between them for between two and five million years (McCracken *et al.* 2000). The White-headed Duck was formerly found throughout southern Europe, parts of North Africa and much of central Asia, but its breeding areas are now highly fragmented, principally due to habitat loss and over-hunting. The European breeding population is

now restricted to Spain, which is the only region where the White-headed Duck has expanded its breeding range and population size in recent years (Hughes *et al.* 2006). The Spanish population had fallen to as few as 22 birds, at just one location in Cordoba, by 1977 (Torres 2003), but numbers had increased to a recent peak of almost 4,500 in autumn 2000, following a particularly good breeding season, and the post-breeding population now appears to have stabilised at between 2,100 and 2,600 individuals (Carlos Gutierrez pers. comm.). Small numbers have been released into the wild in recent years. These are the surplus birds from a captive-breeding programme that uses stock of Spanish origin (Torres 2003; Carlos Gutiérrez pers. comm.), and which was established in the early 1980s as insurance against the potential loss of the small wild population. However, the increase in numbers was mainly the result of a hunting ban which came into effect in 1980, and habitat protection that has safeguarded the key breeding and wintering sites for the species (Carlos Gutiérrez pers. comm.). In 2007, breeding occurred on 32 sites across 11 provinces in southern and eastern Spain (Carlos Gutiérrez pers. comm.).

In 1983, the first feral Ruddy Duck was recorded in Spain, raising concerns about the risk of hybridisation with the White-headed Duck. Ruddy Ducks have been recorded annually in Spain since 1991, and the first Ruddy Duck × White-headed Duck hybrids were observed in the same year (Hughes *et al.* 1999). In the early 1990s, several hybrids were culled in Spain as the authorities developed an effective control and reporting programme (fig. 1). At least 182 Ruddy Ducks have been recorded, in 19 provinces, since 1991 (Carlos Gutiérrez pers. comm.) and introgressive hybridisation with the Ruddy Duck is now the greatest long-term threat to the White-headed Duck's survival (Hughes *et al.* 2006).

Although many people focus on the small numbers of Ruddy Ducks that currently arrive in Spain, it is the threat posed by range expansion of the Ruddy Duck that is the greater risk. The Spanish authorities currently have a well-organised control programme, which can deal with the few Ruddy Ducks that appear annually, and the numbers arriving in Spain have in fact fallen since the start of the UK eradication programme. In 2008, only six birds were seen (Mario Saénz de Buruaga pers. comm.) and all



**Fig. 1.** Ruddy Ducks *Oxyura jamaicensis* and Ruddy Duck x White-headed Duck *O. leucocephala* hybrids culled in Spain, 1984–2008 (Carlos Gutierrez pers. comm.).

of these were culled. However, the spread of Ruddy Ducks across the Palearctic will become unstoppable if allowed to proceed beyond a certain point (Hughes *et al.* 2006). For example, if the species expands its range through France and Spain in the same way that it spread throughout the UK between 1975 and 2000, then control in Spain would become impractical. The range of the Ruddy Duck would probably also begin to extend into central and eastern Europe and in due course it would almost certainly become established in other White-headed Duck range states such as Turkey and the Russian Federation. This could potentially lead to the global extinction of the White-headed Duck, given the difficulties of carrying out monitoring and control over such vast and remote areas. It has been suggested that hybridisation between the two species would cease (or at least continue only at a very low level) if the range of the Ruddy Duck was allowed to overlap with that of the White-headed Duck. However, there are precedents elsewhere that demonstrate that hybridisation between native and non-native waterfowl can lead to the effective extinction of native species and that hybridisation does not stop as the numbers of the invading species increase. For example, in New Zealand the non-native Mallard *Anas platyrhynchos* was introduced in significant numbers from 1895. Hybridisation with the native Grey Duck *A. superciliosa superciliosa* was soon evident and by

the late 1950s the proportion of hybrids was estimated at up to 4.3% of the Mallard/Grey Duck population in some areas (Sage 1958). By the mid 1980s this had risen to over 50% (Gillespie 1985), and the proportion of pure Grey Ducks had fallen to only 4.5%. Although the situation in New Zealand is complicated by the fact that Mallards have a competitive advantage, it is clear that hybridisation has become more extensive as the Mallard population has grown, and the Grey Duck may soon become extinct in New Zealand (Williams 2006) (see Fox 2009, p. 666 for a fuller discussion of the Mallard problem). Given the very significant risk that to

do nothing might lead to the extinction of the White-headed Duck in Europe, the precautionary principle has been applied, which is one of the guiding principles of the UN Convention on Biological Diversity (Secretariat of the Convention on Biological Diversity 2005).

It is known that Ruddy Duck x White-headed Duck hybrids are fertile to the second generation in captivity, and that a total of 68 hybrids have been recorded in Spain (Mario Saénz de Buruaga pers. comm.), although the number has fallen in recent years as the Spanish control programme has become more efficient and fewer Ruddy Ducks have been arriving. It is also interesting to note that Ruddy Ducks have been recorded in all months in Spain, but the largest numbers tend to occur between October and December. This coincides with the movement of Ruddy Ducks from breeding sites to wintering sites in the UK and suggests that cold-weather movements are not a significant factor.

#### *The background to the eradication programme in the UK*

The UK is a signatory to several international agreements under which various recommendations oblige it to take action against non-native species that threaten native fauna. These include the Convention on Biological Diversity, the Convention on the Conservation of Migratory Species of Wild Animals, the African-

Eurasian Waterbird Agreement and the Bern Convention.

In accordance with these agreements, research was carried out between 1993 and 1996 by WWT, concentrating on the feasibility of control (Hughes 1996). This involved testing different methods of control, namely breeding-season bank shooting (with both shotguns and rifles), winter bank shooting (also with shotguns and rifles), nest-trapping of females, winter trapping and egg-oiling. This research involved the culling of fewer than 100 birds per year and had no significant effect on the population, but the results indicated that breeding-season shooting was the most effective method of control, followed by winter shooting. Although nest-trapping had a high intrinsic efficiency, the rate of control in terms of staff effort was very low and the method would therefore be an ineffective means of eradication. The report concluded that eradication was feasible but that control at a larger scale was required to define the timescale and costs involved more fully. This larger-scale research was carried out in the form of regional control trials in three areas (Anglesey, the western Midlands and Fife) between 1999 and 2002 by CSL (the Central Science Laboratory, now the Food and Environment Research Agency). Further research by CSL was carried out nationally

between 2003 and 2005 in order to further refine the effectiveness of winter shooting. This research confirmed that eradication was feasible and identified the shooting of large winter flocks from boats as the most effective way to reduce the population rapidly. Typically, between 700 and 900 Ruddy Ducks were culled each year during this period (1999–2005), leading to an apparent slight decline in the national population (Musgrove *et al.* 2007).

#### *The eradication programme*

It has long been recognised that complete eradication of Ruddy Ducks from Europe is likely to be the only effective way to remove the threat to the White-headed Duck (e.g. Green & Hughes 1996, Morley 2003). For that reason the aim of the programme is the complete eradication of the Ruddy Duck from the UK. However, it was also recognised at the outset of the eradication programme that it would be difficult to predict how the population would behave once reduced to very low numbers. It was therefore agreed with the funding bodies (EU LIFE-Nature and Defra) that if complete eradication was not achieved, modelling of the response of the much-reduced population at the end of the project would be carried out to allow an estimate of the time and effort required to remove any remaining birds. Given the small size of the



Kit Day

442. Male Ruddy Duck *Oxyura jamaicensis*, Slimbridge, Gloucestershire, May 2006. A captive Ruddy Duck at the place where it all started – the UK population originates ultimately from four males and three females imported to Slimbridge in 1948.

original founder population, it is imperative that complete eradication is achieved. The importance of this is fully recognised by Defra, even if it involves an extension of the current work.

Although some animal welfare and animal rights organisations are opposed to the eradication, it is fully supported by the country's major conservation bodies. As with other difficult issues, the views of individual birdwatchers and members of the public vary from the very hostile to the very supportive.

Ten full-time staff are employed on the project (eight shooting staff, one project manager and one footpath warden) and are employees of the Food and Environment Research Agency (Fera), an Executive Agency of the Department for Environment, Food and Rural Affairs (Defra). They undertake a range of training, including firearms safety and wildfowl identification, and work to standard operating procedures which include the need for site-specific risk assessments for all culling sites and the requirement to use non-lead shot (currently tungsten-matrix). The work itself is licensed by Natural England, the Scottish Government and the Welsh Assembly Government.

#### *Access to sites, disturbance, and work on sites of conservation importance*

All access to sites, whether for counts or shooting, is with the agreement of the site owner. In the early years of research into Ruddy Duck control (1993–2002), many landowners had significant concerns about allowing shooting. These concerns were based mainly on the fear of a negative public reaction to the work, while some landowners also felt that eradication was unlikely to succeed. In recent years, however, access has been granted by a significant majority of site owners and there has been a 'domino effect', where getting access to one site in an area often opens up access to other sites. Of the top 20 sites for Ruddy Ducks in the 2005/06 Wetland Bird Survey (WeBS) report (Musgrove *et al.* 2007), i.e. the key sites at the beginning of the eradication programme, Fera now has access to 19. The one site to which access has not yet been granted now typically holds 15 birds or fewer during the critical mid-winter period, and sometimes as few as one or two. Similar levels of access apply to the top 20 wintering sites in 2008/09, although the sites themselves have changed since 2005/06. Since September 2005, culling of Ruddy Ducks has

taken place on over 110 sites across Scotland, England and Wales and Fera is being granted permission to work on new sites at a rate of two or three per month. Although some site owners still refuse permission to cull Ruddy Ducks on their land, the birds are quite mobile, and they will probably become more so as the remaining birds have to move around more in order to pair up, so access to all sites is probably not necessary for full eradication.

Some disturbance does inevitably result from the shooting of Ruddy Ducks, especially when boats are used in the winter months, but considerable effort is made to ensure that this results in no long-term ill effect on other species. As part of the initial research into control, WWT investigated the effects of bank shooting on other species and concluded that it could be conducted without significant disturbance (Hughes 1996). However, it is acknowledged that the disturbance caused by the use of boats is greater than that caused by bank shooting alone. Observations suggest that many species leave shooting sites soon after the disturbance starts (e.g. Briggs 2007) and it has been suggested that the level of additional energy expenditure attributable to disturbance is minimised if birds leave the site rather than make repeated responses to intermittent activity (Ward 1990). Where an alternative site or refuge is available, it may be possible for birds to use this without any significant negative effect on their energy budgets and the survival of individuals (Gill *et al.* 2001). Other research, in relation to Eurasian Wigeon *A. penelope* (Townshend & O'Connor 1993), suggests that frequency rather than intensity of disturbance has a greater effect on wildfowl numbers.

Monitoring of the disturbance caused by shooting Ruddy Ducks on Gadwalls *A. strepera* and Shovelers *A. clypeata* at Staines Reservoir in Greater London was carried out on six occasions from February 2006 to January 2007 as part of a doctoral research project (Briggs 2007). This site is part of the South-West London Waterbodies SPA, which has been designated as such because of the internationally important numbers of these species present during the winter months. It is divided into two basins by a causeway and culling never takes place on both basins at the same time, thus leaving one as a refuge for disturbed non-target species. Typically six to eight team members, each in a separate boat, use a shotgun from the

water, while one or two shoot from the bank. The monitoring showed that during each cull all the Gadwalls and Shovelers left the disturbed site and flew to alternative sites within a short distance (always within about 3 km). A few individuals of both species also flew the very short distance across to the undisturbed basin at Staines. On the majority of occasions, most birds returned to Staines within one day of the cull, and sometimes before the end of the same day. The conclusion reached was that the Ruddy Duck culls demonstrated the value to both Gadwalls and Shovelers of having nearby waterbodies for use as refuges, and the culls were not considered to have had a lasting negative impact upon either species (Briggs 2007).

Many of the sites where shooting is carried out are Sites of Special Scientific Interest (SSSIs) or, under European legislation, Special Protection Areas (SPAs). In such cases, Fera is obliged to consult Natural England, the Countryside Council for Wales or Scottish Natural Heritage. A proposal is put forward based on the protection of the key interests at each site. Often this is wintering waterbirds, and in these cases limits are placed on the length and frequency of visits based on the evidence above. Most culling sites have alternative waters available nearby and

many also have refuge areas where birds will not be disturbed either by shooting or by boats. On most SSSIs and SPAs, shooting is limited to no more than five hours every two weeks, but in practice it would be highly unusual for any water to be visited more than four or five times between September and March. During the breeding season, Fera does not apply for a licence to disturb Schedule 1 birds and we work closely with site owners and wardens to ensure that no disturbance of Schedule 1 species occurs. Depending on the species and the site, this can be achieved by avoiding certain areas and using sound-moderated firearms, or by delaying visits until the end of the breeding season.

A total of 29 native birds have been killed or wounded as a direct result of Ruddy Duck control since September 2005 (table 1). This compares with over 6,200 Ruddy Ducks culled, a non-target rate of less than 0.5%. Most of these have been hit by back-pattern from shotguns (i.e. pellets that missed their intended target), but the Black-necked Grebe *Podiceps nigricollis* and Common Scoter *Melanitta nigra* were misidentified in 2006 and 2005 respectively. Since these incidents, Fera has tightened its procedures for ensuring that all staff are aware of any rare or unusual birds present on a culling site which might be confused with a Ruddy Duck.

#### *The control strategy and Ruddy Duck behaviour*

The regional control trials showed clearly that control of the large wintering flocks, which make up a large proportion of the total population, was the key to bringing about a rapid reduction in numbers. In the case of breeding-season control, there is circumstantial evidence that if numbers are reduced on the best breeding sites, birds are drawn into these from suboptimal sites (CSL 2002). The strategy therefore has been to concentrate winter control on large wintering flocks, while breeding-season control is concentrated on the best breeding sites. Because Ruddy Ducks move between sites as part of their seasonal migration or (for example) in response to freezing conditions, up-to-date information on numbers at different sites is critically important in maximising efficiency. This is done either by Fera staff carrying out a count or by site

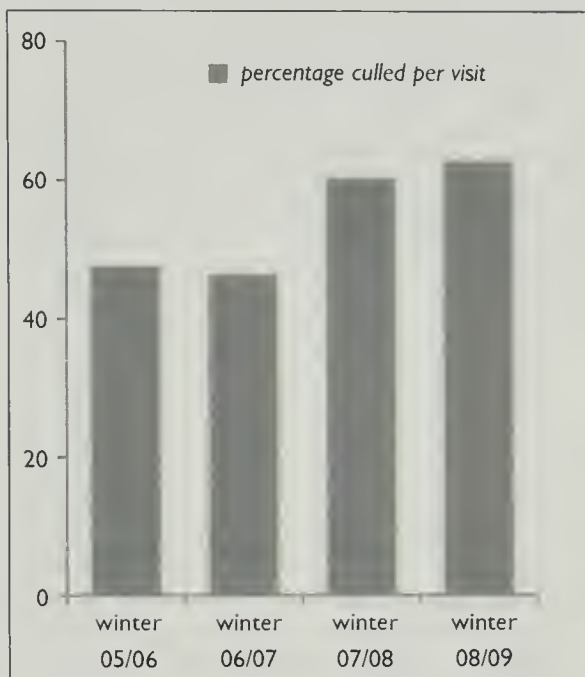


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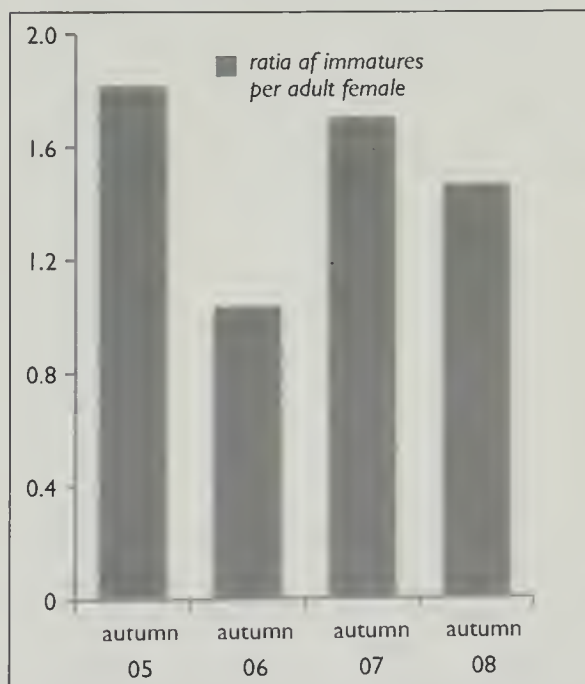
**443.** The use of small-calibre, sound-moderated rifles in the breeding season significantly reduces disturbance.

**Table 1.** List of native birds killed or wounded during the Ruddy Duck eradication programme since September 2005.

Species	No. killed/wounded
Mallard <i>Anas platyrhynchos</i>	1
Common Pochard <i>Aythya ferina</i>	4
Tufted Duck <i>A. fuligula</i>	6
Common Scoter <i>Melanitta nigra</i>	1
Black-necked Grebe <i>Podiceps nigricollis</i>	1
Little Grebe <i>Tachybaptus ruficollis</i>	2
Common Coot <i>Fulica atra</i>	14



**Fig. 2.** Mean percentage of UK Ruddy Ducks *Oxyura jamaicensis* culled per visit to a site, winter control 2005/06 to 2008/09.



**Fig. 3.** Ratio of immature Ruddy Ducks *Oxyura jamaicensis* culled per adult female, autumn 2005 to autumn 2008.

owners or wardens providing information.

The behaviour of the Ruddy Duck has favoured effective control, particularly in the winter, when shooting from boats is the most usual method of control. The large concentrations found on wintering sites fly readily when approached by boats, although individual birds are more likely to dive to escape. At most sites, a number of boats form a line across the water and as they approach the flock the birds fly over the boats and are shot. It is relatively rare for Ruddy Ducks to leave the water where shooting is occurring, even to the extent of not flying over a causeway to escape. Any birds which manage to fly over the guns tend to regroup in another area, and the process is repeated. Smaller flocks are now encountered and it has proved beneficial to stop shooting and withdraw the boats for an hour or more in the middle of the visit, which allows the remaining birds to find each other; this is because the flight response is reinforced when groups are larger. Birds are not just shot in flight, but also on the water surface, either from cover on the bank or from the boats. The proportion of birds shot per visit depends on the nature of the site and the weather conditions, but typically 50–75% of the birds present are culled on any one visit. This percentage has risen slightly in recent winters (fig. 2) as the size of the flocks has fallen. Importantly, there is no evidence that Ruddy Ducks have abandoned traditional wintering sites to any great degree as a result of the disturbance caused by shooting.

During the breeding season the population is much more dispersed and birds tend to be found on smaller waters. Most breeding-season control now involves shooting birds on the water surface using small-calibre, sound-moderated rifles, which cause very little disturbance to other species (plate 443). The main target at this time of year is breeding females, with the aim of reducing productivity. It was considered possible that productivity would rise as the population fell and there was less competition for food and breeding sites, but this appears not to have happened to any significant degree (fig. 3).

Over 6,200 Ruddy Ducks have been culled since the eradication programme started in September 2005. However, since 2006 (when 2,290 were culled) the numbers culled have fallen in line with the overall decline in the population.

### Monitoring of the progress of the UK eradication programme

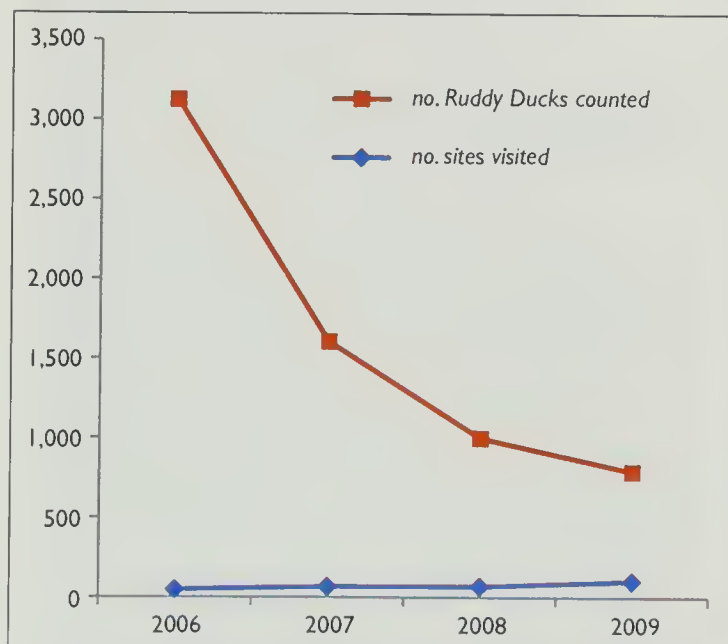
WWT has been contracted to carry out monitoring of Ruddy Duck numbers at the key wintering sites in Great Britain, while Allen and Mellon Environmental has carried out similar surveys of the population in Northern Ireland. These counts are carried out entirely independently of Fera and Defra. The aim of both surveys is to provide up-to-date information on numbers at key sites. These figures can then be compared with count data from the same sites in previous years to assess progress.

Two WWT surveys have been carried out each winter, one in December and one in January, with the exception of the first winter (2005/06), when only one survey was undertaken. Historically, these months have provided the highest counts of Ruddy Ducks (WeBS data) because the birds tend to be highly concentrated on a relatively small number of key sites. The sites surveyed are identified from WeBS data, county bird reports, and information from Fera staff and local experts (Hall & Cranswick 2009). They cover all the 'traditional' main wintering sites as well as nearby sites that might serve as refuges when birds are disturbed. In the most recent surveys, over 100 sites were covered in both December 2008 and January 2009. There has been a steady decline in the number of Ruddy Ducks counted during each survey, despite an increasing number of sites

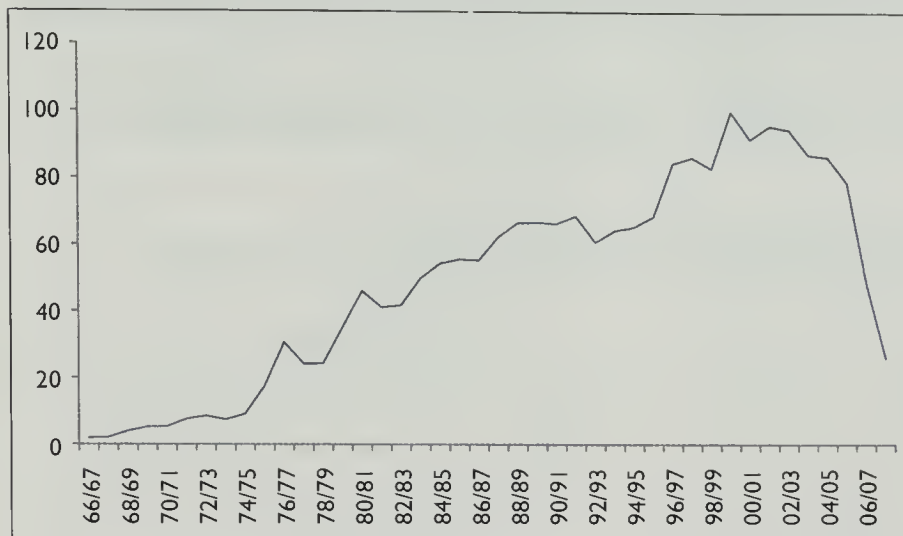
being included each year (fig. 4).

The use of national indices allows a comparison with previous years. It should be noted that the WeBS national index presented in this paper differs slightly from that which appears in recent WeBS reports (Hall & Cranswick 2009). Since the late 1990s, counts of Ruddy Ducks at some sites have not been submitted to WeBS because the counters are opposed to Ruddy Duck control. While the index enables a trend to be calculated in the absence of these data, the inclusion of WWT and Fera counts results in a more accurate and precise trend. The inclusion of these data does not make a large difference to the index, either in terms of the magnitude of the population growth or the subsequent decline in recent years. The main effect is a smoothing of the index during the years of peak abundance, showing the between-year fluctuations to be less marked than the index based solely on WeBS counts.

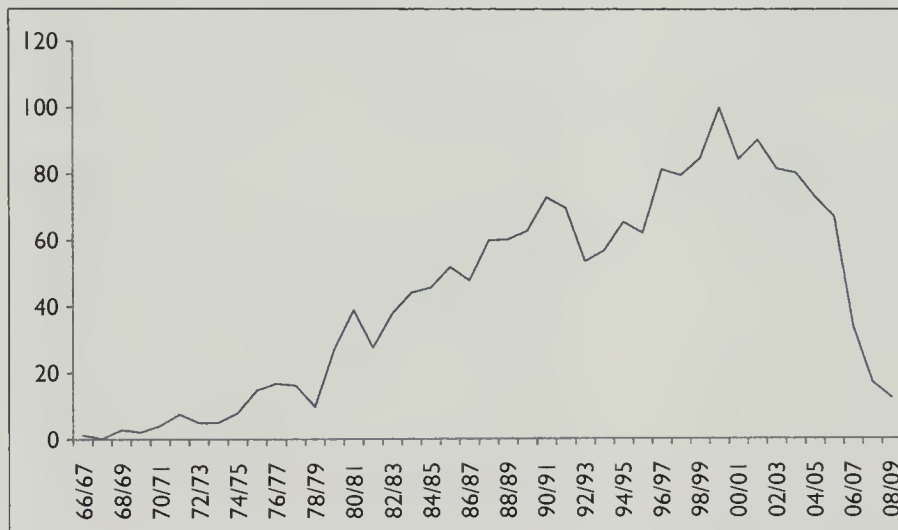
One index is produced using all WeBS data and Fera/WWT supplementary counts (fig. 5) but the data for this become available only about 18 months after its collection, and so is out of date by the time it is ready for analysis. This index shows that by winter 2007/08 numbers had fallen to just over 20% of their peak in the late 1990s. A second index (fig. 6) is produced using data collected during the WWT surveys in the most recent year but including all available data (WeBS, Fera and WWT) for those sites in previous years too. Although this index covers a more limited number of sites (103 in 2008/09), it more accurately reflects the current situation. This index and the count data from 2008/09 both suggest that by the time of the surveys the UK Ruddy Duck population had fallen to around 12% of its peak in the late 1990s (Hall & Cranswick 2009) and to levels not seen since the mid 1970s. Following the count of 687 in January 2009, a further 507 Ruddy Ducks were culled up to the end of July. It is not possible to estimate the size of the population remaining in the UK accurately but it is highly likely that numbers on sites not included in the survey total are small (Hall & Cranswick 2009) so the current UK population (excluding birds hatched in 2009) is unlikely to be significantly higher than 300–400 individuals.



**Fig. 4.** Results of WWT surveys of Ruddy Ducks *Oxyura jamaicensis* in Great Britain (see text), 2006–09. Sites counted rose from 47 in January 2006 to 103 in January 2009, while the corresponding number of Ruddy Ducks counted fell from 3,077 to 687.



**Fig. 5.** Index of Ruddy Duck *Oxyura jamaicensis* numbers in Great Britain, 1966/67 to 2007/08, based on a combination of WeBS data and WWT Ruddy Duck surveys and using counts from September to March inclusive. Index values are calibrated to equal 100 in the winter of the peak index value. See Underhill & Prŷs-Jones (1994) and Kirby *et al.* (1995) for a full explanation of the indexing process and its application for WeBS data.



**Fig. 6.** Index of Ruddy Duck *Oxyura jamaicensis* numbers in Great Britain, 1966/67 to 2008/09, based on data from key sites only, i.e. those subject to WWT winter surveys, and using counts from December and January (see text). Index values are calibrated to equal 100 in the winter of the peak index value.

Importantly, the population has remained concentrated on relatively few sites since the eradication programme began. Although the individual sites have changed, the WWT surveys have found that the percentage of birds concentrated on the top 20 sites across the country has remained relatively stable, at 85–90%.

