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BIRD LIFE
OF ENGLAND

BY



CHARLES DIXON



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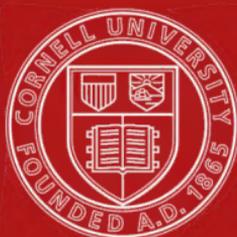
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STARLING.

RURAL BIRD LIFE

OF ENGLAND

BEING

ESSAYS ON ORNITHOLOGY

WITH INSTRUCTIONS FOR PRESERVING OBJECTS RELATING TO THAT SCIENCE

BY

CHARLES DIXON

With Forty-five Illustrations and a Preface

BY DR. ELLIOTT COUES, U.S.A.

Author of "Key to North American Birds," "Field Ornithology,"
"Birds of the Northwest," Etc.



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Rural Bird Life

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AMERICAN EDITOR'S PREFACE.

THE publication of Charles Dixon's "Rural Bird-Life" in America renders it desirable to say a few words by way of introducing these agreeable Essays on Ornithology to the readers whom the book will undoubtedly win for itself in this country.

It might seem at first sight unlikely that a treatise devoted entirely to British Birds, very few of which are ever seen in the United States, could have any special interest for the new circle of acquaintances to whom the American publishers address the work. But my examination of these pieces of bird-biography have satisfied me that their merit has only to be known to be appreciated as highly here as elsewhere. Mr. Dixon's example may be followed with no less profit than pleasure in this country; for the lessons which he teaches respecting the pursuit of ornithology are restricted in their applicability to the native birds of no single region. The study of the life of English birds, under this author's guidance and in his agreeable company, will go far toward fitting one to enter easily and successfully upon those personal experiences with our native species which are necessary in order to become a good practical ornithologist.

The aspects of Nature change ceaselessly, by day and by night, through the seasons of the year, with every difference of latitude and longitude; and endless are the profusion and variety of the results which illustrate the operation of her laws. But, let the productions of different climes and countries be never so unlike, she works by the same methods; the spirit of her teachings never changes; Nature herself is always the same, and the same wholesome, satisfying lessons are to be learned in the contemplation of any of her works. We may change our skies, but not our minds, in crossing the sea to gain a glimpse of that bird-life which finds its exact counterpart in our own woods and fields, at the very threshold of our own homes.

The practical utility of Mr. Dixon's work, as well as its adaptability to the wants of American students and amateur ornithologists, may easily be shown; and it is not difficult to explain exactly how the book may be used to great advantage by all those who have a taste for natural-history pursuits, and a desire to study birds in earnest, yet hardly know how to make a beginning.

The author gives more or less perfect sketches—in some cases, finished pictures—of the habits of some sixty or seventy kinds of British Birds. These are for the most part common and familiar species in his country, though only very few of them—such as the ubiquitous House Sparrow—can be studied in our own. I would advise the reader to turn first to his author's account of the character and habits of that bird, to see whether or not it agrees with his own experiences. Should it be found concordant, as far as it goes, with his own observations, he may ask himself if there be not something still to be added, as a

further contribution to the natural history of this interesting bird ; and he may not impossibly be thus stimulated to enter upon original investigations. Should he differ with his author in any particulars, the interesting question would be raised, how far the domestic economy of the bird has been modified under the new conditions of its transplantation. Any single instance like this may be made, at the hands of an earnest and enthusiastic student, a means to the end of most important problems in natural history—like Huxley's Crayfish, already become so famous an illustration of the broadest principles of biological science.

Again, let the reader take up one of the histories of some species entirely unknown to him—say the Song-Thrush or the Missel-Thrush of England—and read carefully what his author has to say of these birds. He scarcely needs to be informed of the fact that we recognize in ornithology what are called “representative species ;” that is, species of one country which take the place of, correspond to, or otherwise represent more or less closely allied species of another country. Having found out what Mr. Dixon knows of the Song- or Missel-Thrush, let him ask himself the question, “Do I know as much as this about the Wood-Thrush or the Hermit-Thrush of my own country? Could I give as complete an account of their habits?”

The point is very clear, — Mr. Dixon's book is nothing if not original. I have seldom examined a treatise composed of fresher material, or one relying less upon the authority of other writers. This is marked merit for the days when one of the chief uses of books seems to be to breed books, and when writers in ornithology spend in their libraries much time that might be better spent in the field, and devote more attention

to what is said about birds by others than to the story that birds themselves will tell if rightly questioned. The student of American ornithology may be assured that he cannot find out for himself as much about our birds as Mr. Dixon has to tell him of British birds without becoming a good practical ornithologist. Such is the ground on which I recommend the volume to his attention; and that this is something beyond the mere pleasure he may derive in perusing it is readily to be perceived.

In furtherance of the object that I have in view in prefacing the work of another with these few remarks, I would call the reader's attention to the following lists of birds. In one column is the list of species treated by Mr. Dixon, with their technical names. In the other I present an equal number of American species, the study of whose natural history may profitably be undertaken according to the author's method and in imitation of his example. In a few cases only, the names are identical. In some other instances, they are those of strictly representative birds. But, in any event, the two columns agree closely enough to answer the purpose, though some of the groups of British Birds have nothing to correspond exactly in this country.

BRITISH BIRDS.

Song Thrush . . .	<i>Turdus musicus.</i>
Mistle Thrush	<i>Turdus viscivorus.</i>
Redwing	<i>Turdus iliacus.</i>
Fieldfare	<i>Turdus pilaris.</i>
Ring Ouzel . . .	<i>Turdus torquatus.</i>
Blackbird	<i>Turdus merula.</i>
Dipper	<i>Cinclus aquaticus.</i>
Hedge Accentor .	<i>Accentor modularis.</i>
Robin	<i>Erythacus rubecula.</i>
Redstart	<i>Ruticilla phœnicurus.</i>
Stonechat	<i>Pratincola rubicola.</i>
Wheatear	<i>Saxicola œnanthe.</i>

AMERICAN BIRDS.

Wood Thrush . . .	<i>Turdus mustelinus.</i>
Hermit Thrush . .	<i>Turdus pallasi.</i>
Olive-backed Thrush	<i>Turdus swainsoni.</i>
Wilson's Thrush . .	<i>Turdus fuscescens.</i>
Varied Thrush . . .	<i>Turdus nævius.</i>
Robin	<i>Turdus migratorius.</i>
Dipper	<i>Cinclus mexicanus.</i>
Oven-bird	<i>Siurus auricapillus.</i>
Bluebird	<i>Sialia sialis.</i>
Redstart	<i>Setophaga ruticilla.</i>
Thrasher	<i>Harporhynchus rufus</i>
Wheatear	<i>Saxicola œnanthe.</i>

BRITISH BIRDS.		AMERICAN BIRDS.	
Whinchat . . .	<i>Pratincola rubetra.</i>	Catbird . . .	<i>Mimus carolinensis.</i>
Spotted Flycatcher	<i>Muscicapa grisola.</i>	Wood Pewee . . .	<i>Contopus virens.</i>
Blackcap . . .	<i>Sylvia atricapilla.</i>	Black-poll . . .	<i>Dendroæca atricapilla.</i>
Whitethroat . . .	<i>Sylvia rufa.</i>	Yellow-rump . . .	<i>Dendroæca coronata.</i>
Willow Warbler	<i>Phylloscopus trochilus.</i>	Summer Warbler .	<i>Dendroæca æstiva.</i>
Chiffchaff . . .	<i>Phylloscopus collybita.</i>	Green Warbler .	<i>Dendroæca virens.</i>
Sedge Warbler . . .	{ <i>Calamodus schœno-</i> <i>bænus.</i> }	Yellow-throat .	<i>Geothlypis trichas.</i>
Gold-crested Kinglet	<i>Regulus cristatus.</i>	Gold-crested Kinglet	<i>Regulus satrapa.</i>
Great Titmouse . .	<i>Parus major.</i>	Tufted Titmouse	<i>Lophophanes bicolor.</i>
Blue Titmouse . .	<i>Parus cœruleus.</i>	Verdin . . .	<i>Auriparus flaviceps.</i>
Cole Titmouse . .	<i>Parus ater.</i>	Chickadee . . .	<i>Parus atricapillus.</i>
Long-tailed Titmouse	<i>Acredula caudata.</i>	Bush Tit . . .	<i>Psaltriparus minimus.</i>
Wagtails	<i>Motacilla.</i>	Wagtail	<i>Budytes flava (?)</i> .
Tree Pipit	<i>Anthus trivialis.</i>	Sprague's Lark . .	<i>Neocorys spraguii.</i>
Meadow Pipit . . .	<i>Anthus pratensis.</i>	Titlark	<i>Anthus ludovicianus.</i>
Skylark	<i>Alauda arvensis.</i>	Shore Lark	<i>Eremophila alpestris.</i>
Yellow Bunting . .	<i>Emberiza citrinella.</i>	Towhee Bunting . .	{ <i>Pipilo erythrophthal-</i> <i>mus.</i> }
Common Bunting .	<i>Emberiza miliaria.</i>	Song Sparrow . . .	<i>Melospiza fasciata.</i>
Reed Bunting . . .	<i>Emberiza schœniclus.</i>	Savanna Sparrow	<i>Passerculus savana.</i>
Chaffinch	<i>Fringilla cœlebs.</i>	Indigo Bird . . .	<i>Passerina cyanea.</i>
Brambling	{ <i>Fringilla montifringil-</i> <i>la.</i> }	Rose-breasted Gros-	<i>Zamelodia ludovici-</i> <i>beak</i> <i>ana.</i>
House Sparrow . .	<i>Passer domesticus.</i>	House Sparrow . .	<i>Passer domesticus.</i>
Tree Sparrow . . .	<i>Passer montanus.</i>	Tree Sparrow . . .	<i>Spizella monticola.</i>
Bullfinch	<i>Pyrrhula europæa.</i>	Purple Finch . . .	<i>Carpodacus purpureus.</i>
Linnet	<i>Linota cannabina.</i>	Pine Finch	<i>Chrysomitris pinus.</i>
Redpoll	<i>Ægiothus linaria.</i>	Redpoll	<i>Ægiothus linaria.</i>
Greenfinch	<i>Ligurinus chloris.</i>	{ Black-throated . . .	{ <i>Euspiza americana.</i>
Goldfinch	<i>Carduelis elegans.</i>	Bunting	
Starling	<i>Sturnus vulgaris.</i>	Goldfinch	<i>Astragalinus tristis.</i>
Jackdaw	<i>Corvus monedula.</i>	Field Lark	<i>Sturnella magna.</i>
Carriion Crow . . .	<i>Corvus corone.</i>	Purple Grackle . .	<i>Quiscalus purpureus.</i>
Rook	<i>Corvus frugilegus</i>	Common Crow . . .	<i>Corvus americanus.</i>
Magpie	<i>Pica rustica.</i>	Fish Crow	<i>Corvus ossifragus.</i>
Jay	<i>Garrulus glandarius.</i>	Magpie	<i>Pica hudsonica.</i>
Woodpecker	<i>Picus major.</i>	Jay	<i>Cyanocitta cristata.</i>
Creepier	<i>Certhia familiaris.</i>	Woodpecker	<i>Picus villosus.</i>
Wren	<i>Troglodytes parvulus.</i>	Creepier	<i>Certhia familiaris.</i>
Kingfisher	<i>Alcedo ispida.</i>	House Wren	{ <i>Troglodytes domesti-</i> <i>cus.</i>
Cuckoo	<i>Cuculus canorus.</i>	Kingfisher	<i>Ceryle alcyon.</i>
Swallow	<i>Hirundo rustica.</i>	Cuckoo	<i>Coccygus americanus.</i>
Martin	<i>Chelidon arctica.</i>	Swallow	<i>Hirundo horreorum.</i>
Swift	<i>Cypselus apus.</i>	Martin	<i>Progne subis.</i>
Kestrel	<i>Falco tinnunculus.</i>	Swift	<i>Chaetura pelagica.</i>
		Sparrow Hawk . . .	<i>Falco sparverius.</i>

BRITISH BIRDS.		AMERICAN BIRDS.	
Sparrow Hawk . . .	<i>Accipiter nisus.</i>	Sharp-shinned Hawk	<i>Accipiter fuscus.</i>
Barn Owl	<i>Aluco flammeus.</i>	Barn Owl	<i>Aluco pratincola.</i>
Ring Dove	<i>Columba palumbus.</i>	Carolina Dove . . .	} <i>Zenaidura carolinensis.</i>
Pheasant	<i>Phasianus colchicus.</i>	Spruce Grouse . . .	
Partridge	<i>Perdix cinerea.</i>	Ruffed Grouse . . .	<i>Bonasa umbellus.</i>
Quail	<i>Coturnix communis</i>	Bob-white	<i>Ortyx virginiana.</i>
Red Grouse	<i>Lagopus scoticus.</i>	Ptarmigan	<i>Lagopus albus.</i>
Lapwing	<i>Vanellus cristatus</i>	Killdeer	<i>Ægialitis vocifera.</i>
Sandpiper	} <i>Tringoides hypoleucus.</i>	Sandpiper	} <i>Tringoides macularius.</i>
Snipe		<i>Gallinago gallinaria.</i>	
Land Rail	<i>Crex prytensis.</i>	Water Rail	<i>Porzana carolina.</i>
Moorhen	<i>Gallinula chloropus.</i>	Gallinule	<i>Gallinula galeata.</i>
Coot	<i>Fulica atra.</i>	Coot	<i>Fulica americana.</i>
Swan	<i>Cygnus olor.</i>	Swan	<i>Cygnus americanus.</i>

ELLIOTT COUES.

WASHINGTON, D.C.

P R E F A C E.



I HAVE now for years been engaged in a study of Ornithology ; and from my numerous notes, principally on the economy of our commoner inland birds, I conceived the idea that from them might be compiled a little volume that might doubtless prove of interest to those persons who have a love for rural pursuits and the study of nature. There are also I believe a few fresh facts on the economy of birds noted, which I respectfully submit to working ornithologists, as well as several moot questions, relating to the natural history of birds, discussed, and opinions, gained by experience, promulgated.

Had I spent more of my time amongst books instead of amongst bogs, I have no doubt but what this little volume would have found more favour amongst a certain class of naturalists, no matter how questionable or erroneous the matter it contained. But such was never my intention. A work purely original I intended it to be—a work whose materials have been obtained by un-

wearied personal observation in the field and the forest, and for the most part written in the several haunts of the birds described, and free from the harsh, and, in a measure, unmeaning technicalities with which at the present time ornithology is so pervaded, to the utter confusion of every aspirant to this delightful science.

If, through a perusal of this unpretending little volume, I may be the remote cause of sending a few fresh labourers into the vineyard of ornithology, my labours have not been in vain, and it will please me much. Should the then intending ornithologist wish for a more technical insight into the science he has adopted, I recommend him to acquaint himself with one of the few useful exhaustive works on this science, where he will obtain the information he seeks.

My object in giving publicity to this little work has been solely to excite a love for the study of the feathered tribes—to place in a popular form the true economy of birds, showing their relations and positions in Nature's great system; and to thee, gentle reader, I leave the task of saying if I have succeeded. With these few remarks I commit it to your considerate care.

CHARLES DIXON.

HEELEY, NEAR SHEFFIELD

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RURAL BIRD LIFE.



PAIRING INSTINCT OF BIRDS.

COURTEOUS READER, before noticing the haunts and economy of any particular bird, it may not be out of place to give thee a short collective account of their pairing instincts, the many and varied arts birds display for the safety of their eggs or young, and also a few remarks on the habits of birds in general.

The pairing instinct of birds has always been a subject of much dispute amongst naturalists, and indeed one of a very perplexing nature. I have found it to be a subject which few writers on ornithology treat with a proper amount of care, while others refrain entirely from introducing it into their works. I consider it to be one of the most important traits in the character of the feathered tribes—an amount of instinct given alike to the lordly Eagle and the diminutive Wren, and that, no matter under which particular division it may come, harmonises with, and is essential to, the habits and requirements of the birds practising it.

Birds may be divided into three classes ; viz., firstly, those birds which, having once paired, remain together for life ; secondly, birds which pair annually ; and thirdly, birds which never pair, but are polygamous. The young

naturalist must bear in mind that every bird, no matter of what species or inhabiting what part of the globe, comes under one of these three divisions. I will briefly glance at these three divisions, and give the opinions I have arrived at in a matter to which I have paid no small degree of care and attention.

We will take, firstly, those birds which pair for life. Swallows are an excellent type of this class, returning annually to their old *nesting-sites* for the same purpose as previously. The Martin returns to its old *nest*. But to some this may appear incredible, knowing that these birds perform long migrations, and may get separated while upon them. Do these birds get finally separated when in large companies they are searching the air for their food? or do Rooks, Starlings, and Jackdaws fail to remember the position of their nests? The same instinct which informs the Swallows when to leave Africa, in like manner urges them onwards to their old nests; and again the same pair of birds will perform the duties of incubation. We all know that the same nesting-site will be yearly tenanted, provided the birds are left unmolested. This must be by the same pair of birds, not their young, as is erroneously supposed, for what ornithologist has ever in the course of his observations seen swallows prying about into barns and out-buildings in search of some old nest, which will save them the labour of constructing one themselves? The time would be so taken up in this search, that no brood would be reared. Young birds pair most likely before their migration to us, and search out nesting-sites upon their arrival in this country.

Again, the Rook is another bird which I believe pairs for life. At the commencement of the breeding season rooks (unmolested by the other members of the

rookery) return to their old nests, and commence doing the necessary repairs required for the comfort of their future brood ; while others, whose nests have been destroyed, diligently set to work to reconstruct them in the same sites, in company with many of the last year's brood which have paired some time during the previous six months. Can any ornithologist inform me of any combat he has been witness to for the choice of the nests which have withstood the storms of winter? A few pairs of rooks will sometimes desert the general rookery and build their nests in neighbouring trees, returning to them yearly.

Ravens, Magpies, Jackdaws, Starlings, House Sparrows, birds of the Falcon tribe and Titmice, have all been known to return to their nests of the previous season. I have known the Robin and the Wren return to their old sites (but not to the old nests) for several years. From what I have observed, the Ringdove and Partridge too are very probably life-paired species. From these instances I would infer that all birds which return to their old nests or nesting-sites for the same purpose every season pair for life. Witness the various marks of affection constantly passing between life-paired birds: keeping in each other's company, feeding, often the male bird feeding his mate, flying and roosting together, so that the observer, as a rule, experiences but little difficulty in identifying them. Ovid must have had life-paired birds in mind when he wrote the following lines expressive of constancy in the male bird :—

Hanc cupit, hanc optat ; sola suspirat in illa ;
Signaque dat nutu, sollicitatque notis.

In the second place, those birds which pair annually : the birds which form this division are the most numerous

of any. We have many instances of this class: as a good type we will take the Willow Warbler. When these birds first arrive in this country they are never in pairs, and indeed the male birds arrive a little before the females. But observe them a few weeks later; they have all found a mate, and are employed in domestic duties. It is the nature of these birds to make fresh nests every season, and never in the same position or locality. When once these birds have left their nests, and the young can forage for themselves, I firmly believe all connection between the two birds ceases; the nests are abandoned, never to be returned to, and the birds roam about searching for food, very often solitary, until the time of migration arrives. Several of the Thrushes are for the most part solitary in their habits except in the breeding season, while others roam about in flocks, very often the males or females being predominant; but as spring arrives, separating into pairs for incubation, after which the same routine is again repeated. The Chaffinch is the same—in flocks during the winter, the sexes not at all social; but as the breeding season approaches they are again seen in pairs for the propagation of their species. The Snipes, Plovers, and Rails all pair annually, with the exception of the Mcorhen and Coot when living in a semi-domesticated state. In the same manner the Buntings, Larks, many of the Finches, Warblers, all pair in their due season.

All these birds' nests, after once serving their purpose, are abandoned for ever: a walk round the leafless hedges will confirm this. Will the frail little White-throat use yon abode again? or will yonder Chaffinches' nest ever more harbour another brood? Will the Sandpiper return to the cavity which once contained her eggs? or the Skylark seek out her home in the mea-

dow grass again? These birds pair annually, and of course select each successive year a fresh situation for the birthplace of their young. In the third place, we will take that class of birds which never pair, or are polygamous. It is only in one division of our present classification that we can trace those of polygamous habits—in the first section of the Gallinaceous birds.

In all birds which are polygamous the female alone is entrusted with all care of the eggs or young, and she, through a wise provision of Nature, is made equal to the emergency. The male shows little or no affection for them. From this I would infer that all birds of the Gallinaceous order, with few exceptions, are polygamous.

I proceed now to give exceptions, which tend greatly to perplex and bewilder the observer in the study of this interesting subject. This matter presents very little uniformity in its arrangement. In the Gallinaceous order of birds the first section are polygamous in their habits; but even to this the Red Grouse, for instance, forms an exception; while the latter section of these birds, birds of the pigeon tribe, to wit, are decidedly monogamous in their habits.

The House Sparrow returns to its nesting-site, and is thus at variance with its congeners of the same family. The tame Duck is polygamous; but observe its wild representative, the Mallard, which separates into pairs for nidification. The Long-tailed Titmouse never returns to its beautiful abode, while the Blue Titmouse appears annually at its hole in the hollow tree. The Goatsucker annually pairs, while Swallows, Swifts, and Martins, I believe, remain united for life. The Rook I have once observed practising polygamous propensities, a fact perhaps never before recorded.

Are those birds which pair for life gifted with a

greater amount of affection than those which pair every season, and what ends are gained by such procedure? While those who pair every season, as soon as the young are sufficiently matured to take care of themselves, do the ties which previously united them together entirely cease, and for what reason? Is this peculiar instinct, call it affection if you will, wanting in polygamous birds, and why? Is it because the presence of the males would probably, owing to their conspicuous colours, &c., lead to the destruction of their brood, were they to share the duties of incubation with the females? If this be so, we cannot but admire the peculiar instinct which exists within them, and instead of considering the male bird wanting in affection for his mate and offspring, by his very absence he contributes largely to their welfare. In many species of birds—notably the water birds—it is difficult to say under which of my first two divisions they fall. This subject, deeply pondered, only tends to show us upon what an intricate foundation the system of Nature is based; and, though apparently of but small moment, we may rest assured that the part it plays in the economy of the feathered race is no unimportant one.

PROTECTIVE INSTINCT OF BIRDS.

Safety depends on vigilance.

A PERSON frequently in the haunts of the feathered tribes during the nesting season, will not fail to observe the numerous artifices these creatures practise for the safety of their nests, eggs, or young; and though these little artifices are often of a varied nature, yet but one end is in view, and that the preservation of their treasure. But, it is naturally asked, What is the *cause* of these peculiar motions, and what prompts the birds to practise them? Instinct, not imitation, explains fully the cause, and instinct again explains the prompting power. If imitation were the theory on which they worked, all birds would practise these powers in the same manner as their parents did before them. But this is not so, for many, if not all birds, at some period of their existence, are called upon to exert their powers in a manner befitting and harmonising with surrounding circumstances. Can we, therefore, explain this power by anything save a protective instinct?—an instinct which is as infallible as the great and mighty Power which causes the creature to manifest it. I would here, gentle reader, have thee to understand that none of the varied protective arts displayed by birds in guarding their eggs or young are due to forethought. To credit the bird with this power would be to endow it with reason at once—a power found in

noble man alone. A bird has not the remotest idea that its nest will be plundered, or its young destroyed, but it has existing within it, and planted there through the agency of a subtle and powerful law, a certain power which we call 'instinct,' which it irresistibly displays in its own particular manner, without any knowledge of the good it is working for the protection and safety of its eggs and young; yet in such an effectual manner are these wiles displayed, as to keep up its species till time shall be no more, or Nature's designing hand wills that its race shall cease to be.

I intend dividing this peculiar instinct into six divisions, and will take them in the following order:— Firstly, colour; secondly, mimicry; thirdly, silence; fourthly, alluring motions; fifthly, pugnacious motions; and, sixthly, deceptive motions.

Colour.—If we wish to observe examples of this peculiar instinct, we must stroll into the nesting-grounds of the Pheasant, for instance, and there we shall find that the female bird, with a mother's watchful care, upon leaving her charge for a short time to recruit her failing strength with necessary food, covers her eggs with pieces of vegetation strictly harmonising with the colour of the herbage around. Thus, if her nest—or cavity, for a nest it can scarcely be called—in which her eggs are deposited is situated amongst a tangled mass of bracken, the bird will cover her eggs with the same material. Should her eggs be snugly ensconced in the shelter of a tuft of grass, materials harmonising in colour will be used to cover them during her temporary absence. When the bird is upon her charge, her own plumage so closely resembles the surroundings, that, trusting in these for safety, she remains faithful to it, until perhaps unwittingly trodden upon by an intruder. Again, the Sand Grouse

are striking instances of this peculiar form of instinct. Their colours so harmonise with those of the arid waste on which they live, that when the birds are sitting upon their eggs discovery is almost impossible. The Red Grouse, when sitting, so closely resembles the moorland vegetation around, that the finding of her treasure is due more to accident than design ; and well does the parent bird know in what direction safety lies, and unerringly does she adhere to it. The Terns and most shore birds, impelled by the same protective instinct, deposit their eggs only upon those portions of the beach which display the same tints as they do. In this manner numerous instances might be brought forth as examples, but the remarks upon this somewhat lengthy subject must of necessity be brief. We will now, therefore, glance at the next division.

Mimicry.—This peculiar form of instinct is closely allied to the preceding one, and if it were not for a few incidents peculiar only to this division, it would be difficult to distinguish more than a slight difference between them. One of the first birds gifted with this instinct is the gay little Chaffinch. Observe how closely she imitates the surroundings in the structure of her nest, how beautifully it is silvered over with lichen, if on the rugged branch of a tree covered with similar material. If in the centre of a glossy evergreen, lichens are discarded, and bright shining green moss substituted in their place. If in the centre of a hawthorn, bedecked with fair and beautiful flowers, protective instinct impels her to gild her handiwork with small scraps of paper, so that, to a casual eye, the whole structure, imitating as it does the flowers around, appears a tangled mass of bloom. How artfully does the Water Ouzel imitate the colour of surrounding objects, her nest being invariably placed

near a running stream, amongst the brightest moss, composed of similar materials; the dampness of the situation keeping them in all their verdant beauty, and thus concealing the nest of the bird, whose protective instinct lies in utilising them for her purpose. The beautiful nest of the Long-tailed Titmouse is again an instance of this protective instinct, and so is that of the Wren. The Robin also finds safety under its banner, and the delicately formed Gold-crest assimilates her nest to surrounding circumstances by weaving the branches of the fir amongst moss of the same colour, the whole appearing to a careless eye nothing but a mass of foliage. And then how beautifully do the sombre greens of the little Dunnock's nest contrast with the colours of the vernal year around. In all these cases how artfully and well the little architects use to the best advantage those materials which their unerring instinct leads them to make use of for the welfare of their young.

Silence.—Perhaps many persons will scarcely comprehend this peculiar form of instinct, yet such a form does undoubtedly exist, and that too in many of our commonest birds. Take, for instance, the little Willow Warbler, and note carefully how she leaves her temporary home. Her nest being often ill concealed, silence is her *forte* and well does she practise it. Observe the garrulous little Whitethroat leave her nest, so silently threading her way from her treasure—so silently as to be seldom heard; and then, when at a safe distance from the neighbourhood of her abode, how joyously she gives forth notes of seeming defiance and alarm. How often does the silent protective instinct of the Dartford Warbler manifest itself, the bird when scared from its nest leaving it silently, and

going for a considerable distance under the surrounding vegetation ere it appears, by its silent motions thus leading an inexperienced intruder far away from her treasured home. Again, how silently the Bunting leaves her charge, and what a deceptive little creature is the Grasshopper Warbler! I have often been deceived by their silent motions when in the neighbourhood of their nests. Silence, again, is the protective instinct of many of the Thrushes, some of them remaining faithful to their charge until compelled to leave it, and then as silently as possible. But should the bird find her nest discovered quite accidentally, as many are, her instinct is not put in force, and the faithful parent flies quickly off, and anxiously watches the movements of the aggressor from her perching-place near at hand. I have known many of these birds allow themselves to be touched by the hand, and remain silent, trying to the utmost their peculiar protective instinct for the welfare of their treasured eggs or young. The Pipits, again, employ silence for the safety of their nests, the nest being almost buried in the herbage around, and the watchful bird remaining silently upon her charge, observing with anxious eye the motions of the intruder till he retreats from her 'castle,' or perhaps almost treads upon the devoted parent and her house. When forced reluctantly to leave it, she does so as quietly as possible, and in most if not all cases this silent protective instinct is crowned with success and safety. If these birds were not gifted with this peculiar instinct, and left their nests in a precipitate manner, numbers of their eggs or young would be destroyed, which, however, through its agency, are brought up to maturity under its protective influences.

Alluring motions.—I consider this peculiar form of protective instinct one of the most beautiful evidences of

an All-wise Providence. Where is the naturalist who, when he sees a bird practising its varied motions, does not admire the little actor, and if possessed of any feeling as becometh a true naturalist, leave her victorious, to attend to her domestic cares in peace? Although all these protective motions claim admiration from a lover of animated nature, yet the power now under notice is perhaps most readily manifest to a casual observer.

Let us stroll down this sandy shore. Observe yon little Sandpiper which has just started up from our feet, endeavouring to make us concentrate all our attention upon herself. Fearlessly she reels and tumbles before us, while her mate from yonder group of rocks is encouraging her with notes of condolence. Why is she so anxious? Her treasured eggs are on the sandy shore, and the little sand-bird is trying to the utmost those powers which an All-wise Providence leads her to manifest for the safety of her one and all-absorbing care. Now we will repair to the barren waste. Here the Lapwing, driven by resistless impulse, will flutter with seemingly broken wings, now tumbling, now running, uttering her mournful cries, but in all these motions the watchful bird is endeavouring to lead us from her home on this dreary moor. Why is she so anxious? Disregard the motions of the watchful mother, and we shall probably find, after a scrutinising search, her eggs on some slight eminence, or her little ones nestling closely in the friendly shelter of the scanty herbage. The young themselves, even at this early age, manifest no slight degree of instinct for their self-preservation. These alluring motions are not confined to the female alone, for her mate, in another direction, is performing various aerial gyrations, which would lead an inexperienced person to believe that the

bird is circling over those treasures it is seeking to defend by so many artful and varied antics.

Pugnacious motions.—These motions form one of the most decided and marked of all the divisions. With man, they almost if not entirely fail, but against their *natural* enemies this peculiar power is of effectual service. As a homely type of this protective instinct we will take the Missel-thrush. How admirably she defends her treasure from all predaceous animals, flying at them with such fury as to compel them to beat a hasty retreat from the neighbourhood of her home. Such is the impelling power of this instinct, that the birds, with only the safety of their nests in view, will attack, and come off victorious, even when matched against that little tyrant the Sparrow-hawk. Notice yon Magpie coming suspiciously near the nest of the Missel-thrush—bent upon plunder, it is evident. How craftily he approaches! Ah! the watchful parent Missel-thrush has descried him, and, with a note of defiance which echoes through the silent woods, she chases the intruder: her mate, too, on hearing her cries, appears upon the scene, and aids in repelling the would-be robber. The Magpie, crestfallen enough at the failure of his designs, is glad to beat a hasty retreat, and is no doubt thankful if he escapes with only the loss of a few feathers. The Ring Ousel employs the same power for the protection of its nest, eggs, or young, and will even dash fearlessly into the face of a human intruder, uttering cries of mingled rage, defiance, anxiety, and alarm, should he approach her treasured nest and its priceless contents. Birds of prey also come under this division, and will even attack man himself when he approaches their nests. Instances are on record where the human aggressor came off second best in these encounters. The Raven

and others of the Crow family find safety under this peculiar instinct, and woe betide the predaceous animal that is caught lurking in the neighbourhood of their abode. The Titmice are also included, and will, by hissing, biting, and other pugnacious actions, endeavour to repel the intruder from their eggs or young.

Deceptive motions.—The last division on which my remarks will bear is of frequent occurrence amongst the feathered tribes. Prominent amongst its followers is the Lark. Note how deceptively she repairs to her nest, by darting suddenly downwards into the herbage at some distance from it, proceeding the remainder of the way by running, thus baffling the searcher in discovering her abode. What a roundabout way the Winchat repairs to her nest, occasionally darting downwards into the thick grass. Surely that is the situation of the nest. But no! up flies the little bird, and, perched on some tall stem of herbage, looks warily around, and again silently alights in the friendly cover. ‘Found at last!’ is our exclamation, and we rush hastily to the spot, but are somewhat crestfallen to find no nest and even no bird. How is this? Her protective instinct has been at work. Influenced by its unerring power, she has used these deceptive motions in regaining her nest, which is doubtless many yards away from the place of her final descent into the friendly cover. Then, again, the Rails manifest various deceptive motions in retiring from and regaining their nests. Who, also, has not observed wonderful instances of this protective power in the manner the Starling approaches her abode? In places where these birds are left unmolested no such power appears, but when the birds are far from the busy hum of cities, how warily they approach, and will not betray their nesting-hole even if thereby prevented from

visiting their nest. Our eyes are often diverted from the bird for a few moments, and the bird, taking advantage of this circumstance, silently enters the nesting cavity. These are a few instances of this peculiar instinct, but a careful observer will see in the habits of these feathered creatures innumerable instances of this and the other forms of protective instinct.

From these remarks we may gain the following facts:— Birds depositing their eggs on bare situations invariably use alluring motions as a protective power; by those nesting in dense situations, silence is employed, predaceous birds as a rule employ pugnacious motions; deceptive motions are displayed by birds whose nests are but little concealed; while birds of a general habitat resort to colour and mimicry.

It must also be remembered that birds only display their protective wiles under certain circumstances, and these circumstances exist when the birds see ample scope for the utilising of them. Thus, if a Sandpiper, rudely scared from her eggs, sees the intruder bending over them, she will not put in force her protective instinct, perceiving at once that the employment of it is vain, and she will utter a note of anguish and despair, and fly to a short distance, to watch the motions of the intruder. This also clearly proves that no imitating power exists within them, for if this were so, birds would always employ these powers, and under all circumstances. Many birds are also known to possess *several* of these forms of instinct, and use them as the emergencies of the case require. Thus the Lapwing or Snipe will manifest a silent protective instinct in some cases, while in others alluring motions will be adopted. Therefore I have no hesitation in saying that all birds have doubtless been gifted with equal portions of this peculiar instinct,

and could, if circumstances required it, put in force all their varied arts, but have, through the course of endless time, adopted those motions best suited to their wants and conditions of life.

Thus has Nature bountifully supplied these feathered creatures with instinct sufficient to baffle, in most cases, their natural enemies—instinct which is so artfully put in force as to baffle even man himself, gifted as he is with noble reasoning powers, which enable him to be the superior and master of every other living creature.

HABITS OF BIRDS.

HE who pays attention to the various motions of the feathered tribes, at all seasons, will find that the habits of birds can be most readily studied in early morning and evening. For 'tis then these feathered creatures are the most active, sing the loudest and in the greatest numbers, and 'tis then they are much, very much, more full of life than at any other time of the day. Many birds, the Thrushes for instance, procure the greater part of their food at these times ; while others seldom leave their fastnesses except for a few hours in the morning and evening. In the following remarks, penned down at the time of observation, I intend showing a few of the actions of the feathered tribes at these, to the ornithologist, the most interesting times of the day.

Ye woodlands all, awake : a boundless song
Bursts from the groves.

Gentle reader, I would request thee to let imagination captivate thee, and bear me company; this lovely morning in May, in a stroll amongst Nature's finest ornaments, the feathered tribes. We must set out long before the sun rises over yonder hills if we wish to notice the morning actions of the Robin, Wren, Thrushes, or other early birds. Just as the sky grows gray we hear the Rooks, the earliest moving birds, cawing solemnly from the tops of the nesting-trees ; a little later a Robin is

heard uttering a few sharp call notes ; the little Wren too is now on the move. A word in respect to the awakening of birds. We are gravely told that those birds roosting in high situations rise the first, because the sun is seen sooner from their elevated roosting-place. But this is incorrect, for the Robin, Wren, and Thrush, roosting in a lowly shrub, rise just as soon from their slumbers as the Rook, perched some fifty feet above them in the towering elm, and long before the sun is visible from the highest tree in the vicinity. Another, I believe a French naturalist, tells us that the Lark is a sluggard. Let him come hither and behold this charming little songster rise from its lowly bed with the first glimmer of sunrise in the eastern sky. Methinks our forefathers of old, or even the village swain of the present day, could have given this grave scientist a lesson in this simple matter. After close attention to this special habit in the feathered tribe, I am able to inform thee, gentle reader, that birds awake with but little approach to regularity, and probably thy first ramble will be quite at variance with thy second, although they be taken but a few days apart. The Carrion Crow and Rook are probably the first birds astir : Thrushes follow them closely. The Cuckoo, too, is a very early riser ; so are the Lark and sylvan birds ; while Finches as a rule rise late in comparison to their above-mentioned congeners. However, as soon as the first bird is heard to move, the other members of the feathered race are heard in rapid succession, and I am often in my rambles, especially in the vernal year, greatly puzzled as to which of my little favourites was the first to greet me with its notes. But to return to our ramble.

A warm glimmer appears in the sky, 'tis the har-binger of the glorious sun, and the Song-thrush and

Blackbird leave the dense shelter of the evergreen and mount the tallest branches, to greet the rising orb with a flood of gushing music. The Robin and Wren have now commenced their lay; the former from yonder thorn, and the latter from the concealment of the dense and lowly bramble. The Cuckoo utters his name from the blasted top of a majestic oak, for an early riser is this bird of spring. As we stroll over this field of clover the Lark springs up from its dewy bed, and, shaking the moisture from its plumage, soars on quivering wing into the azure vault of heaven, now glowing as if with gold from the rays of the rising sun. Cheerily he sings on ever-moving pinions; upwards he soars until he appears but a speck, yet his melody is heard, beautiful in its faintness, e'en though the bird be lost in the morning mist as it rises and creeps slowly along the valley. The welcome twittering of the Swallows is now heard, and these charming little creatures flit by us, their plumage glowing with pristine gloss in the morning suniight. Their morning meal they are seeking, and a bountiful one they find over yonder calm and lucid pool.

Arguta lacus circumvolitavit hirundo.

Gay little Chaffinches greet us as we approach the hedgerows, and the Bunting from his perch on yonder fence utters his enlivening though somewhat monotonous notes. On the decayed branch of this ash sits the sprightly Tree Pipit: ever and anon he launches himself into the air for a short distance, singing as he goes, and then with his *twee, twee, twee, twee*, returns to his elevated perch. The plaintive notes of the Willow Warbler, the dulcet symphonies of the Blackcap, and the garrulous warblings of the little Whitethroat are heard in all directions. The Flycatcher is seeking his morning

meal, and, judging from the clouds of insects hovering near him, his wants will speedily be supplied. As we stroll down this narrow lane the Redstart flits before us from bush to bush, uttering his wrenlike song, while the Wagtail greets us with his call notes as we cross the murmuring rivulet. We now enter a coppice, and the Stormcock flies round us with grating cries: her home is here, and she is seeking to defend it. Now in our return journey we see a pair of Magpies, and hear the discordant call of the Jay; while in yonder grass field near the shrubbery numbers of Thrushes are seen searching for worms and slugs. Observe them closely, and we find the Blackbird elevates the tail upon alighting, while the Song-thrush is never seen to do so. All look warily around before feeding, and upon the slightest alarm fly rapidly off into the shelter of the evergreens. The Rooks are now feeding, and obtaining food for their sitting mates or helpless young, in the pastures. Starlings in their company are keeping up a noisy concert, many of the males on the surrounding tree-tops warbling their varied notes, with shaking quivering wings. The sun is now well up in the heavens, and all birds are singing their loudest. First come the noble family of Thrushes, represented by the dulcet Blackbird and varied Thrush; the delicate sylvan songsters give forth their plaintive notes; while the Finches in all directions help to swell the lovely concert—a concert in which, without close attention, the songs of the many actors cannot be traced. Amongst such a sea of melody we are apt to ponder over the cause of it; but it defies our every effort, and we are obliged to rest content with listening to it and enjoying its sweetness. The Corncrake is calling from the meadow, and the late-rising Sparrows cluster round the barns and ricks to seek their morning sustenance.

On the bosom of the still waters the Moorhens and Coots splash about right heartily, and the Heron on one leg appears in silent moody contemplation. As the sun advances the birds cease their music and retire, and such a delightful concert of bird music will not again be heard until the sun has performed his daily tour through the flaming zodiac, and arises once more in the eastern heavens to usher in a future day. In the evening, however, the actions of the feathered tribes are ever full of interest.

The waning sun behoves us to set forth. The objects of our quest betray their whereabouts by their music, and although these little songsters have been heard in small numbers throughout the day, still all now sing their lovely evening notes. This noble shrubbery presents us with a great number of the little sons of Orpheus. The Thrushes, from their powerful notes, come first before our notice. In yonder stately sycamore, just donning its golden leaves, the Blackbird is pouring forth his notes; another on a lowly wall is assisting in the concert. Song-thrushes from every tree are giving forth their varied tones. As we pause for a few moments under this widespreading yew, Cock-Robin hops daintily on to a neighbouring bough and greets us with a song; while down below him in the tangled ravine the Wren gives forth his rambling notes. Our little friends the Chaffinches, with their congener the Greenfinch, are heard singing their loudest; and the graceful Willow Warbler in his journey over the forest trees in search of insect food occasionally pauses to utter his plaintive song. The active little blue Titmice in every conceivable attitude are searching for their evening meal; while in the distance the bell-like notes of the Ox-eye are heard ringing on the evening air. In the grass fields

we find numerous Thrushes searching for food: the greater part of these birds have not been out of their haunts since we saw them retire in the morning. A flock of Starlings, too, is busily employed feeding. If we disturb them, they all rise together and make for the top-most branches of the neighbouring trees, and there commence a noisy clamour, the male birds giving forth their delightful warbling notes. The Rooks are seen flying backwards and forwards from the distant feeding ground to the rookery with food for their mates or young: they continue these operations till dusk. Far off in the distant meadow we hear the Landrail, who but seldom calls during the heat of the day. There, too, we hear the Skylark singing his evening melody previous to alighting in the grassy sward for the night; while deep in the recesses of the wood we hear the harsh cries of the Jay and Magpie, the discordant crow of the male Pheasant, as he marshals his harem around him, and the soft cooing of the Ringdove; for be it known all these birds are very vociferous at night's gloomy approach.

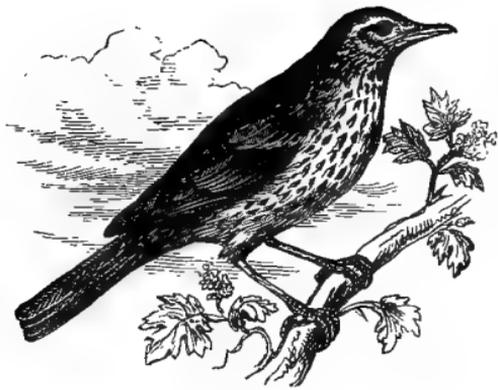
Perhaps the most interesting feature in the nightly motions of the feathered tribe is their retiring to roost. Amongst the earliest retiring birds are the Chaffinch and Greenfinch, for just as the sun disappears these birds seek the shelter of the yew or holly as a roosting-place. The Willow Warbler sings well into the twilight, as also do the Thrushes, Wrens, and Robins: the latter bird, by the way, we shall hear long after twilight has merged into night. All birds, or nearly all, just prior to roosting, become very vociferous. We hear the startling call of the Blackbird; there the Starlings in noisy concert are settling over their roosting-place; yonder the Titmouse is flitting hither and thither in search of a safe retreat. Down the hedgerows the Sparrow-hawk is coursing in

search of some unlucky Finch that has lingered after his companions have sought repose. The female Rooks are upon their nests, their partners perched close at hand, the birds occasionally uttering a hoarse caw, or the young birds their more feeble notes. The night mist hangs low in the valley, and the Bat leaves his gloomy retreat and courses through the air in search of his meal. The wailing call of the Lapwing from the pasture, or the screech of the Owl is heard, proclaiming that the night birds are about to usher forth ; yet still the Robin and a solitary Thrush are heard to sing a few last notes. The gloom is fast hastening into night, and ere long a solemn stillness reigns, only broken by the cries, startling and strange, of the birds or beasts of night.

. . . . the restless day
Expiring, lays the warbling world asleep.

All diurnal birds have retired to rest—a rest however but of a few short hours' duration, for ere long bird life with its ups and downs, cares and anxieties, will be once again in full vigour.

