

# Why I Love Birds So Much

Brian Easlea : written in or after 2002

*This version prepared June 2013 by Mike Hales, from typescript in Brian's papers*

## Boyhood Years

From my boyhood I have always loved birds. I was very fortunate to grow up in a small village on the northeast Norfolk coast (Happisburgh) and so found myself continually surrounded by birds. Because at that time, the 1940s, small boys collected birds' eggs, this is what I first began to do, emulating my elder brother. However, after a lot of heart searching I concluded that every egg in my meagre collection of one egg per species nevertheless meant that number less of wonderful birds about. So I gave up egg collecting and eventually joined the junior branch of the RSPB, so beginning a lifetime's love of birds.

Although as an academic, living and working during the Cold War, the Nuclear Arms Race and the frightful Vietnam War, I necessarily accorded birdwatching a very low priority in my life, early retirement in 1987 gave me the opportunity to resume my boyhood love and now, living on my own, I am able to devote some time of each day to watching birds and, whenever possible, to travelling the world to get to know birds I have read about, perhaps studied, but never seen in the flesh or, better to say, feathers. Indeed, I devote so much time and money to watching birds that, to my bewilderment and even concern, I am often asked, 'Just what do you see in birds?'. It baffles me that I can be asked such a question by an adult fellow citizen of the U.K. but since I often am, I have decided to answer it. But, more than that, I want to try to explain to myself why I love birds *so much*.<sup>(1)</sup> (With the aid of a few footnotes, of course. Old habits die hard!)

First a word on those special village birds, my companions as they seemed to me, at long last brought closer with the aid of a very ancient pair of German binoculars. I remember so well that each spring a beautiful descending cadence resounded everywhere in the village woodland and what a thrill it was to trace the source to a very small, nondescript, olive-brownish bird continually flitting in and out of the foliage. That precious little book, *The Observer's Book of British Birds*, given me by an elderly village lady, identified it as a Willow Warbler. Skylarks sang everywhere around the village and Lapwings performed their wonderful aerobatics over the spring-sewn fields. In the rich mosaic of luxuriant hedgerows, Linnets, Greenfinches and

Yellowhammers were abundant. Commandeering each summer the ivy-clad walls of the local vicarage was an eagerly awaited pair of Spotted Flycatchers. The village was a birdwatcher's paradise. Even in winter new birds could be found, such as in one year a pair of Stonechats and in another year a pair of Black Redstarts searching for food along the cliff faces. How thrilling one autumn to discover a Sanderling scurrying along the sea's edge. Occasional cycling trips to visit the warden and birds at Horsey Mere or, further afield, car rides to visit the tern colony at Blakeney Point, were memorable experiences. There are many birds I might mention. But my pride and joy were four pairs of Red-backed Shrikes which bred each year within a mile or so of my home. What charismatic, fearless birds were the males, what incredible journeys they and their partners had made (so I had read, from southern Africa) and to the same hedge each year! I was hooked. To this day, the sight of a male Red-backed Shrike fills me with joy (alas, it now has to be outside the U.K.). A life-long love of birds had developed. Now, over half a century later, I will ask my brain to spell out what my heart has known for so long and, in doing so, to answer that amazing, worrying question, 'Just what do you see in birds?'.

## Avian flight

Birds? Can they be easily defined? They can. Birds have feathers. If it doesn't have feathers, it's not a bird! (2) And feathers, whatever the reason for their appearance some 150 million years ago, are superbly designed to enable birds to fly. It is, of course, birds' ability to fly, their most characteristic feature, which perhaps most entrances and captivates their earthbound human admirers. For the ability to fly not only gives birds seemingly limitless freedom but certainly endows so many of them with that most welcome of virtues, their ready visibility to our eyes. When I go for a walk in the South Downs countryside next to where I now live, I see hundreds, perhaps thousands, of birds comprising, depending on the season, some 30 to 60 different species and this without even trying, yet of other vertebrates a mere handful of one or two species - a few rabbits and, if I'm very lucky, a fox or two. The ability to fly means that birds don't have to be nocturnal or skulkers, though some are one or the other. Where's there a niche, natural selection will invariably fill it. But many, many species are just gloriously, wonderfully visible.

