

THE HELM GUIDE TO Bird Identification

AN IN-DEPTH LOOK AT CONFUSION SPECIES



Keith Vinicombe, Alan Harris and Laurel Tucker

B L O O M S B U R Y

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CHRISTOPHER HELM
LONDON

Laurel Tucker

Laurel died on 20 June 1986, having suffered a cerebral haemorrhage from which she never regained consciousness. She was 35. We had been together for nearly three years and she embarked upon the first version this book with great enthusiasm, excited at the prospect of a joint project together. In the event, she completed only 18 of the plates. Laurel was a remarkable woman, whose vivid and intense personality was somehow reflected in her illustrations. It is hoped that this new edition and its predecessor, together with the *Handbook of Bird Identification* by Mark Beaman and Steve Madge, will serve as a testament to her remarkable ability, both as a bird illustrator and as a birder.

It is, of course, dedicated to her memory.

K.E.V.

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* illustrations entirely or mainly by Laurel Tucker; the remainder are by Alan Harris

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Introduction

This book is based on the *Macmillan Field Guide to Bird Identification*, which was first published in 1989. The original book was born out of a meeting in 1985 between Laurel Tucker and Dr Tim Sharrock, the latter in his capacity as natural history consultant to Macmillan. The idea was to produce a book that would tackle in depth the problems of identifying ‘difficult birds’. It was felt that the standard field guides, mainly because of lack of space and, in some cases, poor illustrations, could not do justice to the problem of separating similar species. The result was, in essence, a series of well-illustrated ‘mini’ identification papers. The original book proved to be an enormous success but, unfortunately, it has been out of print for many years. Choosing the original subjects was problematical, but it was decided to include mainly those regularly occurring British species that present a problem for the ‘average birder’ and to include only those rarities that are frequently confused with something more common.

In this new version, we have expanded the range of species included. The taxonomy generally follows Mitchell & Vinicombe (2011). Most of the additions simply reflect the remarkable changes in the status of many species over the last 20 years, coupled with changes in taxonomy, partly brought about by advances in the study of DNA. As with the original book, inconsistencies have been inevitable, the most difficult problem being ‘species creep’. For example, it is difficult to discuss the identification of the regularly occurring Melodious and Icterine Warblers without dealing with Olivaceous Warbler (now split into Eastern and Western) and, in turn, Booted Warbler, which in itself leads to the unavoidable discussion of the recently split Sykes’s Warbler. In other cases, discussion has been confined to the commoner species, as to have gone into detail on the extreme rarities would have been beyond the scope of the book. Although in recent years there has been a marked trend towards the almost forensic examination of minute feather detail, this book offers advice on how to identify birds in the field, when the instinctive evaluation of shape, flight, behaviour and call is just as important – this overall impression that a bird gives is often termed its jizz. It is hoped that, as with the original, the end result will appeal not only to relative beginners but also to those more seasoned observers with gaps in their knowledge.

How to use this book

In order to facilitate the efficient exposition of difficult identification problems, a rigid format has been abandoned. Each 'chapter' has been arranged in the form of a 'mini' identification paper to best suit the topic under discussion. As it is important to be aware of the likelihood of any particular species occurring in a given area at a given season, each article is prefaced with a short section entitled 'Where and when', but it must be stressed that this is only a generalised outline that cannot account for every eventuality. Many accounts end with a short list of references. These point the way to books and articles that contain useful additional information or which go into various aspects of the identification in more detail.

Bird names

Since the first edition, there have been a number of changes to English bird names, some of which have been widely accepted, others almost universally ignored. The names used in this book attempt to reflect current normal usage by 'ordinary birders' but, for the sake of clarity, some epithets (such as 'Barn' Swallow) have occasionally been used.

Statistics

The rare breeding bird, scarce migrant bird and rare bird statistics have been taken from the official record published in *British Birds* (see *Bibliography*) and relate to Britain (but exclude Ireland). Their use attempts to quantify the likelihood of any given species being seen at a specific time and place. All are taken from the most recent reports: rare breeding bird data being accurate to 2010, the rare bird data to 2011 and the scarce migrant data to 2007. 'Current averages' are based on the most recent ten years. Waterbird counts are taken from the annual report *Waterbirds in the UK* and are accurate up to 2010/11.

Short cuts to identification

Knowing the common birds

The only way to become an expert birder is to spend as much time as possible in the field and, as in all things, practice makes perfect. However, time should be spent not just in acquiring a large life list but in getting to know common birds. The secret to identifying a rarity is the ability to eliminate the common confusion species: how, for example, can you identify a Ring-billed Gull if you have never bothered to take a close look at a Common Gull?

Keep an open mind

When faced with something unusual, do not automatically assume that it is a rarity. Consider all of the other possibilities. Could its appearance be due to individual variation? Is it something common in an unfamiliar plumage? Is it aberrant? Is it a hybrid? Is it an escaped cagebird? If you are stuck, take a full description or a photograph, but always try to get someone else to look at the bird. This is especially important with rarities, as substantiated observations will have a much better chance of acceptance. On the other hand, try to make up your own mind about an identification and do not be bamboozled by so-called 'experts' who are not.

Calls

Most good birders identify a large proportion of birds by calls and songs. Unfortunately, there is no shortcut to learning calls, but try to follow up all the unidentified bird calls that you hear. Bird recordings may help, but they are no substitute for hearing the real thing within the context of its natural environment.

Fieldcraft

Standards of fieldcraft have declined over the years, presumably because so many observers now birdwatch from hides or turn up at a 'twitch' to find their quarry already under observation. Remember the old rules of wearing sombre clothing and moving quietly and smoothly. Also, remember the benefits of patient stalking, and do not be afraid to crawl on all fours or to duck down below vegetation to avoid flushing the birds that you are pursuing. It is often possible to get close to birds by using even scanty vegetation as cover. Conversely, on modern bird reserves, many species have become so used to people walking along regular trails that they do not feel threatened by our presence and can be approached very closely.

Note-taking

When faced with an unusual bird, it is imperative that you take exhaustive field notes *on the spot*. If this is not possible, then write some notes on the same day, before you go to bed (once you have slept, the brain seems to file away your 'photographic' mental image into a different intellectual part of the brain, so you will no longer be able to accurately recall what you have seen). It is also useful to take notes on unfamiliar plumage types and on anything else that

attracts attention, as note-taking aids the learning process. The easiest way to take notes is to make an annotated sketch: if you cannot draw, just use two circles, one for the head and one for the body. Drawing the bird ensures that all parts are checked. When drawing, it does not matter quite so much if you forget the names of the feather tracts as these can be checked when you get home, but try to familiarise yourself with how the feathers lie, particularly on the wing (it is essential to know which are the median coverts, greater coverts, tertials etc.).

Description-writing

In the modern digital age, description writing is rapidly becoming a forgotten art. But if you fail to obtain a frame-filling digital image, you will need to convince a records committee of your sightings. This is when field notes are essential. Remember to organise your description into a logical sequence (start with the head and work back) and the use of accurate topographical terminology is essential. Remember that records committees have to look at large numbers of descriptions, so make your notes concise, readable and interesting. Start with an introduction, outlining the circumstances of the observation, and write a short summary of the bird's appearance, emphasising the salient features and overall impression, before embarking on a detailed feather-by-feather account. Try to include a drawing if possible, as it is usually easier for a committee to visualise a bird from a drawing than from a description. Furthermore, describe what you actually saw, not what you think you should have seen, and do not trot out standard text book clichés: it is those descriptions that include a minor feature not mentioned in the books that are often the most convincing. Finally, do not forget the bird's behaviour, habitat and calls, as well as weather details, distance, optics, names of other observers and details of your previous experience. All of these points are important if a record is to be accepted.

Photographs

Nowadays of course, description writing has been largely sidelined by digital photography and digiscoping. There is no doubt that this has revolutionised birding, it being possible to take excellent record shots with an ordinary digital camera and a telescope. However, beware of falling into the trap of spending so much time taking photographs that you fail to take a proper look at the bird itself. Also remember that digital images have their limitations and can be misleading, particularly in the evaluation of subtle plumage tones.

Making mistakes

Remember that *all* birders make mistakes, even experts. Rather than dwelling on misidentifications, remember that mistakes are all part of the learning process and are nothing to be ashamed of. Inevitably, the more experienced you become, the fewer mistakes you will make, but do not lose sight of the fact that the identification of many of the species covered in this book really is difficult, particularly in testing field conditions.