In Northern Ireland, three counts have been carried out each year since 2007, in January, March and October. These have concentrated on the main post-breeding and wintering sites around Lough Neagh and Portmore Lough. Although no control has taken place in Northern Ireland to date, a marked decline in the post-breeding and winter population is

apparent, from a peak of 72 in 2003/04 (Allen & Mellon 2006) to 38 in 2006/07 (January) and 27 in 2008/09 (January). Interestingly, 21 of the birds counted in January 2009 were identified as males (Dave Allen pers. comm.), which gives a much higher male-to-female ratio than would be expected to occur naturally.

### Conclusion

There is no doubt that the eradication of Ruddy Ducks from the UK is an extremely difficult and substantial task. However, progress since the start of the eradication programme has been in line with expectations, with numbers falling by close to 90% by winter 2008/09. Ruddy Ducks have not become harder to find or cull since the start of the programme, nor have they abandoned traditional sites in response to culling. There is a wealth of published information (albeit some of it now historical) on the distribution of Ruddy Ducks in the UK in both

summer and winter, and although some bird-watchers and WeBS counters withhold count information, others (including site owners and managers) actively submit it or make it available on request. The increasing co-operation of site owners bodes well for the final stages of the programme, as does the behaviour of the Ruddy Duck. The strategy of targeting winter flocks and key breeding sites nationally has been successful and this will continue for the coming 12 months, during which time significant progress should have been made towards achieving eradication. It is to be hoped that this will stimulate efforts to eradicate Ruddy Ducks

from the near continent, so that the most significant threat to the White-headed Duck will have been removed.

#### Acknowledgments

This paper is dedicated to the memory of Robert Groom, whose dedication and knowledge of wildlife management proved invaluable during the research phases and the early years of the eradication programme. I would like to record my gratitude to all those site owners, managers and birdwatchers who have assisted the programme by allowing access and providing count data. I would also like to thank all the existing members of the eradication team for their dedication and professionalism. Sincere thanks go to members of the Project Advisory Group for comments on an earlier draft and for their advice and support over many years. WeBS data were supplied by the BTO on behalf of the WeBS Partners: BTO, RSPB and JNCC (the last on behalf of CCW, NE, NIEA and SNH), in association with WWT.

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# Britain's first Baikal Teal

Andrew H. J. Harrop and Robert Y. McGowan

**ABSTRACT** Evidence supporting the natural vagrancy of a Baikal Teal *Anas formosa* shot in Denmark in November 2005 prompted BOURC to review the British records of this species. The results of a stable-hydrogen isotope analysis (published on pp. 697–699 of this issue) of feathers from the specimen of a Baikal Teal shot at Tillingham, Essex, in January 1906 suggested that the bird had not been hatched in western Europe, and this record was duly accepted by BOURC as the first for Britain. Ten subsequent British records were examined; of these, a first-winter male at Minsmere, Suffolk, in November–December 2001, was placed in Category A of the British List.

*No duck has ever struggled harder to become accepted as a wild British bird than the Baikal Teal (Wallace 1981)*

## Introduction

Baikal Teals *Anas formosa* breed in eastern and northeastern Siberia and winter mainly in Japan, South Korea and China. In Asia, the Baikal Teal is a vagrant to the Indian subcontinent and Thailand. A century ago this was one of the most numerous ducks in eastern Asia, with flocks of thousands of birds recorded (BirdLife International 2000). Hunting and habitat degradation are the main causes of the severe decline in numbers that has been noted during the last 50 years. Around 400,000 individuals have regularly been found wintering in South Korea (Moore 2002), but there have been few recent reports of large numbers in other countries, with the exception of a flock of 8,000–10,000 at Shanghai, China, in January 2006 (Kejia & Qiang 2007).

Migration strategies used by this species are still relatively little known. In spring, birds migrate northwards in March and reach the breeding grounds during April or May. They leave the breeding grounds in late August or September and arrive at the wintering grounds in late October. Migration routes are incompletely known, but migration is rapid and is believed to follow different routes in spring and autumn. Vagrancy to Alaska by juveniles in September/October is regular and well documented (e.g. Sladen 1966). There have also been records

from elsewhere in the USA, notably California, during the late autumn and winter, the origins of which have been more controversial.

The status of Baikal Teal in western Europe has been a matter of controversy for at least a century, and has frequently divided expert opinion. For example, Palmer (1976) referred to a report of breeding at Myvatn, Iceland, in 1837 following an invasion into Europe in 1836 which brought five to France during November, whereas Delacour (1956) considered that all European records involved escapes. Palmer concluded that the question of whether or not particular records are of natural occurrence 'can be argued endlessly'.

Such argument has indeed persisted. The paper by Wallace (1981) was driven by the identification of a bird on Fair Isle in September 1954, which was subsequently shown to have been unsound (Eldridge & Harrop 1992). Eldridge & Harrop drew attention to inconsistencies in the treatment of records of Baikal Teal in different European countries, and noted that although the monthly distribution of European records is compatible with vagrancy, a marked increase in the number of records closely followed the importation of large numbers of birds. Shortly afterwards, BOURC revised its position on the status of British records.

Prior to 1984, Baikal Teal was placed in Category D but, following the acceptance of a sight record of a juvenile on Fair Isle, Shetland from 25th September to 1st October 1954, a sight record of an adult male at Caerlaverock, Dumfries & Galloway, from 19th February to 7th April 1973, and a first-winter male, shot at Crom, Co. Fermanagh, on 13th January 1967, the species was added to Category A of the British and Irish Lists (BOU 1984). The significant factors noted were changes in the species' status in captivity, the occurrence of apparently wild individuals in Scotland, and the occurrence of what was believed to be a first-year bird in Fermanagh.

However, the Irish specimen was subsequently re-aged as an adult and no longer accepted onto the main Irish List (Brazier *et al.* 1986). In addition, Eldridge & Harrop (1992) called into question the identification of the Fair Isle record. This prompted BOURC to re-examine ten British records:

- Tillingham, Essex, 1st January 1906, shot: male
- Winchester, Hampshire, c. 1915, shot: male
- Battle, Sussex, 14th November 1927, shot: male
- Wells, Norfolk, 20th December 1929, shot: male
- Nacton, Suffolk, 10th November 1951, captured: female
- Fair Isle, 30th September to 1st October

1954, sight record: female

- Loch Spynie, Moray & Nairn, 5th February 1958, shot: female
- Brownsea Island, Poole Harbour, Dorset, 1st January 1969, caught and ringed: male
- Abberton Reservoir, Essex, 28th November 1970, sight record: male
- Caerlaverock, Dumfries & Galloway, 19th February to 7th April 1973, sight record: male

The identification of the birds from Essex 1906 and Norfolk 1929 was accepted, but escape risk was considered significant and the records were not accepted to any category (BOU 1993); the identification of the birds in Moray & Nairn 1958, Dorset 1969 and Dumfries & Galloway 1973 was also accepted but, as escape risk could not be excluded, the records were placed in Category D1. The identification of the remaining records was considered to be unproven or not acceptable.

Fox *et al.* (2007) provided important new evidence supporting vagrancy by Baikal Teals to western Europe, based on a record from Denmark of a bird shot there on 24th November 2005. This presented a way to help to resolve the controversy, and inspired BOURC to undertake a further review of British records.

#### *The 1906 Essex bird*

At a meeting of the British Ornithologists' Club in London on 25th April 1906, Mr H. Scherren, on behalf of Mr J. E. Harting, exhibited a supposed hybrid duck, collected from the Marsh Farm Decoy, near Maldon, in January 1906. It was shown, however, to be an immature male Baikal Teal, acquiring adult plumage, 'and had, no doubt, escaped from some ornamental water' (Harting 1906). The record was also mentioned by Hubbard (1907). Glegg (1929) gave the date as 1st



Andrew Harrop

**444.** Marshhouse Decoy Pond, Essex, August 2009, much as described by Payne-Gallwey (1886): 'at a distance looks like a clump of trees upon the marsh. It is not a large pool, but is very secluded and well concealed by reeds and brushwood.' The site of the decoy is still discernible, and has been declared an Ancient Monument, though most of the pond is now overgrown.

January 1906 and stated that the specimen was in Chelmsford Museum, where it remains today (accession number CHMER E9108), although it is in a particularly fragile condition.

Renewed interest and research into this record suggested that the contemporary view that it was an escape was based on unfounded assumptions. We know that the first Baikal Teals recorded in captivity in Britain were kept by the Zoological

Society between 1840 (breeding until 1843) and 1847 (when they died). Two pairs were acquired in 1867, and 20 were kept between 1889 and 1898. In 1894, a pair raised four young in Northumberland (Laidlay 1933). We know about this in some detail because it was sufficiently unusual to merit discussion. Elsewhere in Europe, the only known breeding until relatively recently took place in Holland (1872–73) and France (1880). The 1906 Essex bird hatched in 1905, a year for which we have no record of captive breeding; note also that in 1972, Mike England (*in litt.*) stated that he knew of only three successful breeding attempts in Britain during the twentieth century, all of which hatched females. It also preceded the first large wave of importations mentioned by Delacour (1956) by two years (see 'Status in captivity'). The only precisely dated European records which pre-date this are as follows: five in France in November 1836; a male in Italy on 27th December 1881; and a female in Belgium on 21st November 1888.

The 1906 Essex specimen was loaned to National Museums of Scotland, Edinburgh, to be analysed. The results of the analysis are more fully discussed by Votier *et al.* (2009) (pp. 697–699), who found marked differences in stable-hydrogen isotope signa-



**445.** The 1906 Essex Baikal Teal *Anas formosa*. The retained juvenile primaries and primary coverts of this bird have very low hydrogen-isotope values consistent with an origin in Siberia (Votier *et al.* 2009).

Tony Walentowicz © Chelmsford Museum

tures between juvenile and post-juvenile feathers. The results of the analysis therefore confirmed what had been suggested by existing records of captive breeding in Europe, namely that the 1906 Essex bird had probably not hatched in western Europe. Its plumage accorded with the natural moult cycle of this species, and excluded the possibility that it had been shot in Asia during the autumn then shipped to Europe. For these reasons, BOURC accepted it as the first for Britain (BOURC in press).

#### Status in captivity

One of the past (and continuing) problems for those assessing records of Baikal Teal is its popularity in collections, both in Europe and in the USA, especially since the second decade of the twentieth century. At that time (from 1908

**Table 1.** Baikal Teals reported in captivity in the Netherlands and UK, based on figures in van der Laar *et al.* (1994) and (unpublished) Captive Waterfowl Census Reports compiled by B. Hughes; it should be noted that the Dutch figures represent data supplied by about one-third of keepers, while those from the UK are based on figures from about two-thirds of keepers.

Nos. of adult and (young) birds in the Netherlands in 1991	No. of adult birds in the UK in 1990	Nos. of adult and (young) birds in the UK in 2001
524 (1,029)	160	277 (100)

according to Delacour 1956) they were being imported into Europe by the thousand, and during the next 30 years they were the easiest and cheapest teal to acquire. In 1914, so many were brought to San Francisco that they could not be disposed of (Palmer 1976). In the Netherlands, for example, records of 12 in 1922, three in 1923, and five in 1925 were presumed to involve escapes (e.g. Kist 1957). Today this species is commonly kept in collections throughout the world. Birds are offered for sale for as little as £250/pair in the UK and \$300/pair in the USA.

#### Subsequent records

Despite the recent progress made in establishing vagrancy to western Europe by Baikal Teals, the relatively high numbers in captivity make assessment of individual records an ongoing problem. Analysis of feathers from the 1967 Irish bird showed little difference in signature between feathers moulted during the breeding season and those moulted subsequently (Steve Votier *in litt.*). Adult Baikal Teals normally moult their primaries near the breeding grounds, so would be expected to show a similar isotopic signature to juveniles if records in western Europe were the result of direct vagrancy; however, this would not apply to

birds which had arrived naturally during a previous season and remained in Europe prior to being collected (behaviour which has been recorded in some vagrant Nearctic wildfowl, for example). In these circumstances, BOURC remained cautious about automatically accepting records after the first as wild. In addition to those records listed above, BOURC considered a record from Minsmere, Suffolk, from 18th November to 29th December 2001 (*Brit. Birds* 95: 524) as part of this review.

Of the ten records considered by BBRC subsequent to the 1906 Essex bird, the identification of the birds occurring in Hampshire in c. 1915, Sussex 1927, Fair Isle 1954 and Essex 1970 was not established. Of the remainder, those from Norfolk in 1929, Suffolk 1951 and Dumfries & Galloway 1973 presented different problems about their provenance. The Norfolk and Suffolk birds both followed records of escapes in the Netherlands. The Norfolk specimen is extant (specimen no. 27-930 in Norwich Museum) so it should be possible to arrange for it to be analysed, though the results might be inconclusive because it was an adult. The Suffolk bird has a curious history: after being captured in Nacton Decoy on 10th November 1951, it was taken into captivity in aviaries at Ipswich and Hartest for three years before being



**446 & 447.** The 1958 Moray & Nairn Baikal Teal *Anas formosa*. Harrison (1958) found a 'bridle' present in approximately 15% of female Baikal Teals, but it is not normally as strongly marked as on this individual.

loaned to the Wildfowl Trust (Piotrowski 2003); a specimen in the Harrison Museum (H2M. 5. 10374) labelled '1959 Nov, female caught in Nacton Decoy, ex W.H. Payn collection' is probably this bird, but as it was kept in captivity for several years it will have a western European isotope signature, which makes analysis redundant. The behaviour of the bird in Dumfries & Galloway (eating goose droppings in preference to grain, which is a trait of some captive wildfowl, as noted by Eldridge & Harrop 1992) invited doubt about its origin.

The records from Moray & Nairn in 1958, Dorset 1969, and Suffolk 2001 did not present specific problems over and above those related to large numbers in captivity, and therefore seemed more credible. However, in light of the results of an analysis of the 1967 Irish bird, the Committee was reluctant to accept the first two of these as wild without more information. The Moray & Nairn specimen was documented by Harrison (1958); it is extant in the Harrison Museum (H2M 2. 10371) and ideally should be analysed, though as with the Norfolk 1929 bird its age may compromise the results. The Dorset bird was an adult male seen only in the hand; if analysis of specimen records proves vagrancy by this species on multiple occasions, this record has as good a case as many for being treated as referring to a wild bird.

The Suffolk record involved an immature male in a plumage that, by the end of its stay, was quite similar to that of the 1906 Essex bird. Ageing Baikal Teals in the field in autumn is difficult (e.g. Eldridge & Harrop 1992, Jackson 1992) but, on the basis of the bird's moult strategy (later than normal for adult males) and the shape and pattern of the scapulars (not as pointed as in adults, and with neat, dark brown centres, and pale inner and brown outer edges), it was aged as a first-winter male. It

accompanied a large flock of Eurasian Teals *A. crecca*, of which over 2,000 had been counted at Minsmere during the October WeBS count. Wolf (1966) noted that Eurasian Teals which pass through the Netherlands in November and December come from the eastern part of the breeding range; the November arrival of the Minsmere bird therefore accorded with arrivals of eastern populations of a potential carrier species, and quite closely matched the date of the 2005 Danish record. Its feeding behaviour was normal, and included foraging among fallen reeds along the bank of a lagoon; on at least two occasions it was seen to fly off at dusk towards the Minsmere and Sizewell Levels with Eurasian Teal, presumably to feed. The Committee was satisfied that there were no obstacles to the acceptance of this record, and accordingly it was accepted onto Category A of the British List (BOURC in press).

In addition to the British specimens listed, there is a specimen record of an immature male Baikal Teal collected in the Netherlands on 29th November 1948 (van den Berg & Bosman 2001) which might yield interesting results if analysed.

#### Acknowledgments

Dr Tony Walentowicz, Chelmsford Museum, kindly facilitated tissue sampling of the Essex specimen; George Gordon, Angela Ross (Ulster Museum) and Neville McKee facilitated tissue sampling of the Fermanagh specimen; David Harrison provided access to the specimens held in the Harrison Museum; Brian Small provided additional information about the 2001 Suffolk bird; and BOURC



Steve Young/Birdwatch

**448.** First-winter male Baikal Teal *Anas formosa*, with Eurasian Teals *A. crecca*, Minsmere, Suffolk, November 2001; now accepted into Category A of the British List (BOURC in press).

members have commented extensively during several circulations of the files on this species.

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## Looking back

### One hundred years ago:

RECOVERY OF MARKED BIRDS. COMMON TERN (*Sterna fluviatilis*).—B. B., No. 4308, marked by Messrs. Robinson and Smalley at Ravenglass, Cumberland, on July 30th, 1909, as a nestling. Recovered at Espifia, in Galicia, Spain, on September 21st, 1909. This bird was caught by a boy, and was kept alive for two days. The capture was heard of by a coastguard named Inocente Dieguez, who reported the matter to the British Vice-Consul at Corcubion, who in turn reported it to Mr. Thomas Guyatt, the acting British Consul at Corufia. I am deeply indebted to Sir Edward Grey for drawing my attention to this case, and to Mr. Guyatt for very kindly undertaking the strictest enquiries with regard to the matter, and returning me the ring with full particulars of the capture of the bird. H. F. W.' (*Brit. Birds* 3: 224, December 1909)

'YELLOW-BROWED WARBLER IN LINCOLNSHIRE. ON October 12th I shot a Yellow-browed Warbler (*Phylloscopus superciliosus*) at North Cotes. It was a very fine example and proved to be a male. There was very little migration in progress, only a few Thrushes, Rock-Pipits, and Grey Crows coming in. A fresh south wind was blowing and there had been a gale from the same quarter on the previous day. G. H. CATON HAIGH.' (*Brit. Birds* 3: 224, December 1909)

'PUFFINS IN SURREY. A PUFFIN (*Fratercula arctica*) settled in our garden on the south side of Banstead Parish, Surrey, on November 1st, 1909, and as it was unable to rise, I caught it without difficulty. It is now in the Diving Birds' House at the Zoological Gardens. CLEMENCE M. ACLAND.' (*Brit. Birds* 3: 231, December 1909)

# Stable-hydrogen isotope analyses suggest natural vagrancy of Baikal Teal to Britain

Stephen C. Votier, Gabriel J. Bowen and Jason Newton

**ABSTRACT** Stable-hydrogen isotope signatures of feathers from a first-winter Baikal Teal *Anas formosa* collected in Essex in January 1906 reveal marked differences between juvenile feathers, grown on the breeding grounds, and post-juvenile feathers, grown on the wintering grounds. The natal-area signatures were consistent with a Siberian origin and the wintering-area signatures were consistent with a west European origin. This suggests that the Essex bird originated within the normal breeding range of Baikal Teal and that its occurrence in Britain was the result of natural vagrancy.

## Introduction

The analysis of stable-isotope ratios is being increasingly applied in many aspects of avian ecology, for example as a means of dietary assessment and particularly as spatial markers for migratory studies (Hobson *et al.* 2004; Inger & Bearhop 2008). For example, large-scale differences in oxygen and hydrogen isotopes exist as a function of precipitation patterns, and while these are not able to pinpoint specific locations, they can be used to characterise different regions. The fact that these isotopic signatures or 'landscapes' are reflected in growing tissues in a predictable manner is central to the application of these techniques in the study of migratory behaviour.

The analysis of stable-hydrogen isotope ratios in the feathers of a first-winter Baikal Teal *Anas formosa* shot in Denmark in November 2005 provided compelling evidence for natural vagrancy of this species to western Europe (Fox *et al.* 2007). There were two key elements to this analysis. Firstly, a strong gradient in hydrogen isotopes across continental Eurasia means that feathers grown in western Europe are isotopically distinct from feathers grown in Siberia (Hobson *et al.* 2004; fig. 1). Secondly, as a first-winter bird, the Danish Baikal Teal had a mixture of juvenile feathers grown on the breeding grounds and feathers grown during the post-juvenile moult, on the wintering grounds. Consequently, when it was shown that the

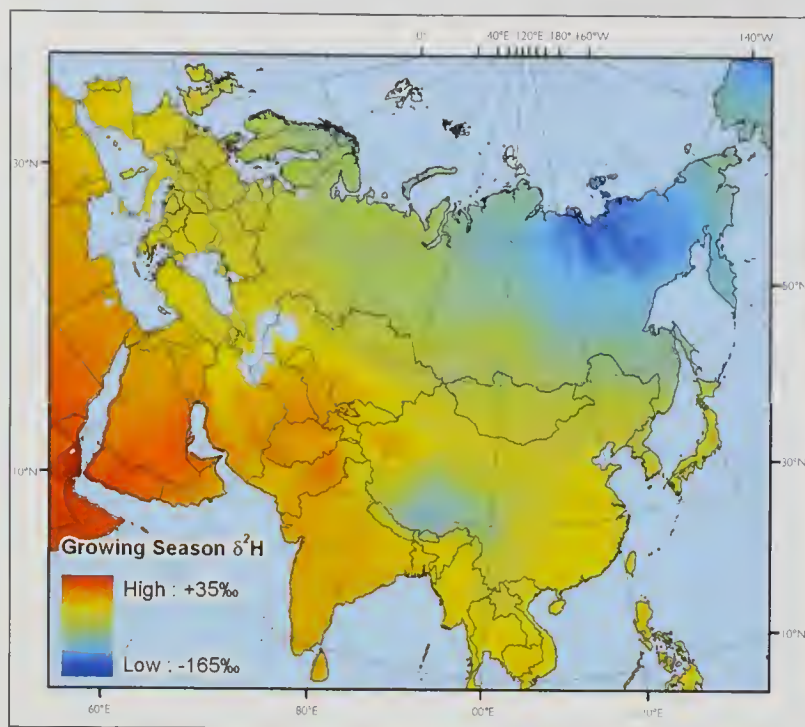
Danish bird had juvenile feathers with a strongly continental signature and post-juvenile feathers with a signature more typical of the near-coastal conditions in much of western Europe, the most likely explanation was that this bird originated from the natural range of the Baikal Teal.

In this paper, we report on the analysis of stable-hydrogen isotope ratios in the feathers of a first-winter male Baikal Teal shot in Essex in January 1906. If this bird had hatched within the native range of Baikal Teal, it would be expected that feathers of natal origin would exhibit a strongly continental signature, whereas post-juvenile feathers moulted on the wintering grounds should have signatures consistent with western Europe.

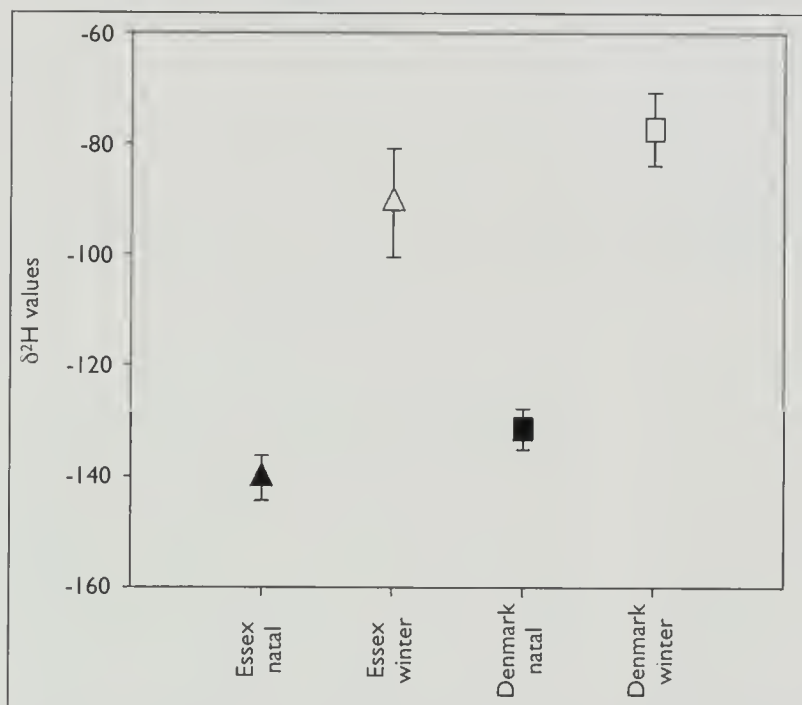
## Stable-isotope analysis

A supposed hybrid duck collected from Marsh Farm Decoy, near Maldon, Essex, in January 1906, transpired to be a Baikal Teal moulting into adult plumage (Harting 1906; Hubbard 1907; Glegg 1929). The timing of the moult of the Essex specimen, as well as the rounded scapulars and tertials, which are quite different from those of an adult, confirmed that this bird was a first-winter (Harrop & McGowan 2009). The specimen is held in Chelmsford Museum (specimen no. CHMER E9108).

Sections were taken from feathers grown on the breeding grounds (left and right primary coverts as well as a primary flight feather) and



**Fig. 1.** Mean growing-season  $\delta^2\text{H}$  values of modern precipitation. This map reveals that areas with extremely low  $\delta^2\text{H}$  signatures are located in northern and eastern Siberia, while the coastal regions of western Europe have comparatively high signatures. These patterns result from the prevailing weather patterns that transport atmospheric moisture from west to east across the Eurasian continent, and have been relatively stable for millennia or longer. As a result, even though the Essex Baikal Teal *Anas formosa* was shot more than 100 years ago, the modern precipitation patterns provide a strong indication of the large isotopic differences expected between feathers grown in the early twentieth century in western Europe and eastern Siberia.



**Fig. 2.**  $\delta^2\text{H}$  values from Baikal Teal *Anas formosa* feathers. Symbols show the mean ( $\pm$  95% confidence intervals) for feathers assumed to have been grown in natal areas (primaries, primary coverts and tail feathers) and feathers assumed to have been grown during the late autumn or winter post-juvenile moult (undertail-covert, breast, tertial and head feathers). Data are from two specimens, a first-winter male in Essex in 1906 and a first-winter in Denmark in 2005 (the latter from Fox *et al.* 2007).

feathers grown during the post-juvenile moult in late autumn or early winter (single breast, undertail-covert, tertial and head feathers). Samples were washed with a dilute detergent followed by a 2:1 chloroform:methanol solvent (Paritte & Kelly 2009). Once dried, the samples were homogenised and approximately 0.1 mg of material placed into a silver capsule and analysed for  $\delta^2\text{H}$  (the ratio of  $^2\text{H}/^1\text{H}$ , expressed as  $\delta^2\text{H}$ ). Hydrogen-isotope analysis was conducted by continuous-flow isotope ratio mass spectrometry, with a reductive elemental analyser (TC/EA: Thermo Fisher Scientific, Bremen) interfaced with a Thermo Delta V isotope ratio mass spectrometer. The scientific instrumentation differed slightly from that used by Fox *et al.* (2007) but both studies were carried out in the same laboratory, with all data being normalised by a comparative equilibration technique (Wassenaar & Hobson 2003), thus ensuring comparability of the techniques.

### Results

Hydrogen-isotope ratios of the Essex 1906 specimen are presented in table 1, and also plotted in fig. 2 alongside values for the Danish 2005 specimen. Differences between the average natal signature and average winter signature (of the Essex bird) are statistically significant (as shown by the non-overlapping 95% confidence intervals). The very low hydrogen-isotope values for feathers grown on the breeding grounds are consistent with a strongly continental signature and values for feathers grown on the wintering grounds are consistent with near-coast signatures of western Europe (fig. 1).

**Table 1.**  $\delta^2\text{H}$  values from the specimen of a first-winter male Baikal Teal *Anas formosa* shot in Essex in January 1906. Values are grouped into feather tracts grown on the natal grounds and those grown on the wintering grounds.

