

A CHAPTER ON BIRDS

RARE BRITISH VISITORS



R. BOWDLER

SHARPE

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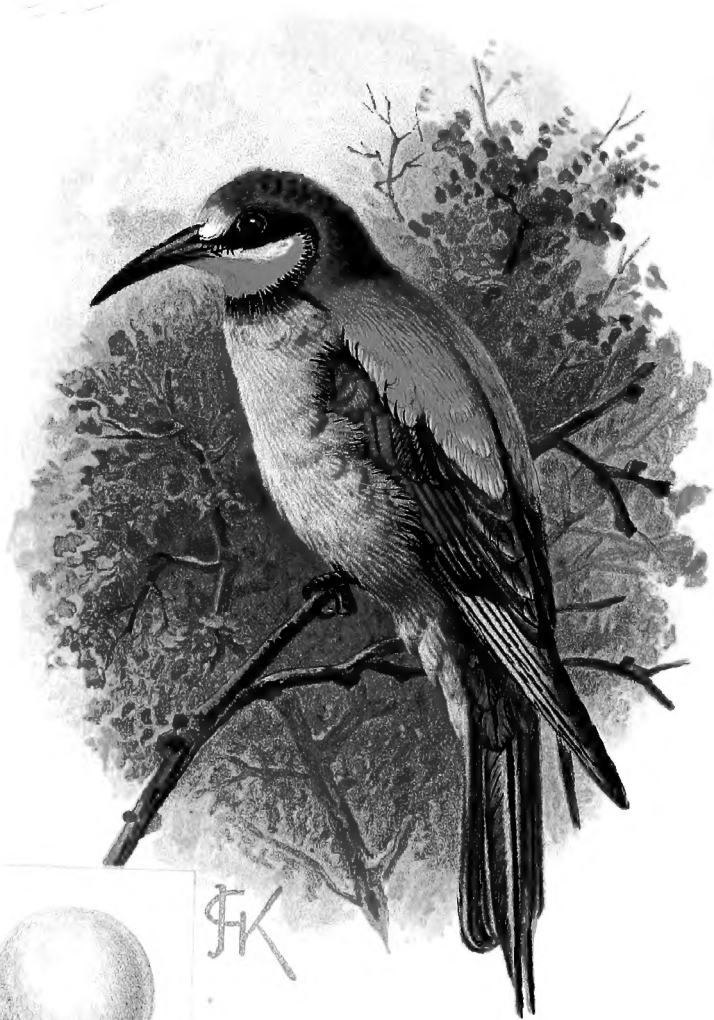
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A CHAPTER ON BIRDS.



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N. S.

BEE-EATER.

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A CHAPTER ON BIRDS.

BY

R. BOWDLER SHARPE, LL.D., F.L.S., ETC.

(Zoological Department, British Museum.)

RARE BRITISH VISITORS.

With Eighteen Coloured Plates.

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P R E F A C E .

WHEN first I was appointed to the charge of the Ornithological collection in the British Museum, the home of that collection was in Bloomsbury, where the opportunities of observing birds in a state of nature are not many, as every one will admit. Domestic Pigeons are numerous, an occasional Starling can be seen, and in the neighbouring garden, in Russell Square, I have seen Blue Tits in winter. Sparrows, of course, abound, and doubtless other birds could be occasionally observed. One of the most interesting specimens in the British collection is—of all birds—a Kingfisher, which was picked up dead in the courtyard of the old British Museum, so that the possibilities

of making a varied collection of birds, in Bloomsbury, are manifold. Still it is not the neighbourhood for many "field" observations; and some unkind critics have not hesitated to throw at their brethren, whose lot has been cast in the shade of Museum work, the taunt of being "two-pair-back-garret" naturalists. There may have been such, but I have not met with them in my experience; on the contrary, every one of my colleagues in the British Museum, has been as fond of work in the field as in the cabinet, and has made as good use of his opportunities as some of our more fortunate compatriots, who have been able to travel in far countries.

At South Kensington, however, to which the Natural History collections have been removed, quite a respectable assortment of birds visit the gardens attached to the Museum in the Cromwell Road. During the migration-time, Pipits, Wheatears, Siskins, Goldfinches, and other small birds stop to rest. Turtle-Doves have been delayed in their southern journey by the gales of autumn, and Kestrels have stayed with us, and, let us hope, have taken toll from the ever-

increasing House-Sparrows. In severe weather, Redwings, Fieldfares and Mistle-Thrushes have been plentiful, while Wood Pigeons, Tits and Blackbirds may be considered permanent residents, so that, even in the west of London, many species come under our daily observation.

Such slight knowledge, however, avails us little in writing about rare visitors, in the shape of birds, to Britain. Those treated of in the present volume have occurred but seldom—they will never be common residents, in our time at least—and to learn about their habits, we must go further a-field. It will, I believe, be of some interest to students of British Ornithology to read something about the life-history of the species, which Mr. Keulemans has here depicted, and I have had great pleasure in putting together a few notes on some of these most interesting avian visitors from foreign parts. Naturally, much of the information on their habits has had to be extracted from the writings of naturalists who have had the good fortune to meet with the species in life. The works of Mr. Seebohm, especially, have been laid under contribution; because it is impossible to write about our rarer

British birds without quoting from him. No one has taken the pains that Mr. Seebohm took, before writing his "History of British Birds," to travel into all parts of Europe, and even into Siberia, to learn something about the nesting-habits of the rarer species of European birds; and, with the exception of those of Naumann and Macgillivray, there is no work so full of original observation as the above-mentioned one of Mr. Seebohm. In America there are several excellent books on the habits of birds, and the observations of Captain Bendire in his "Life History of North American Birds," and those of Mr. W. H. Hudson on South American Bird-life, are amongst the most important of modern contributions to our knowledge of Natural History.

In these little essays, therefore, I have not hesitated to draw upon the information published by those who have seen these rare species in their native haunts, and I have quoted freely from the writings of Lord Lilford, Canon Tristram, Colonel Irby, Mr. Howard Saunders, and others, but it is to Mr. Seebohm that I am especially indebted. I have also striven to give these chapters a wider scope, and have said a few

words on the natural relations of the species, so as to give a little general information on the families to which they belong.

The pictures which Mr. Keulemans has drawn, are, in my opinion, among the best which the present generation owes to his talented brush, and the way in which they have been reproduced in chromo-lithography, by Messrs. Riddle and Couchman, not only demands my warmest acknowledgment, but, I believe, that they will be thoroughly appreciated by all lovers of birds.

R. B. S.

Easter, 1895.

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THE BEE-EATER.

(*Merops apiaster.*)

IF it were not for its brilliant plumage and conspicuous appearance, which mark it out for instant observation, and, consequently, for destruction, the Bee-eater is a species which might possibly nest in England, as it has been observed in the British Islands on upwards of thirty occasions. Unfortunately, however, the species is too much in request for British collections for the bird to be allowed to live at large, and its fate on reaching our islands may be taken as assured.

The Bee-eater comes to us from the south, after spending its winter in South Africa, and

nearly every occurrence in the British Islands has taken place in spring, as if some members of the hordes which sweep into Southern Europe at this time of the year, were carried beyond their usual range by the impetus of migration, and so reached England. Its principal home, however, is Southern Europe, whence it ranges eastward as far as Central Asia and Cashmere, breeding everywhere throughout this wide extent of habitat. For the winter season it migrates south, some Asiatic individuals wandering but a short distance, though it is probable that the bulk of them pass by Arabia to Africa, which continent is, undoubtedly, the principal winter resort of the species. Its course along the Nile Valley can almost be traced with certainty, as it has been observed in the Lake districts of Equatorial Africa, and in most of the countries of Eastern Africa, where collections have been made, while it is apparently unknown in any portion of West Africa proper. After passing the Zambesi country, we find it in almost every part of South Africa, even in the neighbourhood of Cape Town itself, while it is by no means a rare winter visitor to Damara Land and South-western Africa generally

The Bee-eater is one of the few species of European birds which are recorded as nesting a second time in their winter home. There are a few others, such as the Quail and the Common Chimney-Swallow, which have been said to rear another brood in their winter quarters; but, in the case of the two last-named species, some reasonable doubt may be entertained. For instance, the Quail of South Africa, which, until quite recently, was supposed to be the same as the Quail of Europe, has lately been demonstrated by Mr. Ogilive-Grant, who is now our first authority on Game Birds, to be a distinct form, *Coturnix capensis*, which is a resident in Africa, so that this instance of double brooding falls to the ground.

The nesting of the Chimney-Swallow (*Hirundo rustica*) is equally unconfirmed, for the evidence of its so doing rests upon the testimony of the late C. J. Andersson, who says that "in uncivilized parts of Africa these Swallows affix their nests to some projection of a roof or trunk of a tree, or occupy cavities in rocks or banks." It is true that the Chimney-Swallow passes the winter in South Africa, and Mr. Andersson was

one of the best observers of bird-life of the present century, but it is, to my mind, certain that in this instance he made a mistake, and the Swallow to which his notes refer, was, in all probability, the Cape Chimney-Swallow (*Hirundo albigularis*). This surmise is the more likely to be correct, from the fact that our Chimney-Swallow leaves Europe in the same plumage with which it visited us in the spring in its full beauty. Most of our migratory birds, both old and young, moult before they quit the shores of Great Britain; but the Swallows are an exception to the rule, and fly away in the same clothing that has borne "the battle and the breeze" of their sojourn and nesting in England. In their winter quarters in Africa they go through their moult, and it is against all reason that they should wish to encounter once more the toil of rearing a brood, while their energies are enfeebled by the exhausting process of a renewal of their feathers.

In the case of the Bee-eater, however, the evidence is stronger, for the well known pioneer in our knowledge of South African ornithology, Mr. Edgar L. Layard, distinctly states that he

has evidence of the bird breeding in South Africa. It arrives in August, and remains during our winter months, when it is absent from Europe. In September and October, Mr. Layard found the Bee-eater breeding in great numbers on the Berg River. "It does not," he writes, "always select a bank into which to bore the hole destined for its nest, for we found one flat piece of sandy ground perforated with numberless holes into which the birds were diving and scrambling like so many rats."

August is the month when the Bee-eater leaves Europe, and thus the bird is one of the earliest southern migrants, and has plenty of time to rear another brood in South Africa. Its migration into Europe takes place during the last days of March and the first days of April, and Colonel Irby, who has studied the arrival of birds at Gibraltar for many seasons, found that for three successive years, the largest influx of these birds took place on the 10th of April, which date, he says, "in Spanish fashion, I christened St. Bee-eater's Day."

To an English naturalist, whose acquaintance with brilliant plumage in our islands begins and

almost ends with our Kingfisher (*Alcedo ispida*), the sight of the Bee-eaters in the South of Europe must be a pleasing and welcome sight, but it is by no means so welcome to the Andalucian peasants who keep bees, and who, unmindful of the further good done by the birds in destroying wasps and other insects, resent the havoc which they work on the denizens of their bee-hives. Here the destruction is so great, that Mr. Howard Saunders tells us that the bee-keepers catch sacks-full of Bee-eaters by spreading nets in front of their nesting holes. The absence of bees in the early autumn is assigned by Colonel Irby as one of the chief causes of the early migration of the Bee-eaters. "The reason of their early departure in August is to be accounted for by the simple fact that bees cease to work when there are no flowers, as by that time all vegetation is scorched up."

The Bee-eaters may be considered to be first cousins to the highly plumaged Kingfishers, and they have many characteristics in common. They belong to the great order of Picarian birds, in which are contained not only the Kingfishers, but the Rollers, the Swifts, Nightjars, and many other

families of tropical birds, such as the Motmots, Todies, Frog-mouths, etc. They have a bridged or "desmognathous" palate, and other anatomical and osteological characters, which show their affinity to the above-mentioned families. In the front of the breast-bone, however, there is a distinct perforation, allowing the feet of the coracoid bones to meet through it. This is a character only found in the Hoopoes (*Upupide*) and Hornbills (*Bucerotidæ*), and the Game-birds (*Gallinæ*).

Like the bulk of Picarian birds, the Bee-eaters lay glossy, white eggs, which are concealed from view. It is the constant habit of birds which lay white eggs to observe this rule, the most striking exception to which is afforded by the Pigeons, which lay white eggs in an open nest. Thus we find the white eggs of Passerine birds, such as Martins, Tit-mice and Gold-crests, carefully concealed from observation. The Bottle-Tit (*Ægithalus vagans*) builds a moss-nest, completely domed in, the Gold-crests (*Regulus regulus*) suspend their hammock-like nest under the friendly shelter of a dark fir or yew tree; while the Martin builds a plaster-nest under an overhanging

eave, and the Sand-Martin burrows out a tunnel in a friable sand-bank.

Like their relations, the Kingfishers, the Bee-eaters adopt the latter method, and at the end of a long self-hewn tunnel they lay their eggs, but make no nest whatever. In the nest-chamber, at the end of the long tunnel, the eggs are laid on the bare soil, while gradually there accumulates a foetid mass of fish-bones and pellets, in the case of the Kingfishers, and, in that of the Bee-eaters, a conglomeration of wing-cases of beetles and the indigestible portion of the bees and wasps on which the birds feed.

The curved and slender bills of the Bee-eaters suffer greatly from the labours of excavating the tunnels, and become much worn away and reduced in size. Luckily for the birds, the bill is an organ which quickly grows again to its former length, and this must be a great advantage to the Bee-eater, which has before it the task of a fresh tunnelling operation when it reaches South Africa. The holes in river-banks in the South of Spain are often hollowed out to a depth of eight or nine feet, and Colonel Irby states that when suitable banks are not available, the birds excavate holes

downwards in the earth, just as Mr. Layard has described in his notes on the species in South Africa. The eggs, when first laid, are of a beautiful pure white, but become discoloured in time from contact with the surroundings of the nest-chamber. In our illustration the egg is given of the natural size. Specimens vary a little in depth and breadth, but the average measurements of the series in the British Museum varies from about 0.95 inch to 1.1 inch.





THE COMMON ROLLER.

(*Coracias garrula*).

THIS beautiful bird is a somewhat rare and occasional visitor to the British Islands, but has been known to occur here upwards of a hundred times. It comes from the south, from Africa, which continent the species traverses on its winter migration, even extending as far south as the Cape Colony. It never appears, however, to migrate to its winter quarters in such large numbers as the Bee-eater, and is by no means so common as the latter bird in Africa.

The Roller breeds throughout Central and Southern Europe, as far as South Sweden, though it is not known to nest in Norway. As



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ROLLER.

$\frac{1}{3}$ Size

with the Bee-eater, its beautiful plumage has made it a desirable adornment for women's hats, and a great destruction of the species has ensued, though not to the same extent as has taken place with its Indian relative, *Coracias indica*, whole cases full of which arrive in London from time to time for millinery purposes, along with other equally useful birds, hundreds of Little Owls, Kestrels and other insect-eating species being sent from India to be dyed of brilliant colours, and displayed in women's hats or bonnets. In the case of the unfortunate Rollers, no such improvement of colour is needed, for the bird is one of the brightest of any which inhabit the old world, the contrasting colours of purple and blue on the wing being of singular beauty.

The species gets its common name of "Roller" from its curious habit of tumbling and rolling about in the air. This habit they display particularly in spring at the time of pairing, and Mr. Seebohm suggests that their aerial evolutions are for the purpose of exhibiting to the females the beautiful colours of their wings and tail.