And what very different modes of flying there are. The mercurial, quicksilver New World hummingbirds dart hither and thither at breakneck speeds and, when not doing so, can be seen hovering, yes, hovering, in front of usually colourful flowers devouring their energy-rich nectar. Of which they surely need a lot with wings vibrating at some 50 times a

second, far too fast for the human eye to follow. Needless to say, hummingbirds are not alone in mastery of flight. Who does not thrill to watch the sheer grace, beauty and speed of the flight of Swallows and Swifts and, for those of strong stomachs, their pursuit by those two pirates of the skies, the Peregrine and the Hobby? What mastery of flight these two raptors possess. What a thrill to watch the stoop of the Peregrine (does it reach 200 mph or a mere 100?), what delight to watch the incomparable elegance and grace of the flying Hobby. Even huge birds are not to be outdone in grace of flight. Dwarfing the tiny Bee Hummingbird, the world's smallest bird, is that most sought-after of raptors, the huge Andean Condor, one of the world's largest flying birds and, for those lucky enough, to be seen soaring on thermals, high above the human observer, sometimes just a dot amidst those awe-inspiring, snowbound Andean peaks. Yet how graceful are these Andean emperors of the skies. Once I watched a love-dance of two Andean Condors, the male slowly, so gracefully, twisting and turning in the breezes above a mountain summit and the female, almost touching her mate, following his every move to the nearest inch, or so it seemed. Huge though it is, however, the Andean Condor does not even approach the size of the largest flying bird that has ever lived. Only some 5 to 8 million years ago, the colossal *Argentavis magnificens* soared over the savannas and grasslands of Patagonia, weighing in at some 75 kgs (my weight of 165 lbs!) with a wingspan of 7 to 7.5 metres (23-25 feet), thus almost dwarfing the 'tiny' Condor, seven times less in weight with less than half the wingspan. Did pairs of these teratorms do love-dances together? If so, what a sight that would have been!

Captivating as flight is, it is certainly not the only feature of birds that we humans find irresistible. There is also the little matter of visual appearance.

## Avian beauty

If all birds were a uniform dull grey colour, they would still be the most fantastic of creatures. But so many of them are so breathtakingly beautiful that Charles Darwin, following on from his revolutionary theses in the *Origin of Species*, further astonished his 19th-century readers with the statements that 'birds appear to be the most aesthetic of all animals' (except for humans, he added) and 'they have nearly the same taste for the beautiful as we have'. (4) Controversial as such statements were at the time - and still are - the ingenious Darwin could, for example, suggest no other explanation for the existence of the Peacock's beautiful, extravagant, outrageous encumbrance of a tail except that, over many generations, it had evolved by sexual, not natural, selection as a consequence of the Peahen's highly refined aesthetic taste. For the eyespot in a Peacock's tailfeather, declared

Darwin, is 'one of the most beautiful objects in the world' and therefore, slowly but surely, it must have been progressively selected for under countless Peahens' watchful scrutiny. Thus, cocking a snook at natural selection, the Peacock with the most extravagant tail must have usually enjoyed the best chance of fathering the most offspring. And indeed, in a recent observation it was found that Peahens at a lek of displaying cocks mated most with those males sporting the largest number of eyespots in their tails. But just what do Peahens see in all those eyespots? Are Peahens really just attracted to 'beauty'? Or is that beauty (as we judge by our human eye) rather, or additionally, a marker for something else like physical fitness and therefore 'good genes'?