When grown	Feather	Amount (mg)	$\delta^2\text{H}$
Natal	Primary covert (right)	0.107	-140.96
Natal	Primary covert (left)	0.172	-143.49
Natal	Primary feather	0.121	-136.45
Winter	Undertail-covert	0.157	-77.35
Winter	Breast feather	0.117	-96.70
Winter	Tertial feather	0.094	-88.30
Winter	Head feather	0.085	-99.71

### Discussion

Our analysis provides compelling evidence that the Essex bird was raised within the natural breeding range of the Baikal Teal. The very low hydrogen-isotope values for the feathers grown on the breeding grounds are most consistent with stable-isotope ratios in parts of Siberia and central Asia (fig. 1), whereas the feathers replaced during post-juvenile moult have a signature characteristic of near-coastal regions of western Europe. Since Baikal Teals breed in northern and eastern Siberia, east to Kamchatka, the results are consistent with a bird raised within the native range, and migrating south and west to winter in the UK. These findings do not *prove* natural vagrancy, however. Firstly, it is possible that this bird was reared in captivity in western Europe on a diet similar to that available to wild birds in Siberia. Although this possibility cannot be excluded, it seems highly improbable (Fox *et al.* 2007). Secondly, the isotope values do not tell us how this bird travelled between Siberia and Essex; it is possible that it was either raised in captivity in Siberia or captured live before being transported to western Europe and subsequently escaping. Nonetheless, given that this species was still relatively infrequent as a breeding bird in captivity in 1905 (Harrop & McGowan 2009), dispersal to the west of the known range seems a more parsimonious explanation.

The results of our analysis are remarkably similar to those of the first-winter Baikal Teal shot in Denmark in November 2005 (fig. 1).

Consequently, they suggest that the Danish record is not unique and it seems likely that Baikal Teals may have occurred in western Europe in a wild state on a number of occasions.

In summary, while stable-isotope evidence does not unequivocally prove that the Essex 1906 Baikal Teal occurred as a natural vagrant in Britain, the most likely explanation is that it occurred here in a wild state. This analysis confirms that stable-isotope analysis can be a useful tool in studying avian migration, particularly

between regions with strikingly different isotopic landscapes. Nevertheless, it represents only one strand of evidence and should be used carefully, in conjunction with other available clues, to investigate the provenance of vagrant birds.

### Acknowledgments

Dr Tony Walentowicz, Chelmsford Museum, kindly facilitated tissue sampling of the Essex specimen and Carrie Gunn kindly prepared the feather samples for analysis.

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## Blogging at the BTO

As most readers will know, 2009 marks the centenary of bird ringing in Britain & Ireland, and with so much going on during the year we have started blogging some of the more interesting events. Here we give just a taster of what has been on 'Demog Blog' this autumn, but to keep up in real time follow the blog at: <http://btoringing.blogspot.com/>

### A splash of colour

The run of interesting colour-ringed birds continued over the autumn, with the most apparent being a minimum of 12 colour-ringed Glossy Ibises *Plegadis falcinellus*. Most were recorded from only one location, but birds from a flock of 25 in southwest Wales were subsequently seen at two different sites in Norfolk (including 'MVP', pl. 449). A bird from Cambridgeshire was also seen again, this time in Suffolk, and two birds flying over Chew Valley Lake, Avon, were relocated seven days later at Catcott Lows in Somerset. One of these then became the first for Warwickshire when it was seen at Fishers' Mill on 18th October. Amazingly, the second county record was found the next day at the same site – this time an

unringed bird! These birds were all ringed as nestlings in May/June in Coto Doñana in southern Spain.

In addition to Glossy Ibises, there was a run of sightings of colour-ringed Little Egrets *Egretta garzetta*, including 'AF', ringed in Kent in May 2003. After fledging, it wasn't seen again until it appeared in June 2009 at Leighton Moss, Lancashire. Not only is this quite a long movement, but it also makes it the oldest BTO-ringed Little Egret – still well short of a 22-year-old French bird, though.

### Movements and hybrids

In August we received details from BirdLife Malta of a ringed bird found on the island in March. This turned out to be a Kittiwake *Rissa tridactyla* that had been ringed as a chick on the Farne Islands, Northumberland, in July 2006. This is only the tenth British-ringed Kittiwake to be found in the Mediterranean, with the previous records coming from Morocco, Libya, France, Sicily and Italy. This followed news of a 'Kittiwake wreck' in the Pyrenees in late winter: on 1st February 2009, no fewer than 113 were found dead at Sabiñanigo, in Huesca province. These included

EL42194, ringed as an adult on the Isle of May in 2004, so weren't just lost juveniles. Such a movement is not entirely unprecedented though, and is the third time such an influx has happened in northern Spain.

On a happier note, mid September saw an influx of Cetti's Warblers *Cettia cetti* into Lincolnshire, with birds caught at Saltfleetby and Gibraltar Point on the same weekend, the latter only the fifth-ever at



Kev Joynes

**449.** First-winter Glossy Ibis *Plegadis falcinellus* 'MVP', Pembrey, Carmarthenshire, September 2009; part of a 25-strong flock, four of which were individually identifiable and had been ringed in the nest in the Coto Doñana.

the site. Around the same time, two were caught at Marston Sewage Works in south Lincolnshire, the first records for the site. One of these, V888617, had been ringed as a recently fledged juvenile at Rye Meads, Hertfordshire, in July 2009. Cetti's Warblers had a good year at Rye Meads, with 20 juveniles ringed this autumn, after recolonising the site in 2008.

Other interesting recaptures in autumn 2009 included the first BTO-ringed Roseate Tern *Sterna dougallii* in Belgium (a 2004 chick from Dublin, found breeding successfully with a Common Tern *S. hirundo* near Zeebrugge in 2008) and the world's oldest-recorded Common

Mark Grantham, BTO Ringing Scheme

Whitethroat *Sylvia communis* (ringed at Stanford Reservoir, Northamptonshire, on 3rd August 2002 and recaptured there on 2nd August 2009). Seven years seems much more impressive when you consider that this bird will have made the 11,000-km return trip to/from Africa seven times, crossing the Sahara 14 times!

One that got away, sadly, was a ringed Black Tern *Chlidonias niger* at Grafham Water, Cambridgeshire, as photos of the bird weren't quite sharp enough to make out any detail on the ring. Only 100 Black Terns have ever been ringed in Britain & Ireland and we have no recorded movements to date.

## Further evidence of shifts in wintering waterbird distributions

Results from the Wetland Bird Survey (WeBS) for 2007/08 (July 2007 to June 2008) provide further evidence of the impact of climate change on the UK's wintering waterbirds. Several species showed further declines in the UK, thought to be the result of milder winters enabling species to winter closer to their breeding grounds – behaviour that has become known as 'short-stopping'.

A range of wildfowl and waders are responding to climatic amelioration in Europe. While numbers of European White-fronted Geese *Anser albifrons albifrons* wintering in the Netherlands have risen steadily (Hustings *et al.* 2008), those in the UK have fallen to fewer than 1,500 birds. In 2007/08, the peak count from the Slimbridge area (Gloucestershire) was the lowest since records began and almost surpassed by numbers on the Suffolk coast, perhaps a further indication of the eastward shift in wintering distribution. Numbers of wintering Common Pochard *Aythya ferina*, a species traditionally sensitive to freezing conditions, are now at record levels in Sweden (Nilsson 2008) but in steep decline in Britain, where it reached an all-time low in 2007/08 (fig. 1).

Maclean *et al.* (2008) used

WeBS data to demonstrate the generally north-east shift in wintering ranges of several waders within northwest Europe (e.g. Eurasian Oystercatcher *Haematopus ostralegus*, Grey Plover *Pluvialis squatarola*, Red Knot *Calidris canutus*, Dunlin *C. alpina*, Bar-tailed Godwit *Limosa*

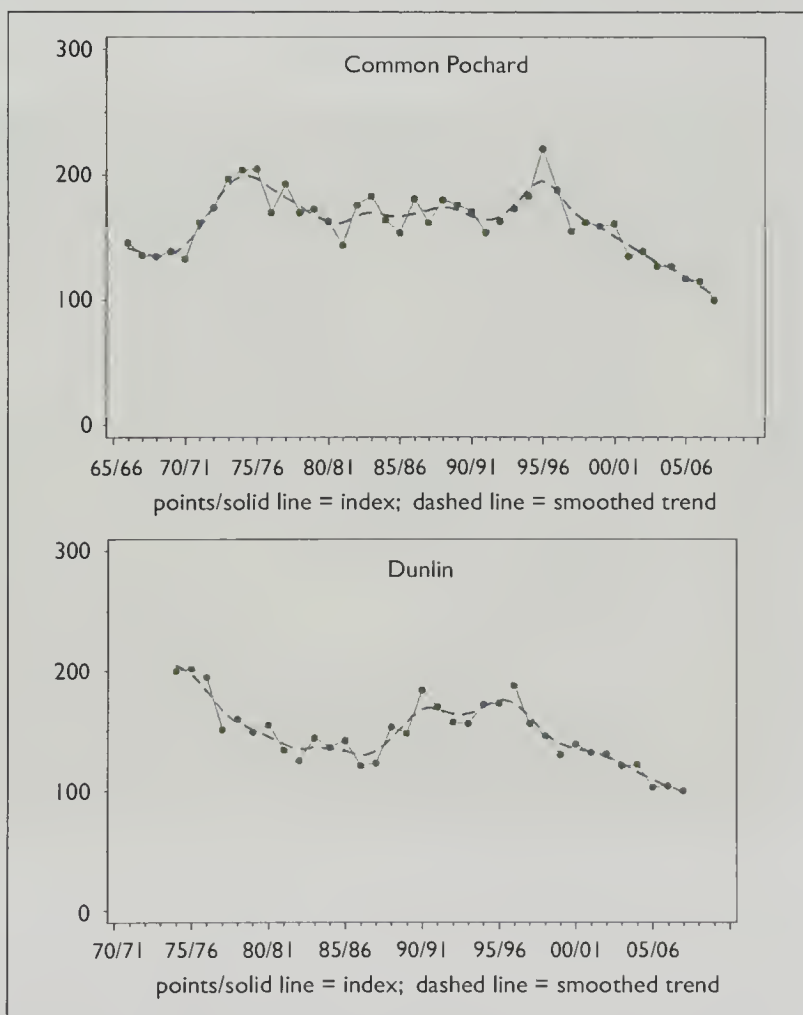


Fig. 1. Annual WeBS indices and trends for wintering Common Pochards *Aythya ferina* and Dunlins *Calidris alpina* in Great Britain.

*lapponica*, Eurasian Curlew *Numenius arquata* and Common Redshank *Tringa totanus*; fig. 2); note that many Common Redshanks wintering in Britain breed in Iceland, which probably accounts for their northwest shift. As predicted by Austin & Rehfisch (2005), in many cases these shifts are coinciding with declines in UK wintering populations (e.g. Dunlin, fig. 1) and increases in the Dutch Wadden Sea (Hustings *et al.* 2008). With many UK estuaries supporting internationally important numbers of waders, such changes are clearly of major conservation relevance.

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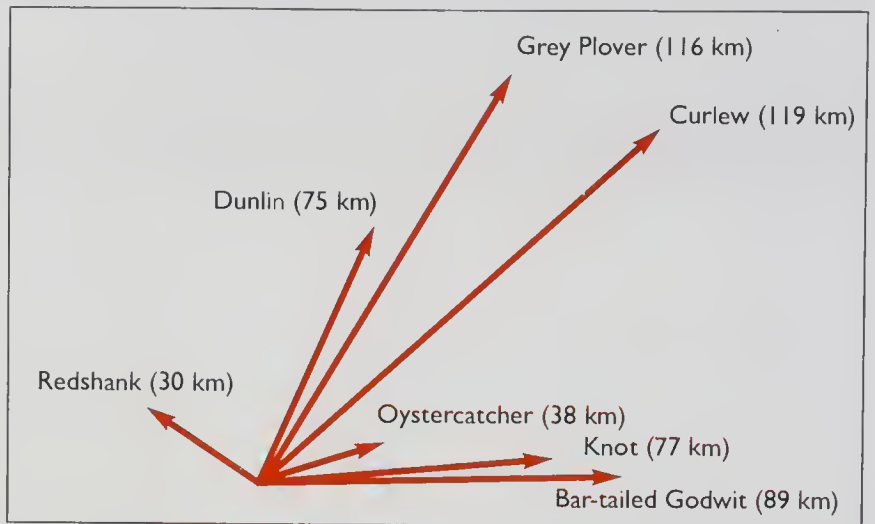
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**Fig. 2.** Schematic diagram to illustrate the effects of climate change on direction and magnitude of redistribution of the wintering range of seven wader species in northwest Europe from 1981 to 2000. Modified from Maclean *et al.* (2008).



Richard Chandler

**450.** The Dunlin *Calidris alpina* is one of the familiar waders of the coasts of northwest Europe that has shifted its overall wintering range northeast in recent years, in response to milder weather conditions.

Chas Holt, WeBS National Organiser

WeBS is organised and funded by BTO, RSPB and JNCC in association with WWT, and would not be possible without the dedicated efforts of thousands of counters nationwide. If you are interested in helping, please contact the WeBS office at [webs@bto.org](mailto:webs@bto.org)

# Reviews

**RARE BIRDS WHERE AND WHEN: AN ANALYSIS OF STATUS & DISTRIBUTION IN BRITAIN AND IRELAND. VOLUME 1: SANDGROUSE TO NEW WORLD ORIOLES.**

By Russell Slack.

MPG Books Group, Bodmin and King's Lynn, 2009.

493 pages; numerous black-and-white vignettes and figures.

ISBN 978-0-9562823-0-9.

Hardback, £29.99.

I must confess to having wondered whether this book would prove to be little more than an update of earlier volumes, notably the Poyser titles *Rare Birds in Britain and Ireland* (1976 and 1989), and *Rare Birds Day by Day* (1996). All three were, in reality, little more than catalogues of rare-bird records, albeit of some contemporary value. In 1996, the excellent *Rare Birds in Britain and Ireland* by Keith Vinicombe and David Cottridge really did offer something different, covering identification, patterns and trends of vagrants in the context of other European records and attempting to unravel the factors influencing vagrancy.

Russell Slack is, however, to be congratulated. This work is thoroughly researched, well written and packed with fascinating and relevant information. It goes much further than any of its predecessors. The inclusion of Irish records makes biogeographical sense, while the incorporation of European and, where relevant, Western Palearctic records enables a much wider perspective when assessing trends and patterns of vagrancy. So, for example, we learn how the record arrival of 16 Chimney Swifts *Chaetura pelagica* in Britain & Ireland in 2005 was part of a much wider displacement of birds following Hurricane Wilma (including no fewer than 112 on the Azores). Indeed, the book is worth it alone for bringing these records of

vagrants from across Europe together in a single source.

An excellent introductory chapter on vagrancy by Alex Lees and James Gilroy presents a healthy mix of fact and speculation, summarising current knowledge on the subject and considering the factors that cause vagrancy. With sections on vagrancy from the Nearctic, the eastern Palearctic and the near continent, it challenges the concept of 'reverse migration', an idea that has perhaps too readily been used to predict which eastern Palearctic species might occur here naturally, as opposed to via the cagebird trade. However, it offers little to explain why so many species that were once extreme rarities in Britain (e.g. White's Thrush *Zoothera dauma*) are now appearing with increasing regularity, while a whole new set of 'eastern' species that were simply not on the radar of most rarity finders (e.g. Rufous-tailed Robin *Luscinia sibilans*, Eastern Crowned Warbler *Phylloscopus coronatus* and Chestnut-eared Bunting *Emberiza fucata*) have turned up in recent years – surely observer coverage alone cannot account for this. There is also no mention of 'pseudo-vagrants', although the concept was first put forward (in *BB*) by Lees & Gilroy. A summary would have been useful as the term is used frequently in the species accounts. Brief sections on the role of BBRC and BOURC follow, written by their respective chairman. That of the BBRC is both more involved and more interesting, perhaps an indication of its wishes to engage more with 'rank and file' birders.

The species accounts cover 200+ species currently considered by BBRC and IRBC. These include *all* published records up to and including 2007, along with many subsequent records from 2008 and even 2009. Sadly, if understandably, the suite of species recently 'dropped' by BBRC, including such gems as Radde's Warbler *P. schwarzi*, are not included. For species recorded 22 times or fewer, sections

on range and taxonomic status are followed by a list of records and a brief discussion. The remaining species are given a more thorough treatment, with additional sections on status, historical review, 'Where', 'When' and a much fuller discussion.

The comments on subspecies seem well researched, which is important given current taxonomic progress and useful in raising awareness of potential splits. The status section gives the total number of records in both Britain and Ireland. The historical review takes us from the first record through to 2007 or beyond. It includes comments on patterns and trends and changes in status; Ian Wallace has brought his wisdom and entertaining writing style to some. 'Where' outlines geographical spread, 'When' deals with arrival patterns (seasonality), while the discussion considers factors that may help to explain observed patterns and trends, for example changes in range, population size and migration routes. The context provided by the inclusion of records elsewhere in Europe is of enormous relevance here. Embedded in many of the historical reviews are narratives relating to one of the records. These are generally entertaining, though I especially liked those relating to older records that I cannot remember reading before. Arguably perhaps too many have appeared relatively recently (and do I detect a disproportionate east-coast bias?).

The discussion attempts to explain trends and patterns and I found myself lingering most in this section. There is a mass of fascinating material: for example, why are Black-billed Cuckoos *Coccyzus erythrophthalmus* so much rarer than Yellow-billed *C. americanus* (14 records of the former, 68 of the latter)? Well, Black-billed is much the rarer species and currently in decline. In addition, its migration route takes it down the Atlantic coast, while the Yellow-billed undertakes a lengthy ocean crossing to

wintering grounds in northern South America. There are as many questions as answers, though. Britain often punches above its weight in terms of eastern Palearctic vagrants, yet why has Oriental Turtle Dove *Streptopelia orientalis* remained so rare? There have been 15 in Sweden, 13 in Finland, 10 in Denmark and 5 in Norway. Are we missing them? And just how much longer must we wait for a twitchable Tengmalm's Owl *Aegolius fimerens*? In late autumn 2008, an influx into Scandinavia resulted in 264 being trapped and ringed at Falsterbo (southern Sweden) while at least 23

reached Denmark.

A few relevant identification issues are also raised and Slack is (commendably) not shy of asking questions, notably with regard to Pallid Swifts *Apus pallidus* and some of the early Citrine Wagtails *Motacilla citreola*, and there is much food for thought here too. Category D species, and those recently 'downgraded' to Category E by BOURC, are included in a separate section. This is useful, especially as one record has been upgraded to Category A since publication.

This book will undoubtedly become the standard work for those

interested in rare birds in Britain & Ireland. Whether you are simply a patch worker who enjoys coming across migrants, a passionate lister, someone fascinated by the phenomenon of vagrancy itself or one of an increasing band of observers for whom their 'self-found' list has become a key driving force, this book is a must for you. Forget the lack of photographs, the content more than makes up for that and at £29.99 this book represents excellent value for money. I look forward to Volume 2.

Paul Harvey

**NORTH NORFOLK'S  
WILDLIFE:  
DISCOVERING ITS BIRDS  
AND NATURAL HISTORY**

By Andrew Bloomfield and  
Gary Smith. Red String  
Publishing, Sculthorpe, 2009.

144 pages, 161 colour  
photographs.

ISBN 978-0-9522459-1-9.  
Hardback, £29.99.

Britain has many beautiful and special places but perhaps none is closer to the hearts of birdwatchers than north Norfolk. Key to its charm is its intricately woven mosaic of habitats – open sea, sandy beaches, shingle ridges, dunes, saltmarshes, estuarine mudflats, freshwater and grazing marshes, reedbeds, woods, farmland and charming river valleys. This was a landscape which provided the inspiration for some of the country's earliest conservation efforts and here, one could argue, is the spiritual home of British birdwatching.

This book provides a detailed account of the area and its wildlife by Andrew Bloomfield – someone who knows intimately its most secret locations and its daily and seasonal rhythms. Its chapters are structured according to the area's habitats and within them lies a wealth of detailed information, not just on birds (though they dominate) but also on mammals, butter-

flies, moths, dragonflies and plants.

The text is alive with fascinating facts (for example, 1,200 European Hares *Lepus europaeus* were shot on a single day at Holkham in 1877 as were 140 Woodcocks *Scolopax rusticola* over three days on the same estate in 1997) and is greatly enhanced by the frequent historical contexts, which remind us that the north Norfolk we see today is just a snapshot in a continuum of change. For example, the great hordes of Pink-footed Geese *Anser brachyrhynchus*, for which the county is now so famous, are a very recent, and probably temporary, phenomenon. We are also reminded of the oft-neglected attractions of the agricultural hinterland to be found just minutes from the more well-known coastal habitats.

Though the rarities for which the coast is famous get a mention, the focus is kept deliberately on those common or characteristic species and the spectacles which define the area and which make it so special. There is, therefore, an admirably comprehensive treatment of such iconic north Norfolk species as the Pink-footed Goose, Red Knot *Calidris canutus*, Marsh Harrier *Circus aeruginosus*, Eurasian Bittern *Botaurus stellaris*, Sandwich Tern *Sterna sandvicensis*, Barn Owl *Tyto alba*, Grey *Haliaeetus grypus* and Harbour Seals *Phoca vitulina* and European Hare.

Structuring the book by habitat illustrates a dilemma. One could

equally well structure the same content by the calendar or by species, but whichever approach is taken it will be difficult to capture all three dimensions effectively. These problems are mostly overcome successfully, though some chapters do seem a little awkward and disjointed. The text is generally well written, but a couple of hours of professional proofreading could have removed a few niggling lapses in grammar, punctuation and spelling.

The photographs are the other key element of this book. Most are by local wildlife photographer Gary Smith, with a few by the author, and all but one are taken in north Norfolk. They illustrate every aspect of the text – the area's characteristic habitats, its great bird spectacles, intimate portraits of bird behaviour and other wildlife. They are almost all of a very high quality and their liberal presence throughout the text is a joy.

The layout and production quality are of a high standard but the map of the area could have been much better, perhaps illustrating the mingling of the different ecological zones and highlighting the numerous conservation designation areas which the region boasts. This is a highly insightful guide to north Norfolk's wildlife, and as a visual treat it deserves to do well.

Andy Stoddart

**THE ULTIMATE SITE  
GUIDE TO SCARCE  
BRITISH BIRDS**

By Lee G. R. Evans.

BirdGuides, Sheffield, 2009.

326 pages; numerous black-  
and-white line-drawings.

ISBN 987-1898110-49-9.

Paperback, £24.95.

This is an updated third edition of a guide that first appeared in 1996 as *The Ultimate Site Guide to Rare and Scarce Birds in Britain*, then resurfaced in 2001 as *Finding Birds in Britain*. Within its 326 pages can be found detailed accounts of where to find 109 rare and scarce species in England, Scotland and Wales. A short introduction discusses the conservation issues raised by publicising sites for breeding birds and gives due prominence to the 'Code of Conduct for Birdwatchers'. The main section comprises the individual species accounts, each of which includes a status and distribution summary and detailed listings of recommended locations, with up to six pages per species and listings of up to 50 sites, often with maps and grid references. There is also information on when to look and where to look once you have arrived, and an indication is also given as to the likelihood of seeing the desired bird. The text is enlivened by attractive vignettes by Ray Scally. Finally, the book contains brief accounts and maps of 26 well-known 'migration and rarity hotspots' and a 'Checklist of the Birds of Britain'.

The range of 'scarce' species covered is wide, ranging from relatively 'common' species (e.g.

Dipper *Cinclus cinclus*) to, surprisingly, the extremely rare (e.g. Redhead *Aythya americana*), and includes both highly localised residents (e.g. Lady Amherst's Pheasant *Chrysolophus amherstiae*) and more erratic and transient species (e.g. Pallas's Leaf Warbler *Phylloscopus proregulus*). The inclusion of extreme rarities is based on the temporary residence of single 'twitchable' individuals (e.g. Black-browed Albatross *Thalassarche melanophris*), but it is hard to understand the inclusion of 'Hornemann's' Arctic Redpoll *Carduelis hornemanni hornemanni*. The exclusion of the much more regular and widespread Greenish Warbler *P. trochiloides* (nowadays much easier to find on the east coast than Bluethroat *Luscinia svecica*) is perhaps also surprising.

There are of course dangers in producing any site guide. While it may be straightforward to provide directions to localised, resident species, it is quite another to give site information for scarce and rare migrants whose appearance is unpredictable. A brave attempt is made to identify a variety of sites for a wide range of such species but I sense a degree of over-optimism which might raise false hopes for those unaware of how difficult it is in reality to find even scarce migrants, let alone rarities. There is much more to it than just turning up at a site and expecting to see the required species. For example, some of the locations listed for Bluethroat may not record the species for years on end, and using this guide to find one would almost certainly result in disappointment! Furthermore, this is a

book that will date very quickly. For example, the winter status and distribution of such semi-irruptive species as Rough-legged Buzzard *Buteo lagopus* and Great Grey Shrike *Lanius excubitor* changes dramatically from one year to the next, with favoured sites suddenly being abandoned, while long-staying rarities may have disappeared even before the book's publication!

The book is well laid out, clear and easy to use. One can only be impressed at the author's extensive and detailed knowledge of Britain's scarce-bird hotspots and occurrence patterns, built up over many years of 'year listing'. The acid test of such a book, however, is its reliability. As a reviewer, I cannot hope to match the author's knowledge of Britain's birding hotspots but I can test it for an area I know well. I took particular note of the listing for Blakeney Point/Cley where, sadly, mistakes were easy to find. The text refers to the Cley Norfolk Wildlife Trust reserve hosting 'up to ten hides' (there are five), mentions Maynard's and Bittern hides (both long departed) and refers to Monday closing (long since discontinued). Such matters of detail should be simple to check and of course this raises questions over the accuracy of other sections.

Such concerns aside, this book makes an excellent stab at helping the would-be observer to 'connect' with his or her target species, and should prove immensely useful to those wishing to increase their life or year list or to those visiting a new area.

Andy Stoddart

**THE BIRDWATCHER'S  
YEARBOOK 2010**

Edited by David Cromack.

Buckingham Press,  
Peterborough, 2009.

352 pages; many black-  
and-white illustrations  
and figures.

ISBN 978-0-955033-98-8.

Paperback, £17.50.

Since I remember the first-ever *Birdwatcher's Yearbook*, I was shocked to discover that this is the 30th-anniversary edition of this well-known favourite. Even in this digital age, it remains a particularly handy reference source, one that often provides a quicker answer to a particular question than the internet, and is, for many of us, more portable too. As ever, it is crammed with up-to-date information: accompanying a swathe of special features are the indispensable county and national directories, details of nature reserves, tide tables, checklists and much more. And *BB* readers who order before 15th December can buy the book for just £15.50 – call the credit card hotline on 01733 561739 or send a cheque (payable to Buckingham Press Ltd) to BYB Offer, Buckingham Press, 55 Thorpe Park Road, Peterborough PE3 6LJ, quoting your *BB* subscriber reference. RR

# News and comment

Compiled by Adrian Pitches

Opinions expressed in this feature are not necessarily those of *British Birds*

## Marine Act becomes law at last

After many years of lobbying by the RSPB and the Wildlife Trusts, the Marine and Coastal Access Act became law in November. While welcoming the Act, the RSPB is reminding the Government that this long-overdue legislation now needs to be used to create a network of marine conservation zones in England and Wales, offering protection for important and vulnerable marine species.

This is 'a watershed for marine conservation' according to Dr Sharon Thompson, a senior marine policy officer with RSPB. She continued: 'But, for the Act to be meaningful and help safeguard vulnerable marine species, from corals to whales, the Government must use these new powers to designate sites, otherwise the legislation will be as toothless as a sea squirt!'

To help start the designation process, the RSPB has identified 21 sites of national importance for seabirds in English waters (see below), creating a series of potential 'early wins' for the UK Government. The sites, ranging from Northumberland to Cornwall, would provide protection for nationally important populations of 13 species of seabird. Two of the

species to benefit include the Common Eider *Somateria mollissima* and the Black Guillemot *Cephus grylle*, both of which have small populations in England. Although populations of some seabirds are increasing, others are faring less well. In particular, the UK population of Shags *Phalacrocorax aristotelis* is down by 25%, Kittiwakes *Rissa tridactyla* are down by 36% and Lesser Black-backed Gulls *Larus fuscus* by 41%. The 21 sites identified by the RSPB include six sites of national importance for Kittiwakes and two for Shags.