Glossary

- Arm** Inner wing between body and carpal joint (often used for raptors).
- Brownhead** Term applied to encompass female, juvenile and immature plumages of Smew, Red-breasted Merganser and Goosander.
- Chum** Revolting mixture of dead fish, fish oil and, sometimes, popcorn poured onto the sea to attract seabirds on pelagic trips.
- Culmen** The ridge along the top of the upper mandible of the bill.
- Eclipse** Non-breeding plumage of male ducks in late summer.
- Filoplume** A hair-like feather.
- Gonyes** The ridge of the lower mandible between the gonydeal angle and the bill tip (often used in reference to large gulls).
- Gular** Pertaining to the throat.
- Hand** Outer wing between carpal joint and tip (often used for raptors).
- Leucism** All-white plumage or all-white feathers mixed with normal-coloured ones. Always normal-coloured eyes. Other colour aberrations (such as black plumage that is normally pale brown) have a variety of terms; see van Grouw (2013).
- Overshooting** When a migrant bird flies further than it should (e.g. a Subalpine Warbler heading from Africa to Spain, but 'overshooting' to Britain.)
- Pishing** 'Shushing' noise made by birdwatchers to attract warblers and other small passerines.
- P10, P9 etc.** The primaries on some species, particularly gulls, are referred to by a letter and number, P10 being the outermost primary, P9 the second outermost and so on to P1, which is the innermost primary immediately adjacent to the secondaries. Confusingly, this system is usually reversed in passerines, where the outermost primary is referred to as P1.
- Rectrices** Main tail feathers.
- Remiges** Main flight feathers (primaries and secondaries).
- Tertial crescent** Large white crescent-shaped fringe to the closed tertials, seen on adult gulls at rest.
- Tertial step** Refers to a distinct 'step' on the closed wing between the tertials and the primaries when viewed side-on (commonest on large gulls).
- Wreck** Occasional disaster affecting seabirds that are swept ashore or inland by gales and/or food shortages.

Topographical tips

See topography drawings at the end of this section.

Learning the topography of a bird is fundamental to understanding and describing the features that you see. It is important to stress that feathers on a bird are not haphazard, but are grown in organised rows or groups, overlapping like roof tiles. These feather tracts have specific standardised names illustrated on the front endpapers. Many birders confuse some of the terminology and the following lists some areas that most frequently cause problems.

Culmen, gonys and gonydeal angle The ridge along the top of the upper mandible of the bill is the 'culmen'; hence, a bird may show a 'strongly decurved culmen'. On the lower mandible, some birds, particularly gulls, have a distinct angle, about three-quarters of the way along towards the tip; this is the 'gonydeal angle'. The ridge of the lower mandible between the gonydeal angle and the bill tip is called the 'gonys'. Thus, the heavier-billed Great Black-backed Gull has a much stronger gonydeal angle than a Lesser Black-backed Gull.

Eye-stripe and supercilium The eye-stripe is exactly that: a stripe through the eye. When present, this is a dark line that usually extends from the bill back through the eye. On some birds, it extends just from the eye back, leaving the lores (the area between the eye and the bill) pale and unmarked. This may seem an insignificant difference, but unmarked lores produce a different facial expression – a rather pleasant, gentle, 'open-faced' appearance – whereas those species that have a line across the lores tend to look more 'severe'. Species for which this difference is significant include Reed and Little Buntings, and Tawny and Richard's Pipits. The supercilium is the *pale* line extending back from the bill *above* the eye and *above* the eye-stripe; as it is a Latin word, the plural is supercilia. The dictionary definition of the word is 'eyebrow' which is what, quite sensibly, it is called in North America. Some species have the supercilium extending only from the eye back, while others, such as Spotted Redshank, basically show only a fore-supercilium from the bill to the rear of the eye.

Crown-stripe Some species possess a pale stripe on the centre of the crown known as the 'crown-stripe'; occasionally it may be more precisely referred to as the 'median crown-stripe'. Some birds show a *dark* line on the side of the crown, immediately above the supercilium, and this is called, quite logically, the 'lateral crown-stripe'. Common Snipe, Aquatic Warbler and Firecrest show both.

Eye-ring and orbital-ring Many birds show a ring pale of feathers around the eye known as the 'eye-ring'. Whereas an eye-ring comprises feathering, the 'orbital-ring' is a narrow ring of *bare skin* immediately surrounding the eye. In some species, this may be swollen, colourful and very obvious, classic examples being the yellow orbital-rings shown by Lesser White-fronted Goose and Little Ringed Plover.

Chin and throat The 'chin' is the small area of feathering immediately below the base of the lower mandible of the bill. As such, it is not usually necessary to differentiate it from other areas of a bird's plumage. The 'throat' is the large, triangular area of feathers between the chin and the upper breast.

Moustachial stripe, submoustachial stripe and lateral throat-stripe These three areas are often confused, but a recent development has clarified the position quite considerably. The 'moustachial stripe' is a dark line shown by many birds, most obviously pipits and buntings, which runs obliquely from the gape down and along the lower border of the ear-coverts. Many birds have another dark line below this, bordering the throat, properly referred to as the 'lateral throat-stripe'. Between the dark moustachial stripe and the lateral throat-stripe is usually a pale area known as the 'submoustachial stripe'. So, from top to bottom there is: (1) the dark moustachial stripe, (2) the pale submoustachial stripe and (3) the dark lateral throat-stripe. Note that the confusing 'malar stripe' is no longer in use.

Nape and hindneck The rear of the head, between the crown and the mantle, is called the nape (upper) and the hindneck (lower).

Mantle and back These two terms are often confused. The 'mantle' is the forward part of the upper side of a bird, immediately below the nape, whereas the 'back' is the lower part, sandwiched between the mantle and the rump. One complication, however, is that with adult gulls and terns, the whole of the grey area of the upperparts, which involves the mantle, back, scapulars, wing-coverts and tertials, is often referred to in its entirety as 'the mantle'.

Tertials On the closed wing, between the wing-coverts and the primaries, are the 'tertials'. They are in fact the three innermost secondaries that are elongated to cloak the bases of the primaries at rest; they often show contrasting pale edges or fringes (hence: 'tertial fringes'). On some birds, such as gulls, the secondaries are often invisible at rest, but on others, such as warblers, the secondaries are visible immediately below the tertials. On some species, such as Icterine Warbler, the tertials and secondaries have contrasting pale fringes that form a rectangular 'wing-panel'.

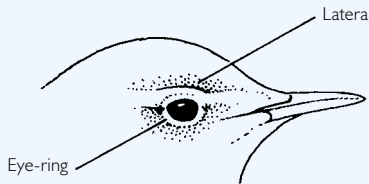
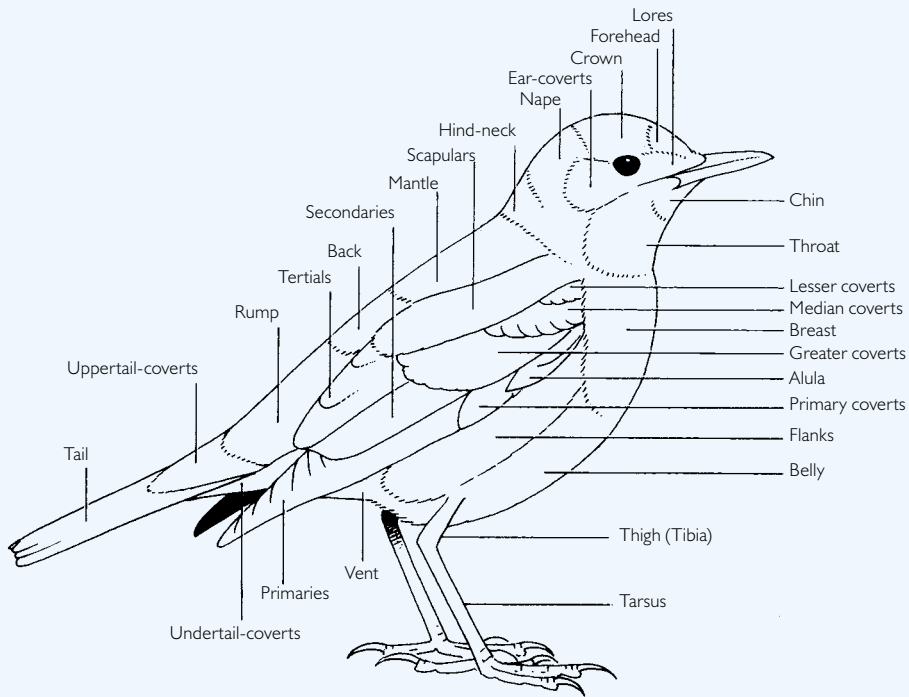
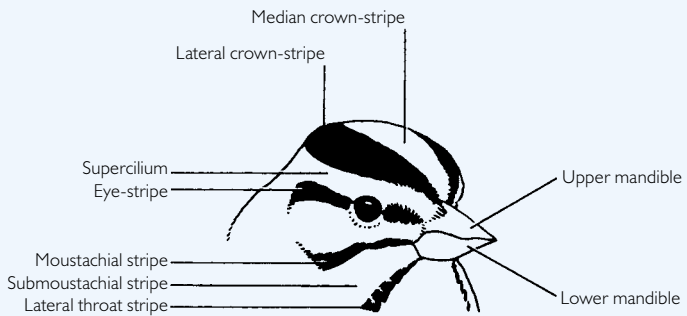
Speculum The iridescent speculum on dabbling ducks is on the secondaries and this area too is often readily visible at rest.

The open wing This can be divided into the flight feathers and the wing-coverts. The flight feathers comprise the primaries, secondaries and tertials. The feathers that overlay the primaries, towards the bend of the wing, are the 'primary coverts' (in fact comprised of lesser, median and greater primary coverts but, for identification purposes, these are not usually differentiated). The line of larger coverts overlying and immediately in front of the secondaries are the 'greater coverts', while the line of smaller coverts overlying the greater coverts are the 'median coverts' (not *medium* coverts). In front of these is a larger, more random looking area of small feathers: the 'lesser coverts'. The large oval-shaped area of 'shoulder' feathers between the open wing and the mantle/back is the 'scapulars'.