No matter. When we humans look at so many birds, particularly males in their breeding plumages, we first gasp in amazement at their beauty and then we ask, almost in disbelief, 'How is it possible? How is it possible?'. But, somehow or other, it is possible and this birdwatcher has looked enthralled and entranced at the beauty of so many birds: the Eurasian Bee-eater (perhaps top in my list for combined beauty of appearance and grace of movement), the Scissortailed Flycatcher', the Black-capped Kingfisher, the Eurasian Dotterel, the Slaty-backed Forktail.... The complete list would be very long. And I've yet to see the bird so many say is the most beautiful in the world, the Resplendent Quetzal of Central America. However, many birds are not so much beautiful as breathtakingly spectacular, such as the European Roller and the Andean Cock-of-the-Rock. I remember when I was watching two European Rollers for the first time I said to my two Catalan companions, 'We are the richest men in the world' and I meant it! As for the Andean Cock-of-the-Rock, I was left speechless with disbelief and delight. But then I find nearly all birds beautiful in some aspect or other. Not far from nearly every home in the U.K. is the 'humble' but beautiful Chaffinch and not too far away the beautiful Goldfinch together with, until at least quite recently, the beautiful Linnet, Yellowhammer, Reed Bunting.... The list of birds I consider beautiful runs into the thousands. Far from all are brilliantly coloured. Referring to the 'wonderful beauty' and 'exquisite patterns' in the wing feathers of the Great Argus Pheasant, Darwin wrote approvingly how many people to whom he had shown the feathers had told him they seemed 'more like a work of art than of nature'. Indeed, the avian world of an ever-changing, living kaleidoscope of sheer beauty is an incomparable work of art produced by natural - and sexual - selection over scores of millions of years. How lucky we are to find ourselves unintended (and, for the most part, quite undeserving) beneficiaries. All the art galleries in the world, valuable and wonderful though they are, pale into total insignificance compared to the world's avian art display.

## Songs and calls

Compelling though their visual display is, nearly all birds also attract our attention, and each other's, by their stunning repertoires of calls and, in the case of aptly named songbirds, by their beautiful songs. Controversial as always, Charles Darwin suggested that many of the less obviously glamorous passerines still have something with which 'to charm the female', as he put it. Their incredible songs! Of world renown, of course, is the song of the male Nightingale, leaving many humans fortunate enough to hear it transfixed by the experience. Some 350 years ago, the angler Izaak Walton listened at midnight to the singing of a Nightingale and wrote in wonder: 'Lord what music hast thou provided for the saints in heaven, when thou affordest bad men such music on Earth'. (6) How lucky we are in Britain to be blessed not only with the song of the Nightingale but also with those of the Blackbird and Blackcap which are not poor seconds. Neither is the once ubiquitous song of the Song Thrush which was to inspire Thomas Hardy's beautiful poem, 'The Darkling Thrush'. I have already mentioned the sweet, descending cadence of the Willow Warbler, such an important song for me in my formative years. Happily, there is an abundance of songs comprising the spring chorus on an English May morning. Everywhere one hears the 'rollicking little ditty' of the Chaffinch, the seemingly hurried but charming song of the Dunnock, the incessant two-note song of the Chiffchaff. So many others. But many of the songsters are fast declining in number. At one time, not long ago, the joyful, continuous outpourings of the Skylark could be heard over any suitable green patch. Now it is very much scarcer, one of the many casualties of intensive agriculture. Rachel Carson could not have chosen a more appropriate title for her warning of the probable dreadful consequences of man's arrogance towards the natural world. Remembering Keats's ominous lines, 'The sedge is withered from the lake, And no birds sing', Carson called her momentous book *Silent Spring*. (7) Just what would we lose?

Bird song, like birds themselves, seems almost infinitely varied. (8) Why do male birds sing? To advertise territory, to attract and 'charm' a partner, to convey further messages (particularly in the case of female songsters), perhaps, sometimes, for the sheer joy of it. And no doubt avian listeners hear far more in a song and appreciate a fine performance much more than do we human listeners. After all, young birds are able to listen to and copy song details which unaided human listeners cannot even perceive! We aurally handicapped humans need the help of modern technology and sophisticated computer programmes in order to perceive these details and, in doing so, to distinguish between the many different versions of a bird's song - up to 200 for a Nightingale, more than a 1000 for the Brown Thrasher of North America!

Moreover, in possessing two independent vocal organs a bird is, amazingly, not only able to duet with itself but each species is able to achieve its own type of musical virtuosity by the special way the two vocal organs interact. Would that I could become a listening male or female Nightingale or Skylark for a few hours. Or for that matter a Sedge Warbler. Although I love to hear the 'chattering' song of the Sedge Warbler in spring, so characteristic of marshy ditches and reedy hedges, I do not find the song particularly alluring or charming. But it is extremely long and complex - the acoustic equivalent of the Peacock's tail - and is sung incessantly after the Warbler has arrived from Africa and continues to be so until the male has found a partner and mated with her, when it abruptly ceases. Careful observation has shown that those males with the most complex songs are first to gain and mate with partners, so giving themselves the best chance of successfully fledging young. Just as the Peahen seemingly has a fine visual aesthetic sense, so, it seems, female Sedge Warblers are great aficionados of musical virtuosity. (9) We human observers and listeners clearly miss out on perhaps nearly everything that the avian female of the species appreciates. But what we do appreciate is such a joy.