Some sites are nationally important for several species, including St Bees Head, in Cumbria, which is the only place in England where Black Guillemots breed. The Marine and Coastal Access Act will be the culmination of a decade of campaigning by the RSPB and other members of Wildlife and Countryside Link, especially WWF, the Wildlife Trusts and the Marine Conservation Society. The sites and the nationally important seabirds at each are as follows:

**The Farne Islands** (Common Eider); **Northumberland Shore**

(Common Eider); **Coquet Island** (Common Eider, Black-headed Gull *Chroicocephalus ridibundus*, Roseate Tern *Sterna dougallii*); **St Bees Head** (Fulmar *Fulmarus glacialis*, Shag, Kittiwake, Common Guillemot *Uria aalge*, Razorbill *Alca torda*, Black Guillemot, Puffin *Fratercula arctica*); **The Dee Estuary** (Common Tern *S. hirundo*, Great Cormorant *P. carbo*); **The Wash** (Black-headed Gull); **Hunstanton Cliffs** (Fulmar); **Weybourne Cliffs** (Fulmar); **Blackwater Estuary** (Cormorant); **Dover to Kingsdown Cliffs** (Fulmar, Kittiwake); **Dungeness, Romney Marsh and Rye Bay** (Cormorant, Black-headed Gull); **Brighton to Newhaven Cliffs** (Kittiwake); **North Solent** (Black-headed Gull); **Newtown Harbour** (Black-headed Gull); **Hurst Castle & Lymington River Estuary** (Black-headed Gull); **Berry Head to Sharkham Point** (Guillemot); **Gerrans Bay to Camels Cove** (Shag, Kittiwake, Guillemot); **Godrevy Head to St Agnes** (Kittiwake); **Pentire Peninsula** (Fulmar, Guillemot, Razorbill, Puffin); **Lundy** (Manx Shearwater *Puffinus puffinus*, Kittiwake, Guillemot, Razorbill, Puffin); **West Exmoor Coast & Woods** (Guillemot, Razorbill).

## Save Our (Irish) Seabirds

Meanwhile, BirdWatch Ireland is marking its 40th anniversary with a €100,000 appeal to its members for the conservation of seabirds in Ireland. Here's the lyrical text from the appeal flier:

'Our seas and coastlines are changing. Decades of man's influence – exploiting our sea-fish stocks, unintentionally introducing rats and mink to seabird islands, pollution, disturbance and now rising sea temperatures – mean that seabirds are struggling to adjust. Starving nestlings in Puffin

burrows and on Kittiwake nests are the stark face of a worrying future for our seabirds. Our seabirds are the very essence of nature on the island of Ireland – sociable, beautiful, resilient but increasingly vulnerable. From the Roseate Terns of Rockabill to the fortress gannetry of Little Skellig, we have a special role in protecting these magical birds. BirdWatch Ireland has been at the forefront of protecting and monitoring our seabirds for the last 40 years. Successes have included the recovery of the

national Roseate Tern population at colonies in the Irish Sea, Gannets [*Morus bassanus*] thriving on the BirdWatch Ireland reserve of Little Skellig and Little Terns [*Sternula albifrons*] protected from disturbance on the Wicklow coast. However, we now need to expand our conservation efforts to meet the greater threats that confront our seabird populations.'

And here's how that €100,000 could be spent: €25 will pay for a new Roseate Tern nestbox; €50 will support volunteer wardens for one

day, protecting Little Terns; €100 will buy a GPS tag for finding Kittiwake and Guillemot feeding areas; €250 will provide a school visit to tell children about Puffins and

sandeels *Anmodytes* and the threat from pipefish (Syngnathidae); €1,000 will pay for boat hire and get a survey team out to remote islands to census poorly known

European Storm-petrel *Hydrobates pelagicus* and Puffin colonies; €10,000 will pay a fieldworker's salary for one season.

## Reprieve for Polish wetlands as Via Baltica re-routed

The Polish Government has agreed to proceed with an alternative route for the Via Baltica expressway – an international road corridor in north-east Poland – and given a reprieve to some of Europe's best wildlife sites.

Campaigners BirdLife, the RSPB and OTOP (the RSPB's partner in Poland) have said that the decision by the Polish Council of Ministers is a major victory that represents a significant step towards the proper implementation of Polish and European environmental laws. However, the groups say that the new decree does not mark the end of their campaign to save Polish sites of European importance from suffering damage from other road construction plans in the region.

The Natura 2000 sites spared by the re-routing decision include locations important for a range of threatened species such as Lynx *Lynx lynx*, Wolf *Canis lupus*, European Beaver *Castor fiber* and threatened bird species including the Aquatic Warbler *Acrocephalus paludicola* and Spotted Eagle *Aquila clanga* which have their most important concentrations in the EU in northeast Poland.

This environmentally sound routing of the road via Lomza is also valid on economic, traffic and social grounds. The decision means that the expected stream of intra-continental lorries will go via Lomza, thus avoiding negative impacts on three Natura 2000 sites: the Biebrza Marshes, and the Knyszyn and Augustow Primeval Forests. However, it does not bring an automatic halt to current road construction work inside the Knyszyn Forest or other environmentally harmful road-development plans in northeast Poland.

Dr Helen Byron, a senior RSPB international site casework officer, said: 'This is great news! After seven years of campaigning, the Polish ministers approved a new route for the Via Baltica corridor that will avoid the threatened sites of international importance. Sadly, this doesn't mean our work is over entirely – we still need to protect sites along the "old" Via Baltica route and ensure that construction on the new route goes ahead so that this isn't just a paper victory. But this is an absolutely fantastic step forward ensuring a brighter future for the wildlife of this naturally diverse region.'

Malgorzata Gorska, IBA Casework Officer of OTOP, said: 'As these road developments have been proceeding at high speed, Natura 2000 sites like the Knyszyn Forest and the Biebrza Marshes are still under threat. Our task is to ensure that all environmentally harmful road projects along the old routing of the Via Baltica, as queried by the European Commission, are halted or modified.'

## Red List goes redder

The extinction crisis confronting all animal groups is deepening, according to the latest update to the IUCN Red List of Threatened Species, which shows that 17,291 out of the 47,677 assessed species are threatened with extinction.

BirdLife International is the Red List Authority for birds and released the 2009 update for birds earlier in the year, listing 192 species of bird as Critically Endangered, the highest threat category, two more than in the 2008 update. (Of the world's 9,998 birds, 137 are Extinct or Extinct in the Wild, with 192 Critically Endangered, 362 Endangered and 669 Vulnerable).

The results of the full Red List update reveal that 21% of mammals, 12% of birds, 28% of reptiles, 30% of amphibians, 37% of freshwater fishes, 35% of invertebrates and 70% of plants assessed so far are under threat.

'The scientific evidence of a serious extinction crisis is mounting,' says Jane Smart, Director of IUCN's Biodiversity Conservation Group. She continues: '2010 is the International Year of Biodiversity. The latest analysis of the IUCN Red List shows that the 2010 target to reduce biodiversity loss will not be met. It's time for governments to start getting serious about saving species and make sure it's high on their agendas for next year, as we're rapidly running out of time.'

Of the world's 5,490 mammals, 79 are Extinct or Extinct in the Wild, with 188 Critically Endangered, 449 Endangered and 505 Vulnerable. There are now 1,677 reptiles on the IUCN Red List, with 293 added this year, and a third of all the world's amphibians are in danger of extinction (1,895 of the planet's 6,285 species) making them the most threatened group of species known to date. In the plant kingdom, of the 12,151 plants on the IUCN Red List, 8,500 are threatened with extinction, with 114 already Extinct or Extinct in the Wild. But it's not all doom and gloom.

'In global terms, things continue to get worse – but there are some real conservation success stories this year to give us hope and point the way forward,' said Dr Leon Bennun, BirdLife's Director of Science and Policy.

In Brazil, Lear's Macaw *Anodorhynchus leari* has been downlisted from Critically Endangered to Endangered. Named after the English poet, this spectacular blue parrot has increased four-fold in numbers as a result of a joint effort of many national and international non-governmental organisations, the Brazilian Government and local landowners.

*continued on page 708*

In New Zealand, the Chatham Petrel *Pterodroma axillaris* has benefited from work by the New Zealand Department of Conservation and has consequently been downlisted from Critically Endangered. And in Mauritius the Mauritius Fody *Foudia rubra* has been rescued from the brink after the

translocation and establishment of a new population on a predator-free offshore island. It has now been downlisted to Endangered.

‘Both the petrel and the fody have suffered [through the introduction of] invasive species, and tackling these is one of the ten key actions needed to prevent further

bird extinctions that BirdLife has indentified. What this year’s Red List changes tell us is that we can still turn things around for species. There just has to be the will to act and the resources to back this up,’ said Dr Stuart Butchart, BirdLife’s Global Research and Indicators Co-ordinator.

## New Recorder for the IOW

Graham Sparshott is standing down as the Isle of Wight Recorder, and he will be succeeded by Robin Attrill, 17 Waterhouse Moor, Harlow, Essex CM18 6BA, tel. 01279 423467, e-mail Robin@Rpattrill.freeserve.co.uk

## British Birds in 2010

Thanks to all subscribers for your continuing support in 2009. As previously stated, subscriptions have been held constant for financial year 2009/10, so subscribers renewing for Volume 103 will secure their monthly fix for the same bargain price as Vol. 102. Next year’s content is stronger than ever, and readers can look forward to pioneering identification texts on (among others) Caspian Gulls *Larus cachinnans*, Eastern Woodchat Shrikes *Lanius senator niloticus* and Asian flycatchers, population studies of Common Sandpipers *Actitis hypoleucos* and Northern Wheatears *Oenanthe oenanthe*, conservation priority texts on Ring Ouzels *Turdus torquatus* and Eurasian Bitterns *Botaurus stellaris*, review papers on Eskimo Curlews *Numenius borealis* and Hawk Owls *Surnia ulula* and much, much more. A Happy Christmas to all readers and a bird-filled New Year. And if you’re looking for a New Year’s resolution... let’s all recruit one more subscriber each in 2010 and double the readership of this excellent journal!

Adrian Pitches

# Recent reports

Compiled by Barry Nightingale and Eric Dempsey

This summary of unchecked reports covers early October 2009 to early November 2009.

**Headlines** Long anticipated, the Eastern Crowned Warbler in South Shields was an extremely popular find, particularly as it was in mainland Britain, as was a long-staying Brown Shrike on the outskirts of London. Ireland also produced some top-quality passerines, including a Mourning Dove, a Common Nighthawk (both second records for Ireland), a probable Northern Rough-winged Swallow and the first Irish Cedar Waxwing, as well as a Swainson’s Thrush and Blackpoll Warbler. Many other good-quality rarities were scattered across the country, together with notable influxes of several species, including Red-rumped Swallows, Olive-backed (at least 15) and Red-throated Pipits, seven Red-flanked Bluetails and at least 20 Radde’s Warblers.

**Red-breasted Goose** *Branta ruficollis* Old Hall Marshes (Essex), two, 25th October. **American Wigeon** *Anas americana* Mersehead, 13th October, with another Castle Loch, 13th–19th October and again 5th November, same Kirk Loch (all Dumfries & Galloway), 8th November; Hayle (Cornwall), 14th–17th October; Loch of Brow (Shetland), 8th November. **Blue-winged Teal** *Anas discors* Saltholme Pools, long-stayer to 10th October, same Port Clarence (both Cleveland), 24th–26th October; South Nesting (Shetland), 31st October.

**Ferruginous Duck** *Aythya nyroca* Chew Valley Lake (Avon), long-stayer to 29th October; Calvert Lakes, 14th October, Foxcote Resr (both Buckinghamshire), 2nd November. **Lesser Scaup** *Aythya affinis* Draycote Water (Staffordshire), long-stayer to 31st October; Cardiff Bay (Glamorgan), 11th–30th October. **King Eider** *Somateria spectabilis* Freiston area/River Witham (Lincolnshire), long-stayer to 18th October. **Hooded Merganser** *Lophodytes cucullatus* Hemlington Lake, long-stayer previously Saltholme Pools (both Cleveland), to 12th October.

Fea's Petrel *Pterodroma feae* St John's Point (Co. Down), 18th October; Budleigh Salterton (Devon), 20th October; Ramore Head (Co. Antrim), 25th October.

Little Bittern *Ixobrychus minutus* Cossington Meadows (Leicestershire), 19th October. Cattle Egret *Bubulcus ibis* Records from Argyll, Co. Cork, Cornwall, Derbyshire, Gloucestershire, Hampshire, Kent, Co. Kerry, Pembrokeshire, Scilly and Somerset. Great White Egret *Ardea alba* Another influx, with eight at various localities along the north Norfolk coast on 14th October, five Brandon Pools (Warwickshire), 16th October and three Leighton Moss (Lancashire & N Merseyside), 27th–28th October, with other records (mainly singles) from Argyll, Cambridgeshire, Cheshire & Wirral, Cleveland, Cornwall, Co. Cork, Cumbria, Devon, Essex, Co. Galway, Gwynedd, Hampshire, Kent, Co. Kerry, Leicestershire, Lincolnshire, Northamptonshire, Scilly, Somerset, Suffolk, Sussex and Warwickshire. Glossy Ibis *Plegadis falcinellus* Wanderers from the earlier influx in Cambridgeshire, Derbyshire, Gloucestershire, Gwynedd, Kent, Co. Kerry (including 11 at Smerwick Harbour, 11th–20th), Lincolnshire, North-east Scotland, Northumberland, Somerset (including five Catcott Lows, 16th October), Staffordshire, Suffolk, Sussex, War-

wickshire and Yorkshire. By the end of October probably fewer than ten remained in England, with none in Wales or Scotland and just one in Ireland. Black Stork *Ciconia nigra* Bishop Middleham (Durham), 16th–18th October.

Black Kite *Milvus migrans* Ramsey Marshes (Essex), 15th October; Bardsey (Caernarfonshire), 26th October.

American Golden Plover *Pluvialis dominica* Records from Argyll (2), Cheshire & Wirral, Co. Clare, Co. Cork, Cornwall, Co. Down (3), Fife, Co. Galway (3), Co. Kerry (3), Lancashire & N Merseyside, Norfolk, Orkney (3), Outer Hebrides, Shetland and Yorkshire. White-rumped Sandpiper *Calidris fuscicollis* Abberton Reservoir (Essex), long-stayer to 18th October; Cley (Norfolk), 25th–26th October. Baird's Sandpiper *Calidris bairdii* Neatholme Fen (Nottinghamshire), 14th October; Belhaven Bay (Lothian), 7th–8th November. Buff-breasted Sandpiper *Tryngites subruficollis* Saltholme Pools, long-stayer to 13th October; West Runton (Norfolk), 11th October. Long-billed Dowitcher *Limnodromus scolopaceus* In Lancashire & N Merseyside up to two Ribble Marshes, 12th–17th October, one to 27th, Cockersand 13th–21st October, Banks Marsh, two 15th and 18th October, one to 31st, Marshside, two 21st



451. Juvenile Spotted Sandpiper *Actitis macularius*, Garths Ness, Shetland, October 2009.

Roger Riddington



Eric Dempsey

452. Common Nighthawk *Chordeiles minor*, Caherciveen, Co. Kerry, October 2009.

October; elsewhere, Tresco (Scilly), long-stayer to 10th October; Inner Marsh Farm (Cheshire & Wirral), two long-stayers to 17th October, one again 28th–31st October; Blashford Lakes (Hampshire), 11th October; South Uist (Outer Hebrides), 14th–15th October; Connah's Quay (Clwyd), two, 19th–21st October, with one to 25th October; Browhouses (Dumfries & Galloway), 25th October; North Uist, 26th October.

Spotted Sandpiper *Actitis macularius* Quendale/Garths Ness (Shetland), 11th–18th October. Lesser Yellowlegs *Tringa flavipes* Aberlady Bay (Lothian), long-stayer to 8th November; Leam Lough (Co. Mayo), 15th–21st October; Pagham Harbour (Sussex), 23rd October. Wilson's Phalarope *Phalaropus tricolor* Slimbridge (Gloucestershire), 7th–8th November.



Jason Atkinson

453. Olive-backed Pipit *Anthus hodgsoni*, Whalsay, Shetland, October 2009.

Franklin's Gull *Larus pipixcan*  
Tankerness (Orkney), long-  
stayer again 16th October.

Mourning Dove *Zenaida  
macroura* Garinish (Co.  
Cork), 25th October.

Common Nighthawk  
*Chordeiles minor* Caherciveen  
(Co. Kerry), picked up  
exhausted on 24th October,  
successfully released on  
25th. European Bee-eater  
*Merops apiaster* Sudbury  
(Suffolk), 17th October.

Northern Rough-winged  
Swallow *Stelgidopteryx ser-  
ripennis* Probable, near Ballinskelligs (Co.  
Kerry), 13th October. Red-rumped Swallow  
*Cecropis daurica* Witcham (Cambridgeshire),  
27th–28th October; near Aberdaron (Caernar-  
fonshire), 27th October; Kilnsea (Yorkshire),  
two, 27th October; Kilminning (Fife), 28th  
October; Durlston (Dorset), 29th October;  
Thorpeness (Suffolk), 31st October; Aberlady  
Bay, 3rd–5th November; Udale Bay (Highland),  
8th November.

Olive-backed Pipit *Anthus hodgsoni* In Shetland:



Chris Turner

454. Pechora Pipit *Anthus gustavi*, Out Skerries, Shetland, October 2009.

at Kergord, two on 9th, one to 11th October;  
Whalsay, 11th–12th October; Geosetter, 20th  
October; Levenwick, 26th October; Swinister,  
31st October; Grutness, 4th November. Else-  
where: Great Notley (Essex), 15th October; St  
Agnes (Scilly), 23rd October; Lundy (Devon),  
23rd–25th October; Sandy Point (Hampshire),  
24th October; St Levan (Cornwall), 29th  
October; East Hills (Norfolk), 30th October; St  
Mary's (Scilly), 31st October to 2nd November;  
Flamborough Head (Yorkshire), 5th November.  
Pechora Pipit *Anthus gustavi* Out Skerries (Shet-



Eric Dempsey

455. Buff-bellied Pipit *Anthus rubescens*, Clahane Strand, Co. Clare, October 2009.

Anthony McGeehan



456. First-winter Cedar Waxwing *Bombycilla cedrorum*, Inishbofin, Co. Galway, October 2009.

land), long-stayer to 11th October. Red-throated Pipit *Anthus cervinus* St Agnes, 10th October, St Martin's, 11th–14th October, St Mary's, 12th, 15th–16th and 20th October (all Scilly); Rainham Marshes (Greater London), 13th October; Staines Moor (Surrey), 14th October; Easington (Yorkshire), 14th October; Marshside, 20th October; Orcombe Point (Devon), 23rd October; Skomer (Pembroke-

shire), 23rd October; Portland (Dorset), 27th October; Kenidjack Valley (Cornwall), 28th October. Buff-bellied Pipit *Anthus rubescens* Clahane Strand (Co. Clare), long-stayer to 19th October; Brow Head (Co. Cork), 11th October. Citrine Wagtail *Motacilla citreola* North Ronaldsay (Orkney), 18th October; Tresco, 25th–29th October.

Cedar Waxwing *Bombycilla cedrorum* Inishbofin (Co. Galway), 14th October. Red-flanked Bluetail *Tarsiger cyanurus* Voe, 12th–14th October, Quendale (both Shetland), 15th October; Minsmere (Suffolk), 14th–21st October; Whitburn (Durham), 15th October; Kilnsea/Spurn (Yorkshire), two 17th, one to 19th

October, one of same (ringed) again 26th–27th October; Bempton Cliffs (Yorkshire), 23rd–25th October. Pied Wheatear *Oenanthe pleschanka* Horsey Gap (Norfolk), 14th–15th October; Shingle Street (Suffolk), 19th October; Fife Ness (Fife), 26th–31st October. White's Thrush *Zoothera dauma* Fair Isle, 10th October. Swainson's Thrush *Catharus ustulatus* Old Head of Kinsale (Co. Cork), 31st October. Black-

Graham Catley



457. Red-flanked Bluetail *Tarsiger cyanurus*, Bempton Cliffs, Yorkshire, October 2009.



James Kennerley

**458.** First-winter female Pied Wheatear *Oenanthe pleschanka*, Shingle Street, Suffolk, October 2009.

throated Thrush *Turdus atrogularis* Scorrilton (Devon), 27th–28th October.

Zitting Cisticola *Cisticola juncidis* Pegwell Bay (Kent), long-stayer again 18th October, then regularly 28th October to 8th November. Pallas's Grasshopper Warbler *Locustella certhiola* Foula (Shetland), 21st October. Lanceolated Warbler *Locustella lanceolata* Out Skerries 11th–15th

October, Unst (both Shetland), 12th–14th October; North Ronaldsay, 12th October. River Warbler *Locustella fluviatilis* Fair Isle, long-stayer to 13th October. Paddyfield Warbler *Acrocephalus agricola* Snettisham (Norfolk), 15th October. Blyth's Reed Warbler *Acrocephalus dumetorum* Hoswick (Shetland), 11th October; Achill Island (Co. Mayo), 14th October. Sykes's Warbler *Hippolais rama* Nanquidno (Cornwall),



John Carter

**459.** Zitting Cisticola *Cisticola juncidis*, Pegwell Bay, Kent, October 2009.



Michael McKee

**460.** Lanceolated Warbler *Locustella lanceolata*, Out Skerries, Shetland, October 2009.

13th–14th October. Subalpine Warbler *Sylvia cantillans* Bardsey, 10th–11th October.

Eastern Crowned Warbler *Phylloscopus coronatus* Trow Quarry, South Shields (Durham), 22nd–24th October. Greenish Warbler *Phylloscopus trochiloides* Church Cove (Cornwall), 28th October to 1st November. Arctic Warbler *Phylloscopus borealis* Wester Quarff (Shetland), long-stayer to 11th October; Cape Clear Island

(Co. Cork), 9th–18th October; Out Skerries, 15th October; Newcastle-under-Lyme (Staffordshire), 15th October; Capel-le-Ferne (Kent), 22nd October. Radde's Warbler *Phylloscopus schwarzi* In Yorkshire: Easington, 10th October; Filey, 10th October; Flamborough Head, 11th–12th October; Kilnsea, 17th October. Elsewhere: Druridge Pools, 10th–11th October, Holy Island (both Northumberland), 10th and 22nd October; Sandwich Bay (Kent),



Ian Fisher

**461.** Eastern Crowned Warbler *Phylloscopus coronatus*, Trow Quarry, South Shields, Durham, October 2009.



Gary Thoburn

462. Radde's Warbler *Phylloscopus schwarzi*, St Martin's, Isles of Scilly, October 2009.

10th and 13th October; St Martin's 14th–17th October, St Mary's, 14th–16th and 24th October; East Haven (Angus & Dundee), 22nd October; Thorpeness, 22nd–23rd October; Fife Ness, 23rd–26th October; Girdle Ness (North-east Scotland), 23rd October; Wells Wood (Norfolk), 26th–27th October; St Levan, 26th October to 3rd November; Cape Clear Island, 28th October; St Agnes, 28th October; Lowestoft (Suffolk), 29th October; Abbotsbury (Dorset), 31st October. Dusky Warbler *Phylloscopus fuscatus* Skateraw (Lothian), 15th October; Power Head (Co. Cork), 22nd–25th October; Dungeness (Kent), 23rd–24th October; Flamborough Head, 23rd–24th October; Stronsay, 30th October; Gunton (Suffolk), 2nd–8th November; Whalsay, 5th November. Western Bonelli's Warbler *Phylloscopus bonelli* Ellister (Shetland), 10th–18th October; Calf of Man (Isle of Man), 15th–17th and 23rd–26th October.

Taiga Flycatcher *Ficedula albicilla* Gloup, Yell, 9th–17th October, previously on Fetlar to 5th October (both Shetland). Penduline Tit *Remiz pendulinus* Strumpshaw Fen (Norfolk), 22nd October. Brown Shrike *Lanius cristatus* Staines Moor, 11th October to

8th November. Rose-coloured Starling *Pastor roseus* On Scilly: St Agnes, 9th–29th October, St Mary's, 12th–14th October; Bryher, 15th–18th October. In Norfolk: Sheringham, 11th October; Choseley, 11th–12th October, same



Hugh Harrop

463. Western Bonelli's Warbler *Phylloscopus bonelli*, Ellister, Shetland, October 2009.



George Reszeter

464. First-winter Brown Shrike *Lanius cristatus*, Staines Moor, Surrey, October 2009.

Thornham 12th, same Titchwell 12th, with it or another 31st October; West Runton, 11th October. In Cornwall: Land's End, 13th October; St Ives, 20th–22nd and 27th October. Elsewhere: Shapinsay, 15th–19th October and 5th November, Finstown (both Orkney), 18th October; Peterhead (North-east Scotland), 28th October; Forest Hill (Oxfordshire), 7th–8th November (and probably since mid October).

European Serin *Serinus serinus* Pegwell Bay, 18th October; Land's End (Cornwall), 26th October; Hengistbury Head (Dorset), 26th October; Bryher, 27th–30th October; Lizard Point (Cornwall), 28th October; Durlston, 29th October. Arctic Redpoll *Carduelis hornemanni* In Shetland: Cunningsburgh, long-stayer to 10th October; Mid Yell, 11th–12th October; Fetlar 11th–12th October; Voe, long-stayer to 12th and again 18th October; Unst, two, 13th–17th October. In Outer Hebrides: Barra, one or two, 10th–15th October; Lewis, two, 10th October; North Uist, 14th October.

Blackpoll Warbler *Dendroica striata* Garinish (Co. Cork), 11th–19th October; Fair Isle, 15th–16th October.