By the earlier students of Ornithology, the Roller was classed with the Crows, with which

its Crow-like bill and harsh note appeared to identify it. Its Turkish name is "Alla Carga" or "Beautiful Crow," and by all Anglo-Indians the Indian Roller is always spoken of as a "Jay." As a matter of fact, however, the Roller is a Picarian bird, and finds its true allies in the Kingfishers and Bee-eaters. Like these, it has a flattened sole to the foot, so that it was formerly classed among the *Anisodactyli*, as these birds with united toes were called, the toes being joined together for some distance, and thus producing a very flattened sole. Birds of this group generally capture their prey from a fixed perch, such as a dead branch or a stump, and in the case of the Bee-eaters and Rollers, telegraph wires have been appropriated by the birds as a good point of vantage, from which to sally forth on any passing insect. The Roller, however, procures most of its food on the ground, sitting patiently on a raised clod or slight elevation, and then pouncing down on any insect that happens to shew itself. Its short legs and weak feet render it unable to progress with any rapidity on the ground, but it is extremely quick of flight in the air. Its food consists of all kinds of insects,

principally beetles, but caterpillars and worms, and even frogs, are known to form a portion of its diet, while the late M. Favier states that it will even eat scorpions.

Like the Bee-eaters and Kingfishers, Rollers lay pure, glossy, white eggs, four or six in number. These are placed in a hole in a tree or a rock, or in a wall or building. Sometimes they excavate holes in a sand bank, as Canon Tristram tells us that he once met with a colony in Palestine which had tunnelled their own nesting-holes. The egg is figured of the natural size, the average measurements of the series in the British Museum being 1·5 inch by 1·15 inch.



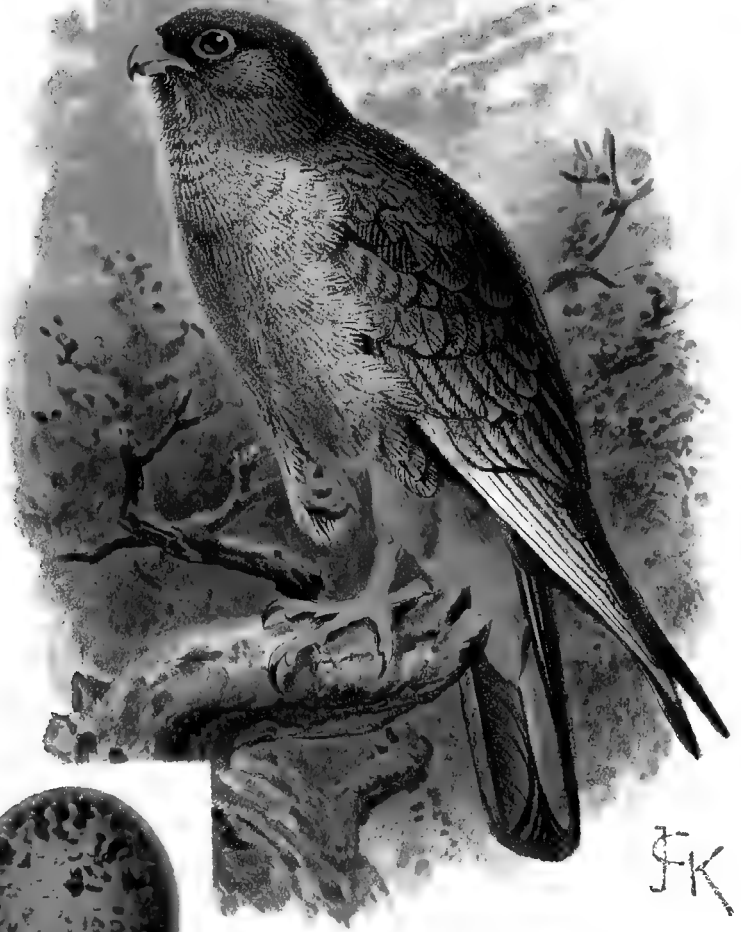


THE RED-FOOTED KESTREL.

(*Cerchneis vespertina.*)

THE Birds of Prey may be systematically divided under the following heads:— American Vultures, True Vultures, Caracaras, Secretary-Birds, Harriers, Sparrow-Hawks, Buzzards, Eagles, Kites, Falcons, Ospreys and Owls. The subject of the present notice belongs to the group of the Falcons (*Falconidæ*), which comprises some of the most striking in appearance, and also some of the most beautiful of all accipitrine birds.

First of all we have the Cuckoo-Falcons (*Baza*), which have a curious and interesting geographical distribution, as the genus *Baza* is one



RED-FOOTED KESTREL.

$\frac{2}{3}$ Size.

N.S.

which is found in tropical Africa, and also in Asia. Though these continents are now separated by such a vast extent of ocean, there are certain forms of animals which are common to both these distant lands. Thus, in the forest region of West Africa, which extends from the southern districts of Senegambia to the Coanza river in Angola, and thence along the Congo system up to the western watershed of the Nile and Equatorial Africa, we find Ant-Thrushes (*Pitta*), and many forms of forest-loving genera of birds, such as Babblers (*Turdinus* and *Trichostoma*), none of which are again encountered till we come to the Indian and Malayan regions. With the Cuckoo-Falcons this same remarkable distribution also obtains. Thus we find one species, *Baza cuculoides*, occurring in West Africa, from Senegambia to the Congo, while in Natal a second species is found, viz., *B. verreauxi*, and a third, *B. madagascariensis*, inhabits Madagascar. Then we find no species of *Baza* in any other part of Africa, but in Ceylon and in Southern India the genus again occurs, and then successive species, each confined to a limited area, are dotted all over the Malayan Archipelago, till the last

species are met with in New Guinea, the Bismarck Archipelago, and the Cape York Peninsula of North-east Australia. The Cuckoo-Falcons are somewhat intermediate in character between the Kites and the Falcons, as are some of the American genera, such as *Harpagus* and *Ictinia*. In the Malayan Islands, extending northward through the Malay Peninsula to the Eastern Himalaya, we find the Falconets (*Microhierax*), little birds, some of which scarcely exceed a sparrow in size, but true Falcons all the same.

Then we come to the true Falcons, of which there are four recognisable genera, *Falco*, to which the Peregrine and all the Hunting Falcons belong; *Hierofalco*, which comprises the large and powerful Jer-Falcons; *Hieracidea*, the Australian Jer-Falcons; and lastly, the Kestrels (*Cerchneis*).

The latter birds are mostly of small size, and are principally insectivorous, though they also devour small mammals and birds. The Kestrels are distributed nearly all over the globe, and the common species of the British Islands has relatives in nearly every quarter of the old world. The American Kestrels are of a somewhat different type.

Of the Red-footed Kestrels there are two, an eastern and a western form; and it is the latter bird which has been depicted in our illustration. It is a beautiful little bird, and has been captured in the British Islands more than twenty times. It is also of accidental occurrence in Western Europe and Scandinavia, but from Hungary eastwards, throughout Southern Russia, it breeds plentifully, and extends to South-western Siberia, as far as the district of Krasnoyarsk. In the region of Lake Baikal, and eastwards to Mongolia and Northern China, the place of our Red-footed Kestrel is taken by an allied species, *C. amurensis*, which has the under wing-coverts white, instead of slaty-grey. The winter home of the Eastern Red-footed Kestrel is also to be found in South Africa, where the European bird also takes up its winter abode, but even in their winter quarters, the two species preserve, to a great extent, their eastern and western distribution, as *C. vespertina* is common in Damara Land and South-west Africa, where *C. amurensis* is scarcely ever met with, while the latter bird occurs in numbers in South-eastern Africa, where *C. vespertina* is not seen, as far as we know. How do these birds

reach South Africa, and by what route do they travel? *C. amurensis* has been found in India on a few occasions only, but the bulk of the individuals of this species go to South Africa. Do they cross the sea from India to Africa? or, on the other hand, do they migrate from their breeding-grounds in Eastern Siberia, and join their western brethren on the Kirghis steppes, and, with them, accompany the hordes of birds of prey, which we know sweep into Equatorial and even into Southern Africa during our winter season?

Some idea of the numbers of insect-eating Hawks which visit South Africa may be gathered from a note by the late C. J. Andersson on the present species. He says that the Red-footed Kestrel usually arrives in Damara Land and Great Namaqua Land about the rainy season, and retires northwards again on the approach of the dry season. He speaks of the Kestrels, Hobbies and Kites appearing in "myriads," and one can estimate the good these birds do in a country where locusts abound. Of the Red-footed Kestrel, he writes: "It is exceedingly abundant, and may be counted by hundreds and thousands; nay, their numbers at times exceed all belief. On one

particular occasion, a friend of mine and myself attempted to form a rough approximation to the number of these birds actually within sight, and of the Black and the Yellow-billed Kites, with which they appeared to be mixed up in about equal proportions. Taking a small section of the sky, we came to the conclusion, by counting and estimating, that there were at least ten thousand individuals; and as the heavens above and all around us appeared to be darkened by a living mass of Kites and Hawks, we set down the aggregate number, immediately within our view, at fifty thousand, feeling at the same time that we were probably below the mark."

The gregarious habits of the present species are not only kept up during its winter residence in the south, but are characteristic of the bird in its breeding stations. It occupies the deserted nests of Rooks, so that many pairs may be found nesting on the same tree, and at night they roost together in numbers. Like our Common Kestrel, they catch numbers of field-mice as well as insects, and they hunt moths in the twilight, while in the daytime they capture dragon-flies and grasshoppers.

Another common name for the species is the "Orange-legged Hobby," but it is wrong to speak of this bird as a Hobby, as the latter is really of the true Falcon type, whereas the subject of our essay is essentially a Kestrel. The male is figured in the accompanying picture, and the female is very different in plumage. The male is slaty grey, with chestnut thighs, and under tail-coverts; while the female is paler in colour, and has the grey upper parts barred with darker grey. The head is chestnut, and the entire under surface is light chestnut, paler on the throat.

The egg, which is figured in our plate of the natural size, is very much like that of the Kestrel of the British Islands. Those of the Red-footed Kestrel are somewhat smaller, and are not so coarsely grained. They are, moreover, of a yellowish red colour.





ROSE-COLOURED STARLING.



THE ROSE-COLOURED STARLING.

(*Pastor roseus*).

I N recent classifications of Birds we find the Starlings placed near to the Weaver-Birds and Larks, on account of the shape of their wing, and the number of their primary-quills, the first primary being very feebly developed, and the number of these quills being ten.

These differences, however, are not now considered to have the importance which was at one time attached to them by Zoologists, and the old idea is once more reverted to, that the Starlings are allied to the Crows. Like the latter birds, they walk on the ground, and do not hop like Thrushes or Finches ; further, they nest in holes

of trees or buildings. The Starlings are rather a numerous family, and are entirely confined to the old world. All the birds called "Starlings" in the American continents are not really Starlings, but belong to the family *Icteridæ*, which is peculiar to the New World.

The Starlings of the old world may be divided into two main groups, the true Starlings (*Sturnidæ*) and the forest Starlings (*Eulabetidæ*). The former have rather a flattened bill, without rictal bristles, which are like spiny hairs at the edge of the mouth on each side; they lay, moreover, an uniformly coloured blue or white egg, without spots. The forest Starlings, on the other hand, have no bristles on the gape, and they always lay spotted eggs. To this second family belong all the Mynas (*Eulabes*) and the glossy Starlings (*Calornis*, *Lamprocolius*, etc.)

The typical Starlings (*Sturnus*), of which our English Starling (*S. vulgaris*) is the best known representative, are found chiefly in the northern parts of the old world. The two principal forms are *S. vulgaris* of Europe, and the Siberian Starling, *S. menzibieri*. Both are migratory, the common Starling leaving its nesting home in the

autumn and going south or west. Our British bird stays with us during the winter, and vast flocks of Starlings come to us at this time of the year; but in Scandinavia and Central Europe, they entirely disappear. The same may be said of the Siberian Starling, which migrates to India, in great numbers, for the winter. The more southern forms migrate to a certain extent, as the Sardinian Starling (*S. unicolor*), which migrates across the Mediteranean to Morocco, and the Purple-backed Starling of Asia Minor (*S. purpurascens*), which wanders east from the Dobrudscha and Asia Minor to North-western India.

The Rose-coloured Starling, or "Pastor," as it is sometimes called, is one of the true Starlings, laying a grey egg, of so pale a colour as to be nearly white. It differs from the ordinary Starlings in its choice of a nesting place, not seeking the hole of a tree or building in which to build its nest, but breeding in holes of rocks, as a rule, and in large numbers together. At all times the Rose-coloured Starling appears to be a gregarious bird, and its migrations take place in prodigious flocks.

The winter home of this species appears to be in the plains of North-western India, and there the birds remain until very late in the spring, returning in a very short time with their young. This brief absence has always been a source of wonder to Indian field-naturalists. I, myself, saw a small flock of fully plumaged birds near Agra on the 3rd of July. Were these birds which would breed far away to the west, or were they birds which had nested and returned to their home? They were all full-plumaged, and no young birds were in the flock, so they may have been individuals which stay in India all the year, just as some Dunlins and Gulls, in England, remain on the south coast for the whole summer, and never go north to breed, though they put on the full nesting-livery.

As the Rose-coloured Starling passes over Sind on its westward migration, the following note by Mr. Scrope Doig is of great interest. He is one of the most accurate observers in India, and he set himself to watch the spring migration of *Pastor roseus*. On the 10th of May the male birds he shot shewed signs of breeding, but the female birds had no indication of nesting.

He writes:—"The birds were feeding in the bed of a dried-up swamp, along with flocks of *Sturnus minor*, and were constantly flying in flocks backwards and forwards in one direction. Unfortunately, important work called me to another part of the district, and when I returned in a fortnight's time, I could not find one. Where can they have gone? And they remain away such a short time! I have seen the old birds return as early as the 7th of July, accompanied by young birds barely fledged, and I should not be at all surprised if these birds are found to breed in some of the native States on the east of Sind. That they could find time to migrate to the Caspian Sea and Central Asia to breed, and return again by the middle of July, I cannot believe, especially after having found them so thoroughly in breeding time, while still in the east of Sind. Another suspicious circumstance is the absence of females in the flocks I met with. There can be no doubt that the breeding-time lies between the 20th of May, and the commencement of July."

Since Mr. Doig wrote the above note, no additional evidence has been obtained as to the

breeding of the Rose-coloured Starling, in the countries lying to the east of Sind, as he supposes the bird may do. All our information at present, shews that, however extraordinary it may appear, the species does actually leave India, rear its young in Asia Minor or South-eastern Europe, and bring them back to India in an incredibly short space of time.

Some idea of the numbers in which the present species migrates westward, may be gathered from the following note of Canon Tristram's in his "Fauna and Flora of Palestine":—"The Rose-coloured Pastor is well known to the natives as the Locust Bird, from its habits of preying on that pest, whose flights it generally follows. It is very uncertain in its visits, being an erratic, rather than a migratory bird. I found it in 1858, but not in 1864 or 1872. In 1881 I came across marvellous flights of this bird in Northern Syria, which for three days (26-28 May) passed us on the Orontes, near the ancient Larissa, in countless myriads, all travelling to the westward. There must have been thousands upon thousands. The locusts were there; and on one occasion we rode over some acres alive with young locusts,

which absolutely carpeted the whole surface. One of these flocks of birds suddenly alighted, like a vast fan dropping on the earth and dappling it with black and pink. Soon they rose again. We returned, and not a trace of a locust could we find (*See 'Ibis,' 1882, pp. 410-414, for a full account of this marvellous migration*). I may add that all these myriads of birds were in fully adult plumage."