The above remarks apply to an inland pastoral district, and he who roams in the haunts of the feathered tribes in the morning and evening hours, be his rambles on the sea coast, lonely moor, forest, swamp, or plain, will not fail to find his stroll abounding with the interesting habits, many probably unknown before, of these feathered creatures. My aim in giving thee, gentle reader, this brief and hasty sketch of bird life, is in the hope that if thou hast not yet visited the haunts of birds at these times thou wilt be led to do so ; for no matter under what circumstances thou art placed, thou wilt not fail to find abundant sources of pleasure and profit by so doing.



THE SONG-THRUSH.

IN the shrubberies, the woods, and, in summer, the fields and the hedgerows, in fact, wherever we find the Blackbird, we may pretty well rest assured of finding the Song-thrush too. The haunt of the Song-thrush, *par excellence*, however, is amongst the bright and glossy foliage of the evergreens. There they delight to hide, although not so shy and retiring as the Blackbird ; there they build their nests in greatest numbers, amongst the perennial foliage, and there they draw at nightfall to repose in warmth and safety.

Like the Blackbird, the Song-thrush is not a gregarious species, nor can it be justly called a social one, for it is rarely we see more than a pair together save at feeding time. Then, however, they are drawn together by one common object, and once that object attained they retire to their life of solitude again. You can best observe the actions of the Song-thrush at feeding time,

which takes place, as a rule, in the morning and evening hours. Your wish will the better be gratified if a light shower of rain has previously fallen. You see the Song-thrushes leave their haunts one by one, and, alighting on the grass, look warily around for a moment, but do not elevate the tail, like the Blackbird, before commencing their search for food. Hopping hither and thither, they pick up the worms, slugs, and grubs, or seize a passing insect; when satisfied, returning into their leafy haunt solitary as they came. Berries also are eaten in considerable numbers, both in the autumn and early spring months of the year. Wild fruits, as blackberries and raspberries, are eaten, and the fruit gardens near their haunts are often visited. The Song-thrush is also a large feeder on those snails whose pretty shells occur in almost every hedgerow. Capturing the snail, the Thrush conveys it, shell and all, to some convenient stone, where he dexterously breaks open the shell by dashing it against it, and feeds upon the animal within. I have often seen the remnants of a score or more of these shells strewed round some large stone, silently speaking of the Thrush's usefulness. The Song-thrush also obtains much of its food amongst the withered leaves and marshy places of the woods and shrubberies which it frequents. In the autumn months we find the Song-thrush in abundance on the cabbage beds near its haunts, feeding upon the snails and slugs which frequent that vegetable. In the moulting season this bird is still more retiring in its disposition, as if fully aware of its helplessness while undergoing its annual change of plumage.

The Song-thrush sings very early in the year, his rich and varied notes being heard early in February, from which time he warbles incessantly up to the

moulting season in July, at which time, by the way, the young of the year are heard making attempts at song. We have not a bird in Britain possessing a more varied melody than the Song-thrush. His notes may be said to be almost endless in variety, each note seemingly uttered at the caprice of the bird, without any perceptible approach to order. I have often, when listening to his charming song, noted down as many of these variations as I could detect, and the result has surprised me. I on one occasion recorded the variations as the bird was warbling from the summit of a stately ash, and obtained *ten* variations in one of the snatches of his song. The Song-thrush warbles throughout the day, but morning and evening are the times he sings in largest numbers. I have known one of these birds sing incessantly in all his varied splendour for five hours in the morning, without once quitting his perching-place. It is a pleasure indescribable to listen to the vernal song of the Thrush. In the early morning, when the first streak of dawn appears glimmering over the eastern horizon, and surrounding objects are beginning to assume a more decided outline against the gray morning sky, we first hear a few notes, as if the bird, like a skilful musician previous to his performance, were tuning his lyre. Gradually it swells into a lovely song, and is carried for half a mile or more along the valley by the gentle zephyrs of early morn. Shortly we hear another from a neighbouring tree; another and another are heard in rapid succession, as the day spreads, widely around; and finally the air seems laden with their joyous notes, now intermingled with the charming song of the Robin and Wren, and the rich and flutelike tones of the Blackbird. There is no monotony in the notes of the Song-thrush, they are for ever on the change; and when

we hear a dozen or more in one small shrubbery, singing their best, the effect is lovely in the extreme, and totally beyond the art of the most graphic pen to describe. In the evening, too, they just as numerous, and sing equally as well ; every tree-top has its Thrush, pouring forth a requiem to the parting day, and the still evening air resounds with their melody. We also often hear them singing their loudest under a star-spangled sky, or greeting the rising moon with notes of gushing sweetness.

The Song-thrush pairs in the latter end of February, sometimes earlier, although the nest is seldom found before the first or second week in March. Even then numbers of the nests finished, or in course of completion, are abandoned if severe weather occurs. The site of the Song-thrush's nest is a varied one. We invariably find the first nests of this bird amongst the perennial branches of the evergreen ; but as the year rolls on, and other trees and shrubs assume their leafy covering, they in turn are used. The whitethorn hedge is a favourite place ; so too is the bottom of the hazel hedgerows ; while we not unfrequently see it far up the branches of the stately trees, and amongst the ivy growing up their trunks. The nest of the Song-thrush generally takes upwards of a week to complete, yet when hard pressed it can be done in a much shorter time ; witness the following instance, among several, coming under my own observation. I found a nest of the Song-thrush in a small yew bush, and in a very exposed situation, which I removed. Three days afterwards I again visited the place, and was surprised to find that the birds had almost completed a fresh nest. I removed this also, and visited the place the following day, when I was still further surprised to find that the little songsters had almost completed a third nest, so attached were the

little architects to their somewhat ill-chosen site. This structure, however, was removed like the former ones, and on the evening of the following day a fourth nest was there, and the bird upon it, putting the finishing touches, and an egg was laid the following day, for I could not find it in my heart to remove this, their fourth piece of handiwork. I may add that all the nests were excellently made.

Many erroneous opinions are held as to the materials with which this bird lines its nest. Some affirm that cow-dung is the material used; others, that clay and mud form the lining. Let us closely watch a Song-thrush when building her nest: we will suppose the site is already chosen. In the first place a nest of dry grass, straw, and a little moss, is made as the foundation for future operations; and then with wet mud or clay she proceeds to line her handiwork. But this is not all. When this first lining is still in a soft state, the bird repairs to some decayed wood in the vicinity—old fences, roots of trees, or dead branches, answer the purpose, it matters not which—and after obtaining a small quantity, returns to the nest and commences a second lining. How does she moisten the wood for her purpose? Not with her saliva; for with admirable instinct she seeks wood already saturated with moisture, or, provided none can be found in that condition, which very rarely occurs, she moistens it in the nearest water. The selected pieces of wood speedily become tunnelled by the repeated visits of the bird, and in fact by all the other Song-thrushes in the vicinity who are about to set up housekeeping. A stroll in the nesting season through the localities favoured by the presence of these charming songsters will reveal quantities of decayed logs bearing the marks of their repeated visits. But to return. The bird speedily

lines her nest a second time, making it smooth and rounded as any specimen of the potter's art, and then leaves it for probably a day or so to dry, ere the eggs are deposited. The eggs of the Song-thrush are very beautiful objects. They are deep greenish-blue (by the way, a difficult colour to describe), spotted with small deep brown spots, and four or five in number. You sometimes find eggs of the Song-thrush richly blotched with reddish-brown and light purple; others are pure and spotless. The eggs of the Song-thrush are also subject to no small degree of variation in size, the largest and finest eggs being laid by the more matured birds. Silence is the protective power, as a rule, employed by the Song-thrush, although pugnacious motions are sometimes, though rarely, employed. The notes of the sitting bird, when scared from the nest, are almost as harsh as those of the Stormcock. Both birds sit upon the eggs and young, and tend their young for a short time after they quit the nest for ever. All birds, I am convinced, understand the notes of their congeners when in distress or menaced by danger. Notice how, when you have unwittingly disturbed a brood of young Song-thrushes, for instance, the harsh and distressful cries of the parent birds draw other birds to the vicinity of the tumult, undoubtedly drawn thither by feelings of sympathy, or for the purpose of uniting to repel the advances of the oppressor. The Song-thrush rears two broods in the year at least.

Here the Song-thrush is a decidedly migratory bird. They leave us, with one or two solitary exceptions, by the early part of November's foggy month. Their numbers decrease about the Redwing's arrival, and go on doing so until the middle of November, with the above result. In the shrubberies where they formerly abounded

now (November) but one or two are seen, and the hedge-rows are entirely deserted, and their harsh grating call notes no longer disturb the air at eventide. Where the birds retire to, is to me a mystery ; but by the latter end of January or first week in February, when the first signs of approaching spring abound on every side, the Song-thrushes are back again in their old haunts. I am of opinion they migrate, like the Redwing, during the night, for one day they are absent, and the next their mellow notes fill the air around with gladness. I have now for several years been struck with this peculiar habit of the Song-thrush, and the Blackbird too, and paid particular attention to the same, but I am, as yet, totally unable to say what causes these movements.

THE MISSEL-THRUSH.

THIS noble frequenter of our woods and fields is known by many as the 'Stormcock,' a name acquired by the bird warbling his lay in the wildest months of the year. How diversified and everchanging are the habits and motions of the feathered tribe! and most particularly their song. Some birds, as the Robin, Wren, and Dunnock, sing all the year through; while others, as the Chaffinch and Bunting, sing but for a short six months every season; while again the Song-thrush and Lark will warble a few strains at intervals on some calm and genial winter's day, in addition to their spring and summer melody; while yet again the Missel-thrush, by Nature's mandates commanded, sings throughout the winter, drops his lay in April, but regains it in all its power in early autumn, to continue till the sun has commenced his journey to the northern tropic. Thus we find that the Missel-thrush is invariably silent at a time when all his congeners are filling the grove with their melody. His song resembles in some of its tones that of the Song-thrush and Blackbird, but it possesses a peculiar loudness, and wild variation strictly its own, and may, by one who pays attention to the songs of birds, be instantly recognised from the notes of any other British songster. Like the notes of the Ring Ousel, it is somewhat monotonous. I have heard this bird pouring out his wild notes before actual daylight, in the middle

of the short winter's day, and when the sun has been sinking behind the western hills in tints of the finest lustre. How pleasantly his notes greet the ear amid the shrieking of the wind and the driving snow, or when in a calm and lucid interval of genial weather we hear him sing, if possible, more richly than before. His song reminds us of a coming season when the now dreary landscape will be clothed in a blooming garb befitting the vernal year—of the song of the Blackbird and Thrush combined with that of the Lark, and other host of tuneful throats which usher in that lovely season. Should you disturb the Missel-thrush when singing he usually drops silently down and awaits your departure, though sometimes he merely retires to a neighbouring tree and warbles as sweetly as before. You will also find that you can approach him much closer when he is singing than at any other time, save in the breeding season, a fact, by the way, found in all or nearly all singing birds. The call notes, or alarm notes, of the Missel-thrush are extremely harsh and discordant. You may form a pretty correct idea of them in the same manner as you would imitate the Landrail's call.

The Missel-thrush, as a rule, flies much higher through the heavens than the Thrush or Blackbird. They are also capable of flying with great rapidity, and also have considerable command over themselves in the air: witness their motions round the head of an intruder when in the neighbourhood of their nest. The Missel-thrush is a decided inhabitant of trees and shrubs, save when in search of food, which for eight months in the year is found chiefly on the ground, except in fruit time. The remaining four months he is for the most part a berry feeder, though, if the weather be mild and open, we find him on the grass land in company with his congeners.

You will also find in studying the economy of the Missel-thrush that he is never seen to skulk and hide under the evergreens and lowly shrubs, but is generally found amongst the higher branches, shy and vigilant at all times, and taking wing the instant he is alarmed.

From what I have observed, the Missel-thrush pairs somewhere about the first week in February, and at that season the birds are very pugnacious. I was once a witness to one of these combats between two males: a female was in their company. After much discordant language, harsh blows, and not a few warlike motions, one of the birds was evidently vanquished, and retired to a tree close at hand. The now victorious male went off in another direction, in company with the female, and I have no doubt a union was formed between them. These birds frequent the locality of their nest weeks before a twig is laid in furtherance of it. Every day the observer may hear their harsh cries and the lovely notes of the male in one locality, and he may rest assured, if he does not molest them, that there their nest will be. Another noteworthy habit of this bird, in common with many other species, is its singularly trustful disposition in the breeding season; yet at all other times of the year he is one of the most difficult birds to approach, and shuns, except in fruit time and the keenest weather, man's habitation with scrupulous care.

Missel-thrushes commence building early in March, and their eggs often suffer from the inclement weather which not unfrequently occurs at that season. I have found many nests of this bird forsaken, though the full complement of eggs was deposited, the nests being filled with snow, and the eggs frozen hard as stones. Almost every forest tree is destined to contain the nest of the Missel-thrush. We find it in the yew shrubs, a few feet

from the ground ; in the lowly hawthorn ; the alder bordering the stream ; sometimes in the ash, sixty feet above the ground ; more rarely in the beech ; while very often the towering oak and silver birch are selected. We also find it in every species of fruit tree ; and what I have noticed as very singular is, that though the nest is often very conspicuous, it is often overlooked until the eggs are hatched, or the young have left their birthplace for ever. Missel-thrushes will sometimes build their nests very close together ; I on one occasion counted four of their nests a few yards apart in the secluded corner of a swampy wood. The nest is placed in some convenient fork, often built on a branch growing at right angles to the trunk, and but very rarely constructed amongst the more slender twigs. I on one occasion found a nest belonging to this species in a large yew shrub : the nest was placed at the end of one of the slender branches, five feet from the ground, and was but very slightly secured : it contained four eggs. In my opinion the nest of this bird is but very rarely found in these situations. It is composed of a few twigs, coarse grass, sometimes growing chickweed, mixed with large masses of wool, cemented with mud, and lined with a very thick lining of the finest grass. Some nests are composed externally of a species of moss which grows in swamps, and when dry is a greenish-white colour. This when skilfully woven with the slender twigs of the birch, and placed in that lovely sylvan tree, forms one of the most beautiful specimens of bird architecture. I have known this bird use ivy leaves for the outside of its nest, which was placed in a hawthorn tree just bursting into leaf. Of all the birds which have come before my notice, perhaps none deposit more regularly the same number of eggs. I have examined scores of

the nests of this bird, and found the eggs in all stages of development, yet not in one single solitary instance have I found the eggs of this bird to exceed four in number : the eggs of the Missel-thrush, therefore, I should say but rarely exceed this number. They vary considerably in shape, size, and markings ; some specimens are pear-shaped, others almost round, and great disparity of size may be often noted in the eggs of the same nest. Some eggs are bluish-green in ground colour, with a zone of purple and reddish-brown spots ; others have a much deeper ground colour, mottled all over with light and dark brown and purple blotches ; in others the colouring matter is collected on the larger end. I have found eggs of this bird not sat upon in June, and known the young able to fly by the latter end of April : from this I would infer that two broods are reared in the year. You can seldom examine the nest of the Missel-thrush in quietness, save when but one or two eggs are deposited, for when the full complement is laid, and the birds commence to sit, they seem priceless to them. As they approach maturity they are still more anxious, and when their young are depending upon them for safety and sustenance, the old birds care but little for their own security, and with harsh cries and pugnacious motions endeavour to drive away all intruders. Pugnacious motions are the protective wiles this bird displays, and when you approach their nests the old birds fly round your head, uttering their grating cries, and endeavour by their boldness to drive you away. Magpies and Jays, and even the Sparrow-hawk, fare but badly if the Missel-thrushes attack them in defence of their eggs or young. Those persons who would have us believe that the song of the male bird is given forth to cheer his sitting mate, must certainly find

an exception in the Missel-thrush, for on no account do you hear his tuneful lay cheering his sitting mate, and the incubation is performed in silence, a fact perhaps not observable in any other British songster.

The popular belief that Missel-thrushes drive all birds away from the neighbourhood of their nest, and rear their young apart from the company of their kindred, ought to be received with explanation. I have often found the nests of the Greenfinch, Chaffinch, Magpie, Wren, Thrush, Ring Ousel, and Blackbird, within a few yards of the nest of the Missel-thrush; all living peacefully together, and each performing its domestic duties in company. I have seen the nest of the Missel-thrush in the branches of a tall mountain ash: the nest contained four eggs. In a small hole in the trunk a Redstart was sitting upon her eggs, while in a recess amongst the roots of the tree a Wren was building her cave-like home, and a Magpie was also engaged in like manner amongst the branches of a wide-spreading oak close by. But, gentle reader, mistake not these remarks, I pray thee. If the nest of the Missel-thrush is menaced by any predatory bird—by the way quite a different matter—the parent bird will strive to repel its approaches, as will most birds, more or less, when placed in similar circumstances; and these pugnacious motions are undoubtedly the cause of this erroneous and misleading statement. Where birds are closely observed the utmost harmony is found to exist between them, when employed in bringing up their young. Although their nests be but a few feet apart, each performs its allotted task in a manner harmonising with the instincts with which Nature has endowed it.

In the early autumn months the Missel-thrush congregates into little parties, and by the latter end of

September we see them in considerable flocks. But as the year begins to wane and the sun enters the southern tropic, these birds, from at present an unknown cause, again separate, and are seen solitary or in little parties. They are very wild at this particular season, probably more so than at any other time of the year. They frequent the turnip lands and newly-ploughed lands at this time, feeding on the insects and worms, and seeking the grass land for slugs, taking wing the instant danger threatens, flying from tree to tree, uttering their harsh and grating cries both when at rest and when flying through the air. In the winter months Missel-thrushes congregate to some extent with the Fieldfares, and roam about from one place to another in search of food. It is seldom now they come near man's habitation save when hard pressed for food: then, however, we see them on the hawthorn trees, or regaling themselves upon the berries of the service tree.

A word as to the Missel-thrush feeding on the berries of the mistletoe. Popular opinion regards this waxen berry as the staple food of the 'Stormcock,' but as far as my own observations extend I consider that such is not the case. Here the mistletoe grows in abundance on the poplar trees, and the 'Stormcocks' abound in all directions, yet I never see them feeding on the berries, nor can I find traces of them in the stomachs of the birds. Hence I am led to believe that the berry is not sought after so closely as is generally supposed. Hawthorn berries, and the fruit of the service trees, seem to be preferred; and he who would wish to encourage this noble bird, and have his domain enlivened in the winter months by his wild and powerful notes, will do well to cultivate these trees. When I see the mountain ash and service tree expanding their lovely

bunches of bloom, and the hawthorn assuming its snow-white flowers under the soothing influence of the vernal sun, I know that these flowers are the future fruit that will feed the 'Stormcock' and his congeners when their other food is wanting; and I pause for a moment to admire these graceful daughters of Sylva, and reflect how beautifully every animate and inanimate object of the creation performs its allotted task in a manner beneficial to the great Commonwealth of Nature.



THE REDWING AND FIELDFARE.

WHEN the mournful winds of autumn sigh through the semi-denuded branches, and the leaves of the trees are falling all around, as

One by one they wander through
The Indian summer's hazy blue,

and the first blasts from the north arrive, the Redwings, in flocks, are in their van. Already winter has commenced his dreary sway in their far northern home, and they must fly before him to those lands where his powers, though of no mean order, can yet be tolerated by these delightful songsters. Thus, as October's nut-brown month is waning, the Redwing arrives here to spend his winter. Redwings, in my opinion, perform their migrations under the cover of night, and at this season of the

year I often hear on some clear and starlight night the yelping cries of the Redwings winning their way through the still starlit air far above me in the trackless heavens. The Redwing arrives in this country much sooner than the Fieldfare, though both these birds inhabit the same northern latitudes. This is owing to the Redwing being more sensitive to cold than the Fieldfare, and numbers of these 'Swedish nightingales' perish from cold in a hard winter: food, too, is another cause for this early migration. You can instantly tell the Redwing from any other of the Thrush family by its small size, the abundance of white on the under parts, and the yellowish white streak of plumage over the eye. Upon their arrival we find the Redwing a very shy and wary bird, but in a few weeks' time much of this wariness disappears, and they become one of the most trustful members of this charming family of choristers. We find the Redwing delights in the more cultivated parts of the country, frequenting well-wooded parks, and pleasure and pasture grounds.

Redwings are perhaps more nocturnal in their habits than any other British Thrush. As I wander over the pastures when the shadows of night are falling, I often disturb these late-feeding birds, and their now dusky forms flit by me, and their peculiar cries disturb the evening air as they fly rapidly off to their roosting-place. The trustful familiarity of these birds is sometimes very marked, notably so in keen weather. It is a pleasing sight to watch a flock of Redwings when searching the grass land for food. How nimbly they hop amongst the frosted grass, ever in motion, occasionally taking short flights or starting up to look warily around. If alarmed, they fly off in small parties and take refuge on the top-most branches of the neighbouring trees, and then when

the danger has subsided leaving their elevated perching-places in the same manner. First one will fly boldly down, others follow, and so on until the whole flock are again engaged in obtaining food. We often see, however, one or two birds perched in the trees close to which the flock is feeding. These do duty as sentinels, and give forth alarm notes on the approach of danger. These signals are heard by the feeding birds below, who instantly take wing, very often to the mortification of the wandering gunner, who tries in vain to discharge his piece at the harmless creatures.

The partiality of the Redwing for animal substances is no doubt the primary cause of their permanent residence in one neighbourhood throughout their sojourn in this country. In the winter months the land frequented by them is very often like one huge sponge, teeming with abundant food, and on which they are always found. This bird is not near so much a berry-feeder as is currently supposed. Upon their arrival we find them, it is true, regaling themselves on the fruits of the hawthorn and service tree, but this only occurs for a few weeks after their arrival, and I then see them for the most part obtaining worms on the grass land, and only returning to the berry-bearing trees and shrubs when the ground is frozen hard as adamant.

I know not whether the song of this bird is frequently heard in the winter months, but with me it is certainly of the rarest occurrence. I have given the birds my closest attention with regard to this matter, but their song has only once greeted my ear. One of those sunny days in December, when everything around almost put me in mind of the coming spring—the Robin chanting his delightful notes far up in the naked branches, and the little Wren pouring forth his jerking

song from the undergrowth : a number of redwings, too, were feeding on the surrounding grass fields, when one of their number flew from the rest, and perched on a lowly hawthorn tree, some ten yards away, and commenced singing. I can only compare the notes of the Redwing to a mixture of Song-thrush and Blackcap melody, the whole being given forth in one long warbling strain, varied by several harsh and guttural notes. Well does the Redwing merit the title of 'Swedish nightingale,' a title bestowed upon it by the great and illustrious Linnæus ; for still more beautiful must be his song when inspired by love—still more charming will its tones appear when given forth amongst the pine-clad hills of his far northern home. He continued singing for a few moments, when an unlucky movement on my part sent him hastily away to the company of his kindred on the adjoining meadows. Few birds possess such a variety of call notes as the Redwing. A musical one, something like the call note of the Skylark, is uttered when the birds are passing through the air ; their alarm notes are a yelping cry ; and when settling down to rest, harsh cries like those of the Stormcock, only a trifle more musical, and low squealing notes, varied with peculiar guttural ones, are uttered.

I have paid great attention to these birds just prior to their departure to the north, and examined carefully their haunts weeks after they have vacated them, but have never yet found any of them tarry here to breed. Redwings are strictly gregarious, they feed together, fly together, roost together, and I am told, for of their nesting habits I am totally unacquainted, that in companies they build their nests. Certain it is that none remain to breed near here. Should the reader have the good fortune to discover the nest he will at once identify it ;

for its nest is lined with the finer grasses, like the Black-bird's, and the eggs, judging from one in my possession, taken in Sweden, very closely resemble the eggs of that bird, but are, of course, very much smaller.

Redwings are found in the same locality year after year, and nightly seek the same place for repose ; and often do I take shelter under the yew tree's dense and impenetrable foliage for the purpose of seeing them retire to rest. Early in the evening a few of the birds are seen on the neighbouring trees, but as the evening is emerging into night, and the moon assumes her borrowed light, the birds come in flocks from the pastures, their wings rustling in the still evening air, and their call and alarm notes fill the air around with tumult. Down they settle on the tallest underwood ; *yelp, yelp*, is heard in all directions, and one by one I see them seek their roosting-place. Numbers retire to the ivy, others to the yew, while many seek the holly's glossy sprays for their purpose. Now one flutters hastily into the bush under which I am standing, but noticing man's baneful presence, he flies quickly off to more suitable quarters. As the stars shine out one by one, solemn stillness reigns around, occasionally broken by the fluttering of some benighted songster ; but these sounds cease at last, and I know that just around me some two hundred members of the feathered race are lulled in tranquil sleep in the bosom of the warm and friendly evergreen.

In the latter end of March the Redwings visibly decrease in numbers, and as the month of April approaches they have left us in still larger numbers for the north. Flock succeeds flock, and before the middle of April arrives, they are probably in safety on the far northern shores of Norway.

The second of these little wanderers arrives here much later in the season than its aforementioned congener. November's blasts have stripped the forest trees of their covering, and the evergreens stand out prominent in all the splendour of their glossy garb, ere we see the Fieldfares winging their way through the heavens. Like the Redwing, the Fieldfare, in my opinion, migrates in the night ; for not a single bird will be seen one day, while the next, long before sunrise, they are observed in incredible numbers. I have but small doubt that the Missel-thrush is often taken for the Fieldfare, but their cry may instantly inform the one well versed in the notes of the feathered tribes. It is much more harsh and guttural than either the Missel-thrush or Song-thrush ; besides, the Fieldfares fly in large flocks, an act never observed in the economy of the Song-thrush, and only in the autumn months in the case of the Missel-thrush. The Fieldfare is of a far more decided wandering disposition than the Redwing, and this is obvious when we reflect that the bird is, when residing with us, for the most part a berry-feeder. Once arrived in a district abounding with their favourite food (berries), and they remain until all is consumed. He who would wish to encourage the Fieldfares around him should pay special care to the cultivation of his evergreens, and plant with unsparing hand the mountain ash, service tree, and hawthorn, in all parts of his domain, for it is on the fruit of these and kindred trees that the Fieldfare finds his main support.

When the snow is lying thickly on the ground I see the Fieldfares flying over the dreary waste near man's habitations, or satisfying their hunger in the berry-bearing trees near his threshold, but I but rarely see the

Redwing in their company. The Stormcock is found with them not unfrequently, for he, too, at this season, is a decided berry-feeder. But when the snow has all disappeared, and a few days of open weather follow, the Fieldfares seldom stay if the berries are consumed, and rarely, or never, seek the grass land with the Redwing. There are few birds more shy and wary than the Fieldfare, for if once disturbed they invariably take off to some considerable distance in a long straggling train, and as they fly rapidly, and as a rule out of gunshot, they are comparatively safe at a season when the poor half-frozen songsters are so ruthlessly murdered.

Like the Redwing, the Fieldfare, when with us at least, is gregarious. They arrive here in flocks, and in flocks return to the north, but of their nesting habits I am unacquainted. Their nests, from specimens I have seen brought from northern Russia, are very similar to the Blackbird, and the eggs closely resemble those of the Ring Ousel, with the exception that they are slightly smaller.

The Fieldfare is of such irregular habits that the exact time they leave us would be difficult to mention. Certain it is they leave us much sooner than the Redwing, for I but rarely see them after the third week in February, the state of the weather influencing considerably their migratory movements. We are still in ignorance as to many of the causes of migration, and probably shall ever remain so. Here we have two Thrushes, differing in no perceptible degree in their habits and requirements from resident species, that leave us every spring, and repair hundreds of miles to the north, for the purpose of rearing their young. And what end is gained by such procedure? That some benefit is

obtained we may rest assured, and that the birds have an all-important purpose to fulfil in thus leaving us every season for those northern climes—a purpose which, although as yet unknown to us, is still, mayhap, of vital importance to these two interesting little wanderers.

THE RING OUSEL.

ON the barren moor, where the mountain ash and graceful silver birch are wafted with the health-giving mountain breeze ; where huge boulders of rocks are piled upon each other, by some stupendous convulsion of nature, in endless confusion ; where the roaring mountain stream rolls down in silent grandeur ; and where the red Grouse and Merlin, true birds of the mist and heather, find a haunt—there too the Ring Ousel finds a safe and secluded home. Amid scenes so desolate, yet so full of solemn grandeur, he pipes his song and rears his young in peace. What careth he for the shrieking winds as they drive with fury through his haunts. 'Tis but music to him, and his rugged fastnesses are preferred to more pastoral scenes, save when our garden fruits are ripe ; but even then he strays but little from his beloved home until, by resistless impulse driven, he follows the sun in his journey to the southern tropic, to his home in the sunny south. Such is the Ring Ousel's home. We will now give the bird our attention.

The Ring Ousel is one of our spring visitors, and the only Thrush which comes to our shores to spend the summer. He arrives here the first week in April, sometimes in flocks of several hundred individuals, remaining in flocks or parties, as the case may be, for a few days frequenting the marshy ground in search of food. If disturbed, they all rise, and after wheeling about in the air

for a short time, again alight at some distance from the observer, for a shy and wary creature is the Ring Ousel, and particularly so just after its arrival. They soon separate into pairs, and spread themselves over the moorland districts. Soon after their arrival the male birds are heard singing in all directions, and, by exercising a little caution in your approach, you may get within a few yards of the bird, and thus observe him closely. Monotonous as is the song of the Ring Ousel, still its loud tones, and the noble bearing of the bird itself, fully harmonise with the wild surroundings. Perched very often on some storm-riven tree growing out of the gray and massive rocks, the Ring Ousel, with his white cravat glistening in the sun, pours forth his notes—notes resembling those of the Starling, the piping of the Blackbird, and the varied tones of the Song-thrush. The bird after several piping notes calls forth in harsh tones, as if in mockery of his own performance. Motionless he sits, with probably a minute between each snatch of song. If alarmed, his wild notes cease, and, with his loud cries echoing in the rocks around, he flies off to a more secluded resting-place. Whenever I stray on to the wild moorlands in summer, the Ring Ousel, with his loud call notes of *tac tac tac, tac tac tac*, comes forth to meet me, and seems to challenge my right of approach. He alights on the boulders of rocks before me, and flits from bush to bush as I wander on. I observe him closely, and I find he possesses the habit in common with the Blackbird of elevating the tail upon alighting. His female, with her more dingy garb, keeps out of sight and is more rarely seen.

On the rugged sides of the steep mountain gorges which occur so frequently in the wild and lonely Peak of Derbyshire ; in some stunted bush on the gorse and

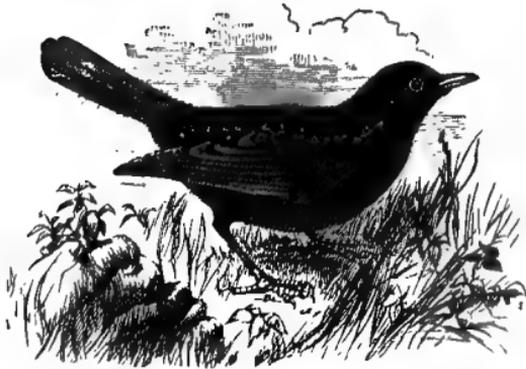
heath-covered bank of the mountain lake ; on the banks of the roaring current ; or snugly located amongst the purple heather's bushy branches, on the wide-spreading moor—in all these situations the nest of the Ring Ousel may be found artfully concealed, never very high from the ground, and always well and compactly constructed. Early in May is their nesting season, and but one brood is reared in the year. The site chosen, the little builders first make a nest of dried grass, the sides mayhap bound together with a few birchen twigs : they then line this structure with a thick coating of mud, obtained from the nearest water-side or marshy swamp. The nest now is very deep for its breadth, but upon the mud the birds place a large quantity of finer grass, as a lining. The mud hardens, and the whole structure forms a well-made cradle for their little ones. The eggs of the Ring Ousel, four or five in number, so closely resemble those of the Blackbird, that even the most practised eyes are very often unable to discriminate any difference between them. I think, however, as a rule, the Ring Ousel's eggs are a little the largest, and more deeply blotched and bolder in their markings. They are bluish-green in ground colour, speckled and blotched with reddish brown : some specimens have one or two brown streaks, notably at the larger end.

No birds defend their eggs or young with more matchless courage than the Ring Ousel. Approach their treasure, and although you have no knowledge of its whereabouts, you speedily know that you are on sacred ground, or, more plainly speaking, on the nesting-site of this bird of the moor. *Something* sweeps suddenly round your head, probably brushing your face. You look round, and there the Ring Ousel, perched close at hand, is eyeing you wrathfully, and ready to do

battle, despite the odds, for the protection of her abode. Move, and the attack is renewed, this time with loud and dissonant cries that wake the solitudes of the barren moor around. Undauntedly the bird flies round you, now dashing into your face, or reeling and tumbling on the ground in very anguish and despair. Who could view such a scene unmoved. As you approach still closer, protective instinct, if possible, works more powerfully within her; her cries, with those of her mate, disturb the birds around; the Red Grouse, startled, skims over the shoulder of the hill to find solitude; the Moor Pipit chirps anxiously by, and the gay little Stonechat flits uneasily from bush to bush. How great is her maternal love! How unceasing in his vigilance is her mate! Let us leave them to their rugged haunt, to attend to their duties in what the birds love best, the absence of man and the presence of solitude. Even when the nest is but half built I have known these birds unceasing in their efforts to drive me away. I have even struck the bird repeatedly with a fishing-rod, but, undaunted, she has kept up the unequal contest, and followed me quite out of the neighbourhood of her unfinished home, and then returned in triumph to aid in its completion.

The food of the Ring Ousel is snails and worms, for which they may often be seen hunting on the marshy land peculiar to the moors: insects and beetles are also eaten. When the bilberries are ripe the bird subsists largely on them; the gardens, too, near their haunts, when the various fruits are ripe, suffer considerably from their repeated visits. But soon the fruit is gathered, and the Ring Ousels must see about their great journey. They leave their haunts solitarily, or in little parties, but as they journey southwards they congregate in flocks,

and very probably keep in flocks throughout the winter, and until they return once more to their northern breeding-grounds. The moors glow in all the splendour of their purple tints, the woods and coppices are already touched by autumn's magic wand, and the Ring Ousels must not tarry. To do so would probably be death ; for peaceful and lovely as the scene now appears, the winter is nigh with all its terrors, and the Ring Ousels, by Nature's mandates commanded, leave the moor and the mountain, to spend their winter secure in a southern clime. It has been said that the Ring Ousel winters in England ; but from my knowledge of the habits of this bird, the case is only analogous with the Swallow.



THE BLACKBIRD.

HE who makes field ornithology his study will not fail to notice how each district, varying in its scenery, possesses birds peculiar to it alone. Thus the Red Grouse loves his lonely moor ; the Lapwing delights to soar in reeling flight over the naked common ; the Woodpecker loves the silent woods, and the Landrail his pastoral haunt. Birds of the Thrush family, too, exhibit this preference in a marked degree. Thus we find the Thrush, Blackbird, and Redwing inhabit, as a rule, our pastoral lands and shrubberies ; the Fieldfare is a wanderer ; while the family is represented by the Missel-thrush in the woods and wilder districts ; while, yet again, the heath-covered moor and mountain-sides have their charm for the Ring Ousel.

It is in the shrubberies, where the laurels, the yews, and the hollies spread their glossy branches, and where the ivy climbs up the trees in wild confusion, that we find the Blackbird in greatest abundance, especially so

if grass lands adjoin them. Being by nature a shy and retiring bird, these situations are preferred before any other, simply because the evergreen's dark and gloomy branches afford him nesting-sites, roosting-places, and, above all, the seclusion which he loves.

As you wander through the shrubberies, say when the shadows of night are falling, you will often hear a rustling noise under the spreading laurels, amongst the withered leaves. It is the Blackbird, frightened at your approach. If you alarm him still further, he dashes rapidly out, and with loud and startling cries flies off to some safer cover. As the darkness deepens you have good opportunity of watching their actions when retiring to rest. Conceal yourself under the friendly branches of a yew tree, and wait patiently. You hear their loud startling cries in all directions, and catch occasional glimpses of their dark forms flitting hither and thither in the gloom. *Pink, pink, pink, tac, tac, tac, tac*, is heard on every side. Now one comes fluttering into the bush under which you are concealed, and his notes startle you by their nearness. A short distance away another answers. Another and another, in different directions, also swell the noisy clamour, and you hear on every side their fluttering wings amongst the perennial branches around you. Gradually the cries cease in number as the birds settle down to rest; a solitary cry will break the stillness of the evening air, but remain unanswered; and the only sounds that break the oppressive silence are the evening notes of the Robin, or mayhap the peculiar call of the Goatsucker, winnowing his way through the trackless air above.

Morning and evening are the times the Blackbird usually seeks his food. This is for the most part, in summer at least, obtained on the grass land near his

haunts. One by one you see them fly rapidly out and alight amongst the grass. He remains motionless for a few seconds after alighting, with legs at a graceful angle, neck arched, head slightly turned aside, as though he were listening intently, and tail almost at right angles to the body (for be it known the Blackbird, like the Magpie and the Ring Ousel, always elevates the tail upon alighting), which is crouching low amongst the herbage. When in this position he presents an attitude the acme of easy gracefulness and beauty. No museum attitude there, for he can never be seen in such graceful, though wary ease, save when in the full enjoyment of life and vigour. Therefore, he who would wish to see this jet black chorister in such attitude must stray into his haunts at morning or eventide, and watch his motions when on the pastures in search of his meal. Few birds are more wary whilst feeding than the Blackbird, and the instant danger threatens he retires into the fastnesses whence he came. Morning and evening are the times animal substances abound on the pastures : it is then the small snails occur in largest numbers, and the earthworms leave their holes and visit the surface of the ground. The Blackbird knows this full well, and acts accordingly. It is an animating sight to see a number of these birds engaged in feeding ; now digging away at some tenacious worm ; now exploring the manure heap for the beetles, worms, and insect life with which it abounds, every now and then pausing in their labours and looking warily around. At the sight of so many Blackbirds together you would most likely consider them as a gregarious species, yet the reverse is the case, and it is only their food brings them together. All their food, however, is not obtained from the pastures. Lurking amongst the hedgerows are numerous snails, inhabiting

prettily marked shells : these shells the Blackbird breaks open and preys upon the snails within. Insects and grubs are also eaten, and in the autumn months the berries of the mountain ash, service tree, hawthorn, and wild rose are eaten in abundance. Our garden fruits are also eaten, wild fruits too are preyed upon—notably the wild raspberry, blackberry, and sloe. Should his depre-dations amongst your fruit trouble you, take not his life, and bear in mind his labours in the spring time make ample amends for any losses of fruit that occur in autumn, and his music is as charming as that of any other songster that fills the grove with gladness.

The Blackbird is a pugnacious creature in pairing time. A little before the period of the vernal equinox it is no uncommon thing to see male Blackbirds fighting with perfect fury, chasing each other through the branches until one comes off victorious, and the other slinks silently away. Most birds are more or less pugnacious in the mating season, although peaceable enough at other times, yet this does not hold good with Blackbirds, for at all times you will frequently see them displaying animosity towards each other.

The song of the Blackbird commences the latter part of February, and continues with increasing powers until the end of May, when his notes are on the wane throughout June's leafy month, and in July his mellow pipe is hushed in the autumnal moult until the advent of the following spring. The song of the Blackbird is rich and full in its tone, but possesses little variety : however, there is not a doubt but what the Blackbird's melody ranks as one of the finest amongst all the songsters frequenting our land in summer and winter alike. The Blackbird will, though rarely it is true, warble his delightful strain when coursing through the air. Early morning, about

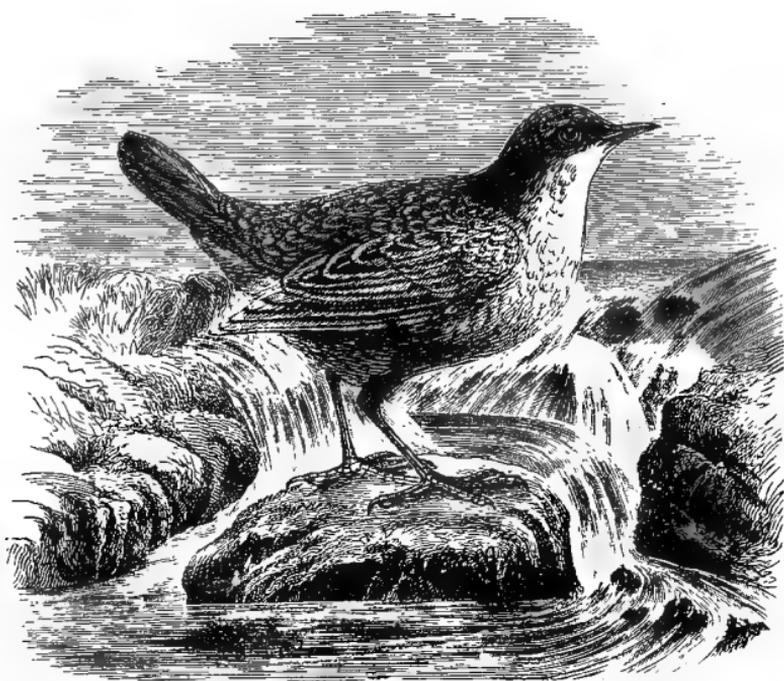
sunrise, and after five o'clock in the evening, in the latter part of April's fresh and vernal month, are the times the Blackbird's powers of song are heard to best advantage.

The Blackbird pairs early in the season, sometimes late in the month of February, although the nest is not found quite as soon as the nest of the Song-thrush. The nest of the Blackbird is placed in various situations. You frequently find it amongst the evergreens, yew, laurel, holly, bay, or ivy, it matters not which; then you occasionally find it some forty feet or more up the branches of the forest tree; while yet again the ground alone supports it, and the hedgerows are often selected. I have known the Blackbird build its nest in a shed. I have also found it simply placed on a stone projecting from a wall, from which it could be removed and replaced without any anxiety for the birds forsaking it. The nest is built of dry grasses, sometimes a few slender twigs, a little moss, and lined, in the first place, with wet mud alone; this is again lined with the finer grasses, and when dry the whole structure is very firm and compact. The eggs are four, five, and even six in number, and, like the nesting-site, subject to no little variety, both in size, shape, and markings. Many of the eggs are very small; some are pear-shaped, others almost round. The ground colour on many is greenish-blue, spotted and blotched with rich reddish brown; others have the ground colour more clouded, and a zone of colouring matter round the end of the egg. But the most curious variety are pale bluish-green in ground colour, faintly marked with a few claret spots, or, not unfrequently, quite pure and spotless. Both birds sit upon the eggs or young, the male in many cases quite as frequently as the female. When the nest is ap-

proached the sitting bird either glides silently off, or remains silent and motionless, very often until touched by the hand ere it quits the nest. The call note in the nesting season of the male Blackbird resembles the call note of the Robin, and is indescribably plaintive and beautiful. The young birds are fed on worms, snails, grubs, and insects, and the parent birds tend them but a short time indeed after they quit the nest. Not unfrequently two broods are reared in the year.

Though the Blackbird frequents the hedgerows in summer, still he abandons them long before the autumnal blasts strip them of their verdure. Exceptions are found to this, but only where the hedges are unusually dense, and sunken fences occur. The Blackbird then retires to the neighbouring shrubberies, and woods studded with evergreens, where he remains in seclusion during the moulting season. His habits, however, you will find at all times shy and retiring. A skulking bird, he is with difficulty flushed, and if in open places, the least alarm sends him hurriedly off into the cover, from which he seldom strays far away.

The Blackbird, with me at least, is a partially migratory species. His numbers decrease after the autumnal moult, and go on decreasing, until in November his presence is only represented by one or two solitary birds. He returns in the same mysterious manner, and early in February again appears in his wonted numbers.



THE DIPPER.