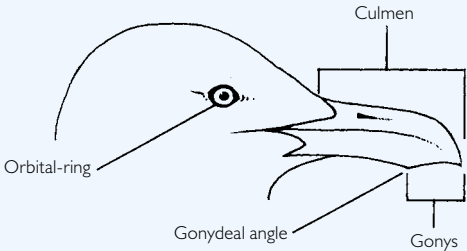
The closed wing What is less straightforward is how these feathers lie when the wing is closed. The first point to remember is that, at rest, the lesser coverts are largely concealed by the overlying scapulars and sometimes by the fluffed-up flank feathers, so that all that can usually be seen at rest are the median and greater coverts; on many passerines, these feathers have pale tips, which form two wing-bars. On many non-passerines, the scapulars are often the largest area of 'non-flight feathers' visible on the upper side of a bird at rest, although this depends to some extent on the bird's posture. On swimming ducks, the wing-coverts are usually completely hidden by the scapulars and flank feathers.

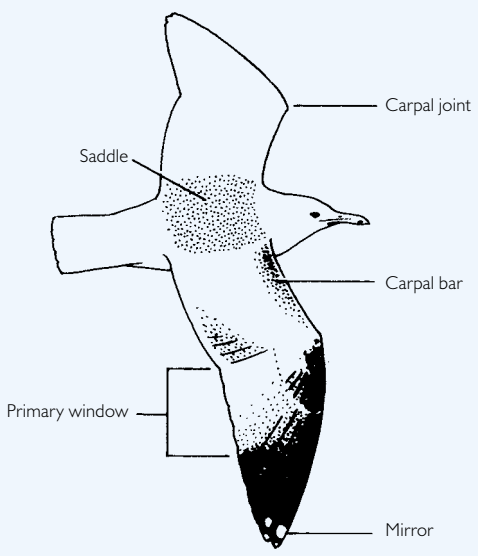
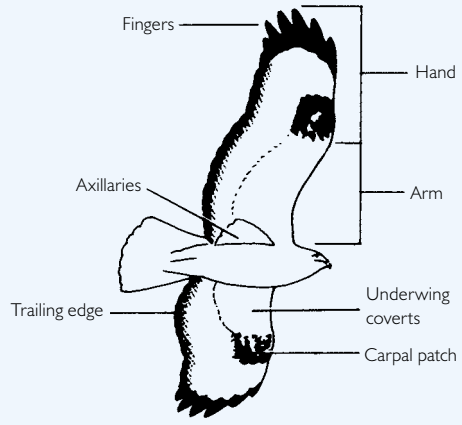
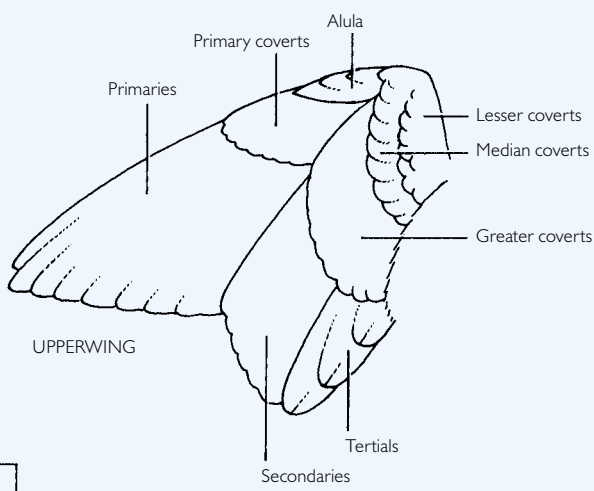
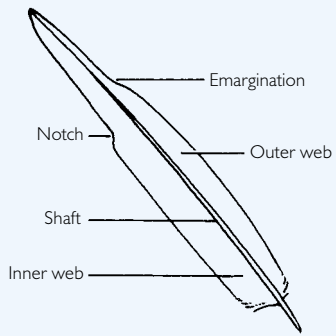
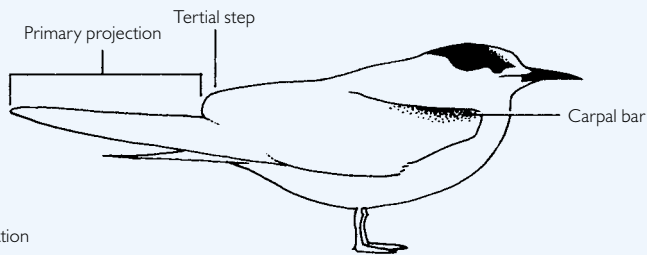
Primary projection At rest, the visible primaries beyond the tertials are referred to as the 'primary projection'. As a general rule, the longer the primary projection, the longer distance a bird migrates. In some species pairs, for example Willow Warbler and Common Chiffchaff and Icterine and Melodious Warblers, accurate assessment of the primary projection is one of the best ways to separate them. What you have to do is to gauge the length of the primary projection *compared* to the length of the overlying tertials. Thus, on a Common Chiffchaff, the primary projection is about half the overlying tertial length, whereas on the longer-winged Willow Warbler it is about three-quarters to equal. Some birds show no primary projection at all, their primaries being completely cloaked by the overlying tertials. The most obvious examples are larks, pipits and wagtails.

Remiges and rectrices 'Remiges' is a collective word given to the primaries, secondaries and tertials combined; as such it is a useful abbreviation when referring to those three feather groups, which comprise the 'flight feathers'. 'Rectrices' is the equivalent term for the tail feathers, but is less frequently used.



The eye-ring is made of feathers.
 The orbital-ring is the bare ring of flesh around the eye shown in some birds such as gulls.





Moult and ageing

1. The basics

The correct ageing of a bird is often fundamental to its identification. To facilitate this, an understanding is required of the precise terminology that describes the various ages, which are related to a bird's moult cycle.

Juvenile plumage Newly hatched birds fall into two categories: (1) naked and blind, remains in the nest and is fed by its parents (altricial), or (2) covered in down, has its eyes open and is soon able to leave the nest and feed itself (precocial). All young birds must grow as quickly as possible and acquire the power of flight. In some small passerines this can take as little as ten days, which is an extraordinary physiological feat. In that time, they must grow their first covering of feathers, which is known as *juvenile plumage*. In order for it to grow so quickly, something has to be sacrificed: the strength and durability of that plumage. Consequently, the juvenile feathers of many species, particularly passerines, are weak and this is why young birds have an endearing fluffy appearance. The parents continue to feed them once they have left the nest but, gradually, the young become independent. The feeding is good in the long, warm days of late summer, making this the ideal time for young birds to quickly lose their inferior juvenile plumage and grow a stronger set of feathers that will see them through the winter. Thus, in late summer and early autumn, most young birds undergo *post-juvenile moult*. This usually involves just a body moult in which all the head and body feathers are replaced. The juvenile flight feathers (primaries and secondaries) and the tail feathers are retained. A young Robin, for example, loses its spotted brown juvenile body plumage – which made it difficult to detect during its inexperienced days in the shady undergrowth – and acquires its red breast and plain brown upperparts. By late autumn, it resembles its parents and, to all intents and purposes, is in adult plumage.

Immature plumages While a Robin may be adult-like by late autumn, other birds take much longer to acquire adult plumage, and larger birds may pass through a number of immature plumages before reaching adulthood. As a rule, the larger the bird, the longer it takes to mature and the more immature plumages it has. A group that demonstrates this particularly well is the gulls. Larger gulls, such as Herring Gull, usually take about four years to reach maturity, the medium-sized Common Gull takes three and the small gulls, such as Black-headed Gull, take two. To take Common Gull as a straightforward example, its juvenile plumage is essentially brown, but it gradually moults much of its body plumage during autumn, acquiring a whiter head and underparts, and grey back, mantle and scapulars. This new plumage is given a specific name, which is, quite logically, *first-winter plumage*. In spring, it has another body moult into *first-summer plumage*. It is not until late summer, when the bird is one year old, that it has its first complete moult, replacing all of its wing and tail feathers for the first time and its body feathers for a third. Its *second-winter plumage* is much more adult-like but still shows traces of immaturity, such as brown in the primary coverts. This is followed by another spring body moult into *second-summer plumage*, which is then followed by another complete moult into *adult plumage*, when it is just over two years old. Each plumage is more adult-like than the previous but remember that the different

plumages may vary individually, particularly in larger birds (such as Herring Gulls) so do not expect all birds to conform exactly to those illustrated in field guides. Bare parts too – eyes, bill and legs – also change as a bird gets older and, although their progression is roughly in sync with their plumages, there is great individual variation in the acquisition of bare-part colours.

Juveniles and immatures At this point, it is essential to clarify one particular area of confusion. Any bird that is not mature (i.e. not an adult) is an ‘immature’. Literally, ‘immature’ simply means ‘not mature’. Thus, a juvenile bird is an immature, as is a first-winter, a second-summer and so on. The term ‘juvenile’ should be confined to a bird’s very first plumage worn for a short time after leaving the nest. Although many larger birds migrate whilst still in juvenile plumage, most passerines do not. Therefore, you will not see juvenile Redstarts or Yellow-browed Warblers in September falls on the east coast. If these birds are not adults, then they are ‘first-winters’. Similarly, *subadult* is also to be avoided if possible, as again more accurate ageing can usually be determined.