Mr. Seebohm, who has had experience of the Rose-coloured Starling in its native haunts, has given the following account of it in his "Birds of Great Britain":—"The most westerly recorded instance of its breeding in large numbers is in Lombardy, at Villafranca, near Verona. The mystery which for some time shrouded the breeding of this species has been at length completely dispelled. The old stories of their breeding in hollow trees, and the modern Greek or Bulgar fables of their boring holes in banks like Sand-Martins, are entirely unsupported by evidence. The Rose-coloured Starling is essentially a Rock-Starling in its breeding habits. When I was in the Dobrudscha, in the spring of 1883, I visited a village about three miles north of Kustendji, where these birds had bred in great numbers the

preceding year. They had occupied a pile of rough building-stone, most of which was, unfortunately, removed during the following winter. A small heap near a cottage still remained, and I was informed by the peasant who lived there that it had been full of nests. After removing a few stones from the top I soon came upon the old nests. They were more carefully made than those of the Starling, and might easily have been mistaken for nests of the Ring-Ouzel; they were chiefly composed of dry grass, but in several of them a few feathers were interwoven."

"Mr. Barkley, in his 'Bulgaria before the War,' describes two similar breeding-places between Rustchuk and Varna, where thousands took possession of a mound of broken stone and rock thrown out of a cutting on the railway. In several parts of the Dobrudscha, I met German emigrants from Bessarabia who told me that the Rose-coloured Starling not unfrequently bred in thousands in the peasants' gardens, which are surrounded by rough stone walls, in the holes of which the nests are made. These birds also often breed between Tchernavoda and Kustendji; but I had the misfortune to drop upon a blank

year. The railway from Tchernavoda to Medjidi is across a series of swamps full of reeds, some twelve feet high. Ducks and Geese come down here to feed, and the Great Reed-Warbler and the Bearded Tit make the reeds their home. Now and then a Purple Heron, a Stork or a Demoiselle Crane gets up, and Marsh-Harriers range over the swamp. On the outskirts of the reed-bed, luxurious grass grows, leading up to perpendicular cliffs from 50 to 100 feet high. Some of these are of a white chalk, and some consist of a buff calcareous conglomeration; but most of the cliffs are sandy earth, full of Bee-eaters' holes.

“The valley is about a mile wide, and has evidently, within a comparatively recent date, geologically speaking, been the main mouth of the Danube. The lakes north and south of Kustendji, are as evidently the silted-up mouths of the various arms of the river which formed the ancient delta of the Danube, which was probably destroyed by the drifting sand driven by the east winds from the shores of the Black Sea. Where the cliffs are rock, the action of the water, and possibly of the ice, has hollowed them into caverns and ledges and holes, usually tenanted by

30 THE ROSE-COLOURED STARLING.

Jackdaws, Starlings, Tree-Sparrows and Rollers, and every two or three years by Rose-coloured Starlings. In driving across the Steppes between the Danube and the Black Sea, we now and then came upon small flocks of these birds. At a distance they are indistinguishable from Common Starlings; they run along the ground in the same way, they have the same rapid straight flight, and the same habit of clustering together. On the ground they feed with the same eager anxiety, but frequently perch on the stunted bushes, when their pink colour is very conspicuous.

“The notes of this bird are almost exactly the same as those of the Starling; they chatter together in the same way; and in confinement the low warble mixed with the chatter is very similar in both species. In most places, where this bird breeds, it is protected on account of the enormous number of locusts it devours. In autumn it takes its toll on the fruit (mulberries, cherries, etc.), but its usefulness in spring is so apparent, that the Greeks and Turks do not begrudge it so small a trifle. In Asia Minor, as in the Dobrudscha, I had the misfortune to arrive the day after the fair. Dr. Krüper and I were

informed by our friend Guido von Gonzenbach, that the Rose-coloured Starlings had bred in the previous spring (1871) in enormous numbers in the neighbourhood of Smyrna, and had devoured the grubs and locusts to the admiration of the peasantry. They fixed upon some village unknown as a central breeding place, and more than 200 of their eggs were brought in to Mr. Gonzenbach; but all his information being Greek, he was unable to find the locality. After many inquiries, we succeeded in discovering it amongst the hills. It appeared to be deserted, not a soul could we find; everybody was down in the valley harvesting. At last we met an old man travelling with a mule, buying up fleeces of sheep from the peasants. He told us that he had travelled all the country round, and could assure us that there was not a bird to be found of the kind we sought. He told us that last year the birds swarmed in thousands in the valley below, and had built nests like Blackbirds in the clefts of the rocks and on the stony ground on the steep hill-sides. That year (1872) he said that they had arrived in great numbers, but at the expiration of a week, had suddenly disappeared."

A very interesting account of the breeding of these birds in the same district sixteen years previously, is to be found in the "Zoologist" for 1857, p. 5668, translated from an article in "Naumannia" by the Marquis O. Antinori. He and Mr. Gonzenbach did not discover the locality until the young had left the nests. The birds arrived during the last week of May, and fresh eggs must have been laid about the 10th of June; but by the end of that month the young had left the nest, and by the middle of July, both old and young had left the locality. The breeding-place was a rocky mountain-side, and long before it was reached, they noticed that every rock and stone was covered with the white droppings of the birds. The nests were in thousands, some quite open and uncovered, others so concealed amongst the blocks of stone, that it was necessary to turn the rocks over to find them. Some were more than a foot below the surface, and others beyond arm's length. The nests were often so close together as to touch one another; they were carelessly made of dry stalks and leaves, occasionally lined with fine grass. Many eggs were laid on the bare ground. The great number of birds

THE ROSE-COLOURED STARLING. 33

naturally attracted many enemies; and the remains of birds were lying about in all directions, which had fallen a prey to Jackals, Martens, Wild Cats, Rats, etc.

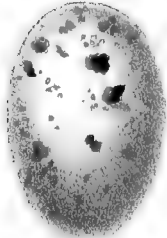
In these ravines the oleander is very common; and a small flock of Rose-coloured Starlings often suddenly becomes invisible as it drops on one of these shrubs, the pink backs and breasts of the Starlings being scarcely distinguishable from the pink flowers of the oleander.

During the breeding-season, the females of the Rose-coloured Starling sit very close, and are assiduously fed by the males; and during the short time that the young are in the nest, they are most carefully tended by both parents. The birds are said to take pleasure in killing locusts, even when their appetites are satisfied.

In the "Zoologist" for 1878, p. 16, is a most interesting account of the visit of these birds in 1875 to Villafranca, translated from the Italian of Edoardo de Betta. About four o'clock in the afternoon of the 3rd of June, about a score of Rose-coloured Starlings arrived at the Castle, and were followed in about half an hour by a much larger flock, of perhaps a hundred birds. Towards

evening some thousands arrived, and at dusk dispersed in flocks over the country. The next day the numbers increased to about fourteen thousand; and they soon ejected the Common Starlings, Swallows, Sparrows and Pigeons from the holes in the battlements in the Castle. The following day these holes were cleaned out, and nest-building began on the 5th of June. It was not until the 17th that it was ascertained for certain that eggs had been laid; but by the 14th of July the young were seen migrating with their parents, and soon afterwards the birds had all disappeared. The nests were described as roughly composed of small sticks, little branches, straws, hay, grasses, and other dry herbs disposed in a shapeless mass, with a limited hollow space in the middle to contain the eggs, and irregularly lined with herbaceous fibres, leaves, mosses and feathers. The males went out to feed in small parties, returning together.





NS

GOLDEN ORIOLE.

$\frac{1}{2}$ Size.



THE GOLDEN ORIOLE.

(*Oriolus galbula.*)

THE Orioles are entirely birds of the Eastern Hemisphere. In America there are many black and yellow birds, which are commonly called "Orioles," such as the "Baltimore Oriole," for instance, but these birds are really "Hang-nests," and belong to the *Icteridæ*, a purely American family.

Orioles are found in Europe, Asia and Africa, that is to say, the yellow and black forms, of which our Golden Oriole is the best known representative; for in Australia, all the Orioles have a greenish type of plumage. The Orioles constitute a family apart, having somewhat of the habits of Starlings and Thrushes, but building nests and

laying eggs of a totally different pattern from these birds. Some naturalists have even placed the Orioles in the family of Crows, but this is certainly a mistake, for there is scarcely a character in common between the Families of the *Corvidæ* and *Oriolidæ*. The structure of the nest alone is so totally different, that it shows at once a want of kinship, for the Orioles build a suspended nest, a kind of hammock, attached to the fork of a branch. No Crow builds such a nest; but, on the contrary, the nests of the *Corvidæ* are rough and substantial structures, whereas that of an Oriole is a very slenderly built affair. The Drongos (*Dicruridæ*), which also inhabit the tropics, and are found, like the Orioles, in Africa, India and Australia, build similar fork-slung nests, but are not, in other respects, allied to the Orioles.

The beautiful Golden Oriole has often wandered to Great Britain. It has even bred in our islands; but this has been owing to the protection of some proprietor, on whose land the birds chanced to settle, for, as a general rule, no highly plumaged species has much chance of establishing itself in a land like ours, where a pecuniary reward is ready for every one who owns a gun

and will shoot specimens for the collector of "British" birds. Thus the Oriole, which might be a regular summer resident, has to be classed among our rare visitors. The birds, themselves, appear to know that their golden plumage renders them specially visible, and in India I noticed that the Golden Oriole of the country (*Oriolus kundoo*) was an uncommonly shy bird, and this seems to be the manner of the European species.

However much the Oriole may keep itself out of sight, its note is at once attractive, being very flute-like. Thus Mr. Seebohm says:—"The call-note, during the pairing season, sounds like the words, 'Who are you?' in a full rapid whistle; and its song is a 'Wheet-li-vee-o,' whence its vernacular name in Holland of 'Kiel-i-vee-o.' Some slight modifications in its song are apparently produced by prefixing or interluding its call-note. It is a pity that the song is so short; for in quality it is scarcely exceeded by any other bird. Naumann describes its ordinary call-note a clear *gyako, yako, yako*, and its alarm note as a harsh *Khrr.*"

In its habits the Oriole is very like a Thrush, and in its flight it also resembles that bird. Its

food consists of insects, but it also feeds on fruit, especially cherries. "The nest of the Golden Oriole," writes Mr. Seebohm, "is unlike that of any other European bird. It is, perhaps, more curious than beautiful, and is most artistically made, but the art is of the mechanical kind. The nest is always suspended from the fork of a horizontal branch, sometimes of a pine-tree, but generally of an oak, and is usually placed from twenty to thirty feet above the ground. The outside is composed of broad sedges and strips of inner bark, which are wrapped round the two branches forming the fork, from which the nest is pendant, I have generally found intertwined with these long narrow strips a few withered leaves, and almost invariably a scrap or two of a Dutch newspaper. The lining is composed of the slender round grass-stalks, very frequently with the flower of the grass attached. It is said that the male relieves the female in the duties of incubation, and it drives off any intruder with great daring. It has the general reputation of being a quarrelsome bird, and in spring the males are often seen fighting, either for the possession of the female, or for the range

of some favourite plantation. Like the Jay, the Golden Oriole has some peculiarities, which are not altogether Corvine. Its flight is undulating, not straight; and on the ground it hops, but does not walk."

The Golden Oriole is rather a late visitor to Central Europe, and does not arrive before the end of April or beginning of May, and its eggs are found towards the end of the latter month.

In Southern Europe and Asia Minor it is not seen before the middle of April, and the return migration commences at the end of July or the beginning of August, and lasts till the early part of September.

The winter home of the species is South Africa, and it has been traced through the eastern side of the Continent, but has not, so far, been found migrating on the western side.

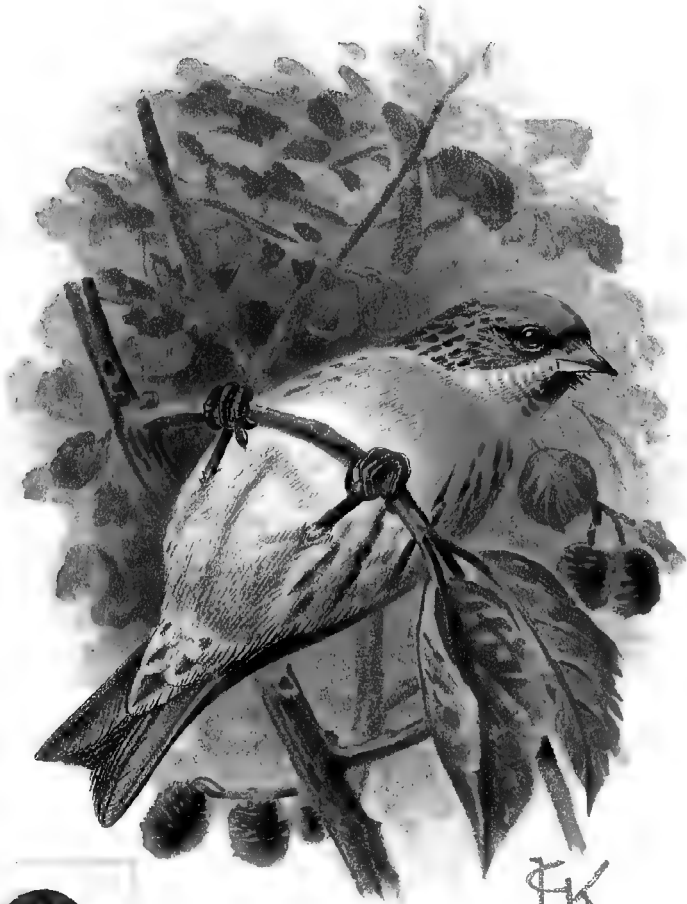




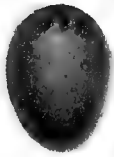
HOLBOELL'S REDPOLL.

(*Cannabina holboelli.*)

THIS is a large form of the Mealy Redpoll, and has certainly occurred in this country, as two specimens are in the British Museum, procured near Norwich in the month of January. It probably visits us more often than is suspected, for our friend Mr. Chernel has lately procured many specimens in Hungary. The home of the species is in Scandinavia, whence its range extends to Eastern Siberia. It is like a Mealy Redpoll, and has the lower back and rump white, with brown streaks like the back, but it is larger, with the bill 0·5 inch in length instead of 0·4, and the latter is altogether stouter. To us it seems a well-marked race of the Mealy Redpoll, but



JK



N.S.

HOLBOELL'S REDPOLL.

$\frac{3}{4}$ Size.

Professor Newton records his opinion that the lengthened bill is only due to the nature of the food on which the bird subsists at certain seasons of the year.

Redpolls are birds of the north, and inhabit North America as well as the northern parts of Europe and Asia. They belong to the same genus as the Linnets and Twites, of which about ten species are recognised by naturalists. Of these the best-known British species are the Common or Brown Linnet (*C. cannabina*), the Twite (*C. flavirostris*) and the Lesser Redpoll (*C. rufescens*). The Redpolls are principally distinguished from the Linnets and Twites by always having a red patch on the forehead, the males of the latter alone possessing this character. From the male Linnets and Twites, however, the Redpolls may always be distinguished by having a black spot on the chin, and by having white, or buffy white bars on the wings, formed by the pale tips to the wing-coverts.

All the Redpolls appear to be very similar in their habits, though these vary slightly according to the species and the countries which they inhabit. It is very difficult to write with any

degree of accuracy on this point, however, as recent observers have persisted in uniting many of the forms together, though not omitting to record differences of plumage, as well as variations in the call-notes and song. A full account of the several species has yet to be written. Thus, of Holboell's Redpoll, be it merely a race or a good species, nothing is known with certainty, as the notes written about Scandinavian and Siberian Redpolls may, after all, apply to *Cannabina linaria* or *C. exilipes*, which likewise occur in those countries.