PERCHED on a rock in the centre of the stream, which whirls and boils with incessant clamour over its rocky bed from the mountains far above, we very often see the Dipper, a bird slightly smaller than a Thrush, his snow-white throat and breast contrasting richly with the brown of his other plumage. At first sight he puts you in mind of the Wren, and the incessant activity and peculiar crouching attitude bear out the analogy between that active little creature and this bird of the wild. He is, indeed, a strange bird, and well worthy of your attention ;

quite as much at home in the water as the Divers themselves, and as active on the land as any of the Thrushes : but more of this anon. Then, too, throughout the keenest weather he quits not the waters of the roaring stream, and is as active amongst the icicle-draped rocks as when the summer sun was scorching them with its meridian rays. The Plovers quit their upland haunts, now frozen hard as iron, and the Ring Ousel has long ago retired to more genial climes ; but still the Dipper lingers, and experiences no inconvenience by doing so. The very fact of the stream being ever in troubled motion is the cause of his perpetual residence on its banks ; for the frost never binds its waters in its tight embrace, and they being always open, his food is always there, and he has no cause to wander. He is a bird full of activity, flying in a shooting course before us ; now alighting on the grassy banks, and then on the rocky boulders, round which the foam-crested waters dash and boil in seemingly exhausted rage. He sometimes is flushed with difficulty, and then flies so slowly as to appear wounded ; but should you be tempted by his seeming helplessness to pursue him, he takes good care to evade you, advancing in short flights, it is true ; but, ever wary, he takes wing the moment you think you have him secure, and departs still further up the stream, appearing to exult in your mortification. The Dipper is a solitary bird, and, save in the breeding season, is rarely found even in the company of its own species. Each bird seems to haunt a certain part of the stream, to which it strictly keeps, and is seldom or never seen to associate with other birds. The Dipper seldom strays far from the waters, for they afford him all he requires, nor does he frequent the trees and shrubs. The waters and their banks supply him with

abundant food, and the rocks around furnish nesting-sites in abundance.

The song of the Dipper is first heard early in April, sometimes, but rarely, in March, and a short and pleasing performance it is, fully harmonising with the wild grandeur of the scene around. He warbles his lay from the banks of the stream, or not unfrequently when crouching low on the rocks in the midst of its roaring waters. There, with the milk-white foam dancing on the crests of the waves, and the spray falling like mist around him, he chants his love song. When in such a situation we cannot hear his whole performance, for the noise of the stream prevents it; but in the lulls of the strife we catch parts of his melody, sounding low and sweet, as though the Naiads of the fall were singing its praises in mellow cadence.

It might be thought that the Dipper lives in company with his mate for life, but such is not the case; and when the young are independent of their parents' aid, the old birds separate for ever. The nest of the Dipper is usually found amongst the rocks, never in a tree or bush, although occasionally amongst their gnarled and moss-grown roots. The nest is not unfrequently found within a few inches of the water, and occasionally in the rocks over which the water rushes in mad career, passing directly before the nest, and keeping it in an incessant state of moisture by the spray continually beating against it. The nest of the Dipper in point of outward beauty yields the palm to few, if any, of our British nests. True, the Chaffinch and the Long-tailed Titmouse may build a nest the paragon of beauty, but the materials used die and wither; but with the Dipper the case is far different, as will be seen by what follows. The site chosen, the materials have not far to be sought.

The moss which grows in wild profusion all around is selected, and the outside of the nest, at least, is composed entirely of this soft and beautiful material. In form it is precisely like the nest of the Wren, spherical, with a hole in the side to admit the birds. The inside of the nest is lined with dry grass, moss, and withered leaves, but very rarely feathers. Mimicry is the protective art employed by the Dipper in shielding her nest from danger, and most effectually are her wiles displayed. The moss with which her nest is made never dies—the humidity of the nesting-site prevents this—and her home is literally nothing more than a cave whose walls are full of life and verdant beauty. Keen and perceiving must be the eyes of him who can, at a casual glance, discern the home of the Dipper when placed amongst the moss-grown rocks, for it presents an appearance unvarying from the emerald hues of the surroundings. The eggs of the Dipper are four or five in number, and entirely different from the eggs of any other British *Thrush*. They are pure white and spotless, and about the size of a Song-thrush's egg. The shell, however, does not possess any gloss, as is the case with the eggs of the Kingfisher and Woodpecker, and is somewhat rough in texture. The old birds display great caution in returning to and quitting the nest, and should you discover it, they manifest little or no outward signs of anxiety for the safety of their treasure.

It is with the utmost caution you must approach the Dipper if you are desirous of watching his actions, for a shy and wary bird is he. However, ample means of concealment are at hand, and by hiding behind one of the rocky boulders, and keeping quiet and motionless, you may observe him as long as his restless nature allows him to remain in your company. You may hap

see him at first perched on a stone projecting out of the water a few inches, or it may be standing in the water itself. Warily he looks around, now crouching low, as if fearful of discovery ; now erect, as if on the point of taking wing. Now he fearlessly enters the water, and aided by his wings floats buoyantly to land, where you see him running and hopping about, picking up the small animal substances found amongst the marshy shores of the stream. Then he will sit for a few moments on the bank, motionless as a statue, and you cannot help admiring the purity of his plumage, white as the driven snow. Suddenly, and doubtless to your surprise, if you are unacquainted with his habits, he takes to the water and disappears under the surface. Is he in distress? mayhap drowning? Neither one nor the other. Aided by his wings and feet you see him explore the sand and mossgrown pebbles at the bottom of the pool, and turning the little stones with his bill, for the various water insects which constitute his food ; perhaps going a yard or more, and then rising to the surface for breath ; then down again for another short distance, then rising as before. He will proceed thus for a certain length of the water, then return—sometimes swimming aided by his wings, and sometimes darting under the surface, occasionally pausing to rest for a moment on the rocks projecting from the water—to the point of his departure, when he will again visit the bank and course up and down or sit motionless. Well may the bird fill the beholder with wonderment at its aquatic motions ; for if a Grebe or a Diver were gambolling in the water before him he could not expect a more able performance. You find, as a rule, the Dipper explores those parts of the stream for food where the water is less troubled ; yet he will not unfrequently dash boldly into the boiling stream

just below the falls, and course about for very sport and joyfulness. The sandy islets in the stream and places where drift-wood and other matters congregate are favourite places ; so too below the weirs and about the water-wheels he is also seen. When alarmed, the Dipper instantly takes wing. I have never yet known a Dipper take to the water when threatened by danger, nor do I consider that such is the case unless the bird be injured. His flight puts you in mind of the Kingfisher, rapid and straightforward ; sometimes he flies just above the surface of the water, sometimes a few feet above it, and invariably following the course of the stream. He often utters a low and complaining chirp when taking wing, and he will also call when sitting on the rocks and banks. Summer and winter alike he explores the waters, and at all times draws his largest sustenance from the bed of the stream. The Kingfisher's plunge is but a momentary immersion, but with the Dipper it is far different. He will not unfrequently remain in the water for a quarter of an hour or more without once quitting it. The food of the Dipper is composed of the various forms of insect life inhabiting the waters, and their larvæ. Young fish he will also devour, and worms and grubs found on the banks of the stream.

A word as to this singular bird's place in our classification. Were you to examine the Dipper you would find his plumage similar to the plumage of water birds in general, yet his feet are not webbed, and do not resemble the feet of water birds, nor does his beak and general appearance proclaim him as one whose haunt is the waters. Notwithstanding, the bird, however, has, I think, far more claim to be ranked amongst the water birds than those frequenting the land ; he is, in fact, what

we might call midway between them, and instead of distinguishing him by the somewhat vague name of 'Dipper,' some more fitting title should be bestowed upon him, and a place assigned to him in our classification more in harmony with his ways of life.



THE HEDGE ACCENTOR.

THE Hedge Sparrow, or Hedge Accentor, for he is not a Sparrow at all, though certainly he bears a distant resemblance to one, is another little soft-billed chorister who permanently resides in Britain. He shares the hedgerows with the Robin, and frequents the tangled brakes and thickets with the Wren. We see him hopping amongst the heaps of wood in the farmyard, uttering his low and plaintive call notes, and amongst the evergreens in the shubbery he is often seen, especially at nightfall. A quiet and unobtrusive little creature he is, and his low and plaintive music, resembling the song of the Wren, only nothing near so loud, is heard at all times of the year, provided he can obtain sufficient shelter from the elements.

The Hedge Accentor appears to love retirement, even

more so than the Wren, and his only aim when disturbed is to seek safety in seclusion. He but rarely takes to flight when alarmed, preferring to creep and hop with amazing rapidity up the hedgerows, silently as a shadow. If you see him amongst a heap of hedge clippings or old timber, your glimpse of him is but brief, and he takes shelter in the thickest parts of the cover, where his sober plumage is in harmony with the dusky shadows of his retreat. Again, you seldom, very seldom, see the birds otherwise than solitary, save in the pairing and breeding seasons. The Hedge Accentor's claim as a perennial songster is but a slight one. If the situation of his haunt is bare and exposed he is seldom heard to sing in the inclement season of the year. It is only amongst the evergreens that his melody, as a rule, is heard in the winter months, and even there it is by no means so freely uttered or so often heard as the tuneful warblings of the Robin and Wren. The song of the Hedge Accentor is a plaintive one, and something similar to that of the Wren, only not so loud and not of such long duration. Its low and plaintive character probably saves it from being classed as monotonous, for without those characteristics it would indeed be but a poor performance. It is when singing that we have a good opportunity of observing this unobtrusive little creature; for when so engaged he will often mount the topmost branches of the trees or hedgerows, and gladden the air around with his short and plaintive song. The Hedge Accentor sings in those districts where he is well sheltered from the beginning of October right away through the winter. Then the genial spring calls them all into song, and they sing incessantly until the middle of July, when their notes are lost in the autumnal moult. The call notes are low and

complaining, and uttered most frequently at eventide or early in the morning.

We are apt to think that the pairing of annual birds takes place just prior to nesting duties, yet this in some cases, at least, is not correct. From what I have observed of the habits of the Hedge Accentor I am led to believe that it pairs about, or soon after, the winter solstice. About that period I see the Hedge Accentors congregate in little parties of perhaps five and six individuals—a circumstance, by the way, never observed in this species save at mating time. The birds are also unusually clamorous, and at times pugnacious, chasing each other through the leafless hedgerows with every sign of anger. These motions are but of short duration, and then I see the Hedge Accentors invariably in pairs right up to the nesting season in April. This is only one instance, yet I feel convinced that when the matter is more generally studied, fresh instances occurring in other species will be brought to view.

It is just as the hawthorn hedges begin to assume their first signs of verdure, by the myriads of opening buds clothing them in a tinge of the brightest green, that the Hedge Accentor commences her unassuming little home. In the hedgerows, or amongst brambles covered with tall grasses, frequently in a heap of hedge clippings, or in the branches of the evergreen, we find the first nests in course of completion. The Hedge Accentor's nest, like the bird, has nothing particularly striking in its appearance, yet withal it is a handsome little structure—beautiful in its simplicity—composed in the first place of the greenest moss and twigs, with mayhap a few bents and fine straws, cemented with cobwebs, and the inner part lined with a thick and warm lining of hair, feathers, and wool. The eggs of the

Hedge Accentor are almost unique in beauty too, their clear and spotless blue defying the painter's every art to produce, and contrasting richly with the sober colours of the nest. They are from four to six in number, and vary little in size. The Hedge Accentor is another of those birds who continue laying if you remove the eggs from time to time, even depositing them on what little materials chance to remain after removing the nest. This bird will rear as many as three broods in the year. I have found their unfinished nests late in July, and seen the eggs in April. The Hedge Accentor will hatch the eggs of other birds and tend the young with as much care and attention as her own. It is the nest of the Hedge Accentor that the Cuckoo so frequently uses as the receptacle for her egg, and the old Hedge Accentors prove careful and attentive parents. Mimicry in part forms the protective power of the Hedge Accentor; the sitting bird will also display a silent protective power, and remain brooding over the eggs or callow young until absolutely compelled to quit them.

There is not a more harmless bird tenants the woods and fields than this active little creature, yet I fear its harmlessness is not its shield. Its food in summer time is almost exclusively composed of small worms and insects and their larvæ, and in the autumn months it will eat various small seeds. In the winter time, when insect life is scarce, and the worms deep in the hard frozen ground, the Hedge Accentor, in company with the Sparrows, frequents the farmyards and manure heaps, and obtains the greater part of its food on the ground. They will also approach our doorsteps in company with the Robin, and subsist upon our bounty, picking up the crumbs, and rewarding us with their active motions and short and pleasing song.

The Hedge Accentor's permanent sojourn in Britain is another of the as yet unsolved problems in ornithology. How can we explain the fact that, of all the army of insect-feeding birds that quit our shores as the sun proceeds on his journey to the southern tropic, this little insect-feeding bird remains, and braves the northern blasts with impunity, and varies his diet accordingly. We see him as active amongst the leafless twigs or withered leaves as when those twigs were clothed in verdure, and when those same leaves were full of life and vigour. We see him scatter the snow from the sprays of the evergreen when he seeks repose at nightfall among its verdant branches, and appear as strong and healthy as in the height of summer, but we cannot explain it. The secret is still in Nature's keeping, and all our attempts to elucidate it, our theories and conjectures, are at present all in vain.



THE ROBIN.

OF all birds which enjoy any protection from man, perhaps the Robin is most prominent. His bright colours and sprightly actions, together with the sundry nursery tales in which he is favourably mentioned, conduce greatly to place him in more security than his congeners. Unlike most other soft-billed birds, the Robin remains with us throughout the year: he lends a charm to the wintry landscape, and in summer graces the smiling face of nature with his presence. He is also one of our few perennial musicians, his song being heard the year throughout. We find the Robin close to our habitations; in the most secluded haunts of the deepest woods, far from the busy hum of men; in the farmyard, the field, and garden, the plantation and shubbery, the country lane and shaded dell, and by the side of the murmuring rivulet. In all these situations

his habits may be observed at all seasons : he is not shy, and his sharp notes will be heard soon after you enter his haunt. If we tarry long in one situation, be it the wood, coppice, field, or garden, the Robin is almost sure to visit us, and, provided we remain quiet, and it is not the moulting season, approach closely and pour out his rich and plaintive song.

There is not a songster in Great Britain, no, not even the sweet Nightingale himself, that possesses a song so rich and plaintive as this little red-breasted chorister. So plaintive are some of his notes, that they border on sadness, and never fail to fill the lover of animated nature with ecstasy, as they pour, O so sweet, from his little throat. His song cannot fail to awaken a thrill of pleasure even in the casual observer—cannot fail to convince him of the trustful familiarity displayed in his various motions. He will approach you closely, and pour out his sweet song within a few feet of your head, or perched up in the spreading branches of the stately oak under which you are standing, his flaming breast contrasting beautifully with the sober tints of the rugged bark, and his bright eyes looking trustfully at you, he will greet you with his melody. The Robin daily visits the same perching-place to sing his evening song, and strictly guards it from any intrusion. Here every evening in the cheerless month of November a Robin comes and sits upon the topmost branches of a mulberry tree and gives forth his even-song ; while another comes nightly to perch on a stick projecting from a haystack ; and a third chooses as his perching-place a heap of timber in a farmyard. Very often two Robins may be heard singing in concert. First one will pour forth his loudest and clearest tones, his little throat swelling with the exertion ; then the other stationed near at hand will

strive if possible to excel its opponent in the superiority of its song. I have heard these birds when so engaged in these contests commence in such high notes, that to complete the full song was impossible. And thus the concert proceeds, until one of the actors will eventually sing its opponent out of the contest, when it will utter a few notes, as if of challenge, and, if not answered, drop silently down into the underwood. The Robin is one of the first birds to greet the coming dawn with his notes, and also one of the last, if not *the* last, to retire in the evening. It is at these times the Robin is most lively, and his notes are often heard when their author cannot be seen amongst the falling shadows of night.

In the moulting season the Robin is but seen occasionally, and never heard to sing; the young birds are the most frequently seen, and it is their sharp call notes we most frequently hear. Our other songsters, with few exceptions, lose their song in the autumnal moult: not so the Robin; for after this important season is passed, which takes place in July, the Robin regains his notes, to continue them throughout the winter. First we hear them singing in very small numbers, but as August passes away these numbers increase, and when September arrives they are in full song once more; and perhaps there is nothing more beautiful in all animated nature at this season of the year than the evening song of this pretty warbler when given forth in the dusk of a September evening. The autumnal fog is creeping up the valley; the Bat, with squeaking notes, darts round the tall elm trees, taking the place of the day-flying Swallow; the Starling has repaired to his roosting-place, the Thrush and Blackbird are at rest; the solemn stillness of the woods is perhaps broken by the drowsy hum of a nocturnal beetle or the lowing of the cattle in a neighbour-

ing meadow. Among all this stillness the Robin pours forth his evening notes, which sound peaceful and plaintive in the extreme. He will keep up his song until darkness has fairly set in, and unerring instinct leads him to his roosting-place, when his voice, which has hitherto helped to swell the concert of Robin-music, will cease, and all the voices of the birds of day are silent, and their authors lulled in tranquil repose.

The call notes of the Robin are sharp and clear, and sometimes startle us with their nearness; for on looking round we often find the author of them daintily perched on some post, or in the shrub near which we are standing. If you observe him closely, he will almost invariably be found to accompany those call notes with a peculiar jerking motion of the head and tail. The call note in the breeding season is a plaintive piping one, monotonously given forth every few moments.

Robins are not of a wandering disposition, and remain in their respective haunts until perhaps driven forth by hunger, 'necessity's supreme command.' I have known this bird remain in one certain locality for many months, and never saw him more than fifty yards away from his favourite haunt in the secluded and marshy corner of a plantation. I identified the bird by a greyish white ring of feathers round the neck, and could always observe him when strolling through his haunt. In the breeding season he reared a brood in safety; but after the autumnal moult he lost this peculiar mark, and is now in appearance like his congeners, but no doubt there he will remain, if left unmolested, for years yet to come.

Robins do not pair for life, and early in March the birds seek out mates. Combats often occur between

rival males at this season ; indeed, at all times the Robin is more or less a pugnacious bird. Upon one occasion I was strolling through a dense shrubbery, under the gloomy yew trees, when I heard a flutter amongst the withered leaves on the banks of a tiny rivulet flowing down a ravine. Closer inspection revealed a bird struggling in the water, and I went down the bank to find out the cause of this strange proceeding, and found a Robin tangled, as it appeared, in the herbage growing on the water's edge. I took hold of the bird, with the intention of releasing it from its captivity, and was about to lift it up, when, judge of my surprise, I pulled out from under the bank a second Robin, that had evidently, when conquered, tried to seek safety by squeezing under the bank, also in the water too. Both birds, like two warriors bold, were locked in deadly embrace, the one first seen being entangled in the breast feathers of its antagonist by its claws ; their plumage, too, was all wet and ragged, and they had lost many feathers. After keeping them for a short time I restored them to liberty : the victorious one, I should say, flew quickly off, while its terribly exhausted antagonist just managed to gain a thick bush and was soon lost to view.

The site of the Robin's nest is varied. Old walls, amongst the tangled roots of trees, under banks, and on their verdant sides, also amongst ivy, are all suitable places to look for his abode. Robins will often choose very singular sites for their nests. An old watering-can, dilapidated and rust-eaten, once lay in a sunk fence, several inches deep in withered leaves. In the interior of this can a pair of Robins made their abode, and the female bird laid two eggs, which, unfortunately, were taken, and all the hopes of the little choristers

destroyed. The Robins, if their nest be on the ground, first scratch a hole as a foundation for future operations ; then of moss, dry grass, and withered leaves, they form a well-made nest, and line it with a large quantity of horse or cow-hair, and but rarely indeed with any feathers. Dead leaves are always found in the materials of the Robin's nest, and the front of the nest is invariably one mass of these remnants of autumn's mellow days : oak leaves, as a rule, are the ones selected. Mimicry is the Robin's general form of protective instinct as regards the safety of its eggs and young, and he who finds the Robin's nest, unassuming and simple, yet beautiful in the extreme, will admire the protective arts of the little builders, and, if he has not discovered it by accident, regard with pleasure the effectiveness of their designs. The eggs of the Robin are four, five, six, and even eight in number, and, as a rule, all prove fertile. They vary considerably in colouring matter even in the same nest. The most common variety is dirty-white in ground colour, freckled, and spotted with pale reddish-brown and gray markings, so closely as to almost conceal the ground colour of the egg. Other specimens are more sparsely coloured ; others of a purer ground colour, with a zone of spots round the larger end ; while yet again specimens are sometimes found pure white, and entirely devoid of markings. The Robin is a close sitter, and, provided you exercise a little caution, you may often have the pleasure of gently stroking the sitting bird, without any alarm for the little creature forsaking its charge.

The Robin abandons its young very soon after they leave the nest, and we often see the little things fluttering about from bush to bush, but not able to fly for any considerable distance. Helpless indeed they are, though

not wanting in means for self-preservation, as will be seen by what follows. I on one occasion flushed a young Robin scarcely able to fly. The bird fluttered through some dense herbage, and nestled closely under the roots of a hazel bush. Wishing to test its protective powers to the utmost, I first dislodged the herbage, and then commenced a diligent search, finding the little 'robinet' lying closely in a little cranny, its bright eye looking anxiously around. It made no effort to escape, and suffered me to take it in my hand, and examine it minutely. I returned it to its native bushes, and pondered deeply over the instinct for self-preservation existing in this little songster, in common with many other birds, notwithstanding their infancy, and which, as far as I can determine, is never known to occur in mature birds, unless when sickly or wounded. Thus it would seem that this form of protective power is only put in force when the bird is in a weak or helpless condition. Young Robins in the colouring of their plumage differ greatly from their parents. But in their sprightly actions they still show, despite their dingy garb, that they *are* Robins, and in their call notes they seem to tell us that in a few short months they will don the chaste and beautiful garb of their parents.

The Robin lives on insects and worms, and in the winter months, if the weather be severe, numbers of these charming songsters perish from cold and hunger. He visits man's habitation, too, and regales himself on the crumbs scattered by the thoughtful person for the poor birds in the cold and dreary winter time. He is a regular little tyrant, and but few birds venture near until he is satisfied. I know of few things more beautiful, when the snow enshrouds everything in a wreath of dazzling whiteness, than a Robin perched on a snow-

clad rail, or far up in the frosted branches, pouring forth his lovely song. As he sits, his feathers all ruffled, his bright red breast and large and trustful eyes contrasting richly with the surroundings, he is, indeed, really a beautiful object ; and no wonder that he elicits admiration from all, even from the wandering gunner or birds'-nesting schoolboy, for the one will not point his gun knowingly at a Robin, or the other think of plundering his nest.

THE REDSTART.

FLITTING uneasily before us, as we wander down the lanes or through the birch coppices, we often see a gaily dressed little bird, occasionally uttering a wild and pleasing song. As he flies, his rich black and white plumage glistens in the light, and his chestnut tail appears as a dull streak of fire. Ah, then, the secret's out: this gay little bird is the 'Firetail,' or, more learnedly speaking, the Redstart, met with so commonly in summer time in every lane, wood, and coppice.

He arrives here by the second week in April, the females a few days later, and that is the time to hear him sing his best; for the song with which he invites a mate is perhaps more rich and full of energy than his summer melody. The song puts you in mind of the Wren's loud and varied notes, yet it wants their vigour and sprightliness, and is somewhat monotonous. We often see him just after his arrival perched right up the oak's tallest branches, and as he sits and warbles his oft repeated strains, he appears so rich and gorgeous in his nuptial garb, as it shines and glistens in the bright April sunlight, that he seems to have borrowed a few of the glorious plumes of some feathered gem of the tropics, whilst spending his winter amongst them.

Those places most favoured with the Redstart's presence are woods abounding with old and decayed timber—the birch woods are a favourite place—or in the

neighbourhood of old walls, on which he is constantly alighting, to jerk his tail with regular beats, and view you with alarm as you wander on.

May is the Redstart's nesting season. We must not seek his nest amongst the branches, nor yet amidst the brambles or vegetation on the ground, but always in some hole well protected from the external air: holes in walls and trees are as a rule selected. The Woodpecker, if the selected nesting-hole is not quite suitable, alters it accordingly; or, if holes be scarce, oftentimes making one herself with her strong beak, but the Redstart does no such thing. The graceful birch tree or mountain ash very often affords a nesting-hole; while in the old walls nesting-sites occur in abundance, sometimes but a few inches in depth at others several feet: it matters little. The nest itself is a very slovenly piece of workmanship, so loosely made in most cases, as to make it impossible to remove it entire, yet it serves the purpose intended most admirably. It is made of dry grass, moss, sometimes a little wool, and lined with hair and feathers. The eggs are often six in number, though four or five are most frequently found, and about the size of the Hedge Accentor's, and, like them, blue and spotless; but they are not so deeply coloured, and much more polished, and the shell, too, is more fragile than the eggs of that bird. You may remove the eggs of the Redstart, and yet she will continue laying, and seldom forsake the nest. The same remarks will apply to the Starling; but this is not the case with most birds, for if their eggs are taken, even only a part in some cases, the mother bird is sure to forsake the nest and remaining eggs.

All birds display not that deep feeling and anxiety for their eggs as for their young, and I am satisfied in my own mind that the loss of the eggs causes not half so

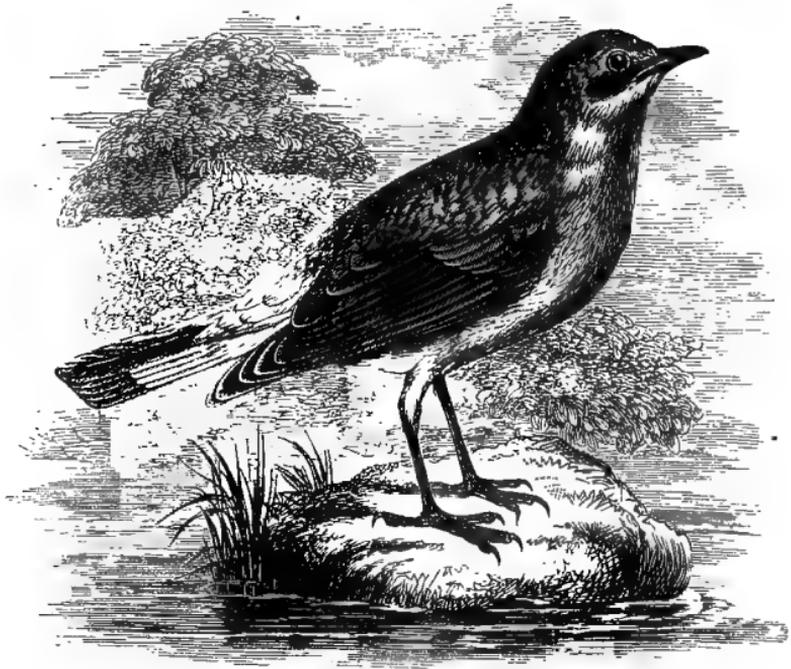
much grief to the parent birds as if their young were taken from them. If you approach the nest of the Redstart when it contains their young, the birds become very anxious for their welfare, coursing within a few feet of your head, uttering their mournful call notes, which resemble those of the little Willow Warbler, and exhibit in various ways the keenest anguish. As usual, the female bird, with the intensity of a mother's love, approaches the nearest, and with hissing cries endeavours to shield her offspring. But should you examine her nest when the eggs are newly laid, she will silently leave it, and though you take out the eggs in your hand, and remain an indefinite time, she approaches you not, nor displays the least sign of affection for them.

The young are fed entirely on insects, and I have reason to believe that but one brood is reared in the year, although if the first set of eggs is removed a fresh set will be laid. One or two of the eggs sometimes prove addled. If this were the case in the nest of a bird built in the open air, the egg would most probably be ejected ; but as the Redstart rears its young in holes, the addled eggs are suffered to remain in the nest, and thrown out the next season, should the little owners return to their abode again.

The young male Redstarts do not resemble their brightly clothed sire in the slightest until after the moulting season, and probably even then their garb is not perfection until the following breeding season. All birds when moulting seek retirement, as if aware of their helpless condition. The Redstart moults in July and August, and during that period we seldom see them, not in the places they most frequent, until a short time before their departure, which takes place very early in September.

It appears to be an overlooked fact that many if not all the male warblers leave sometimes a week or more before the females, and return in the same manner ; yet how to account for this strange habit I am at a total loss. It is only another among the many mysterious actions of the feathered tribe - mysterious because we cannot understand them - which will, I fear, only be solved when the birds of the earth regain the powers of speech which in Ovid's time they were said to possess.

The fluttering motions when in search of food which more particularly mark the Flycatcher, are, however, common to many if not all insect-feeding birds. Thus we see the Redstart occasionally in the air catching insects, by the way its chief food, or fluttering before the trunks of trees or old walls, to secure the vast quantities of insects lurking there.



WHEATEAR.

THE STONECHAT AND WHEATEAR.

ON the wild and trackless moors, where the solitudes are but rarely broken save by the harsh cries of the Plover, Grouse, and Curlew, we find a little bird, in a garb the gayest of the gay, flitting from bush to bush, uttering his monotonous note of *wee chic, wee chic, chic, chic, chic*, while his mate in her more sober plumage sits apparently motionless on a tuft of heather hard by; but if we more closely observe her we find that she is jerking her tail incessantly, and occasionally looking warily around, for these little birds of the moor but seldom see

the face of man, and therefore regard his advances with suspicion.

And every beast before him ran,
To shun the hateful sight of man.

So attached are the little creatures to their particular haunt, that we can scarcely drive them away from it. Wary and watchful, it is true, and only allowing us to approach within a certain distance, yet backwards and forwards they fly, passing and re-passing from one stunted bush to another, perching on the topmost sprays, or diving into their arboreal shades, and, no matter how we harass them, seldom if ever quitting the stretch of moor which is their haunt and nesting-ground combined.

Many persons would probably feel an unavoidable sense of loneliness creep over them when alone in Nature's wilds, but with me it is the reverse, especially when the feathered company I love is flitting from spray to spray around me. Thus, if I wander over the seemingly interminable moor, though a feeling of nothingness captivate me as I gaze upon Nature in her sublime grandeur around, still, when the Red Grouse on whirring wing pursues her skimming flight afar, or the gaily dressed little Stonechat, the bird now before our notice, flits from bush to bush before me as I wander on, I feel as light-hearted as the birds themselves. Mayhap I stroll into the woods when winter holds them in his tight embrace, when the evergreens are bowed down with a snowy covering, and icicles hang pendent from the naked branches; still no lonely feeling, for at least Cock Robin will come and greet me with a song, or a company of ever active Titmice engage my attention as they wander over the leafless trees and shrubs. If in autumn, that season of all others best adapted to make a thoughtful person feel sad and lonely, as the winds sigh mourn-

fully through the semi-denuded branches, bringing the leaves down in showers, and speaking of death and decay, still the Wren creeps through the brambles, whose leaves are now painted with bewitching colours, souvenirs of the waning year. Then, too, the Stormcock sings his loudest, and the rapidly flying Swallows in one large company claim my notice; and I can find abundant food for thought by pondering over the unerring instinct which leads these birds to leave our cold and dreary shores long before the northern blasts arrive. No; he who is fond of animated nature will never feel lonely when in Nature's grand domains, for she has lavished her priceless gifts with such unsparing hands, that on every side abundant objects, infinite in variety and purpose, claim our attention, and as it were irresistibly woo us from the society and company of our kindred.

There is a pleasure in the pathless woods;
There is a rapture on the lonely shore;
There is society, where none intrudes,
By the deep sea, and music in its roar.

But to return to our little Stonechat flitting hither and thither on the heathery moor. You only find the Stonechat on the moors, or in the large furze coverts on their outskirts. He is not what you may call common anywhere, but he can never be overlooked by the observer, for his colouring is so rich and varied, and contrasts richly with the purple heather's bell-like flowers or the golden blooms of the gorse. Then, too, he makes himself as conspicuous as possible, by sitting on the topmost sprays of the surrounding bushes. He is also constantly in motion the instant an intruder appears, and is, by his unceasing activity and monotonous notes, one of the first birds noticed when we set foot on the springing heather

Stonechats pair very early in the season ; indeed it is not improbable but what they remain in pairs the year throughout, as we see them in pairs at all times of the year far more often than alone. Their nest—found by the way with the greatest difficulty, especially when situated in the centre of a large patch of gorse ; discovery, except by the merest accident, is then almost impossible—is snugly and cleverly concealed at the foot of some furze or other bush. It is built of dried grasses and moss, and lined with a quantity of horse-hair and feathers. The eggs, four or five in number, are pale blue, with a few purplish-red markings, chiefly on the larger end, although some specimens are quite plain. Deceptive motions form the little Stonechat's protective power which she displays for the safety and concealment of her treasured eggs or young ; and, once disturbed, she will tire any except the most patient observer by her deceiving motions—flitting from bush to bush, occasionally alighting in them, as though about to visit her nest, which, however, is probably some fifty yards away. If her nest be suddenly approached, silence, another protective design, will be manifested. The watchful mother, still and silent as a statue, views your approach and moves not ; but, once the danger gone, we find both her and her seldom absent mate flitting from spray to spray, giving forth their monotonous notes of *wee-chic, chic-chic*. Stonechats are not gregarious, still we very often find several pairs living close together.

The Stonechat lives on insects and their larvæ : you also see them hunting amongst manure for small worms and beetles, and they obtain part of their food by hovering in the air like the Flycatcher. The song of the male bird is a short and wandering performance, yet fully in harmony with the surrounding landscape.

The Stonechat is another bird whose non-migratory habits we are apt to view with surprise, because the cause of them is as yet unknown to us. Now the Stonechat, as far as we are aware, differs in none of its requirements from its congeners the Wheatear and Whinchat, yet the two last mentioned species leave our country annually every autumn, to spend their winter in the south. Yet the little Stonechat remains and braves all the rigours of a northern winter. I see them on the moors when the snow is lying deep, or skipping about in the furze coverts in December, quite as nimbly as at the summer solstice. Truly indeed have we much to learn in the habits of birds, and particularly so with regard to their migrations, and the cause of them.

Still keeping to the moorland, the observer will often see perched on the rugged walls a sprightly bird about the size of a lark, when in motion the white parts of its plumage showing out very plainly : this is the Wheatear, known also as the Fallow Chat. Besides inhabiting the moors, we also see him on the wild upland fallows near them : commons and stone quarries, too, if in wild districts, are also frequented by him, as also are the open lands near the sea coast. As I have previously stated, the Wheatear is a migratory species. He arrives here the third week in April, and soon after is seen in pairs.

Birds of the Chat tribe are for the most part terrestrial in their habits, but this is not because the birds are incapable of perching. The Wheatear, or Chats in general, can perch just as well as the agile Titmouse, and this is borne out in the little Whinchat, a bird more often seen, and whose habits can be far more readily studied, than the above two birds of the wilderness. The real matter of fact is this : if trees were as plentiful in their wild haunts as in the haunts of the Whinchat, we should see

them repair to their branches every bit as frequently as the Whinchat himself. But on the bare moorland, or on the bleak and open common, vegetation is of a more stunted growth. Thus we see the Wheatear perching on rocky boulders, or old walls, or on the ground, simply because other perching-places are absent, and not because the foot of the bird requires a broad surface to obtain a secure hold.

When walking through the haunts of the Wheatear we see the birds perched on the walls or rocks around us slowly jerking their tails, but as we approach them they flit before us, always keeping some distance away, and all the time uttering a low and plaintive note, resembling, though faintly, the call note of the Stonechat. In the fallow fields they will follow the plough, and feed on the grubs and insects, like the Wagtail. Their food, in addition to worms and grubs, is largely composed of insects and beetles, and we often see the birds sitting motionless, and then with a quick fluttering movement sally into the air for the purpose of securing the insects flying round them, hovering in the air just as buoyantly as our little friend the Flycatcher.

May is the Wheatear's nesting season, and, like the Chats in general, its nest is extremely difficult to find. We may stumble upon it by accident as it lies cleverly concealed under a friendly rock, but may search for hours with fruitless results, although we know for certain it is not far away. In an old wall, under a large stone, or in the crevices of the surrounding rocks, are excellent places to search for it. When discovered, it will be found to be a very simple structure, made of dry grass, and lined with a little hair. The eggs are four or five in number, sometimes only three, somewhat elongated in form, and, like the Redstart's, pale blue, and spotless. The

young Wheatears are tended by their parents for some considerable time after leaving the nest, and when an intruder happens to disturb them the anxiety of their parents is touching in the extreme. The young birds, not so strong upon the wing as their parents, keep alighting close to the observer, and the old birds fly at a considerable height in the air in circles round his head, uttering a short plaintive note, speaking of love and anxiety for their tender brood. When the young are in safety the old birds still follow the observer for some considerable distance.

When the heather's purple flowers are withering and the bracken has partially donned its autumnal hue, the Wheatears are seen in small flocks, and as the month of September draws near its close they congregate in still larger numbers, and finally wing their way southwards; and though they may tarry for an indefinite period on the downs, or other parts of the south coast, still, up here in Yorkshire, their moorland home knows them not until the following spring.



THE WHINCHAT.

As we wander over the fields when smiling in their early summer garb, we oftentimes see a little bird, dressed out in gay attire, flitting from spray to spray, and occasionally alighting on the tallest stems of herbage, all the time uttering a monotonous note of *u-tac, u-tac, u-tac-tac-tac*. It is the little Whinchat, cousin to the little bird dressed out in still gayer plumage, and whose home is on the barren moor, the sprightly Stonechat to wit. But though the Whinchat occurs abundantly in almost every grass field, still he is found on the wastes of heather on the outskirts of the moorland, or in the large coverts of gorse or whin he finds a home. Perhaps from his frequenting the whin covers he has obtained his name of 'Whin' chat, a name, by the way, very applicable.

The Whinchat is a somewhat shy and wary little creature, always endeavouring to keep a certain distance away from the observer. They inhabit hedgerows and

the tall stems of herbage, but are often seen far up the branches of the highest trees. In the pastoral districts upon their arrival they frequent, for the most part, the fallow land, where turnips are being sown, and it is very amusing to see them catch the insects abounding on those situations, after the manner of the Wagtail. He will sometimes be observed sitting apparently motionless on a clod of earth, but if looked at closely, the tail is seen wafting up and down with graceful motion. Suddenly his quick eye detects an insect a few feet away, and with a rapid, half flying half hopping motion, he darts forward and secures it, and then again returns to his original position, where he remains still and motionless as before. In many fields we see trees whose branches almost sweep the ground, and upon these lowly branches the Whinchat delights to rest and bask in the sun. Occasionally we see him sally into the air and catch the passing insects, like the Flycatcher: the beetles which frequent the grass stems are also eaten, and obtained while the bird is on the wing.

The Whinchat utters his song both when at rest and when fluttering in the air. There is nothing remarkably striking in his performance, his song resembling that of the Redstart, and given forth in a very low tone. Perhaps the Whinchat is one of the first birds to lose its notes. With me he warbles incessantly throughout the month of May, not so frequently as June's leafy month begins to wane, and ceases altogether by the first week in July, when the young have almost reached maturity.

This little chorister is abroad very late in the evening, and when night is about to enroll us in her murky shroud we hear their familiar call notes, *u-tac, u-tac, tac-tac-tac*, sounding from the trees, hedges, and fences, and

see the author of them flitting hither and thither in the gloom. The Whinchat is certainly a terrestrial bird as far as roosting is concerned. You never find them repair to the branches at eventide for the purpose of repose, always doing so on the ground. When first they arrive, we find them roosting on the fallows, but as nesting-time approaches they repair to the grass fields for this purpose.

By the middle of May the Whinchat is seen in pairs, and a week or so after their nest is completed. If on the moorland, she finds a place to build her nest amongst the heather; if in the gorse covers, she will repair to the herbage in their midst, and make her little home under some dense and impenetrable whin bush; while if her haunt is the smiling fields, her home is built amongst the grass, sometimes in the centre of the field, or, at others, close to the hedgerows. Deceptive motions form the protective instinct of the little Whinchat, and their nest is seldom discovered by design. Even when the nest is in course of construction their vigilance is by no means relaxed. I have often noticed the actions of the male bird when bringing materials to the nest, and though I have remained quiet and motionless, he would not betray its whereabouts by visiting it. From spray to spray he hops, sometimes sitting motionless for a few moments, and then flying to some distant bush, to utter his monotonous call note; then back again, to alight in the herbage, but reappearing the next moment with the materials still in his beak. Half an hour quickly passes, but well does he know an enemy is near, and I leave the place, completely vanquished. As we stroll over the grass fields we sometimes stumble on the nest by accident. Let us examine this nest which the female bird has just quitted. We find that a little hole has been

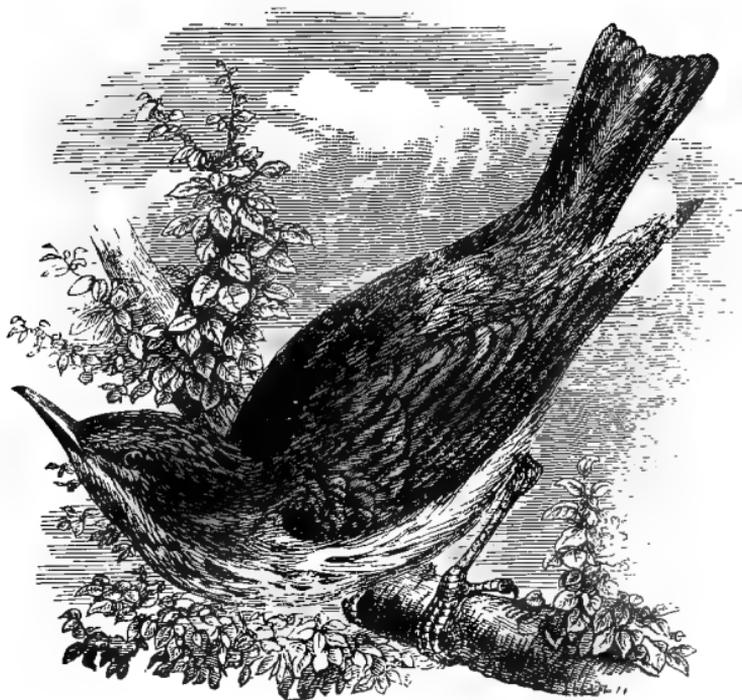
formed, in which the nest is built. The nest itself is made of dry grass, a little moss, and lined with fibrous roots and a few horsehairs ; there is nothing very imposing about it, and it is almost buried by the surrounding herbage. It contains six eggs ; many nests only contain four or five ; and at first sight you would almost be led to think that the Hedge Accentor had been there and laid the eggs on which the mother Whinchat was sitting ; but if you examine them closely, you will find they are different in form, being pointed at both ends, and then in colouring matter they differ too, by having a ring of light brown spots round the larger end, in some specimens so pale as to be scarcely seen. Among the many birds with which I have experimented in respect to placing strange eggs in the nest, the Whinchat is the only bird that expelled the foreign egg. It would be interesting to know from this whether the Cuckoo ever uses this bird's nest for her purpose.

The young are seldom able to fly before the grass is cut, and when the mowers are at work near their nests the anxiety of the parent birds is great. Birds will get used to every sound save that of the gun—it alone sends terror through their ranks. Thus the Rooks will rear their young in the midst of a crowded city ; the House Sparrow amid the deafening roar of a railway station ; or the Swallow and Martin close to the hum of human toil. The Whinchat, too, is no exception. Though the mowing-machine, with its clicking cog-wheels and deafening roar, passes within a few yards of them, they display no alarm whatever, and flit from stem to stem before it. When the grass is all cut the Whinchats become rather more shy, and flit uneasily from swathe to swathe, incessantly uttering their call notes, both when flying and when at rest. They know full well that their deceptive

arts are now of but little avail, and their young, still unable to fly, are helpless and unconcealed. When the young have gained the use of their wings, we see them in little parties attended by their parents, who feed and tend them in this manner for many weeks, as but one brood is reared in the year.

The food of the Whinchat is for the most part insects, yet the small worms and grubs on the pastures are also eaten, and though we find bristles round the base of the bill, still they aid it not in securing its insect prey.

The Whinchat moults in July and August, and after that season is over they appear in a garb nothing near so rich and beautiful as their wedding dress of the previous spring. Unlike the Stonechat, which is seen here the year throughout, the Whinchat leaves us for the winter the third week in September, but few indeed being seen after the autumnal equinox.



THE SPOTTED OR GRAY FLYCATCHER.

THE Spotted or Gray Flycatcher is found in his haunts early in the flowery month of May. 'Tis when the beech enshrouds itself in a lovely and delicate garb of green, when the sycamore is clothed with golden leaves, and the wide-spreading chestnut appears a towering mass of foliage, and the mountain ash assumes its vernal garb; when the mighty oak and drooping elm form a leafy bower in which the bird can find seclusion, that he appears in his old haunts, and from their verdant shelter we hear his low and rambling notes as he launches

himself into the circumambient air, to feed on the insects, which in fine weather soar in clouds as high or higher than the tallest trees. Though the Spotted Flycatcher is often found in woods and plantations, still he is most frequently seen on their borders, these situations abounding with his insect-food, which is not found so plentifully in their arboreal depths. Thus we often see him sitting on fences and posts, or flitting about the walls of woods and plantations, and hear his call note from the branches which droop gracefully over into the surrounding fields. He frequents the neighbourhood of man's habitation, too, living in the gardens and orchards ; and a more unobtrusive and quiet little bird it would be difficult to find.