Although not all birds sing, nearly all species have calls. Indeed, passerines, these most recently evolved of birds, have a repertoire of as many as 20 calls corresponding to different messages conveyed. Try as I do, I find it very difficult to match calls to individual species, although I have friends and have been out with bird guides who can seemingly put a species name to every call they hear. So expert have they become, they could be walked through a wood blindfold and yet emerge with a far better idea of the avifauna than any call-illiterate but seeing birders would gain. Birds, unsurprisingly, can do even better, for the calls of individual birds of the same species are all subtly different thus enabling neighbours in adjacent territories to identify each other by their calls and any newcomers to be immediately recognised. We birdwatching humans do our best but we're a long, very long, way short of avian abilities.

Nevertheless, modest though my musical appreciation is, even in human terms, songs and calls of birds have always been a source of joy - and challenge! - for me. I remember how happy I was to see and listen to a Tropical Mockingbird singing while incubating eggs on her nest just outside the cabin where I was temporarily staying and how at night I tried not to go to sleep at once but to listen for an hour or so to the mate of that very same Mockingbird singing so melodiously outside. And how surprised I was to learn that the characteristic call of the Australian Whipbird is, in fact, a duet between partners: first the whiplike call of the male followed immediately by the soft answer of the female. Moreover, it appears that duets between males and females

are quite common, especially among some tropical species, and are so skilful that to the human ear the duets appear to come from just one bird.

Birds, for me, are not just a constant source of joy but of surprise as well, no more so perhaps, than in their breeding habits.

## **Breeding behaviour**

As a boy, nestfinding was my forte, so much so that the birdwatching I did in those now far-off days was all but synonymous with nest-finding. After I had given up egg-collecting, my boyhood collecting mania remained for a few years which I satisfied by buying a second-hand camera that enabled me, with the use of a close-up lens, to take black-and-white photos of birds' nests and eggs. And what a thrill it was to find those nests and, if possible, to peer down into them. I always thought the Chaffinch's nest was the most comfortable and well-made of all nests (I never found a Long-tailed Tit's nest, the species having been seemingly wiped out in my area by the severe winter of 1947) and I thought that if I were ever to be reborn a bird I would like it to be in a Chaffinch's nest. I was so enamoured of Chaffinches that I even wrote a childish poem in their praise! But perhaps the greatest thrill was looking into the nest of the humble Dunnock and seeing those small, pale-blue beautiful eggs.

And what a miracle it seemed to me - and still does - that after just 12 days or so the eggs would hatch into naked, blind, seemingly helpless nestlings and then, after just another 12 days or so, the nestlings would be feathered fledglings experiencing a very precarious initiation to life outside their wellhidden nest. Alas, the nest of the Red-backed Shrike was all too easy to find, far too conspicuous just like its builders, and since the beautifully marked eggs were eagerly sought by collectors their easy locating was presumably one of the factors hastening the sad extinction of the species as a breeding bird in Britain. This is a sadness I shall never get over. Happily, make just a short train journey to central France in summer and Red-backed Shrikes are still a common sight along the luxuriant hedgerows of what appears to be a still largely traditional agriculture.

There is so much to write on the variety of breeding behaviours I have observed: the range of sites chosen for nests, the different structures of nests, their sometimes breathtakingly superb architecture, and, perhaps above all, the range of courting and breeding behaviours of the adult birds. What birdwatcher has not thrilled to witness the highly ritualised courtship of pairs of Great Crested Grebes? Much further afield, I have never tired of watching the apparently loving courtship