Spring body moult This has an important and obvious function both for adults and many first-years: it enables them to change from their drab, functional winter plumage into brightly coloured breeding or summer plumage.

Calendar-year ageing Some large birds, such as cormorants and large birds of prey (e.g. eagles) have a fairly continuous moult in which several generations of feathers are present simultaneously. Precise ageing terms, such as ‘first-winter’ and ‘second-winter’ then become redundant so, to circumvent this problem, larger birds are often aged in relation to the year in which they hatched. A bird hatched in May 2013 will be called ‘first calendar year’ up to 31 December 2013, ‘second calendar year’ from 1 January to 31 December 2014, and so on.

Feather wear When identifying birds and assessing ageing, bear in mind the effects of wear, abrasion and bleaching. Old feathers wear and fade, and significant plumage features (such as wing-bars) can disappear through wear, while some species alter plumage tone (for example, fresh autumn Meadow Pipits possess a green tint, whereas worn breeders are much browner). Immature gulls are notoriously prone to wear and bleaching, and may look particularly ‘tatty’ and faded in summer, when their wing and tail feathers are nearly a year old. Some species acquire summer plumage not by moult, but by the wearing away their duller feather fringes (see below).

2. Waders and other non-passerines

Juvenile waders As noted in part 1, most passerine migrants have a body moult before they head south in autumn, but what happens if there is not time to complete it? This is the problem that faces all birds that nest in the Arctic. Although food there is abundant, summer is short, so young birds do not have time to complete a post-juvenile body moult. They therefore have no option but to head south while still in juvenile plumage. Consequently, nearly all southbound autumn waders are in full juvenile plumage. In many ways, this plumage is a halfway house between adults’ summer and winter plumages. Like summer adults, juveniles tend to be brown and patterned on the upperparts, providing good camouflage when viewed from above, but the underparts are mainly white, like the adults’ winter plumage. Many species really do look intermediate. For example, juvenile Black-tailed Godwits, particularly those of

the Icelandic race *islandica*, are usually quite bright orange on the underparts, while juvenile Spotted Redshanks appear rather dusky grey-brown, somewhere between the smart black of summer plumage and the grey and white of winter. It was no doubt this juvenile plumage that gave rise to its now redundant alternative name of 'Dusky Redshank'.

Adult waders in autumn Because young waders' feathers are all grown at the same time and because they are all very fresh in late summer and autumn, juvenile waders always look neat. In contrast, adults in late summer often undertake body moult while on migration, so they look tatty and 'moth-eaten' compared to their immaculate offspring. Most young waders do not moult until they arrive on their wintering grounds, after which they look like winter adults. There are, however, a number of notable exceptions, the most obvious being juvenile Dunlin, which often acquire grey scapulars on migration. Grey Phalaropes are also transitional by the time they reach Britain, with a patchy grey-and-black appearance to their upperparts (Red-necked Phalaropes moult somewhat later). For two rarities, Semipalmated and Western Sandpipers, moult timing can be fundamental to their separation.

Other Arctic migrants Birds such as divers, geese, ducks, skuas and terns also migrate in juvenile plumage and gradually start to moult into first-winter plumage once they have reached their winter quarters. Interestingly, whereas most mid-latitude gulls soon start to acquire fresh first-winter feathering, Arctic gulls such as Glaucous and Iceland retain their juvenile body plumage well into the winter. Another useful example is provided by Common and Arctic Terns: any 'Commic Tern' showing primary or secondary moult in autumn will be a Common Tern; the more northerly breeding adult Arctics do not normally commence wing moult until they reach Antarctica.

Tail and primary moult With a few exceptions, juveniles do not moult their primaries and secondaries or tail feathers in late summer. Therefore, almost any bird showing wing and tail moult in autumn is an adult. This means that, for example, distant Curlews, Common Buzzards and Ravens with symmetrical gaps in their flight feathers can be aged at considerable distances, even in flight.

3. Passerine exceptions

When Lars Svensson first published his iconic *Identification Guide to European Passerines* in 1970, the ageing of passerines was purely the domain of ringers. In recent years, however, improved optics and the advent of digital photography has meant that field birders are in a much better position to try their hand at the subtleties of ageing. This may seem like a step too far, but the accurate ageing and sexing of a bird is as much a part of the identification process as its specific or racial identity. The following provides some tips on the moult and ageing of passerines, but it must be stressed that this is a difficult and complicated subject, bedevilled by significant individual variation.

Single moulters (acquisition of summer plumage by feather abrasion) Several passerines do not moult twice a year, only once. The most obvious examples are some of the chats and finches. In late summer, they lose their colourful summer plumage and acquire a plumage that is much drabber. This is because the colourful bases of the new feathers are obscured by paler and browner fringes. As winter progresses, these dull tips gradually wear off so that, by spring, their bright and colourful 'summer plumage' is revealed. Most of these species

are resident or relatively short-range migrants, e.g. European Stonechat, Common Starling, Linnet, Chaffinch and Brambling.

Species that migrate in juvenile plumage A small number of passerines migrate while still in full juvenile plumage, their post-juvenile moult not commencing until arrival in the winter quarters. Some warblers fall into this category, including Sedge and Aquatic (but not Reed) and *Hippolais* warblers (Melodious and Icterine). Another bird that migrates in juvenile plumage is Common Rosefinch. Peculiarly, Red-rumped Swallow migrates in juvenile plumage, whereas 'Barn' Swallow has a body moult before it heads south.

Species that migrate in juvenile or first-winter plumage Some species vary in the acquisition of first-winter plumage. For example, young Richard's and Tawny Pipits from early broods have time to moult into first-winter plumage prior to migration, whereas later broods may not. This means that many later-hatched individuals migrate while still in juvenile plumage. Others may suspend moult and migrate in a mixture of the two plumages.

Adults that moult in their winter quarters Some long-distance adult passerine migrants do not moult until they arrive in their winter quarters, the most obvious being hirundines (although some start their moult in Europe). Other species that follow this strategy include Reed Warbler and Spotted Flycatcher. Adult Spotted Flycatchers are in fact surprisingly rare in Britain in autumn, when they look decidedly worn and abraded compared to the more pristine first-winters.

Juveniles that have a complete post-juvenile moult A final group of exceptions includes a disparate bunch of unrelated species in which juveniles undertake a complete post-juvenile moult. One thing that they have in common is that most are sedentary, and because they do not migrate, they have time to renew all their feathers. These include the larks, Bearded and Long-tailed Tits, Common Starling, House and Tree Sparrows, and Corn Bunting.

Ageing first-winters Following post-juvenile moult, most young passerines are basically adult-like. Indeed, many, such as *Phylloscopus* warblers, are virtually impossible to age even in the hand. Some families of birds are easier to age than others and there are some useful pointers to remember. **1 BUFF TIPS TO THE GREATER COVERTS** Many first-winter thrushes (and related species such as nightingales) retain buff tips to their juvenile greater coverts, forming a narrow wing-bar. It should be noted, however, that whilst the presence of such tips indicates a first-winter, their absence may not prove the reverse since first-winters may lose them through abrasion. Remember though, that Song Thrushes and Robins can show buff tips even in adult plumage. **2 DIFFERENT LENGTH GREATER COVERTS** Some young birds moult their greater coverts in autumn and winter, the consequence being that their new adult inner greater coverts are longer than their old juvenile outer feathers, so there is a distinct 'step' between the two ages (often referred to as 'moult limit'). This is particularly useful with thrushes and pipits. On thrushes, there is an additional difference in that the adult inners are fairly plain, whereas the juvenile outer feathers show distinct pale fringes. On larger pipits, such as Richard's and Tawny, the adult inners are diffusely brown-fringed, whereas the juvenile outers are sharply fringed with white. **3 TAIL FEATHER SHAPE** In some passerines adults and first-winters have different-shaped tail feathers: adults have broad tips with rounded corners, whereas first-winters retain more pointed juvenile feathers. This can

be particularly useful for ageing well-photographed vagrants. **4 FAULT BARS** Young birds in the nest sometimes undergo periods of food shortage, particularly during bad weather. This may manifest itself in 'fault bars' across the tail, which are inconspicuous but distinctive narrow bars across each feather, representing structural deficiencies brought about by poor diet. As adults re-grow their tail feathers in sequence, they do not show fault bars across the entire width of the tail (unless they re-grow a new tail after losing it through an accident).

Whooper and Bewick's Swans

Where and when Whooper Swan *Cygnus cygnus* has a more northerly winter distribution than Bewick's *C. columbianus*, occurring mainly from September to April in Scotland and Ireland. Paradoxically, however, the largest concentrations are in England: Lancashire and the Ouse Washes in Norfolk/Cambridgeshire. A few pairs breed in Scotland, and occasionally elsewhere. Bewick's Swan has a more southerly distribution, occurring mainly from October to March in England, with the Ouse and Nene Washes being the main sites. Mute Swan *C. olor* is a widespread and common resident.

Structure Bewick's is the smallest swan, with rather goose-like proportions. Compared to Whooper, the head is more rounded, the bill smaller, the neck shorter and proportionately thicker. Whooper has a long neck, a large wedge-shaped bill and it tends to show a more bulging breast. Most of these differences are also apparent in flight, but caution is then required.