The song of the Flycatcher is heard but rarely, and it is uttered in such a low tone as to be scarcely heard a few yards away. It is given forth both when the bird is sitting at rest or when fluttering in the air after insects. It consists of a few rambling notes, and puts you in mind of the Whinchat's song. Their call notes, too, are very similar to the call notes of the Whinchat, only the first note is not so broad, and the birds utter them when on the wing as well as when stationary. You may often hear them for a long time giving forth these call notes of *chee-tic, chee-tic, chee-tic-tic-tic*, in rapid succession, from one perching-place, and if you notice the birds closely you find that every now and then the tail is wafted to and fro with graceful motion.

The Flycatcher is, as his name implies, a deadly foe to insect life. We often see him sitting motionless on the decayed limb of a tree, or on a low stump or fence, or not unfrequently on the ivy-covered wall, looking as if he were dozing away the blazing hours of noonday. But the Flycatcher's inactivity is a treacherous calm, and

his bright and piercing eye is ever on the watch, and woe betide the unlucky insect that happens to flit unconsciously by. With a bound, the ever wary bird flutters into the air, and, circling about for a moment, we hear, if stationed near at hand, the sharp snap of his bill as it seizes the tempting morsel. Flycatchers are often seen hovering in airy flight over the meadow grass, every now and then alighting to secure the small insects and beetles lurking on the stems of herbage. They will sometimes pursue an unusually large insect for fifty yards or more, and then we see the Flycatcher's peculiar flight to perfection. This bird is not the only one who secures its food in this manner, for Chaffinches, Warblers, Pipits, Whinchats, and Wagtails are frequently seen in the air doing likewise. The Flycatcher is often seen on manure heaps, feeding on the small beetles, like the well-known Chaffinch. They are also seen searching old walls for food, by fluttering before and occasionally clinging to them. In examining the Flycatcher you will notice a few bristles round the gape, and many writers will inform you that these bristles aid the bird in securing his food. But this is an error, as there are many birds equally expert at flycatching who have not a single one.

The nest of the Flycatcher is found in various situations. You see it in a cleft of the rugged bark of some hoary elm, or placed on some convenient bough of the stately oak; on old walls, amongst ivy, in the branches of the pear tree growing up the garden wall, or even in the trelliswork beside your threshold, amongst the climbing woodbine and rose, and always supported on one side at least. Let us examine one of their nests, built in a crevice of the bark of this stately elm. The outside is composed of coarse and dry grass, a little moss,

and several pieces of twine, cotton, and worsted, artfully wove all round the structure. There are also a few feathers, and here and there portions of spiders' webs and the wings of insects. The inside is composed of a few fine rootlets and a thick lining of horsehair, and is but two inches across. The eggs, four, five, or even six in number, are of a pale greenish ground colour, blotched and spotted with various shades of reddish-brown. Some specimens are encircled with a ring of colouring matter round the large end; others have the colouring more evenly distributed; while yet, again, many are clouded all over with pale red. Many eggs of the Flycatcher closely resemble those of the Robin. Flycatchers not unfrequently commence sitting as soon as the first egg is deposited, and you often find their nests containing fresh eggs and eggs in which the embryos are considerably developed. Silence is displayed by the Flycatcher as a protective power.

The young are fed on insect food, and when fully fledged differ considerably from their parents, by being 'spotted' Flycatchers in the true sense of the word. I do not consider that any particularity in the young of any species of birds should contribute to, or influence, the naming of the adult birds. The Flycatcher when at maturity is not what you might call spotted, for you only find a few spots on the head, and one or two streaks on the breast, therefore the name of 'gray' Flycatcher is much more preferable.

When the young can leave the nest they still keep in the company of their parents, and we see them in the late summer months in little parties, perched on fences or the lower branches, flitting away as we approach, occasionally catching the insects or uttering their pleasing call notes. We find them most active early in the

morning and at nightfall. It is a pleasing sight to glance down the sunny glades in early morn, when the leaves of the trees are glowing in the light, and the countless numbers of insects flit hither and thither in the bright sunlight, and watch the Flycatchers obtain their morning meal.

The Flycatcher stays with us but a short five months for when their haunts are painted by the bewitching colours which come attendant with September, they make ready for their journey, and by the end of the month they leave us, to spend the winter in company with their migratory congeners in the northern tropic.

THE BLACKCAP AND WHITETHROATS.

OF all the little songsters that regularly visit us every season, the little Blackcap is first to arrive. He is seen amongst the evergreens, or hopping about the naked hawthorn hedges early in April, and, like the Warblers in general, he arrives some little time before his mate, and seldom or never sings before her arrival. You can tell him by his rich and varied song, or, better still, by his jet black crown : his mate, however, does not wear a 'black cap,' but on the crown of her head is a patch of reddish-brown.

The Blackcap is seen in shrubberies, woods, gardens, tangled hedgerows, and lanes in which brambles are prominent. But, wherever found, he is a shy and wary little creature, and upon the least alarm seeks the shelter of the densest vegetation. How rich and melodious is the song of the Blackcap Sylva ! His song is given forth on the topmost branches of the tallest trees, on the more lowly shrubs, and from the midst of the dank and dense vegetation where he builds his nest. His notes are varied, ay, almost as much so as the vernal notes of the Song-thrush. Of the peculiar richness of its tone no pen can adequately speak, while its loud tones, to one not familiar with this graceful little chorister, appear as though a much larger bird were uttering them. In the vernal year I have heard him sing as loud as the Thrush. If you wish to see this little warbler in the act

of singing, you must steal a march upon him by noiselessly creeping amongst the dense undergrowth, and, provided you advance with cautious step and slow, your wish will be gratified. You find he sings as he wanders over the branches in his search for insects, or remains stationary for minutes together, engaged in pouring forth his notes, his little throat quivering, his head turning from side to side, as if conscious of your presence, and his jet black plumage contrasting richly with the golden greens of the vernal vegetation around. And then how beautifully this little creature modulates his music! We hear a soft plaintive note, sounding as though its author were a hundred yards away: gradually it rises in its tone: we think the bird is coming nearer: louder and louder become the notes, till they sound as if a Blackbird, Song-thrush, Wren, Robin, and Warbler were all singing together. We happen to cast our eyes in the branches above us, and there we see this little blackcapped songster, and after watching him, we find that all these lovely notes, low and soft, loud and full, come from his little throat alone, and when at the same distance from us. The Blackcap is erroneously thought by some to be a mimic or imitator of other species. In his song I can trace notes of the Wren, Robin, Thrush, and Blackbird, but from this circumstance I must not set him down as an imitator of those species, simply because some of his notes happen to resemble theirs. The Starling is the same, and however much this bird will imitate other species when in confinement, still I am convinced that in *feræ naturæ*, his notes though resembling other species, are strictly his own.

Though the Blackcap arrives here so early, still we seldom find his nest before the latter end of May and beginning of June. We must seek it in the most

secluded parts of his haunt, on the banks of the trout stream meandering through the woods, where the brambles and briars grow in uncurbed luxuriance ; so, too, in the tangled hedgerows, and not unfrequently amongst the dense shelter of the holly's foliage. It is made of dry grass stems, leaf-stalks, a little moss, coarse roots and cobwebs, and lined with a few horsehairs. The nest, although slight, and though it can be seen through with the greatest ease, is compact and well built and beautifully rounded. Man requires a pair of compasses to form a truthful circle, but this little creature, aided by no contrivance save its bill and feet, forms a circle beautifully true in all its measurements. Most wonderful are the nests of the feathered tribe, and particularly so when minutely examined. Truly indeed are they a study in themselves, fraught with the highest interest. The Blackcap's eggs are four or five in number, sometimes only three, dull white in ground colour, speckled and blotched with greenish-brown, and sometimes streaked with deep brown. The male bird often sits upon the nest, probably as much as the female, and we find that silence is the power they most frequently put in force for the protection of their eggs or young, although the female bird will often use pugnacious motions, approaching an intruder with ruffled feathers, and uttering sharp hissing cries. When the young are hatched, the parent birds become still more anxious, and much of their habitual shyness disappears until their offspring reach maturity. After the young are reared, you seldom or never hear the male bird's song. But one brood is reared in the year, and if their first nest is destroyed a fresh one is made, but the eggs seldom exceed three.

The food of the Blackcap is not confined to insects

alone, for various berries are eaten, notably those of the ivy, and the fruit gardens, too, are visited for sustenance. It would thus seem that the Blackcap, adapting itself as it does to various forms of food, would, like the Robin or Wren, remain with us throughout the winter; but after the middle of August they gradually decrease in numbers, and I never see them later than the autumnal equinox, a period, by the way, which marks the disappearance of many of our birds of passage.

Closely resembling the Blackcap is the Whitethroat, but no black or rufous covering adorns the head of the male or female. When the hedgerows are almost enshrouded in foliage, and the thick undergrowth is gaining vigour under the beams of the vernal sun, we hear the little Whitethroat giving forth his discordant cries as he threads his way through the tangled vegetation. A bird loving retirement and the thick matted fences, still he is by no means shy, nay, almost as trustful as the little Willow Warblers themselves. We find the Whitethroat in small numbers on the lonely moors, as well as round the hedgerows, but in the latter situations he is most common. On the moors he frequents the bushes. I am of opinion that the male Whitethroats do not generally sing at the time of arrival, but after a few days, probably when the females have arrived, we hear them giving forth occasional snatches of melody; and as the month of May rolls on they utter their varied song much oftener, and in strains of greater power and richness. Early in June the Whitethroat may be said to be in full song. His song in parts is indescribably sweet, and I know of no migratory songster, the little Willow Warbler excepted, that sings so boldly and in such exposed situations. He oftentimes poises himself on the topmost spray of a bush or tree, and warbles long and loud: he is not

shy, and you can approach him closely when so engaged. The Whitethroat, like many other songsters, sings as he flies, and I often see him, when flying from hedge to hedge, soar up in the air and utter notes much freer than when at rest. He is rarely heard to sing after the third week in July.

The Whitethroat, though essentially an insect feeder, must still, however, rank as one of the fruit-eating Warblers. Upon their arrival they feed upon insects and their larvæ, on which their young are also reared ; but when the fruit is ripe we see the Whitethroats regaling themselves in the fruit gardens. Wheat is fruit to them, and when that grain is in its soft creamy stage, previous to ripening, we see the Whitethroats devouring it greedily. Insects, too, which infest corn-fields, particularly the fly known as 'daddy long legs,' are at the same time preyed upon. The Whitethroat is very often seen capturing insects like the Flycatcher, and running and creeping over trees and shrubs, like the Titmouse or Creeper.

Although the Whitethroat arrives here comparatively early in the year, still it is one of the latest birds to breed. Most, if not all, of our summer migratory birds are late breeders, and this is partly owing to the fact that all, or nearly all, breed in secluded places ; and as the vegetation in which they find seclusion is not sufficiently dense until very late in the spring, or even early summer, to nest earlier in the season would be quite at variance with their retiring habits. But at the same time food is very probably another cause of late breeding, for the young are perhaps fed upon food which only makes its appearance at certain times. By the second week in May the Whitethroat is in pairs, and soon after that date we find their flimsy net-like abode. In the brambles creeping in wild confusion over a waste bit of

ground, by the sides of the hedgerows in the thorns and tangled grass, amongst heaps of hedge clippings, and in nettles and in the hedgerows, but always well concealed by surrounding vegetation, we find it; sometimes six feet or more from the ground, at other times but a few inches. It is made of the finer kinds of dry grass stems, and lined with a few fibrous rootlets and a little horse-hair; though a flimsy looking structure in the extreme, still strong enough for its purpose. The eggs, very seldom more than five in number, are dull greenish-white, with greenish-brown and very faint purple blotches, also a few deep brown specks, very often forming a zone round the larger end. The Whitethroat, as a rule, displays silence as a protective power, but once away from the vicinity of her nest, she is one of the noisiest little birds we meet. As soon as the young can fly they are abandoned by their parents, who likewise separate; and then we see the Whitethroat as a solitary bird, living alone until the time of migration arrives.

In the moulting season, which invariably takes place in July and August, the Whitethroat becomes a very shy and retiring little creature, seldom venturing far from its home in the tangled hedgerows. So silent do the birds now keep, that we are apt to think they have departed for the south, but in a few weeks we find them lively and trustful as ever, but with this difference, the males no longer flit from spray to spray, uttering their charming song. By the second week in September, sometimes a little sooner, the unerring and resistless impulse that sent the little Whitethroat so far for the purpose of rearing its young, again calls upon it to return to the land from whence it came. Though food be in abundance and the weather calm and genial, still at the allotted time it leaves us for southern shores. I am

satisfied that the Whitethroats perform their migrations in the night. They will be seen in plenty in the hedgerows one day, and the next not a single bird is seen, and their well-known cries are heard no more.

The third of these little choristers now before us is the Lesser Whitethroat, a bird, as its name implies, a Whitethroat, but slightly smaller than the one whose life history has just been traced. Like its congener, it is a migratory bird, and arrives a little later in the year, seldom being seen before May. It is a shy and wary little creature enough, only inhabiting the most tangled hedgerows, the deepest woods and dells, or most impenetrable thickets; and though absolutely common nowhere, still I suspect its retiring nature and unobtrusiveness combined cause it to be looked upon as a much rarer bird than it really is.

It is only by exercising the utmost caution that you can observe this little creature, for on the least alarm it instantly darts into the thickest cover, and there remains until the intruder retires. I sometimes succeed in watching him when seeking for food. I have seen him when so engaged amongst the dense branches of the tallest trees, from which he sometimes sallies on fluttering wings to secure the passing insects. Though the common or greater Whitethroat may often be seen on the fruit trees, in the garden, still I seldom or never see the smaller species, as it probably contents itself with the various wild fruits growing in its haunts. The Lesser Whitethroat is another very late breeder. When the vegetation in its haunts is enclosed in its summer wreath, the little birds seek out a nesting-site. It has not far to go, the nesting materials are at hand. Concealment and seclusion are the two main things required, and the brambles or thickets, the topmost branches of a tangled hedgerow, or the bushes

bordering the stream in some shaded dell, admirably supply the want. The nest you will find to be a very small and fragile structure and beautifully rounded, and nothing near so deep, accordingly, as the nest of the larger species. It is made of fine grass stems, artfully wove together, enclosing the neighbouring twigs, and lined with a few fibrous rootlets. He who studies the nests of birds, and views them as structures adapted in every particular to the requirements of their feathered owners, will probably pause, and stand perplexed, when viewing the nests of these delicate sylvan birds. Here he will find a netlike structure, almost as loose and fragile as the spider's web, containing the eggs or helpless young of a most delicate bird, while in yonder shrub the sturdy Chaffinch is rearing her young in a nest made of the warmest materials. We might pursue the subject *ad libitum* with the same results, but the cause we are as yet unable to determine.

The eggs of the Lesser Whitethroat are four or five in number, and of course rather smaller than the eggs of the larger species. They are dull white in ground colour, blotched and spotted with deep brown and greenish-brown markings. When the nest is approached the female bird displays her silent protective instinct, and remains brooding motionless over her treasure until almost touched by the hand. Her mate, too, when danger threatens, speedily appears, and both the birds hop anxiously from twig to twig, uttering their harsh and monotonous call notes. You will notice that the more frequently the nest is visited the more wary the birds become, and when their nest is approached the mother bird at once quits it, and, threading her way silently through the foliage, appears a short distance away in company with her mate ; and should you further alarm

them, they seek safety in the deepest recesses of their haunts. I am satisfied that the Lesser Whitethroat is another of those birds unable to distinguish its own eggs from the eggs of other species. I have placed the eggs of the Willow Warbler in the nest of this bird after removing the rightful eggs, and they have been attended to with the greatest care. Throughout the early summer months the male Whitethroat contributes to the melody which fills the grove at that delightful time, but he seldom or never sings after the young can fly. As the Lesser Whitethroat is of so shy and retiring a nature, it is difficult to mention the exact time of their departure, but there is small doubt but what the little creatures leave us for the south by the latter end of August or beginning of September, soon after the autumnal moult is completed.



THE WILLOW WARBLER.

OF all the feathered choristers that follow the sun in his northern journey, the little Willow Warbler is my special favourite. His trustfulness, delicate appearance, graceful motions, and unassuming garb, together with his plaintive song and call notes, all give me pleasure, and it is with delight I welcome him in the fresh and vernal month of April. He arrives here sometimes as soon as the first, while at other times he is not seen until the third week in the month ; and, like the Warblers in general, the males make their appearance first, but do not sing until the arrival of their mates. I know not how far naturalists will agree with me with regard to these birds migrating in the night, but here they invariably appear to do so. You find the Willow Warbler in woods, fields, coppices, plantations, gardens, and pleasure grounds, but very rarely on the wild and barren moor. They frequent as a rule the lower

vegetation, exploring every branch and twig in search of their insect prey, the males occasionally stopping to warble forth their notes as they sit delicately poised on some slender spray. You see the birds to advantage when perched amongst the fresh and vernal foliage of the birch just as it is emerging into leaf. Their plumage resembles the surrounding foliage, and their delicate form and graceful actions harmonise with the slender twigs and branches.

I know of few birds indeed which possess so sweet a song as this frail little creature. It is plaintive and soothing in the extreme, being so soft and rich in its tone, commencing with a low and sweet *twee-twee-twee*, and as the song approaches its end the notes swell louder and richer, and finally cease in so low a strain as to be scarcely audible a few yards away. He sometimes utters his song when flying through the air or when coursing over the slender branches. He sings incessantly throughout the spring and early summer, but in July and August we seldom hear it save at the morning's dawn, and by the end of the latter month it is lost in the autumnal moult, to be regained, however, when that season is passed, in all its former beauty—a circumstance found in no other migratory Warbler that I am acquainted with, and, as far as I can determine, an overlooked fact in the life history of this little sylvan wanderer. Their call notes too are singularly low and plaintive, and uttered when the birds are in motion or when at rest.

The trustfulness of the little Willow Warbler is surprising. Seat yourself on some grassy bank in his haunts, and you will be enabled to observe his motions with ease. He will approach the bushes whose branches droop over you, and seek his food within reach of your

hand. See with what nicety he poises upon the slender twigs; notice the agility he displays in exploring every branch, now stopping to secure some insect or its larvæ, or pausing to utter his charming song. He visits the old ivy-covered walls as well, in whose crevices he finds abundant food, and mark how nimbly he explores the many crannies, drawing forth the spiders lurking there. Now he sits motionless after the manner of the Flycatcher, to dart into the air at the first passing insect, securing it with becoming agility and ease. You not unfrequently see him exploring the bark of some noble son of the forest, for he can do so just as easily as the sombre clothed little Creeper himself. If you closely observe him, when so engaged, you find his motions more or less spiral, and unlike the Creeper, who invariably ascends a tree in a straight or nearly straight course. By this peculiar motion the Willow Warbler gains an ample meal, for let the observer examine the bark of most trees, and he will be surprised at the quantity of insect life lurking there.

The food of the Willow Warbler from its arrival until July is composed of insects and larvæ, but when the fruit is ripe they forsake for the most part their woodland haunts, and subsist upon the sweet and luscious produce of the garden. But even in the fruit season they are deadly foes to insects, and one in particular, namely the 'daddy long legs,' which sometimes occurs in such numbers as almost to amount to a plague, the grass and bushes swarming with them. The infinite amount of good all birds perform is manifest to every careful observer of them. In what state would the surrounding fields and gardens be if it were not for the army of small birds which tenant them? I dare not hazard a conjecture as to the probable end of vegetation on the fair hills and

valleys of our country if those insect hunters were no more.

The Willow Warbler pairs annually, as a rule, a few days after the arrival of the females, but nest building is not commenced at once. During the mating season you sometimes see them chase each other with startling rapidity, darting unharmed through all the intricacies of the tangled undergrowth with the rapidity of a meteor. May, with its expanding buds and flowery train, arrives, and the little birds must see about their all important purpose. Though you see them far up amongst the mighty branches, yet they do not aspire to such a lofty site for their abode. On some cosy bank amongst the trailing brambles, along the hedgerow side, or even far away in the centre of the mowing grass, they find a place adapted to their wants. The nest of this bird is but rarely, very rarely, found built at any height from the ground. I have however seen their nest several feet from the ground, but the instance is solitary in my experience. The nest in question was built partly on a stone jutting out of an ivy-covered wall, and partly supported by the stem of a small hawthorn tree. It was embosomed in the ivy's glossy foliage, one of whose creeping branches formed its main support : it contained four eggs. The nest of the Willow Warbler is a very loose structure, and once removed from its original position, will bear but the most delicate usage. It is composed of dry grass, a few withered leaves, and lined first with horsehair and rootlets, and then a plentiful bed of feathers. I once took a nest of this bird carefully to pieces, and in it I found two hundred feathers of various sizes, but chiefly of a downy texture, of the Blackbird, Thrush, Rook, domestic Duck, and poultry. Besides these there were countless hairs of horse and cow, coarse and fine grass, scraps of moss, and

a few dry leaves—by the way, a somewhat varied assortment. The nest is more open than the Chiffchaff, and appears as if overturned, the eggs being laid on the side. Notwithstanding the number of journeys the little builders have to perform in conveying materials, the nest is ready for its purpose the fourth or fifth day after its commencement. Wary indeed are the little owners when approaching their nest with materials. You sometimes see them with a feather, for instance, and observe how they hop from spray to spray, conscious of your presence, and uneasy for the safety of their still unfinished nest. Keep motionless and have patience, and the little creatures will gain confidence and visit their nest. But do not, I pray you, take the advantage of their confiding nature to destroy their handiwork. See and admire it, and leave it to them, for to blast the hopes of the little owners would be cruel indeed. Their eggs are six or seven in number, sometimes only four, of a pure and glossy white, blotched and spotted with reddish-brown: some specimens are more faintly marked than others. Before the contents of the egg are removed they possess a faint and beautiful tinge of pink. Silence is the Willow Warbler's general form of protective instinct, and you never hear her utter a sound of any description when leaving her nest. The Willow Warbler will care for and rear the young of other species with as much care as her own. I once inserted a young Whitethroat in the nest of a Willow Warbler containing one young one, and the parent bird attended both her own offspring and the young Whitethroat with every care; but either a weasel, or that sly and prying animal the rat, destroyed both the nestlings, and prevented me having the pleasure of witnessing the young Whitethroat grow up to maturity under such novel circumstances. Young Willow War-

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blers are abandoned by their parents when able to fly, and the birds for the most part lead a solitary life.

The little Willow Warblers tarry on our bleak northern shores long after many of their soft-billed congeners have departed for southern climes. They leave us by the latter end of September, and when I miss these little songsters flitting gracefully from spray to spray, I feel as though I had lost a number of friends; for what engaging little creatures these Willow Warblers are. With the motions of the Flycatcher, Creeper, and Titmouse; with their own charming song and actions; with their active fairy-like aspect, and with their harmless and trustful disposition, they shall ever have a friend in me. 'So little African wanderer, sweetest of all thy sylvan race, rest here, each time Nature's mandates send thee northwards, in peace and safety.'



SEDFE WARBLEK.

*WOOD WREN, CHIFFCHAFF, AND
SEDFE WARBLEK.*

THERE is perhaps no group of birds which will more puzzle the young naturalist than the two former of the three birds now before us, and the little Willow Warbler treated with in the preceding pages; for it is only by the closest observation we can distinguish them. The Wood Wren is conspicuous by his large size and bright yellow plumage, and the Chiffchaff is much the dullest clothed in this pretty trio. But neither of these two birds sings so low and plaintive as our little friend the Willow Warbler.

First, then, we will take the Wood Warbler or Wood Wren, and if the reader wishes to acquaint himself with this pretty species he must seek it in the woods and shrubberies. Sometimes, though rarely however, we see it in the fields, the lanes, or the gardens, between the months of May and September. To go at other times would be useless, for the Wood Wren, like its two con-

geners, is a migratory species. With much the same motions as the Willow Warbler we see them coursing over the surrounding vegetation, exploring every branch and twig in search of their insect prey; but perhaps the Wood Wren is more often seen in the branches of the surrounding trees than the Willow Warbler. Right up in the leafy crowns of the forest trees we see him hopping hither and thither amongst the foliage, occasionally pausing to utter his loud, wild, and varied song, which echoes through the leafy arches of the woods, and fills the air around with gladness. If it be pairing time, their music is heard from every bower, now varied by the Willow Warbler's plaintive trills, and anon by the more loud and piercing notes of the Chiffchaff.

The Wood Wren is not a gregarious species, nor does it pair for life, and every season for a short time after its arrival it leads a life of solitude. But when both sexes have arrived—for be it known the males arrive a little the soonest—and recruited their failing strength, the serious business of the year is commenced. By irresistible impulse each and every bird seeks the company of a mate, and together they seek a suitable place in which to build their little home. Under some hazel bush, by the side of the stream, or on the banks of a shaded dell, a place meeting their requirements is found. A small cavity is quickly made, and the nest, formed of dry grasses and a little moss, is soon completed. The young naturalist, however puzzling the birds may be, cannot easily confound the nest of the Wood Wren with that of the Chiffchaff or Willow Warbler. It differs from them by having no lining of feathers. Five eggs are most often found, though sometimes the nest contains but three or four. They are, of course, much

larger than those of the Willow Warbler, and more richly coloured, being of a pure white, spotted and streaked with deep reddish-brown.

Unlike the Whitethroat and Blackcap Sylva, the Wood Warbler and Chiffchaff subsist, as far as I can determine, on insects alone. I seldom see the Wood Wren after the first week in September, and never hear his notes after the young have reached maturity.

The second little chorister is the smallest of the Willow Warblers found in Britain, and he is also dressed in the most sober garb. We find them in the same haunts as the Willow Warbler, and their habits, too, are very similar to that bird, but they are nothing near so plentiful. Early, very early sometimes, in April he makes his appearance; and such a frail little creature he is too. How those feeble wings support him on his long journey seems incredible, but such it is. You find he seldom or never sings just upon his arrival, and remains silent until the appearance of the female birds, at whose advent his *song* commences.

You can scarcely term the music of the Chiffchaff a song—the only notes he utters are the monotonous cries of *chiff ch-a-ff, chiff ch-a-ff*, from which he takes his name. He utters them as he wanders from branch to branch, and will sometimes sit motionless for half an hour or more, uttering these monotonous notes. Still, monotonous as they are, I always think that they harmonise beautifully with the notes of other birds that fill the woodlands with sweetest sounds. These harsh sounds only help to increase the power and beauty of more favoured songs, and in Nature's fastnesses there is not a sound, be it ever so harsh and discordant, but what chimes beautifully and harmoniously in with other and sweeter music, and the varied surroundings.

The Chiffchaff frequents both the lower bushes and the branches of the tallest trees, showing in this respect a variance to the habits of the Willow Warbler. He is a far shyer species, too, and flies rapidly off to the deepest solitudes should you alarm him. By sitting quiet and motionless, however, he will approach you, and reward your patience with a glimpse of his fragile little form.

I have long thought that here, at least, the Chiffchaff's race is dying out, and that the Willow Warbler is replacing him. Season after season he seems to occur in lessening numbers, and his loud cries disturb his favourite haunts less frequently year by year. His shy and retiring habits—for in one so closely related to the Willow Warbler we should expect a corresponding degree of trustfulness—also seem to show that his presence in these parts is drawing to a close. On the other hand, the Willow Warblers proportionately increase, and almost every spray sends forth their plaintive songs of gladness. I can almost trace an instance in these delicate sylvan songsters where Nature's fierce and hidden contests are exposed to view—favouring one race for the time being, and causing the other to pass slowly and silently, and it may be finally, away. The grain of favour is in the balance of the Willow Warbler, and the Chiffchaff is undoubtedly affected by it. Like the red man who roamed for untold ages through the wilds of America, its race, in its now existing form, is passing away.

Like most migratory warblers, the Chiffchaff is a late breeder, and May is well advanced ere we find its nest. It is often situated amongst the herbage on a bank, under the wide trailing brambles up the hedgerow sides, or far from man's habitation in the thickest woods.

The Chiffchaff does not confine itself to the ground alone for a nesting-site, and we not unfrequently find its home some two or three feet from it. Unlike its congener, the Wood Wren, the little Chiffchaff makes a substantial nest, and its young require a bed of softest feathers. The eggs are four or five in number, and differ from those of the Willow Warbler by being slightly smaller, rather more pointed, and the markings of a deeper and richer red, very often forming a zone round the larger end. When the young no longer need their parents' aid the union between the parents ceases its mysterious power, and old and young alike separate, probably for ever. They leave us somewhere about the time the Willow Warblers take their departure for the south, which is seldom much later than the autumnal equinox.

The Sedge Warbler is another songster that regularly visits us every spring. He is a lover of marshy places, and delights to find seclusion amongst the dense under-wood skirting the banks of pools and streams. Amongst the ever murmuring reeds and sedges also he finds a fitting haunt, and his rich and varied song is often heard trilling forth from their verdant fastnesses. He is a bird whose only aim appears to be the shunning of man's approaches, and it is very often indeed only by his notes that we know he is at hand. You sometimes hear him singing so loudly as to appear as if he were but a few inches away, and it is only by the most diligent search that you succeed in finding him, so still and motionless does he keep, and so unassuming is his plumage.

The Sedge Warbler is often mistaken for the Nightingale, partly on account of his song, and partly because he oftentimes warbles in the hours of night. But to those who have been fortunate enough to hear the lovely

strains of Philomela he is but a sorry substitute. There seems to be a vague idea amongst persons unlearned in the ways and doings of the feathered race that no bird, the Nightingale excepted, sings at night. But this is an error, for many birds, notably the Warblers, pour forth some of their sweetest strains under a star-spangled sky.

The Sedge Warbler appears to live entirely on insect life. You sometimes see him take a short flight over the surface of the water and secure an insect, and then return to his perching-place. He also explores the branches and twigs, likewise the reedy places and coarse vegetation bordering the waters.

We find their nest sometimes placed in the thick branches of the hedgerow bordering a stream, at other times we see it in the brambles growing in wild confusion in his marshy haunts, or in the bushes and woodbine drooping over the water. It is but a small and simple structure, made of a few dry grass stems, sometimes sedgy plants, and often lined with a few hairs. The eggs, usually four or five in number, are something similar to a Whitethroat's egg, and about the same size, but are more clouded, and generally streaked with deep brown. Some specimens are beautifully marbled over with olive green. The old birds leave their charge as silently as possible, as is the case with all birds of the family of Warblers, and by this means the nest, appearing as it often does but a tuft of withered grass, is very often passed unnoticed by an intruder.

As the Sedge Warbler appears to lose his notes after the young reach maturity, and as he is such a shy and retiring little creature, it is difficult to say when he leaves us. But as I always fail to find him in places most favoured by his presence in September, I conclude that he leaves us for the south during the latter part of August.



THE GOLD-CRESTED KINGLET.

THE little Gold Crest is a notable bird, inasmuch as he is the smallest feathered creature found in Britain. His small size in no way diminishes his beauty, and he boasts a crest brighter than any other British songster, save indeed his near relation the Fire Crest. He frequents the fir woods and plantations, also the birch coppices and shubberies, and, though seemingly frail and delicate, braves all the rigours of our northern winter with apparent comfort.

The Gold Crest being such a small and frail little creature, we should suppose would delay its nesting duties until the middle of summer; but this is not so. I am convinced that birds rear their young at times when the food which brings them to maturity occurs in greatest abundance. The food of the Gold Crest consists for the

most part of the insects abounding amongst the buds and twigs of trees, as well as those flying through the air, hence his food is always attainable (and this doubtless is the reason he remains throughout the winter months), and his young can be reared so early in the season.

The fir woods and deepest shrubberies are the breeding grounds of the Gold Crest. Early, very early in April, sometimes even in March, we hear the love song of the male, perhaps as he hangs suspended and head downwards from a drooping spray, or amongst the gloomy branches hidden from view, or not unfrequently when flying through the air. The song itself is a shrill though pleasing one, and when coupled with the plaintive notes of the Willow Warbler, forms music as rich and sweet as any the grove can boast. The nest of this species is as charming in its beauty as its little owners. It is most frequently placed upon the drooping end of a fir bough, or sometimes amongst the feathery foliage of the yew. Picture to yourself a green mossy Chaffinch's nest without the lichens, and you have a tolerably good idea of the Gold Crest's cradle, with this exception, that the nest is partially a domed one. The foliage on the selected branch is woven skilfully amongst the materials of the nest. It is lined with a thick and downy bed of feathers, and the eggs are from five to eight in number. As you may suppose, the eggs are very small, far smaller than a Wren's, and of a delicate reddish-white, speckled with tiny red marks, although some specimens are pure and spotless. Mimicry is the Gold Crest's form of protective instinct, and note how well she follows it, her nest appearing nought but a tangled mass of foliage. The Gold Crest is also a close sitter, and one of the most trustful birds whilst nesting that I am acquainted with; for the mother bird will often only quit her home when the

branch which sustains it is shaken violently, and even then she goes but a little distance away, so that you have good opportunity of examining the parent and her handiwork at the same time. You would probably think that so many young birds in so small a nest are hard pressed for room, yet this is never so; and if you examine them closely you find all comfortable and contented in their mossy home, which is swayed hither and thither by every breeze that murmurs through the pine woods in its passage from the hills above, awaiting the advent of their parents with food.

The food of the Gold Crest is composed partly of animal and partly of vegetable substances, although the former largely predominates. Insects of all kinds inhabiting trees are preyed upon, and also those flying through the air, which the birds secure in the same manner as the Flycatcher, by sallying into the air. In the autumn months various small seeds are eaten, as the birch and heather, and many of the smaller berries.

It is in the balmy days of autumn that we have the best opportunity of studying the motions of the Gold Crest. It is then and throughout the winter that we see them in the hedgerows. The birds almost invariably keep in pairs, and flit from bush to bush, now in the centre, now on its topmost spray, then again diving into its leafy depths, our only sign of its presence being the trembling twigs which mark out its course. If you seriously alarm them you find they at once seek seclusion amongst the thickest foliage, and there remain for some considerable time. But it is in the birch woods, when October's mellow month paints those lovely trees in yellow of the brightest dye, that we notice these charming little creatures in greatest abundance. There we see them in pairs or little parties exploring the twigs of

the birch for insects, and sometimes ejecting the seeds like the Titmouse. Their low, sweet, but singularly piercing call notes are heard in all directions. You look to the oak tree, standing forth in solitary grandeur, and think they are there, but you cannot perceive them; you scan the branches of a distant shrub, and think you have found them at last, but in vain. Indeed, they appear to be wherever you happen to direct your attention; their notes are so shrill and piercing, ay, almost as much so as the cries of the bat winnowing his way through the still air of a summer evening; while after all they are within a few yards of you, it may be feet, probably exploring the branches of the tree beside which you are standing. Sometimes the sunlight catches on their fiery streak of plumage on the crown of the head, causing it to shine with metallic splendour like burnished gold. Now they hop from branch to branch; then, fluttering in the air, they catch a passing insect, and with feeble though piercing notes pass on to the next bush, for they seem to prefer the lower branches and bushes to the tops of the trees, though if repeatedly disturbed they take refuge in the tallest trees. Now they hang suspended from a long slender twig, their weight causing it to swing to and fro with graceful motion; and then on fluttering pinion they hover above some tempting seed case or bud, which promises to reward their search. Now they drop silently into the heather and explore its wiry branches in search of seeds and insects, or chase each other in sportive glee, darting like animated meteors through the branches. Now they alight in the gorse bushes and hop from spray to spray, their lovely crests appearing like the golden blooms. As the males, conspicuous by their brighter crests, course over the twigs, they sometimes, autumn though it be, burst out into song, and utter a few notes

of matchless beauty. Ever in motion, like the Tits, birds by the way they most closely resemble in habits and motions, truly they are engaging little creatures, and their trustfulness is probably greater than any other feathered denizen of the grove.

In the autumn and winter months our resident Gold Crests are largely increased in numbers by birds from the cold and dreary north. Though this species cannot be called gregarious, it is eminently a social one, for not only does it associate with its own kind, but with the Tits, the Willow Warblers, and other little songsters, although at the close of day you seldom or never see more than a pair roost in company. In the autumn and winter the perennial foliage of the evergreen is their only roosting-place at night.



GREAT TITMOUSE.

*THE GREAT TITMOUSE AND BLUE
TITMOUSE.*

YOU may easily recognise a Titmouse, no matter of what species, from any other bird that frequents the trees and hedgerows, by its incessant activity, and the infinite variety of the attitudes it assumes. The Great Titmouse, or Ox Eye, as he is otherwise called, is a well-known and very handsome bird. He is not quite the size of a Sparrow, and you can instantly recognise him

by the broad streak of black plumage which reaches from the chest to the vent. He is found commonly in woods, plantations, shrubberies, gardens, and orchards; we also see him on the hedgerows in the autumn and winter months most frequently; but in the upland wild he is never found, the presence of trees and shrubs being imperative to his haunt.

The motions of the Great Titmouse are varied in the extreme. See with what nicety he poises himself, now legs uppermost, now the reverse, now nimbly running over a rugged branch, occasionally stopping to utter his harsh grating call notes. Picture to yourself, gentle reader, the sound made in sharpening a saw with a three square file, and you have a tolerably good idea of one of his various notes. Now at the bottom of the tree, in an instant on its topmost spray, then back again into the thickest branches. In a word, this sprightly, active, and amusing little *chorister* explores every nook and cranny, and drags from their lurking places the countless numbers of injurious insects which would, if left, increase so rapidly as to ultimately destroy the tree that sustains them. Great Tits are invariably found in pairs, although they associate with their own and other species indiscriminately: still, if you observe them closely, you find that they arrive in pairs and in pairs depart. When observing this active little creature, you would not for a moment suppose him to be guilty of destroying other little birds, for the purpose of feeding on them; yet he undoubtedly does so, pecking at his victims with his strong little bill until he kills them, when he takes out the brains and a little of the flesh off the breast. His principal food, however, is confined to insects and their larvæ, and various kinds of the smaller seeds. You often hear, whilst wandering through districts haunted

by the Great 'Tit, a loud tapping noise which puts you in mind of the Woodpecker, only the sounds are not so loud. If you search closely around you will probably see a Great Tit clinging with his strong claws to a decayed limb and hammering at the bark, to get at some insect or its larvæ lurking in the crevices.

The Great Titmouse does not possess any song, although some of his varied notes are very sweet and pleasant. In the early months of the year, when the winds of March are drying up the saturated lands, the bird is heard uttering his only approach to melody. A few low sweet notes, varied by harsh and grating ones, many of them sounding like the tinkling of a bell, compose his love song. Yet when once the site for the nest is chosen, he and his mate become much more silent, shy, and retiring birds, and continue so throughout the nesting season. The site of her nest varies considerably : she will make it in a hole in a wall ; she will repair to the trees, and build it in a hole in their trunks ; she will visit the old abode of the magpie, and build it inside that ; or, stranger still, she will not unfrequently weave it amongst the crevices of the sticks of the Rook's nest, both birds living in perfect harmony together. It is made of moss and dry grass, and lined with a thick and soft bed of feathers. If the nest be made inside a deserted Magpie's or amongst the sticks of a Rook's nest, you find it is domed like the House Sparrow's when in a similar situation, but if in the hole of a tree or wall it is open, and much more loosely made. The eggs of the Great Titmouse are from five to eight in number, and are about the size of a Whitethroat's, pure white, when blown, in ground colour spotted with reddish-brown. Both birds sit upon the eggs, and one brings the other food when so engaged. The young birds are fed almost

entirely on caterpillars and grubs, which the old birds obtain from the neighbouring trees and bushes. When able to fly, I believe their parents abandon them, and very often rear another brood.

In the autumn months the Great Tit frequents the birch woods in greatest abundance, where you see them feeding on the insects abounding amongst the slender twigs, or eating the tiny seeds. You also find that it delights to frequent the topmost branches, and that it is far more wary than any other member of the family, save, indeed, the wild loving Marsh Tit.

The Blue Titmouse, of all members of this active group of birds, is the best known, and probably the oftenest seen and of the commonest occurrence. There is hardly a wood; plantation, field, orchard, garden, or hedgerow, that does not contain him at some period of the year. In size he is rather smaller than the Great Titmouse, and his plumage is slightly different. The delicate azure blue which pervades much of his plumage is perhaps unequalled in the loveliness of its tint, and the manner in which his other colouring is distributed causes him to be a bird of no mean degree of beauty.

The notes of the Blue Titmouse are varied, some of them being harsh and monotonous, while others are pleasing, many of them resembling the call notes of the Gold-crested Kinglet. No song escapes from him in the vernal year, when almost every other feathered tenant of the woods is overflowing with music. He is perhaps more noisy than usual, and that is all. His mate, however, experiences as much pleasure from his harsh and grating calls, as the mate of the sweetest warbler does from the delightful trills of her spouse.

In the early months of the year you often see the Blue Titmouse searching out a nesting-site. The birds

so engaged are young ones, for be it known the old birds, if left unmolested, will return yearly to their nesting-hole. You see them clinging to walls, exploring the holes and crannies, and they will sometimes enlarge the entrance to a selected hole by pulling out the bits of plaster. But the Flue Titmouse nests in other places besides walls: in the holes of trees and decayed stumps, and not unfrequently in gate-posts or even pumps. The nest, as is usual with birds nesting in holes, is a loose and slovenly structure, made of moss and dry grass, and lined with wool, hair, and feathers. The eggs of the Blue Titmouse are from five to eight in number, sometimes, indeed, we find a dozen or even more. They are like those of the Great Tit, only rather smaller, and the markings, perhaps, are not quite so bold. Pugnacious motions are displayed by the birds when their nest is approached. You can seldom or never drive the sitting bird from its charge. Bravely it remains upon it, and by hissing, puffing up its plumage, biting, and fluttering, endeavours to repel you from its home. So closely does the sitting bird imitate the warning hiss of a snake, that when trying to obtain a glimpse of the nest and its contents, I have started back in alarm, fearful that instead of a nest and eggs the wall contained some poisonous reptile. If you take the bird in your hand its courage is none the less, for, erecting its crest, it views you with eyes that seem to speak of the anger lurking within, and attacks you right courageously with its beak. Both birds assist in hatching the eggs, and when their extensive family is hatched the exertions of the parent birds are great to keep all the little mouths supplied. When the young can quit the nest they still keep in company with their parents, who feed and tend them for some considerable time.

It is a pleasing sight to see a brood of young Blue Tits and their parents exploring the trees for food. Perched in every conceivable attitude, the little creatures search each twig and branch for their insect food: hopping, fluttering, creeping, and swinging to and fro, there is not a part that promises to reward their search but what is visited. Insects, however, do not compose their food entirely, for vegetable substances, as seeds and buds, are eaten. In the winter they will visit the then leafless pear trees and prey upon any of the fruit which may happen to have withstood the blasts of November. Caterpillars also form no small item of their food. Both Great Tit and Blue Tit will search the ground for food, as well as the trees and hedgerows, the shrubs, walls, and fences. When the ground has been newly manured you see them feeding on the insects, grubs, and beetles amongst the manure, and even eating the refuse of the slaughterhouse, picking the bones and dragging at the putrid flesh with as much zest as the Rooks and Magpies.

Parties of Blue Titmice are seldom seen after the month of January, when the old birds repair to the neighbourhood of their nesting-sites, and the young ones pair and set out in search of nesting-places. I should mention that both the birds here treated of are resident with us throughout the year, as, indeed, are all other members of this active group of birds. Summer and winter alike, their actions may be observed, but perhaps to the best advantage when November's blasts have bared the trees of their leafy covering: then we have the best opportunity of observing the many, varied, and grotesque attitudes they assume when searching for their prey.

*THE COLE TITMOUSE AND LONG-TAILED
TITMOUSE.*

By a close attention to the notes of this engaging group of birds the observer will be enabled to instantly identify them, even though the birds themselves are obscured from view. He will find that each species, though the notes of all are very similar, utters notes peculiar to itself alone. He will find that the Ox Eye's notes are the loudest and most peculiar ; the Blue Tit's are harsh and garrulous, though often indescribably low and sweet ; the Cole Tit's different still ; while the Marsh Tit's cry is but little varied, and does not resemble the notes of any other Titmouse ; and the long-tailed species again possesses notes strictly its own. It is to the casual ear alone that all their notes are alike ; but to the ear of the ornithologist each note is different, and each cry instantly proclaims the species of its owner with unerring certainty.