of the Black-capped Donacobius of South American rainforests. Literally very close to home again, one Spring I watched almost every day a pair of breeding Long-tailed Tits in my local park and was very amused to see that after the eggs had hatched and the female became visible, she had, unlike her mate, the end of her tail markedly curved, due presumably to continually bending it round at the top of her domed nest. Incidentally, her mate once put a piece of white paper into the nest at the building stage which the female immediately removed, flew with it to a nearby branch and 'contemptuously' discarded it. For long I had shared the opinion of the Rev. F.O. Morris in his classic 19th-century *History of British Birds* in which he had described the familiar Dunnock as 'unobtrusive, quiet, and retiring, sober and unpretending in its dress' and 'humble and homely in its deportments and habits', and who unsuspectingly proceeded to suggest to his fellow humans that they would do very well to emulate the behaviour of this exemplary bird. Alas, the Rev. Morris had been cruelly deceived! A recent academic study has revealed a breeding behaviour by the Dunnock that no Sunday tabloid would dare to print, only, it seems, Oxford University Press in an adult monograph! (10) We learn that in one territory there is a breeding pair, a very respectable pair we hope, but in an adjacent territory two males share one female, in another territory two females are paired with one male, and in other territories two males share two or even three females. Moreover, this is only for starters! If the Rev. Morris's no doubt good parishioners had indeed followed the actual behaviour of the Dunnock, the worthy Reverend would have believed that Beelzebub himself had paid a personal visit to his Yorkshire parish. There is still much to learn and understand about the behaviour of birds!

## Non-breeding behaviour

That said, I shall nevertheless have to restrict myself to mentioning just two riveting examples of more bird behaviour, one which I watched spellbound for an unforgettable hour or so in my life and the other I have watched entranced during many, many winter evenings at sunset.

It was in the Andes of Venezuela that I and the birdwatching group I was with at last sighted a pair of Torrent Ducks in one of those spectacular fastflowing mountain streams. It was an expected and much hoped-for encounter in a well-known site for them and to complete our joy the pair were accompanied by two ducklings. These Ducks are charismatic in the extreme, beautifully marked and able to perform feats of moving underwater upstream in the fastest of currents in a way that seems physically impossible! But what most delighted me, and I think all of us, was that the drake on one occasion suddenly proceeded to shoot the perilous-looking rapids with consummate, almost nonchalant

ease and then immediately flew back to his original position. Status quo restored. Why had he done it? Surely not to show off to the enchanted onlookers! Was it just one of many lessons to his youngsters on how to do it?. Or had he just taken a bit of time off other duties to enjoy himself? This very special hour is imprinted in my memory and in my living room at home a small but treasured painting of a pair of Torrent Ducks continually invites me to seek out again these incomparable masters of the rapids.

The other example of bird behaviour which has sustained and delighted me over many a winter is the daily sunset swarming of Starlings around the derelict West Pier in Brighton where I now live. Unfortunately, Starling numbers have declined dramatically over the last few years (corresponding to a national decline) but only ten years ago hundreds of thousands of Starlings arrived at the West Pier in individual huge groups, there swirling around for up to an hour or so until all their number had arrived and then retiring into the Pier to spend the night, their incessant chattering clearly audible on calm nights. Watching them arrive each sunset to perform their amazing aeronautic displays was for me enjoyment of one of the wonders of the world. Moreover, as far as I know, no ornithologist has yet suggested a remotely convincing explanation as to why Starlings perform this, to our eyes, apparently senseless, biologically maladaptive practice. Why, after all, waste all that valuable energy so laboriously acquired by assiduous feeding during the short hours of winter daylight? So there must be a survival advantage in these vast winter displays. But what is it? The display surely cannot be a daily Starling carnival, a mere pleasurable exuberance in dancing to the music of the winds in the company of all their fellows. Or can it? No, of course not!

But it is not only the fantastic swirling of the Starlings which rivets my attention but also how the Starlings cope with their daily predators. For each sunset two to three Sparrowhawks arrive one after the other at the Pier, attracted to those vast swirling smoke clouds, as they appear to be at a distance. Immediately an incoming Sparrowhawk is sighted, the Starlings all become very agitated, their swirling frenetic, and then a detachment of Starlings, at least several hundred strong, goes to confront the approaching Sparrowhawk when usually a standoff occurs. The Sparrowhawk floats in the air facing the waiting detachment. Then the detachment of potential dinners charges the dinner-hunter which retreats to a safer distance. Perhaps several times this occurs, the leading Starling risking life and limb it would seem, but almost always the Sparrowhawk at first retreats, even occasionally being put to flight, though eventually most Sparrowhawks seemingly pluck up sufficient courage to dive majestically under the menacing detachment in what appear to be mathematically precise, beautiful

trajectories, whence to enter the Pier and at long last to seek out their evening meal. Peregrines, too, get the same Starling treatment but these aloof, fearsome raptors are usually waiting for unsuspecting pigeons and pay little attention to the would-be harassing Starlings.