The best-known of the British species is the Lesser Redpoll (*Cannabina rufescens*), which breeds sparingly in the southern counties, but more commonly in the north of England. It is, however, much more numerous on migration, and is caught in large numbers during its autumn flight to the southward. At this season, it may be seen feeding on the birch-trees, and oftener still on the seeds of the alder, in company with Siskins and Goldfinches. When thus seen, its actions are very much like those of a Tit, though the bird is never so active or noisy. It is by no means impossible to stand under an alder tree for a

considerable time without seeing a bird, till a call-note suddenly directs one's attention to the part of the tree in which the Redpolls are, and we have often been amused to find that there have been a dozen or twenty birds within a short distance of our heads, so quietly engaged in feeding that we have failed to distinguished them. In feeding, they often hang back downwards, and scarcely ever utter a sound, and the call-note, which sounds like "too-who," uttered in a nasal manner, is generally the signal for the little flock to fly off to another alder or birch-tree. This call-note, which is very similar to that of the Siskin, is quite different from that of the Linnet. A flock of Twites, however, will utter the same kind of note as Redpolls, and they are very like the latter birds in their appearance and ways.

Mr. Seebohm says that he has often heard the song of the Lesser Redpoll near Sheffield, and he describes it as a short, monotonous trill, clear, shrill and not altogether unmusical. Prosaically described, however, it may be said to resemble the rattling of loose cog-wheels. The nest is a beautiful little structure, composed "of a few slender twigs in the foundation, and built up of

dry grass-stalks and a little moss, profusely lined with the down from the cotton-grass or willow-catkins, or if these materials are not obtainable, with white Ptarmigan feathers, hair, or wool. The lining is generally more or less interwoven into the sides of the nest, which can scarcely be matched for delicacy and beauty."





SCARLET ROSE-FINCH.
 $\frac{4}{5}$ Size



N.S.



THE SCARLET ROSE-FINCH.

(*Carpodacus erythrinus.*)

THE Finches are birds of very wide distribution, especially in the Old World. They may be divided into three sub-families, the Grosbeaks (*Coccothraustinæ*), of which our English Hawfinch is a type, the true Finches (*Fringillinæ*), of which our Chaffinch is a type, and the Buntings (*Emberizinaæ*), of which our Yellow Ammer is a type.

The Scarlet "Bullfinch," as it is often called, belongs to the true Finches, and it is not a real Bullfinch, such as our English bird. In fact, the members of the genus *Carpodacus* are usually called "Rose" Finches—a very appropriate name, but one which cannot so well be applied to the subject

of the present article, as its principal colour is scarlet and not rosy.

The Rose-Finches are found from North-eastern Europe throughout Siberia to Kamtschatka, and are particularly well represented in the Himalayas, westward to the Caucasus, and one peculiar species is found as far south as the Peninsula of Sinai. In South America several species are found, and the genus extends to Mexico. The Rose-Finches may be said to be intermediate in form between the Canaries and the Bullfinches, approaching the former in the slightly swollen bill, and resembling the latter in the absence of yellow in the plumage. In their habits, however, they differ considerably from the last-named birds.

The Scarlet Rose-Finch is an inhabitant of Northern Russia, but breeds as far to the west as Eastern Prussia, while to the east it extends throughout Siberia to the Pacific and to Kamtschatka, as well as to Northern China, where it also nests. Its winter home is in the Indian Peninsula, and large numbers pass through China on passage. It is at the season of migration that examples have been found in Western Europe, and the species has been

captured in France Italy and Spain, and has twice been obtained in England—once near Brighton in September, and once near Hampstead in October.

The notes on the habits of the Scarlet Rose-Finch are very scanty, as it has been given to but few European ornithologists to observe the bird in a state of nature. Mr. Seebohm, who has travelled extensively for the purpose of studying the habits of birds which do not breed in England, writes as follows:—"The Scarlet Rose-Finch is not particularly interesting at its breeding-grounds. Such a fine-looking bird, perching so conspicuously as it does, is sure to attract attention; but I did not observe anything in its habits worthy of note to distinguish it from other Finches. North of Lat. 68°, when the trees began to diminish in size, it disappeared. The call-note is very similar to that of the Canary. In autumn these birds collect into flocks, and are amongst the first birds to migrate southward before the approach of winter.

"The song of the Scarlet Rose-Finch is a very striking one, and not to be confused with that of any other bird. It is a loud, clear whistle—

Tŭ-whit! tŭ-tŭ-i! It does not require a great stretch of imagination to fancy that the bird says, 'I'm pleased to see you;' the 'see' being strongly accented and slightly prolonged. This song is never varied, but is sometimes repeated twice in rapid succession. When it is heard, the bird may usually be seen perched conspicuously on the top of a bush or low tree. The marshy forest banks of the great Siberian rivers are a very favourite resort of this bird; and in the Baltic Provinces, where it is common, and in the valley of the Upper Volga, it is described as frequenting willows and other low trees in marshy districts.

"The food of this bird consists of seeds of various kinds, grain, and the buds of trees. In spring it eats insects, and in autumn berries and other fruit.

"The nest of the Scarlet Rose-Finch is built in the fork of a small bush, or amongst climbing plants, not far from the ground. It bears little resemblance to the nest of a Finch, and might easily be mistaken for that of a Warbler. It is composed of dry grass-stalks, and lined with horse-hair. It is rather deep, and very neatly

and carefully made, although it is so slender as to be semi-transparent when held up to the light. The inside diameter is two inches and a quarter.

“Five is the usual number of eggs; but sometimes only four are laid, and, occasionally, as many as six. They vary in length from $\cdot 9$ to $\cdot 73$, and in breadth from $\cdot 63$ to $\cdot 55$. The ground-colour is greenish blue, not so pale as that of the eggs of the Bullfinch; the spots are also fewer, smaller, and blacker than in typical eggs of the latter species. They are smaller than the eggs of the Bullfinch, and are not likely to be mistaken for the eggs of any other bird.”

The following is Colonel Biddulph's account of the breeding of the species in Gilgit:—
“Several nests were found, all situated within a foot of the ground, either in low bushes or among the stems of coarse grass, about 2 feet high, in scrub-jungle. The nest is a neat cup-shaped structure of grass, lined with the finer roots and stems only, except in one instance, in which a good deal of hair was mixed with the lining; the interior is from 2 to $2\frac{1}{2}$ inches wide, and $1\frac{1}{4}$ deep. The eggs are blue; of a purer and slightly deeper shade than those of *Trochalopteron*

lineatum, with chocolate spots sparingly scattered over them, chiefly towards the large end. In one out of a dozen the spots are almost entirely wanting; in some they are paler, almost of a sienna tint, in others nearly black, while on a few there are also one or two pale purplish spots and fine reddish scrawls at the larger end; and in these the spots are almost confined to the larger end in an ill-defined zone or cap.

“Nests were taken at 10,000 feet elevation on July 16th, 17th, 20th, 21st, 29th and 30th, all with eggs mostly fresh.”





JK



N.S.

TWO-BARRED CROSS-BILL.
 $\frac{3}{4}$ Size.



TWO-BARRED CROSSBILL.

(*Loxia bifasciata.*)

THE Crossbills are nearly allied to the Bullfinches, but are remarkable for the curious way in which their mandibles cross each other.

This conformation of the bill is only seen in old birds, as in the young ones the bill is like that of ordinary Finches, and does not show any sign of the ultimate aberration in the position of the mandibles.

Many of our readers will be familiar with the pretty rendering by Longfellow of the ancient legend regarding the way in which the Crossbill obtained its abnormal bill:—

THE LEGEND OF THE CROSSBILL.

(From the German of Julius Mosen.)

On the cross the dying Saviour
 Heavenwards lifts His eyelids calm,
 Feels, but scarcely feels, a trembling
 In His pierced, and bleeding, palm.
 And, by all the world forsaken,
 Sees He how with zealous care,
 At the ruthless nail of iron,
 A little bird is striving there.
 Stained with blood, and never tiring,
 With its beak it doth not cease ;
 From the cross 'twould free the Saviour,
 Its Creator's Son release.
 And the Saviour speaks in mildness :
 "Blest be thou of all the good !
 Bear, as token of this moment,
 Marks of blood and Holy Rood !"
 And that bird is called the Crossbill ;
 Covered all with blood so clear,
 In the groves of pine it singeth
 Songs, like legends, strange to hear.

In the same way the red breast of the Robin is said to have been acquired, and the Red-breast possesses this advantage over the Crossbill in legendary history, that it does really occur in the Holy Land, whereas the latter species is not, as yet, known to visit that country.

The Crossbills are birds of the pine-woods,

and are found in the northern portions of the old and new Worlds, wherever forests of pine, or larch, or fir-trees flourish. Here it finds the seeds on which it feeds, and for the extraction of which its curious bill is adapted. The latter varies considerably in stoutness and strength, the larger-billed individuals being often called "Parrot" Crossbills in works on British Ornithology. In the Himalayas the Crossbills are very small, and have been recognised as a distinct species, but they really only constitute a small race of the ordinary form, for between the small size of the Himalayan Crossbill and the species of Northern Europe, the bird of North America is intermediate, so that it is impossible to define any characters by which these races can be recognised, as the size of one overlaps that of the race next in order of dimensions. In the New World we find Crossbills as far south as Mexico, and the curious discovery was made by Mr. John Whitehead last year, of the existence of a species of Crossbill in the mountains of Northern Luzon, in the Philippines, where the presence of the genus had never before been suspected.

Besides the ordinary species, of which the common Crossbill is the type, there are two species of White-winged Crossbills, both of which have occurred in England. They differ from the ordinary type in having a double bar of white across the wing; hence the name of "Two-barred" or "White-winged" Crossbills. Both of these are distinguished from the ordinary forms by a slightly richer coloring, in addition to the bars on the wing. The European species (*Loxia bifasciata*) occurs accidentally in England, but has occasionally visited us in some numbers. Its true home is in Northern Russia and Siberia, and in North America it is represented by a closely allied form, which only differs from its European relative in having the scapulars slightly darker, so that it is extremely doubtful if there is any real distinction to be found between the European and American birds. The latter have also been recorded as British.

As might be expected, there is no difference in the habits of the Two-barred and the Common Crossbills, but the former seem to have a slightly more northern breeding-range, both in the Old and the New Worlds. They are all very early

breeders, and lay their eggs in February and March, the young birds afterwards forming family parties with their parents, and straying about in small or large flocks in search of food, when they wander to a considerable distance from their home.

Writing of the Two-barred Crossbill in Alaska, Mr. E. W. Nelson says:—"It is found in the greatest abundance wherever trees occur to afford it shelter. It is even in greater numbers than the Pine Grosbeak, and shares with the latter its range. It is more familiar than the Grosbeak, frequently coming low down among the smaller growth, and it is a common sight to see parties of them swinging about in every conceivable position from the twigs on the tops of the cottonwoods or birch trees, where the birds are busily engaged in feeding upon the buds. They pay no heed to a passing party of sleds, except, perhaps, that an individual will fly down to some convenient bush, whence he curiously examines the strange procession, and, his curiosity satisfied or confidence restored, back he goes to his companions, and continues his feeding. When fired at, they utter chirps of alarm, and call to each

other with a long, sweet note, something similar to that of our ordinary Goldfinch (*Spinus tristis*). They keep up a constant *cheeping* repetition of this note, when feeding in parties, and if one of their number is shot, the others approach closer and closer to the hunter, and gaze with mingled curiosity and sympathy upon their fluttering companion."

We have already alluded to the way in which the bill of the Common Crossbill varies in size, and the birds in stoutness. Mr. Seebohm says that this has much to do with the food on which they live. "The bill of the Crossbill has become specially adapted for extracting the seeds from the cones of the larch and various species of pine. The strongest billed birds, to which the name of "Parrot" Crossbill has been applied, form a local race, which live in the pine-forests, and feed principally on the cones of the Scotch fir (*Pinus sylvestris*). The more slender-billed birds choose localities where spruce-fir and larch cones are obtainable; they range further north during the breeding season, than their thicker-billed cousins, not because they are able to withstand a greater degree of cold, but because the trees whose fruits

form their favourite food are found further north.

“In the Valley of the Yenesei, the larch and spruce range to lat. 69° , whilst the Scotch fir only grows as far north as $62\frac{1}{2}^{\circ}$. The Crossbill breaks off the cone with its beak and flies with it to a thick bough. The cone is held firmly against the bough with one foot, exactly as a Raptorial bird holds its prey, and the cone is torn to pieces, and the seed extracted with the bill, the outside covering or shell being removed, and the kernel only eaten. The Crossbill also feeds on many other seeds, and is very fond of apples. Meves found them feeding, in South Sweden, on the caterpillar and chrysalis of a small green moth (*Tortrix viridana*), which is very destructive to oak-trees, and it is said that the Crossbill generally feeds its young upon insects.

“The nest is usually placed in a pine-tree of some kind, occasionally not more than five feet from the ground, but more often at a much greater elevation. The favourite position seems to be almost at the top of the tree in a cup formed by the forking of the branches; but it is not unfrequently built on a horizontal branch

at some distance from the trunk. It is formed on the same model as the nest of the Bullfinch, an outside nest of sticks, and an inside nest of soft material, the latter rising somewhat higher than the former. The outside nest is made of twigs of Scotch fir, about $\frac{3}{16}$ of an inch thick, somewhat loosely interlaced together, and has ~~an inside~~ diameter of four inches, and an outside diameter of six inches or more. The inside nest is composed of dry grass and hair-lichen, with occasionally a little moss or wool, or a few feathers in the lining; the cup has a diameter of $2\frac{3}{4}$ inches, and is almost $1\frac{1}{4}$ inch deep. The usual number of eggs is four, but five are sometimes found; they vary in length from 0.95—0.85 inch, and in breadth from 0.07—0.65. The ground-colour of the eggs varies from pale greenish blue to almost white. The overlying spots are dark brown, principally at the larger end, most of them very small, but some as large as No. 10 shot, and many elongated into streaks; the underlying spots are pale reddish brown, but do not differ in size, shape, or distribution, from the overlying spots."



SHORE-LARK.
1/2 Size.



N.S.



THE SHORE-LARK.

(*Otocorys alpestris.*)

THIS bird is by no means an uncommon visitor to our shores in winter, occurring both in the east of England and in Scotland, and it probably comes regularly every winter. It merits its name of "shore" Lark from its habit of frequenting the sea-coasts, but a more correct name for it would probably be the "Horned Lark," as it belongs to a small group of the *Alaudidæ*, which have a little black tuft of feathers on each side of the head; and, moreover, these members of the genus *Otocorys* are anything but "shore" Larks in their summer habitats.

Thus we find that there are about twenty forms of Horned Larks recognised by naturalists

at the present day. The species which visits the British Islands is a bird of the Arctic Circle in summer, breeding on the "tundras" above the forest growth in both the Eastern and Western Hemispheres. Hence it is one of those species known as circum-polar, and like the Snow Bunting, and the Snowy Owl, the Shore-Larks wander south in winter. They are a regular visitor in late autumn to the island of Heligoland, and have occurred in most of the countries of Europe at the same season of the year.

The allied species, however, are mostly stationary, and migrate in a much less degree than the common species, *O. alpestris*. In North Africa there is a resident species, *O. bilopha*, in the Sahara, which extends eastwards to Arabia. In South-eastern Europe we find *O. penicillata*, which visits Bosnia and Southern Russia, and extends through Persia to Afghanistan and the country round Gilgit, in the Western Himalaya. A second race, *O. bicornis*, replaces this Horned Lark in Palestine and Syria; and a third race, *O. pallida*, occurs in Yarkand and Turkestan.

In the Himalaya Mountains and in the Tian Shan and Altai ranges as far as Northern China,

and throughout the great plateau land of Tibet, a large and strong-billed form, *O. longirostris*, is dominant; but it is in North America that the greatest diversity of race is shewn. In the latest memoirs on these Larks, by Mr. Dwight, no less than eleven races are recognised, each inhabiting a separate and distinct area between the Arctic Regions and Mexico, while one little species of Horned Larks, *O. peregrina*, is stranded in the United States of Colombia, in South America.