Bill patterns Bewick's has a smaller bill, at least half of which is black; the amount and shape of the yellow at the base varies individually, but the yellow is rounder or squarer than on Whooper. On the latter, the yellow extends in a sharp point towards the tip so that, from a distance, most of the bill appears yellow. Young juveniles of both species have ivory or cream at the base, the distal part being pink (and the tip itself black). At a distance, therefore, young Bewick's can appear to have a large, pointed pale area, recalling Whooper, and lone individuals can be surprisingly tricky. However, the point to remember is that, in both species, the ivory or cream area at the base is similar in shape to the yellow on the adults' bills. Thus, on Bewick's it is cut off squarely from the pink, behind the nostril. On Whooper it extends in a sharp point past the nostril, a smaller patch of pink being restricted to the area behind the black tip and immediately in front of the nostril. In both species, the ivory or cream basal patch may gradually become yellower as the winter progresses. In addition, both species gradually lose the pink, which turns black and is subsumed into the black bill tip, the extent of which mirrors that of the respective adults. However, unlike Whooper, many juvenile Bewick's retain the deep pink into their first-summer. Juveniles and first-winters are otherwise best separated by size and structure, although their identification is usually facilitated by the fact that the young normally stay with their parents throughout their first winter (many Mute Swan families split up in autumn).

Plumage Adults As a result of feeding in iron-rich pools, Whoopers often show orange head staining. **Juveniles** Uniformly pale ashy-grey (Whoopers tend to be slightly darker) and even when the white first-winter feathering appears, they still look rather uniform as a result of their overall paleness; indeed, distant young are not always obvious amongst the adults. Compared with juvenile and first-winter Mute, they are much paler, more uniform and smoother looking. Juvenile Mute is darker and browner, and the gradual appearance of white first-winter body feathering creates a uniquely patchy appearance. However, the amount of white varies (some are still uniformly dull brown in late winter) but it is usually similar within a brood. In flight, such birds still show a patchy contrast between the whitish flight feathers and the brown wing-coverts and body. Note also young Mute's dark grey, black-based bill. Rarely, all-white juvenile Mute Swans occur (so-called 'Polish Swans').

Calls Bewick's has variety of calls, most being softer and more muted than Whooper; perhaps



Bewick's Swan.

Proportions are
goose-like.

Whooper Swan.

Note very long neck.

Mute Swan. The wings
make a rhythmic throbbing
noise in flight.

Mute Swans.

Curved neck and
pointed tail distinctive.
Arched wings of
threatening adult
diagnostic.



Ist-winter Mute Swan.

Brown rather than grey, ▶
becomes patchy.



Whooper Swans.

Note small head on
long neck, bulging
breast. Extensive
yellow on bill ending
in point. Head and
bill wedged-shaped.

Ist-winter Whooper Swan.

◀ Greyer than Mute Swan and
more uniform.

Bewick's Swans.

More
goose-like build than
Whooper, with short neck.
Yellow bill patch small and
generally more rounded.



Ist-winter Bewick's Swans. ▶
Paler, greyer
and more evenly coloured than Mute Swan.

most characteristic is a soft, pleasing, rather hollow *oop oop*. Whooper's calls are typically louder, deeper and more trumpeting. Mute occasionally gives a deep but quiet, wheezy grunt, a goose-like honk and a loud hiss; in flight, its wings make a distinctive rhythmic musical throb.

Distant separation from Mute Swan Note Mute's generally more curved neck and, particularly, its longer, pointed tail; the orange bill with a black knob is visible at some distance. Bewick's and Whoopers are sleeker, do not arch their wings in threat like Mute, but engage in trumpeting displays with outstretched necks and open wings.

'Whistling Swan' There are two British records (1986 and 1998) of Bewick's showing characters of the nominate North American race, known as 'Whistling Swan'. It can be distinguished by its almost all-black bill, often with tiny amounts of yellow at the base. When faced with a 'black-billed Bewick's', very detailed attention should be given to the bill in order to eliminate the possibility of discoloration. The exact pattern of any yellow should be noted and the bird photographed.

Grey geese

Where and when When identifying grey geese, it is important to be aware of each species' main distribution patterns and traditional wintering areas. Most wild geese arrive in Britain in September and October and remain until March (although some Pink-footed Geese remain into May or even June). Being the only grey goose that breeds here, Greylag Geese may be encountered throughout the year. As distribution is a vital clue to their identification, this is covered in the individual species accounts.

General approach Geese often occur in non-traditional areas and the careful scrutiny of flocks sometimes reveals the presence of rarer species. Frustratingly, however, geese also escape from captivity, so always check out-of-context individuals for rings, wing-clipping and unusual tameness. When identifying geese, concentrate on size, structure, head and neck colour, and body patterning, but most important are the bare-part colours. Note that males of all species average about 5% larger than females and about 10% heavier; this is particularly relevant when judging the size of lone geese. In flight, geese can be identified by a combination of structure, forewing colour and calls, although the latter require practice (and there is much variation).

Ageing of grey geese Juveniles have weak and rather fluffy head, neck and body feathering, duller than the adults with duller and buffer feather fringes on their upperparts; these extend right around the edges of the feathers to produce a *scalloped* pattern. Adults have paler, more contrasting and more noticeable pale fringes, but these are strongest across the *tips* of the feathers. Consequently, adults' upperparts are strongly but neatly *barred*. Early in autumn, fresh-plumaged juveniles tend to look paler and plainer than the adults, with their heads similar in colour to their bodies. During the autumn, however, juveniles commence a body moult, starting with the head, neck, lower scapulars and flanks. The moult varies individually, with some birds renewing all of their body feathers by late winter, at least some tail feathers and some median coverts, but others retain some juvenile body feathering into the following summer (Cramp & Simmons 1977). The moult means that, in the field, young birds often appear less immaculate than their parents; this is because they gradually show a mixture of old worn, scalloped juvenile feathers and fresh barred adult ones.

Greylag Goose *Anser anser*

Distribution Greylag Goose is the only species of grey goose breeding in Britain. Wild birds breed in n. Scotland, particularly the Outer Hebrides, Orkney and Shetland, but re-established birds are now common over much of Britain and in a wide variety of freshwater habitats; in fact the two populations are no longer distinguishable. Winter immigrants from Iceland occur in large numbers, mainly from October to April in Scotland (with smaller numbers in NE England); they are surprisingly rare further south.

Structure The largest, heaviest and most thickset of the grey geese. It is worth remembering that Greylag is the ancestor of the domestic 'Farmyard Goose' and it shares many of its characteristics, most notably its loud, honking calls.

Plumage A rather pale goose with a distinctly grey tone to its plumage, particularly to the head and underparts. It shows a heavy, thick-based, mainly orange bill and pink legs. Note too the very strong crenellations that run down the sides of the neck, standing out against the pale grey plumage. Most distinctive is its extensive pale grey forewing in flight (see below).

Eastern race *rubrirostris* The Greylags breeding and wintering here are of the nominate race but birds showing characters of the eastern race *rubrirostris* may also occur (e.g. a small influx in November 2011). Pure *rubrirostris* has a pink bill, which is slightly longer and slimmer than *anser*. Consequently, the bill shape may be reminiscent of Taiga Bean Goose. Its plumage is also a paler, cleaner grey with more obvious white barring, both above and below, producing a strongly scalloped impression. There is a problem, however, in that *anser* and *rubrirostris* intergrade across Europe, so birds with intermediate characters occur, such as a pink bill with an orange base. It is, therefore, difficult or impossible to be certain of the racial integrity of any individual seen in Britain although, when all the birds in a flock show *rubrirostris*-type characters, it is possible to be more confident about their Continental origin, especially if they exhibit 'wild behaviour'.

Confusion with White-fronted Goose Many Greylags show traces of black on the belly and white feathering around the base of the bill (vaguely recalling White-front). Indeed, lone Greylags can be confused with juvenile White-front: note that Eurasian White-front has a pink bill and orange legs, the opposite to Greylag (Greenland White-front has an orange bill and legs). White-front is smaller, slighter, smaller-headed, smaller-billed and generally browner and plainer than Greylag, lacking the latter's strong, crescent-shaped whitish fringes to its body plumage.

Flight identification Greylags are heavy and thickset with a heavy bill and a large head, sometimes emphasised by their 'pinched-in' neck; most obvious are the forewings, which are strikingly pale grey. They also show pale grey underwing-coverts that contrast with dark under-remiges (all other grey geese have uniformly dark underwings).

Calls Their loud honking calls, which recall domestic geese, allow for instant and confident identification.

Pink-footed Goose *Anser brachyrhynchus*

Distribution The most abundant wintering goose, found mainly in southern and central Scotland, NW England, the Wash and n. Norfolk, where they form huge and impressive flocks. Present from late September to April, with stragglers into May or even June. At least two pairs bred in Scotland in 2010.



Greylag Goose. Large with pinched neck, large head and broad-based wings. Note pale grey forewing, pale underwing diagnostic.



Pink-footed Goose. Short neck, small dark head and pale grey wings.



Bean Goose. Dull wings, long dark neck, dark rump.