Starlings are favourite birds of mine! And there is yet another aspect of their behaviour which is extremely intriguing, though not at all obvious. For some of these West-Pier Starlings, like many other birds, are twice yearly participants in the fascinating, perplexing phenomenon of bird migration.

## **Avian migration**

Not all Starlings congregating each winter in the West Pier are resident in Britain through the year. Some are migrants from northeastern Europe (Scandinavia and Finland) to where they return to breed in the summer months. In the 1950s a fascinating, now classic experiment was done with these migrating Starlings as they returned from breeding grounds to their wintering quarters in the northern parts of western Europe. One autumn over 11,000 of them were caught in Holland and then transported to sites in Switzerland where they were released. Whereas juveniles flying to wintering quarters for the first time simply continued in their original compass direction to end up in very unfamiliar Spain, adult Starlings actually changed direction on to a course taking them to their intended destinations, with some of them even managing to arrive at their traditional wintering sites. Thus the adult Starlings had seemingly, somehow or other, determined where they were at their release sites relative to their intended destinations and had taken compensatory counter-measures! At the dawn of the new millenium, a foremost expert on bird migration confessed that 'it is still completely unclear how such site determinations and goal adjustments are carried out by birds - making this the last great mystery of animal migrations'. (11) When during those winter sunsets I look at the swirling clouds of Starlings around the West Pier, I often wonder just how many of them have come from northeastern Europe with the location and image of the West Pier engraved in their brains and determined to arrive no matter what obstacles those pesky, ubiquitous and still very puzzled ornithologists interpose en route! Birds certainly do possess the most amazing abilities.

But even if we understood all the mysteries of bird migration, we would surely still marvel - or at least I would - at how such small creatures are able to arrive at the same hedgerow or same farm shed where they bred the previous year after journeys of thousands of miles to and from their wintering quarters, across seas, deserts, and tropical forests. How I marvelled at the Red-backed Shrike. As a boy I couldn't have

found my way to Norwich on my own, yet a small bird had both the stamina and the skill to journey from southern Africa to that very same hedgerow on the northeast Norfolk coast it had claimed for its own the year before, much to my delight. How I admired the Red-backed Shrike! The migratory feats of birds seem to defy all physical possibility, let alone navigational ones. How do Bar-headed Geese manage to fly over the world's highest mountains at heights of 30,000 feet or more, how do Sedge Warblers manage to fly over the Sahara from southern England to tropical West Africa for more than three days and three nights without stopping, how are Curlew Sandpipers and Little Stints able to make the return journey each year from southernmost South Africa to the northernmost Arctic tundra and successfully cope with such different living conditions? From one side of the globe to the other, migrating birds seem to be able to make themselves at home. Wrote Thomas Alerstam in his marvellous book on bird migration, 'The whole earth is the stage for these fantastic birds with their miraculous journeys.' (12) How true.

## The mystery of birds

Not that it really matters, but there seems to be quite a lot about birds we still don't understand. Only recently have palaeontologists reached consensus that birds evolved some 150 million years ago from ground-dwelling, perhaps feathered, perhaps warm-blooded dinosaurs called theropods and that birds are in fact dinosaurs, so that, according to them, some dinosaurs actually survived the great extinction of 65 million years ago - namely birds! - and that only the non-avian dinosaurs vanished. (13) Such claims, though, have been syntongly disputed by at least one expert on the origin of birds, Alan Feduccia, who argues in the 1999 edition of his immensely erudite *The Origin and Evolution of Birds* that birds are not dinosaurs, that birds and dinosaurs had a common reptilian ancestor before the epoch of the dinosaurs, and that feathers evolved as aids to flight (flight from trees down, not from the ground up) and he pours scorn on the belief that feathers evolved as efficient means of insulation for warm-blooded dinosaurs. (14) Who is right? (15)