Micky Maher

465. Blackpoll Warbler *Dendroica striata*, Fair Isle, October 2009.



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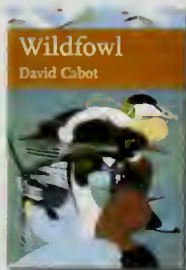
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Volume 102

2009

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# British Birds Volume 102 (2009) Main contents

## January

- 3 Climate change: a Swallow's eye view *Angela Turner*  
17 The Cape Verde Warbler: distribution, density, habitat and breeding biology on the island of Fogo  
*Jens Hering and Elmar Fuels*

## February

- 52 Birds and habitat change in Britain. Part 2: past and future conservation responses *Malcolm Ausden and Robert J. Fuller*  
72 The social and communication behaviour of the Great Black-headed Gull *Evgeniy N. Panov*  
84 From the Rarities Committee's files: The identification of male 'Ehrenberg's Redstart', with comments on British claims *Brian J. Small*  
98 The BB/BTO Best Bird Book of the Year 2008 *Roger Riddington, Dawn Balmer, Andrew Gosler, Peter Hearn, John Marchant, Robin Prytherch and Bob Scott*

## March

- 110 Should Red-necked Nightjar be on the British List? *Tim Melling*  
116 Olivaceous warblers in southeast Morocco *Volker Salewski, Herbert Stark and Bernd Leisler*  
122 Hooded Merganser on North Uist: a return to the British List *Brian Rabbitts*

## April

- 158 Rare breeding birds in the United Kingdom in 2006 *Mark Holling and the Rare Breeding Birds Panel*  
203 A 25-year study of breeding Greenshanks: territory occupancy, breeding success and the effects of new woodland *Nick Christian and Mark H. Hancock*

## May

- 230 The status of the Dartford Warbler in the UK and the Channel Islands in 2006 *Simon Wotton, Greg Conway, Mark Eaton, Ian Henderson and Phil Grice*  
247 The social behaviour of the Common Buzzard *Robin J. Prytherch*

## June

- 296 Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man *Mark A. Eaton, Andy F. Brown, David G. Noble, Andy J. Musgrove, Richard D. Hearn, Nicholas J. Aebischer, David W. Gibbons, Andy Evans and Richard D. Gregory*  
342 American Herring Gull in Cheshire & Wirral: new to Britain *David Quinn*

## July

- 365 'All-dark' *Oceanodroma* storm-petrels in the Atlantic and neighbouring seas *Robert L. Flood*  
386 The decline of the Willow Tit in Britain *Alex J. G. Lewis, Arjun Amar, Elisabeth C. Charman and Finn R. P. Stewart*

## August

- 425 From the Rarities Committee's files: Identification of Wilson's Snipe and assessment of the first British record *Adam Rowlands, Brian J. Small and Colin Bradshaw*  
435 Naumann's Thrush in Essex: new to Britain *Ken Murray*  
441 Bird Photograph of the Year 2009 *Richard Chandler, Tim Appleton, Robin Clittenden, David Hosking, Peter Kennerley and David Tipling*  
451 The Carl Zeiss Award 2009: 50 years of rarity photographs *Roger Riddington, Colin Bradshaw, Adrian Pitches, Richard Porter and Andy Stoddart*  
459 Rare birds in Britain – 50 golden years: birders vote for the 'best rarity' of the BBRC era *Adrian Pitches*

## September

- 482 Ageing and sexing of Asian chats: Siberian Rubythroat, Siberian Blue Robin, Rufous-tailed Robin and Red-flanked Bluetail *Paul J. Leader*  
494 From the Rarities Committee's files: Identification of Dark-breasted Barn Owl in Britain *Paul R. French*

## October

- 528 Report on rare birds in Great Britain in 2008 *Nigel Hudson and the Rarities Committee*

## November

- 604 Separation of Willow Tit and Marsh Tit in Britain: a review *Richard K. Broughton*  
617 From the Rarities Committee's files: The Green Farm Booted Warbler *James A. Lidster*  
622 From the Rarities Committee's files: The history of Sykes's Warbler in Britain *Roger Riddington*

## December

- 660 What makes a good alien? Dealing with the problems of non-native wildfowl *Tony (A. D.) Fox*  
680 Progress of the UK Ruddy Duck eradication programme *Iain Henderson*  
691 Britain's first Baikal Teal *Andrew H. J. Harrop and Robert Y. McGowan*  
697 Stable-hydrogen isotope analyses suggest natural vagrancy of Baikal Teal to Britain *Stephen C. Votier, Gabriel J. Bowen and Jason Newton*

# Index to Volume 102

Compiled by M. A. Ogilvie

Entries are in single list with reference to:

- (1) every significant mention of each species, not only in titles, but also within the text of papers, notes and letters, including all those appearing in such lists as the 'Report on rare birds in Great Britain in 2008' but excluding those in 'Recent reports', requests and reviews. In general, races are included in the index only if they are specified in the titles of papers or notes or in a photograph caption, or are included as a main entry in the Rarities Report;
- (2) scientific nomenclature under generic name only and following *The 'British Birds' List of Birds of the Western Palearctic* (see [www.britishbirds.co.uk/bblist.htm](http://www.britishbirds.co.uk/bblist.htm));
- (3) authors of all papers, notes, reviews and letters, and photographers; papers and notes are referred to by their titles, other contributions as 'letter on', 'review of', etc.;
- (4) a few subject headings, e.g. 'Announcements', 'Breeding', 'Conservation research news', 'Field characters', 'Food and feeding behaviour', 'News and comment', 'Rarities Committee', 'Recent reports', and 'Voice';
- (5) 'Reviews', which are listed together in alphabetical order of authors reviewed.

Accentor, Alpine, photograph, 290, plate 152

*Accipiter gentilis*, see Goshawk, Northern

— *nisus*, see Sparrowhawk, Eurasian

*Acrocephalus agricola*, see Warbler, Paddyfield

— *arundinaceus*, see Warbler, Great Reed

— *brevipennis*, see Warbler, Cape Verde

— *dumetorum*, see Warbler, Blyth's Reed

— *paludicola*, see Warbler, Aquatic

— *palustris*, see Warbler, Marsh

— *schoenobaenus*, see Warbler, Sedge

— *scirpaceus*, see Warbler, Reed

*Actitis hypoleucos*, see Sandpiper, Common

— *macularius*, see Sandpiper, Spotted

Aebischer, N. J., see Eaton, M. A., *et al.*

*Aegithalos caudatus*, see Tit, Long-tailed

Agombar, D., Eurasian Jay catching a Blue Tit in mid-air, 219

Agostini, N., *et al.*: evidence for age-dependent migration strategies in the Short-toed Eagle, 506, plates 339–40

Ahmed, R., see Fisher, I.

Ainley, D., photograph of Leach's Storm-petrel, 381, plate 197

*Aix galericulata*, see Duck, Mandarin

*Alauda arvensis*, see Lark, Sky

Albatross, Black-browed, photographs, 452, 649, plates 262, 410; accepted record, 538

—, Yellow-nosed, photograph, 456, plate 270; accepted records, 538–9, plate 358

*Alca torda*, see Razorbill

*Alcedo atthis*, see Kingfisher, Common

*Alle alle*, see Auk, Little

Allen, C., Mediterranean Gulls in Hampshire, 635

*Alopochen aegyptiaca*, see Goose, Egyptian

Amar, A., see Lewis, A. J. G., *et al.*

Amato, P., see Agostini, N., *et al.*

*Anas acuta*, see Pintail, Northern

— *americana*, see Wigeon, American

— *clypeata*, see Shoveler

— *crecca*, see Teal, Eurasian

— *discors*, see Teal, Blue-winged

— *formosa*, see Teal, Baikal

— *penelope*, see Wigeon, Eurasian

— *platyrhynchos*, see Mallard

— *querquedula*, see Garganey

— *rubripes*, see Duck, Black

— *strepera*, see Gadwall

— *superciliosa*, see Duck, Grey

Andrews, R., photograph of Ferruginous Duck, 478, plate 282

Anker-Nilssen, T., photographs of Swinhoe's Storm-petrel, 385, plates 206, 209

Announcements: 45

*Anser albifrons*, see Goose, White-fronted

— *anser*, see Goose, Greylag

— *brachyrhynchus*, see Goose, Pink-footed

— *caerulescens*, see Goose, Snow

— *fabalis*, see Goose, Bean

*Anthus godlewskii*, see Pipit, Blyth's

— *gustavi*, see Pipit, Pechora

— *hodgsoni*, see Pipit, Olive-backed

— *petrosus*, see Pipit, Rock

— *pratensis*, see Pipit, Meadow

— *rubescens*, see Pipit, Buff-bellied

— *spinoletta*, see Pipit, Water

— *trivialis*, see Pipit, Tree

Appleton, T., see Chandler, R., *et al.*

*Apus affinis*, see Swift, Little

— *apus*, see Swift, Common

— *melba*, see Swift, Alpine

— *pacificus*, see Swift, Pacific

— *pallidus*, see Swift, Pallid

*Aquila chrysaetos*, see Eagle, Golden

*Ardea cinerea*, see Heron, Grey

- *purpurea*, see Heron, Purple  
*Ardeola ralloides*, see Heron, Squacco  
*Arenaria interpres*, see Turnstone  
Ashforth, M., photograph of Spotted Sandpiper, 479, plate 284  
*Asio flammeus*, see Owl, Short-eared  
— *otus*, see Owl, Long-eared  
Aspinall, S., Schmidt *et al.*: review of *Birdwatching in Azerbaijan: a guide to nature and landscape*, 38  
Atkinson, J., photograph of Veery, 655, plate 421; of Olive-backed Pipit, 710, plate 453  
Auk, Little, population status in the UK, Channel Islands and Isle of Man, 296–341  
Ausden, M., and Fuller, R. J., birds and habitat change in Britain. Part 2: past and future conservation responses, 52–71, plates 37–46  
Avocet, breeding in the United Kingdom in 2006, 183; population status in the UK, Channel Islands and Isle of Man, 296–341  
*Aythya affinis*, see Scaup, Lesser  
— *americana*, see Redhead  
— *ferina*, see Pochard, Common  
— *fuligula*, see Duck, Tufted  
— *marila*, see Scaup, Greater  
— *nyroca*, see Duck, Ferruginous
- Bachmeier, photograph of ‘Dark-breasted Barn Owl’, 496, plate 322  
Ballance, D. K., and Smith, A. J., letter on recording areas of Great Britain, 139  
Balmer, D., photograph of Barn Swallow, 6, plate 3, and Barn Swallow nest-site, 10, plate 6; review of König & Weick: *Owls of the World*, 286  
—, —, see Riddington, R., *et al.*  
*Bartramia longicauda*, see Sandpiper, Upland  
Baston, B., photograph of Purple Heron, 293, plate 153  
Batten, L., obituary of Eric Simms, 211–12, plate 120  
Baxter, P., photograph of Caspian Plover, 552, plate 363  
BB/BTO Best Bird Book of the Year 2008, 98–100  
Bee-eater, Blue-cheeked, photograph, 526, plate 353  
—, European, breeding in the United Kingdom in 2006, 189  
Bellingham, G., photographs of Wilson’s Snipe, 426, plates 233–4  
Betton, K., review of Skåne’s Ornithological Society: *A Guide to Birdwatching in Skåne, Southern Sweden*, 38; of Watson & Moss: *Grouse*, 147; of Yalden & Albarella: *The History of British Birds*, 284–5; review of Couzens: *Extreme Birds*, 286; of van Perlo: *Field Guide to the Birds of Eastern Africa*, 412; of Hayman & Hume: *The Birdwatcher’s Pocket Guide to Britain and Ireland*, 514; of Eyre: *Gilbert White’s Birds: then and now*, 516; of Harris: *National Geographic Complete Birds of the World*, 642  
Bird Photograph of the Year 2009, 441–50, plates 250–60  
Bittern, American, accepted record, 541  
—, Eurasian, photograph, 62, plate 42; breeding in the United Kingdom in 2006, 172; population status in the UK, Channel Islands and Isle of Man, 296–341; spring migration, 410–11  
—, Little, accepted records, 541–2  
Blackbird, eating fuschia seeds, 144; population status in the UK, Channel Islands and Isle of Man, 296–341; unusual breeding behaviour, 636–7  
Blackcap, eating fuschia fruits, 144; population status in the UK, Channel Islands and Isle of Man, 296–341  
Blake, N., photograph of Black Lark, 462, plate 275; of Barn Owl, 501, plates 335–6  
Blamire, S., photograph of Great Snipe, 445, plate 253  
Bloomfield, A., letter on Black Brants and the problem of intergrades, 213  
Bluetail, Red-flanked, photographs, 48, 712, plates 29, 457; ageing and sexing, 482–93, plates 311–19; accepted records, 572–3, plate 375  
Blunt, A. G., letter on pronunciation of scientific names, 25–28  
Bobolink, accepted records, 590  
Bolton, M., photograph of Swinhoe’s Storm-petrel, 373, plate 192  
*Bombycilla cedrorum*, see Waxwing, Cedar  
— *garrulus*, see Waxwing  
Bonfield, M., photograph of Common Nighthawk, 567, plate 371  
Booth, A., photograph of Booted Warbler, 691, plate 397  
*Botaurus lentiginosus*, see Bittern, American  
— *stellaris*, see Bittern, Eurasian  
Bourne, W. R. P., letter on the distribution of Bulwer’s Petrel, 101; a procession by a Common Snipe and its chicks, 218; letter on the Cape Verde Warbler on Fogo, 403; Green Woodpecker using a natural tree hole as a nest chamber, 636  
Bowen, G. J., see Votier, S., *et al.*  
Boyer, P., photograph of Brown Shrike, 587, plate 385  
*Brachyramphus perdix*, see Murrelet, Long-billed  
Bradshaw, C., photograph of Two-barred Crossbill, 50, plate 35; photograph of Swinhoe’s Storm-petrel, 383, plate 200  
—, —, see Riddington, R., *et al.*  
—, —, see Rowlands, A., *et al.*  
—, C. G., review of Kirwan *et al.*: *The Birds of Turkey*, 408–9  
Brambling, population status in the UK, Channel Islands and Isle of Man, 296–341

- Bramham, G., photograph of Common Tern and Herring Gull, 448, plate 259
- Branta bernicla*, see Goose, Brent
- *canadensis*, see Goose, Greater Canada
- *leucopsis*, see Goose, Barnacle
- *ruficollis*, see Goose, Red-breasted
- Breaks, M., photograph of Calandra Lark, 569, plate 373; of Pallas's Grasshopper Warbler, 577, plate 379; of Brown Flycatcher, 586, plate 384
- Breeding: Hen Harrier, 468; Corn Crake, 217, plate 121; Greenshank, 201–10, plates 112–19; Green Woodpecker, 636; Great Spotted Woodpecker, 143, 282, plate 99; Red-rumped Swallow, 218–19; Blackbird, 636–7; Cape Verde Warbler, 17–24, plates 1–16; Blue Tit and Willow Tit, 468–9; Willow Tit, 145–6, plates 100–1; Common Raven, 638
- Breider, J.-M., photograph of 'Ehrenberg's Redstart', 92, plate 65
- Bretagnolle, V., photographs of Swinhoe's Storm-petrel, 382, plates 198–9
- Britton, D., letter on Wilson's Storm-petrels seen from mainland Britain, 403–4
- Brookes, R., photograph of Subalpine Warbler, 422, plate 231; of Citrine Wagtail, 654, plate 420
- Broughton, R. K., separation of Willow Tit and Marsh Tit in Britain: a review, 604–16, plates 394–6
- Brovad, G., photograph of Leach's Storm-petrel, 370, plate 188
- Brown, A. F., see Eaton, M. A., *et al.*
- BTO research update, 504–5; 700–2, plates 449–50
- Bubo scandiacus*, see Owl, Snowy
- Bubulcus ibis*, see Egret, Cattle
- Bucanetes githagineus*, see Finch, Trumpeter
- Bucephala clangula*, see Goldeneye, Common
- Bullfinch, population status in the UK, Channel Islands and Isle of Man, 296–341, plate 161
- Bulweria bulwerii*, see Petrel, Bulwer's
- Bundy, G., unusually large assembly of Hoopoes, 635–6
- Bunting, Black-headed, accepted records, 595
- , Cirl, breeding in the United Kingdom in 2006, 200; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Corn, population status in the UK, Channel Islands and Isle of Man, 296–341, plate 167
- , Cretzschmar's, accepted record, 594–5, plate 393
- , Lapland, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Reed, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Snow, breeding in the United Kingdom in 2006, 200; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Yellow-breasted, accepted records, 595
- Burhinus oedicephalus*, see Stone-curlew
- Burton, J. A., letter on language and ornithology, 278
- Bustard, Macqueen's, photographs, 452, 457, plates 261, 271
- Buteo buteo*, see Buzzard, Common
- Butorides striatus*, see Heron, Green-backed
- Buzzard, Common, social behaviour, 247–73, plates 132–41; population status in the UK, Channel Islands and Isle of Man, 296–341; playing with plastic bag, 354
- Cairiua moschata*, see Duck, Muscovy
- Calcarius lapponicus*, see Bunting, Lapland
- Calidris alba*, see Sanderling
- *alpina*, see Dunlin
- *bairdii*, see Sandpiper, Baird's
- *canutus*, see Knot, Red
- *ferruginea*, see Sandpiper, Curlew
- *himantopus*, see Sandpiper, Stilt
- *maritima*, see Sandpiper, Purple
- *minuta*, see Stint, Little
- *minutilla*, see Sandpiper, Least
- *pusilla*, see Sandpiper, Semipalmated
- *tennini*, see Stint, Temminck's
- Calonectris diomedea*, see Shearwater, Cory's
- Cannon, A., the diet of Common Eiders at seaside resorts, 279
- Capercaillie, breeding in the United Kingdom in 2006, 168; population status in the UK, Channel Islands and Isle of Man, 296–341
- Caprimulgus europaeus*, see Nightjar, European
- *ruficollis*, see Nightjar, Red-necked
- Carduelis cabaret*, see Redpoll, Lesser
- *cannabina*, see Linnet
- *carduelis*, see Goldfinch
- *chloris*, see Greenfinch
- *flammea*, see Redpoll, Common
- *flavirostris*, see Twite
- *spiuus*, see Siskin
- Carl Zeiss Award 2009: 50 years of rarity photographs, 451–8
- Carpodacus erythrinus*, see Rosefinch, Common
- Carter, I., review of Martin: *Baru Owls in Britain: phantoms of the farmyard*, 39
- , J., photograph, of Black-bellied Dipper, 228, plate 128; of River Warbler, 480, plate 287; of Arctic Warbler, 656, plate 424; of Zitting Cisticola, 713, plate 459
- Catharus fuscescens*, see Veery
- *guttatus*, see Thrush, Hermit
- *minimus*, see Thrush, Grey-cheeked
- Catley, G., photographs of Barn Swallow, 5, 12, plates 2, 8; of Terek Sandpiper, 478, plate 283; of Barn Owl, 499, plates 330–1; of Red-flanked Bluetail, 712, plate 457
- Caunt, M., photograph of Hooded Merganser, 47, plate 27; of Desert Wheatear, 48, plate 31; of Collared Flycatcher, 422, plate 232; of Hooded

- Merganser, 535, plate 355
- Cecropis daurica*, see Swallow, Red-rumped
- Cepplius grylle*, see Guillemot, Black
- Certhia brachydactyla*, see Treecreeper, Short-toed
- *familiaris*, see Treecreeper, Eurasian
- Ceryle alcyon*, see Kingfisher, Belted
- Cettia cetti*, see Warbler, Cetti's
- Chaffinch, Common, population status in the UK, Channel Islands and Isle of Man, 296–341; eating seeds of Monterey Pine from grounded cones, 638
- Chandler, R., photograph of Dunlin, 300, plate 159; of Whimbrel, 305, plate 163; of Black-tailed Godwit, 308, plate 166; of Red-necked Phalarope, 321, plate 169; of Brent Goose, 321, plate 170; of Yellow Wagtail, 329, plate 171; of Dunlins, 702, plate 450; review of Delany *et al.*: *An Atlas of Wader Populations in Africa and Western Eurasia*, 639
- , —, *et al.*, Bird Photograph of the year 2009, 441–50, plates 250–60
- Chantler, P., photograph of Blue-cheeked Bee-eater, 526, plate 353
- Chapman, D., photograph of Spotted Sandpiper, 47, plate 28
- Charadrius asiaticus*, see Plover, Caspian
- *dubius*, see Plover, Little Ringed
- *hiaticula*, see Plover, Ringed
- *leschenaultii*, see Plover, Greater Sand
- *morinellus*, see Dotterel
- *vociferus*, see Killdeer
- Charman, E. C., see Lewis, A. J. G., *et al.*
- Chick, A., photograph of Alpine Swift, 294, plate 154
- Chiffchaff, Common, feeding on whirligig beetles, 219, plate 122; population status in the UK, Channel Islands and Isle of Man, 296–341; on the Greek island of Lesvos, 467
- , Iberian, breeding in the United Kingdom in 2006, 195
- Chittenden, R., see Chandler, R., *et al.*
- Chlamydotis macqueenii*, see Bustard, Macqueen's
- Chlidonias hybrida*, see Tern, Whiskered
- *niger*, see Tern, Black
- Chordeiles minor*, see Nighthawk, Common
- Chough, Red-billed, breeding in the United Kingdom in 2006, 197; population status in the UK, Channel Islands and Isle of Man, 296–341
- Christian, N., and Hancock, M. H., a 25-year study of breeding Greenshanks, 201–10, plates 112–19
- Chroicocephalus philadelphia*, see Gull, Bonaparte's
- *ridibundus*, see Gull, Black-headed
- Ciconia nigra*, see Stork, Black
- Cinclus cinclus*, see Dipper
- Circaetus gallicus*, see Eagle, Short-toed
- Circus aeruginosus*, see Harrier, Marsh
- *cyaneus*, see Harrier, Hen
- *pygargus*, see Harrier, Montagu's
- Cisticola juncidis*, see Cisticola, Zitting
- Cisticola, Zitting, accepted record, 577; photograph, 713, plate 459
- Clangula lyemalis*, see Duck, Long-tailed
- Clark, J., review of Dubois *et al.*: *Nouvel Inventaire des Oiseaux de France*, 286–7
- Cleave, A., see Flood, R. L., *et al.*
- Cleeves, T., review of Joynt *et al.*: *The Breeding Birds of Cleveland*, 149–50
- Coccothraustes coccothraustes*, see Hawfinch
- Collinson, M., review of Long & Schouten: *Feathered Dinosaurs: the origin of birds*, 220–1; of Zeigler & Marler: *Neuroscience of Birdsong*, 221; of Pennycuik: *Modelling the Flying Bird*, 285; of del Hoyo *et al.*: *Handbook of the Birds of the World, Vol. 13. Penduline-tits to Slrikes*, 407
- Columba livia*, see Dove, Rock/Pigeon, Feral
- *oenas*, see Dove, Stock
- *palumbus*, see Pigeon, Wood
- Combridge, P., review of Friend: *Southern England*, 147
- , —, and S., Lesser Crested Tern feeding at night, 37
- , —, and Wiseman, E., letter on the curious case of the disappearing storm-petrel, 213–15
- Condon, P., photographs of Yellow-nosed Albatross, 456, 539, plates 270, 358
- Conservation research news: 130–1; 348–50; 465–6; 627–8
- Conway, G., see Wotton, S., *et al.*
- , M., photograph of Willow Tit, 606, plate 394
- Cook, K., a second British record of Allen's Gallinule, 399–402, plates 222–5
- Coot, Common, population status in the UK, Channel Islands and Isle of Man, 296–341; eggs predated by Common Shelduck, 634, plate 405
- Coracias garrulus*, see Roller, European
- Cormorant, Great, population status in the UK, Channel Islands and Isle of Man, 296–341
- Corrections: 359; 418
- Corso, A., and Gustin, M., morph ratio of Eleanora's Falcon in Sicily, 216–17
- Corvus corax*, see Raven, Common
- *cornix*, see Crow, Hooded
- *corone*, see Crow, Carrion
- *frugilegus*, see Rook
- *monedula*, see Jackdaw, Western
- Cottridge, D., photographs of Naumann's Thrush, 436, plates 248–9; of Golden-winged Warbler, 460, plate 273
- Coturnix coturnix*, see Quail, Common
- Cowbird, Brown-headed, photograph, 362, plate 185
- Crake, Corn, breeding in the United Kingdom in 2006, 182; pair-bonding and nesting behaviour, 217, plate 121; population status in

- the UK, Channel Islands and Isle of Man, 296–341
- , Little, accepted record, 550
- , Spotted, breeding in the United Kingdom in 2006, 181–2; population status in the UK, Channel Islands and Isle of Man, 296–341
- Crane, Common, breeding in the United Kingdom in 2006, 182; population status in the UK, Channel Islands and Isle of Man, 296–341; photographs, 518, plates 347–8
- Crex crex*, see Crake, Corn
- Crossbill, Common, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Parrot, breeding in the United Kingdom in 2006, 198; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Scottish, breeding in the United Kingdom in 2006, 198; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Two-barred, photograph, 50, plate 35; accepted records, 590–2, plates 388–9
- Crow, Carrion, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Hooded, population status in the UK, Channel Islands and Isle of Man, 296–341
- Cubitt, M., photograph of Swinhoe's Storm-petrel, 377, plate 193
- Cuckoo, Common, population status in the UK, Channel Islands and Isle of Man, 296–341, plate 174
- Cuculus canorus*, see Cuckoo, Common
- Cunningham, M., letter on whether the flight mode of Honey-buzzard has evolved to mimic that of Common Buzzard, 630
- Curlew, Eurasian, population status in the UK, Channel Islands and Isle of Man, 296–341
- Curlew, Slender-billed, photograph, 42, plate 25
- Cyanistes caeruleus*, see Tit, Blue
- Cygnus columbianus*, see Swan, Tundra
- *cygnus*, see Swan, Whooper
- *olor*, see Swan, Mute
- Dally, A., letter on Common Chiffchaffs on the Greek island of Lesbos, 467
- Dalziel, L., photograph of Pallas's Sandgrouse, 456, plate 268
- Daniells, L., see Lewis, A. J. G.
- Day, K., photographs of Dartford Warbler, 231, 234, plates 129–30; of Glaucous Gull, winner, Bird Photograph of the Year 2009, 442, plate 250; photograph of White-crowned Sparrow, 593, plate 391; of Grey Partridge, 670, plate 436; of Rose-ringed Parakeet, 671, plate 437; of Ruddy Duck, 684, plate 442
- Dege, A., see Tigges, U., *et al.*
- Delichon urbicum*, see Martin, House
- Dempsey, E., photograph of Ivory Gull, 228, plate 127; of Common Nighthawk, 710, plate 452; of Buff-bellied Pipit, 711, plate 455
- , ——, see Nightingale, B.
- Dendrocopos major*, see Woodpecker, Great Spotted
- *minor*, see Woodpecker, Lesser Spotted
- Dendroica fusca*, see Warbler, Blackburnian
- *striata*, see Warbler, Blackpoll
- Dickson, R. C., two male Hen Harriers attending nests in Dumfries and Galloway, 468
- Dipper, photograph of 'Black-bellied Dipper', *Cinclus c. cinclus*, 228, plate 128; population status in the UK, Channel Islands and Isle of Man, 296–341; accepted record of 'Black-bellied Dipper', *Cinclus c. cinclus*, 571
- Diver, Black-throated, breeding in the United Kingdom in 2006, 170–1; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Great Northern, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Pacific, accepted records, 535–6, plate 356
- , Red-throated, breeding in the United Kingdom in 2006, 169–70, plate 109; population status in the UK, Channel Islands and Isle of Man, 296–341
- , White-billed, accepted records, 536–8, plate 357
- Doherty, P., photograph of Golden-winged Warbler, 455, plate 267
- Dolichonyx oryzivorus*, see Bobolink
- Dotterel, breeding in the United Kingdom in 2006, 184; population status in the UK, Channel Islands and Isle of Man, 296–341; photograph, 447, plate 256
- Dove, Collared, population status in the UK, Channel Islands and Isle of Man, 296–341; dark birds on St Kilda, 512, plate 344
- , Rock/Pigeon, Feral, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Stock, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Turtle, population status in the UK, Channel Islands and Isle of Man, 296–341
- Dowitcher, Long-billed, accepted records, 555–6; photograph, 652, plate 425
- Duck, Black, accepted records, 533
- , Ferruginous, photograph, 478, plate 282
- , Grey, threatened by hybridisation with non-native Mallard, 660–79, plates 432–3
- , Long-tailed, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Mandarin, as non-native species, 660–79, plate 438
- , Muscovy, as non-native species, 660–79, plate 435
- , Ruddy, as non-native species, 660–79, plate 439; progress of the UK eradication programme, 680–90, plates 441–3
- , Tufted, population status in the UK, Channel Islands and Isle of Man, 296–341