As the Shore-Lark is only seen with us in winter, very little has been observed of its habits, and we must fall back on the writings of those who have observed it in its breeding-haunts. As is the case with most of our rare visitors, we find the best notes in the writings of Mr. Seebohm, who made it a special feature of his work to visit many countries, for the express purpose of studying the habits of species, which are known in Great Britain only as rare or winter visitants.

In the north of Europe, and in Siberia, he met with the Shore-Lark, and took the nest and eggs in Lapland, on the Petchora River, and on the Yenesei. In the former country the bird lays its eggs from the middle of May to the middle of

June, and rears two broods. In Siberia the eggs are laid in the middle of June, and only one brood is raised, as the summer is too short to allow of a second one being brought up. "The nest," writes Mr. Seebohm, "is always built on the ground, generally in some slight hollow. I found one in Finmark in the middle of a mountain-path, in the hollow formed by the foot of a horse in the soft mud, which the sun had afterwards hardened. Others were amongst stones on the bare ground, and one under the shelter of some rushes in the grass. The nest is loosely made of dry grass and stalks, and the inside, which is rather deep, is lined with willow-down or reindeer-hair. Four is the usual number of eggs; but very often only three are laid, and sometimes as many as five. They may be said to be characteristic Lark's eggs, and only differ from those of the Sky-Lark by their more olive-shade of colour."

Mr. Seebohm further gives the following characteristic account of his experiences of the species in its northern home:—"The Shore-Lark is as much a bird of the tundra as the Snow-Bunting and the Lapland Bunting, but it breeds

at a lower latitude than the former species, and, although almost as abundant as the latter, it is more local. It avoids the marshy districts, and confines itself to dry sandy plains or rocky hills, though it comes down to the mud-shores of the rivers to drink. It is one of the earliest of the small birds to arrive at its breeding-grounds. The Snow-Bunting and the Mealy Redpoll arrive first, and may be seen running about on the snow some weeks before the ice breaks up; but as soon as the thaw begins in earnest, a batch of small birds arrive, amongst which is sure to be the Shore-Lark. In latitude 60° , in the Valley of the Petchora, I saw the first on the 10th of May; but in latitude $66\frac{1}{2}^{\circ}$, in the Valley of the Yenesei, I did not see this bird until the 2nd of June. They afterwards passed through both stations in great numbers.

“The Shore-Larks seem to be entirely ground birds. On the banks of the Petchora I have seen both the Common Gull and the Common Snipe perched in trees, and in the Valley of the Yenesei I have shot a Golden Plover from the summit of a larch; but I have never seen the Shore-Lark perch on a tree or even on a bush. It seems to

be even more exclusively a ground-bird than the Sky-Lark. It runs along the sand with the greatest ease; but when watching a flock of Lapland Buntings and Shore-Larks feeding on an oasis of grass in the snow, I noted down that both species occasionally advanced by a series of hops, and that the Shore-Lark did so more than the Lapland Bunting. During migration, the Shore-Lark is a gregarious bird, and though the first flocks consisted of Shore-Larks only, as soon as the Lapland Buntings began to arrive, they seemed to be on the best of terms together, and the later flocks usually consisted of both species: Flocks of Pipits were migrating about the same time, and it was very striking to contrast the wildness of these birds with the tameness of the Shore-Larks.

“The Shore-Lark often sings on the ground, and when apparently too busily engaged in feeding to mount in the air for the purpose, will occasionally utter snatches of song. At their breeding-places, they sing continuously, mounting up into the air like a Sky-Lark, and singing their charming song, as they sail about with wings and tail expanded. The song is very

melodious, though short, and, among its few variations, a long-drawn note often occurs, which resembles much the song of the Corn-Bunting. It often remains for some time in the air, and sings its little song several times over before it descends. It will also sing from the roof of the wooden houses. Its call-note is loud and clear, but scarcely capable of being expressed by a word."





THE BLUE-HEADED WAGTAIL.

(*Motacilla flava.*)

FIVE species of Wagtails are known in the British Islands. They are all more or less migratory; but two of them, the Pied Wagtail (*Motacilla lugubris*) and the Grey Wagtail (*Motacilla melanope*) stay during the winter in some numbers, though most of them leave our shores for more southern climes.

The Pied Wagtail, most familiarly known in England as the "Dish-washer," may almost be said to be a peculiar British bird, for its nesting-home is almost confined to our islands. It is known to breed also in the North-west of France, and the nest has, on one occasion, been



BLUE-HEADED WAGTAIL.

¾ Size.

N.S.

found in Holland. It also nests in South-western Norway, but it is a species quite peculiar to Western Europe, and even in its migrations it still adheres to this distribution, going in winter to Southern France, and, in fewer numbers, to Spain and Morocco, in company with its congener, the White Wagtail (*Motacilla alba*). With this species it returns in spring; but the latter bird takes the place of the Pied Wagtail throughout the greater part of Europe, and visits England more rarely. Sometimes a partnership takes place between the two species, as was proved a few years ago by Lord Walsingham, who instructed his keepers to procure a pair of Pied Wagtails for the series of groups of British Birds in the British Museum. The nest and young birds were duly obtained with the parent birds, when the male proved to be a White Wagtail (*Motacilla alba*), and the female a Pied Wagtail (*M. lugubris*). This curious western distribution is observed in another species of Wagtail, belonging to the yellow section of the genus, or "Field" Wagtails, as they are usually termed. This is the Yellow Wagtail or Ray's Wagtail, *Motacilla campestris*, which nests plentifully in the

British Islands, and also in the North of France, but is only known as a rare bird-of-passage in spring in Holland. Of this bird, however, there seems to be a second "colony," if one may use the term, which inhabits Central Asia and the countries round the Caspian Sea in summer, and winters probably in South-eastern Africa, for specimens have been received in collections from the Transvaal and the Zambesi. Western Africa is the winter home of our British-bred individuals, and here we have a somewhat similar case of distribution to that already explained in our account of the Red-footed Kestrel.

The breeding-ranges and migrations of the Blue-headed Wagtail are not less interesting. This is a first-cousin of Ray's Wagtail, and, like that bird, belongs to the group of "Field" Wagtails, as opposed to the "Pied" or "Water" Wagtails, of which *M. lugubris* and *M. alba* are the typical representatives. They are mostly found in the fields, rather than at the water-side, and nest in the meadows, instead of in sheltered places, like the Pied Wagtails do.

All the Wagtails, like their relations the Pipits, have very long secondary quills, which are nearly

the same length as the primary quills. In this character they resemble the Larks, as they do also in their mode of running along the ground, instead of proceeding by means of hops. The eggs of both are very Lark-like in general appearance, especially in the case of the Pipits, but none of the Larks have the elegant motions of the slenderly-built Pipits and Wagtails, all of which keep up a vibration of the tail, when they run, which is exceedingly graceful. Their flight also is more of a "dip" through the air than is the case with the Larks; whose flight is more steady and sustained.

As a rule, the Pipits and Wagtails are birds of sober plumage, but some of the latter are rather handsomely coloured, and of these the Blue-headed Wagtail is certainly one of the most striking. It has perhaps the largest range of any of the Family to which it belongs, and is particularly interesting to the student of the geographical distribution of animals, as being an example of "interrupted" habitat. Thus the Blue-headed Wagtails which pass the summer in Europe, apparently pass the winter in Africa. Far to the eastward, the Blue-headed Wagtail is

met with again, for I have never been able to separate satisfactorily the Chinese examples from their European representatives, though many ornithologists consider them to be specifically distinct. This eastern colony of *M. flava* breeds in Eastern Siberia, as far as Kamtschatka, and even extends to Alaska, in North-west America. It passes through China to its winter home in Burma and the Indo-Malayan region, visiting even the Molucca Islands during its winter migration. In Central Siberia, on the other hand, certainly in the Valley of the Yenesei, and probably in that of the Lena, an intermediate form of Blue-headed Wagtail obtrudes itself, wedging in, as it were, its range between the true *Motacilla flava* of Europe and Eastern Siberia. This is the Indian Blue-headed Wagtail, *Motacilla beema*, which nests in the Siberian latitudes mentioned above, and spends its winter in the Indian Peninsula. It is a very pale-coloured edition of the ordinary *M. flava*, and is easily recognisable as a distinct race.

The Blue-headed Wagtail is a regular visitant to England in spring, and is probably more frequent than is generally supposed. It arrives

with the flocks of Ray's Wagtails, and I have shot it in their company on the marsh-land of the South coast. I have also seen in the collection of my friend, Mr. Menteith Ogilvie, several female specimens procured by him in Suffolk, and it is, therefore, quite possible that the species either breeds in our Eastern counties, or that it mates with Ray's Wagtail, which is the Common Yellow Wagtail of those parts.

Large flights of Yellow Wagtails arrive in England in the spring, and are to be seen in numbers in the meadow-lands of the south coast as early as March. By the end of that month they have extended further inland, and their bright plumage rivalling, in the males at least, the brilliancy of a Canary, makes them a conspicuous object in the pastures and commons of the southern and mid-land counties. In April they extend their range into Scotland, where they breed plentifully. They are very fond of accompanying cattle, and may generally be seen running swiftly about in close proximity to the legs of the cows, and actively catching the insects disturbed by the latter as they move along. In the autumn they collect in vast flocks on our southern coasts, and roost

in the reed-beds in swarms, before taking their long journey to Western Africa.

The Blue-headed Wagtail, although, as we have already said, it sometimes arrives along with the Yellow Wagtail in England, is, as a rule, a somewhat late arrival on the continent of Europe, and its eggs are not found till the end of May or June, at a time when our Yellow Wagtail has already reared its first brood. Its habits are very similar to those of the latter bird, and it is equally fond of accompanying cattle; but in Hungary I found it in the vicinity of the swamps, near the Neusiedler Lake, in company with the Blue-throats, and evidently nesting. Mr. Seebohm also notices that it is partial to swamps, and frequents wet grass-lands. He says:—"The song of this bird like that of its congeners, is scarcely more than a musical twitter. Its common call-note is a musical "chit-up," similar to those of the Yellow Wagtail, but certainly shriller than that of the Pied Wagtail. It has also a prolonged plaintive double note, occasionally heard when the bird is perched. Every meadow in Holland abounds with these charming little birds, running along the banks of the dykes or among

the grazing cattle, and occasionally perching on the wooden boundary-posts, whence they will suddenly take wing to catch a passing fly. But, perhaps, their beauty is seen to still greater advantage on the marshy banks of the lower Danube, when the brilliant sunshine gilds the deep rich yellow of their breasts, as they sit on the top of a willow or tall thistle, or other rank herbage which flourishes in this semi-tropical climate, displaying the white outside feathers of their quivering tails, as they balance themselves on their uncertain perch."

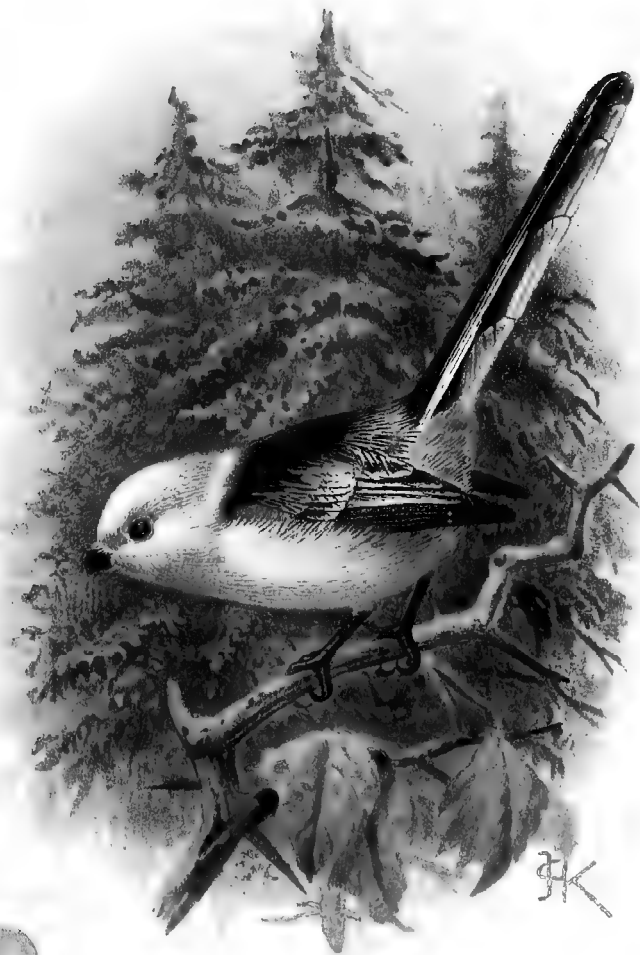




THE WHITE-HEADED LONG-TAILED TIT.

(*Ægithalus vagans.*)

THE Tits are an interesting family of birds to study, for they are numerous in the British Islands, amusing in their habits, of pretty coloration, and are capable of being trained into an exhibition of confidence, that renders them as entertaining as if they were kept in a cage. Thus much one may say for the British species, but when we come to talk of the Tits of the World, they are among the most difficult of all families of birds to study. Climate changes them, altitude affects their coloration, till in some genera they present form upon form, all closely allied, but having certain definiteness of colour



NS.

WHITE-HEADED LONG-TAILED TIT.

$\frac{2}{3}$ Size

which calls for close and assiduous study, till they are as bewildering as the American Horned Larks to characterise.

The Tits are essentially northern birds, that is to say, the bulk of the species are inhabitants of the northern parts of the old and new Worlds. South America is innocent of them, so is Australia, so is Oceania, Africa has a few, India a few; but the bulk are Palæarctic and Neartic.

The Palæarctic Region is the northern region of the Old World. It embraces the whole of Europe and North-western Africa; includes Syria and Palestine, and then stretches eastward, taking in Asia Minor and Persia, trending thence to Afghanistan and the confines of the Indian Region and includes the whole of the countries to the north of the Himalayas, and all the countries north of the great river Yangtze in China.

This region is not very rich in families of birds, like the more tropical ones, such as the Ethiopian Region, with its Touracoes and Colies; the Indian Region with its wealth of Hill-Tits (*Liotrichidæ*), its Broadbills (*Eurylæmidæ*), and its Babblers (*Timeliidæ*); the Australian Region with its Lyre Birds, Birds of Paradise, and

Mound-building Megapodes; or the Neotropical Region, the richest of all, with its Curassows, Boat-bills, Hoatzins, etc.

And what of the Nearctic Region, *i.e.*, the Northern region of the New World, which includes North America, down to the Table-land of Mexico? Recent scientific criticism would have us recognise this as an integral part of our European or Palæarctic Region, the two to be included in one natural area, the "Holarctic" Region. With this we do not in the least agree. In its strictly northern elements there is much in common between the two regions, and Snowy Owls, Jer-Falcons, Willow-Grouse, Waxwings, Shore-Larks, and many other birds are common to both, but in the Nearctic Region Pheasants, Capercailzies, Bearded Reedlings, Wagtails, and all true Warblers, are absent; while on our side of the world we have no Painted Warblers (*Mniotiltidæ*), no Hang-nests (*Icteridæ*), no Ruffed Grouse, no Turkeys, and many other forms of bird-life which North America possesses. Thus we firmly believe, with Dr. A. R. Wallace, that the northern regions of the old and new worlds, possess distinctive features which will lead orni-

thologists to regard them as natural regions, and not as forming part of one and the same zoo-geographical area.