White-fronts with single Greylag Goose (second from right) and Taiga Bean Goose (third from right).

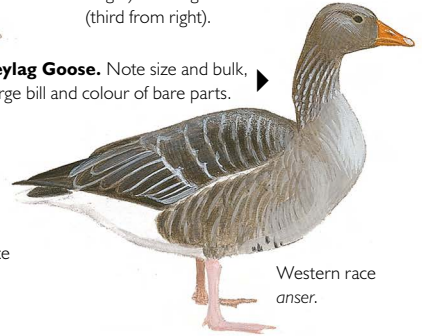
Greylag Goose



All three species may show white at base of bill.



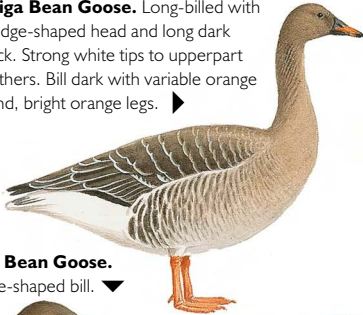
Eastern race *rubrirostris*.



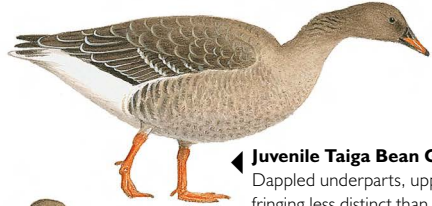
Western race *anser*.

Greylag Goose. Note size and bulk, large bill and colour of bare parts.

Taiga Bean Goose. Long-billed with wedge-shaped head and long dark neck. Strong white tips to upperpart feathers. Bill dark with variable orange band, bright orange legs.



Taiga Bean Goose. Wedge-shaped bill.



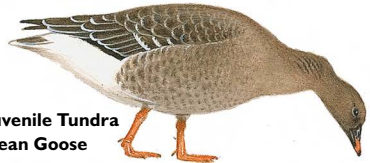
Juvenile Taiga Bean Goose. Dappled underparts, upperpart fringing less distinct than in adult. Note leg and bill colour.



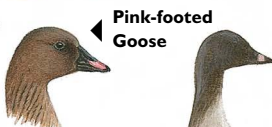
Two Tundra Bean Geese showing variability of orange bill markings.



Tundra Bean Goose. Compact, shape closer to Pink-footed Goose.



Juvenile Tundra Bean Goose



Pink-footed Goose

Adult Pink-footed Goose. Note dumpy body, short neck and small round dark head, greyish mantle. Small dark bill with pink band, pink legs.



Juvenile Pink-footed Goose. Note dark mantle and mottled underparts. In early autumn legs maybe ochre.



Adult White-fronted Geese. Note long wings, white 'front' and belly bars.



Juvenile White-fronted Goose. Lacks white 'front' and belly bars.



Lesser White-fronted Goose. Difficult to separate, but compact and short-necked.



White-fronts with a Pink-foot (fifth from right), a Lesser White-front (second from the right), and a Taiga Bean Goose (extreme right).

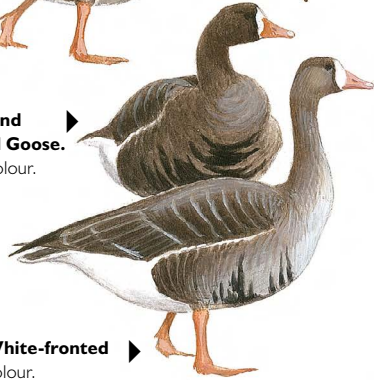
Juvenile White-fronted Goose. Resembles Greylag, note bill and leg colours.



Juvenile Greenland White-fronted Goose. Note orange bill; head and neck darker than European race.



Adult Greenland White-fronted Goose. Dark, note bill colour.



Adult White-fronted Goose. Extreme examples can show white feathering around eye and large rounded 'face' patch.

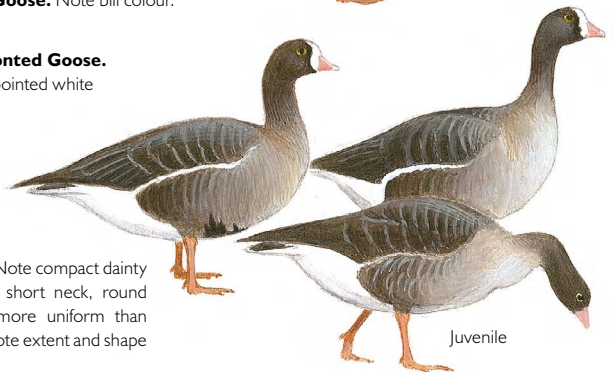


Adult Eurasian White-fronted Goose. Note bill colour.

Adult Lesser White-fronted Goose. Note yellow orbital-ring, pointed white 'face' patch, small bill.



Lesser White-fronted Goose. Note compact dainty build, bright short, triangular bill, short neck, round head and long wings. Plumage more uniform than White-front. Yellow orbital-ring. Note extent and shape of white frontal blaze.



Juvenile

Structure Much smaller and more compact than Greylag, being more similar in size to White-front. It has a distinctly short, thick neck, a rounded head and a short, triangular bill which is crossed with a pink band (sometimes extending back along the cutting edge); its legs, of course, are also pink.

Plumage The very dark brown head and neck contrast strongly with the pale body, which is strongly suffused with grey over the upperparts. This contrast facilitates even distant recognition. Some adults show traces of white feathering around the base of the bill. Juveniles are duller and browner on the upperparts and less strongly patterned. Particularly dull and ‘messy’ first-winters can be confusing, but they should be identifiable by structure and bare-parts coloration, although the pink on the bill and legs may be duller than in adults.

Flight identification Pink-feet look small, stocky, short-necked and pointed-winged in flight. The dark head contrasts strongly with the pale body and the forewings are noticeably grey (but not as pale as Greylag).

Calls High-pitched, musical and usually double-noted: *wink-ink*, sometimes very squeaky (or trebled *wink-ink-ink*); also a distinctive, deeper *ang-ank*. Large flocks make a tremendous noise.

Tundra Bean Goose *Anser serrirostris*

Distribution Tundra Bean has no regular wintering populations in Britain but Musgrove *et al.* (2011) estimated a wintering population of about 320 birds. It occurs erratically in small parties (rarely more than ten) at a wide variety of disparate sites, mainly in e. England. Consequently, it is far more likely to be encountered than Taiga Bean, which is largely confined to two discrete areas (see below). Small influxes may occur during severe freezing weather.

Structure and plumage It is helpful to think of Tundra Bean as being similar to Pink-foot, the two species having similar ecological requirements (the Arctic tundra: Pink-feet in Iceland and Greenland, Tundra Bean in N. Europe and Asia). A bulky, heavy goose with a rather thick neck (and crenellations on the side), a rounded head and a deep, rather triangular bill which, at any distance, may appear quite stubby. It averages slightly larger and bulkier than both Pink-foot and White-front, with more of a side-to-side swagger when walking. Like Pink-foot, it has a dark brown head and neck but it lacks the abrupt contrast between the head and body, the latter being much darker (lacking Pink-foot’s grey suffusion). In addition, adults are more heavily and more contrastingly patterned, the body feathers being coarsely tipped or fringed whitish, creating an obvious scaly effect; strong white fringes to the tertials can be particularly useful in picking out back-on individuals from other geese. Adults can show traces of white feathering around the base of the bill. Juveniles appear much more uniform, their narrow dark buff feather fringes failing to contrast significantly with the rest of the plumage. Concentrate on the bill and legs: adult has bright orange legs and a discrete orange band across the bill. On some, the orange extends back along the cutting edge (suggesting Taiga Bean). The orange is slightly duller on juveniles. Bear in mind that orange and pink can be surprisingly difficult to differentiate in the field.

Flight identification Tundra Bean has dull grey forewings, lacking obvious contrast between the wing-coverts and the flight feathers; thus the forewings are far less contrasting than those of Pink-feet.

Calls Resemble Pink-feet, but are lower-pitched, harder and more strident.

Taiga Bean Goose *Anser fabalis*

Distribution Taiga Bean Goose is largely confined to two areas: the Yare Valley in Norfolk (currently around 120 individuals from November to February) and on the Slamannan Plateau in central Scotland (currently around 270 from October to February); it is very rare elsewhere and should be identified with great care. As its name suggests, it breeds in bogs, marshes and pools in the taiga forest belt of Europe and Asia.

Structure and plumage It is larger, longer-billed and longer-necked than Tundra Bean, their ecological separation being similar to that of Whooper and Bewick's Swans. This is eerily reflected in their structural and bill colour differences (the Bewick's/Whooper analogy is worth bearing in mind when separating the two species). Plumage is extremely similar to Tundra Bean, and, like Greylag, it shows fairly obvious crenellations down the sides of the neck. To separate the two, concentrate on structure. Taiga Bean is a large goose, similar in size to Greylag; it averages 6% larger than Tundra Bean and about 15% heavier. It shows a long, swan-like neck (alert Taiga Beans tower above accompanying Pink-feet). Taiga also has a longer, less triangular-shaped bill than Tundra, often creating a flatter-headed impression (conversely, when at rest the head shape can often look rather peaked). It also has a noticeably bulging breast, as well as a long, bulky body with a heavy bulge in the ventral area. It is slow and ponderous in its movements, having a lumbering gait with a side-to-side swagger. All these features combine to create a distinctly swan-like impression, especially when the bird is alert. At closer range, another feature is that Taiga's bill lacks a 'grinning patch'. On Tundra Bean, the lower mandible bulges, creating a distinct oval gap between the two mandibles. On Taiga Bean, the mandibles fit together more closely so that it lacks this prominent gap. Most Taiga Beans have extensive orange on the bill, either from the tip back along the cutting edge to the base, or sometimes covering almost the entire bill, such individuals being very distinctive. It is important to emphasise, however, that a minority (about 5% in one flock studied) have a bill pattern very similar to Tundra Bean, with a discrete orange band near the tip; conversely, some Tundra Beans have orange extending back in a point to the base of the bill.