Whatever the initial evolutionary function, or functions, of feathers, the Rev. William Paley was quite correct in his much Darwinian-maligned *Natural Theology* of 1803 when he wrote, 'What a mechanical wonder is a feather'. Indeed it is, and it is apparently still baffling to molecular biologists as to how feathers evolved piecewise from reptilian scales. (16) But the problem of the evolution of feathers appears minor compared to the conundrum of how the avian lung could have evolved from the reptilian lung in a Darwinian incremental manner, as it surely must have done. (17) For the avian lung, unlike the lung

of any other living creature, is uniquely designed so that air passes through it in only one direction, thus enabling far greater efficiency of oxygen intake than is the case for mammalian lungs. Whatever the seemingly impossible step-by-step path taken by natural selection, those wonderful Bar-headed Geese are therefore superbly equipped to fly more than five miles high over Mt. Everest, consequently little handicapped, at least temporarily, by the severe reduction in oxygen at that altitude. Birds are just fantastic creatures!

## A thank you to birds

And, thank goodness, there are many species of birds, nearly 10,000 in all, though this is a small number compared to the 150,000-plus species thought to have once existed from the time those first strange birds like Archaeopteryx took to the skies, or tried to. Unfortunately, many of the world's present species are fast declining in number and not a few are even threatened with rapid extinction. Some species have, of course, become extinct in recent times. As a salutary warning, the Passenger Pigeon of North America was perhaps the most numerous species of bird ever to have existed on Earth, with flock sizes estimated in the early 19th century to consist of thousands of millions of birds. Nevertheless, following prolonged, widespread, organised slaughter for food, including trapping live birds for target practice in shooting galleries, the population size of this colonial breeder rapidly fell below a critical number and by the end of the 19th century the Passenger Pigeon was, unbelievably, extinct in the wild. Martha, the last representative of one of the world's most successful-ever avian species, died in Cincinnati Zoo in 1914. (18) Birds have only one serious enemy, *Homo sapiens*, a species characterised not by wisdom but in the main by - I have to confess it - greed, stupidity, arrogance and poor aesthetic taste. As Pete Seeger would have asked, "When will we ever learn?".

Of course, in this strange Universe we inhabit, planet Earth will eventually be engulfed by the Sun and all its life will be extinguished. Long before that happens, however, natural happenings will wreak periodic havoc with life on Earth, not least more collisions with asteroids like the one which, it is thought, led to the extinction of all (non-avian?!) dinosaurs and much else. But not all life will succumb in such disasters. Humble bacteria will remain as indestructible as ever and evolution will continue in its unpredictable ways until the Sun eventually frizzles all life. I, though, am happy to have lived at a time when birds had not yet been eradicated by humans and when the natural world could be, and certainly has been, a source of so much joy. Bertrand Russell once wrote: 'When I come to die, I shall not feel that I have lived in vain. I have seen the earth turn

red at evening, the dew sparkling in the morning, and the snow shining under a frosty sun; I have smelt the rain after drought, and have heard the stormy Atlantic beat upon the granite shores of Cornwall.' (19) I would just like to add to that, 'I have seen a pair of Wallcreepers just a few feet away at their breeding site in the Transylvanian Alps, I have seen male Cocks-of-the-Rock displaying in the Ecuadorian Andes and a female incubating her eggs in a nearby ravine, I have listened so many times to the song of the Willow Warbler in the English countryside'. I am very content to have passed this way.

## Notes

1) This is not to say I am not fascinated by other wildlife and by the natural world in general. I am, especially by butterflies, moths and dragonflies. But I have a thing about birds.

2) Very confident claims now exist that some small dinosaurs were feathered. So best to say, all today's birds are feathered and no other modern creature is.

3) See, for example, Alan Feduccia, *The Origin and Evolution of Birds* (1996; Yale University Press, 2nd edn, 1999), p.305.

4) All quotations from Darwin come from his *The Descent of Man and Selection in Relation to Sex* (1871; 2nd edition, 1874).