The Cole Titmouse is a handsome bird, with jet black head and white cheeks : you can always tell him from the Marsh Tit by the patch of white plumage on the nape of the neck and by his peculiar notes. Cole Tits frequent the woods, coppices, plantations, parks, and gardens, and are most frequently found in pairs. Perhaps their motions, though partaking of those of the Titmice in general, are more rapid than other members of the family. You sometimes see them dart through

the foliage with great rapidity, chasing each other apparently in sportive glee. There is not a tree or bush but what the Cole Tit will visit it. Now hanging from the long pendent branches of the graceful birch, now searching the thorny sprays of the hawthorn, now on the topmost branches of the oak or ash, then onwards to the drooping elm. Now on the lowly twigs of the hazel or elder bushes; then the evergreens in turn are visited, and even the ground ivy, too, is frequently explored. A favourite place to meet with the Cole Tit is on the spreading branches of the fir tree, notably those which are studded with cones. There you see him dexterously ejecting the tiny seeds from their scaly bed, the bird very often clinging to the cone, it may be on the extremity of a slender twig, and its active motions causing the branch and its living burthen to sway backwards and forwards like the steady beat of a pendulum. A merry little party of wanderers they are, and busying themselves with their own affairs alone. When the sun nears the western horizon the Cole Tits, if it be winter time, repair to the verdant branches of the evergreen for repose, or sometimes seek shelter in the warm side of a haystack, always seeking that side opposite to the direction in which the wind is blowing.

It is early in the vernal year when we hear the Cole Tit's love song—a performance scarcely deserving the name, it is true, but which, however, is perhaps the closer approach to a song than the like notes of any other Titmouse. The nest of the Cole Tit is found in holes of trees principally, but sometimes a hole in a wall will be selected. It is in the birch woods that the Cole Tits, and in fact all the other members of the family, congregate to breed in greatest numbers. The reason for this is the abundance of holes suitable for

nesting purposes, and the vast quantities of insect food which there abound. He who roams through these situations will find that these woods are full of decayed timbers; and the immense numbers of gigantic fungi also form one of the principal features of the scene before him. Here, it may be where a giant limb has fallen in premature decay, leaving a hollow cavity in the parent stem, or where a trunk has been riven up by the fury of the wintry blasts, the Cole Tit builds her nest. As is usual with the Titmice, the nest is but a loose and rambling structure, made of moss, dry grass, and feathers, and the eggs are from five to seven in number, like those of the Blue Titmouse, only a little smaller. Cole Tits will hiss and bite, and display various other pugnacious motions in defending their eggs or young, and the utmost difficulty is experienced in causing them to quit the nesting-hole.

The food of the Cole Titmouse is partly animal and partly vegetable matter. In the spring and summer insects and their larvæ are sought after with unceasing vigilance. You sometimes see them exploring old walls for spiders, small beetles, and larvæ. In the autumn and winter months the insects become scarcer, and the birds partly subsist on birch, fir, and other small seeds.

Before leaving the Cole Titmouse I should mention that a few years back the bird was almost a rarity, and the Marsh Tit abounded. Now the reverse occurs, and the Cole Tit is found commonly in the haunts of the other Titmice, and the Marsh species is becoming rarer every season. The matter may be partly explained thus. The Cole Titmouse appears to be a bird of civilisation, the Marsh Titmouse a bird of the marshy uncultivated places. Therefore as the land gets reclaimed from its primeval state, and drainage and tree planting

advance, the one advances and the other retreats still further into the wild. The case is analogous with that of the Bittern, the Stork, the Bustard, and the vast hordes of waterfowl, which in like manner have retreated, and other birds more homely and social have taken their place.

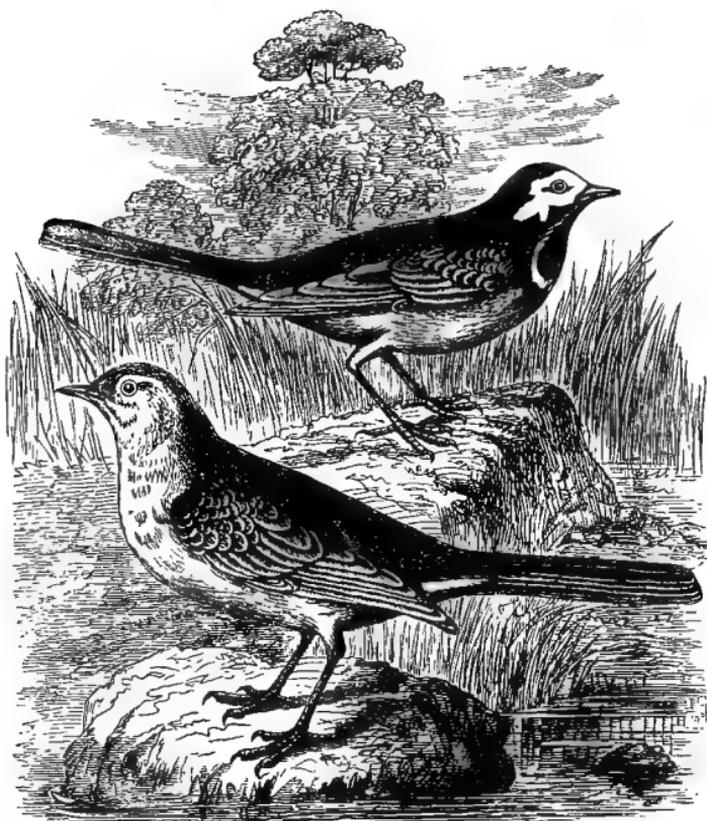
The Long-tailed Titmouse is the smallest of this active family, and an engaging and pretty little creature he is. At first sight he appears but a tiny ball of feathers, shapeless, though animated, with one long feather by way of tail. Yet if we examine him closely his delicate rosy plumage comes out in rich contrast to his darker markings; his form, though small in size, is perfect, and well adapted to his ways of life, and what really appears as one long feather, is in reality a perfect tail. The Long-tailed Tit is found in much the same places as the other members of the family, though he appears to show a decided preference for woods, thickets, shrubberies, and the densest hedgerows.

If you observe them after the vernal equinox you will invariably find them in pairs, for their nesting season is close at hand. Unlike any other species of Titmouse, properly so called, the Long-tailed Tit builds a nest in the branches of trees and shrubs—a nest of matchless beauty, too, and which costs the little owners at least a fortnight's incessant labour to complete. It is most frequently placed amidst the branches of the ever verdant holly. It is domed, and a small hole in the side near the top admits the little owners. Its materials consist of the greenest moss, lichens, and cobwebs, and lined with an immense number of feathers and hairs. Mimicry is the Long-tailed Tit's form of protective instinct, and well does she practise it. Perhaps—nay the matter is without a doubt—the nest of this little creature is the finest piece

of nest-building found in Britain, and probably amongst all the army of feathered architects throughout the world, but few, if any, excel it. The eggs of the Long-tailed Tit are small, and pure white in ground colour, faintly, very faintly, speckled with a few red markings. They are from six to ten in number, but probably eight are most frequently found. The young birds when able to fly still keep in the company of their parents, and remain in company throughout the autumn and winter months. Thus we may infer that but one brood is reared in the year.

Few things to me are more pleasing than to observe a company of Long-tailed Titmice searching the leafless trees in winter for food. Keeping close together, they explore every branch, bud, and twig, with true Tit-like pertinacity. Now the lower bushes and shrubs are the subject of investigation; then the topmost branches of the forest trees, even the hedgerows, in their turn, are visited, the whole party flitting from tree to tree in one long straggling train. You cannot separate them; all flock together, seeming to delight in each other's company, and the air around is laden with their shrill twittering call notes. A wandering party they are, too; here one day, miles away the next. Having no fixed haunt, the whole woodlands are their pastures, and their wanderings doubtless extend from one end of the country to the other, if not over the briny deep itself. Their food is everywhere, provided trees and shrubs abound; for insects innumerable lurk amongst the buds and bark, and it is the duty of the Titmouse to search them out—a duty which is well and effectually performed. Small seeds, too, are eaten, notably those of the birch. The Long-tailed Titmouse, in winter, roosts amongst the branches of the evergreen. The statement that these

birds huddle together, when roosting, for warmth, is an erroneous one—no bird in the creation, whether large or small, roosts in such a manner, be they ever so social or gregarious in their habits. Early in the spring these parties of Long-tailed Titmice separate into pairs, and the original parents go off in company for the purpose of rearing another brood ; for be it known this species is undoubtedly a life-paired one, although it does not return to the same nest yearly, but doubtless a new nest is made somewhere in the neighbourhood of their previous one.



WAGTAILS.

As we stroll over the pasture lands in summer we oftentimes notice a little bird nimbly running hither and thither round the feeding cattle, occasionally uttering a sharp note, and incessantly jerking its tail with a fan-like motion. As we approach nearer it stops and looks at us suspiciously, and then, uttering a note of alarm, moves in undulating flight for a short distance, and alights, to await our approach, when it again takes wing, to again

alight some little distance away as before. But we have had time to notice it, and by its black and white plumage and peculiar motions we know at once it is the Pied Wagtail, a bird so commonly met with in almost every pasture field, on the country roads, or by the banks of the streamlets, rivers, ponds, and lakes.

Though the Pied Wagtail may justly be called a migratory species, for in October they congregate in parties and small flocks and wing their way southward, still a few remain permanently with us throughout the year. In the late autumn days we see them following the plough; while in the depth of winter we occasionally see one or two on the manure heaps searching for small beetles, or hear their cheery notes as they fly through the air in search of some *oasis* in the snowy waste affording them food and shelter. They return, however, to their old haunts very early in the season. By the third week in March, and long before the Swallow or the Blackcap arrives, we see them, still in flocks, upon the newly ploughed land, exceedingly tame, and daintily running up the newly-turned furrows, gracefully fanning their tails, and uttering their sharp peculiar call notes. Thus we see the Wagtail, besides being a migratory species, is also partially gregarious—a habit common to but very few of the soft-billed choristers.

But as spring time arrives the Wagtails separate into pairs, and spread themselves here and there in suitable localities, frequenting them throughout the summer. The Pied Wagtail pairs annually, and thus seeks out a fresh nesting-site every successive year; but though paired so early, spring is merging into summer ere we find their nest. In the matter of nesting the Wagtail is a strictly terrestrial bird, its nest being always on the ground, or in crevices of rocks and walls. Sometimes it

is placed far under the shelter of a convenient stone ; at other times under a tile in the brick-fields, or even in a drain-pipe their nest is frequently found. It is made merely of dry grass, occasionally a little moss, and sometimes lined with a few hairs. The eggs, four or five in number, are about the size of a Sparrow's, and bluish-white, speckled and blotched with ashy-gray. Young Wagtails stay in their parents' company some time after they quit the nest ; indeed, in some cases they keep company right through the autumn and winter months. It is a pleasing sight to see a brood of young Wagtails and their parents. The little creatures, some time before they are able to fly, will leave the nest and wait patiently the arrival of their parents with food, but upon the least alarm they take refuge in the nesting-hole, as they also do at nightfall. In the breeding season the trustfulness of the Wagtail is often very considerable. I once knew a Wagtail's nest in a hole of the wall bordering a large sheet of water, in fact, the nest was but a few inches from it. It contained four young ones, which were continually running in and out of the hole which contained their nest ; and by keeping perfectly still, they approached me closely, and I had the pleasure of seeing the old birds, undaunted by the baneful presence of man, feed their offspring with a few crumbs that I scattered for them. When the young have gained the full use of their wings the nest is abandoned for ever, and we see them on the fallow land and pastures. Here they are still fed by the old birds, and it is pleasing to observe the actions of both old and young at this period. We can instantly tell the young birds from their parents by their being dressed in a garb much lighter, and by the drooping wings with which they welcome the advent of the old birds with food. See

them now walking, now running, in all directions, making sad havoc amongst the myriads of insects. Gifted with the acutest sense of sight, the Wagtails distinguish the smallest insects at incredible distances. Now running, aided with their wings, they capture an insect, and with notes of exultation call their young, nestling closely and motionless amongst the earth clods near at hand. With quick motions the little creatures bound forward and receive the proffered food with the graceful actions so prominent in this charming group of sylph-like choristers.

In spring time, when every animate and inanimate object of Nature is influenced by its balmy presence, we sometimes see the Wagtail launch into the air and pour out a short, sweet, and varied song. Sometimes his notes are poured forth as he sits daintly poised on the water-encircled stone, or even when perched on the top-most branches of the tallest trees. We have yet to learn much in respect to the song of birds. Before us is a bird that only sings at rare intervals ; in fact, this is common to this particular group of birds, while his close relations the Pipits warble incessantly throughout the spring and summer months.

It is in the nest of the Pied Wagtail that the Cuckoo oftentimes inserts her eggs, and by this we have another proof that the female Cuckoo, after laying her egg, carries it in her bill or claws, and thus inserts it in the selected nest ; for eggs of the cuckoo are often seen in the nest of the Wagtail when in situations totally impossible for the bird to enter for her purpose.

When following the plough the Wagtail feeds on the numberless small worms and larvæ ; when on the pastures, insects and worms are preyed upon ; and when by the side of the stream or lake they catch the insects

flying near the water, and wade through the shallows in search of small beetles and sand-worms. Ever and anon the ever active and vigilant Wagtails are seen to sally into the air, to obtain the insects flitting hither and thither over the placid surface of the waters. On the sea shore, too, the Wagtail is frequently seen running nimbly on the borders of the boundless deep, and feeding upon the small marine animals which are left in such abundance by the receding waves.

Another species of Wagtail commonly seen in the country is the Yellow Wagtail, a bird differing both in habits and appearance from the Pied species. While we see the Pied Wagtail on the pastures, or running nimbly by the margins of lakes and streams, or even on the shores of the briny deep, we seldom see the Yellow Wagtail near the waters. He is in fact a bird of the pastures, on which he almost exclusively lives throughout the season Nature has allotted him to reside amongst us. It is only when snow lies deep on his favourite meadow and the ground is hard frozen that we see him on the banks of the streamlets, unless they wander through his pastoral haunt: then, however, he may be seen near them pretty frequently. Like the Pied Wagtail, he quits his pastures in the late autumn months and returns the following spring. Yellow Wagtails are probably the first birds, among all the varied train that speed here with the spring, that we see after the chilling comfortless season of winter is passed. But this migratory instinct is not so imperative in the Yellow Wagtail as in the Swallow, for we sometimes see them running as nimbly over the frozen snow as over the grassy sward of mid-summer.

All Wagtails, and, indeed, many other birds, possess the habit of jerking the tail with an easy fanlike motion.

Some persons have most erroneously, though probably unintentionally, advanced theories endeavouring to show us what purpose these caudal movements serve. They have told us that when the Wagtail jerks his tail it is for the purpose of disturbing the insects around him, just as the cows lash their tails to drive away the troublesome flies ; with this difference, however, the Wagtail disturbs them for the purpose of preying on them, and the kine for the purpose of driving them away. Now let the young naturalist observe the Wagtail, it matters not of what species, and he will find that these tail-jerking motions are present even if the bird is not in search of food ; besides, a bird possessing such keen powers of vision does not require to hunt with his tail for sustenance. Did this little volume treat with the anatomy of birds, it would be an easy task to show the cause of these tail-jerking motions ; but it will suffice to say that these motions, and the extraordinary length of tail found in this family of birds, goes far to aid in preserving the equilibrium of the bird.

The Yellow Wagtail is an associate with the cattle. We see them running round them, under their bellies, or even within a few inches of their mouth, and yet the cattle view them not as enemies, nor attempt to drive them away, for it would seem they know full well what service they derive from these little songsters. Insects innumerable torment them, and the Yellow Wagtail is busily employed ridding them of their pests. Now with a short call note they launch into the air, to secure an insect, and then with dainty motions run nimbly forward to capture an unlucky beetle. They are not at all shy, and, provided you advance with caution, you can approach and view their actions when but a few yards away. When the ground is being ploughed in early

spring the Yellow Wagtail is at hand, running nimbly up and down the furrows, catching the insects and feeding upon the small worms and beetles. You may see how trustful he approaches when the ploughman rests his horses, as if aware that man looked favourably on his actions ; and when work is again renewed the Wagtail flies in drooping flight for a few yards to the rear, and with a few rapid beats of the tail again commences his insect and worm-hunting labours. I have often observed, but cannot say whether the habit is general, that the Yellow Wagtail invariably, or nearly so, utters a short jerking note upon taking wing, and the Pied species only does so occasionally. The Yellow Wagtail is not of a wandering disposition, and, once in a pasture, is but rarely seen far away throughout the summer.

The Wagtail pairs annually a little after his arrival in the vernal season, but the nest is not commenced for some considerable time ; indeed, he is one of our latest breeding birds. Unlike the Pied species, the Yellow Wagtail prefers open sites for its nest, at the foot of walls, amongst deep grass, and sometimes down the hedgerow sides. It is made of dry grasses, 'twitch,' a little moss, and lined with fine grass and hair. The eggs, four or five in number, are dirty-white, with light and dark brown spots and blotches : some specimens are more highly coloured than others. In the breeding season the Yellow Wagtail is occasionally heard to sing. At times far between is his melody given forth. No morning or evening lay escapes from the Wagtail, and his notes are uttered seemingly in sudden outbursts of gladness. Suddenly, and as it were by resistless impulse, he soars from the meadow grass, and, fluttering in the air, warbles a delightful strain and alights, probably

to remain silent for days ere another thrill of gladness causes him to carol forth anew. When the young can leave the nest they still keep in their parents' company, and seldom stray far away from their native pasture until the time of migration arrives.

Early in October, and before vegetation assumes the lovely tints attendant with that month, flocks of Yellow Wagtails are often seen, sometimes as many as twenty or thirty individuals, but for the most part young birds. The varied song of the old males is now never heard, and the birds, that is most of them, are preparing for a southern flight. We miss them suddenly, and though a few specimens are from time to time seen throughout the winter, still the main body have sought a southern clime.

Before bidding this graceful group of choristers adieu, I will say a few words in respect to their habits of perching on trees—a motion denied them by many naturalists. Here the Wagtail, no matter of what particular species, though its food is obtained on the ground, or when coursing through the air, may be seen daily resorting to the trees for rest, and from their branches he oftentimes pours forth his varied song. Yet at nightfall he repairs to the ground to seek repose. The foot of the Wagtail differs not in general form from any of the feet of the extensive order of perching birds, and methinks the bird's semi-terrestrial habits have led many persons to believe the Wagtail a bird unable to perch. Did his food frequent the trees, or did those lovely sylvan ornaments abound in the open pastures, you would see the Wagtail far up their branches as frequently as the Pipits. And these remarks apply not to one member of this active family alone, for there is not a Wagtail in Britain, no matter of

what species, that is not able to perch with comfort on the most slender branches, and does so repeatedly ; yet, notwithstanding, the true haunt of the Wagtail is on the ground, and there he is most frequently found, because the conditions of his existence require it.

THE TREE PIPIT.

IN the fresh and vernal month of April this sprightly species is seen in his summer haunts. While the barren moor has its charms for the Meadow Pipit, the Tree Pipit delights in the richest pastures, on the borders of woods, and seldom far from trees, his partiality to which gains him the name 'Tree' Pipit. Of all the lovely singing birds that annually visit us in spring, perhaps the Tree Pipit is most often heard. He chooses for his station the topmost branches of a tree, it matters not if it be oak, ash, elm, or beech; nor does the height of the tree at all affect him. Thus, when all Nature is smiling in the varied beauty attained under the influences of the vernal sun, and all creatures seem overflowing with gratitude to their Creator, the Tree Pipit sings his loudest. We see him, probably on the withered or storm-blasted top of a lofty tree, his slim sprightly form telling out in bold relief against the azure vault of heaven, after remaining motionless for a few moments, launch into the air, and on fluttering pinions mount upwards and soar far away, pouring out notes of rare beauty as he goes; then poising himself, as the zenith of his flight is reached, for a moment, he glides on motionless wings and expanded tail smoothly and evenly down with a sidelong motion—and uttering his long drawn *twee-twee-t-wee* as he comes—to his original perching place, or if he is not yet engaged in nesting he will

sometimes glide from one tree to another. And thus he continues soaring, warbling, and gliding, the livelong day, occasionally visiting the ground for sustenance, or even sallying out into the air to catch the passing insects. The Tree Pipit often warbles on his perch, but it will invariably be found that he does not utter his full song unless when on the wing. It would thus seem that aerial motions are requisite for this graceful little chorister to utter those lovely notes which we hear him warble when in the circumambient air.

By the latter end of April the Tree Pipit is found in the company of his mate, who, by the way, spends the greater part of her time on the ground. He is now a wanderer no more. Connected by the closest ties, he remains near the field destined to contain his nest until the young are strong upon the wing. The site of the nest is always on the ground, frequently in a grass field, though sometimes you will find it amongst the corn or up the side of a hedgerow. A little hole is scratched in the ground, and dry grass, moss, and hair are speedily formed into a little home. Puzzling indeed will the young naturalist find the eggs of this bird. They vary, ay, almost as much so as the Guillernot's beautiful eggs, so commonly met with on all our rocky coasts. But eggs in the same nests are similar. Should you find eggs dull white, boldly spotted and blotched with purple of different shades, all the eggs in the nest are similar; should you find eggs dark olive-green, with brown markings, none of the other varieties are observable amongst them; or if you notice eggs dull white, mottled all over with reddish-purple, the larger end being so thickly coloured as to hide the ground colour, all in that nest will be similar in tint. I have noticed, too, that the darker coloured eggs are found in dark situations, as

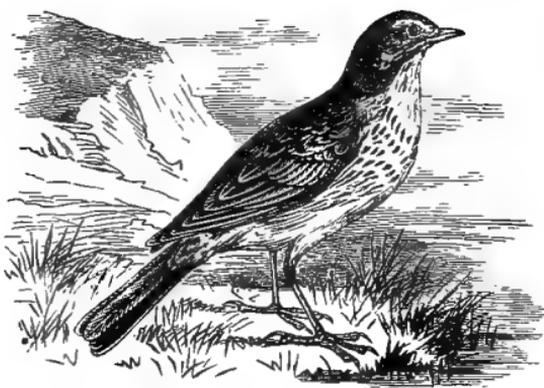
in nests under trees or by the hedgerows, while those of brighter tints are found in the barest situations, in the bright sunlight, and almost invariably in pasture fields. But whether this circumstance is in any way connected with the great variation of the eggs, I am not prepared to say.

Wary birds are Tree Pipits in approaching their nest. Deceptive motions are their protective power, at least under ordinary circumstances. You see the male bird, when his partner is upon her home, dart silently downwards into the herbage and is lost to view. Could you now observe his actions, you would find he runs rapidly through the grass and thus gains his nest unseen. The nest, too, you will find is almost buried in the surrounding vegetation, and should you come upon a nest by accident, the female bird sits quiet and motionless, crouching low over her treasure, and only quits her charge at the last moment, which she does silently and swiftly, getting out of sight as soon as possible. The male bird during the whole period of incubation goes but little way from the nest. He chooses some convenient tree near his home, from which he sings the day throughout, and which he uses as a ladder into the air, flying down from it to feed his mate, and using it always as the starting point of his soaring flights. He roosts on the ground near the nest; and when the young are able to fly, and at liberty to repose in any suitable place, both young and parents are never known to roost anywhere but amongst the herbage on the fields. I am of opinion but one brood is reared in the year.

When the young are able to fly they keep in their parents' company, but not throughout the season, for in August Tree Pipits are invariably flushed off the grass fields in pairs, or solitary. Upon the ground the Tree

Pipit is a very active bird, in manner something similar to the Wagtails, running hither and thither in search of insects, or feeding on the smaller worms and grubs. In August, when the corn is soft and milky, and, indeed, right up to the period of ripening, the Tree Pipit is seen amongst it. Formerly I was somewhat puzzled by the visits of several soft-billed birds to the corn-fields, and it was not until I had spent much time in observation, and in dissection too, that I learnt these visits were for the purpose of feeding on the corn. The Tree Pipit is one of the insectivorous or soft-billed birds most commonly found in the corn-fields, and by exercising a little caution you may see him shelling out the wheat with as much dexterity as the well-known Sparrow. Probably these birds subsist on the wheat as a fruit, and would not touch it when dry and hard, like true graminivorous birds; for the insectivorous birds so feeding on it are all known as 'fruit eaters.'

The Tree Pipit moults very early in the season, as soon as the young are fully fledged. They then, both male and female, are for the most part found on the ground. Indeed, when once the Tree Pipit has lost his notes, which he does by the middle of July, he is seldom seen on the trees, and never observed to soar in the graceful flights peculiar to the spring and summer months. The moulting season passed, the Tree Pipits tarry but for a short time, and then wing their way southwards, thus making room for the Meadow Pipits, which come down from their moorland haunts to spend the winter.



THE MEADOW PIPIT.

THIS pleasing active little songster would be far more appropriately named the 'Moor' Pipit, for it is amidst their barren solitudes by far the greater number of them delight to find a home in the summer months, only being found on the lower and more cultivated lands at a time when the wintry blasts howl dismally over their summer haunts.

As the observer wanders over the wildest moors, where the Red Grouse skims before him, and the Ring Ousel, a true bird of the wild, pipes his defiant song—where the Curlew and the Snipe rise in rapid flight from the margins of the marshy pools, and the Lapwing reels and tumbles in the air, as though cautioning the hardy observer to beware how he invades her upland haunt,—he oftentimes hears a feeble *peep-peep*, and on looking round sees an olive-coloured little bird sitting quietly on a neighbouring rock or heather tuft, eyeing him with suspicious glances, and occasionally jerking its wings and tail as though about to take flight. This is the frail

little Moor, or Meadow Pipit, the most abundant little bird on the moors around in summer, who prefers the invigorating mountain breezes and the sparse vegetation of the moor to the gentle zephyrs and arboreal haunts of the cultivated lands. Should you stroll over the moors in winter, scarcely a bird is seen, but if you postpone your visit until the smiling month of April, you see them on every side, on the walls, the bushes, the boulders of rock, or flitting uneasily over the heathery wastes, the male birds ever and anon sallying into the air and uttering their pleasing varied song as they return to their perch in the same manner as the Tree Pipit. But pause for a moment and observe the bird closely, and you find that the Meadow Pipit reaches the zenith of his flight in silence, and then as he comes gracefully down again he warbles forth his song. Another very prominent feature in the Meadow Pipit's economy is its partiality for wet and marshy places. Wherever a bit of marsh or little pool breaks the monotony of the seemingly interminable moors, there too the Meadow Pipit is invariably found. In the turnip fields and pastures, to which the birds repair in winter, if marshy places occur, they are seen most frequently on their borders. Doubtless this is owing to their food, for the Meadow Pipit subsists on animal substances, such as small worms, snails, and larvæ, much more than on insects.

The Meadow Pipit pairs very early in the season, though you will seldom find their nest before the beginning or middle of May. The site is often under some friendly tuft of herbage; sometimes you find the nest placed far under a convenient stone, or at other times it is placed amongst the reeds and rushes of a little marsh. It is largely made of the moss growing so plentifully all around, mixed with a little dry grass, and lined with

a few hairs, sometimes only with fibrous roots. The eggs are four or five in number, dull white in ground colour, where it is seen through the markings of the egg, clouded all over with brown, and sometimes spotted and streaked with dark brown. They vary but little, and are much smaller than those of the Tree Pipit. The Meadow Pipit leaves and gains her nest by deceptive motions, and upon your approach crouches low over her charge and remains silent until your foot is almost over her home. But it is seldom the domestic peace of the Meadow Pipit is broken, or her anxiety excited for her young, by the presence of man. The Cuckoo in her wanderings over the wilds sometimes pays her a visit and inserts her egg; but we have yet to learn that the bird selected by the Cuckoo views this intrusion with displeasure. The Meadow Pipit tends her young after they have left the nest, in fact the whole family sometimes keep together throughout the winter. I am of opinion that but one brood is reared in the year.

The summer passes quickly away, and the hill sides don their purple tints, an unfailing sign of autumn. The Lapwings and Curlews as the season wanes leave the bleak uplands and descend to the coasts for the winter; the Meadow Pipits, too, must retire, and they appear on the pastures in September and October. Here they go about solitary or in little parties. As you stroll over the turnip fields and grass lands you see them flying up before you, uttering their feeble and complaining notes of *peep-peep-peep*, to alight a little distance away, and again tarry till almost trod upon ere they take wing, their sober unassuming garb harmonising closely with surrounding tints. In the late autumn months by far the greater number of Meadow Pipits frequent the turnip fields, where with feeble call notes

they alight on the broad leaves and search for the grubs or insects lurking there. Sometimes in winter the little creatures are hard pressed for food indeed. When the ground is covered with a snowy mantle to the depth of many inches and frozen hard, they repair to the manure heaps, and prey upon the small flies, beetles, and worms there found. They go in little parties, sometimes alone, and what is noticed about them as strange is that, contrary to most if not all birds, they appear in a garb much brighter than the one assumed in the vernal season. In the early months of the year the Meadow Pipit appears to become gregarious for a short time. I see it in company with the spring flights of Wagtails following the plough, and have no doubt they continue in companies till they reach the moorlands and separate into pairs for the nesting season. The Meadow Pipit when in a weak and helpless condition endeavours, like many other birds, to hide itself. I have seen a wounded Meadow Pipit bury itself for some considerable distance in a snow drift and remain motionless, allowing itself to be taken in the hand without the least movement. Such is the protective instinct of the feathered tribes, endless in its forms, and each form adapted most wonderfully to the particular purpose it has to serve.

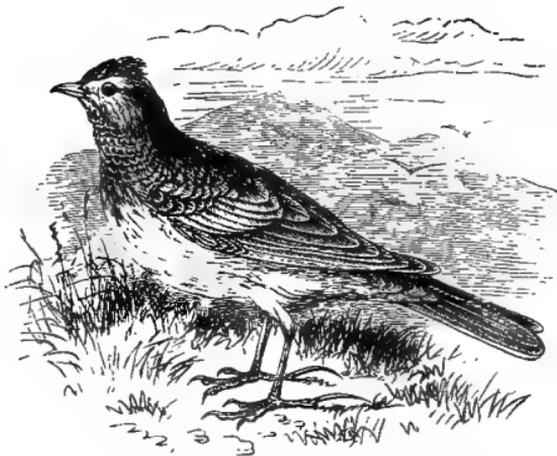
We have yet to learn why the Tree Pipit, so closely allied in every respect to its little congener the Meadow Pipit, leaves our shores for the winter, while this seemingly frail little creature, and ill adapted one would think for its cold and cheerless sojourn with us, braves all the rigours of the inclement season with apparent comfort.

Before leaving the Meadow Pipit to its moorland haunts, I would like to say a few words on migration: When the observer scans the long list of birds found in

Britain he will, supposing him to have some little knowledge of ornithology, perhaps notice that but very few species are perfectly stationary. The major part, then, are of more or less migratory habits. Some migrate to distant countries for the purpose of rearing their young ; others, though their young are reared around us, still with unerring certainty leave our shores in the autumn months. Many visit us for a short time in the winter, to escape the inclement elements in their northern haunts ; while yet again numbers only visit us at intervals long and far between, but for what purpose we are as yet in ignorance. Probably the spring migration of birds is performed for the purpose of rearing their offspring in places specially adapted to the purpose, while the autumn movements are chiefly influenced by the supply of food and the state of the elements. But in the case of the Tree Pipit and many other species these remarks will scarcely apply. We must, therefore, view the migrations of many species as requisite to the preservation of the balance of Nature and the equal distribution of the feathered tribes throughout the earth.

Thus in the far north the elements and scarcity of food drive all, or nearly all, species to temperate climes, where they can spend their winter in comparative ease and safety. But it will be seen that did no birds migrate from temperate climes, as our own for instance, birds would be far too abundant and unequally distributed. Therefore, as if to balance this great influx of birds fleeing from the rigid winter of the north, many birds in temperate climes retire still further south, to regions where an opposite season prevails to that of the country left, and where the presence of birds is needful. In the spring the northern birds retire northwards, and the temperate birds leave their southern haunts, now

parched and untenable, to fill their place. In temperate climes many birds which migrate are not absolutely compelled to do so by food and weather—the Wagtails, Pipits, and Thrushes, for instance—and therefore I am bold enough to hazard a conjecture that the migrations of birds in temperate regions, though they *may* in some cases be influenced by food and climate, play an all important part in the delicate and infinite mechanism of Nature's balance.



THE SKYLARK.

THE Skylark shares the fields with the Tree Pipit, and also inhabits the wild pastures bordering the moorland. Indeed the Lark is very partial to the most elevated pastures, oftentimes shunning the sheltered valleys, and remaining on certain elevated districts throughout the year. I find that the Lark is rather peculiar in its choice of a haunt, sometimes inhabiting certain districts in great plenty, while other localities, differing in no perceptible degree, are but thinly tenanted or abandoned altogether. This is probably owing to the abundance or rarity of certain plants on the seeds of which they feed.

The song of the Skylark is heard early in February, which by the way is their mating season. Few things conduce more to the beauty and peaceful harmony of the fields than the love song of this aerial chorister. By the first streak of dawn he bounds from the dripping

herbage, and on fluttering wing mounts the air for a few feet, ere giving forth his cheery notes. Then upward, apparently without effort, he sails, sometimes drifting far away as he ascends, borne as it were by the ascending vapours, so easily he mounts the air. His notes are so pure and sweet, and yet so loud and varied withal, that when they first disturb the air of early morning all the other little feathered tenants of the fields and hedgerows seem irresistibly compelled to join him in filling the air with melody. Upwards, ever upwards, he mounts, until like a speck in the highest ether he appears motionless ; yet still his notes are heard, lovely in their faintness, now gradually growing louder and louder as he descends, until when within a few yards of the earth they cease, and he drops down like a fragment hurled from above into the herbage, or flits above it for a short distance ere alighting. Though the Skylark warbles throughout the spring and summer with unfailing powers, still it is in the glorious freshness of the vernal year, when all nature is putting on its refreshing sweetness, that I prize his notes the best. For though the Cuckoo proclaims the presence of spring from the budding branches, and the Blackcap sings of leafy bowers, still the Skylark is one of the *first* little choristers to inform us that winter is already vanishing away before the soft and gentle advent of spring. I would here remark that the Lark's soaring flights are not at all necessary for the utterance of his charming song, for he will sing just as richly on the ground as when on quivering wing. His song is also uttered as he wanders hither and thither in search of food, but it is not perhaps so free as when the bird is in the vault of heaven. The observer will find that there is a considerable difference between the songs of those birds who sing whilst in motion and the songs of birds who

sing from a perching place. The song of the former, as a rule, is more uneven and varied, and as it were speaks of motion, as, for instance, the song of the Wren, the Swallow, and the Skylark; while the latter is more tame and even, as the love song of the Bunting or the tuneful warblings of the Blackbird. When the Lark is in song he is a good guide to the weather, for whenever we see him rise into the air, despite the gloomy looks of an overcast sky, fine weather is invariably at hand.

As the nesting season draws nigh, the Larks spread themselves here and there over the surrounding grass lands for the continuation of their species. The nest is most frequently in the mowing grass fields, sometimes amongst the young corn, or even by the wayside, in places little frequented. It is made of dry grasses and moss, and lined with fibrous roots and a little horsehair; and the eggs, four or five in number, sometimes only three, are dull white, spotted, clouded, and blotched over the entire surface with brownish-green. The female Lark, like all ground birds, is a very close sitter, remaining faithful to her charge until almost trod upon by the wanderer over the grass lands. The manner the Lark regains her nest, too, shows us that she practises deceptive motions as a protective power. You see her drop silently into the herbage, and by a previous knowledge of her habits you are aware her nest is far away, probably a hundred yards or more from the place of her descent. The male Skylark is seen more frequently in the breeding season than at any other time of the year. It is music that sends him into the gaze of every observer taking the trouble to find him in the sky, and that music may be the result of love, or for the purpose of cheering his mate on her lowly nest, or even for the purpose of

adding greater charms to the smiling face of Nature around. We know not which, if any of these causes be the right one, for all the information we can glean from the subject is from inference. Would that some chattering Magpie could gain her long lost powers of speech, and give us a few hints on this puzzling subject. After the young have gained the use of their wings, they are abandoned by the parent birds, who very often have another brood before the autumnal moult takes place in August. Yet as far as I can learn the second brood are abandoned as soon as matured, and the Lark, though occurring in plenty all around, appears as a solitary species.

The Skylark loses his charming song in the autumnal moult, never to fully regain it until the following spring, though we sometimes hear a solitary specimen in the waning days of autumn, or on those calm and tranquil days that so greatly help to break the monotony of a long and cheerless winter. By the first appearance of winter, even as early as October, or more often when November's blasts herald its approach, the Skylark shuns its solitary life, and becomes a gregarious species, to remain so throughout the winter. Districts most favoured with their presence are the stubbles sown with clover and the wild weedy pastures. Here, as the observer wanders on, the birds fly from under his feet and all around him, uttering a musical note as they rise and speedily unite into one flock, when, after wheeling about in the air for a time, they again alight in another part of the cover. Upon alighting the Lark stands erect and glances suspiciously around, ere it nestles down amongst the herbage. Here the sombre colours of its plumage harmonise so closely with the surroundings, that, once nestled, it is comparatively safe, and will

seldom or never rise until closely approached. Seldom indeed, if ever, will the observer notice the Lark perch on a tree or hedgerow. I have seen them alight on trees, but only in one or two isolated instances. But this, however, shows us that though the Skylark is terrestrial in its habits, its feet are capable of firmly grasping a bough or twig, notwithstanding the surprising length of the hind claw—a peculiarity, by the way, common to but few birds. I have reason to doubt that the Woodlark, and even the Tree Pipit, are often set down as Skylarks, and looked at with surprise when seen to alight otherwise than on the ground.

The Larks roost on the ground, but seldom close together, and will continue to use certain grounds for the purpose despite the presence of man. Indeed, so attached is the Lark to its favourite haunts, that it can seldom be driven away. If fired at it merely rises, and after wheeling round in the air again alights, or if driven away at nightfall, it is sure to be on its favourite lands the following day. The food of the Lark is varied : in spring and summer, insects and their larvæ, and worms and slugs are preyed upon ; in autumn and winter, seeds form their chief support, very often of the most troublesome weeds, which if left would cause the smiling pastures to become nothing but useless and weed-choked wastes. The newly sown corn lands are also visited, and sometimes in early spring you see them on the fallows in company with the Wagtails. When the ground lies deep in snow the Skylark has often to wander in search of food, but always unerringly returns to its former haunts at the approach of milder weather.

The Skylark is held in high repute by the bird fancier, but to me his notes in confinement sound as a mockery of Nature. To cage a bird of the Skylark's

habits seems cruel indeed. I always look with regret upon any of the feathered tribes when caged, and on none more so than the Skylark, when I see it endeavour to soar and warble as if in the height of its freedom. To reflect what liberty this poor little chorister has lost, and that a space a few inches square should enclose one whose liberty knew no bounds, makes me sad. Poor little chorister, though your melody seems a joyful one, yet my heart feels sorry for thee, and I would infinitely like to see thee restored to all the freedom of thy aerial celsitude.

THE YELLOW BUNTING.

OF the many gaily dressed birds which frequent our fields and hedgerows, few are dressed more splendidly than the Yellow Bunting. A bird of the fields and woodlands, we find him round the hedgerows, on the borders of woods and shrubberies, on the highways, in the fields and gardens, on the borders of the moors, and occasionally far on their barren wastes. There are few hedgerows without the Yellow Bunting, and where the hedges are wanting we find him on the trees and walls. On the outskirts of the moors, too, we see him perched on the stunted bushes or rocky boulders, and his short and monotonous song, and still more monotonous call notes, break the stillness of the solitudes around. Like most birds known as Finches, and whose food consists for the greater part of seeds, the Yellow Bunting resides with us the year throughout. He is a bird easily recognised by his canary-coloured under parts, rich brown back, and yellow crown. When in motion the white feathers in the tail show themselves. His call notes, too, are harsh and monotonous, and most frequently uttered when he is at rest. The tail also is continually jerked with a slow and regular motion. A little after the vernal equinox the Bunting commences to sing. Perched on a hedgerow, wall, tree, bush, or sometimes on the ground, he will sit and sing, if not disturbed, for a con-

siderable length of time, being answered by the other Buntings in the neighbourhood. Monotonous as are the love notes of this little songster, still they always sound pleasant to the ear after the dull dreary time of winter. Then, too, they are heard at a time when few other songsters warble, and even as the season rolls on, and all the feathered host unites in song, his notes form a part and variation by no means to be despised. He is also one of the latest birds to sing, for autumn reigns in peaceful beauty, and the greater part of Nature's minstrels have ceased their warbles, long before his notes decline.

We find in most birds, from the Falcon to the Dove, that in the mating season the male birds are more or less pugnacious. The Yellow Bunting, being a species that pairs annually, is no exception. Thus, early in April, when all the males are in full song, we often witness combats between rival males for the possession of a female. Fiercely they fight, pursuing each other with the utmost fury, their feathers bristling, and their whole form swelling with rage and passion, until, finally, the stronger repels the weaker, and celebrates the event with a song seemingly louder and fiercer than before. Once paired, however, these combats cease, and the Yellow Bunting becomes as gentle and harmless as any of the feathered race.

Though the Yellow Bunting pairs so early in the season, a month or even more elapses ere we find its nest. The site chosen is a varied one; round the hedgerows it is seen amongst the tangled herbage; oftentimes too upon a bank, or under the shelter of a bush. Though most frequently found on the ground, still it is occasionally built in the smaller shrubs. A favourite place is amongst nettles and other rank vegetation growing on waste grounds: but wherever the site be

chosen, the nest is invariably well concealed. It is made of dry grasses and a little moss, and lined with fibrous roots and horsehair ; and, what is rather remarkable, will lie completed for several days ere the eggs are deposited. The eggs are four or five in number, purplish-white in ground colour, streaked, spotted, and dashed with deep brown. In respect to British eggs, the young naturalist can seldom, if ever, take the egg of a Bunting for that of any other bird. It is only amongst the Bunting family we find these streaky eggs, appearing as they often do as though some one had scribbled and streaked with a pen over their entire surface. Many of the lines are fine as the finest hair, while others are bolder, all being mixed up together in endless confusion. With most, if not all birds, if the first egg be taken from the nest, they will still continue laying in the nest until the full number of eggs be laid. This is the case with the Bunting. Nay, more ; you may remove the nest itself, still the old bird forsakes not the place, and continues laying egg after egg on the bare ground until the usual number is deposited. But the moment that is done she abandons the place for ever, and by no strange circumstance will she incubate them on the ground. When you approach the Bunting's nest the parent bird crouches low over her treasure, and silently awaits the success of her protective designs. If compelled to leave her home she does so in a silent manner, though sometimes when a little distance away she will try to gain your attention by various alluring motions.

It is when the Bunting has a brood of hungry young that the birds amply repay us for their inroads on the corn-fields and seed-beds. Indeed, this will apply to all the Finches, for there is not one amongst them that feeds its young on seeds. Insects and their larvæ form the

Yellow Bunting's food in the summer months. They will bring to their nest a caterpillar or insect every few minutes ; and when we bear in mind that their young are fed twelve hours a day at least, the quantity of insects consumed even by one family of birds is amazing. At other times of the year seeds form their chief support ; but though they are seen feeding on the newly sown lands in company with the Rook, we must not forget that seeds of noxious plants, both to farmer and gardener, are consumed. Though we see them feeding on the seed-beds in the gardens, we must bear in mind that if they do take a few of the seeds they are one of the chief guardians of what is left.

In the winter months the Yellow Bunting is seen on the naked hedgerows and surrounding fields, searching for sustenance in company with the Chaffinch, the Greenfinch, and the Rook. When disturbed, instead of rising simultaneously like Rooks or Starlings, they fly off in little parties, or even singly, and after wheeling about in the air in jerking flight, finally settle on the neighbouring trees or hedgerows, and wait until the danger is passed, when one by one, or in little parties, they return to their food-seeking labours. In the keenest weather, when the lands lie inches deep in snow, and the hedgerows are decked in dazzling whiteness, you see the Buntings, gregarious at this season, in the farmyards, clinging to the corn-stacks, or picking a scanty sustenance from the manure heaps, in company with the Chaffinch, the Dunnock, and Cock Robin. You also see them hopping round the barn door, or fluttering round the threshing floor, showing no alarm for the sturdy blows of the flail. Hunger is a stern command, and even the most shy and timid birds must bow before it. The Yellow Bunting is very probably a migratory bird, for in the winter months

they are often seen in more than double their numbers of the summer months.