When we consider the Tits, we find a great affinity between the forms which inhabit the two regions. Such birds as our Great Tit (*Parus major*) and our Blue Tit (*P. cæruleus*) find no near Nearctic allies, nor is our Cole Tit (*Parus britannicus*) represented in the New World, but our Marsh Tit (*Parus dresseri*), and especially its continental relatives, *P. palustris*, and *P. borealis*, have many representatives in North America, as does also our Crested Tit (*Lophophanes cristatus*), and our Long-tailed Tits are replaced in America by the tiny *Psaltriparus*. On the other hand, most of the European Tits find their nearest allies in Eastern species rather than in the Western ones, particularly with those which inhabit the lofty Himalayas, part of which mountain chain probably belongs naturally to the Palæarctic Region.

The subject of our present article, the White-headed Long-tailed Tit, will always be an object of interest to myself, for the species was the occasion of my first serious contribution to ornithological literature. I was in fact, struck by the

difference in the coloration of the Long-tailed Tit, the *Parus caudatus* of most works on ornithology thirty years ago; in those dealing with the ornithology of different countries of Europe, the species was mostly represented with a perfectly *white* head. Such a bird I had never seen in England, and on following up my researches, I gradually came to the conclusion, after the examination of many specimens, that our British bird was a distinct species from that of the continent of Europe. This seemed*to be to many a surprising fact, although it ought not to have been so. In studying the ornithology of any other part of the world but Europe, naturalists would have *expected* to find a modification of the Avifauna in islands as far separated from a continent as the British Islands are, but, because it was a European question, and our Long-tailed Tit had been always considered to be the *Parus caudatus* of Linnæus, many doubts on the subject were entertained, and are even entertained to this day, that the British species can be distinct from the Swedish and Continental bird, even by men who readily admit that our Red Grouse (*Lagopus scoticus*) is not the

same as the Willow Grouse (*Lagopus lagopus*) of Scandinavia.

Since the year 1867, however, when I promulgated the idea of there being an indigenous species of Long-tailed Tit in Great Britain, several other birds have been found to present modifications of the continental form. Our moist and smoke-laden climate renders most of our resident birds of a duller and more sombre hue than those of the adjacent continent of Europe. Our Bullfinches, Yellow-Ammers, Sky-Larks, and Tits, are all more dingy than the specimens we see in continental museums, and some naturalists have not hesitated to give distinctive names to our Tree-Creeper, our Cole Tit, and our Marsh Tit. In the case of the two species last named there can be no question that they present certain differences from their continental allies; but in no case are the distinctions so well marked as in the two Long-tailed Tits of Great Britain and the continent. In the latter, the head is pure white all round, while in the insular form there is a distinct black band along each side of the crown.

The Swedish bird, it is clear, must bear the name of *Parus caudatus* of Linnæus, because the

great Swedish naturalist was, of course, describing the birds of his own country, and hence it is the white-headed form which must be called by the Linnean name, as that is the only one which occurs in Sweden. The earliest name for our British bird seems to be that of *O. vagans* of Leech, given to it by him in a catalogue of Mammals and Birds in the British Museum, but evidently without any idea that the British species was distinct.

On account of its long and graduated tail the Long-tailed Tits are separated from the true Tits (*Parus*), and bear the name of *Ægithalus*. They also differ in their mode of nidification, for, whereas the Blue Tit and its allies make their nest in a sheltered situation, such as a hole in a wall or tree, the Long-tailed Tit builds an exposed nest, which trusts for its concealment chiefly by the wonderful way in which lichens are attached by the birds to the outside of it, so that it resembles moss-covered bark. As is the case with nearly all birds which lay white eggs, the present species carefully conceals them from view, by building a domed nest of moss, and lined with feathers; one of the prettiest, and

WHITE-HEADED LONG-TAILED TIT. 81

softest, and warmest of all possible homes. The nest of the Long-tailed Tit is so well known, and has been so often described, that it is not necessary to give a long account of it here; but it is certainly one of the most remarkable of all nests built by birds, and has been known to have as many as 2,000 feathers in its construction.

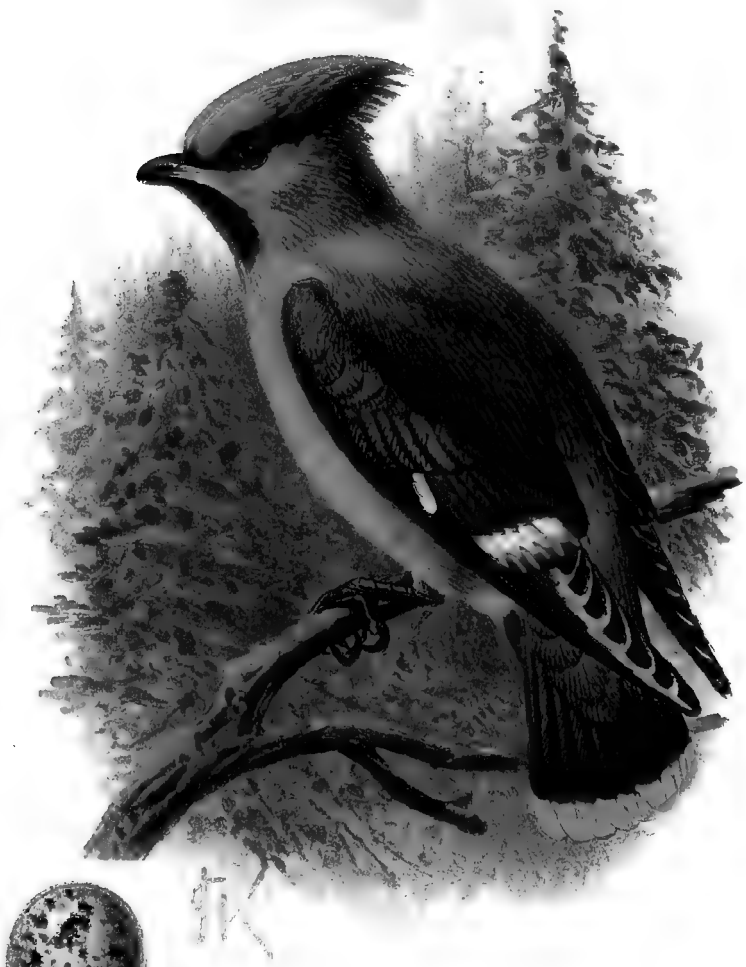
The nests of the true Tits, concealed as they are in a hole of a tree or building, are often very rough structures, though sometimes the larger nests which the Great Tit builds in a flower-pot, or a pump, or a post-box, or in some such out of the way place, are neat enough, but they are far behind that of the Long-tailed Tit, as regards beauty and finish. Other little members of the Family which build a bag-like nest, are the Penduline Tits (*Remiza* and *Anthoscopus*), tiny species, inhabiting Africa and Southern Europe, and from these countries extending to Central Asia, and even as far as Northern China. The nests made by the Penduline Tits are like bags of closely woven felt, layer upon layer of cotton being employed in their construction, so that in South Africa one of the species goes by the name of the "Cotton Bird," on account of its curious nest.

To return to our little friends, the Long-tailed Tits, we may mention that the white-headed form, which is figured in the plate, is a very rare and occasional visitor to England, and has only been known to occur for certain on a few occasions, all statements of its more frequent occurrence notwithstanding. We can state most positively, from our own experiences in France, where we have shot both the ordinary *Ægithalus vagans* and the White-headed *Æ. caudatus* in the same park, that it is impossible to distinguish the two birds when they are at a little distance, and when hanging to a twig, the white centre to the crown of our own bird, shows so conspicuously that it is easy to imagine it to be the white-headed continental form. A good pair of field-glasses, therefore, is absolutely necessary for the correct determination of these small creatures.

The eggs, as might be expected, are among the least of those found in Europe, and only measure half an inch. They are of a dull white colour.







N.S.

WAX-WING.
 $\frac{2}{3}$ Size.



THE WAXWING.

(*Ampelis garrula.*)

THIS is an arctic visitor, of which arrivals are noticed nearly every winter in the British Islands, while sometimes there is a regular invasion of Waxwings, just as there is, occasionally, a large westward immigration of Nutcrackers or Pallas' Sand Grouse. The Waxwing is a bird of very delicate coloration, and gains its English name from the peculiar tips to the quills and tail-feathers, which have pointed drops, as it were, of red sealing-wax at the ends. The older the bird, the more numerous are these wax-like tips. Young birds do not have any, and the wax-like ornaments vary in number even in

adult individuals, and it is probably only very old birds indeed which have these appendages on the tail-feathers, as well as on the wings.

The Waxwing is a circum-polar species, and is found in the pine regions of the Arctic circle, both in the Old World and in North America, but it has not been found breeding in the latter country excepting in Alaska, though it doubtless has a more extended breeding-range in North America than is generally supposed. Its movements, even in the nesting season, seem to be somewhat uncertain, as it will make its appearance in a certain locality in some numbers, and then is not seen again for some seasons. In the same way, its winter migrations are very irregular, and but five instances of its visiting Great Britain, in large numbers, have been recorded during the present century. The Waxwing is to be seen in our markets nearly every winter, but the birds which are thus exposed for sale come from Russia, where numbers are captured for the table every year. In the autumn and winter the food of the bird consists of berries, and they then become very fat, and are esteemed a delicacy. In summer they subsist

almost entirely on insects, with occasionally a few berries.

The discovery of the nest of the Waxwing is one of the romances of ornithology, and is connected with the name of John Wolley, one of that earnest school of British naturalists, whose work in the fifties did so much to raise the standard of ornithology in Europe, and to prepare the way for the more complete studies which have been undertaken during the last forty years. Those ornithologists were mostly Cambridge men, and, happily, the majority of that pioneering band are still with us, though Wolley, Hewitson, John Hancock, Stevenson, and John Henry Gurney have passed away; but, we can still muster among the ranks of working ornithologists, many of the founders of the "Ibis"; Lord Lilford, P. L. Sclater, Alfred Newton and his brother, Sir Edward Newton, Osbert Salvin, F. D. Godman, and Canon Tristram, all of whom are still actively working at ornithology. It was in the "Ibis," that wonderful journal of ornithology, fast approaching its fortieth volume, that the account of the quest of John Wolley after the Waxwing's nest was published. He spent five consecutive summers,

and two out of the five winters in Lapland, studying the habits of birds, and trying to obtain the eggs, previously unknown, of this species; but so erratic is the Waxwing in its choice of a breeding-home, that it was not until his fourth summer that he succeeded in obtaining the prize. In 1856 and 1857 a few nests were got for him by his collectors, who procured nearly seven hundred eggs in 1858. Wolley died in 1859, at the early age of thirty-five, leaving behind him an immortal record in the annals of European ornithology, for his name is connected not only with the discovery of the nesting of the Waxwing, but with that of several other European birds, unknown before his day.

His account of the discovery of the Waxwing's nest has often been quoted, but it is such a true picture of ornithological enthusiasm and its reward, that I make no apology for reproducing it. Wolley had provided his servant, Ludwig, with a coloured picture of the *Sidensvans*, with instructions to find the nest, if possible, and when Ludwig saw the bird at last, he gathered together a number of Russian boys to search for the nest, which one of them at last discovered

on the branch of a spruce-fir, about nine feet from the ground. Ludwig then snared the old male bird and packed it up with the nest and eggs until Wolley arrived.

Then the latter writes:—"You can fancy how eagerly I waited for Ludwig to produce the eggs. With a trembling hand he brought them out—but first the nest, beautifully preserved. It is made principally of black 'tree-hair' (lichen) with dried spruce twigs outside, partially lined with a little sheep's grass and one or two feathers, a large deep nest. The eggs, beautiful! magnificent!! just the character of the American birds. An indescribable glow of colour about them!

"Almost every day (and it is now the sixth since my arrival here) Ludwig has told me the story of the *Sidensvans'* nest, and I am never tired of hearing it: how the season was very backward; how in their expedition he and Piko Heiki were getting very much out of spirits at the little success they met with; how he saw the bird in the sunshine; how, when at last the nest was found, he could scarcely believe his eyes; how he went to it again and again, each time convinced when at the spot, but believing it all a dream as

soon as he was at a distance; the rising and falling of the crest of the bird; its curious song or voice. All he is eager to tell over and over again; and I have the fullest version, with all the 'I said,' 'Heiki said,' 'Michel said,' 'Ole said,' etc."

The eggs of the Waxwing are no longer the rarities in collections that they were before Wolley's day, but they are still looked upon as prizes, and many of the best clutches in the British Museum are from the collection obtained by Wolley nearly forty years ago.





N.S.

COMMON TREE-WARBLER.

$\frac{4}{5}$ Size.



THE COMMON TREE-WARBLER.

(*Hypolais hypolais.*)

THE epithet "common" can only apply to this Warbler as regards its continental home, for in Great Britain it is a very rare visitor, of which only some half-dozen specimens have been captured, and this is the more curious, as it is really a common bird in other parts of Europe, and breeds in North-eastern France, as well as in Holland and Belgium. It cannot be the "silver streak" of sea which separates England from these countries, which prevents the bird from visiting our islands, for in winter it migrates into South Africa, and in summer it goes as far north as 67° N. Lat. in Norway, and to the vicinity of Archangel. In the West of

Europe, over the greater part of France, and in the Spanish Peninsula, the place of *H. hypolais* is taken by a closely allied species, *H. polyglotta*, a bird which may also be confidently expected to visit the British Islands some day, though it is not of such wide-reaching migratory habits as the Common-Tree Warbler, and is not known to go further south than Senegambia in winter.

These Tree-Warblers, which are also called in many books on Natural History, "Melodious Willow Warblers," appertain to the group of small green species known as *Phylloscopi* or Leaf-Warblers. To the genus *Phylloscopus* belong our three familiar birds, the Wood-Warbler (*P. sibilatrix*), the Willow Warbler (*P. trochilus*), and the Chiff-chaff (*P. minor*), delicately formed little species, of a sober green and white coloration, laying white eggs with reddish spots, and building domed nests on, or near, the ground. The Tree-Warblers, on the other hand, build a beautiful cup-shaped nest in the fork of a tree, and lay unmistakable eggs of a vinous or pinkish stone-colour, with a few scratches or lines of black or purplish-brown.

The Tree-Warblers too have a more flattened and flycatcher-like bill than the Willow Warblers' (*Phylloscopus*), which, however, lay a totally different type of egg from that which renders the members of the genus *Hypolais* so remarkable.

There are several species of birds which have been variously placed by systematists among the Thrushes or the Warblers, as, for instance, the Nightingale and the Redstarts, which were formerly considered to be Warblers, but are now reckoned as members of the *Turdidæ*, or family of Thrushes. It may, therefore, be useful to consider what are the characters which distinguish a Warbler from a Thrush—birds which at first sight so closely resemble each other that some of the tropical members of these two families are difficult to determine by external characters. The first point to be settled, then, is the nature of the immature plumage of a species, and it is a reply to the frequent exclamations of wonder, that the British Museum should find it necessary to keep such large series of specimens of every species, that it is only by means of such series, that the true history of a bird can be learnt. To tell a Thrush from a Warbler, we

must know the stages of plumage through which the species passes from the time it first puts on its feathers to the time that it has completed its moult. This is not difficult to discover in the case of common European species, but it is often a puzzle with some of the tropical forms, of which, perhaps, only a specimen or two have been obtained. If the species be small, and of plain coloration, it may be taken for a large Warbler or a small Thrush, and if only skins of old birds come to hand, a mistake might easily be made as to the family to which the new species is referred. Happy then is the ornithologist who can find a feather of the preceding livery amongst the plumage of the bird! If the feather be that of a young individual, the question is solved in an instant; for if plain and uniform in colour, then the species must be a Warbler, but if it carry a coloured spot, then it must be a Thrush.