Habitat This may be a useful clue. Whereas Tundra Beans tend to feed in similar environments to Pink-footed and White-fronted Geese (agricultural land), Taiga Beans are more likely to be found in longer, coarser vegetation in wetter, marshier environments, where they feed on the roots and seeds of aquatic plants, often burrowing their head into the mud to do so. Consequently, whereas Tundra Beans tend to associate with Pink-feet or Eurasian White-fronts, lone Taiga Beans often associate with Greylags.

Flight identification Whereas Tundra Bean suggests Pink-foot (being rather stocky with a short neck) Taiga is heavier-bodied, noticeably longer-necked and has slower wingbeats. However, flight identification in Britain should be attempted with great care.

Calls Distinctive, deep and guttural, perhaps more reminiscent of Greylag, and obviously deeper than Tundra Bean: *an-angk*, *ar-an-angk* or *ur-ur-ur*.

Eurasian White-fronted Goose *Anser albifrons albifrons*

Distribution The nominate Eurasian race occurs in s. Britain, mainly in Norfolk, north Kent and Gloucestershire. It has declined considerably in recent decades, with more now wintering in the Netherlands. However, numbers may increase considerably in severe winters. It arrives in October, departing mainly in February and March.

Structure and plumage A rather evenly proportioned, pale, grey-brown goose with a slightly gingery-brown head. Note in particular the pink bill and orange legs. Adults are easily identified by their white facial blaze and black belly barring (there is individual variation in the amount of black, with some showing a huge and solid area). Juveniles lack both the white facial blaze and the belly barring, and are noticeably paler than the adults, being pale grey-brown. Consequently, lone juveniles can appear bland and rather featureless, prompting confusion with Greylag Goose (concentrate on bare-part colours and structure). They gradually start to acquire a white 'front' as the winter progresses. In flight, White-fronts appear rather evenly proportioned with dull grey forewings; the adults' black belly barring and white facial blaze should be obvious given a decent view.

Calls High-pitched, yelping and rather musical, especially in flocks, when they may recall a pack of distant dogs: *yi-yip*, *yi-yi-yip*, *ar-yip-yip-yip* and so on.

Greenland White-fronted Goose *Anser albifrons flavirostris*

Distribution The Greenland race *flavirostris* winters chiefly in SW Scotland (mainly on Islay and the Mull of Kintyre) with small numbers in W. Wales. The main wintering site, however, is the Wexford Slobs in Ireland. They arrive in October and depart in April, later than Eurasian birds.

Bare parts The most obvious difference from Eurasian is the bill colour, which is orange (on young juvenile, strongest at the base and somewhat pinker towards the tip). Note, however, that bill colour can be surprisingly difficult to distinguish in the field, so caution is required. Greenland's bill is also about 10% longer than Eurasian's, so it can appear quite long, wedge-shaped and not particularly deep at the base.

Structure and plumage If seen well, Greenland can be surprisingly different from Eurasian. It averages about 5% larger and is distinctly darker, more chocolate-brown, with narrower and darker buff feather fringes that produce a more uniform appearance. Grey wing-coverts are also rather dark. The darkness of their plumage renders the white rump and undertail-coverts more contrasting in flight. On average, Greenland has more extensive black barring on the belly, but this is individually variable in both races. Note that juvenile Greenland with a mud-stained bill can suggest one of the bean geese.

Lesser White-fronted Goose *Anser erythropus*

Distribution Formerly regular, Lesser White-front is now a major rarity with just three records between 2000 and 2012. It has traditionally occurred in flocks of White-fronts (mainly in Gloucestershire) but recently also with Taiga Beans in Norfolk. Introduced birds from Scandinavia now winter in the Netherlands and these too could conceivably occur; frustratingly, escapes are not infrequent.

Structure and plumage Not only the rarest grey goose, but potentially the most problematical. Before identifying Lesser White-front, it is essential to note *all* the differences, particularly structural. Finding a Lesser usually requires prolonged and patient scrutiny of White-front flocks and, without previous experience, the species can be surprisingly difficult to pick out. The adult has a more extensive white blaze and also a yellow orbital-ring, but neither may be obvious, particularly at any distance, so other clues are needed. The white blaze extends well up onto the forehead, but the shape of the white may be useful: viewed

front-on, it is narrow and usually forms a point on the forehead (more rounded on most White-fronts, although some also show a more pointed blaze). It is a distinctly smaller bird in direct comparison (about four-fifths the size) with a shorter and proportionately thicker neck (perhaps suggesting Pink-foot), a steeper forehead and rather square head. The bill is small, delicate, rather triangular and generally brighter pink than White-front's (like White-front, sometimes with a grey area on the upper mandible). The head and neck are slightly darker and, with practice, this is a useful character, particularly coupled with its plainer body plumage and smaller area of black on the belly. More subtle characters include slightly longer wings and a quicker feeding action. Juveniles are particularly difficult but, as with adults, the combination of shape, structure, head and neck colour, and yellow orbital-ring is most useful. Like White-fronts, juveniles lack black belly barring and are plainer above, but most first-winters gradually acquire a white forehead blaze, similar in shape to the adults', but slightly smaller.

Pitfalls Some White-fronts show a particularly large white blaze, some even show yellow orbital-rings and occasional individuals show white feathering around the eyes which, at a distance, may suggest the yellow orbital-ring of Lesser. Sleeping White-fronts reveal pale eyelids which, momentarily, can suggest the rarer species.

Call A three or four-noted *ee-wee-wee-wee*, shrill and penetrating compared to White-front.

Other Confusion Species

When identifying out-of-context grey geese, be aware of escaped birds (such as blue-phase Snow *A. caerulescens*, Bar-headed *A. indicus* and Swan Geese *A. cygnoides*) as well as hybrids (such as Canada *Branta canadensis* × Greylag and Snow × Barnacle *B. leucopsis*) which may show peculiar combinations of plumage and bare-part colours.

References Cramp & Simmons (1977), Holt *et al.* (2011), Musgrove *et al.* (2011), Ogilvie & Wallace (1975).

Snow and Ross's Geese

Where and when Small numbers of Snow Geese are annual in Britain and Ireland, usually accompanying Icelandic Greylag Geese *Anser anser* or Greenland White-fronts *A. albifrons flavirostris*. Their status is, however, muddied by the presence of escaped and feral birds, with populations on the islands of Mull and Coll in the Inner Hebrides and in Lancashire, Yorkshire, Oxfordshire and Sussex (about 180 birds; Musgrove *et al.* 2011). Since 2001, Ross's Geese have also been seen with some regularity, usually with flocks of Pink-footed Geese *A. brachyrhynchus* that gradually move south from Scotland to traditional wintering areas in Lancashire and, particularly, Norfolk.

Background There are two races of Snow Goose, both of which have undergone a population explosion in recent decades. The most abundant is the nominate Lesser Snow Goose *caerulescens*, which breeds in n. Canada from Baffin Island west to NE Siberia. They use the Pacific and Mississippi Flyways and do not normally occur on the Atlantic Flyway. Unlike Lesser, there is only one population of Greater Snow Goose *atlanticus*, which breeds on the

islands of ne. Canada and in n. Greenland, having expanded its breeding range eastwards in recent decades. In winter, it is restricted almost entirely to the Atlantic Flyway. Although traditionally wintering in California, Ross's Goose appeared in the Mississippi Flyway in the mid 1970s and in the Atlantic Flyway in the mid 1990s. It too has recently undergone a population explosion (2,000–3,000 in the early 1950s rising to perhaps two million at present) and it has spread eastwards to breed on Baffin Island. This coincides with their recent regular appearances in Britain, the original vagrancy presumably taking place in the Arctic. The birds subsequently arrive with 'carrier' species that originate from the same general area. Snow and Ross's Geese may rarely occur among goose populations from n. Europe and Siberia.

Snow Goose *Anser caerulescens*

Dimorphism There are two morphs (or phases) of Lesser Snow Goose: white and 'blue'. Western birds are predominantly white, the eastern ones predominantly 'blue'. Unlike Lesser Snow Goose, 'blue' morph Greaters are quite rare, comprising less than 4% of the population.