When the icy hand of winter has shorn the greater number of trees and shrubs of their leafy covering, the Bunting seeks shelter in the branches of the evergreen. Nightly you see them enter its dense and impenetrable foliage, and after a twittering concert settle down to undisturbed repose. I think few things are more interesting in the study of animated nature than to observe the actions of birds at the close of day. Then, too, the particular time at which they seek repose strictly harmonises with their habits. We find in winter that seed-eating birds, as the Bunting for instance, retire early to rest; while insect feeders, as the Robin, and feeders on animal substances, as the Redwing, only seek their roosting places when night wraps all things in her gloomy mantle.



REED BUNTING.

*THE COMMON BUNTING AND REED
BUNTING.*

THERE are two other members of the Bunting family which the observer will probably notice in his wanderings, namely, the Common Bunting and the Black-headed or Reed Bunting. The former bird is much rarer than the Yellow Bunting, and inhabits the corn-fields, also the lands bordering the moors. It has not anything particularly striking in its appearance, being dressed in a garb something similar to the Skylark, but it claims merit as being the largest Bunting found in Britain.

In the spring time and indeed throughout the summer the Common Bunting is for the most part seen in the neighbourhood of corn-fields, either clinging to the stems of herbage swaying about in the breeze, or perched on the hedgerows and walls, the male uttering a few notes, which, given many times in succession, comprise his only attempt at song: still, crude and monotonous

as they are, to the ear of the lover of animated nature they prove ever grateful. When the bird is engaged in song, provided you advance with cautious step and slow, you may succeed in getting quite close to him, and observe him minutely. I would here remark that when a bird is singing, though it be a shy and retiring species, it will admit of a much nearer approach than when silent. I have advanced within a few feet of the shy and retiring Blackbird when singing, simply by advancing when the bird was pouring out his song, and remaining silent and motionless between each snatch of melody.

The Common Bunting pairs annually, rather later by the way than the Yellow Bunting, and its nest is seldom commenced until the latter end of May, when the spring corn affords it plenty of seclusion. This bird has seldom been known to build a nest otherwise than on the ground. We may find the Yellow Bunting's abode some feet above it, but rarely indeed do we see the home of its larger congener in such situation. It is often placed in the middle of the field, or often but a few yards from the hedge, sometimes down the hedge-row side, under a spreading bramble: it matters little. The nest is made of a few straws taken from the manure with which the field was spread, and grasses, and lined with fibrous roots and a few horsehairs. The eggs are from three to five in number, and of course much larger than the Yellow Bunting's, otherwise they very closely resemble them. When you approach their nest the parent birds become very anxious, flitting from spray to spray, or wheeling round you in the air; but these motions are only observed after their silent protective wiles have failed, for the Bunting is a close sitter, and will allow you to almost tread upon her ere she rises.

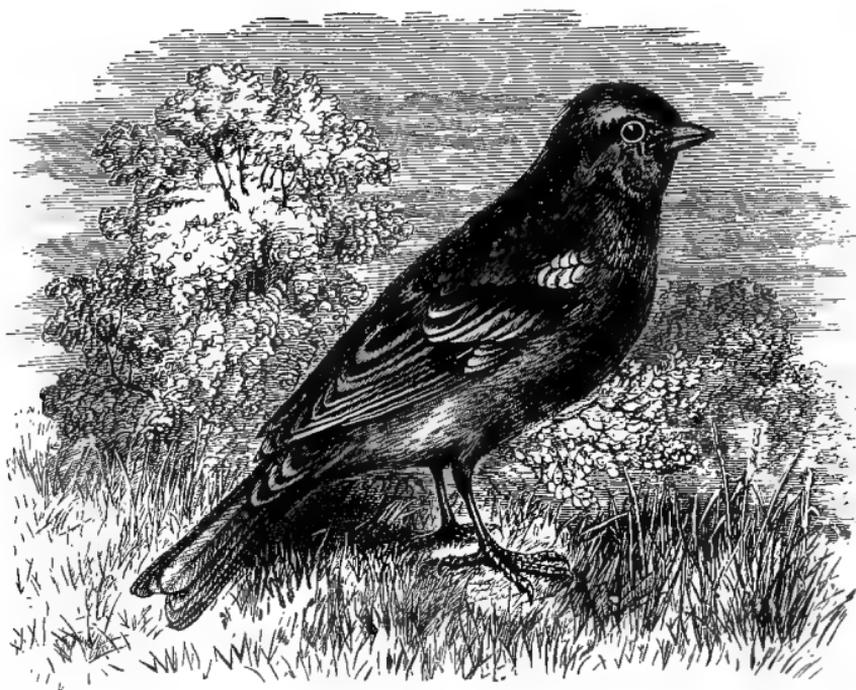
Like all Buntings, the Common Bunting subsists on various seeds, and in the summer months on insects and larvæ. Like its congeners, it becomes partially gregarious in the winter months, and is often seen in the company of Yellow Buntings, Greenfinches, and Larks. In the corn-fields, when the grain is almost ready for the sickle, we often see the Common Buntings alight on the straws, and bending them down by their weight, feed on the grain unobserved. Noxious seeds are also consumed and many a smiling acre owes its fertility to these birds, who ravenously feed on these seeds, which if left would speedily convert the surrounding fallows into tangled weedy wastes.

When the wintry floods have subsided, and the showery month of April calls all things into vigour, as we wander on the banks of the river or canal, where the rushes and waterflags bend and sway in the vernal breeze, and the surface of the water ruffles under its gentle breath, we sometimes see a bird, or most frequently a pair of them, the male dressed in a garb similar to the Yellow Bunting, but with a jet black head and white collar, and the female much more sombre, without the black head, and the under parts much lighter coloured. These little choristers are Reed Buntings. See how the male bird perches as high up yonder rush stem as possible, and with tail jerking quite as frequently as the Wagtail pours forth a few pleasing notes. Short and somewhat monotonous as they are, still they are his love song, and his more shy and retiring mate no doubt experiences the same degree of pleasure from them as the female Nightingale does from the lovely trills of her mate. As we wander on, the birds flit before us in undulating rapid flight, now alighting on the reeds or on the sprays of the bushes skirting the stream, and then

with a low sweeping flight over the water returning to their old haunt.

Though in winter the Reed Bunting quits his marshy haunts and is seen in company with other grain-eating birds, still when the vernal season once more arrives he leaves the ricks and the pastures and returns to the waterside in company with his mate, for the purpose of continuing his species. The nest is snugly placed in a reed tuft or under a friendly bush on the margin of the waters. When in the reeds, however, it is never found suspended to them, like the Reed Warbler's abode, but always right down in the centre of the tuft. It is made of coarse grass, reeds, and sedges, and lined with fibrous rootlets and a few horsehairs. The eggs are four or five in number, dull white, streaked, spotted, and speckled with deep purplish-brown: some eggs are more clouded and less streaked than others, while many are almost plain. When you wander near the nest the ever watchful male bird will oftentimes endeavour to draw your attention to himself by fluttering apparently helpless before you; but the female bird remains quiet and motionless on her charge, and only quits it when her treasure lies at your feet.

In the spring and summer months the Reed Bunting's food consists of insects and larvæ, like that of the other members of the Bunting family; but when the seeds of the rushes are ripe, we see them clinging to the stems, almost bent double by their weight, and with tail jerking quickly extract the seeds. Grass seeds and the seeds of weeds are also eaten, and in the winter months we sometimes see them on the common in company with Linnets, on the clover fields with the Larks, or even in the farmyards with Sparrows, and on the highway or pasture with the Chaffinch and Yellow Bunting.



CHAFFINCH.

THE CHAFFINCH AND BRAMBLING.

THE Chaffinch is another little chorister decked out in gay attire, and well known, too, for there is scarcely a hedgerow, garden, wood, coppice, or shrubbery, that does not at some time of the year contain Chaffinches in abundance. You may easily recognise him by his monotonous cry of *spink-spink, spink-spink-spink*, the more frequently and loudly uttered provided you are close to his nest.

By the first week in March, when the pale primroses are peeping from under the withered leaves, and the hawthorn shows the first signs of its coming vesture, we

hear the love song of the Chaffinch. Though short and even monotonous as compared to the melody of the Song-thrush, still there is an indescribable freshness and sprightliness about it, and its loud ringing tones seem to fill the air and the woodlands around with gladness. When we hear his enlivening notes in the vernal year we know he is inviting a female to join him for the coming breeding season, and we hail his melody as one of the first signs of coming spring, and prize it accordingly, for at a time like this the slightest warning of the change of season is welcomed with the keenest delight. The Chaffinch sings incessantly from the beginning of March till the middle of July, when in the autumnal moult his voice is lost until the following spring. Sometimes, however, the Chaffinch is heard to sing after recovery from the moult. The 24th of September 1878 was one of those calm tranquil times that so often mark the waning year—one of those evenings when all Nature seems lulled to rest after the vigorous activity of the spring and summer. As I was pausing to admire the calmness of all Nature around me, my ears were suddenly greeted with the love song of the Chaffinch, given forth as loudly and sweetly as in the vernal season. He sang but once, and though I lingered long, his bewitching notes were heard no more. Perhaps the old proverb, 'One Swallow does not make a summer,' may be urged in this case; but then he sang again the following month, and I have not a doubt but what he sings at intervals throughout the autumn months, although, notwithstanding, the occurrence is certainly a rare one and worthy of record. This gives me a somewhat convincing proof that birds which moult early in the year regain their lost melody, probably owing to the genial weather at the time they have completed it, for I am convinced that the song of birds is

influenced by their temperament. Thus the Robin and Wren moult early in the season ; so, too, do the Starling and the Thrush. Now all these birds sing more or less frequently throughout the winter, but the Bunting and Meadow Pipit and Chaffinch moult later, and consequently are seldom if ever heard to sing until the following season. All birds, therefore, which moult late begin to feel the cutting blasts of Boreas ere they are in a fit state to sing, and therefore never do so till the return of spring, or at most on those calm and genial days which so often occur throughout the winter months. Besides the song of the male in the breeding season, we also hear him utter a sharp call note something like that of the Willow Warbler, only very much louder and not at all plaintive. This note, as far as I can learn, is common to the male alone, and only uttered in the pairing and breeding seasons.

Throughout the cold and windy month of March, the Chaffinch, though he frequents the hedgerows in plenty during the day, is seen at nightfall in the shrubberies, seeking the yew tree's shelter for repose. If the days are cold and cheerless, we invariably find them in amongst the evergreens, for I notice that with all birds the colder and more ungenial the weather the more they flock on low lying and sheltered lands, and seek in the shelter of shrubberies a refuge from the elements. But though the Chaffinch in winter prefers to frequent the shrubberies, still in summer he loveth the fields the best, and amongst the evergreen's verdant branches I but seldom find his nest.

Although the Chaffinch pairs early in March, we but rarely find its nest fully completed before the second or third week in April. The nest is as varied in its situation as its little owners are in their distribution. We

see it on the orchard tree ; placed in some convenient crotch in the hedgerow ; far in the solitudes of the birch woods, on some lichen-covered branch ; or some fifty feet or more up the branches of the oak or elm. Then, too, we sometimes find it in the spreading yew tree ; frequently amongst the branches of the holly and white-thorn ; and more rarely in the prickly branches of the gorse. I once found a Chaffinch's nest on the banks of the river Derwent, in amongst the frowning hills of the wide-famed Peak. It was built on the side of a wall bordering the river, and was under a tuft of grass growing from the wall. The materials of the nest were so closely woven with the tuft of grass, that other support it did not require : indeed, no further support was available, and the nest hung suspended over the roaring stream. It contained five eggs, and the female bird was sitting quietly upon them.

The Chaffinch probably takes more time to build her snug little home than any other British bird, save, indeed, the Long-tailed Titmouse. We visit it day by day for nearly a fortnight ere we find it ready for the eggs. First the outside framework, made of rootlets, moss, and grasses wove beautifully together, and further strengthened with cobwebs and lichens, is completed ; then the inside has to be lined with a thick and soft bed of hair and feathers and the down of various seeds. Were we to stay near the place during the whole period the nest is being made we should probably never see the male bird do any of the nest building. He, however, brings the greater part of the materials to his mate, who receives them, and, unaided, weaves them into the structure which, in our ideas of beauty, is a matchless piece of handiwork.

Mimicry is the Chaffinch's most frequent form of protective instinct. Wherever we find the Chaffinch's

nest we see an example of her protective power. On the lichen-covered trunk lichens dot the walls of her abode; in the holly bush green moss is used instead; while against the trunk of a tree spiders' webs are used. I would here again remark that a bird has not the least idea that its nest will be plundered, and it is not forethought that influences them in making those various provisions for the present or future welfare of their eggs and young which we class as protective instinct. The Chaffinch, as is every other bird, is perfectly unconscious of the good she is effecting when covering her nest with lichens to assimilate it to the lichen-covered branch that supports it. But urged by the power we term instinct, planted within her by her all-merciful Creator, she does so, unconsciously, it is true, but in an effectual manner. The Chaffinch is an anxious bird when building, and should you intrude upon her when so engaged, she and her mate fly hither and thither, and course over the branches, making the air resound with their monotonous call notes, seemingly speaking of anger and alarm, for the Chaffinch shows more anxiety for its uncompleted nest than probably any other bird we meet.

The eggs of the Chaffinch, four or five in number, sometimes even six, are pale bluish-green, spotted with deep purplish-brown, and occasionally streaked with the same colour. Some specimens have all the colouring matter collected in a mass on the larger end, and others are entirely spotless. The female bird is the one who hatches the eggs, and she is fed assiduously by her mate, and her long dreary task is made light and pleasant by his bright and vigorous notes close at hand. While sitting on her nest I sometimes see her catch the insects flying near. I have never yet found the egg of the

Cuckoo in the Chaffinch's nest, still the female Chaffinch will hatch the eggs of other species. I once made a Chaffinch hatch four eggs of the Dunnock, and I have no doubt the old birds would have reared their strange brood if the nest had not been destroyed.

When the young are fully fledged they appear to be abandoned by their parents, but in the month of November Chaffinches congregate in flocks and continue partially gregarious throughout the winter. I would here make a few remarks on the separation of the sexes of these birds in the winter months. This singular separation does not, as far as I can learn, take place in resident species, or, at most, in very limited numbers, for our resident birds are to be seen in company the winter through. In November, however, vast flocks of Chaffinches appear, notably in the beech woods, whither they go to feed on the mast, and what is strange about them is they are all or nearly all males. These Chaffinches are not the birds who remain stationary with us throughout the year, but I am led to conjecture that they arrive from the north. A little later in the season quantities of female Chaffinches arrive, and frequent the corn lands in company with other Finches. Thus we see that the migrations of the Chaffinch are not confined to the male alone, but the sexes separate to perform them, owing no doubt to the higher susceptibility to cold in the male birds causing them to leave before the females; for after they have been here some little time both sexes are seen in each other's company. I always notice, too, that in the severest winters female Chaffinches are most numerous, the male birds doubtless being much further south in a warmer atmosphere.

In the summer months the Chaffinch is an insect feeder, but at all other times seeds and grain form his staple sustenance. The Chaffinch is sometimes seen

obtaining insects in the same manner as the Flycatcher, launching itself into the air, and after a short fluttering flight returning to a perching place. In winter he is often seen on the highway, searching amongst the manure for grain and insects; we also see him about the farmyards, on the corn-stacks, feeding in company with Sparrows and Buntings. In the autumn he is found in the beech woods, of the fruit of which tree he is passionately fond, and to the newly sown lands he often repairs to feed on the grain. Few birds, indeed, contribute more to the beauty of a wintry landscape than the Chaffinch, especially where the evergreen grows in profusion, for there he is seen in largest numbers, and where, after spending the short winter's day on the neighbouring fields, he retires to rest amongst its perennial branches.

When the Brambling or Mountain Finch arrives in November much of his former beauty has disappeared. His black plumage is mottled with a rusty hue, and his breast is not so bright a red as when he donned it for the nuptial season. Still, in beauty he forms no mean rival to the Chaffinch, and yields the palm to but few of our resident choristers.

Once arrived in a locality, the Bramblings seldom quit it, provided food and shelter can be obtained, until the returning spring sends them in the direction of the polar star. They are a tame and confiding little species, if not continually molested. When disturbed, they do not all take wing at once, but in little parties. As they fly from the observer their white plumage contrasts richly with their other colours. When seriously alarmed and compelled to take wing, they invariably take refuge on the tree tops, where, packed close together, they keep up a twittering concert and take but little notice of an intruder. In midwinter the beech woods

are an animated scene in those districts favoured with the Brambling's presence. The birds are fond of the beech mast, and we see them in all directions searching for the coveted nuts, all the time keeping up a Babel of cries. The husks are falling in all directions, as in the branches overhead the nuts are ejected ; some of the birds are feeding on the nuts strewing the ground ; while many are sitting on the underwood, their wants supplied, and twittering merrily. They are also fond of the various seeds found in woods, plantations, and shrubberies. Manure heaps, too, are visited for various kinds of animal substances, as worms and grubs, as are also the newly manured fields for the same purpose, for Bramblings seem to have a special liking for animal food. Every evening the Brambling may be seen in company with the Redwing, seeking safety and repose amongst the ever-greens. Chaffinches are in their company, too : indeed, the Chaffinch very closely resembles the Brambling in its habits in winter time, and wherever we see the Brambling we may rest assured Chaffinches are not far away.

The Brambling stays but a short four months with us, and as soon as the first signs of approaching spring appear they leave us to retire northwards for the purpose of rearing their young. In the vernal season I am always on the look out for any Bramblings that, tempted by the seclusion of their haunt and abundance of food, may have tarried here instead of journeying northwards with their congeners, but hitherto my search has been fruitless ; and I draw the conclusion that some grand end is gained by these birds retiring northwards, and which it is imperative they should follow.

Of the Brambling's habits in the nesting season I know nothing ; but the egg, judging from one in my own possession, is slightly larger than a Chaffinch's egg, and more boldly marked.



TREE SPARROW.

THE
HOUSE SPARROW AND TREE SPARROW.

THE House Sparrow is, strictly speaking, the only bird attendant on man. Though the Robin will frequent our thresholds in winter time, still, when once his accustomed food becomes plentiful, he retires to the seclusion of a woodland haunt. Though the Swallows course round our houses in spring and summer, still they show as much attachment to the wild as man's habitation. Though the Flycatcher will sit in moody silence on the trees bordering our windows, still he loves the forest glades equally as well, or even better. But the House Sparrow, like the Hanoverian rat, finds food and shelter wherever man dwells, and prefers to live in his society far better than in the richest pastures or woodlands. In the crowded streets we see him as much at home as round the country cottage; amidst the whirl and confusion of the railway station he lives as happily as in the

peaceful farmyard. If man emigrates into the wild, the Sparrow goes too, subsists upon his bounty, and rears his young in safety under his roof-tree. In fact, wherever we hear his merry chirp, or catch a glimpse of his pert little form, we may rest assured that human habitations are not far away.

Unlike all or nearly all birds of the Finch tribe, the House Sparrow is gregarious at all times of the year; and what is more interesting, we have every reason to suppose the Sparrow is a life-paired species, as every season we find their old nests tenanted. The Sparrow may be found breeding throughout the spring and summer, and in some instances the winter too. I have known their nests contain newly-laid eggs in December. Their chief breeding season, however, is in April, May, and June, and during these months we sometimes hear the male bird utter his love song. Many persons, accustomed as they may be to live surrounded by Sparrows, have never heard his song; and this is not at all surprising, for he only utters it at rare intervals, and then in tones low and soft. The song itself is merely a few twittering notes, some of them sweet and soft, others loud and harsh, and differs but slightly from the song of the Greenfinch.

Sparrows build in societies, like Rooks, or singly, as circumstances permit, the abundance or scarcity of nesting-sites influencing them in this matter. When the Sparrow builds its nest in a tree the structure is domed: it is also domed when placed in an old Magpie's nest, or in the crevices of the Rook's nest, for both these situations, the latter especially, are often selected; but if made under eaves or in holes in walls and trees it is an open one. Various indeed are the materials used by the House Sparrow for making its nest. If in the branches

of a tree or amongst ivy, the outside of the structure is made of dry grass and straws, and lined with feathers in abundance, pieces of rag, scraps of worsted, or any other soft materials the birds can secure. Under the eaves, and in holes of trees, rocks, or walls, the nest is more carelessly put together, and much of the dry grass and straw is dispensed with. Sometimes we see the Sparrow fly down from the house-top and alight in the busy street, and fly back with a straw ten times as long as itself, and convey it under the eaves, probably leaving half of it to flutter in the breeze, for a slovenly bird is the Sparrow with regard to its nest.

The eggs vary considerably: some are almost white and spotless, others are blotched with rich brown markings, while many are spotted and blotched with brownish-black; others resemble those of the Pied Wagtail. They are four or five in number. The Sparrow often sits upon its first egg as soon as laid, hence we often find newly-laid eggs and eggs partly developed in the same nest. When the young are able to fly, and in some instances even before, they accompany their parents to the hedgerows, that is to say, those Sparrows hatched in the country, where they feed on insects found on the grass lands, and on the seeds of grasses and other plants. This mode of living is adopted until the corn-fields put on their darkening tints, sure sign of the ripening grain, when the Sparrows leave the grass lands and subsist entirely on the corn and oats, very often to the serious loss of the farmer.

So immense are some of these flocks of Sparrows in the months of July and August, that many persons are led to suppose that the greater part of these birds are migrants. If we visit the towns at this season of the year, Sparrows in plenty are seen on every side; so, too,

the accustomed haunts of the bird, in the villages and near the farm-houses are not lessened in numbers to any perceptible degree. Yet the accounting for these vast flocks is simple—two-thirds of them at least are birds of the year.

Sparrows are very pugnacious birds, and it is no uncommon sight to witness a number of them all taking part in a fierce combat amongst themselves, probably over some tempting morsel of food, or through their very pugnacious nature, for if two birds commence fighting they are speedily joined by others, and very soon the combat becomes general. In the hot months of the year the Sparrow appears to be possessed with an inordinate love for dusting itself. Sometimes as many as half a dozen are seen enjoying this luxury in company, and so persistent are they in this dusting, that I have seen them leave the limestone roads of Derbyshire with their plumage white as snow.

But few persons defend the Sparrow, and, indeed, I fear his inordinate love of grain and fruit form an insurmountable barrier to his ever getting into the good graces of the farmer and gardener. But after all the Sparrow has a few good qualities, which would prove of service to him if they were more generally known. In the spring and early summer months, when his young are being reared, his food consists largely of the caterpillar of the cabbage butterfly; as also does the perfect insect, and we often see him pursuing them in the air like the Flycatcher. But this is not all: the flies which abound in our houses are also consumed by the Sparrow, as are spiders and the grubs which infest the buds of the fruit trees. Even when feeding on the grain in the autumn months his inroads are not entirely confined to that, for seeds of the most troublesome weeds are eaten.

I have seen Sparrows eating dock seeds ravenously, and have taken out of their crops the seeds of the charlock or wild mustard—that plant which so often chokes the growing grain, and spreads its golden blooms throughout an entire field. We must also bear in mind that our game preservers are indirectly responsible for many of the Sparrow's ill doings; for by their relentless persecution of our birds of prey they have relieved the Sparrow of vigilant enemies and natural guards against its undue increase, and thereby allowed him to multiply in a manner Nature never intended.

The Tree Sparrow, a bird differing by the way but slightly from its cousin the House Sparrow, shows a choice of habitat directly opposite. While the House Sparrow courts man's society, the Tree Sparrow shuns it, and retires far into the wilds for sustenance. In the plantations, or on the borders of the mountain torrent, we sometimes hear his peculiar chirp; and miles away from man's abode we are often gratified with his pert crafty appearance. But though strictly speaking a bird of the wild, he is not unfrequently seen in the fields and even in the farmyard amongst the commoner species. The Tree Sparrow is a much more lively species, and confines himself for the most part to trees. His voice too is different, being more shrill and musical than the monotonous chirp of the house species.

As the Tree Sparrow is a bird of but local distribution, though certainly thought to be much rarer than it really is, we are not often gratified by a sight of his nest. Nests that have come under my own observation were placed in holes in trees, and such situations, with holes in rocks, I consider are peculiar to this species, for the bird seldom or probably never builds it in the open air. The nest also is nothing near so comfortable as that of

the House Sparrow, its materials consisting of dry grasses and a few feathers. The eggs are five and sometimes six in number, slightly smaller than the House Sparrow's, and dull white in ground colour, with rich brown blotches and spots. When the young are hatched both the old birds are very noisy, and will rarely indeed allow you to approach them closely. I am of opinion that but one brood is reared in the year. The Tree Sparrow appears to be much more insectivorous in its food than the House Sparrow, although both species may be seen in company on the corn lands in autumn.

As the Tree Sparrow so closely resembles the domestic species, I have small doubt but what they are confused together and all viewed as House Sparrows. Yet in the wilder districts the Tree Sparrow probably abounds, and may easily be detected from the commoner species by the two white patches on the sides of the neck, its small size, and its more trim and active appearance, and the singular wariness of its disposition.



THE BULLFINCH.

THE Bullfinch is a peculiar yet very handsome bird. You can never confound him with any other Finch, for his bright red breast, jet black head, and beautiful blue upper plumage of silky texture, and the metallic gloss of his blue-black tail, and the white patch on the rump, make him a bird easily recognised. In form, too, he differs considerably from the birds known as Finches. His beak is shaped more like the Parrot's, with which he can readily feed on the various berries, and his head is more square-looking, and puts you in mind of the Hawk's.

The Bullfinch is a bird loving retirement. In summer he frequents the densest thickets, and the gloomy evergreens in the shrubberies; and as we wander through these situations we are seldom fortunate enough to catch more than a hurried view of him as he retreats still further into the shade. However, we oftentimes get a view of him in the winter time, when the trees and hedgerows are leafless, and he is searching

their buds for grubs, or sometimes feeding on the buds themselves. He delights to pay the orchard a visit, and, perched in the cherry tree, we see him and his mate—for they seldom or never flock, but go in pairs the winter through—going over the branches, shelling out the buds, and exploring every nook and cranny like the little Titmice do; and ever and anon they utter their peculiar piping call notes. When the bare boughs begin to don their verdure the Bullfinch is more rarely seen, for he now retires with his mate to the most secluded thickets, where he will build his nest.

About this time, too, we hear his low soft piping song, given forth as though its author were afraid of warbling higher for fear of being noticed. The Black-cap warbler, though he loves retirement well, still will sometimes boldly advance and warble long and loud within a few feet of you; the Chaffinch, again, will pour out his spirited warbles close beside you as you wander through his haunts; but the shy and retiring Bullfinch never does so, and it is nine times out of ten that you are favoured by accident in hearing his low tuneful melody.

The Bullfinch, from what I have observed of its habits and economy, I pronounce to be a life-paired species. When the mellow leaves of autumn are falling, if the Bullfinch is seen his mate bears him company; in winter, as the bird wanders over the naked branches, it is in company with his mate; and when the vernal sun bids annual birds seek the company of a mate, and strife reigns amongst them, the Bullfinch is a peaceful species, for his mate has not to be sought for, and wherever his bright charming colours are seen, his mate in her more sober garb is not far away. Though a bird be of fine form and handsome colours, these attributes

are not at all a sign that it builds a neat and well made nest. Slovenly indeed is the cradle of the Bullfinch: placed often in the branches of the yew tree, in the closest whitethorn bushes, or amongst the tangled vegetation of the brake, the nest in the first place is made of grasses, rootlets, moss, and twigs, loosely put together; while the inside is lined with fibrous roots, and sometimes wool and feathers, or even vegetable down. The eggs are four or five in number, bluish-green in ground colour, spotted with purplish-red, sometimes forming a zone round the larger end. The male bird is seldom seen in the nesting season, and the female keeps out of sight as much as possible, and leaves her nest upon the slightest alarm, and flits silently into the cover. Indeed, you may wander near the nesting grounds of the Bullfinch and be totally unaware of it, for the birds are probably more shy and retiring in their manner than the shyest and most retiring of the bashful little warblers themselves. When the young leave the nest they are soon abandoned by their parents, though in some cases it is probable they remain in company during the winter, and this explains the circumstance of seeing the birds in little parties at that season. The moulting season of the Bullfinch is passed over in gloomy silence, and we seldom see the birds again until November's blasts have stripped the hedgerows of their leafy covering.

The food of the Bullfinch in summer is partly composed of insects, and it will occasionally hover above various plants, and secure the insects and beetles upon their leaves. The greater part of the year, however, the Bullfinch depends on vegetable matter for support. He will visit various forest and orchard trees and prey upon their buds; he will frequent the hawthorn hedges and

eat the haws, shelling out the stones with his peculiar bill ; and he also eats the hips of the rose tree. While the majority of Finches love to eat the smaller seeds and grain, the Bullfinch loves those of a more fleshy nature, hence he prefers certain pulpy buds and various berries. In the month of January the Bullfinch pays particular attention to the dock plants, on whose stems he gracefully poises and ejects the seeds, the husks strewing the ground beneath, his rich and varied plumage contrasting richly with the deep browns of the docks' withered stems and seed-pods.

The Bullfinch is in high request for a cage bird, and in confinement he is said to make a pretty pet, and with careful training may be taught to pipe various airs. The Bullfinch is probably more often seen in confinement than in his native haunts ; but I would far rather deny myself the pleasure of ever seeing his rich and varied plumage than confine him in a cage.

We often find that the more showy and handsome the bird the more it loves retirement. The Kingfisher elects to sit in moody silence far in the shade, and delights in retirement ; the Bullfinch, though so showy in appearance, still mopes away his time far from the open. It may be that Nature has a purpose in sending these her brightest gems into seclusion, for there they at least find safety, which they would not were they of more open habits, for their charming beauty would inevitably prove their destruction.



LINNET.

THE LINNET AND REDPOLL.

THOUGH the Greenfinch is sometimes known in the country as the 'Linnets,' still there is but one Finch in Britain really called that name, and that is the bird with which we are at present interested.

The Linnets has nothing in its plumage particularly striking save the rosy hue which adorns the breast of the male in the breeding season, and which contrasts well with the rich brown upper plumage. But, nevertheless, it is a very interesting little creature, and has a pleasing song. It is common in most districts in the winter time, frequenting the waste grounds and weedy places, and in the summer months repairing to the gorse coverts, where it builds its nest.

Linnets are found in flocks up to the period of the vernal equinox. A little previous to that time the male birds commence to sing in low and subdued tones, but as the season advances the song increases in vigour, and when the males of an entire flock are all warbling forth their notes we have a concert that Orpheus himself would

pause in his labours and listen to with delight. But these concerts are soon no longer heard, for the males have each gained the attentions of a mate, and by mutual understanding the whole flock is disbanded.

Let us follow one of the pairs, and bear them company throughout the summer. They frequent their winter haunt perhaps for a day or so after the flock have dispersed, and then high up in the air they wing their way, twittering to each other as they go, to the higher lands. There is a gorse covert below them, just on the borders of a rugged moor, and with a peculiar dipping motion they alight in its prickly fastness. Here for days, it may be weeks, they frequent the covert, hopping from spray to spray, the male bird singing with renewed vigour as the vernal season expands its loveliness. But the birds have a purpose in coming hither, and, prompted by resistless impulse, they set about preparing for the comforts of their future young. A convenient site is soon chosen amongst the gorse, for the Linnet prefers it to any other shrub, and a little home is speedily advancing to completion. In the first place, moss and dry grass is used, sometimes strengthened with a few of the dead sprays of the gorse, and wool taken from its branches, left there by the sheep in its struggles to pass through the almost impenetrable mazes ; then the inside is lined with hair, feathers, wool, and vegetable down. But a few days are taken up in the erection of the nest, and the first egg is laid soon after its completion. Six eggs are deposited, more rotund than those of the Greenfinch, and smaller, bluish-green in ground colour, speckled with tiny markings of deep red. On these both birds sit, though the female does so most frequently. Silence is the protective power usually employed by the Linnet for the safety of its nest, and you may sometimes

remove the parent bird with your hand, so closely does she sit ; yet when rudely scared from her home she sometimes tries by various alluring motions to draw all your attention upon herself. The greater part of the male bird's time, when not on the nest, is taken up in singing from some neighbouring spray. Should you alarm him, he suddenly ceases, and takes refuge in the thickest parts of the covert, there to remain until all danger has gone. When the young can leave the nest they are attended by their parents until the flocking time in July, or left to themselves if the old birds rear another brood, which they often do.

In July the pair of Linnets that have resided in the upland gorse covert all the summer, leave it, and are joined by other families, and wing their way back again to their accustomed winter haunt, fresh arrivals swelling their numbers as they go. There they frequent the grounds overrun with weeds, feeding on the various seeds. They are not shy, and when in motion the white parts of their plumage tell out in rich contrast against their rich brown other parts. The male bird has now lost his song, and their only note is a shrill and musical twitter. When disturbed, they all fly off together, and take refuge on the topmost branches of the nearest tree, all perching close together ; but when the danger has passed they leave the tree in a long straggling train. Linnets seem to keep their own society, probably more so than any other Finch. Seldom indeed are any other birds seen in their company, save a few Twites and Redpolls, their very close congeners.

Flocks of Linnets are very often seen on the sea coast, frequenting the waste lands, and it is not improbable these birds are migrants ; for I am satisfied in my own mind that all or nearly all our British Finches are

increased in numbers in winter time by strangers from lands where the snow lies too deep for them to procure their food, and where the cold is so keen that it is unbearable.

The Redpoll may always be distinguished from the Linnet by its small size and peculiar notes, and by the ruby-coloured patch of plumage on the crown of the head, from which it takes its name.

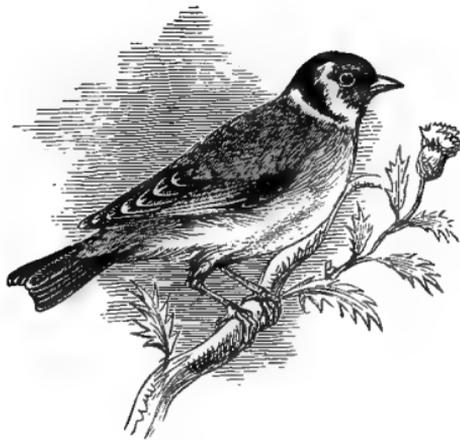
In the summer months the majority of Redpolls retire northwards to breed : still I often find his nest in the hedgerows, or in the young fir plantations. A tiny little structure it is, placed in some convenient crotch, like the Chaffinch's, and made of moss, sometimes a few slender twigs, rootlets, and dry grass, and lined with feathers and the down from the willow tree and other plants. It is seldom found completed before the latter end of May, and the eggs, about the size of a Willow Warbler's, are four or five in number, greenish-blue in ground colour, spotted with purplish-red, and sometimes streaked with deep brown. The Cuckoo will sometimes pay the Redpoll a visit, and deposit an egg, which the little birds tend with as much care as their own. When the young are hatched, if you approach their nest, the old birds become very anxious for their safety. They flit from spray to spray, now alighting in the neighbouring trees, and then flying round your head, all the time keeping up an incessant chorus of twittering notes. During the nesting season the male bird occasionally utters a short and pleasing song, but when the young are reared his notes cease to be heard, unless, indeed, he may have a second brood ; but this I doubt, for as they breed so late in season, and are seen in flocks in August, there is no time for one.

As soon as the young are reared the Redpoll be-

comes a gregarious species; family joins family, until a considerable flock is formed, whose members keep united until the vernal season bids them again separate for the continuation of their species. The Redpoll is another of my little special favourites; his trustfulness makes him so. See how they alight within a few yards of you, to pick out the seeds of various plants, and with what little shyness or show of fear they allow you to observe them when perched on the surrounding hedges, or when exploring the trees in every conceivable attitude. Even if suddenly disturbed, they merely fly into the air, uttering their pleasing twittering notes, and, after wheeling about, they again settle close to you as before. We find that the young birds do not wear the unassuming though lovely garb of their parents, nor have they the patch of deep ruby-coloured plumage that adorns the crown of their sire: but upon the return of the following summer the little creatures receive their garb of maturity.

The food of the Redpoll for the greater part of the year may be said to be composed of seeds of various kinds, the greater part of them belonging to the most noxious weeds, such as thistles, wild mustard, docks, and a hundred others. Upon grounds covered with these weeds, we see the Redpoll in greatest abundance. A favourite situation for them in November is the alder swamps, when the trees are covered with ripe seed-cones. In a little flock keeping close together they explore the branches and eject the seeds, the husks dropping in all directions. In every possible attitude, like the Tits, they gain their purpose; if alarmed, merely flitting buoyantly away, wheeling round in the air for a short time, to again alight on probably the same tree, where they at once set to work as before. In midwinter they visit the dry and

withered nettles, to feed on the tiny seeds. Clinging to the stems, they gain their purpose, and the husks strewn on the ground beneath tell us in silent language of the Redpolls' usefulness to man. When all the train of choristers that seeks our land in summer has left us, and the winter makes all things cold and cheerless, the Redpolls occur in much larger numbers. The far north, where they love to spend their summer, is now uninhabitable, and they flock hither for food and safety. At night the evergreen's ever verdant branches afford them warmth and shelter from the biting winds, and it is just as the blood-red wintry sun is sinking through a sky of leaden hue that they seek repose.



GOLDFINCH.

THE GREENFINCH AND GOLDFINCH.

THE Greenfinch is another bird whose beauty is of no mean order, its rich green and golden-yellow plumage being every bit as beautiful as many of the feathered gems of southern climes. As cultivation and improvement advance, so too does the Greenfinch, and we find him around the highly cultivated fields and in our gardens and pleasure grounds. But the place the Greenfinch loves best to frequent is the shrubberies near man's habitation, where he can find warmth and safety in the winter months, and where, when summer reigns, he can rear his brood in peace. He warbles occasionally throughout the summer and autumn months, but we must hear his performance in the mating season, which takes place in April, to form a correct idea of his musical powers. His song, it is true, is slightly monotonous, but very sweet, portions of it being equally as pleasing as the song of the Canary. It is tremulous and chirping,

and wants the sprightliness of the Chaffinch. But to hear his song at its best we must hear several of the birds singing together, when the various parts are uttered in wild confusion: then we hear music beautiful in the extreme.

When the Chaffinch quits the shrubberies, a few weeks after the vernal equinox, the Greenfinch repairs to them in large numbers for the purpose of nesting. The Greenfinch, though not what we can class as a strictly gregarious bird in the summer months, is still one very sociable amongst its kind; and we often find numbers of their nests within a very small area, sometimes two in the branches of the same tree. Although the birds breed in large numbers amongst the evergreens in shrubberies, still numbers of their nests are seen in the hedgerows, notably the whitethorn. We also find it fifty feet or more from the ground, in the ivy growing up the forest tree, amongst the brambles of the wild rose, and now and then in the gorse. Few nests are more beautiful than the abode of the Greenfinch. The outside part is made of moss, dry grass, and wool, through which a few slender twigs are sometimes entwined; while the inside is lined with moss in the first place, then hair, and feathers, and wool. It is not so neatly woven as the Chaffinch's nest, nor is it so well made or cleverly concealed. We have much yet to learn even in the simple matter of birds' nests. The Wren, we are told, owes the compactness and beauty of her nest to her slender beak and long legs; yet the Chaffinch or Greenfinch, with her thick clumsy bill and comparatively short legs, is able to produce masterpieces of nest building. The nests of the thick-billed birds in Britain are, take them as a whole, by far the neatest, and more compactly built than any of our soft-billed birds, many of whose

nests are but slightly and poorly built. This interesting subject might be pursued much further, for it is indeed a subject as yet but little inquired into. But we will return to the Greenfinch, now busy with nesting duties.

The eggs are from four to six in number, of a pure white ground colour, spotted and blotched with purplish-red. The Greenfinch is another bird who sometimes sits upon her first egg as soon as laid. When you approach the nest the old birds become very noisy and anxious. Flitting from spray to spray, they utter their monotonous, though not unpleasing call notes, and should the nest contain young, the female bird will approach you closely, and by every action and cry betray the keenest anguish. The young of the Greenfinch are not so richly dressed as the male, and they are spotted and streaked, yet have the golden yellow in the wings. They remain in company with their parents for a short time after quitting the nest, when, if the season be not too far advanced, the old birds leave them and rear a second, and, in some cases, a third brood.

Early in July the Greenfinches, young and old, congregate into little parties, and in company with Sparrows frequent the grass fields. Here we see them fluttering over the mowing grass, catching the insects, but the chief cause of these visits is for the purpose of feeding on the seeds of the grasses. As the year rolls on the parties of Greenfinches become larger, as the birds engaged in rearing the late broods join them, and then the corn fields are visited. In the winter the Greenfinch is found in company with the Buntings, feeding upon the newly sown corn lands; sometimes, too, we see them eating the holly berries and picking the seeds out of the fir cones in company with the Titmouse. When the short winter's day is passing into night, as we wander beneath

the gloomy evergreens we notice the Greenfinches in flocks performing various wheeling motions in the air, and finally settle down to repose. The holly is preferred to any other shrub, and the number which nightly repair to its shelter is astonishing. Numbers of other birds roost with them, as Sparrows, Chaffinches, and Thrushes, and it is a sight worth seeing to notice their actions both at nightfall and when the sun again sends them to the neighbouring fields for sustenance.

The Finches are, in Nature's economy, entrusted with the task of keeping the weeds in subjection, and the Greenfinch is probably one of the most useful, for its food is found to consist for the greater part of seeds most hurtful to the works of man. The charlock that so often chokes his cereal crops is partly kept in bounds by the vigilant Greenfinch, who prefers its tiny seeds before the golden grain. The dock, whose rank vegetation would, if allowed to cast all its seeds, spread barrenness around, is also one of his storehouses, and the rank grasses, at their seeding time, are his chief support.

There is another bird to which I would give a passing notice ere the Finches are bade adieu, and that is the gay and elegant little Goldfinch. Next to that animated gem the refulgent Kingfisher, the Goldfinch is thought by many persons to be the bird standing highest in the scale of beauty. But then their own feelings may have biased them in this particular, for does not the Stonechat, the Gold Crest, and the Chaffinch, the Magpie and the Starling, exhibit charms so rich and varied, that in the contest for beauty it is difficult to say which carries off the palm?

The Goldfinch with me, save in the breeding season, is a wanderer, only appearing at uncertain intervals, and remaining until the seeds which tempt his sojourn are

consumed. I see them usually in pairs in the winter time, sometimes in little parties, on the commons, around the tangled weed-choked hedgerows, and especially where thistles and docks are abundant. The thistles are a favourite place for the Goldfinch, and where those beautiful though unwelcome weeds are found, the birds congregate for the purpose of feeding on the seeds, and their actions at these times and the variety of attitudes they assume form a pleasing animated sight. They perch on the thistle's feathery crown, and deftly obtain the seeds, the down fluttering away on the breeze. They cling to the dock stems, and with sharp twittering notes eject the seeds, and then in graceful airy flight sally off in search of more. They are not shy birds, provided you do not greatly alarm them, and they will often allow you to witness their operations but a few yards away.

The song of the Goldfinch, heard in early April, is loud and sweet, and its merits are such that the bird is in the greatest request by the bird fancier. His song, too, is said to be improved by confinement; but I myself would far rather see him flitting from stem to stem before me, and hear his pleasing song, speaking of liberty and free as air, than confine him, even though by so doing I could make his notes sweeter than those of any other songster.

The Goldfinch is rather a late breeder. In the month of May, sometimes not until early June, we find his nest. It is often amongst the evergreens, hanging suspended from a drooping bough; sometimes it is in the fruit trees in the orchard, or in the hawthorn hedges. The nest is not so neatly built as that of the Chaffinch, nor is it so slovenly as the nest of the Greenfinch. It is made of grasses, rootlets, and moss, and lined with hair and feathers, and the down from various plants, as

thistles and groundsels. All the materials are well woven together, and the nest when completed is very strong and compact. The eggs are pale bluish-white, speckled and spotted with small reddish-brown markings, the more frequent on the larger end, and are four or five in number.

THE STARLING.

A VERY interesting bird is the Starling. Its regular movements, bright and glossy plumage, and its pleasing rambling notes, together with its harmlessness of character, make it a bird of special favour with me. We find it with us at all seasons of the year, and it is in fact quite as homely as the rooks themselves. Its habits, too, if carefully studied, will be found to closely resemble those of its sable congener.