This, then, is the important character by which Thrushes and Warblers are separated, and the question of the moulting is equally important, for Thrushes have but a single moult in the year, whereas Warblers have two moults, one in autumn and another in spring. Of course, the

entire life-history of every tropical species is not yet known ; but the above differences will be found to characterize most of the Thrushes and Warblers throughout the world, and they may be summed up in the enunciation that the Thrushes have spotted young and a single autumnal moult, while the Warblers have unspotted young and a double moult.

The Nightingale, therefore, is a Thrush, and not a Warbler ; so is the Robin, so are the Red-starts, the Wheatears, and the Chats. On the other hand, the Blackcap and the Garden Warbler, usually considered to be near relatives of the Nightingale, are really members of a different family of Passerine birds, viz., that of the *Sylviidæ* or Warblers, which embraces not only such birds as the Black-caps, but all the Willow Warblers and the Reed-Warblers, besides many other tropical forms.

It is on such small and hidden features in their economy that the classification of Passerine or Perching birds has to be based. In the larger groups, such as Birds of Prey, Herons, Ducks, etc., characters of importance, both external and internal, are not wanting for their definition, but

those of the Passerine birds are extremely difficult to discover, and there are not wanting zoologists who declare that these birds, comprising the bulk of living species on the globe, are so closely related, *inter se*, that they really constitute but one great Family.

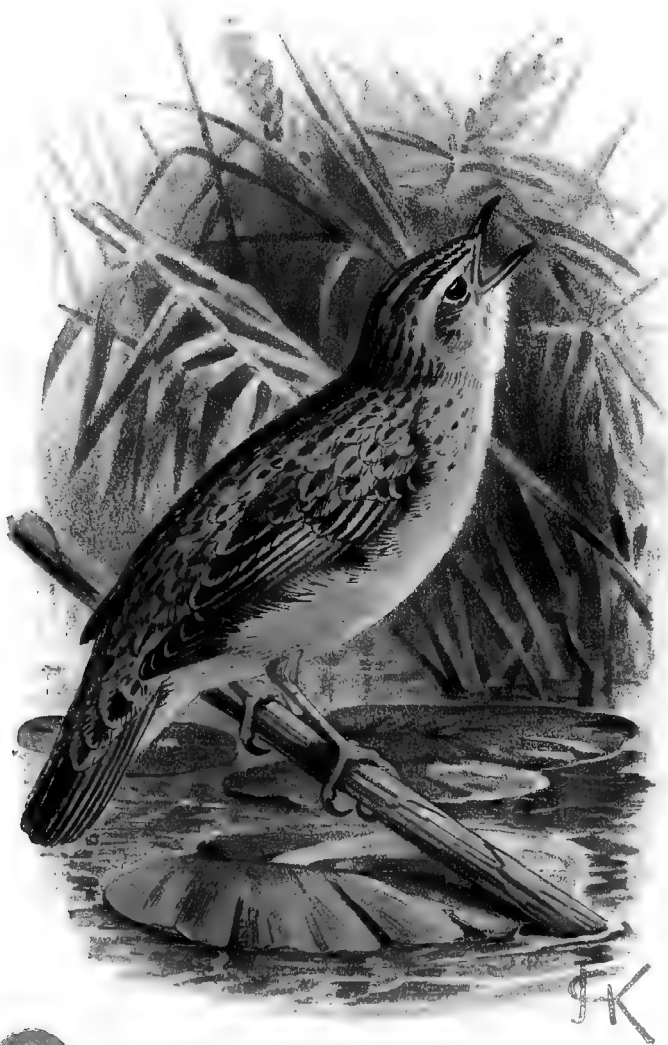
The Common Tree-Warbler, therefore, having plain-coloured young, scarcely differing from its parents in tint, is a true Warbler, and we know that after spending the winter in Africa, the bird will renew its plumage in its southern home, and arrive in Europe resplendent in its freshly-donned livery. None of our Thrushes undertake such a journey. No Song-Thrush or Blackbird, Ring-Ouzel or Fieldfare, crosses the Equator during its winter wanderings, and the Mediterranean countries are far enough travel for the above-named Thrushes, if they would escape from the snow which envelops their nesting-homes in the cruel winter of the north, and forces them to fly south in search of food. It is, perhaps, well for them that they require no change of dress in spring, for their bodies must suffer in the severe struggle for existence during the winter, and moulting must be an exhausting process, so that

it is probable that it is only by a sojourn in a far country, where there is abundance of food, that a Warbler is able to endure the strain on its system of a second moult.

The subject of our notice is often called the "Icterine" Warbler, and is a late arrival in Europe, not putting in an appearance in Holland or Germany before the beginning of May, when the males arrive first, and sing lustily. Mr. Seebohm, who has made a special study of the Thrushes and Warblers of the world, and to whom the discovery of the important characters, on which we have descanted above, is due, has written an excellent description of the habits of the present species in his "Birds of Great Britain." He doubts the wonderful mocking powers usually attributed to the species, and he does not allow that the song can for one moment be compared to that of the Nightingale, as some ornithologists have asserted. "The song," he says, "is somewhat harsh, though very varied, although it repeats every combination of notes two or three times over in rapid succession, like a Song-Thrush. Indeed, one might imagine that it had been taught to sing by that bird, exactly as one

might imagine a Robin to have lessons from a Blackbird. In quality of voice, in richness of tone, and the melody of its notes, it is immeasurably inferior to the Nightingale, and the song does not fill the ear like that of the last-named bird."





JK



N.S

AQUATIC WARBLER.

$\frac{7}{8}$ Size

Riddie & Coequean Lith London



THE AQUATIC WARBLER.

(*Acrocephalus aquaticus.*)

THE genus *Acrocephalus* embraces all the species which we call "Sedge" Warblers, and "Reed" Warblers, and which belong to the little group of old World *Sylviidæ*, to which allusion has been made in the previous article. Like all the other members of the genus, the Aquatic Warbler—a badly chosen name to distinguish it by, as all *Acrocephali* are aquatic or water-haunting birds—is a migrant, and the only time when I have ever met with it in the wild state, was in the island of Heligoland, when I accompanied Mr. Seebohm and Mr. F. Nicholson on their excursion to this interesting locality in 1876.

The island has been so often described, especially by Mr. Seebohm, that most of my readers must have read about it. Since England surrendered it to Germany, a considerable difference in the appearance of the island has, so I hear, taken place; but one feature in this island will never change, and it will always be a haven of rest to the many birds which are crossing the sea on their migrations, though whether their occurrences will meet again with such a recorder as the veteran ornithologist, Heinrich Gätke, is a matter of grave doubt. For more than forty years this celebrated naturalist has lived on the rock in the North Sea, and during that time he has kept a continuous record of the migrations of the birds, which in spring and autumn, pass over Heligoland. On the cession of the island to Germany, Mr. Seebohm made a liberal offer for the Gätke collection, which he wished to present to the British Museum, as an illustration of the phenomenon of the migration of European birds, from north to south and from east to west, as it takes place every year in the North Sea.

Some agitation, however, took place among the German naturalists—at least, so it is said—over

the transportation to the British Museum of a collection made in an island now ceded to Germany, and Mr. Seebohm was asked to retract his offer, which he very generously consented to do, with a result which could scarcely have been foreseen.

At the time when I saw the Gätke collection, the specimens had much deteriorated. Their owner is an artist, and the birds were all exhibited in his studio, which had top-lights, and as the sun, for many successive years, had beaten down through the glass on to the specimens, the latter had become dreadfully bleached, and had, in many instances, lost their colour. A great number of specimens, too, were not in glass cases, and were covered with dust. All this was known to several of us, and Mr. Seebohm's offer was all the more patriotic, as he was not only fully aware of the condition of the collection, but his chief object was to preserve it for posterity.

The artistic taste which Gätke brought into his sea-scapes, he bestowed upon the mounting of his collection of birds, and no more beautiful example of the taxidermists' art were to be found than in the Gätke collection of Heligoland birds,

not even excepting the masterpieces of John Hancock and Pickhardt in this country. Every one, therefore, expected that this celebrated collection would be fittingly housed, perhaps in the National collection at Berlin, or at least that some small regard would have been bestowed on the preservation of a series of ornithological specimens, which belonged not to Germany alone, but to the whole scientific world. It may be hoped, therefore, that the account of the present neglected condition of the Gätke collection, published last year by Dr. Hartlaub, one of the leading authorities in Germany, may wake up the authorities of Heligoland to a sense of the responsibility under which they lie as custodians of one of the most interesting and important series of birds in the world.

To the man who made the formation of this collection the aim and object of his life, it must be saddening to see the fruits of his toil so little cared for; but he has this consolation—that the specimens have been so carefully examined and studied by dozens of European ornithologists, that, even if they perish, the record will survive; while his life-long observations on the

migration of birds, having now been published, will keep his name green wherever ornithology is studied.

The name of the Aquatic Warbler has transferred me, in thought, back to the rocky isolation of Heligoland, with its collection of bird-treasures, its hermit-ornithologist, its potato-covered height; for it was in the latter unlikely locality that I shot my first specimen of the "Aquatic" Warbler. It was easy to be up with the lark in that breezy air, and we usually commenced the day with a walk through the potato-fields on the summit of the island, when a varied bag was the result. On the morning in question, I think my captures were something like the following: a Wood-lark, a Jack Snipe, a Brambling, a Snow-Bunting, and lastly, an Aquatic Warbler; the last-named being the only one seen by me on our expedition, as it is not a common migrant to Heligoland. It is not even known to visit Denmark or Southern Scandinavia, though it is pretty generally distributed over Central and Southern Europe, and appears to winter in Northern Africa. It has been detected three times in Great Britain.

As might be expected, the Aquatic Warbler

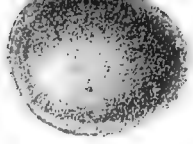
closely resembles in habits its ally, the Sedge-Warbler (*A. phragmitis*), from which it is to be distinguished by the pale stripe down the centre of the crown, bordered with two dark stripes, one on each side. It frequents reedy places, especially the sides of lakes and rivers, ponds and ditches. Its song differs little from that of the Sedge-Warbler, and its eggs are scarcely to be distinguished from those of the latter bird.





ROCK-THRUSH.
♂ Size

Ridder & Cooleman, Ltd., London



N.S.



THE ROCK-THRUSH.

(*Monticola saxatilis.*)

THE Rock-Thrush is a brightly plumaged species and belongs to a group of birds principally alpine in their distribution, and confined to the Old World. Like the Redstarts, the Rock-Thrush has a red tail, and appears to be intermediate in form between the latter birds and the true Thrushes. Like the Redstarts, it lays blue eggs, some of which are sometimes faintly marked with specks of light brown at the larger end.

Though two or three instances of the capture of this beautiful bird in England have been recorded, yet only one is believed to be authentic, so that the Rock-Thrush may be taken to be one of

our very rarest visitors. It seldom comes further north than the Vosges mountains, in Eastern France, and some of the high ranges of Central Germany, but it is found in the mountains of Southern Europe, whence it ranges eastward through Central Asia to Northern China. It winters in Northern Africa, and even visits the eastern portion of that continent in winter, as it has occurred in several recent collections made in Eastern Africa. Colonel Irby has noticed numbers of Rock-Thrushes passing Gibraltar on migration on the 4th of April, and has seen the bird on the return journey in September.

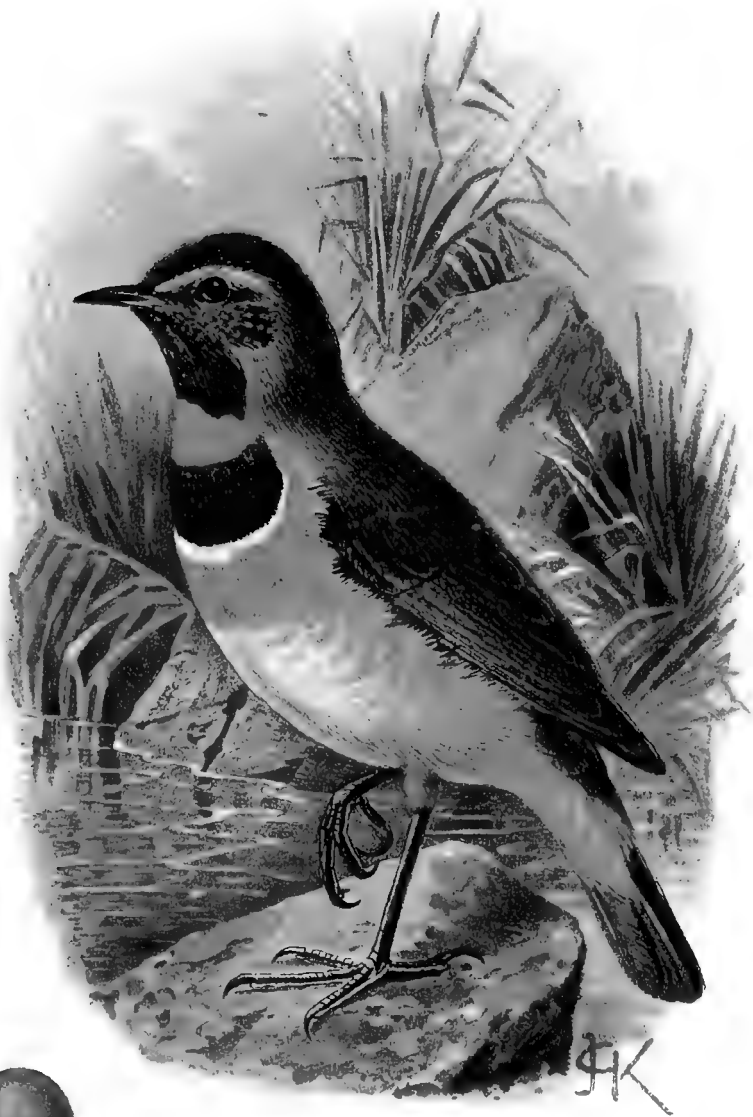
In its ways, the Rock-Thrush much resembles the Redstarts, and Mr. Seebohm says that, "like those birds, it will ever and anon rise into the air, and descend, with his wings expanded, upon its perch again, singing all the time." This manoeuvre is often repeated several times. It is a very shy bird, and will keep flitting before the observer, like a Wheatear, keeping a good look out, and never permitting a too near approach. Its food consists mainly of insects, some of which it captures in mid air, like a Flycatcher, though it will, like other insectivorous birds, vary its diet in

summer with a little fruit, and in autumn feeds on berries.

The nest is always built in a hole, and, according to Mr. Seebohm, is a very difficult one to discover. It closely resembles the nests of the Wheatear and Redstart, and is somewhat loosely put together. "You may search for hours," writes the above-mentioned ornithologist, "and turn over tons of rocks and stones, unsuccessfully, and at last owe its discovery to mere accident. It is usually placed in some convenient rock crevice, at various heights, sometimes under a mass of rock lying on the ground, sometimes in heaps of stones, and sometimes in holes of ruined buildings; and, more rarely, in holes in houses, and in trees and stumps. Vineyard-walls, holes in mountain fortresses, and amongst the *debris* carried down the mountain-sides by the melting of the snow, may be also cited as places selected by the bird for its nest. Wherever it is found, however, it is usually well concealed from view, and always in a hole. The bare ground will not unfrequently be chosen, under a bush, or even under a dense overhanging grass-tuft. The materials of different nests vary to a great extent, according to the

locality in which they are found. Those in the more cultivated districts are made of roots, fine and coarse grasses, moss and bents, and lined with hair and feathers. Those taken from more isolated places, the rocky districts high up mountain-sides, are similar in outward construction, rarely lined with hair or feathers, but with fine rootlets and dry grass. Other nests will be found constructed entirely of roots and withered grass. In examining the nest of this bird, its close resemblance to that of the Redstart or the Wheatear will be noticed. No mud is found in them; they are loosely put together, and this circumstance, coupled with the covered site and the colour of the eggs, still further suggests the bird's affinity to the Chats rather than to the true Thrushes."