5) As reported in Helena Cronin, *The Ant and the Peacock: Altruism and Sexual Selection from Darwin to Today* (Cambridge UP, 1991), p.225.

6) A whole book devoted to the Nightingale is Richard Mabey's absorbing *Whistling in the Dark* (Sinclair-Stevenson, 1993), republished in 1997 as *The Book of Nightingales*. Izaak Walton's eulogy is in his famous *The Compleat Angler* (London, 1655).

7) Rachel Carson, *Silent Spring* (1962; Penguin Books, 1965).

8) For an enthralling account of bird calls and songs, see Luis F. Baptista and Donald E. Kroodsman, 'Avian Bioacoustics: A tribute to Luis Baptista', in Josep del Hoyo, Andrew Elliott and Jordi Sargatal (eds), *Handbook of the Birds of the World*, Vol.6 (Lynx Edns, Barcelona, 2001), pp.11-52.

9) On the Sedge Warbler's musical ability, see the contribution by Clive Catchpole in Michael Brooke and Tim Birkhead (eds), *The Cambridge Encyclopedia of Ornithology* (Cambridge UP, 1991), pp.286-7.

10) N.B. Davies, *Dunnock Behaviour and Social Evolution* (Oxford UP, 1992). For a truly charming story of a year in the life of a pair of Dunnocks, based on the Rev. Morris's characterisation, see Nigel Hinton, *The Heart of the Valley* (Constable and Co Ltd, 1986).

11) See Peter Berthold, *Bird Migration: A General Survey* (Oxford UP, 1993), p.142, after a description of the classic experiment with Starlings. This declaration of unsolved mystery is repeated verbatim in the revised 1999 2nd edn of his book.

12) Thomas Alerstam, *Bird Migration* (Cambridge UP, 1990), p.5. The entire book is a wonderful, wonderful read. Of course, birds are far from alone in performing fantastic migratory feats. Incredibly, those seemingly fragile butterflies, Painted Ladies, have even been known to reach Iceland from North Africa, a distance of some 2,100 miles!! Moreover, one of the most remarkable migratory feats in the whole of the natural world is performed by the Monarch butterfly of North America. See, for example, Torkem Larsen, 'Butterfly Mass Transit', *Natural History* (June, 1993), pp.31-38 and Freeman Dyson's moving tribute to the 'miracle' of the Monarch Butterfly in his *Infinite in All Directions* (Penguin Books, 1989), p.33. On animal migration in general, see Talbot H. Waterman, *Animal Migration* (Scientific American Books, 1989).

13) See, for example, Kevin Padian and Luis M. Chiappe, 'The Origin of Birds and Their Flight', *Scientific American* 278 (February, 1998), pp. 28-37.

14) See especially the 1999 postscript in his *Origim and Evolution of Birds*, my note 3, and his interview with Pat Shipman in her *Taking Wing: Archaeopteryx and the Evolution of Bird Flight* (Phoenix Books, 1999), pp.180-81. Feduccia continues an impassioned critique with his 'Birds are Dinosaurs: Simple Answer to a Complex Problem', *The Auk* 119 (2002), pp.1187-1201.

15) The palaeontologist, Angela Milner, writes, in her *Dino-birds: From Dinosaurs to Birds* (The Natural History Museum, 2002) that recently discovered Chinese fossils show 'beyond all doubt' that birds have descended from small, warm-blooded, feathered, meat-eating dinosaurs called theropods, one of whom in fossilized form is apparently so supportive of this thesis that he is known by devoted admirers as 'Dave the fuzzy raptor'!

16) See, for example, Richard O. Prum and Alan H. Brush, 'The Evolutionary Origin and Diversification of Feathers', *The Quarterly Review of Biology* 77 (2002), p.261-295.

17) However, in 1985 one biologist actually used the existence of the avian lung in support of his rejection of Darwin's theory of evolution! See Michael Denton, *Evolution: A Theory in Crisis* (Burnett Books, 1985), pp.211-12.

18) On the extinction of the Passenger Pigeon, see Tim Halliday, *Vanishing Birds: Their Natural History and Conservation* (Penguin Books, 1980), pp.87-96.

19) Bertrand Russell, *The Scientific Outlook* (Allen and Unwin, 2nd edition, 1949), p.275.