Early in January Starlings visit their nesting-sites, and continue to do so almost daily until the breeding season. Regularly every morning they are seen sitting in pairs near their nesting-holes, preening their feathers and basking in the genial warmth of the morning sun, the male birds whistling their varied and lively notes. By these birds returning to their nesting-sites at various seasons thus, and using them yearly for their purpose, we know that the Starling, like its congener the Rook, is joined to its partner for life. In the vernal year the song of the Starling is heard to perfection. On a tree near his nesting-hole, on the chimney-stack or on the house-top, he is heard to sing. His song is given forth with trembling drooping wings, the throat is distended, the feathers ruffled, which now by the way shine with pristine gloss, and the whole body seemingly full of nervous excitement. Monotonous in parts it perhaps is, but it is a song in which all the com-

ponent parts form one rich, wild, varied, and beautiful whole. The Starling also claims rank as a perennial songster, for his tuneful warblings are heard, like those of the Robin and Wren, throughout the year.

The year rolls on ; every available hole is secured and zealously guarded by its watchful owners, and the Starling must see about the construction of its rude abode. Under the eaves of our dwellings, in old walls and ruined ivy-mantled towers, and in the holes of the forest trees, all prove acceptable to the Starling. Should the reader wish, if suitably situated, to encourage these birds around him in the nesting season, he need only place several small boxes, with a hole in their sides for the entrance of the birds, in the trees near at hand, or fasten them to the walls of his dwelling, and the Starlings will invariably take possession of them. The nest of the Starling is a very slovenly structure, composed of straws, grass, and a few feathers ; even rags, twine, or paper will be utilised, if conveniently near at hand. But nevertheless the nest itself is small, and forms a compact bed for the eggs, which are four or five in number, and very beautiful, being of a clear greenish-blue, entirely devoid of markings. They are as a rule very elongated, but some few specimens are almost round. We often find eggs of the Starling laid in grass fields frequented by the birds, and these eggs are very often quite puzzling to the young naturalist, who is at a loss to identify them. The simple reason why we find these eggs here is because the birds have not sufficient time to gain their nest for the purpose, and it also clearly proves that birds have not the power of withholding their eggs. The young Starlings are very noisy birds, especially when their parents enter the hole with food. Such a chorus of cries, and what a number of hungry little beaks are

opened together! The old birds have plenty of work to keep all these little mouths supplied, and they may be seen to bring food to the nest every two minutes, and keep up their labours for sixteen hours every day. The food is obtained from the neighbouring grass lands, and consists entirely of worms and snails. Upon alighting near the nest with food, you see the bird look warily around, and, if all be safe, hastily enter the nesting-hole. Sometimes before the bird has finished feeding the young its mate arrives, and waits patiently for its appearance, for very rarely indeed do both birds enter the nest together, when, with a chirp of mutual love, each pursues its way, the one to the fields, the other to its young. And thus the birds labour on for many days, until their young are sufficiently matured to quit the nest and repair with their parents to the pastures. Deceptive motions are one of the Starling's forms of protective power, especially where the birds are much persecuted; but the Starling sometimes protects its eggs or young by 'force of arms,' and will, like the Stormcock, dash boldly into the face of an intruder, and make the air resound with its harsh and grating cries. Starlings rear two, and often three, broods in a season.

The young are such strange looking birds when fledged, regular nondescripts in fact, that anyone not acquainted with the natural history of the Starling would be at a loss to name them. Even many learned men formerly fell into error over the circumstance, and called the young Starling the dusky Thrush, thinking it to be quite a distinct species, so different is it from its gaily dressed parents. It is dark brown on the upper parts, and the under parts much lighter, and possesses none of the rich markings or pristine gloss of the adult birds.

In the autumnal moult the birds gain their rich and glossy plumage.

The food of the Starling is for the most part composed of worms and slugs, although in the autumn they will feed on fruit. I have known them devour elderberries ravenously, and the garden fruits too are eaten. But these inroads on fruit are but trifling, for the Starling as a rule obtains his sustenance from the grass fields alone. Starlings are guided by sight alone in obtaining their food. It is a pleasing sight to watch a company of these birds searching for food. Nimbly they run and walk about, picking up the slugs or drawing the worms from their hiding-places. Sometimes one of the birds will find an unusually large worm, and then several others will if possible strive to gain a share, and harsh cries prevail until the tempting morsel is despatched. When flushed, Starlings rise simultaneously, and usually alight in the same manner. When these birds and Rooks are feeding in company, the Starlings always keep together. No satisfactory reason has yet been given for this that I am aware of. But may not these birds keep together for this purpose? When about to take flight all fly up together. Jackdaws, if any be present, fly with the Rooks, but the Starlings keep in one dense flock. And is not this because, did the birds rise promiscuously, the Starlings would have difficulty in flying amongst a flock of their corvine brethren, and no doubt get separated. The Jackdaws, being as large as the Rooks, or nearly so, experience no inconvenience.

A bird gifted with surprising powers of flight is the Starling. I often see them coursing through the air in search of insects, like Swallows, and then their powers of wing are seen to perfection. At other times the Starling passes through the air on a rapid beat of wing

and in a straight unwavering course. He who has dissected a Starling will know at once that the bird is admirably adapted for a flight rapid and well sustained.

The Starling is a strictly gregarious bird, and would breed in societies, like Rooks or Jackdaws, did circumstances favour them; but every one is against them, no one offers them his protection, and the poor Starling is a lonesome wanderer. Perhaps the most interesting time to study the habits of the Starling is when the young are reared, and the birds at liberty to follow their gregarious habits. By the middle of May Starlings are seen in flocks, for once the duties of the year are over, each family seeks the company of its kindred. Family joins family, and soon a large flock is formed, and now the birds are seen feeding together, roosting together, and, in fact, in company all the time. Here one large flock roosts in a group of whitethorn trees, and every evening I see them wheeling about in a dense and compact body, now as it were disappearing, and again appearing, as the birds, by one common impulse, present themselves in various attitudes to the light, waving about in the air like animated network, to settle at last on the trees of the selected roosting place.

There is a certain regularity of movement peculiar to gregarious birds alone. Every evening, as soon as the sun nears the western horizon, the Starlings may be seen at their accustomed roosting place, perched on the topmost branches, and blackening the trees with their numbers. They are constantly in motion, flitting from tree to tree, or struggling for some post of vantage. Every few moments fresh arrivals appear, and glide gracefully down from the surrounding tree tops to join the main company. Now one comes alone, sailing with

skimming flight from on high to settle down with his congeners; then a little party of three or four arrive fresh from the neighbouring grass lands and join the throng, which all the time is keeping up a concert of chattering, warbling, scolding, and whistling notes. It is a pleasing sight indeed to watch the evening motions of the Starling, at a season when they all live in company, and in a spot where the harmless creatures fear no danger. Now numbers take a wheeling flight and return; others repair to the neighbouring pastures to seek their evening meal, but to return long before the evening's dusk, when the birds, enshrouded by the shadows of night, and their noisy warblings o'er, settle down to undisturbed repose.

One year our flock of Starlings was an unusually large one, and every evening a hundred at least left the main flock just before nightfall and flew right across the valley to a distant roosting place. They regularly left every evening at the same time, winging their way at a considerable height in the heavens, and keeping up an incessant chorus of harsh unmusical cries as they went.

He who loves to contemplate the face of smiling Nature, and watch the varied motions of the feathered tribes around him, will grieve to learn that the poor harmless Starling is often caught in immense numbers for our so-called sportsmen—men worthy of the time-honoured name would be guilty of no such heartless conduct—who shoot the poor birds for mere pastime and wanton amusement.



JACKDAW.

THE JACKDAW AND CARRION CROW.

THE Jackdaw is something like the Rook in general appearance, although his plumage is not quite so glossy, and he has a patch of light grey plumage on the crown and nape. He is also in size much smaller than the Rook, being perhaps a little larger than the Magpie, and his passage through the air is performed with a more rapid beat of wing than that bird. Like the Crow family in general, he is not particular as to the choice of a haunt. On the rock-bound coast we hear his pecu-

liar cry as he wings his way to the inland pastures; amid the bleak upland wilds he lives secure amongst the limestone rocks; while in the more cultivated districts we see him soaring round the old church towers and amongst the ivied ruins. He will also associate with the Rooks, and rear his young in holes in the trees which contain their nests. The Rook loves to live near the mansion when in the height of its prosperity, the Jackdaw when it is a heap of mouldering ruins. And why? Simply because he can find abundant holes in which to rear his young amongst the ruins; but when the building was inhabited by man no holes in which the Daw could nestle were allowed to remain.

The Jackdaw resembles the Rook in his general habits, and indeed flocks with them, roosts with them, and only leaves their company when called upon to reproduce his species. The Jackdaw is a strictly gregarious bird, and lives in companies like the Rook. Daily we see them wing their way to the pastures, and obtain their food, and then spend their time either sporting in the air or resting in the neighbouring trees until the sun approaches the western horizon, when they congregate, or separate into little parties, and retire to their roosting place, which is usually in the neighbourhood of their nesting grounds. When evening is fast settling into night I often linger and watch the motions of the Daws ere settling down to rest. Their homes are in great plenty in the limestone cliff above me, rearing its hoary summit to the skies, and seared and furrowed by many a scar. Only a few birds are at first seen, but suddenly their well-known cries disturb the tranquil air, and the birds appear in view flying closely together, a few stragglers being in the rear. After circling in the air a short time they alight in little parties on the stunted trees

growing from the cliff's rugged sides some three hundred feet above me, while a few pay visits to their nesting-holes ; yet all finally settle down to rest on the branches of the trees, where, summer and winter alike, they brave the elements in their exposed and lofty roosting place.

The Jackdaw breeds very late in the year, for the Rooks have young even before they commence laying. Many persons endeavour to show us that all birds nesting in holes of man's habitation show a change of habit, and bring these instances forward as bearing on the theory of Natural Selection. They tell us that the Jackdaw shows an affection for the church steeple, which can hardly be explained by instinct. Now it is the Jackdaw's peculiar habit to nestle in holes of trees or rocks, but when these holes were found in church steeples and other artificial places, the Jackdaw resorted to them just as he would resort to the cliff or tree, both answering his purpose equally as well. We have yet no proof that the Daw can distinguish any difference from these holes and the holes formed by Nature. It is the same with the Starling and the House Sparrow, for they will both build readily in artificial places if you provide them with the requisite accommodation. But remember the accommodation afforded must resemble that to which the birds are naturally in the habit of resorting to, otherwise your attempts will be in vain. You can no more entice the Starling to build amongst your evergreens or in the branches of your fruit trees, than you can, by making holes in your dwelling, entice the Rooks to leave the elm trees and take up their abode in them. The Jackdaw, unlike the Rook or the Carrion Crow, has that in its economy which requires it to bring up its young in a hole, like the Starling to wit, and we find he nestles both in holes of rocks and trees, also church steeples, and

amongst the Gothic architecture of cathedrals. May has arrived ere the Jackdaw commences her rude abode, that is, those birds setting up nest-building for the first time, or those whose nests need repairing. The nest is built of sticks, and lined with clods of turf, moss, wool, and feathers, and the eggs are four or five in number, pale bluish-green in ground colour, spotted and speckled with brown of various shades: they are a little larger than those of the Magpie. It is very probable that the Jackdaw rears its young on food somewhat different to that of the Rook, and this will then explain the lateness of their breeding season. At all events dissection would place the matter beyond a doubt.

The food of the Jackdaw is just as varied in its nature as the food of the Rook. In the early months he will follow the plough, and frequent the newly sown land; he will frequent the potato fields and grass lands, and feed upon the wire-worms. In spring and summer insects and grubs form his main support; in the autumn he will eat the acorns and beech mast; while in the winter, when hard pressed, he will prey upon carrion and the refuse of the slaughter-house. The Jackdaw seems not to be persecuted in so relentless a manner as the other members of the Crow family, yet how he has gained this freedom from oppression I know not. But pity it is his congeners cannot indulge in the same degree of safety, for their usefulness is apparent to every one who makes the feathered tribe the object of his study.

The Carrion Crow resembles the Rook in his appearance, but he is rather a stouter-made bird, and he never has the throat and base of the mandibles bare of feathers, and by this circumstance alone you can always tell him from his sable congener. We see the Carrion

Crow on the bleak and rocky coast, subsisting upon the garbage thrown up by the restless deep; we hear his hoarse croak in the upland districts, even on the grouse moors and sheep-walks; but the home he loves best is in the well-wooded districts—the districts which abound most with his food. Here we oftentimes see him on the pastures with the rooks, but he seldom or never associates with them, or even with his own kindred, for more than a pair are rarely seen together.

If the reader would wish to examine the cradle of this bold and wary bird, he must seek it far in the deepest shades, although he will sometimes rear his young a stone's throw from your door; but this is only where he lives unmolested. In the wooded solitudes, therefore, when the month of May is making all things pleasant around us, the Carrion Crow is engaged in bringing up his young. You see his nest in the topmost branches of the oak, sometimes amongst the tangled foliage of the fir, or far up in the swaying branches of a lofty elm. It matters little on which tree it is placed, but wherever we find it it is always well made. The outside is made of sticks, cemented with mud and clay, and lined in the first place with the same material; then wool, torn from the backs of the sheep in the neighbouring pastures, moss from the ground beneath, and feathers from the distant poultry yard, all firmly and evenly placed, and forming a bed as smooth as the rooty bottom of the Magpie's nest. On this the eggs lie bare and uncovered, four, or more rarely five in number, and often only three. They are subject to much variation both in size and colour, and closely resemble those of the Rook, only they are as a rule rather larger. The Carrion Crow is a wary bird, and quits her nest, if it only contain eggs, the moment your

footsteps greet her ear ; though if the intruder be one of her natural enemies she will fight fiercely in defence of her eggs. When the young are hatched the Carrion Crow, made bold by their incessant clamourings for food, pays frequent visits to the poultry yard, and carries off the Chickens and Ducklings, on which to feed them. If a Pheasant or Partridge be driven from her nest without opportunity of covering her eggs, they are often spied out by the Carrion Crow, and borne off one by one in his strong bill. The young are soon abandoned by their parents after gaining the use of their wings, and these again probably separate until the following season bids them seek the company of a mate.

The Carrion Crow is an early riser, sometimes being abroad before the Rooks, and long before sunrise, and when the gray streaks of morning appear in the sky his harsh and discordant cry is heard as he winnows his way through the air from his roosting place to the distant feeding grounds. This bird is one not very particular as to the choice of his food. He will eat almost anything, from an insect to an acorn ; from the helpless chicks to the feeble wounded hare or rabbit ; from a living mouse or rat to the most noisome carrion. Judging from his somewhat varied tastes, the Carrion Crow is a bird sadly persecuted by the gamekeeper and hênwife. Yet withal his services could ill be spared, as he is one of Nature's greatest scavengers, and his few little failings are amply repaid by the good he undoubtedly performs. I also think the wooded districts and the wild, the inland moor and the rocky coast, are greatly enhanced in beauty by the bold, yet wary, prying, active, and graceful Carrion Crow.



THE ROOK.

THE Rook is another bird loving the society of man, and partly dependent upon his labours. And yet he is a bird very particular as to the choice of a home, for he will shun certain localities seemingly suitable for his colony, and take up his abode in others and remain there for centuries, even though man builds his crowded cities around him. Wherever the old country mansion rears its stately walls amongst the trees, there, too, we almost invariably find a colony of Rooks. In the neighbourhood of the old abbey or castle, now nought but a heap of ivied ruins and souvenirs of bygone ages, we often see their nests in masses on the topmost branches of the neighbouring trees ; and these very nests, without doubt, belong to the descendants of the birds who cawed over the towers and battlements when in the height of their regal splendour centuries ago.

The Rook lives in colonies, and by his social and trustful disposition we are enabled to study his habits

with ease. To begin with their varied habits, we will observe them in the breeding season. The Rook undoubtedly pairs for life, and uses the same nest year after year, renewing it in the old site if blown out by the wintry blasts, and repairing it by adding fresh lining, or, if considerably damaged, sometimes building a new nest on the ruins of the old one. The Rook is one of the first birds to set about nesting duties, commencing operations long before the vernal equinox, and to visit a rookery in the building time is a real pleasure to lovers of the feathered tribes. There we see them perched on the topmost branches of the trees, seated in their nests, or winging their way through the trackless air. What an animated scene! Rooks cawing in all directions; Rooks busily engaged on their nests, moulding and fashioning them for their purpose; Rooks carrying sticks, turf, and other materials; Rooks in yonder fallow, obtaining mud to cement the sticks; and Rooks feeding on the neighbouring grass fields. In fact, Rooks everywhere, and all busily employed, their pleasing caws deafening the air around. Now one encroaches on the other's property, and then those combats occur which many persons attribute to the possession of the old nests—combats often of such a severe nature as to leave one of the birds bleeding and dying at the foot of the tree, and throwing the entire community into a fever of excitement and disorder. When the Rooks break off twigs from the nesting trees they invariably fly clear of the tree and gain their nest by an uninterrupted course, probably because taking the twig through the tangled branches would prove extremely difficult and troublesome. We also notice that when the nest is being built one of the birds remains at home while the other seeks materials; but once the nest is completed this is never done, and it

remains safe, even though its owners be far away. Before the eggs are laid the Rooks never remain on the trees all night, that is in the smaller rookeries, for the birds join the larger colonies and roost with them nightly; and they but seldom work except in the morning, spending the remainder of the day on the pastures. The Rook builds a firm and compact nest of sticks, cemented with mud and lined with the same. Then this shell is lined with turf torn from the grass lands, moss, wool, dry leaves, and feathers. It is far more shallow than that of the Carrion Crow, but otherwise closely resembles it, and so firmly is it built in its elevated crotch, that you may sit in it with perfect safety. Numbers of the nests are built together in large masses, and they are always placed in the topmost branches. Most trees are built in, but probably the oak, elm, and beech are most frequently used. At the old manorial dwelling known as Beauchief Hall, a short distance away from the ancient abbey, the Rooks have in some instances built their nests in some tall holly bushes, many of them being little over eight feet from the ground. These strange sites are not chosen through necessity, for numbers of stately trees throw up their graceful branches close at hand. The eggs of the Rook are subject to much variety both in form and colour. Some are elongated, others almost round; while the ground colour on many is green, on others it is nearly white, spotted and blotched with greenish-brown of various shades. On many specimens we find but little colouring matter, while in others it is so thickly diffused as to entirely hide the ground colour. In numbers, too, they vary considerably, for sometimes you will find but three, and at others four and five: the latter number I do not think they often exceed. If you remove the eggs

of the Rook others will be laid, though but in small numbers, and I have known them sit on a single egg. What is also peculiar, is that we sometimes see eggs and young birds in the nest together, the eggs being often sat upon as soon as laid.

How assiduously the Rook feeds its sitting mate! With peculiar cries and trembling wings it receives the supply of food by inserting its own bill in that of its partner, and taking the insects, grubs, and worms, that in a mass lie under its tongue. Notice yonder Rook; fresh from the grass land is he. His mate sees him approaching from afar; she hops off her charge, and with peculiar tremulous cries and fluttering wings awaits his approach. He feeds her, and after some few marks of affection have passed between them, she cleans her bill on a neighbouring bough, and hops silently on to her precious eggs, while her mate wings his way for a fresh supply. It has been stated that the female bird alone hatches the egg, but this is an error, as I often see the birds change their duties: nevertheless the female bird is oftenest upon them.

By the second week in April, the young are heard uttering their feeble cries, and then the old birds are taxed to the utmost in supplying them with food. Backwards and forwards, to and from the fields, we see the old Rooks flying the entire day, and keeping up their labours long after sunset. For weeks this goes on, and then we notice the young birds sitting outside the nests and on the branches. I cannot find that the young return to their abode after once quitting it, but remain on the trees until able to fly, being fed there by their parents, just as frequently as when in the nest. The leaves are now rapidly expanding, and partly hide the young from view, who try their wings with little flights

from tree to tree ; and when their pinions will sustain them in the liquid void, they follow their parents to the pastures, and are there fed and tended, returning at nightfall to the nesting-trees. Time passes, and they become still stronger on the wing, and often soar to an immense height over the nesting-trees, as it were enjoying to the utmost their newly acquired powers of motion. The young Rooks are nothing near so wary as their parents, and I once witnessed a pleasing sight in connection with this matter. The Rooks were perched in immense numbers in the trees, and of course most of them took wing at my approach. One young bird, however, was almost in reach of my hand, sitting motionless and unconcerned, when a mature bird flew swiftly past it, as if to warn it of its danger, and almost knocking it off its perch, when it flew away with the rest.

From what I have observed, by the summer solstice the Rooks of the smaller rookeries quit the neighbourhood of their nests, and join the members of the larger communities, and feed with them, fly with them, and at night repose in the trees which contain the nests of their hosts. But probably in every rookery in Britain, whether large or small, the Rooks, from the beginning of September till the following breeding season, visit their nests daily or nearly so.

'Night brings home Crows,' says the old proverb : it also brings home Rooks, and it is a stirring sight to see the denizens of a large rookery settle down to rest. All day they frequent the grass lands, turnip fields, or potato patches, either seeking their sustenance, bathing themselves in the little pools, or basking in the sun's genial rays on the tree tops. But as the sun draws near the western horizon instinct prompts the Rooks to seek their roosting place. With a slow and regular beat of

wing the main flock pursues its way through the heavens to the distant rookery. The Babel of sounds is deafening as they wheel round and round previous to alighting. One by one or in little parties they perch on the top-most branches, now struggling for a post of vantage, or taking short flights, uttering their hoarse caws. In the distance parties of three or four are winging their way to join the throng. The noise becomes louder, the somewhat shrill cry of the Jackdaw mingling with the homely *caw, caw* of the Rook. The sun is sinking down in a sea of gold, and the moon, some height in the heavens, appears as a pale ball of fire. Cock Robin, singing his loudest, can scarcely be heard a few paces away, as the flapping wings above us, and the din their owners are making, drown his attempts to gain our notice. At last a lull occurs, as the Rooks, perched on every available bough, turn their heads from side to side, or preen their glossy plumage. But it is not to last, even though the sun has long disappeared, and night reigns in all her soft and magic beauty. The Bats are flitting round us under the gloomy branches; Cock Robin has sought a roosting place; field mice are chirping under the withered leaves; and the woods bear that damp earthy smell so prominent at night. Now one old fellow perched on a dead limb far up yonder elm utters a hoarse croak; another and another answer; now two or three together; and speedily the din is loud, nay, louder than before. Many change their places, their dark forms showing out against the clear western sky. Others hop about the boughs, to be pushed off by their companions and compelled to seek refuge elsewhere. What a terrific din! Is there going to be no end to it? Yes, gentle reader, the Rooks are a noisy race, and all their gatherings are attended with noisy converse. Yet,

like human folk, they grow tired at last, and their caws are heard in lessening numbers, and finally silence reigns supreme, only broken by one or two solitary caws, for amongst a company so large there are always a few wakeful ones, which would be heard even though we tarried under the trees until the Rooks left them in the gray light of morning, for their day on the neighbouring pastures.

The food of the Rook is varied, and there is not a field which he does not visit at some season of the year. We see him on the grass lands, pulling up the turf, to obtain the wire-worms and grubs ; we see him on the corn lands soon after the seed is sown, consuming the seeds which have not been covered up, or digging into the ground to prey upon the wire-worms at their roots. He is seen on the oat fields when that cereal is a few inches high ; but the agriculturist need not be alarmed, for let him examine those parts of the fields on which the Rooks are congregated, and he will find that the birds are seeking and greedily devouring a large brown grub which is preying upon the vitals of the young and tender plants. He is on the potato fields for the same purpose, and when hard pressed by hunger will sometimes eat them, as also will he eat the turnips, boring into them with his strong beak. We see him in the meadows too, following the plough for worms, and in the neighbourhood of manure heaps. Rooks are also fond of carrion, and may be seen eating the refuse of the slaughter-house when thrown on the field as manure. If a dead animal be left in the fields exposed, the Rook will visit it and feed upon it, just as ravenously as the Carrion Crow. In the autumn months when the acorns are ripe he feeds upon them. We invariably see the finest acorns growing at the end of the slender branches, and the Rook, did he alight on these branches in his efforts to obtain them,

would fail to do so, as the branches, being so slender, would not admit of sufficient purchase being used to break them off. Yet he does feed on these fine acorns, and obtains them in the following manner. Flying up to the tree, he alights on these slender branches, and, while swaying up and down, seizes the acorn firmly, and then hangs suspended to it, his weight breaking it off, when he flies to the ground with his prize and eats it at leisure. Like all birds of the Crow tribe, the Rook throws up the refuse of its food in the form of pellets, and the ground under the nesting-trees and the branches of the trees themselves are covered with them. Upon examination, we find that they are for the most part composed of the husks of grain, the hard wing cases of insects, and small portions of gravel swallowed for the purpose of aiding digestion.

The Rook, though seeming to pass slowly through the air, is a bird capable of rapid flight, and I have no hesitation in saying that he often flies at from fifty to sixty miles an hour, or even more. He is a bird possessing great control over himself in the air. Sometimes when far up in the heavens he will, by alternately turning his back and breast to you, alight on the ground directly beneath him. This motion in the country is termed 'shooting,' and the country people will tell you that it foretells wind. But as far as my own observations go, this motion is only used by the bird when desirous of alighting on ground directly beneath him, and the young naturalist may rest assured that the Rook is not affected in the slightest degree by *Æolus*, the god said to preside over the winds of heaven.

Though the Rook lives near our dwellings and allows us to examine him closely when in the nesting-trees, still he is a shy and wary bird. The country rustic will stoutly

maintain that the Rook can smell gunpowder, simply because the Rook has through experience learnt to shun all suspicious objects. You may, by merely throwing up a stick to your shoulder, as if it were a gun, send a whole flock of Rooks scurrying off with as much alarm as though you had actually fired at them. Persecuted so closely by the farmer, the Rook, in self-defence, becomes extremely cunning, and it is only at very rare intervals you can approach him within gunshot, unless in the breeding season, or when lost in a fog.

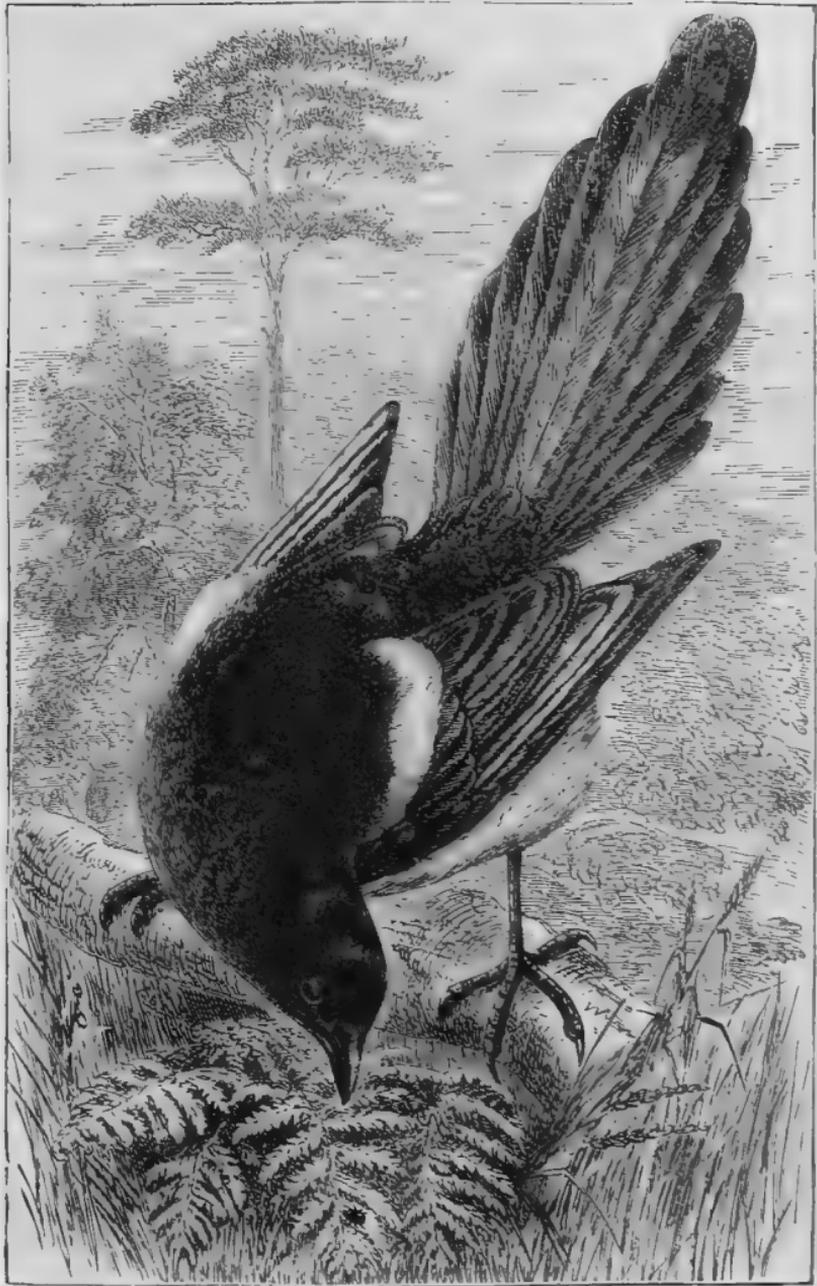
Before leaving the Rook, I should like to say a few words respecting the bare patch of skin on his throat and at the base of his beak. We are still told that the Rook, by continually digging in the ground, wears off in course of time all the feathers on these parts. The matter has been so extensively discussed and investigated by the late Charles Waterton, that I think further remarks from me unnecessary. But I would just add that this bareness is natural to the Rook alone, and if digging were the cause of it, the Magpie, the Jay, the Blackbird, and the Thrush, should all have this scarcity of feathers on these parts. Further, the Rook never buries his beak in the ground to such a depth as to rub the feathers off the throat, and during the intervals of his digging, which for the most part takes place in seed time, the feathers have ample time to grow again, which they never do; for as soon as the birds have completed their first autumnal moult these parts become bare, ever after to remain so.

THE MAGPIE.

OF all birds found in Great Britain, but few excel the Magpie in the richness of their feathered garb. The metallic glow which pervades much of its plumage, and the caudal feathers glowing as they do in green, purple, bronze, and gold, cause the bird to be no mean rival of many of the finest feathered gems that frequent the blazing latitudes of the south.

We find the Magpie plentifully distributed in the woods and coppices all the year round. We also see him in the pastures, sometimes perched on the backs of the feeding cattle, who take not the slightest notice of his presence, or searching for food on the ground around him, occasionally jerking his tail with a graceful sylph-like motion. The sight of a Magpie always gives me pleasure. There is something so graceful and buoyant about his flight, notwithstanding his comparatively short wings. Then, too, his colouring is so beautifully varied, that when the bird is in motion, and you happen to be stationed in such a manner as to see the sun shining on his refulgent caudal plumage, together with part of the wings, and the black and white portions contrasting richly, the latter glistening in the sunlight, the effect is most beautiful. His harsh notes are also in harmony with the verdant woods or barren moors, for on both these situations we see the wary Magpie.

The Magpie is very probably a life-paired species,



MAGPIE.

like its congeners the Rook and Jackdaw. He is a very early breeder, his large conspicuous nest being found long before the leaves are on the trees. The habits of birds are curious and puzzling in the extreme. How can we, for instance, account for the singular trustfulness of some birds at one season, while at another they are shy and the acme of wariness? The Magpie shuns with care man's habitation at all times save in the nesting season. That time arrived, however, and we see them patching up their nest in the old thorn tree, or nest-building in the fir's gloomy branches, a stone's throw from their threshold, without showing any reserve or fear. We find the Magpie's nest in the lofty oak, the swamp-loving alder, or the graceful birch, and even in the lowly hawthorn and holly, or mayhap firmly wedged in a hedgerow. The site chosen, which is usually a crotch in the topmost branches, the birds commence operations. First comes a foundation of sticks cemented with earth, which the birds line with a thick coating of mud or clay; then more sticks are used, until the nest proper is covered with a network of sticks in the shape of a dome, but not sufficiently dense to shield the eggs or young from view. The structure is then often left for a day or so, when the birds line the clay-formed cavity with a thick and elastic bed of fine fibrous roots: no other lining material is used.

There is a pleasing legend in connection with the nest-building of the Magpie. The bird, so runs the tale, having engaged to enlighten her congeners in the important art of nest-building, was so indignant at the continual interruptions of her audience, who endeavoured to appear as wise as herself, that she left them, when the nest was but half completed, to finish the task themselves, having failed to instruct them in the mysteries of

roof-building. So it comes that the Magpie alone covers her nest with a roof of sticks. Even the learned of our own time would fain have us believe that the roof of the Magpie's nest is for the purpose of concealing its eggs or young, or preventing the visits of predaceous birds and animals. But the grave theorists forget that all birds can find an entrance at the same point of ingress as the parent birds themselves. Are not also the young brood of the Carrion Crow in their bare and elevated cradle much more exposed to the same danger?

The Magpie sometimes returns for years to its old abode, if not molested. In other cases where the nest is abandoned the old tenement proves a fitting site for the nursery of the Kestrel or Windhover. In some few instances I have known Magpies return to the old nest, even though the eggs were removed the previous season.

The eggs of the Magpie, for a predaceous bird, are numerous, and herein probably lies the cause of the bird's abundance, in spite of a sad and unwarranted persecution. I have found nests containing the unusual number of nine eggs, seven and eight are a frequent number, but perhaps six are most frequently found. The female bird sits very closely on her charge, notably when her eggs are approaching maturity, and she will not unfrequently remain brooding over them until you reach her nest. The eggs are varied in their markings, and very small for the size of the bird. Indeed, in viewing some nests containing eggs, you are almost inclined to think that a Blackbird had been and laid there too. They are of a light bluish-green in ground colour, with greenish-brown markings equally distributed over the entire surface of the egg. Some specimens are almost white, with a few pale olive-green markings at the larger end; while others

are green in ground colour, boldly marked with deep brown and a few faint purplish blotches. In shape some specimens are almost round, others considerably elongated, while many are strictly oval. He who climbs to the nest of the Magpie will find, in spite of what he reads or is told to the contrary, the eggs lying bare and uncovered on their rooty lining, which is, by the way, perfectly smooth. The female bird, I believe, as a rule, performs the tedious task of incubation, and her mate attends her with loving care, supplying her with a plentiful stock of food.

If you approach the nest of the Magpie when the young are hatched, the old birds will fly round the tree which contains their home, uttering notes fraught with anguish for the safety of their helpless little ones. You will find the female bird, impelled no doubt by the courage maternal love inspires, approach you much nearer than her mate, who contents himself by watching your actions at a safer distance. Before the young are able to fly the nest is enshrouded in a canopy of foliage, and May is well advanced before we see them in company with their parents, searching the pastures for sustenance.

The note of the Magpie is a harsh chatter, and unlike that of the Jay, which is a discordant scream. Most birds at nightfall are very vociferous, and the Magpie is no exception. Thus we hear them making the woods resound with their dissonant cries when the shadows of night are falling and the birds are about to settle down to rest. Many a time I have been startled by their noisy chattering cry when I have unwittingly disturbed them in their roosting places deep in the forest's silent recesses, or in the clumps of evergreens standing boldly out in cheerful relief against the interminable moors around.

The food of the Magpie is varied : like all the Crow family, they will eat carrion, and attack the smaller quadrupeds when young or sickly. The Raven will attack the newly born or weakly lambs. The Magpie will devour animals which his smaller size and strength allow him to master. Insects, various kinds of fruit, notably the acorn, and the eggs of birds, all help to sustain the Magpie : nothing comes amiss to him. But with all his gorgeous plumage, active motions, usefulness, and trustfulness in man, the Magpie has but few friends. Gamekeepers and preservers know his weakness for the eggs of game, and persecute him accordingly, and his shining plumes are by far the commonest seen adorning the tree trunks which constitute the keeper's 'museum.' When the Magpie discovers a Pheasant's or Partridge's nest containing eggs, he thrusts his strong beak into the shell and carries them off one by one to some quiet nook, where he can dispose of them in peace. But after all the Magpie's plunders are trivial, and when we bear in mind what an infinite amount of good these feathered scavengers perform, we are compelled to admit that their services could ill be spared.

For my part I would much rather see the Magpie flying gracefully over the woods and meadows, and find pleasure in his varied habits and gorgeous plumage, than sacrifice his life on the rather obscure charge of egg stealing, especially when I know that after all he is but following the course laid down for him by the designing hand of Nature, and that at most his inroads are but small, for Dame Nature has provided all her feathered subjects with abundant means of safety for their eggs and young.



THE JAY.

THE Jay is one of the handsomest of our native birds, and although of somewhat local distribution, still in the deepest woods and coppices he is far from uncommon. There are few birds more shy and timid than the Jay, and the observer has often to content himself by a hurried glance as the bird flies rapidly amongst the thickest underwood, his beautifully blended plumage contrasting richly with the surrounding vegetation.

The Jay delights to frequent woods plentifully stocked with evergreens, and in the holly's verdant branches we often find his nest. He is also found in shrubberies of sufficient extent to afford him the requisite amount of shelter, choosing those where the underwood is unusually dense. As I see the birds invariably fly in pairs at all times of the year, I am led to believe that the Jay, like birds of the Crow tribe in general, pairs for life. The note of the Jay is a peculiarly harsh and discordant one, even more so than that of the Magpie,

The Magpie's notes are given forth in numbers at a time, something similar to a harsh and discordant chatter, while that of the Jay is one loud and dissonant scream.

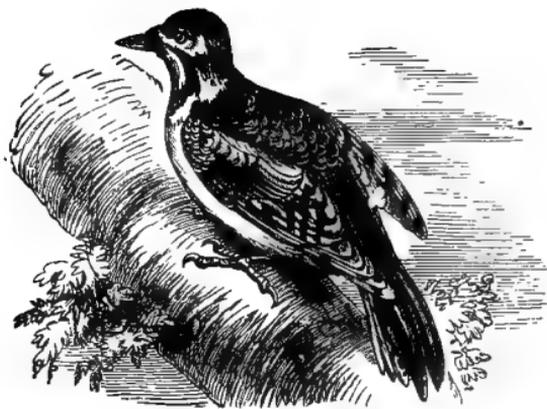
A pleasing sight it is to see a troop of rollicking Jays -- the young fed and tended, by the way, for a considerable time after leaving the nest—and their parents, late in the summer. But though young, they are the very essence of wariness, and it is only now and then that we catch a glimpse of them through the thick masses of foliage, our eyes being drawn in the direction by the harsh scream as if of defiance and mockery with which they scurry off. And then how their beautiful plumage shines in the bright summer sunlight! A handsome bird is the Jay, and one whose presence goes far to enliven and heighten the beauty of our English woods. Should the reader ever have the good fortune to so come upon a troop of Jays, he will probably notice that the birds, instead of darting off in all directions, like many birds would certainly do under similar circumstances, invariably fly before him in a straight line. He may thus follow them the whole length of their cover, and it is only when thus absolutely compelled, they turn again to find seclusion. In July the birds are moulting, and then they appear but as a fragment of their former beauty; but in a few short weeks Nature has again supplied them with a new garment, and they again appear in all the splendour of their rich and varied plumage. The flight of the Jay is a peculiarly drooping one, performed with rapid motions of the pinions. Sometimes we see these birds coursing through the air at a very high elevation, and then, suddenly closing the wings, shoot downward with the rapidity of an arrow into the desired cover. Jays become very noisy at nightfall. Let the observer repair to their haunts at eventide, and their notes, if he be not

thoroughly conversant with their habits, will certainly alarm him. Few things sound more weird and unearthly than their dissonant cry, especially when given forth in the dusk of evening in the deep and silent woods. Numbers are heard calling together, and this, with the occasional cry of the Wood Owl or the wail of the Nightjar, forms a concert which the country people are apt to listen to with superstitious awe.

We are yet in much perplexity as to the time of nidification of various birds. Thus the Magpie or Rook will commence nesting duties long before the leaves are on the trees, while the Jay, so closely related to them, waits until the flowery month of May arrives before a twig is laid in furtherance of its nest. Difficulties, too, arise in the nesting site; for who can tell us why the Jay repairs to a lowly bush while the Rooks invariably choose the topmost branches of tall trees for their purpose? Who can inform us why the Jackdaw rears its young in holes in walls, rocks, or trees, while the young of the Carrion Crow are exposed to the biting winds of heaven in an open nest far up the oak's sturdy branches? Depend upon it some end is served, but Nature still holds the secret in her keeping. In May, therefore, the Jay selects a site for its nest. We must never search for his abode far up the trees, for the Jay repairs to shrubs for its purpose. In hollies, yews, young fir trees, or whitethorns, we often find it. A favourite place is where the creeping, clustering woodbine grows in a tangled mass over some friendly shrub, but wherever we notice it it is well made. Sticks, not so coarse, however, as those used by the Magpie, cemented and lined with mud and fibrous roots, are the materials employed. Let the young naturalist picture to himself a Magpie's nest without the roof of sticks and slightly smaller, and he has a tolerably good idea of the

cradle in which the Jay lays her eggs and rears her young. Few of our British eggs are so unassuming in their colouring matter as those of the Jay. They are rather smaller than a Magpie's egg, and of a peculiar greenish-drab, with perhaps a few streaks of dark brown on the larger end, and four or five in number.

The food of the Jay is varied according to the season of the year. Thus in spring he feasts on birds' eggs, carrying them off on his stout bill, and insects innumerable. He is also partial to a young Pheasant or Partridge, and he is often seen chasing the smaller birds through the trees like a Hawk. As the fruit season arrives he loses much of his occasional wariness, for be it known the Jay is passionately fond of peas, cherries, and other fruits, and to obtain them he advances boldly into the garden. Perhaps he comes in this manner for his share of the good things in recompense for the infinite number of insects he has devoured a few months previously. But the gardener does not see things in this light, and never fails to take his life at every available opportunity. In autumn the Jay leaves the gardens and repairs to the oak trees, for the purpose of feeding on the acorns. He is now very often seen on the ground, and we now and then see him burying an acorn, but whether they return to these buried stores I could never ascertain. But the acorns fail at last, and the winter draws nigh, and the Jay has to subsist on whatever he can find. Carrion never comes amiss to him, and we see him on the pastures, feeding, like Rooks, on worms and other animal substances. You never see Jays in any numbers together, like Rooks, Jackdaws, or Starlings. In the winter little parties may be seen of perhaps five or six, but these are without doubt the young and their parents of the previous season, and we may pretty well rest assured that the Jay is not a gregarious species.



GREAT SPOTTED WOODPECKER.

THE WOODPECKER AND CREEPER.

FAR down in the solitudes of the deepest woods, where the timid squirrels leap from tree to tree in frolicsome play, where the gorgeous Pheasant and the crafty Carrion Crow find a home together, where the mighty forest trees hold up their decaying and storm-riven branches in silent grandeur—there too the Woodpecker lives, and draws his sustenance from their hoary timbers. A bird the shyest of the shy, we seldom get a glimpse of him, for he takes good care to search the trunk and branches on the opposite side to which we are standing. Sometimes, however, fortune favours us, and we are able to steal a march on him and watch his actions. Rather a clumsy looking bird we are apt to think, but let us observe him closely, and see how well Nature has provided him for his ways of life. With his strong legs and claws, by the way, two pointing before and two behind, one of the latter reversible, he is enabled to

grasp the bark and climb with ease. Then, too, his tail is of some importance ; for notice how he presses it close to the bark to gain support while he hammers away in search of the insects and grubs. How nimbly he courses hither and thither, sometimes in a spiral direction, at others straight and unwavering. Now he turns, and with head pointing to the ground begins his downward search, for he is just as much at home in one attitude as the other. Then we see him at the root of the tree ; now with sidelong motions he courses round the trunk ; and the next we see of him is on the summit, where, his labours done, he flits off in drooping flight to another tree and commences his search anew, invariably beginning at the bottom and working upwards, and long after he has passed from view we hear his tap, tap, tap, as he bores into the decaying wood for his prey, or hear his cheery notes as he passes still further into the wooded solitudes. And then how beautifully his rich and varied black, red, and white plumage contrasts with the sober tints of the bark, for it is of the greater Spotted Woodpecker we are at present interested. I would here say that this bird represents his family in the northern parts of our island, while the Green Woodpecker, a much larger bird, which frequents the southern woods, is also seen at times in the north, but so seldom as to make his appearance of but accidental occurrence.