N.S.

ARCTIC BLUE-THROAT.
 $\frac{4}{5}$ Size.

Riddle & Coughman Lith. London



THE ARCTIC BLUE-THROAT.

(*Cyanecula suecica.*)

JUST as the name of the Aquatic Warbler recalls the sea-girt island of Heligoland, with its life-restoring breezes, and its constant excitement of ever-recurring ornithological visitants, so does that of the Blue-throat bring to my mind the hot and sweltering marshes of Hungary, with their equally interesting bird-life.

It was in 1891, that the Second Ornithological Congress met at Budapest, and it was my good fortune to be present on that most memorable occasion. Congresses may be held in other countries of Europe, but it is doubtful whether such an experience will ever be offered

by any other nation, as was afforded in 1891 by our generous Hungarian hosts. Certainly not in England, for we can hardly imagine any landed proprietor, however anxious for the national honour, or desirous of pleasing an International Congress of Ornithologists, supplying boats, guns and cartridges, and skilled boatmen to wander through his preserves, to shoot Ducks and Geese, and anything else ornithological that came in their way.

Certainly one must go to Hungary to find anyone like Baron Von Berg, who met us with a large ferry-boat, roofed in and ornamented with flags of all nations, with a sumptuous repast on board—very welcome after our hot morning in the Hanság Marshes. So big was the ferry-boat, that our host had removed nearly all the bridges on the canal for miles, to make room for our triumphal procession. Every now and then a halt took place, when some of us were conveyed in a small boat to some spot, marked down days before, where there was a nest of a Goshawk or Spotted Eagle, or of some other bird non-breeding in our more northern isles. We wound up with a Stork's nest, and were then

conveyed in trucks, converted into comfortable carriages, along a private tram-line on the Baron's estate, till we reached his château at Kapovár, where our party of nineteen were entertained for the night. This happened on the 22nd of May, 1891, and I carried to the castle two heavy loads of birds, the result of the day's collecting—Night Herons, Goshawks, etc. There ought to have been a Spotted Eagle; but that is another story.

During our progress along the canal before-mentioned, my own turn came to be conducted to a marked-down nest, and while the ferry-boat was hauled up, a small party, consisting of the President, M. Fatio of Geneva, Mr. Büttikofer of Leiden, and myself, were conducted to small punts (crazy little craft enough and leaky too, as I soon found to my cost), provided with guns, and "poled" by keepers into the woods, which seem in this country to flourish in swampy ground. At last we arrived in the midst of a grove of trees, where I nearly spoilt the whole object of the excursion by my desire to shoot a Little Spotted Woodpecker, which was climbing up a tree. I wish now that I had done so, as we

might not then have returned empty-handed; but silence was enjoined, and a little further up, the small punts were brought up under a thin tree, in the upper branches of which was a huge nest. I imagined that we had been brought to *see* the nest of the Spotted Eagle, as our progress had not been particularly quiet—certainly there had been a good deal of shifting on my part to escape the water in which I was sitting for the best part of the time—when suddenly there was a scuffling noise overhead, and away flew an Eagle from the nest. We had been a minute or two beneath the tree, and the last thought in my mind was that there was a bird on the nest, and we were all, more or less, taken by surprise. My gun was lying by my side, and by the time I had cocked it and fired my two barrels, the Eagle was well away, unharmed also by the shots of my companions—and so I lost my first chance at a Spotted Eagle, and narrowly escaped a ducking in the black water, owing to the sudden losing of my equilibrium in the act of turning and firing. Luckily the keepers, in charge of the punts, spoke nothing but Hungarian, and our excuses were made in English, German, and French,

languages which they did not understand—but their faces were enough!

This was only the prelude to my introduction to the Arctic Blue-throat, with which episode I concluded my visit to the wilds of Hungary. The festivities at Baron von Berg's Château were kept up late, owing to the insistence of our friend Büttikofer to "jodel," as if he were on his native Swiss mountains, the playing of the band, and the dancing of the peasants in the garden; but at midnight we retired to bed, only to be called up at 5 a.m. with breakfast served in the Château at 5.30 (these sort of hours had been going on for the last ten days, so no wonder that the Spotted Eagle escaped!). At half-past five, a string of carriages was at the door, and after our last adieu to our host, who stood at the door of his castle to wish us "Good-bye," the very picture of an English country Squire, we were *en route* for the Neusiedler Lake. On our way, we rested for a short time at the Château of Prince Esterhazy, who, throughout our tour, had everywhere extended to us the most lavish hospitality, and who provided a final entertainment on this our last excursion in Hungary. After leaving his

beautiful country seat, a miniature Versailles, we reached the shores of the lake, for our last day's collecting. It was a short but memorable experience, as we had to leave early in the afternoon to drive for two hours to the nearest station to catch the train for Vienna, homeward bound, *via* Prag, Dresden, and Berlin. On the shores of the lake, a large pavilion had been erected, in which was prepared the last of the series of entertainments which had been provided for us throughout the ten days of the Congress. •

The ornithologists divided into several parties; some to go in boats, some to collect on shore. Choosing the latter course, I wandered about with Dr. von Madarász, and obtained many species of interest to the British Museum and myself, Crested Larks, Great Sedge-Warblers, etc., until at last I wandered off into a moist swamp, and stumbled about amongst the stumps of a 'withy' bed. The walking was anything but comfortable, but far ahead of me, I could see a little brown bird continually perching on the tops of the stunted willows, and again disappearing on to the ground below. Disregarding the summonses to come back to the pavilion, I at last secured the

object of my walk, and held in my hand my first "Blue-throat." It was the white-spotted species, and I afterwards saw another, and got it too, but no female bird did I see; they were, apparently, never in evidence. So with joy in my heart that, within twenty-four hours, my ornithological prizes would be in the hands of a celebrated taxidermist in Vienna, whose *atelier* we were to seek on the ensuing day, and with the good wishes of our Hungarian friends ringing in our ears, we started for the Austrian capital. Alas for human hopes! My birds, preserved on the journey with so much care, reached me some months after. I had counted on skins such as our American brethren prepare, "things of beauty and a joy for ever," but I was destined to have the fact once more brought home to me, that a good "mounter" of birds does not necessarily make a good "skin" for Museum purposes. Never did such a ragged regiment of specimens enter the doors of the British Museum—from Europe at least. My beautiful Night-Herons were being eaten by *Dermestes*, that destructive little beetle which is the bane of all collections, and the whole of the skins had to be put into "quarantine" before a

small remnant could be added to our national collection, as a reminiscence of my visit to Hungary. The only thing the *Dermestes* had not touched was the taxidermist's account. Would that they had eaten it! The *Dermestes* were small; the bill was *not!*

So ended my first, and, perhaps, my last acquaintance with the Arctic Blue-throat, unless by chance I come across it some autumn on the east coast of England, to which it is not an unfrequent visitor at that time of year. It is a bird of wide range, for it is found throughout Northern Europe and Northern and Central Asia in summer, and winters in India, Burma, and in North-eastern Africa. The birds which visit England in September ought to be on their way to the latter country, but, like many other birds, the Blue-throat occasionally steers a westerly course, and so a few individuals land in the British Islands.

In many of its ways the Blue-throat resembles a Robin, and its spotted young are singularly like those of the latter bird and those of the Redstart. If the Robin is a bird of the houses and gardens, and the Redstart a bird of the woods, the Blue-throat is a bird of the swamps, and like

the above-mentioned birds, it manages to conceal its nest very effectually. It is found breeding within the Arctic Circle, and Mr. Seeborn writes:—"The tundra is seldom smooth like a common, but is generally a cluster of little hummocks or mounds, covered over with rushes, carices, cloudberry, and other ground-fruits, with sometimes a stunted birch or willow, scarcely higher than the coarse grass. These hummocks are the favourite breeding-places of the Arctic Blue-throat. I have generally found the nest well concealed in a snug hole on the side of one of these hummocks, just such a place as a Robin would choose in such a locality. The nest is not unlike that of a Robin. The hole is well filled with dry grass and roots, and at the far end a neat deep cup is formed, lined with fine roots and hair. It is almost impossible to find the nest, except by accidentally frightening off the bird, and even then it takes some time, so carefully is it concealed. The eggs are five or six in number, and are laid about the middle of June. They are greenish-blue, more or less distinctly marked with pale reddish-brown, and are very similar to the eggs of the Nightingale."



THE BLACK-BELLIED DIPPER.

(*Cinclus cinclus.*)

THE Dippers, or Water Ouzels, may be described as Thrush-like Wrens, or Wren-like Thrushes, because they have much in common with Thrushes, according to the verdict of most ornithologists, but, for myself, I consider them much more closely related to the Wrens. Perhaps the best solution of their avian relationship is to recognise them as "Dippers," a self-contained family of birds, which are neither true Thrushes nor true Wrens. That the inclination of these interesting birds is towards the Wrens is, I should say, unanswerable, provided that we are permitted to make plenty of allowance, and call them



BLACK-BELLIED DIPPER.

Water-“Wrens,” rather than Water-“Ouzels.” Two of the leading features in their economy are certainly “Wren”-like. They have no bristles on the gape, and they build a thoroughly Wren-like nest. These two characteristics alone are sufficient to show that they are not Thrushes.

The Dippers are exclusively mountain birds, and are seldom to be seen away from the streams of the highlands. It is, in fact, necessary to visit their special habitats in Great Britain, if one would make acquaintance with these pretty birds, and, even then, they are not easy of observation.

The Dipper, according to my experience, is a very shy bird, and by no means easy to observe. I spent some hours last year in watching them in Mr. C. G. Oates' park at Meanwoodside, near Leeds, but without much result, as whenever I approached the brook which they frequented, the slightest noise was sufficient to cause them to fly off to a more sequestered spot, and on the only occasion when I managed to get close to one of the birds, it sat on a rock and preened its plumage in the sun, till I was tired of waiting to see it perform in the water. In Scotland, however, I have been more fortunate, and there I

have more than once seen my white-breasted friend come flying along a narrow stream and perch on a rock below me, and then after a little interval, walk gradually below the surface of the water.

This sub-aquatic manner of feeding has aroused considerable animosity against the Dipper, as he is roundly accused of devouring the ova of trout—a sin of such heinous extent, that in the Rhine provinces, during the last few years, a war has been waged against the Dippers, and hundreds, not to say thousands, of these little birds have been killed. And yet, if our best English naturalists are to be believed, this must be a foolish policy, for, although it is undoubted that the Dipper will occasionally seize a small fish, its chief food consists of caddis-worms and other water insects, which in their larval state are most destructive to the ova of fish. The destruction of the Dippers has been chronicled, and what one now wants to know is, whether the trout have increased to any extent in these tributaries of the Rhine?

That the Dippers are lovers of the mountain-streams is shown by their distribution. Our

English bird is represented in the mountain-ranges of Southern and Central Europe by an allied form, *Cinclus leucogaster*, in Scandinavia is found the Black-bellied Dipper, *C. cinclus*, and various other races occur throughout the mountains of Siberia, Central Asia, and the Himalayas, as well as in China and Japan. In North America, too, Dippers occur, and are represented in the Rocky Mountains by *Cinclus mexicanus*, and again by other species in the Highlands of Central America and the Andes of South America.

The British form of Dipper (*C. aquaticus*) is found throughout Scotland and Ireland in its favourite haunts, and it also occurs in England, as far south as Derbyshire, in Wales, and in Devonshire and Cornwall. The Black-bellied Dipper (*C. cinclus*), on the contrary, is the Scandinavian form, and is only a rare visitor to England, where it has been captured in the eastern counties. It is in every way similar to the ordinary Dipper, but has a darker under-surface, the breast being chocolate-brown or black, instead of rufous. In habits it is exactly like an English bird, and builds the same moss-nest, like that of a large Wren. The nest is built

among rocks, or the roots of trees, over-hanging the water, and although of considerable size, is by no means easy of discovery, for it is so carefully constructed that it looks like a piece of the bank, or like a patch of moss on the rocks. The nest is an oval ball of moss outside, with a compact nest of grass and leaves inside. Mr. Seeböhm describes how he pulled a nest of *C. aquaticus* to pieces, and found "layer after layer of birch and beech leaves, and, as a final lining, a mass of oak leaves, laid one on another like leaves in a book. The outside dome was so closely woven together of moss, with here and there a little dry grass, as not to be torn to pieces without considerable force; and the inside nest was so tightly compacted, that, when the materials were pulled apart, you could hardly believe that they could have been made to take up so little room."

The eggs of the Dipper are pure white, somewhat rough in texture and not glossy. They measure 1.0 inch and 1.1 inch by 0.7 inch to 0.75 inch.





N.S.

RED-BREASTED FLY-CATCHER.
 $\frac{4}{5}$ Size.



THE RED-BREASTED FLYCATCHER.

(*Siphia parva.*)

THIS pretty little Robin-like bird has occurred some half a dozen times in Great Britain. It is a true Flycatcher, and has generally been placed in the genus *Muscicapa* along with the Common Flycatcher (*M. grisola*); but in the latter bird the male and female are alike in colour, of a sober grey and white, whereas in the Red-breasted Flycatcher the colour of the sexes is different, and there are many other distinctions between the two birds, in the shape of the wing, the number of rictal bristles, etc., which cause them to be recognised as belonging to different genera,

and consequently the Red-breasted Flycatcher is now placed in the genus *Siphia*, a little group of parti-coloured *Muscicapidæ*, which are principally Indian in habitat.

The nesting-home of the Red-breasted Flycatcher is in Pomerania, the Baltic Provinces, and in the vicinity of St. Petersburg, whence it extends to Central Asia, while it winters in Western and Central India. In Eastern Siberia and Northern China it is replaced by a closely allied species (*S. albicilla*), which winters in Eastern India and the Burmese countries. Here we have another instance of the eastern and western distribution of two species, such as we have already seen in the case of the Red-footed Kestrels, and the Blue-headed Wagtails.

Mr. Seebohm has described the finding of the nest of this rare Flycatcher in Pomerania:—"I soon heard a song which was new to me, but I followed it a long time before I could see the bird. It was a very unobtrusive song, intermediate between the notes of the Robin and the Redstart. For some time the bird kept at the top of the beeches. It was as restless as a Redstart, and we followed it in vain, until,

just as the sun was setting, he came down upon the lower branches and sang his simple song, within twenty feet of us. We might have mistaken him for a Robin with his red breast, but every now and then he half spread his tail and showed the white on it. A few days later, on the 11th of June, Dr. Holland and I went to a forest beyond Schlart to take the nest of a Honey-Buzzard. In the forest we several times heard the alarm note of the Red-breasted Flycatcher, a *pink, pink, pink*, something like the *spink* of a Chaffinch, but softer, clearer, and quicker. Our guide showed us presently a nest, scarcely five feet from the ground, in the hollow in a trunk of a beech tree, and we caught the bird on the nest. He also shewed us a second nest which he had taken a few days before, likewise composed principally of green moss; but it had been built close against the stem of a beech, supported by a bunch of small twigs, which made a convenient shelf for it. In its habits this charming little bird reminds one both of a Flycatcher and a Tit. It catches insects on the wing with ease, and flutters before the trunk of a tree to pick an insect off the bark.

“The nest of the Red-breasted Flycatcher is a very handsome little structure, almost entirely formed of green moss, with here and there a few scraps of lichen and a downy feather or two. The inside is sparingly lined with fine dry grass and hairs. The nest-cavity measures about two inches in diameter and one and a half inch in depth.”

The eggs are like those of the Spotted Flycatcher and not unlike those of a Robin, being pale bluish-green with reddish-brown and greyish-brown spots and markings. •



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