Identification The plumages of the Snow Geese are similar. Both morphs may show orange staining on their faces, which they acquire on their tundra breeding grounds. **White-morph adult** All white, except for black primaries. **White-morph juvenile** Variable, but basically pale grey on mantle and scapulars; the wing-coverts and secondaries are dark grey (feathers fringed white), the crown and nape greyish and the underparts greyish-white. The plumage becomes whiter during the winter post-juvenile moult. **Blue-morph adult** White head and upper neck but exact pattern varies. Most have white extending down the neck-sides in a point, and a thin grey line of dark extending up the nape to the rear head. The body is dark blackish-grey, with elongated, curved and pointed inner greater coverts (black, prominently fringed white) which droop downwards at rest. The belly is white (extent variable). In flight, they have grey upperwing-coverts (white along the leading edge) contrasting with the black remiges. The rump, upper- and undertail-coverts are white and the tail is grey. The underwings are also bicoloured: white lesser and median underwing-coverts contrasting with dark greater coverts and remiges. **Blue-morph juvenile** Also variable but most are uniformly dark smoky grey-brown, the only pale feathering often confined to the chin and throat; like the adults, they too show paler grey wing-coverts and black tertials and greater coverts, fringed whitish. There is a variable post-juvenile moult during the winter.

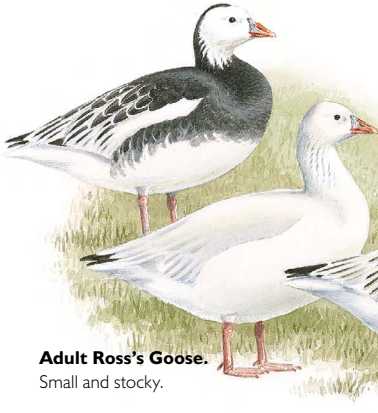
Bare parts Adults have a pink bill and legs. Juveniles start life with yellowish legs and a dark grey bill, which becomes pinker by spring. The bills of Snow Geese (but not Ross's Geese) have a serrated edge and a distinctive elongated oval gap between the mandibles, known as the 'grinning patch'. They can be separated as follows:

Greater Snow Goose *A. c. atlanticus*

Large size, being only slightly smaller than Greylag Goose. It is about 20–30% heavier than Lesser with a 10–15% longer bill. Consequently, it looks longer-faced with a more strongly wedge-shaped head and a longer, deeper bill. Like Lesser (but unlike Ross's) it has a curved line of demarcation between the bill and the face, as well as an obvious black 'grinning patch'. The blue morph is rare.

Adult 'blue morph' Ross's Goose.

This rare morph has restricted white on head, and white wing-coverts.



Adult Ross's Goose has small triangular

bill with vertical line of demarcation at bill base and no 'grinning patch'. Bill base bluish.

Juvenile Ross's Goose.

Whiter than juvenile Snow Goose. ▼



Ross's Goose

Lesser Snow Goose
(race *caeruleus*).

Adult Ross's Goose.

Small and stocky.

Greater Snow Goose

(race *atlanticus*). Note 'grinning patch', common to both races of Snow Goose.

Most British records of Snow Geese are of the larger race *atlanticus*, the Greater Snow Goose.

Adult 'blue morph' Snow Goose. ▶

Note extent of white on head and neck, grey wing-coverts. The grey underparts are variable in extent. ▼



Juvenile 'blue morph' Snow Goose



Juvenile 'white morph' Snow Goose. Dingy and greyer than adult.

Adult 'white morph' Snow Goose.

Note bill structure.



Before claiming a Ross's or Snow Goose take care to eliminate albino, white or partially white geese of domestic ancestry and also hybrids.

Lesser Snow Goose *A. c. caerulescens*

Medium size, similar to Pink-footed Goose. Larger than Ross's Goose with a more wedge-shaped head and bill profile. Unlike Ross's, note that the line of demarcation between the bill base and the head feathering is *strongly curved* and that the bill shows an obvious black 'grinning patch'.

Ross's Goose *Anser rossii*

Resembles a miniature Snow Goose, being about 80% the size of Lesser Snow and about half the weight. It is in fact similar in size to Lesser White-fronted Goose *A. erythropus*. It has a short neck with a rounded head and a small, triangular bill (pink with a bluish base in adults). In flight, it looks very stocky and short-necked. Note in particular that, unlike Snow Geese, it has a vertical line of demarcation between the head feathering and the bill base (not rounded) and there is *no 'grinning patch'*. **White-morph juvenile** Much whiter than juvenile white-morph Snow Goose, with pale grey shading confined to a band through the eye and variably on the hindcrown, neck, nape and mantle, sometimes with grey shaft streaks on the inner greater coverts. It may also show grey on the bill base. **Blue-morph adult** Rare. Adults differ from 'blue' morph Lesser by a combination of blacker neck, back and scapulars, whiter wing-coverts and tertials, and a restricted white face.

Hybrids

Note that hybrids sometimes occur between Lesser and Ross's and these are intermediate in size, bill shape and 'grinning patch'. A hybrid seen in Norfolk was generally considered to have been a cross between Ross's and Pink-footed Geese. It suggested a blue-morph Lesser Snow Goose but it was *completely* white on the head and underparts (apart from scattered grey feathers on the head and grey upper-flank feathers, fringed with white). The upperparts, however, resembled Pink-foot, being grey-brown with white feather fringes, but the greater coverts and tertials were more like blue-morph Ross's, being broadly fringed with white. Its bill was black with a pink tip, more like Pink-foot.

Farmyard geese, aberrant geese and Canada Goose hybrids Also bear in mind the occasional occurrences of escaped or hybrid geese that resemble Snow Goose. White 'farmyard geese' are often encountered but they normally show an orange bill and white primaries (they lack the contrasting black primaries of white-morph Snow Goose). White leucistic geese may also occur but, again, such birds fail to show the smart black-and-white contrast of Snow Geese. Other hybrids may resemble 'blue' Snow Goose. Canada × Snow Goose hybrids may show a similar combination of dark body and white head and neck, but check the wing pattern (mainly dark) and, in particular, bill colour (usually dark on adults, not pink). Harrison & Harrison (1966) described a hybrid Greylag × Canada Goose that, remarkably, showed a white head and neck and a fleshy-grey bill; such a bird could easily have been mistaken for a 'blue' Snow Goose.

References van den Berg (2004), Cramp & Simmons (1977), Harrison & Harrison (1966), Madge & Burn (1987), Musgrove *et al.* (2011), Sibley (2003).

Cackling and Canada Geese

Background Introduced into Britain in the 17th century, Canada Goose *Branta canadensis* is a common and familiar species in a wide variety of freshwater habitats. Introduced birds are of the large nominate Atlantic race *canadensis*. In North America, Canada Goose occurs in a variety of forms, traditionally separated into 11 subspecies. In 2004, however, the American Ornithologists' Union split the species into two: the large ones remaining as Canada Goose *B. canadensis*, the small tundra forms becoming Cackling Goose *B. hutchinsii*. Here in Britain, wild Canada or Cackling Geese occur most winters, accompanying 'carrier species' that breed in Greenland: principally Barnacle Geese *B. leucopsis* and occasionally Pink-footed Geese *Anser brachyrhynchus*.

A new approach In addressing the problem of their identification, Garner (2008) challenged the official view of Canada Goose classification, referring to a monumental work on the subject by Hanson (2006, 2007). Hanson concluded that the complex could be split into six species (not two) with 162 subspecies. Regardless of the perspicacity of Hanson's conclusions, Garner makes some interesting points. **1** The original splitting of Canada Goose into 11 races was based on limited data, a review of the taxonomy in 1946 being based on just 359 specimens, of which only 8% were from the breeding grounds (Hanson's conclusions were based on 1,800 specimens, 60% from the breeding grounds). **2** Hanson concluded that each local population is, effectively, reproductively isolated and has evolved in response to its own particular environment. This isolation is reinforced by the fact that the geese breed alone or in small localised colonies, they mate for life, return to the natal area to breed and remain faithful to the same staging and wintering locations. This complexity is now compounded by the fact that, in some areas of North America, escaped and feral birds have mixed with wild populations and clouded the position still further.

The need for caution Sibley (2007) also stressed the problems of identifying the Canada/Cackling Goose complex and he too warns that the currently described subspecies should be considered as only one interpretation of their taxonomy, adding that the information on these forms remains patchy and incomplete. A number of specific points also need to be kept in mind. **1 SIZE** When judging size, bear in mind that males of all forms are larger than females. **2 NECK LENGTH** This depends on posture and on what the bird is doing. **3 BODY PLUMAGE** Each form shows a range of colour variations. **4 NECK COLLAR** Some forms (e.g. *hutchinsii*) tend to show a white neck collar, but a significant minority may lack it. **5 BLACK CHIN-STRIPES** Similarly, a black dividing line down the centre of the chin/throat (dividing the white face patch into two halves) is often shown in some forms, but this too is variable.

Vagrancy potential From a European point of view, it is important to concentrate on those forms most likely to occur on this side of the Atlantic. Broadly speaking, the larger subspecies are found in the interior of North America, in the south of the breeding range. As these birds have the shortest migrations, they are the least likely to reach Britain. 'Canada Geese' become smaller towards the Arctic and it is the small tundra-breeding forms that are the longest migrants and those most likely to cross the Atlantic. Between these extremes is a range of intermediate-sized birds, including ones that breed in the subarctic zones of Baffin Island, n. Hudson Bay and Greenland. As these are also strongly migratory, they too must be regarded as likely vagrants. The forms outlined below are considered to be the most likely candidates for