- , White-headed, threatened by non-native Ruddy Duck, 660–79, plate 431
- Duffield, S. D., photograph of Ivory Gull, 155, plate 105
- Dunlin, population status in the UK, Channel Islands and Isle of Man, 296–341, plate 159; photograph, 702, plate 450
- Dunnock, population status in the UK, Channel Islands and Isle of Man, 296–341
- Durose, K., photograph of Barn Owl, 500, plate 334; of Audouin's Gull, 560, plate 366
- Dymond, N., review of Brazil: *Field Guide to the Birds of East Asia*, 412–13
- Eagle, Golden, breeding in the United Kingdom in 2006, 176–7; population status in the UK, Channel Islands and Isle of Man, 296–341; photograph, 448, plate 258
- , Short-toed, evidence for age-dependent migration strategies, 506, plates 339–40
- , White-tailed, breeding in the United Kingdom in 2006, 174; population status in the UK, Channel Islands and Isle of Man, 296–341
- Eaton, M. A., *et al.*, Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man, 296–341, plates 157–74
- , —, see Wotton, S., *et al.*
- Edgar, D., photograph of White-billed Diver, 537, plate 357
- Editorial: 2; 364; 424
- Edwards, R., Common Shelduck predating eggs of Common Coot, 634, plate 405
- Egret, Cattle, photographs, 107, 154, 524, plates 75, 102–3, 350; accepted records, 543–6, plate 360
- , Little, photograph, 154, plate 103; breeding in the United Kingdom in 2006, 172–3; eating Brown Rat/vole, 280, 418, plates 144–7; population status in the UK, Channel Islands and Isle of Man, 296–341
- Egretta garzetta*, see Egret, Little
- Eider, Common, diet at seaside resorts, 279; population status in the UK, Channel Islands and Isle of Man, 296–341
- , King, accepted records, 534–5
- Elphick, J., review of Mynott: *Birdscapes: birds in our imagination and experience*, 414
- Elwell, E. R., photograph of Eric Simms, 211
- Emberiza aureola*, see Bunting, Yellow-breasted
- *caesia*, see Bunting, Cretzschmar's
- *calandra*, see Bunting, Corn
- *cirlus*, see Bunting, Cirl
- *citrinella*, see Yellowhammer
- *melanocephala*, see Bunting, Black-headed
- *schoeniclus*, see Bunting, Reed
- Enchev, E., photograph of Golden Eagle, 448, plate 258
- Eremophila alpestris*, see Lark, Shore
- Erithacus rubecula*, see Robin
- Evans, A., see Eaton, M. A., *et al.*
- Everett, M., review of Tudge: *Consider the Birds: who they are and what they do*, 220
- Fagel, P., photograph of 'Ehrenberg's Redstart', 89, plate 62; of Common Redstart, 89, plate 63
- Falco columbarius*, see Merlin
- *eleonora*, see Falcon, Eleonora's
- *peregrinus*, see Falcon, Peregrine
- *rusticolus*, see Falcon, Gyr
- *subbuteo*, see Hobby
- *tinnunculus*, see Kestrel, Common
- Falcon, Eleonora's, morph ratio in Sicily, 216–17; accepted record, 549, plate 361
- , Gyr, photographs, 227, 456, plates 125, 269; accepted records, 549
- , Peregrine, breeding in the United Kingdom in 2006, 179–80; population status in the UK, Channel Islands and Isle of Man, 296–341; robbing Hobby of prey, 406; more kleptoparasitism, 511
- Farias, M. A. S., photographs of Allen's Gallinule, 402, plates 224–5
- Fellows, E., photograph of House Sparrow, 447, plate 257
- Ficedula albicilla*, see Flycatcher, Taiga
- *albicollis*, see Flycatcher, Collared
- *hypoleuca*, see Flycatcher, Pied
- Field characters: Black Brant, 213; hybrid *Aythya*, 31–32, plate 17; Common and Black Scoter, 32–34, plates 18–21; *Oceanodroma* storm-petrels, 365–85, plates 186–210; Wilson's Snipe, 425–34, plates 233–47; Collared Dove, 512, plate 344; 'Dark-breasted Barn Owl', 494–503, plates 320–8; Citrine Wagtail and Yellow Wagtail, 34–35, plate 22; Siberian Rubythroat, Siberian Blue Robin, Rufous-tailed Robin and Red-flanked Bluetail, 482–93, plates 290–319; 'Ehrenberg's Redstart', 84–97, plates 55–72; Long-tailed Tit, 637; Willow Tit and Marsh Tit, 604–16, plates 394–6
- Fieldfare, breeding in the United Kingdom in 2006, 191–2; population status in the UK, Channel Islands and Isle of Man, 296–341
- Finch, Trumpeter, accepted records, 592, plate 390
- Firecrest, breeding in the United Kingdom in 2006, 195–6; population status in the UK, Channel Islands and Isle of Man, 296–341
- Fisher, A., see Flood, R. L., *et al.*
- , I., photograph of Lesser Grey Shrike, 588, plate 386; of Eastern Crowned Warbler, 714, plate 461
- , —, and Ahmed, R., identification of Citrine and Yellow Wagtails – a possible identification pitfall, 34–35, plate 22
- Fitzgerald, N., photograph of Grey Duck, 667, plate 432

- Flood, R. L., photograph of Cattle Egret, 154, plate 104; 'all-dark' *Oceanodroma* storm-petrels in the Atlantic and neighbouring seas, 365–85, plates 186–210
- , —, *et al.*, European Storm-petrels diving for food, 352–3, plates 177–80
- Flycatcher, Brown, accepted records, 585–6, plate 384
- , Collared, photographs, 362, 422, plates 184, 232
- , Pied, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Spotted, photograph, 139, plate 94; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Taiga, photograph, 657, plate 425
- Food and feeding behaviour: Common Shelduck, 634, plate 405; Common Eider, 279; Goosander, 279, 509–10, plates 341–2; European Storm-petrel, 352–3, plates 177–80; Little Egret, 280, plates 144–7; Grey Heron, 279–80; Eurasian Sparrowhawk, 405; Osprey, 36, 405, plates 23–24; Peregrine Falcon, 406, 511; Stone-curlew, 511–12, plate 343; Whiskered Tern, 37; Lesser Crested Tern, 37; Common Kingfisher, 281–2, plates 148–9; Blackbird, 144; Mistle Thrush, 283; Blackcap, 144; Common Chiffchaff, 219, plate 122; Blue Tit and Great Tit, 145; Great Tit, 637; Eurasian Jay, 219; Magpie, 469; Common Starling, 406; Common Chaffinch, 638
- Fox, A. D., what makes a good alien? Dealing with the problems of non-native wildfowl, 660–79, plates 429–40
- Fratercula arctica*, see Puffin
- French, P. R., identification of 'Dark-breasted Barn Owl' in Britain, 494–503, plates 320–8
- Fringilla coelebs*, see Chaffinch, Common
- *montifringilla*, see Brambling
- From the Rarities Committee's files: the identification of male 'Ehrenberg's Redstart' with comments on British claims, 84–97, plates 55–72; an unusual Common Stonechat, 137–8, plates 92–93; identification of Wilson's Snipe and assessment of the first British record, 425–34, plates 233–47; identification of 'Dark-breasted Barn Owl' in Britain, 494–503, plates 320–8; the Green Farm Booted Warbler, 617–21, plates 397–9; the history of Sykes's Warbler in Britain, 622–6, plate 400
- Fuchs, E., see Hering, J.
- Fulica atra*, see Coot, Common
- Fuller, R. J., see Ausden, M.
- Fulmar, population status in the UK, Channel Islands and Isle of Man, 296–341
- Fulmarus glacialis*, see Fulmar
- Gadwall, breeding in the United Kingdom in 2006, 164–5; population status in the UK, Channel Islands and Isle of Man, 296–341
- Galerida cristata*, see Lark, Crested
- Gallinago delicata*, see Snipe, Wilson's
- *gallinago*, see Snipe, Common
- *media*, see Snipe, Great
- Gallinula chloropus*, see Moorhen
- Gallinule, Allen's, second British record, 399–402, plates 222–5
- , American Purple, accepted record, 550
- Gannet, Northern, population status in the UK, Channel Islands and Isle of Man, 296–341
- Gantlett, S., photograph of Common Redstart, 95, plate 69; of Hooded Merganser, 123, plates 85–86
- Garcia, E., letter on language and ornithology, 278
- Garganey, breeding in the United Kingdom in 2006, 165–6; population status in the UK, Channel Islands and Isle of Man, 296–341
- Garrulus glandarius*, see Jay, Eurasian
- Gauntlett, F. M., review of Keene: *European Bird Names: a translation guide*, 287
- Gavia adamsii*, see Diver, White-billed
- *arctica*, see Diver, Black-throated
- *inmer*, see Diver, Great Northern
- *pacifica*, see Diver, Pacific
- *stellata*, see Diver, Red-throated
- Gelochelidon nilotica*, see Tern, Gull-billed
- Gibbons, D. W., see Eaton, M. A., *et al.*
- Gladwin, T., and J., Mistle Thrushes preying on flying insects, 282
- Glareola nordmanni*, see Pratincole, Black-winged
- *pratincola*, see Pratincole, Collared
- Godwit, Bar-tailed, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Black-tailed, breeding in the United Kingdom in 2006, 185 population status in the UK, Channel Islands and Isle of Man, 296–341, plate 166
- Goldcrest, population status in the UK, Channel Islands and Isle of Man, 296–341
- Goldeneye, Common, breeding in the United Kingdom in 2006, 167–8; population status in the UK, Channel Islands and Isle of Man, 296–341
- Goldfinch, population status in the UK, Channel Islands and Isle of Man, 296–341
- Gomersall, C., photograph of Slender-billed Curlew, 42, plate 25; of Stone-curlew, 317, plate 168; of Wood Lark, 332, plate 172; of Redwing, 333, plate 173; of Common Crane, 518, plates 347–8
- Goodey, M., photograph of Booted Warbler, 691, plate 399
- Goosander, approaching close to humans and feeding on bread, 279; population status in the UK, Channel Islands and Isle of Man, 296–341; taking bread, 509–10, plates 341–2
- Goose, Barnacle, population status in the UK,

- Channel Islands and Isle of Man, 296–341
- , Bean, population status in the UK, Channel Islands and Isle of Man, 296–341
  - , Brent, photograph of ‘Black Brant’ *B. b. nigricans*, 106, plate 73; letter on ‘Black Brants’ and the problem of intergrades, 213; population status in the UK, Channel Islands and Isle of Man, 296–341, plate 170
  - , Egyptian, as non-native species, 660–79, plate 429
  - , Greater Canada, as non-native species, 660–79, plate 434
  - , Greylag, photograph, 46, plate 26; population status in the UK, Channel Islands and Isle of Man, 296–341; as non-native species, 660–79, plate 430
  - , Pink-footed, population status in the UK, Channel Islands and Isle of Man, 296–341
  - , Red-breasted, accepted records, 532–3
  - , Snow, photograph, 46, plate 26
  - , White-fronted, population status in the UK, Channel Islands and Isle of Man, 296–341
- Gordon, P., photograph of Eastern Olivaceous Warbler, 581, plate 381
- Goshawk, Northern, breeding in the United Kingdom in 2006, 176; population status in the UK, Channel Islands and Isle of Man, 296–341
- Gosler, A., see Riddington, R., *et al.*
- Grady, C., photograph of Hawfinch, 153, plate 102
- Graham, J., Corn Crake pair-bonding and nesting behaviour, 217, plate 121
- Grebe, Black-necked, breeding in the United Kingdom in 2006, 171–2; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Great Crested, population status in the UK, Channel Islands and Isle of Man, 296–341; caught by Osprey, 405
  - , Little, population status in the UK, Channel Islands and Isle of Man, 296–341
  - , Red-necked, breeding in the United Kingdom in 2006, 171; population status in the UK, Channel Islands and Isle of Man, 296–341
  - , Slavonian, breeding in the United Kingdom in 2006, 171; population status in the UK, Channel Islands and Isle of Man, 296–341
- Greenfinch, population status in the UK, Channel Islands and Isle of Man, 296–341
- Greenshank, Common, breeding in the United Kingdom in 2006, 186; a 25-year breeding study, 201–10, plates 112–19; population status in the UK, Channel Islands and Isle of Man, 296–341
- Gregory, L., photograph of Sandhill Crane, 650, plate 413
- , R. D., see Eaton, M. A., *et al.*
- Grice, P., see Wotton, S., *et al.*
- Grouse, Black, photograph, 61, plate 41; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Willow/Red, population status in the UK, Channel Islands and Isle of Man, 296–341
- Gruar, D. J., evidence of interspecific egg-dumping between tit species, 468–9
- Grus grus*, see Crane, Common
- Guillemot, Black, photograph, 56, plate 39; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Common, population status in the UK, Channel Islands and Isle of Man, 296–341; photograph, 449, plate 260
- Gull, American Herring, in Cheshire & Wirral: new to Britain, 342–7, plates 175–6; accepted records, 560
- , Audouin’s, accepted records, 559–60, plate 366
  - , Black-headed, population status in the UK, Channel Islands and Isle of Man, 296–341
  - , Bonaparte’s, accepted records, 563
  - , Common, population status in the UK, Channel Islands and Isle of Man, 296–341
  - , Franklin’s, photograph, 360, plate 181; accepted records, 559
  - , Glaucous, population status in the UK, Channel Islands and Isle of Man, 296–341; photograph, 442, plate 250
  - , Glaucous-winged, photographs, 108, plates 76, 77; accepted records, 560–1, plate 367
  - , Great Black-backed, killing rival and stealing mate, 218; population status in the UK, Channel Islands and Isle of Man, 296–341
  - , Great Black-headed, social and communication behaviour, 72–83, plates 47–54
  - , Herring, population status in the UK, Channel Islands and Isle of Man, 296–341; photograph, 448, plate 259
  - , Iceland, photographs of ‘Kumlien’s Gull’ *L. g. kumlieni*, 227, 471, plates 126, 279–80; population status in the UK, Channel Islands and Isle of Man, 296–341
  - , Ivory, photographs, 108, 155, 228, plates 78, 105, 127; accepted record, 564
  - , Laughing, photograph, 421, plate 229; accepted records, 558
  - , Lesser Black-backed, population status in the UK, Channel Islands and Isle of Man, 296–341
  - , Little, population status in the UK, Channel Islands and Isle of Man, 296–341
  - , Mediterranean, breeding in the United Kingdom in 2006, 186–8, plates 110–11; population status in the UK, Channel Islands and Isle of Man, 296–341; in Hampshire, 635
  - , Ross’s, accepted records, 562–3, plate 368
  - , Yellow-legged, breeding in the United

- Kingdom in 2006, 188; population status in the UK, Channel Islands and Isle of Man, 296–341
- Gustin, M., see Agostini, N., *et al.*
- , ——, see Corso, A.
- Hackett, P., photograph of Glaucous-winged Gull, 108, plate 76; of Collared Flycatcher, 362, plate 184
- Haematopus meadewaldoi*, see Oystercatcher, Canary Islands
- *ostralegus*, see Oystercatcher, Eurasian
- Haitjema, T., letter on Blyth's Reed Warbler in Estonia, 30
- Haliaeetus albicilla*, see Eagle, White-tailed
- Hall, B., photograph of Common Pochard, 307, plate 165
- , J., photograph of Booted Warbler, 691, plate 398
- Hallam, N., photograph of 'American Black Tern', 652, plate 416
- Hamblin, M., photograph of Common Cuckoo, 338, plate 174; of Barn Swallow, 445, plate 254; of Dotterel, 447, plate 256
- Hancock, M. H., see Christian, N.
- Hancox, M., photographs of Marsh Tit, 606, 616, plates 395–6
- Hanlon, J., photograph of Pallid Harrier, 650, plate 412
- Harrap, S., review of Mann: *The Birds of Borneo*, 514–15
- Harrier, Hen, breeding in the United Kingdom in 2006, 175; population status in the UK, Channel Islands and Isle of Man, 296–341; two males attending nests in Dumfries and Galloway, 468
- , Marsh, breeding in the United Kingdom in 2006, 174; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Montagu's, breeding in the United Kingdom in 2006, 175–6; population status in the UK, Channel Islands and Isle of Man, 296–341
- Harris, A., review of Waters: *Archibald Thorburn, Artist and Illustrator*, 515–16
- Harrop, A. H. J., and McGowan, R. J., Britain's first Baikal Teal, 691–6, plates 444–8
- , H., photograph of Hume's Warbler, 49, plate 33; of Black Grouse, 61, plate 41; of Common Redstart, 96, plate 70; of Red-throated Diver, 169, plate 109; of Alpine Accentor, 290, plate 152; of Laughing Gull, 421, plate 229; of Lesser Grey Shrike, 526, plate 354; of Paddyfield Warbler, 579, plate 380; of Sykes's Warbler, 581–2, plates 382–3; of Booted Warbler, 582, plate 383; of Pechora Pipit, 653, plate 418; of Western Bonelli's Warbler, 715, plate 463
- Hart, M., photographs of 'Dark-breasted Barn Owl', 498, plates 327–9
- Harvey, P., review of Birkhead: *The Wisdom of Birds: an illustrated history of ornithology*, 148–9; of Couzens: *Top 100 Birding Sites of the World*, 221; of Slack: *Rare Birds Where and When, Vol. 1: Sandgrouse to New World Orioles*, 703–4;
- Hatton, D. H., review of Rouco: *A Close Up Look: approaching nature through digiscoping*, 471–2, plates 279–80; photograph of 'Kumlien's Gull', 471, plate 280
- Hawfinch, photograph, 153, plate 102; breeding in the United Kingdom in 2006, 198–9; population status in the UK, Channel Islands and Isle of Man, 296–341
- Hays, L., photograph of Black Scoter, 33, plate 20
- Hazell, J., photograph of Cattle Egret, 546, plate 360
- Hearn, P., see Riddington, R., *et al.*
- , R. D., see Eaton, M. A., *et al.*
- Hellquist, A., difference in shape of bill-base feathering between Common and Black Scoters in non-adult-male plumage, 32–34, plates 18–21
- Hellström, M., letter on the recent status of Blyth's Pipit in southern Siberia, 631–3, plates 403–4
- Henderson, I., progress of the UK Ruddy Duck eradication programme, 680–90, plates 441–3
- , ——, see Wotton, S., *et al.*
- Hering, J., and Fuchs, E., the Cape Verde Warbler: distribution, density, habitat and breeding biology on the island of Fogo, 17–24, plates 11–16
- Hernández, J. J., see Siverio, F., *et al.*
- Heron, Green-backed, accepted record, 542–3, plate 359
- , Grey, foraging behaviour, 279–80; photograph, 282, plate 150; population status in the UK, Channel Islands and Isle of Man, 296–341; Common Raven nesting in colony, 638
- , Night, photograph, 107, plate 74
- , Purple, photographs, 65, 293, plates 44, 153
- , Squacco, photograph, 419, plate 226; accepted record, 543
- Himantopus himantopus*, see Stilt, Black-winged
- Hinton, S., photograph of Whiskered Tern, 565, plate 370
- Hippolais caligata*, see Warbler, Booted
- *opaca*, see Warbler, Western Olivaceous
- *pallida*, see Warbler, Eastern Olivaceous
- *rama*, see Warbler, Sykes's
- Hirundapus caudacutus*, see Needletail, White-throated
- Hirundo rustica*, see Swallow, Barn
- Hobby, breeding in the United Kingdom in 2006, 178–9; population status in the UK, Channel Islands and Isle of Man, 296–341; robbed of its prey by Peregrine Falcon, 406; photograph, 443, plate 252

- Holling, M., and the Rare Breeding Birds Panel, rare breeding birds in the United Kingdom in 2006, 158–202, plates 109–11
- Honey-buzzard, breeding in the United Kingdom in 2006, 173; population status in the UK, Channel Islands and Isle of Man, 296–341; has flight mode evolved to mimic that of Common Buzzard?, 630
- Hoopoe, unusually large assembly, 635–6
- Hosking, D., see Chandler, R., *et al.*
- , E., photographs of Macqueen's Bustard, winner, Carl Zeiss Award 2009, 452, 457, plates 261, 271
- Hudson, D., photograph of British Birds Rarities Committee 2009, 274, plate 142
- , N., and the Rarities Committee, report on rare birds in Britain in 2008, 528–601, plates 355–93
- Hunt, D., photograph of Common Nighthawk, 454, plate 263; of Yellow-bellied Sapsucker, 454, plate 264
- Hutton, D., photograph of Common Redstart, 94, plate 67
- Hydroprogne caspia*, see Tern, Caspian
- Hydrobates pelagicus*, see Storm-petrel, European
- Hydrocoloeus minutus*, see Gull, Little
- Ibis, Glossy, accepted records, 548–9; photograph, 649, plate 411
- Irvine, A., photograph of Gyr Falcon, 456, plate 269
- Ixobrychus minutus*, see Bittern, Little
- Jackdaw, Western, population status in the UK, Channel Islands and Isle of Man, 296–341
- Jay, Eurasian, taking peanuts in flight, 146; catching a Blue Tit in mid-air, 219; population status in the UK, Channel Islands and Isle of Man, 296–341
- Jensen, S. E., photograph of Common Scoter, 32, plate 18
- Jerem, P., Common Buzzard attempting to kill Tawny Owl, 634–5, plates 406–7
- Jones, T., mock-feeding by Common Starlings to facilitate kleptoparasitism, 406
- Joynes, K., photograph of Glossy Ibis, 700, plate 449
- Junco, Dark-eyed, photograph, 50, plate 36; accepted records, 594, plate 392
- Junco hyemalis*, see Junco, Dark-eyed
- Jyrix torquilla*, see Wryneck
- Kennerley, J., photograph of Pacific Golden Plover, 525, plate 351; of Pied Wheatear, 713, plate 458
- , P. R., photograph of 'Ehrenberg's Redstart', 93, plate 66; of Siberian Blue Robin, 488, plate 304; review of Grimmett *et al.*: *Birds of Pakistan*, 473
- , —, see Chandler, R., *et al.*
- Kersbergen, M., photographs of Swinhoe's Storm-petrel, 384, plates 203–4
- Kestrel, Common, population status in the UK, Channel Islands and Isle of Man, 296–341; photograph, 645, plate 408
- Khande, N., photograph of Common Redstart, 95, plate 68
- Kilgour, R., photograph of Night Heron, 107, plate 74; of Common Rosefinch, 480, plate 289
- Killdeer, accepted records, 551
- King, S. S., Peregrine Falcon robbing Hobby of prey, 406
- Kingfisher, Belted, photograph, 464, plate 278
- , Common, taking Great Crested Newts, 281–2, plates 148–9; population status in the UK, Channel Islands and Isle of Man, 296–341
- Kirwan, G. M., review of Sigrist: *Aves do Brasil Oriental/Birds of Eastern Brazil*, 40; review of Sigrist: *Aves da Amazônia Brasileira/Birds of Amazonian Brazil*, 355; of Forshaw: *Trogon: a natural history of the Trogonidae*, 517; of Haynes-Sutton *et al.*: *A Photographic Guide to the Birds of Jamaica*, 640–1
- Kite, Black, breeding in the United Kingdom in 2006, 173
- , Red, breeding in the United Kingdom in 2006, 173–4; population status in the UK, Channel Islands and Isle of Man, 296–341, plate 162
- Kittiwake, population status in the UK, Channel Islands and Isle of Man, 296–341
- Klee, C., see Prytherch, R. J., *et al.*
- Knass, G., photograph of Swinhoe's Storm-petrel, 385, plate 208
- Knights, C., photograph of Stone-curlew, 54, plate 37; of Eurasian Bittern, 62, plate 42
- Knot, Red, population status in the UK, Channel Islands and Isle of Man, 296–341
- Kramer, D., Green Woodpecker drumming on metal plate surrounding nestbox entrance, 142, plates 97–98
- Lagopus lagopus*, see Grouse, Willow/Red
- *muta*, see Ptarmigan
- Land, D., photograph of Sardinian Warbler, 49, plate 32
- Lane, M., photograph of White-headed Duck, 665, plate 431; of Greater Canada Goose, 668, plate 434; of Ruddy Duck, 674, plate 439; of White-headed Duck, 681, plate 441
- Lanius collurio*, see Shrike, Red-backed
- *cristatus*, see Shrike, Brown
- *meridionalis*, see Shrike, Southern Grey
- *minor*, see Shrike, Lesser Grey
- *senator*, see Shrike, Woodchat
- Lapwing, Northern, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Sociable, accepted record, 553, plate 364

- Lark, Black, photograph, 462, plate 275; accepted record, 569, plate 374
- , Calandra, accepted record, 569, plate 373
- , Crested, photograph, 361, plate 183
- , Shore, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Sky, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Wood, breeding in the United Kingdom in 2006, 190–1; population status in the UK, Channel Islands and Isle of Man, 296–341, plate 172
- Larkin, P., hybrid *Aythya* showing features of Redhead, 31–32, plate 17
- Larus argentatus*, see Gull, Herring
- *atricilla*, see Gull, Laughing
- *audouinii*, see Gull, Audouin's
- *canus*, see Gull, Common
- *fuscus*, see Gull, Lesser Black-backed
- *glaucescens*, see Gull, Glaucous-winged
- *glaucoides*, see Gull, Iceland
- *hyperboreus*, see Gull, Glaucous
- *ichthyaetus*, see Gull, Great Black-headed
- *marinus*, see Gull, Great Black-backed
- *melanocephalus*, see Gull, Mediterranean
- *michahellis*, see Gull, Yellow-legged
- *pipixcan*, see Gull, Franklin's
- *smithsonianus*, see Gull, American Herring
- Laughton, R., photograph of Dark-eyed Junco, 50, plate 36; of Cattle and Little Egrets, 154, plate 103; of Penduline Tit, 294, plate 155; of Dark-eyed Junco, 594, plate 392
- Lawrence, M., photograph of Common Redstart, 86, plate 57; of Black Lark, 569, plate 374; of Trumpeter Finch, 592, plate 390
- Laybourne, S., Mistle Thrushes defending holly tree in Caithness, 283
- Leach, I., photograph of 'Steppe Grey Shrike', 49, plate 34; of Lesser Grey Shrike, 480, plate 288; of Ross's Gull, 562, plate 368; of 'Steppe Grey Shrike', 589, plate 387
- Leader, P. J., ageing and sexing of Asian chats: Siberian Rubythroat, Siberian Blue Robin, Rufous-tailed Robin and Red-flanked Bluetail, 482–93, plates 290–319
- Leask, L., Common Buzzard playing with plastic bag, 354
- Lees, J., photograph of American Wigeon, 226, plate 124
- Leisler, B., see Salewski, V., *et al.*
- Lewington, I., photographs of Red-necked Nightjar, 112, plates 80–81; of Common Snipe, 430, plates 238–9; of Wilson's Snipe, 430, plates 240–1
- Lewis, A. J. G., and Daniels, L., second excavation causes Willow Tit nest failure, 145–6, plates 100–1
- , ——, *et al.*, the decline of the Willow Tit in Britain, 386–93, plates 211–19
- , I., letter on Nightjars at sea, 630–1, plates 401–2
- Lidster, J. A., photograph of Richard Porter, 276, plate 143; the Green Farm Booted Warbler, 617–21, plates 397–9
- Lilley, H. A., Magpie taking adult Common Swift, 469
- Limicola falcinellus*, see Sandpiper, Broad-billed
- Limnodromus scolopaceus*, see Dowitcher, Long-billed
- Limosa lapponica*, see Godwit, Bar-tailed
- *limosa*, see Godwit, Black-tailed
- Linnet, population status in the UK, Channel Islands and Isle of Man, 296–341
- Liuzzi, C., see Agostini, N., *et al.*
- Locustella certhiola*, see Warbler, Pallas's Grasshopper
- *fluviatilis*, see Warbler, River
- *lanceolata*, see Warbler, Lanceolated
- *huscinioides*, see Warbler, Savi's
- *naevia*, see Warbler, Grasshopper
- Looking back: 30; 278; 626; 633
- Lophodytes cucullatus*, see Merganser, Hooded
- Lophophanes cristatus*, see Tit, Crested
- Loseby, T., photograph of the Golden-winged Warbler 'twitch', 463, plate 277
- Loxia curvirostra*, see Crossbill, Common
- *leucoptera*, see Crossbill, Two-barred
- *pytyopsittacus*, see Crossbill, Parrot
- *scotica*, see Crossbill, Scottish
- Lullula arborea*, see Lark, Wood
- Lunda cirrhata*, see Puffin, Tufted
- Luscinia calliope*, see Rubythroat, Siberian
- *cyane*, see Robin, Siberian Blue
- *huscinia*, see Nightingale, Thrush
- *megarhynchos*, see Nightingale, Common
- *sibilans*, see Robin, Rufous-tailed
- Lymnocyptes minimus*, see Snipe, Jack
- Madden, B., Blackcaps eating fuschia fruits, 144
- Magpie, population status in the UK, Channel Islands and Isle of Man, 296–341; taking adult Common Swift, 469
- Maher, M., photograph of Blackpoll Warbler, 716, plate 465
- Mallard, population status in the UK, Channel Islands and Isle of Man, 296–341; as non-native species and hybridisation concerns, 660–679, plate 440
- Malloy, J., photograph of Snow Goose with Greylag Geese, 46, plate 26; of Black-winged Pratincole, 420, plate 231; of Greater Sand Plover, 551, plate 362
- Marchant, J., see Riddington, R., *et al.*
- Marshall, T., photograph of Ptarmigan, 298, plate 158; of Corn Bunting, 311, plate 167
- Martin, Crag, accepted record, 569
- , House, population status in the UK, Channel Islands and Isle of Man, 296–341

- , Sand, population status in the UK, Channel Islands and Isle of Man, 296–341
- Mascia, F., Red-rumped Swallow nesting in sea cave, 218–19
- Mason, S. M., Great Tits attacking young rat, 145
- Massa, B., a newly discovered colony of European Storm-petrels in Italy, 353–4
- Matias, R., photograph of Swinhoe's Storm-petrel, 385, plate 210
- Matthes, H., see Tigges, U., *et al.*
- McCabe, E., photographs of Mediterranean Gull, 187, plates 110–11
- McElroy, G., photograph of Black Scoter, 34, plate 21
- McElwee, S., photograph of Glaucous-winged Gull, 108, 561, plates 77, 367
- McGeehan, A., photograph of Cedar Waxwing, 712, plate 456
- McGowan, R. Y., see Harrop, A. H. J.
- McKee, M., photograph of Gull-billed Tern, 564, plate 369; of Lanceolated Warbler, 714, plate 460
- McMinn, M., photograph of Swinhoe's Storm-petrel, 383, plate 201
- Melanitta americana*, see Scoter, Black
- *fusca*, see Scoter, Velvet
- *nigra*, see Scoter, Common
- Melanocorypha calandra*, see Lark, Calandra
- *yeltoniensis*, see Lark, Black
- Melling, T., should Red-necked Nightjar be on the British List?, 110–15, plates 79–81
- Mellone, U., see Agostini, N., *et al.*
- Menzie, S., photograph of European Serin, 156, plate 108
- Merganser, Hooded, photograph, 47, plate 27; in North Uist: a return to the British List, 122–9, plates 85–88; accepted records, 535, plate 355
- , Red-breasted, population status in the UK, Channel Islands and Isle of Man, 296–341
- Mergellus albellus*, see Smew
- Mergus merganser*, see Goosander
- *serrator*, see Merganser, Red-breasted
- Merlin, breeding in the United Kingdom in 2006, 177–8; population status in the UK, Channel Islands and Isle of Man, 296–341
- Merops apiaster*, see Bee-eater, European
- *persicus*, see Bee-eater, Blue-checked
- Miles, W., dark Collared Doves on St Kilda, 512, plate 344; photograph of Blackburnian Warbler, 658, plate 427
- Milvus migrans*, see Kite, Black
- *milvus*, see Kite, Red
- Minton, S., photograph of Buff-bellied Pipit, 654, plate 419
- Molothrus ater*, see Cowbird, Brown-headed
- Moorhen, photograph, 282, plate 151; population status in the UK, Channel Islands and Isle of Man, 296–341
- Morris, D., photograph of Willow Tit nest-site, 146, plate 100
- Morus bassanus*, see Gannet, Northern
- Motacilla alba*, see Wagtail, White/Pied
- *cinerea*, see Wagtail, Grey
- *citreola*, see Wagtail, Citrine
- *flava*, see Wagtail, Yellow
- Mugridge, P., photograph of Common Guillemot, 449, plate 260
- Murray, K., Naumann's Thrush in Essex: new to Britain, 435–40, plates 248–9
- Murrelet, Long-billed, photograph, 473, plate 276
- Muscicapa dauurica*, see Flycatcher, Brown
- *striata*, see Flycatcher, Spotted
- Musgrove, A. J., see Eaton, M. A., *et al.*
- Nason, R., photograph of Black Guillemot, 56, plate 39; of Arctic Skua, 301, plate 160; of White's Thrush, 575, plate 376; of Blue-winged Teal, 648, plate 409; of Blyth's Reed Warbler, 656, plate 423; of Greylag Goose, 662, plate 430; of Mallard, 679, plate 440
- Neave, R., photograph of Eleonora's Falcon, 549, plate 361
- Needletail, White-throated, photograph, 455, plate 266
- Ness, J. K., photograph of Citrine Wagtail, 35, plate 22
- New to Britain: Hooded Merganser, 122–9, plates 85–8; American Herring Gull, 342–7, plates 175–6; Naumann's Thrush, 435–40, plates 248–9; Sykes's Warbler, 622–6, plate 400
- Newell, D., obituary of Bob Scott, 396–8, plate 221
- News and comment: 42–45, plate 25; 101–5; 151–3, plate 102; 222–5, plate 123; 289–92, plate 152; 357–9; 415–18; 474–7, plate 281; 518–23, plates 347–9; 643–6, plate 408; 706–8
- Newton, I., review of Vaughan: *Wings and Rings: a history of bird migration studies in Europe*, 410–11
- , J., see Votier, S., *et al.*
- NHM collection, photograph of David and Barbara Snow, 394, plate 220
- Nichols, P., review of Doherty: *Birdwatching in Norfolk* (DVD), 40
- Nicolson, J., photograph of Franklin's Gull, 360, plate 181
- Nighthawk, Common, photographs, 454, 710, plates 263, 452; accepted records, 566–7, plate 371
- Nightingale, B., and Dempsey, E., recent reports, see Recent reports
- Nightingale, Common, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Thrush, accepted records, 572
- Nightjar, European, population status in the UK, Channel Islands and Isle of Man, 296–341; at sea, 630–1, plates 401–2
- , Red-necked, should it be on the British List?, 110–15, plates 79–81

- Noble, D. G., see Eaton, M. A., *et al.*  
*Numenius arquata*, see Curlew, Eurasian  
 — *phaeopus*, see Whimbrel  
 — *tenuirostris*, see Curlew, Slender-billed  
 Nuthatch, Eurasian, population status in the UK,  
 Channel Islands and Isle of Man, 296–341  
 —, Red-breasted, photograph, 461, plate 274  
*Nycticorax nycticorax*, see Heron, Night
- O’Keeffe, M., photograph of Royal Tern, 421, plate  
 230
- Obituaries: Eric Simms, 211–12, plate 120; David  
 William Snow, 394–6, plate 220; Bob Scott,  
 396–8, plate 221
- Oceanites oceanicus*, see Storm-petrel, Wilson’s  
*Oceanodroma castro*, see Storm-petrel, Madeiran  
 — *leucorhoa*, see Storm-petrel, Leach’s  
 — *matsudairae*, see Petrel, Matsudaira’s  
 — *monorhina*, see Storm-petrel, Swinhoe’s  
*Oenanthe deserti*, see Wheatear, Desert  
 — *isabellina*, see Wheatear, Isabelline  
 — *oenanthe*, see Wheatear, Northern  
 — *pleschanka*, see Wheatear, Pied
- Ogden, K., photograph of Leach’s Storm-petrel,  
 367, plate 186
- Ogilvie, M., review of Hutchins: *Wildfowl of the  
 Northern Hemisphere*, 517
- Olioso, G., letter on European Rollers in France,  
 29–30
- Oliver, P., Eurasian Jay taking peanuts in flight,  
 146; review of London Natural History:  
*London’s Changing Natural History*, 287
- Oriole, Golden, breeding in the United Kingdom  
 in 2006, 196; population status in the UK,  
 Channel Islands and Isle of Man, 296–341
- Oriolus oriolus*, see Oriole, Golden
- Osprey, slime and algae ingestion, 36, plates  
 23–24; breeding in the United Kingdom in  
 2006, 177; population status in the UK,  
 Channel Islands and Isle of Man, 296–341;  
 catching Great Crested Grebe, 405;  
 photograph, 475, plate 281
- Otus scops*, see Owl, Eurasian Scops
- Ouwkerk, A., photograph of Common Scoter,  
 33, plate 19; of Common Redstart, 86, plate 58
- Ouzel, Ring, population status in the UK, Channel  
 Islands and Isle of Man, 296–341
- Owl, Barn, population status in the UK, Channel  
 Islands and Isle of Man, 296–341;  
 identification of ‘Dark-breasted Barn Owl’ in  
 Britain, 494–503, plates 320–38; accepted  
 records of ‘Dark-breasted Barn Owl’, *T. a.  
 guttata*, 565–6; photograph, 645, plate 408  
 —, Eurasian Scops, breeding in the United  
 Kingdom in 2006, 189  
 —, Long-eared, population status in the UK,  
 Channel Islands and Isle of Man, 296–341  
 —, Short-eared, population status in the UK,  
 Channel Islands and Isle of Man, 296–341
- , Snowy, accepted records, 566  
 —, Tawny, population status in the UK,  
 Channel Islands and Isle of Man, 296–341;  
 entering house via cat flap, 513, plate 343;  
 Common Buzzard attempting to kill, 634–5,  
 plates 406–7
- Oxyura jamaicensis*, see Duck, Ruddy  
 — *leucocephala*, see Duck, White-headed
- Oystercatcher, Canary Islands,  
 —, Eurasian population status in the UK,  
 Channel Islands and Isle of Man, 296–341
- Pagophila eburnea*, see Gull, Ivory  
*Pandion haliaetus*, see Osprey
- Panov, E. N., the social and communication  
 behaviour of the Great Black-headed Gull,  
 72–83, plates 47–54
- Panuccio, M., photograph of Marettimo, 506, plate  
 339; of Short-toed Eagle, 508, plate 340
- Panurus biarmicus*, see Tit, Bearded
- Parakeet, Rose-ringed, as non-native species,  
 660–79, plate 437
- Parkin, D. T., review of Walkden: *The Wild Geese  
 of the New Grounds*, 516–17; of Main *et al.*:  
*Birds of the Cotswolds: a new breeding atlas*, 641
- Partridge, Grey, population status in the UK,  
 Channel Islands and Isle of Man, 296–341;  
 impact on of non-native Common Pheasants,  
 660–79, plate 436
- Parus major*, see Tit, Great
- Passer domesticus*, see Sparrow, House  
 — *hispaniolensis*, see Sparrow, Spanish  
 — *moabiticus*, see Sparrow, Dead Sea  
 — *montanus*, see Sparrow, Tree
- Patteson, B., photograph of Swinhoe’s Storm-  
 petrel, 385, plate 207
- Pearson, D., photographs of ‘Ehrenberg’s Redstart’,  
 85, plates 55–56
- Pennington, M., photograph of Hooded  
 Merganser, 129, plate 88; review of Norman:  
*Birds in Cheshire and Wirral: a breeding and  
 wintering atlas*, 148; of *Birdwatcher: the life of  
 Roger Tory Peterson*, 409
- Perdix perdix*, see Partridge, Grey
- Perimon, G., photographs of ‘Ehrenberg’s  
 Redstart’, 88, plates 60–61
- Periparus ater*, see Tit, Coal
- Peruis apivorus*, see Honey-buzzard
- Petrel, Bulwer’s, distribution, 101  
 —, Matsudaira’s, ‘all-dark’ *Oceanodroma* storm-  
 petrels in the Atlantic and neighbouring seas,  
 365–85, plates 186–210  
 —, Zino’s/Fea’s, accepted record, 539
- Phalacrocorax aristotelis*, see Shag  
 — *carbo*, see Cormorant, Great
- Phalarope, Red-necked, breeding in the United  
 Kingdom in 2006, 186; population status in  
 the UK, Channel Islands and Isle of Man,  
 296–341, plate 169

- , Wilson's, accepted records, 558  
*Phalaropus lobatus*, see Phalarope, Red-necked  
 — *tricolor*, see Phalarope, Wilson's  
*Philomachus pugnax*, see Ruff  
*Phoenicurus ochruros*, see Redstart, Black  
 — *phoenicurus*, see Redstart, Common  
*Phylloscopus bonelli*, see Warbler, Western Bonelli's  
 — *borealis*, see Warbler, Arctic  
 — *collybita*, see Chiffchaff, Common  
 — *coronatus*, see Warbler, Eastern Crowned  
 — *humei*, see Warbler, Hume's  
 — *ibericus*, see Chiffchaff, Iberian  
 — *schwarzi*, see Warbler, Radde's  
 — *sibilatrix*, see Warbler, Wood  
 — *trochilus*, see Warbler, Willow  
*Pica pica*, see Magpie  
*Picus viridis*, see Woodpecker, Green  
 Pigeon, Wood, population status in the UK,  
 Channel Islands and Isle of Man, 296–341  
 Piner, S., photograph of Cretzschmar's Bunting,  
 594, plate 393  
 Pintail, Northern, breeding in the United  
 Kingdom in 2006, 165; population status in  
 the UK, Channel Islands and Isle of Man,  
 296–341  
 Pipit, Blyth's, recent status in southern Siberia,  
 631–3, plates 403–4  
 —, Buff-bellied, accepted records, 570;  
 photographs, 654, 711, plates 419, 455  
 —, Meadow, population status in the UK,  
 Channel Islands and Isle of Man, 296–341  
 —, Olive-backed, accepted records, 570;  
 photograph, 710, plate 453  
 —, Pechora, accepted records, 570;  
 photographs, 653, 658, 711, plates 418, 428,  
 454  
 —, Rock, population status in the UK, Channel  
 Islands and Isle of Man, 296–341  
 —, Tree, population status in the UK, Channel  
 Islands and Isle of Man, 296–341, plate 164  
 —, Water, population status in the UK, Channel  
 Islands and Isle of Man, 296–341  
 Pitches, A., news and comment, see News and  
 comment; review of Hirschfeld: *Rare Birds  
 Yearbook 2009*, 41; of Elphick & Tipling: *Great  
 Birds of Europe*, 411–12; of Redman *et al.*:  
*Birds of the Horn of Africa*, 470; rare birds in  
 Britain – 50 golden years, 459–64, plates  
 273–8  
 —, —, see Riddington, R., *et al.*  
*Platalea leucorodia*, see Spoonbill, Eurasian  
*Plectrophenax nivalis*, see Bunting, Snow  
*Plegadis falcinellus*, see Ibis, Glossy  
 Plover, Caspian, accepted record, 552  
 —, European Golden, population status in the  
 UK, Channel Islands and Isle of Man, 296–341  
 —, Greater Sand, accepted record, 551, plate  
 362  
 —, Grey, population status in the UK, Channel  
 Islands and Isle of Man, 296–341  
 —, Little Ringed, breeding in the United  
 Kingdom in 2006, 184; population status in  
 the UK, Channel Islands and Isle of Man,  
 296–341  
 —, Pacific Golden, photograph, 525, plate 351;  
 accepted records, 552–3  
 —, Ringed, population status in the UK,  
 Channel Islands and Isle of Man, 296–341  
*Pluvialis apricaria*, see Plover, European Golden  
 — *fulva*, see Plover, Pacific Golden  
 — *squatarola*, see Plover, Grey  
 Pochard, Common, breeding in the United  
 Kingdom in 2006, 167; population status in  
 the UK, Channel Islands and Isle of Man,  
 296–341, plate 165  
*Podiceps auritus*, see Grebe, Slavonian  
 — *cristatus*, see Grebe, Great Crested  
 — *grisegeua*, see Grebe, Red-necked  
 — *uigracollis*, see Grebe, Black-necked  
*Poecile montanus*, see Tit, Willow  
 — *palustris*, see Tit, Marsh  
 Pope, M., photograph of Common Redstart, 87,  
 plate 59; of 'Ehrenberg's Redstart', 91, plate 64  
*Porphyryla alleni*, see Gallinule, Allen's  
 — *martinica*, see Gallinule, American Purple  
 Porter, R., see Riddington, R., *et al.*  
*Porzana parva*, see Crane, Little  
 — *porzana*, see Crane, Spotted  
 Pratincole, Black-winged, photograph, 420, plate  
 231  
 —, Collared, photograph, 420, plate 230;  
 accepted record, 551  
 Prince, E., and Wilson, J., Great Black-backed Gull  
 killing rival and stealing mate, 218  
 Provenza, A., see Agostini, N., *et al.*  
 Prowse, A. D., Great Spotted Woodpecker nesting  
 in natural tree hole, 143, plate 99  
*Prunella collaris*, see Accentor, Alpine  
 — *modularis*, see Dunnock  
 Prÿs-Jones, R., obituary of David William Snow,  
 394–6, plate 220  
 Prytherch, R. J., review of Snow: *Birds in Our Life*,  
 150; the social behaviour of the Common  
 Buzzard, 247–73, plates 132–41  
 —, —, *et al.*, Common Raven nesting with  
 Grey Herons, 638  
 —, —, see Riddington, R., *et al.*  
*Psittacula krameri*, see Parakeet, Rose-ringed  
 Ptarmigan, population status in the UK, Channel  
 Islands and Isle of Man, 296–341, plate 158  
*Pterodroma madeira*, see Petrel, Zino's  
 — *madeira/feae*, see Petrel, Zino's/Fea's  
 — *mollis*, see Petrel, Soft-plumaged  
*Ptyonoprogne rupestris*, see Martin, Crag  
 Puffin, population status in the UK, Channel  
 Islands and Isle of Man, 296–341  
 —, Tufted, photograph, 653, plate 417  
*Puffinus gravis*, see Shearwater, Great  
 — *griseus*, see Shearwater, Sooty

- *mauretanicus*, see Shearwater, Balearic  
 — *puffinus*, see Shearwater, Manx  
*Pyrrhocorax pyrrhocorax*, see Chough, Red-billed  
*Pyrrhula pyrrhula*, see Bullfinch
- Quail, Common, breeding in the United Kingdom in 2006, 168–9; population status in the UK, Channel Islands and Isle of Man, 296–341
- Quinn, D., American Herring Gull in Cheshire & Wirral: new to Britain, 342–7, plates 175–6
- Rabbits, B., Hooded Merganser in North Uist: a return to the British List, 122–9, plates 85–88
- Radford, A. P., snow-burrowing by Robins, 468; Common Chaffinches eating seeds of Monterey Pine from grounded cones, 638
- Rail, Water, breeding in the United Kingdom in 2006, 180–1; population status in the UK, Channel Islands and Isle of Man, 296–341
- Rajchard, J., see Šimek, L., *et al.*
- Rallus aquaticus*, see Rail, Water
- Rarities Committee, news and announcements: 105; 274–7, plates 142–3
- Raven, Common, population status in the UK, Channel Islands and Isle of Man, 296–341; nesting with Grey Herons, 638
- Razorbill, population status in the UK, Channel Islands and Isle of Man, 296–341
- Recent reports: 46–50; 106–8; 154–6; 226–8; 293–4; 360–2; 418–22; 477–80; 524–6; 647–58; 708–16
- Recurvirostra avosetta*, see Avocet
- Redhead, features shown by hybrid *Aythya*, 31–32, plate 17
- Redpoll, Common, breeding in the United Kingdom in 2006, 198; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Lesser, population status in the UK, Channel Islands and Isle of Man, 296–341
- Redshank, Common, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Spotted, population status in the UK, Channel Islands and Isle of Man, 296–341
- Redstart, Black, breeding in the United Kingdom in 2006, 191; population status in the UK, Channel Islands and Isle of Man, 296–341; midwinter song in Cornwall, 513, plate 346
- , Common, identification of male ‘Ehrenberg’s Redstart’ *P. p. samamisticus* with comments on British claims, 84–97, plates 55–72; population status in the UK, Channel Islands and Isle of Man, 296–341
- Redwing, breeding in the United Kingdom in 2006, 192; population status in the UK, Channel Islands and Isle of Man, 296–341, plate 173
- Rees, G., more Peregrine kleptoparasitism, 511
- Regulus ignicapilla*, see Firecrest
- *regulus*, see Goldcrest
- Reid, J., photograph of Fair Isle Bird Observatory, 523, plate 349
- Remiz pendulinus*, see Tit, Penduline
- Reszeter, G., photographs of Wilson’s Snipe, 432, plates 242–3; of Brown Shrike, 716, plate 464
- Reviews
- Arlott: *Collins Field Guide – Birds of the Palearctic: Non-passerines*, 355–6
- Ash & Atkins: *Birds of Ethiopia and Eritrea*, 639–40
- Balmer *et al.*: *Bird Ringing: a concise guide*, 410
- Best: *Binoculars and People*, 285–6
- Birkhead: *The Wisdom of Birds: an illustrated history of ornithology*, 148–9
- Bloomfield & Smith: *North Norfolk Wildlife: discovering its birds and natural history*, 704
- Brazil: *Field Guide to the Birds of East Asia*, 412–13
- Chandler: *Shorebirds of the Northern Hemisphere*, 472–3
- Couzens: *Extreme Birds*, 286
- Couzens: *Top 100 Birding Sites of the World*, 221
- Cromack: *The Birdwatcher’s Yearbook 2010*, 705
- del Hoyo *et al.*: *Handbook of the Birds of the World, Vol. 13. Penduline-tits to Shrikes*, 407
- Delany *et al.*: *An Atlas of Wader Populations in Africa and Western Eurasia*, 639
- Doherty: *Birdwatching in Norfolk (DVD)*, 40
- Dubois *et al.*: *Nouvel Inventaire des Oiseaux de France*, 286–7
- Dye *et al.*: *Birds New to Norfolk: the accounts of their discovery and identification*, 641–2
- Elphick & Tipling: *Great Birds of Europe*, 411–12
- Evans: *The Ultimate Site Guide to Scarce British Birds*, 705
- Eyre: *Gilbert White’s Birds: then and now*, 516
- Forshaw: *Trogons: a natural history of the Trogonidae*, 517
- Friend: *Southern England*, 147
- Grimmett *et al.*: *Birds of Pakistan*, 473
- Harris: *National Geographic Complete Birds of the World*, 642
- Hayman & Hume: *The Birdwatcher’s Pocket Guide to Britain and Ireland*, 514
- Haynes-Sutton *et al.*: *A Photographic Guide to the Birds of Jamaica*, 640–1
- Hirschfeld: *Rare Birds Yearbook 2009*, 41
- Hutchins: *Wildfowl of the Northern Hemisphere*, 517
- Jonsson: *Lars Jonsson’s Birds: paintings from a near horizon*, 407–8
- Joynt *et al.*: *The Breeding Birds of Cleveland*, 149–50
- Keene: *European Bird Names: a translation guide*, 287
- Kirwan *et al.*: *The Birds of Turkey*, 408–9

- König & Weick: *Owls of the World*, 286  
 London Natural History: *London's Changing Natural History*, 287  
 Long & Schouten: *Feathered Dinosaurs: the origin of birds*, 220–1  
 Main *et al.*: *Birds of the Cotswolds: a new breeding atlas*, 641  
 Mann: *The Birds of Borneo*, 514–15  
 Martin: *Barn Owls in Britain: phantoms of the farmyard*, 39  
 McCarthy: *Say Goodbye to the Cuckoo*, 411  
 Mynott: *Birdscapes: birds in our imagination and experience*, 414  
 Norman: *Birds in Cheshire and Wirral: a breeding and wintering atlas*, 148  
 Pennycuik: *Modelling the Flying Bird*, 285  
 Pyle *et al.*: *Identification Guide to North American Birds, Part II. Anatidae to Alcidæ*, 284  
 Radford: *A Naturalist's Eye: twenty Somerset years*, 414  
 Redman *et al.*: *Birds of the Horn of Africa*, 470  
 Rosenthal: *Birdwatcher: the life of Roger Tory Peterson*, 409–10  
 Rouco: *A Close Up Look: approaching nature through digiscoping*, 471–2, plates 279–80  
 Schmidt *et al.*: *Birdwatching in Azerbaijan: a guide to nature and landscape*, 38  
 Sigrist: *Aves da Amazônia Brasileira/Birds of Amazonian Brazil*, 355  
 Sigrist: *Aves do Brasil Oriental/Birds of Eastern Brazil*, 40  
 Sikora *et al.*: *The Atlas of Breeding Birds in Poland, 1985–2004*, 41  
 Skåne's Ornithological Society: *A Guide to Birdwatching in Skåne, Southern Sweden*, 38  
 Slack: *Rare Birds Where and When, Vol. 1: Sandgrouse to New World Orioles*, 703–4  
 Snow: *Birds in Our Life*, 150  
 Toms *et al.*: *Gardening for Birdwatchers*, 39  
 Tudge: *Consider the Birds: who they are and what they do*, 220  
 van Perlo: *Field Guide to the Birds of Eastern Africa*, 412  
 Vaughan: *Wings and Rings: a history of bird migration studies in Europe*, 410–11  
 Walkden: *The Wild Geese of the New Grounds*, 516–17  
 Waters: *Archibald Thorburn, Artist and Illustrator*, 515–16  
 Watson & Moss: *Grouse*, 147  
 Yalden & Albarella: *The History of British Birds*, 284–5  
 Zeigler & Marler: *Neuroscience of Birdsong*, 221  
*Rhodostethia rosea*, see Gull, Ross's  
 Riddington, R., editorial: 2; 364, 424; review of Pyle *et al.*: *Identification Guide to North American Birds, Part II. Anatidae to Alcidæ*, 284; of Best: *Binoculars and People*, 285–6; of Balmer *et al.*: *Bird Ringing: a concise guide*, 410; of Radford: *A Naturalist's Eye: twenty Somerset years*, 414; of Cromack: *The Birdwatcher's Yearbook 2010*, 705; the history of Sykes's Warbler in Britain, 622–6, plate 400; photograph of Spotted Sandpiper, 709, plate 451  
 —, —, *et al.*, *The BB/BTO Best Bird Book of the Year 2008*, 98–100  
 —, —, *et al.*, *The Carl Zeiss Award 2009*, 451–8, plates 261–72  
*Riparia riparia*, see Martin, Sand  
*Rissa tridactyla*, see Kittiwake  
 Robin, population status in the UK, Channel Islands and Isle of Man, 296–341; snow-burrowing, 468  
 —, Rufous-tailed, ageing and sexing, 482–93, plates 309–10  
 —, Siberian Blue, ageing and sexing, 482–93, plates 304–8  
 Robinson, J., photograph of Mistle Thrush, second, Bird Photograph of the Year 2009, 443, plate 251; of Green Woodpecker, 446, plate 255  
 Rodgers, K. A., photograph of Grey Duck showing Mallard ancestry, 667, plate 433  
 Rogers, R., photographs of Willow Tit, 389–90, plates 215–16  
 Roller, European, in France, 29–30; accepted record, 569  
 Rook, population status in the UK, Channel Islands and Isle of Man, 296–341  
 Rosefinch, Common, breeding in the United Kingdom in 2006, 198; photograph, 480, plate 289  
 Ross, A., photographs of Common Snipe, 428, plate 236–7  
 Rossler, G., photograph of Dartford Warbler habitat, 239, plate 131  
 Rowlands, A., *et al.*, identification of Wilson's Snipe and assessment of the first British record, 425–34, plates 233–47  
 Rubythroat, Siberian, ageing and sexing, 482–93, plates 290–303  
 Ruff, breeding in the United Kingdom in 2006, 185; photograph, 223, plate 123; population status in the UK, Channel Islands and Isle of Man, 296–341  
 Sage, B., Blue and Great Tits foraging on bracken, 145; unusual feeding behaviour by Eurasian Sparrowhawks, 405  
 Salewski, V., *et al.*, Olivaceous warblers in southeast Morocco, 116–21, plates 82–84  
 Sanderling, population status in the UK, Channel Islands and Isle of Man, 296–341  
 Sandgrouse, Pallas's, photograph, 456, plate 268  
 Sandpiper, Baird's, accepted records, 554  
 —, Broad-billed, accepted records, 555

- , Buff-breasted, photograph, 651, plate 414
- , Common, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Curlew, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Green, breeding in the United Kingdom in 2006, 185; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Least, accepted record, 554
- , Marsh, photograph, 525, plate 352; accepted records, 557–8
- , Purple, breeding in the United Kingdom in 2006, 185; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Semipalmated, accepted records, 553
- , Spotted, photographs, 47, 479, 709, plates 28, 284, 451; accepted records, 557
- , Stilt, accepted records, 554–5
- , Terek, photograph, 478, plate 283; accepted records, 556–7
- , Upland, accepted record, 556, plate 365
- , Wood, breeding in the United Kingdom in 2006, 186; population status in the UK, Channel Islands and Isle of Man, 296–341
- Sapsucker, Yellow-bellied, photograph, 454, plate 264
- Saxicola rubetra*, see Whinchat
- *torquatus*, see Stonechat, Common
- Scaup, Greater, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Lesser, accepted records, 533–4
- Schaap, M., photographs of Barn Owls, 496, 502, 503, plates 323, 337, 338
- Scolopax rusticola*, see Woodcock
- Scoter, Black, difference in shape of bill-base feathering from Common Scoter in non-adult-male plumage, 32–34, plates 20–21
- , Common, difference in shape of bill-base feathering from Black Scoter in non-adult-male plumage, 32–34, plates 18–19; breeding in the United Kingdom in 2006, 167; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Velvet, population status in the UK, Channel Islands and Isle of Man, 296–341
- Scott, A., photograph of Bob Scott, 397, plate 221
- , R., review of Toms *et al.*: *Gardening for Birdwatchers*, 39
- , —, see Riddington, R., *et al.*
- , H., photograph of Swinhoe's Storm-petrel, 384, plate 205
- Scottish Daily Express*, photograph of Black-browed Albatross, 452, plate 262
- Sellers, R. M., Goosanders approaching close to humans and feeding on bread, 279
- Selway, C., midwinter song of Black Redstarts in Cornwall, 513, plate 346
- Serin, European, photograph, 156, plate 108; breeding in the United Kingdom in 2006, 197; population status in the UK, Channel Islands and Isle of Man, 296–341
- Serrius serinus*, see Serin, European
- Ševčík, J., see Šimek, L., *et al.*
- Shag, population status in the UK, Channel Islands and Isle of Man, 296–341
- Shaw, D., photograph of Brown-headed Cowbird, 362, plate 185; of Siberian Thrush, 575, plate 377
- , K. D., see Wynn, R. B.
- Shearwater, Balearic, population status in the UK, Channel Islands and Isle of Man, 296–341; in UK and Irish waters between 2004 and 2006, 350–1
- , Cory's accepted record of 'Scopoli's Shearwater', *C. d. diomedea*, 539–40
- , Great, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Manx, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Sooty, population status in the UK, Channel Islands and Isle of Man, 296–341
- Shelduck, Common, population status in the UK, Channel Islands and Isle of Man, 296–341
- Shoveler, breeding in the United Kingdom in 2006, 166–7; population status in the UK, Channel Islands and Isle of Man, 296–341
- Shrike, Brown, accepted records, 587–8, plate 385; photograph, 716, plate 464
- , Lesser Grey, photographs, 480, 526, plates 288, 354; accepted records, 588, plate 386
- , Red-backed, breeding in the United Kingdom in 2006, 197; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Southern Grey, photographs of 'Steppe Grey Shrike', *L. m. pallidirostris*, 49, 657, plates 34, 426; accepted records of 'Steppe Grey Shrike', 589, plate 387
- , Woodchat, accepted records of 'Balearic Woodchat Shrike', *L. s. badius*, 589–90
- Šimek, L., *et al.*, more on the foraging behaviour of the Grey Heron, 279–80
- Siskin, population status in the UK, Channel Islands and Isle of Man, 296–341
- Sitta canadensis*, see Nuthatch, Red-breasted
- *europaea*, see Nuthatch, Eurasian
- Siverio, F., *et al.*, slime and algae ingestion by Ospreys, 36, plates 23–24
- , M., see Siverio, F., *et al.*
- Skua, Arctic, population status in the UK, Channel Islands and Isle of Man, 296–341, plate 160
- , Great, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Long-tailed, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Pomarine, population status in the UK, Channel Islands and Isle of Man, 296–341
- Slymaker, M., photograph of Upland Sandpiper,

- 556, plate 365
- Small, B. J., the identification of male 'Ehrenberg's Redstart' with comments on British claims, 84–97, plates 55–72; notes and sketches of Naumann's Thrush, 437
- , ——, see Rowlands, A., *et al.*
- Small, G., Little Egret eating Brown Rat/vole, 280, plates 144–7
- Smew, population status in the UK, Channel Islands and Isle of Man, 296–341
- Smith, J. A., see Ballance, D. K.
- , K. W., the use of natural tree holes by nesting Great Spotted Woodpeckers, 282
- , N., photograph of Barn Owl, 495, plate 320
- , P., spring migration of Eurasian Bitterns, 410–11
- Snipe, Common, a procession by an adult and its chicks, 218; population status in the UK, Channel Islands and Isle of Man, 296–341; comparison with Wilson's Snipe, 425–34, plates 235–9
- , Great, photograph, 445, plate 253; accepted records, 555
- , Jack, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Wilson's, identification and assessment of the first British record, 425–34, plates 242–47
- Somateria mollissima*, see Eider, Common
- *spectabilis*, see Eider, King
- Sørensen, H., photograph of Hobby, third, Bird Photograph of the Year 2009, 443, plate 252
- Sparrow, Dead Sea, photograph, 140, plate 95
- , House, population status in the UK, Channel Islands and Isle of Man, 296–341; photograph, 447, plate 257
- , Spanish, migrating through the Maltese Islands, 602
- , Tree, population status in the UK, Channel Islands and Isle of Man, 296–341
- , White-crowned, accepted records, 592–3, plate 391
- , White-throated, photograph, 294, plate 156; accepted records, 593–4
- Sparrowhawk, Eurasian, population status in the UK, Channel Islands and Isle of Man, 296–341; unusual feeding behaviour, 405
- Spencer, K., Blackbirds eating fuschia seeds, 144
- Sphyrapicus varius*, see Sapsucker, Yellow-bellied
- Spoonbill, Eurasian, breeding in the United Kingdom in 2006, 173; population status in the UK, Channel Islands and Isle of Man, 296–341
- Stark, H., see Salewski, V., *et al.*
- Starling, Common, population status in the UK, Channel Islands and Isle of Man, 296–341; mock-feeding to facilitate kleptoparasitism, 406
- Štěpánek, P., Stone-curlew feeding on Grass Snake, 511–12, plate 343
- Stercorarius longicaudus*, see Skua, Long-tailed
- *parasiticus*, see Skua, Arctic
- *pomarinus*, see Skua, Pomarine
- *skua*, see Skua, Great
- Sterna bengalensis*, see Tern, Lesser Crested
- *dougallii*, see Tern, Roseate
- *forsteri*, see Tern, Forster's
- *hirundo*, see Tern, Common
- *maxima*, see Tern, Royal
- *paradisaea*, see Tern, Arctic
- *sandvicensis*, see Tern, Sandwich
- Sternula albifrons*, see Tern, Little
- Sterry, P., see Flood, R. L., *et al.*
- Stewart, D., photograph of Green-backed Heron, 542, plate 359
- , F. R. P., see Lewis, A. J. G., *et al.*
- Stilt, Black-winged, breeding in the United Kingdom in 2006, 182; accepted records, 550
- Stint, Little, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Temminck's, breeding in the United Kingdom in 2006, 184; population status in the UK, Channel Islands and Isle of Man, 296–341
- Stirrup, S., photograph of 'Kumlien's Gull', 471, plate 279; of Egyptian Goose, 661, plate 429; of Muscovy Duck, 669, plate 435; of Mandarin Duck, 673, plate 438
- Stoddart, A., an unusual Common Stonechat, 137–8, plates 92–93; review of Arlott: *Collins Field Guide – Birds of the Palearctic: Non-passerines*, 355–6; of Chandler: *Shorebirds of the Northern Hemisphere*, 472–3; of Bloomfield & Smith: *North Norfolk Wildlife: discovering its birds and natural history*, 704; of Evans: *The Ultimate Site Guide to Scarce British Birds*, 705
- , ——, see Riddington, R., *et al.*
- Stonechat, Common, an unusual bird, 137–8, plates 92–93; population status in the UK, Channel Islands and Isle of Man, 296–341; accepted records of 'Siberian Stonechat', *S. t. maurus*, 572–3
- Stone-curlew, photograph, 54, plate 37; in the United Kingdom in 2006, 183; population status in the UK, Channel Islands and Isle of Man, 296–341, plate 168; feeding on Grass Snake, 511–12, plate 343
- Stonier, R., photograph of Cattle Egret, 107, plate 75; of Waxwing, 155, plate 106; of Pacific Diver, 536, plate 356
- Stork, Black, accepted records, 547–8
- Storm-petrel, European, population status in the UK, Channel Islands and Isle of Man, 296–341; diving for food, 352–3, plates 177–80; a newly discovered colony in Italy, 353–4
- , Leach's, population status in the UK, Channel Islands and Isle of Man, 296–341;

- 'all-dark' *Oceanodroma* storm-petrels in the Atlantic and neighbouring seas, 365–85, plates 186–91, 194–7
- , Madeiran, in the Bay of Biscay, 28–29; letter on removal of record from the British List, 213–15
- , Swinhoe's, 'all-dark' *Oceanodroma* storm-petrels in the Atlantic and neighbouring seas, 365–85, plates 192–3, 198–210; accepted record, 540
- , Wilson's, seen from mainland Britain, 403–4
- Streptopelia decaocto*, see Dove, Collared
- *turtur*, see Dove, Turtle
- Strix aluco*, see Owl, Tawny
- Sturnus vulgaris*, see Starling, Common
- Sultana, J., Spanish Sparrows apparently migrating through the Maltese Islands, 602
- Swallow, Barn, climate change: a Swallow's eye view, 3–16, plates 1–10; population status in the UK, Channel Islands and Isle of Man, 296–341; photograph, 445, plate 254
- , Red-rumped, nesting in sea cave, 218–19
- Swan, Bewick's, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Mute, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Whooper, breeding in the United Kingdom in 2006, 163; population status in the UK, Channel Islands and Isle of Man, 296–341
- Swift, Alpine, photograph, 294, plate 154
- , Common, sounds made by chicks, 143–4; population status in the UK, Channel Islands and Isle of Man, 296–341; adult taken by Magpie, 469
- , Little, accepted record, 568
- , Pacific, accepted record, 568
- , Pallid, photograph, 361, plate 182; accepted record, 567, plate 372
- Sylvia atricapilla*, see Blackcap
- *cantillans*, see Warbler, Subalpine
- *communis*, see Whitethroat, Common
- *conspicillata*, see Warbler, Spectacled
- *curruca*, see Whitethroat, Lesser
- *melanocephala*, see Warbler, Sardinian
- *undata*, see Warbler, Dartford
- Syrnhaptes paradoxus*, see Sandgrouse, Pallas's
- Tachybaptus ruficollis*, see Grebe, Little
- Tadorna tadorna*, see Shelduck, Common
- Tams, T., photograph of Red-flanked Bluetail, 48, plate 29; of Red-flanked Bluetail, 573, plate 375; of Grey-cheeked Thrush, 576, plate 378
- Tarsiger cyanurus*, see Bluetail, Red-flanked
- Tate, A., photograph of Squacco Heron, 419, plate 226
- Teal, Baikal, Britain's first, 691–6, plates 444–8; stable-hydrogen isotope analyses suggest natural vagrancy to Britain, 697–9
- , Blue-winged, accepted records, 533; photograph, 648, plate 409
- , Eurasian, population status in the UK, Channel Islands and Isle of Man, 296–341
- Tempest, J., photograph of Barn Owl and Kestrel, 645, plate 408
- Tern, Arctic, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Black, population status in the UK, Channel Islands and Isle of Man, 296–341; accepted record of 'American Black Tern', *C. n. surinamensis*, 565; photograph of 'American Black Tern', 652, plate 416
- , Caspian, accepted records, 564
- , Common, population status in the UK, Channel Islands and Isle of Man, 296–341; photograph, 448, plate 259
- , Forster's, photograph, 479, plate 286
- , Gull-billed, accepted record, 564, plate 369
- , Lesser Crested, feeding at night, 37
- , Little, breeding in the United Kingdom in 2006, 188–9; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Roseate, breeding in the United Kingdom in 2006, 189; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Royal, photographs, 421, 479, plates 230, 285
- , Sandwich, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Whiskered, feeding on the ground, 37; accepted records, 564–5, plate 370
- Tetrao tetrix*, see Grouse, Black
- *urogallus*, see Capercaillie
- Thalassarche chlororhynchos*, see Albatross, Yellow-nosed
- *melanophris*, see Albatross, Black-browed
- Thoburn, G., photograph of Pied Wheatear, 48, plate 30; of 'Black Brant', 106, plate 73; of White-throated Sparrow, 294, plate 156; of Collared Pratincole, 420, plate 230; of Long-billed Murrelet, 473, plate 276; of Cattle Egret, 524, plate 350; of Radde's Warbler, 715, plate 462
- Thomas, B., photographs of Wilson's Snipe, 433–4, plates 244–7; of Black-browed Albatross, 649, plate 410
- , M., review of Sikora *et al.*: *The Atlas of Breeding Birds in Poland, 1985–2004*, 41
- Thomason, B., photograph of Ivory Gull, 108, plate 78; of Taiga Flycatcher, 657, plate 425
- Thompson, P. S., unusual Blackbird breeding behaviour, 636–7
- Thrush, Eyebrowed, photograph, 655, plate 422
- , Grey-cheeked, accepted records, 576, plate 378
- , Hermit, accepted record, 576
- , Mistle, defending holly tree in Caithness, 283; preying on flying insects, 282; population status in the UK, Channel Islands and Isle of

- Man, 296–341; photograph, 443, plate 251  
 —, Siberian, accepted record, 575, plate 377  
 —, Song, population status in the UK, Channel Islands and Isle of Man, 296–341  
 —, White's, accepted records, 575, plate 376  
 Tigges, U., *et al.*, sounds made by Common Swift chicks, 143–4  
 Tipling, D., photograph of Dartford Warbler, 69, plate 46; of Ruff, 223, plate 123; of Red-breasted Nuthatch, 461, plate 274; of Osprey, 475, plate 281  
 —, —, see Chandler, R., *et al.*  
 Tit, Bearded, breeding in the United Kingdom in 2006, 196; population status in the UK, Channel Islands and Isle of Man, 296–341  
 —, Blue, foraging on bracken, 145; caught in mid-air by Eurasian Jay, 219; population status in the UK, Channel Islands and Isle of Man, 296–341; evidence of interspecific egg-dumping involving Willow Tit, 468–9  
 —, Coal, population status in the UK, Channel Islands and Isle of Man, 296–341  
 —, Crested, population status in the UK, Channel Islands and Isle of Man, 296–341  
 —, Great, foraging on bracken, 145; attacking young rat, 145; population status in the UK, Channel Islands and Isle of Man, 296–341; fledglings feeding on wasp larvae, 637  
 —, Long-tailed, population status in the UK, Channel Islands and Isle of Man, 296–341; accepted records of 'Northern Long-tailed Tit', *A. c. caudatus*, 586–7; variation in eye colour, 637  
 —, Marsh, population status in the UK, Channel Islands and Isle of Man, 296–341; separation from Willow Tit in Britain: a review, 604–16, plates 394–6  
 —, Penduline, photographs, 108, 284, plates 107, 155; accepted records, 587  
 —, Willow, second excavation causes nest failure, 145–6, plates 100–1; population status in the UK, Channel Islands and Isle of Man, 296–341; decline in Britain, 386–93, plates 211–19; evidence of interspecific egg-dumping involving Blue Tit, 468–9; separation from Marsh Tit in Britain: a review, 604–16, plates 394–6  
 Tranter, S., photograph of Wood Warbler, 297, plate 157; of Bullfinch, 303, plate 161; of Red Kite, 304, plate 162; of Tree Pipit, 306, plate 164  
 Treecreeper, Eurasian, population status in the UK, Channel Islands and Isle of Man, 296–341  
 —, Short-toed, population status in the UK, Channel Islands and Isle of Man, 296–341  
*Tringa erythropus*, see Redshank, Spotted  
 — *flavipes*, see Yellowlegs, Lesser  
 — *glareola*, see Sandpiper, Wood  
 — *melanoleuca*, see Yellowlegs, Greater  
 — *nebularia*, see Greenshank, Common  
 — *ochropus*, see Sandpiper, Green  
 — *stagnatilis*, see Sandpiper, Marsh  
 — *totanus*, see Redshank, Common  
*Troglodytes troglodytes*, see Wren  
*Tryngites subruficollis*, see Sandpiper, Buff-breasted  
*Turdus iliacus*, see Redwing  
 — *merula*, see Blackbird  
 — *obscurus*, see Thrush, Eyebrowed  
 — *philomelos*, see Thrush, Song  
 — *pilaris*, see Fieldfare  
 — *torquatus*, see Ouzel, Ring  
 — *viscivorus*, see Thrush, Mistle  
 Turner, A., climate change: a Swallow's eye view, 3–16, plates 1–10  
 —, C., photograph of Pechora Pipit, 711, plate 454  
 —, G., Tawny Owl entering house via cat flap, 513, plate 343  
 Turnstone, population status in the UK, Channel Islands and Isle of Man, 296–341  
 Twite, population status in the UK, Channel Islands and Isle of Man, 296–341  
*Tyto alba*, see Owl, Barn  
 Ullman, M., Iran and the Western Palearctic, 139–41, plates 94–96  
*Upupa epops*, see Hoopoe  
*Uria aalge*, see Guillemot, Common  
 van Rijswijk, photograph of 'Dark-breasted Barn Owl', 497, plate 324  
*Vanellus gregarius*, see Lapwing, Sociable  
 — *vanellus*, see Lapwing, Northern  
 Varesvuo, M., photographs of Barn Swallow, 4, 7, 9, 11, 14, 16, plates 1, 4, 5, 7, 9, 10; of Purple Heron, 65, plate 44; of Common Buzzard, 271–3, plates 137–41  
 Veery, photographs, 655, 658, plates 421, 428  
*Vermivora chrysoptera*, see Warbler, Golden-winged  
 Vickers, M., photograph of 'Steppe Grey Shrike', 657, plate 426  
*Vireo olivaceus*, see Vireo, Red-eyed  
 Vireo, Red-eyed, accepted records, 590  
 Vittery, A., Whiskered Terns feeding on the ground, 37  
 Voice: Common Swift, 143–4; Black Redstart, 513, plate 346  
 Votier, S., photographs of Two-barred Crossbill, 591, plates 388–9  
 —, —, *et al.*, stable-hydrogen isotope analyses suggest natural vagrancy of Baikal Teal to Britain, 697–9  
 Wagstaff, W., photograph of Gyr Falcon, 227, plate 125; of Marsh Sandpiper, 525, plate 352; of Pallid Swift, 567, plate 372  
 Wagtail, Citrine, identification from Yellow

- Wagtail – a possible identification pitfall, 34–35, plate 22; accepted records, 571; photograph, 654, plate 420
- , Grey, population status in the UK, Channel Islands and Isle of Man, 296–341
- , White/Pied, population status in the UK, Channel Islands and Isle of Man, 296–341; accepted record of ‘Amur Wagtail’, *M. a. leucopsis*, 570–1
- , Yellow, identification from Citrine Wagtail – a possible identification pitfall, 34–35; population status in the UK, Channel Islands and Isle of Man, 296–341, plate 171
- Walentowicz, T., photograph of Baikal Teal, 693, plate 445
- Walker, A., photographs of Green Woodpecker, 142, plates 97–98
- , D., photograph of Crested Lark, 361, plate 183
- Wallace, D. I. M., review of McCarthy: *Say Goodbye to the Cuckoo*, 411; of Dye *et al.*: *Birds New to Norfolk: the accounts of their discovery and identification*, 641–2; letter on job vacancy: defender of British and Irish subspecies, 629–30
- Walsh, A., photograph of Swinhoe’s Storm-petrel, 384, plate 202
- Warbler, Aquatic, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Arctic, accepted records, 583–4; photograph, 656, plate 424
- , Blackburnian, photograph, 658, plate 427
- , Blackpoll, accepted record, 592; photograph, 716, plate 465
- , Blyth’s Reed, in Estonia, 30; accepted records, 580; photograph, 656, plate 423
- , Booted, accepted records, 582–3, plate 383; the Green Farm bird, 617–21, plates 397–9
- , Cape Verde, distribution, density, habitat and breeding biology on the island of Fogo, 17–24, 403, plates 1–16
- , Cetti’s, breeding in the United Kingdom in 2006, 192; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Dartford, photograph, 69, plate 46; breeding in the United Kingdom in 2006, 193–4; status in the UK and the Channel Islands in 2006, 230–46, plates 129–31; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Eastern Crowned, photograph, 714, plate 461
- , Eastern Olivaceous, in southeast Morocco, 116–21, plates 82–84; accepted records, 581–2, plates 381
- , Golden-winged, photographs, 455, 460, plates 267, 273
- , Grasshopper, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Great Reed, breeding in the United Kingdom in 2006, 193; accepted records, 580–1
- , Hume’s, photograph, 49, plate 33; accepted records, 584–5
- , Lanceolated, accepted records, 578–9; photograph, 714, plate 460
- , Marsh, breeding in the United Kingdom in 2006, 193; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Paddyfield, accepted records, 579, plate 380
- , Pallas’s Grasshopper, accepted records, 577–8, plate 379
- , Radde’s, photograph, 715, plate 462
- , Reed, population status in the UK, Channel Islands and Isle of Man, 296–341
- , River, photograph, 480, plate 287; accepted records, 579
- , Sardinian, photograph, 49, plate 32; accepted record, 583
- , Savi’s, breeding in the United Kingdom in 2006, 192–3; population status in the UK, Channel Islands and Isle of Man, 296–341; accepted records, 579
- , Sedge, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Spectacled, accepted record, 583
- , Subalpine, photograph, 422, plate 231
- , Sykes’s, accepted record, 581–3, plates 382–3; history in Britain, 622–6, plate 400
- , Western Bonelli’s, accepted records, 585; photograph, 715, plate 463
- , Western Olivaceous, southeast Morocco, 116–21, plates 82–84
- , Willow, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Wood, population status in the UK, Channel Islands and Isle of Man, 296–341, plate 157
- Warden, D., see Prytherch, R. J., *et al.*
- Watson, M., photograph of European Nightjar, 631, plate 402
- Watters, T. E., Osprey catching Great Crested Grebe, 405
- Waxwing, Cedar, photograph, 712, plate 456
- , photograph, 155, plate 106; population status in the UK, Channel Islands and Isle of Man, 296–341
- Webley, J., Common Chiffchaffs and whirligig beetles, 219, plate 122; Common Kingfishers taking Great Crested Newts, 281–2, plates 148–9; photograph of Grey Heron, 282, plate 150; of Moorhen, 282, plate 151
- Westray, G., variation in eye colour of Long-tailed Tits, 637; fledgling Great Tits feeding on wasp larvae, 637
- Wheatear, Desert, photograph, 48, plate 31; accepted records, 574

- , Isabelline, accepted record, 574
- , Northern, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Pied, photographs, 48, 713, plates 30, 458; accepted records, 574
- Wheeler, P., photograph of White-throated Needletail, 455, plate 266
- Whimbrel, breeding in the United Kingdom in 2006, 185; population status in the UK, Channel Islands and Isle of Man, 296–341, plate 163
- Whinchat, population status in the UK, Channel Islands and Isle of Man, 296–341
- Whitethroat, Common, population status in the UK, Channel Islands and Isle of Man, 296–341
- , Lesser, population status in the UK, Channel Islands and Isle of Man, 296–341
- Wigeon, American, photograph, 226, plate 124
- , Eurasian, breeding in the United Kingdom in 2006, 163–4; population status in the UK, Channel Islands and Isle of Man, 296–341
- Wilkinson, M., photograph of Pechora Pipit and Veery, 658, plate 428
- Wiseman, E., the Portsmouth Group, 132–6
- Woodbridge, K., photograph of Eyebrowed Thrush, 655, plate 422
- Woodcock, population status in the UK, Channel Islands and Isle of Man, 296–341
- Woodcock, M., review of Ash & Atkins: *Birds of Ethiopia and Eritrea*, 639–40
- Woodpecker, Great Spotted, nesting in natural tree hole, 143, plate 99; use of natural tree holes for nesting, 282; population status in the UK, Channel Islands and Isle of Man, 296–341
- , Green, drumming on metal plate surrounding nestbox entrance, 142; feeding behaviour, 142, plates 97–98; population status in the UK, Channel Islands and Isle of Man, 296–341; photograph, 446, plate 255; using a natural tree hole as a nest chamber, 636
- , Lesser Spotted, population status in the UK, Channel Islands and Isle of Man, 296–341
- Wotton, S., *et al.*, the status of the Dartford Warbler in the UK and the Channel Islands in 2006, 230–46, plates 129–31
- Wren, population status in the UK, Channel Islands and Isle of Man, 296–341
- Wright, B., photograph of hybrid *Aythya*, 31, plate 17
- , M., photograph of Tufted Puffin, 653, plate 417
- Wryneck, population status in the UK, Channel Islands and Isle of Man, 296–341
- www.irishbirdimages.com, photograph of ‘Kumlien’s Gull’, 227, plate 126; of American Herring Gull, 347, plates 175–6; of Forster’s Tern, 479, plate 286; of Glossy Ibis, 649, plate 411; of Buff-breasted Sandpiper, 651, plate 414
- Wynn, R. B., Balearic Shearwaters in UK and Irish waters between 2004 and 2006, 350–1
- , —, and Shaw, K. D., letter on Madeiran Storm-petrels in the Bay of Biscay, 28–29
- Xenus cinereus*, see Sandpiper, Terek
- Yellowhammer, population status in the UK, Channel Islands and Isle of Man, 296–341
- Yellowlegs, Greater, accepted record, 557
- , Lesser, accepted records, 557
- Young, S., photograph of Penduline Tits, 156, plate 107; of Hooded Merganser, 128, plate 87; of Pallid Swift, 361, plate 182; of Belted Kingfisher, 464, plate 278; of Royal Tern, 479, plate 285; of Sociable Lapwing, 553, plate 364; of Long-billed Dowitcher, 652, plate 425; of Baikal Teal, 695, plate 448
- Zonfrillo, B., Goosanders taking bread, 509–10, plates 341–2
- Zonotrichia albicollis*, see Sparrow, White-throated
- *leucophrys*, see Sparrow, White-crowned
- Zoothera dauma*, see Thrush, White’s
- *sibirica*, see Thrush, Siberian

## List of illustrations

### Pages

- |     |  |     |  |
|-----|--|-----|--|
| 3   | Barn Swallow ( <i>Alan Harris</i> )                | 199 | Hawfinches ( <i>Dan Powell</i> )                       |
| 72  | Great Black-headed Gulls ( <i>Martin Elliott</i> ) | 203 | Greenshanks ( <i>Keith Brockie</i> )                   |
| 84  | ‘Ehrenberg’s Redstart’ ( <i>Brian J. Small</i> )   | 230 | Dartford Warbler ( <i>Rosemary Powell</i> )            |
| 110 | Red-necked Nightjar ( <i>Alan Harris</i> )         | 246 | Dartford Warbler ( <i>Dan Powell</i> )                 |
| 116 | Olivaceous warbler ( <i>Dan Powell</i> )           | 296 | Arctic Skua ( <i>Alan Harris</i> )                     |
| 122 | Hooded Merganser ( <i>Richard Johnson</i> )        | 464 | The Druridge Bay curlew<br>( <i>Ian Lewington</i> )    |
| 158 | Red-throated Divers ( <i>Dan Powell</i> )          | 482 | Red-flanked Bluetail ( <i>Alan Harris</i> )            |
| 183 | Avocets ( <i>Phil Jones</i> )                      | 660 | Mandarin Ducks ( <i>Richard Allen</i> )                |
| 186 | Greenshanks ( <i>Dan Powell</i> )                  | 680 | Ruddy Ducks and Tufted Ducks<br>( <i>Alan Harris</i> ) |
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