The Woodpecker is wrongfully accused of boring into the sound timber, and, by letting in the water, hastening its decay. The gamekeeper never fails to take his life at every opportunity, 'to save master's timber,' he would tell you, if you spoke to him on the subject ; besides, that strong beak is suspiciously capable of breaking the Pheasant's eggs. Alas ! poor harmless, unoffending Woodpecker, I fear that by thy visits to the

trees thou art set down as the cause of their premature decay. Full well I know thy beak, strong as it is, is totally incapable of boring into the sound timber—full well do I know that, even if thou wert guilty of such offence, nothing would reward thy labours, for thy prey does not lurk under the bark of a healthy tree. Insects innumerable bore through its bark and hasten its doom, and it is thy duty in Nature's economy to check them in their disastrous progress. Thou art also accused of boring into the sound timber for the purpose of making a cavity for thy eggs and young, yet to do so would be deviating from the course Nature has intended thee to fill. Sincerely do I hope the time is not far distant when the timber owner may welcome thy approaches, and protect thee in his domain, as one of his greatest friends, pointing out by thy actions the state of every tree in his forests, and warning him, by the unmistakable signs of thy visits, that his timber has already passed its prime, and is awaiting the woodman's axe to save it from utter ruin.

The Woodpecker is for the greater part of the year a decidedly solitary species, seldom more than a pair being seen together. True, we may often see a party of them even in the winter months ; still they have accidentally met in their wanderings through the woods, and will again separate, each to seek its meal in a contrary direction. In the early summer months the Woodpecker in company with his mate repairs to his nesting-hole, for it is not at all improbable that these birds are a life-paired species. The hole is oftentimes in a decayed tree, sometimes in a limb, at others in the trunk, not unfrequently in the hole made by the snapping off of a branch. If the Woodpeckers have to make a hole themselves, they set to work in the softest part of a

decayed limb or trunk, and work at it incessantly, carrying the greater part of the decayed wood chipped out in the excavation to some considerable distance from their nesting-site, until it is of sufficient depth to answer their purpose. The hole is not always a straight one, indeed it almost invariably turns either to the right or left, and is only large enough to admit the parent bird. At the bottom of this passage the hole is slightly enlarged. No nesting materials are required—the soft decayed wood at the bottom of the hole answers every purpose. Here the Woodpecker lays her eggs, four, five, or even six in number, not quite so large as a Thrush's, and of a delicate pinky hue beautifully granulated, and appearing in the hollow cavity like pearls of the finest lustre. But when the contents are removed the pink hue vanishes, and the egg remains a pure and spotless white, and smooth and shining as ivory.

The food of the Woodpecker consists of insects, and when feeding their young they collect a great quantity in their mouth, under the tongue, just like the Rook. The tongue of the Woodpecker is worthy of a few remarks. His bill is not used in the same manner as the Flycatcher, although both birds feed on insects. With his strong beak he uncovers his prey and removes the bark under which it is lurking: then his tongue, long and slender, is shot rapidly out, and the insects easily secured. Altogether the Woodpeckers are very interesting birds. Haunting as they do the deepest woods, they are seldom seen, yet their life history is none the less interesting. But time gets on apace, and we must leave the Woodpecker,

tapping the hollow beech tree,

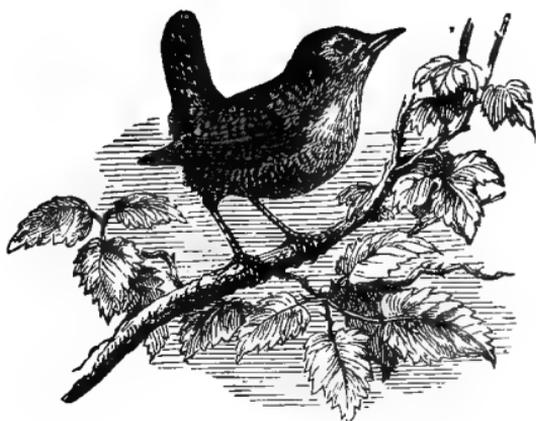
to his useful labours, and notice another little active woodland bird often seen in the same localities as he.

This little creature is called the Creeper, and well he deserves the name, for he is incessantly 'creeping' over the timber in search of his insect food. Besides seeing him in the deepest woods, we oftentimes notice him in the open places, notably the well-wooded parks, and in gardens and orchards he is quite common. He is such an unobtrusive little creature, too, that I fear he is often overlooked or mistaken for the Wren. We see him in his garb of mottled brown commence operations at the foot of the tree, and travel upwards in short stages, now stopping to pick out an insect lurking in the crevices of the bark with his long slender bill, or returning head downwards to pounce on an unwary fly. Up again he creeps, more like a mouse than a bird, occasionally uttering a low and plaintive note: right to the top of the tree he mounts, exploring every nook and cranny likely to reward his search as he goes. Now he creeps on the under side of a projecting limb, then again on the top, and although he will explore an entire tree, still he but rarely uses his wings to convey him from one part to another. You will also find that he, like the Woodpecker, endeavours to be on the opposite side to you, and carry on his explorations unseen. Yet every now and then curiosity seems to get the better of him, and you see his light coloured breast and sharp little head peep trustfully at you and again vanish from sight. The Creeper does not confine his labours to decayed timber, for he explores every tree in his way, sound and decayed alike, flitting from one to the other in drooping flight, uttering his twittering notes as he goes. Most perfectly is the Creeper adapted to his ways of life. His bill is admirably formed for obtaining the insects lurking amongst the crevices of the bark, and his tail,

too, resembles the Woodpecker's, and supports him greatly whilst climbing.

The Creeper breeds in early summer time, when insect life is most abundant, and, like the Woodpecker, prefers a hole for the purpose. But instead of boring one out for himself, he finds one ready made, and, contrary to the Woodpecker's economy, lines it with dry grass, moss, and feathers, and makes a very warm and comfortable abode. Here the female bird lays as many as six eggs, sometimes only four, white, spotted and speckled with red, and about the size of the Blue Tit's, perhaps a little larger. The parent Creepers are very cautious birds in entering or retiring from their nest, and it may be their home is but a few yards from our door, yet we never discover it, at least by the motions of the little owners.

This little creature, like the Woodpecker, is not a migratory bird, and we see him in the woods throughout the year. In winter time one would think that a frail little bird like him, whose food consists of insects alone or nearly so, would be hard pressed for sustenance. Yet that is not the case, and he lives sumptuously the winter through. If the Swallow, however, were to visit us at this time, he would undoubtedly perish, for the air in winter is almost clear of insect life; but the little Creeper can live in ease when the sun is at Capricorn, just because he can climb so dexterously, for the bark of trees abounds with insects, and more particularly their eggs and larvæ, which lie there torpid until called into life by the genial presence of the vernal sun.



THE WREN.

THE Wren is one of the smallest birds known in Britain. But though small, we can seldom pass him by as he creeps up the fences and under the tangled vegetation, trilling forth music both loud and sweet, or uttering his long string of startling call notes. Though a soft-billed or insect-feeding bird, Nature has not intended him to be a wanderer, and he remains with us throughout the year. He knows not the barren moor or common, so dear to the Grouse and Plover, but, a lover of arboreal seclusion, we find him in the densest woods, the shrubberies, the fields, the hedgerows, the lanes, and sunken fences; so too about heaps of old timber or brushwood, in gardens, and on the wooded banks of rivers and streams.

We may justly call this little creature a perennial songster, one of the three or four that warble incessantly, except in the moulting season, summer and winter alike.

In spring his love song sounds through the forest glades and hedgerows, as the buds are expanding into foliage and his mate is seeking a site for her cave-like home. And what a series of jerks and modulations it is composed of, and how abruptly he finishes his song, as if suddenly alarmed: but this is his peculiar habit, and common to him alone. In summer we hear his song given forth for very joyfulness both morning, noon, and night, as he wanders hither and thither in his leafy bower. But a month previous to the autumnal equinox a change occurs, and we hear him sing with failing energy and in rapidly decreasing numbers: the moulting season has arrived. In the middle of September he has regained his lost notes, and as the mellow days of autumn gild the waning year his song assumes all its wild and varied beauty. When the noble trees are almost divested of their leafy covering, and the cold western winds bring down the frost-bitten leaves in showers, he still sings on. When you see him fly you sometimes take him for a swirling leaf, but are soon undeceived as he pours forth his sweet and varied notes—notes so loud as to fill you with wonderment when you see from what a little feathered casket they fall. In winter, undaunted by the shrieking blasts and ice-covered branches, his song is heard, clear as the morning star, and sweet as at the summer solstice.

Two of the Wren's chief characteristics are its ever-elevated tail, borne more erect than that of any other bird, and its never-ceasing activity, for seldom indeed is the Wren seen sitting motionless for two minutes together. See him hopping through the tangled fences, his course marked by the trembling branches. Now he pauses for a moment in the open, to take a peep at you. Notice how he stretches up to his full height, with his tail erect,

and endeavours to appear as full of consequence as possible. A brief moment's rest and he is off again, in short feeble flight for a few yards, and then again seeks shelter under the withered leaves, creeping through them more like a mouse than a bird, occasionally bursting out into fits of sweetest song.

The Wren pairs very early in the year, sometimes a union being formed early in March, although the nest is seldom commenced before the latter end of April. The site chosen is varied, and not unfrequently very singular—under the banks of streams, in bushes and brambles, far up the stems of trees, amongst ivy, and in the sides of haystacks, or sometimes hanging pendent from a yew bough. I once found a Wren's nest hanging suspended from the drooping bough of an elder tree over a small stream, the nest being swayed to and fro by every breath of air. The size of the nest is large when compared with its little owners. Mimicry is the protective power employed by the Wren for the protection of its nest, and note carefully how well she practises it. The nest, which appears as a large ball of withered leaves, is made in the first place of dry leaves and a little moss, and round the hole which admits the parent bird is deftly woven a number of grass stems, to strengthen and firmly bind the materials together. The inside is in the first place lined with a thick bed of moss, and finally with a soft and warm lining of feathers, on which the eggs are laid. I may say that the Wren will forsake her nest when in the course of construction sooner than any other bird I am acquainted with. Disturb her repeatedly when building, and she leaves it apparently without cause. Insert your fingers in her tenement, and she will almost invariably forsake it for ever. The eggs, as a rule six in number, though sometimes only four,

are pure white when blown, faintly spotted with light red spots, often forming a zone round the larger end : some specimens are occasionally met with pure and spotless. When the eggs are deposited, however, the Wren will seldom forsake her treasure, and when her tender brood are relying on her for sustenance, you never find her forsake them, even though you take the young in your hand and examine them, or catch the female bird on the nest while ministering to their wants. When the nest is approached the male is a noisy little creature, coming within a few yards, and with restless motions showing his anxiety, and his displeasure with outbursts of loud and startling cries. When the young no longer require their parents' aid, which is soon after they gain the use of their pinions, they are abandoned and left to their own resources, and the old birds separate, to lead a solitary life until the following spring prompts them to seek a mate. I have seen many erroneous tales in respect to the roosting habits of this little songster. How they are said to frequent holes or crannies, and sleep in companies huddled together for mutual warmth ; or where they build nests in the winter for the purpose of shielding themselves from its icy blasts. In the first place the Wren is decidedly a non-gregarious species, and to congregate in parties for the purpose of repose would be directly opposed to its life of solitude. Secondly, as long as the ivy, holly, yew, or laurel, decked in perennial verdure, exist in their haunts, assuredly there the Wren will seek repose. In haystacks, too, is a favourite place to find the Wren at night-fall.

The Wren in the course of its endless wanderings and when in search of food is very often seen to enter crevices in walls or the holes in tree roots and under

banks, and remain in them some considerable time, often reappearing at holes far away from the place he first entered. Owing to its feeble flight, the Wren can speedily be captured in open places, and the birds appear to be well aware of their weakness in this respect by seeking the densest cover when chased or suddenly alarmed. I have known them when hard pressed take refuge under leaves or creep into any convenient hole, there to lie still and motionless until the threatened danger has passed. Thus we see that if Dame Nature has not gifted the Wren with wings of sufficient strength to carry him quickly out of danger, she has dressed him in a garb harmonising with the colours of his favourite haunts, and taught him in an effectual manner arts of deepest wile for his self-preservation.

The food of the Wren is composed of insects of various kinds and their larvæ. Also we sometimes see him about ants' nests, searching for their eggs. Fruit, too, is devoured in its season ; and when winter makes food scarce he will often feed on the crumbs at your door. But never is the Wren, so closely connected in youthful minds with the Robin, seen in motions so trustful as that little bright-eyed red-breasted songster.



THE KINGFISHER.

THE Kingfisher is now a rare bird in England. Time was when this charming bird could invariably be seen darting hither and thither in most frequented places ; but of late years he has been persecuted so greatly, partly by the collector, who never fails to secure him for his cabinet at every opportunity, and partly by those who have an inherent love for slaughtering every living

creature around them. Gamekeepers, too, are up in arms against him, because of his inordinate love of preying on the finny tribe.

Where the Kingfisher now is seen is in the most secluded places ; where the trout streams murmur through the silent woods, but seldom trod by the foot of man ; or in the wooded gullies down which the stream from the mountains far above rushes and tumbles over the huge rocks, or lies in pools smooth as the finest mirror. It is here we sometimes see the Kingfisher flit past us in his rapid flight, and it is in these flights that the bird's gorgeous plumage shows to advantage. But when he is sitting motionless as death on a bough overhanging the calm and lucid pool, with his reflection showing in the clear waters, and the noonday sun shining upon his back, then he is seen in all the glorious splendour of his rich and refulgent plumage—plumage which, to place it in its proper sphere, more befits the spicy groves of the tropics than our cold and foggy northern isle. Ah ! our heavy step has alarmed him ; he is off like an arrow in his rapid flight, and we can trace him far down the stream in his straight and unwavering course, appearing as an emerald streak of light. Observe him closely, and we find that he seldom or never flies over the bridges, always under them. Man has observed this peculiar habit of the Kingfisher, and taken advantage of it, by putting a silken net over the bridge. The bird in its rapid flight unwittingly enters its toils and becomes an easy prey. The Kingfisher is comparatively a silent bird, though he sometimes utters a few harsh notes as he flies swift as a meteor through the wooded glades. You not unfrequently flush the Kingfisher from the holes in the banks, and amongst the brambles skirting the stream. He roosts at night in

holes, usually the nesting cavity. He will sometimes alight on stumps and branches projecting from the water, and sit quiet and motionless, but on your approach he darts quickly away, often uttering a feeble *seep seep* as he goes.

Should the reader chance to know of a haunt of the Kingfisher, he may, by exercising the utmost caution, observe the bird when obtaining its food—a sight by the way of unequalled pleasure and wonderment. See him sitting on his favourite stump, for he chooses some point of vantage to which he daily repairs to secure his prey and bask in the sun's genial rays, so motionless as to appear but a part of the stump itself. But the Kingfisher is intently watching the troutlets playing in the pool below him. At last his chance arrives, and with incredible speed he poises himself for an instant and then dashes boldly into the water, and before we have time for thought he is under the surface. A few brief moments and he again appears in sight—successful. With the fish crosswise in his strong beak he again repairs to the stump, and then we see how he disposes of it. With a jerk he deftly throws the fish into the air, and as it falls he catches it head first, and swallows it there and then. This, I believe, is the Kingfisher's only method of fishing, and therefore he never molests any fish too large for him to swallow whole. All the bones and other indigestible parts of his food are cast up in pellets. The food of the Kingfisher is not composed entirely of fish, for I have taken the remains of fresh-water shrimps from their stomachs, and doubtless other animals inhabiting the waters are from time to time devoured.

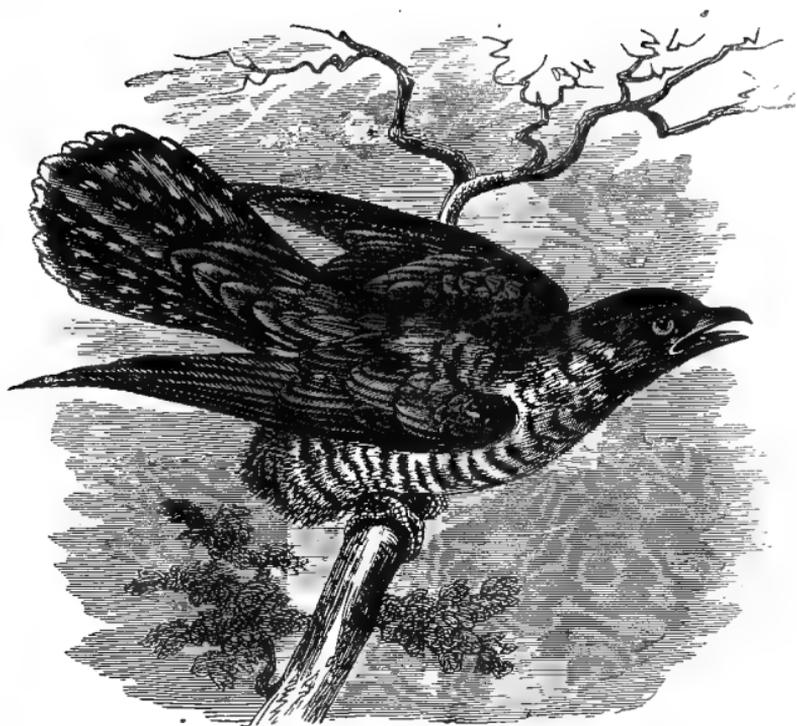
About the nesting habits of the Kingfisher mystery has almost always hung. The ancients, for instance, had a very absurd idea as to its nesting habits. They

believed that the bird built a floating nest, and wherever the old bird and her charge were drifted by the winds, as they floated over the briny deep, the sea remained calm and lucid. The Kingfisher, therefore, to the ancient mariner, was a bird held sacred in the extreme. Even in our own day one would think these absurd superstitions were not altogether eradicated. For instance, the nest is said to be *made* of the fish bones ejected by the bird. If the Kingfisher builds a nest of fish bones, which it certainly does not, we may also say with equal truth that the Windhover Hawk builds a nest of cast-up pellets on which to deposit her eggs. Now the real facts of the case are these: Kingfishers, as the young naturalist is probably aware, nest in holes of the banks of the stream they frequent, and not only do they nest in these places, but they often repair to them at other times and roost in them at night; and therefore, as the birds so frequent them, it must follow that vast quantities of rejected fish bones accumulate, and on these the eggs are of necessity laid. Therefore I am satisfied in my own mind that Nature has not taught or intended the Kingfisher to build a nest, but that its case is analogous to that of the Windhover. The one repairs to an old nest or hole or crevice for its purpose: the other seeks a hole in like manner, and in both cases the eggs are found on the refuse of the bird's food. It will therefore be seen that naturalists err when they tell us that the Kingfisher builds a nest of fish bones, and we may rest assured that no Kingfisher has yet purposely constructed a nest out of the bones it ejects.

The eggs of the Kingfisher are very beautiful objects before they are blown, being of a deep pinkish hue; but after the contents are removed the pink bloom vanishes, and the eggs assume a pure and spotless white, in some

cases beautifully grained. They are not so large as a Thrush's egg, and much more rounded, and usually six in number.

The Kingfisher is found with us throughout the year, but numbers doubtless perish when their native streams are frozen. There is perhaps not a bird in all the ranks of the feathered gems of equatorial regions, be it ever so fair, the Humming Birds excepted, that can boast a garb so lovely—an azure blue, green, and intermediate tints—as adorns this little creature of our own northern land. Naturalists assert that the sun has something to do with the brilliant colours of the birds and insects of the tropics, but certainly the Kingfisher is an exception of the highest kind.



THE CUCKOO.

THE Cuckoo, next to the Swallow, is perhaps the most well-known bird in name our country harbours in the summer months. I say 'in name,' because but few except those learned in bird lore can discriminate the Cuckoo save from his notes ; but let the bird utter them, and everyone knows at once it is the Cuckoo. For does he not proclaim his presence by calling forth his own name, which is wafted in all directions by the refreshing breezes of spring, and making mistake impossible? Then, again, the strange manner in which the Cuckoo

provides for the continuation of its species, together with the absurd supposition of the bird changing into a Hawk for the winter months, also tend to throw a halo of mystery round this bird of spring. Even ornithologists have yet to learn much in the life history of the Cuckoo.

He arrives here about the third week in April, and shortly after the woods and coppices, now fair and beautiful with the tints of rapidly expanding buds, resound with his joyous notes. He is found in the verdant woods, in the coppice, and even on the lonely moors he flits from one stunted tree to another and utters his notes in company with the wild song of the Ring Ousel and the harsh calls of the Grouse and Plover. Though his notes are monotonous, still no one gives them this appellation. No! this little wanderer is held too dear by us all as the harbinger of spring for aught but praise to be bestowed on his mellow notes. His notes, though full and soft, are powerful, and may on a calm morning, before the everyday hum of human toil begins, be heard a mile away, over wood, field, and lake. Towards the summer solstice his notes are on the wane, and when he gives them forth we often hear him utter them as if labouring under great difficulty, and resembling the syllables *cuck-cuck-oo*. I on one occasion early in smiling May heard a Cuckoo calling treble notes. They differed from his 'waning' notes by the last syllable being in the majority—thus, *cuck-oo-oo*, *cuck-oo-oo*—and sounded inexpressibly soft and beautiful, notably the latter one, which resembled the soft and plaintive cooing of the Wood Dove. I at first supposed an echo was the cause of these strange notes, the bird being then half a mile away, but I had abundant opportunity to satisfy myself that this was not the case, as he came and alighted on a noble oak a few yards from me and again gave them

forth. The Cuckoo utters his notes as he flies, but only, as a rule, as far as I can determine, when a few yards from the place on which he intends alighting. Besides the above-mentioned notes the Cuckoo is often heard uttering a chattering cry, not unlike that of the Kestrel, but more guttural. This cry is probably their call or alarm note, as the birds invariably utter it when suddenly alarmed. I have never yet heard a female Cuckoo uttering the note 'cuckoo,' and I consider the song is confined to the male alone; for that it is a song is evident by the bird losing it in the summer months, like most other species. I often hear Cuckoos singing long before sunrise, and equally late in the evening, even when the moon has commenced shedding her borrowed light over wood and meadow.

The Cuckoo, like the god Amphion, at the sound of whose lute the stones arranged themselves in such regular order as to compose the city walls of Thebes, seems to have a wonderful influence over the feathered tribe when giving forth his notes. I on one occasion noticed a male Cuckoo alight in a tall oak tree and commence giving forth his notes. He had not been there long before several Starlings which had been feeding in a neighbouring field flew into the same tree. Soon after several Greenfinches paid him a visit; and lastly a little Willow Warbler flew over the field at some distance from the tree which contained the Cuckoo, which commenced calling loudly, when the Willow Warbler altered its course and flew back again some distance into the tree. I could bring more instances of birds which in my opinion were attracted by his notes, but why, and for what purpose, I am unable to say.

I am not a convert to the belief that Cuckoos are polygamous. Many support their belief by giving in-

stances where they or their friends have observed two male Cuckoos following and chasing a female ; but this proves little or nothing. I, a few weeks before the vernal equinox, see two male Stormcocks fighting over and chasing a female ; but am I therefore to believe that these birds are polygamous ? I strongly suspect that the peculiar manner in which the Cuckoo propagates its species is in some measure responsible for this belief. When we reflect how prolific all polygamous birds are, as a rule, and then note the comparative scarcity of the Cuckoo, it will at once be seen that polygamy, if practised in this species, is attended with results quite at variance with those usually attending it. Upon their arrival I always see the Cuckoo solitary ; and when they have spent a few weeks in their summer home, I either see them in pairs or alone. At the time of writing this, two Cuckoos, a male and female, have frequented one locality for the last three weeks. Thus I infer that the Cuckoo *does* pair, even though it be for a very short season, and that the birds remain in company until the full complement of eggs is deposited.

Reader, we will suppose polygamy to be their *forte*, and a male Cuckoo after fighting for a female gains her attentions. In due course a fertile egg is deposited, and the male departs to seek out and win more females, for be it known Cuckoos are not at all gregarious. Now if the female Cuckoo cannot obtain another partner, the remaining number of eggs by her deposited will prove infertile. But this is not the case, for we rarely find an addled egg of this species. Again, I for one have never seen Cuckoos displaying hostile motions, and if they are of so pugnacious a disposition, we must also bear in mind that all birds which pair annually are more or less pugnacious in the mating season. Further, in polygamous

birds, the male invariably devotes his attentions to several females, and remains in their company until the eggs are deposited. No such act is observed in the economy of the Cuckoo, for when the eggs are being deposited, I challenge any person to bring proof positive where he, *in propria personâ*, has observed any such (Cuckoo) gathering as is frequently to be seen in the haunts of the various polygamous birds in the nesting season.

Another reason why I reject this theory is because polygamous birds are, as a rule—*a*, suitably armed for fighting for the females: no such provision is observed in the male Cuckoo. *b*, Because male polygamous birds, as a rule, exhibit the most gorgeous colours, while the females are of dull and inconspicuous ones: male and female Cuckoos are but slightly different in colouring matter. *c*, Because in polygamous birds the females largely exceed the males in numbers: in Cuckoos, as far as I have observed them, the males and females occur in equal quantities. I am well aware that many urge that one intercourse with the male bird is sufficient to cause all the eggs deposited by the female to prove fertile; but this, as far as I can learn, is not yet proved, and if true, I most flatly deny to be polygamy in the strict sense of the word. Therefore, from what I have ruminated over and observed of the habits of the Cuckoo, I am convinced that this species, as I have before stated, pairs soon after its arrival, and lives in pairs until the eggs are deposited, when the ties which previously bound them together cease their mysterious power, and the birds lead a wandering solitary life until the retiring sun bids them seek their southern home.

Nature has not intended the Cuckoo to build a nest, but influences it to lay its eggs in the nests of other

birds, and entrust its young to the fostering care of those species best adapted to bring them to maturity. Thus we see, midway between the vernal equinox and summer solstice, the female bird prying about all suitable situations in search of nests in which to deposit her eggs. Now coursing down the hedgerows, prying into the deep underwood, or flitting uneasily from tree to tree, her mate singing a short distance away. We often, too, see her at this season upon the ground, and I may say that from what I have observed the Cuckoo usually lays her egg on the ground and then conveys it to the selected nest; but whether the bird conveys the egg in her bill or claws I am unable to say.

The nests selected are numerous, but from my own observation the nest of the unassuming Hedge Accentor is most frequently chosen. I have, however, known her egg in the small and extremely beautiful nest of the lesser Redpoll; and the various ground birds, as Pipits and Wagtails, are oftentimes selected. When her egg is deposited in such small nests and difficult of access, she must of necessity convey them either in her bill or claws, for her large size prevents her entering the nest for her purpose. I am surprised that so much doubt hangs round the eggs of this bird, and the theories put forth by many naturalists on the subject are, to say the least, absurd. The egg, as is well known, is very small in comparison to the bird, being no bigger than a large-sized Skylark's, and very much the same in general appearance. All authentic eggs which have come before my own notice are very similar, both in size and markings; and I deny altogether that the Cuckoo has the power of laying eggs at will of such a colour as to harmonise with those in the selected nest. Even if such were the case no end would be served, for after numerous

experiments with all kinds of birds, I find that they will tend with as much care as their own, eggs of widely different species, and presenting size and colour, the latter especially, far different from their own.' I have inserted eggs as widely different in colour as it was possible to obtain in nests of most of the commoner species of insessorial birds, and in every case except one, out of some fifty instances, my experiments proved successful, viz., that birds will tend the eggs of kindred species with as much care and attention as their own eggs. I, for my part, do not think the eggs of the Cuckoo vary so greatly as is currently supposed. If a nest is found containing eggs, and one of the number happens to exceed the others in size, or differ from them in colouring matter, it is at once set down to be that of the Cuckoo. It has been ingeniously hinted that parasitic birds like the Cuckoo became parasites in this wise. A bird in imminent danger of delivery, and without a nest prepared, deposited her egg in an alien nest rather than on the ground, and the convenience of this method may have struck her, and induced her to repeat the experiment. The birds reared would follow their mothers' peculiar trait, and in course of time the birds thus hatched would outnumber their congeners hatched in the usual way, and thus the habit would become fixed. But my own observations lead me to reject this fanciful theory. If a bird were placed under the circumstances above mentioned, the egg would be deposited upon the ground or in the unfinished nest; for I have known instances of both cases. I consider this peculiar instinct in the Cuckoo has existed as long as the bird itself, and the cause of this to us strange proceeding is as yet one of the many secrets still in Nature's keeping, while the

size of the egg in comparison to the bird bears out my belief.

Mystery still hangs densely round much of the Cuckoo's life history, and particularly in that part relating to the production of its young. Any person in the habit of studying the economy of the birds of the field is well aware that the number of young Cuckoos seen in a season, as compared with the adult birds, is very disproportionate, sometimes not one solitary specimen being seen, although the mature birds are the commonest species we meet ; but we cannot explain it. From this circumstance, however, I am led to believe that the number of eggs deposited by the Cuckoo is far less than is currently supposed. Then, again, we must not give credence, notwithstanding the many instances brought forward in favour thereof, to the seemingly well-received story of the young Cuckoo ejecting its fellow-nestlings at an age when no young bird in the creation (hatched blind) is capable of such an act. Probably, gentle reader, many a time thou hast paused in thy wanderings to examine a nest of newly hatched birds,—of any species whose young are hatched blind—and upon taking them in thy hand and observing them closely thou wilt at once see that any great exertion on their part is impossible. And as to their being capable of ejecting one of their fellows, why, the thing is impossible. Ay, and more so when we reflect that the mother bird sits on her new-born young for a considerable time after their breaking from the shell.

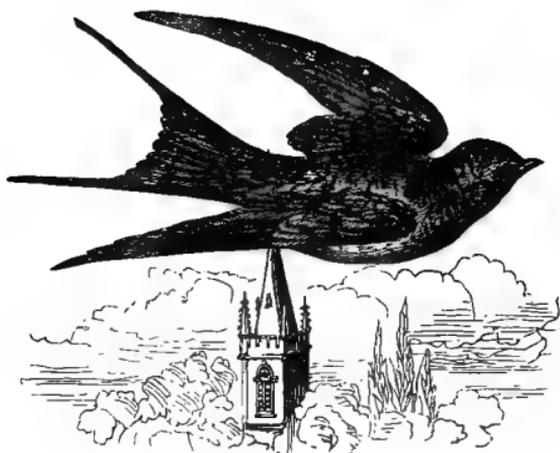
The food of the Cuckoo is composed of insects and caterpillars, the young birds being fed on this food by their foster-parents. They are also accused of destroying the eggs of birds, but certainly not those of game, for their beak is not adapted to break the hard

shells of game birds' eggs : their inroads, therefore, if at all, are confined to the eggs of the smaller birds. Nevertheless, the Cuckoo has a relentless enemy in the game keeper, who never fails to strike him down at every opportunity. He is too much like a Hawk for Velve-teens ; besides, he has a vague idea that every Cuckoo killed in the summer means a Hawk the less in winter. The young Cuckoos in their first plumage differ vastly from their parents, being very similar in markings to the female Kestrel.

The flight of the Cuckoo is a buoyant easy one, straight and unwavering, and graceful in the extreme. When flying, adult Cuckoos have a very accipitrine appearance: with their long tail and wings and rapid flight, they bear a strong resemblance, to a casual eye, to the far-famed Sparrowhawk, especially when the beautiful slate-coloured upper parts glisten in the sunlight, and display themselves in lovely contrast to the vernal greens of the hawthorn, as the bird glides rapidly up a hedgerow side. This resemblance to the birds of prey is doubtless a protection to the weak and defenceless Cuckoo from these pirates of the air. Cuckoos are often accompanied by various small birds, notably the Willow Warbler and Chaffinch ; but for what purpose I am at a loss to say, unless it be for the purpose of mobbing him, much as the little birds are wont to do Crows and other predaceous birds, his hawk-like appearance attracting them.

The Cuckoo is one of the last birds to make his appearance here in the spring, and probably the first to leave us in the early autumn. We miss his mellow notes in hay harvest, and there is a saying here that the sight of the haystacks drives him away. I am of opinion the adult birds leave before the young ones. Certain it

is they do not tarry much longer after the hay is mown, and the male but rarely sings after midsummer. I on one occasion heard him singing the third week in September. The fact of the bird remaining silent, and its hawk-like appearance, causes it no doubt to be overlooked by most people. But he seldom sees the lovely tints of autumn, and never hears the wintry storm-wind's voice, for, impelled by resistless impulse, he wings his way afar over mountain, stream, and sea, to a land where the northern blasts are not felt, and where a summer sun is shining in a cloudless sky.



THE SWALLOW.

IT is perhaps in the habits and movements of birds that we have the most marked signs of the changing seasons. Thus, as winter almost insensibly passes into spring, bird life is sure to make us aware of the change ; for does not the charming Blackcap, fresh from a southern haunt, sit and warble on the yet leafless branches, and the Thrush and the Blackbird, Cock Robin and Jenny Wren, carol forth the praises of the vernal year from every tree and hedgerow ? Then, too, the ever welcome stranger Cuckoo's notes are heard sounding so full and clear from the distant woods, and the Skylark and the Bunting seem overflowing with rapture for the change of season. As spring rolls imperceptibly into summer the extreme vivacity of bird life is a predominant feature. Each bird is busy : the fluttering of a thousand wings amongst the branches, and the abundance and power of

their owners' music, tell us that the young are being reared. Another change, and we know the turning point of the year is at hand. The music of the feathered host, as summer passeth away in favour of autumn, is visibly on the decline, and the disappearance of the Cuckoo and other early birds of passage tells us in silent language of the season at hand. Autumn is declining: one by one the migratory songsters leave us, and the departure of the Swallows and the appearance of the Redwings inform us that ere long winter in his hoary garb will reign supreme around us.

The Swallow, too, is a sure harbinger of the glorious spring, and arrives here the third week in fresh and vernal April, being a little later in its appearance than the Martin or Sand Martin. You can instantly tell the bird from the Swifts or Martins by its steel-blue upper plumage and the acutely-forked tail. Swallows are very common birds, and frequent, as a rule, the cultivated lands in the neighbourhood of water, showing a decided preference for the habitations of man.

How gracefully the Swallows fly. See them coursing over the daisy-bespangled grass fields; now they skim just over the blades of grass, and then with a rapid stroke of their long wings mount into the air and come hovering above your head, displaying their rich white and chestnut plumage to perfection. Now they chase each other for very joyfulness, uttering their sharp twittering notes; then they hover with expanded wings like miniature Kestrels, or dart downwards with the velocity of the Sparrowhawk; anon they flit rapidly over the neighbouring pool, occasionally dipping themselves in its calm and placid waters, and leaving a long train of rings marking their varied course. How easily they turn, or glide over the surrounding hedges, never resting,

never weary, and defying the eye to trace them in the infinite turnings and twistings of their rapid shooting flight. You frequently see them glide rapidly near the ground, and then with a sidelong motion mount aloft, to dart downwards like an animated meteor, their plumage glowing in the light with metallic splendour, and the row of white spots on the tail contrasting beautifully with the darker plumage.

Swallows may always be distinguished from other birds when alighting, by their keeping the pinions in motion until they are firmly seated on the chosen perching place. This proves for ever the inability of this bird to use its feet for motion—other birds gifted with greater length and power of legs close the wings just prior to alighting. When at rest its short legs prevent it from walking or hopping, and if it does move on its perching place, which is very seldom, the wings are invariably called into use and aid it in its motions. Therefore, once at rest, Swallows, Swifts, and Martins usually sit motionless until their restless nature leads them once more to course through the circumambient air. The song of the Swallow, for he has a song both loud and sweet, is uttered when the bird is in motion, although he will sometimes warble forth in a subdued tone when at rest. It is a song worthy of the bird's wandering and buoyant nature, and fully harmonises with his rapid flight. In the smiling month of May you are sometimes puzzled by hearing a strange song in the air, perhaps a hundred yards away. The song sounds nearer and nearer, till at last, above your head, you find it is the Swallow, singing as he flies, giving forth a long train of rambling though pleasing notes. You hear him warble most frequently in the late summer months, when his young are coursing round him, and then it is heard in

all the fulness of its soft and inexpressible beauty. The young males will often warble a few notes in autumn—a circumstance, by the way, met with in few birds.

The great purpose of the Swallow's visit to our northern climes is the rearing of its young. The Swallow, from what I have observed of its habits, I consider to be a life-paired species, and therefore with unerring certainty it returns to its nesting-site of the previous season. The Martin returns to its old nest and again uses it for its purpose ; but the Swallow returns to its nesting-site alone, and builds a new nest close to the one of the previous season. The Swallow has perhaps never been known to build a nest in the open air. In barns and outhouses, upon the beams of wood which support the roof, or on some stone jutting out of the wall or chimney, or any other coigne of 'vantage, we find its nest. In the month of May Swallows are seen hovering near muddy places, and finally alighting, to procure a little of the mud with which to build a part of their nest. Many journeys do the little creatures perform, sometimes for a considerable distance, in the course of the day, each time returning with a little bit of mud in their beak, which they artfully mould into a cup-shaped cavity. When the outside portion is finished, the birds line it with a quantity of grass and feathers. Much of the lining material is obtained when the birds are on the wing—a downy feather from the poultry yard, wafted into the air by the breeze, is secured, and the straws raised by a sudden gust are seized and conveyed to the nest. The nest completed, four or five eggs are deposited of a pure white colour, with deep rich brown blotches and spots, notably at the larger end, round which they often form a zone or belt. The sitting bird is fed by its mate, who keeps visiting the place with joyous twittering

cries during the whole period of incubation. A weary though resistless task it must be to the ever moving Swallow to sit patiently for so long in a gloomy shed or outbuilding. Yet it is a labour of love, to which the sitting bird willingly yields its life of liberty and motion for so long a period, and the sight of their tender brood amply repays the joyous parents for the weary anxious days of confinement.

Early in July the young Swallows are strong on the wing, and it is a pleasing sight to watch the old birds feed them when flying through the air. Well do the little ones know their parents' call, and fly quickly to them, when the parent bird places in their beaks the proffered food, both little one and parent all the time fluttering in the air, and giving forth their twittering notes. The young Swallows can instantly be distinguished from the mature birds by the absence of the two thin and elongated tail feathers, which are a mark of maturity alone. The food of the Swallow is composed of insects alone, and the number these birds destroy in a single summer, would, if known, be truly astounding. They are, in the summer time, on the wing for fully sixteen hours, and the greater part of the time making terrible havoc amongst the millions of insects which infest the air. I never see them molest the butterflies, but doubtless the smaller species of day-flying moths are preyed upon. The Swallow keeps up its insect-hunting labour till late in the evening, and I often see its dusky form dash across the western sky while the bat is hawking for flies around me. When we see the Swallow flying high in the heavens it is a neverfailing sign of fine weather. The reason of this elevated flight is simply because the insects on which it feeds are acted on by the state of the atmosphere in their low or elevated flights. The

Swallow does not always obtain its food when flying through the air, for I oftentimes see him alight in turnip fields, for the purpose of feeding on the vast quantities of insects that are often found on the leaves of that plant. The bird, however, is not seen to move when on the ground, and when the insect is secured it flies rapidly away.

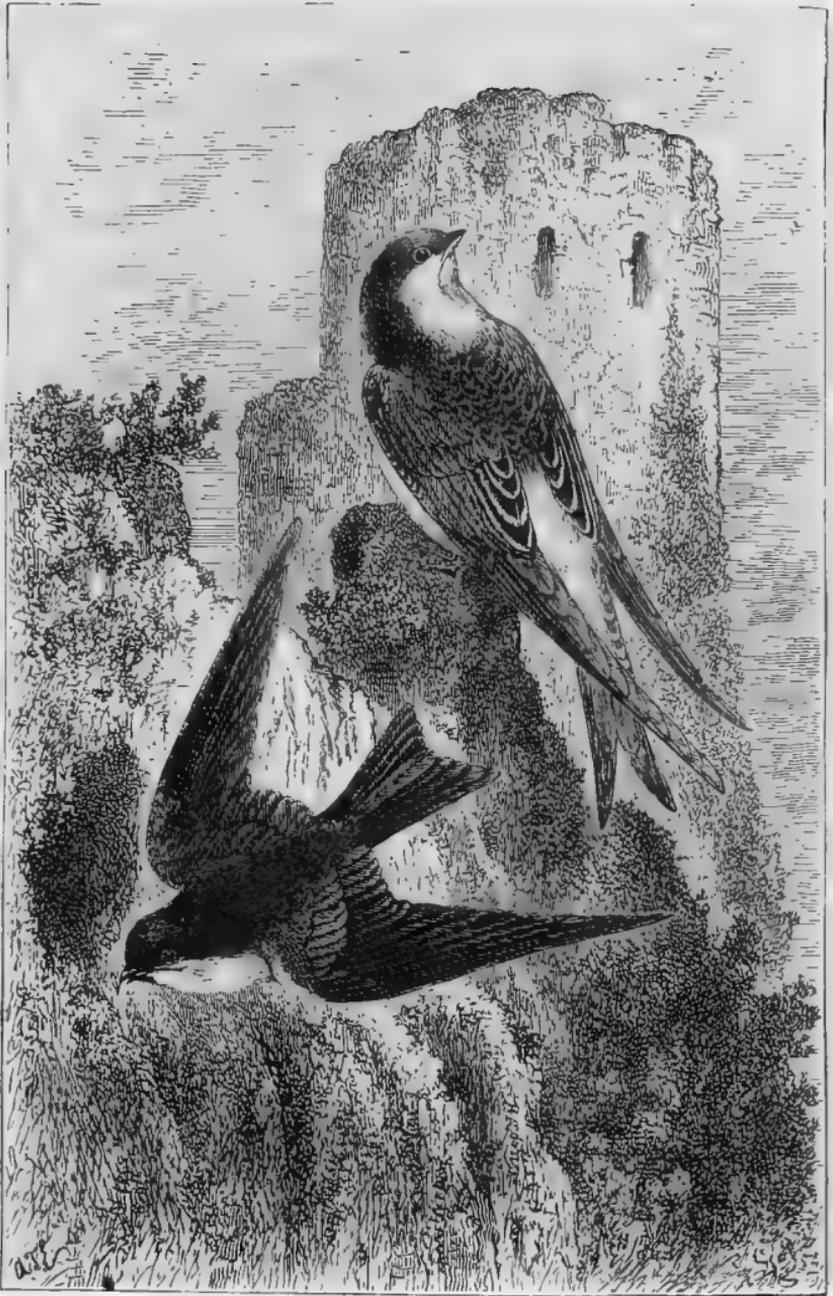
A fact common to life-paired and gregarious birds is that the young keep in company with their parents long after they leave the nest, and are fed and tended by them at an age when the young of annual-paired and non-gregarious species are left to forage for themselves. Thus we see Swallows attending their young all the summer and autumn, and leaving us in company. In September, Swallows, though of gregarious habits, join in still larger flocks, and frequent various suitable localities. These Swallow gatherings are a sure sign of the waning year, and afford an interesting sight to the lover of animated nature. To see thousands of these little creatures in company with Martins, sailing over a sheet of water or gliding over the meadows, awakens strange thoughts within us. We know that each of these little songsters, unless accident befall it, has a long and perilous journey to perform. Many probably there are who will never reach the distant shore, but all now are merry and contented. On the tops of the neighbouring trees, or even on the fences, sit dozens of the birds, and upon closer observation we find that the majority are young ones. With quivering wings, and sharp twittering notes, the little creatures await the arrival of their parents with food. Their little wings are weary, and they therefore depend on the more strong and well-trying pinions of their parents for sustenance. And thus the time passes on, yet still numbers

more swell the ranks ; October arrives, and with it a few days of cold weather ; the Swallows must not tarry, and the main flocks wing their way southwards. But still a few are seen late in this month, young birds not sufficiently matured for their long journey, and their parents. The winds bring down the golden leaves, and whistle mournfully through the half-naked branches, a stern hint that the birds must away to a warmer clime. Those now unable to journey on are left to perish, for the migratory instinct is imperative within the strong and healthy birds, and before October's nut-brown month has waned the Swallows have departed for their southern haunts.

MARTINS.

TWO species of Martin fly over our waters and meadows, namely, the Sand Martin and the House Martin. The former of these little creatures is amongst the first birds to arrive here in the spring, for the vernal equinox is scarcely passed ere we see these little aerial songsters, in their sober garb of brown and white, flitting round the sandbanks which contain their nests.

The Sand Martin is found in the neighbourhood of sandpits, where hundreds may be seen skimming through the air on never-tiring wing. Their flight, however, is not so rapid as the true Swallow, nor is it of such a peculiar twisting nature. Like the Swallow family in general, the Sand Martin delights to skim over large pools of water, occasionally touching the surface with its wings. All members of the Swallow tribe drink when on the wing, and, judging from their motions, they do so pretty frequently. Sand Martins are strictly gregarious, and there are few more lively scenes in bird life than a large company of these active little creatures. The neighbouring sandbanks are pierced with their holes, many hundred pairs of birds living together. The birds are constantly in motion, darting hither and thither, uttering their pleasing notes, and occasionally visiting their nests with food for their sitting mates. Let us try to gain some little insight into their nesting habits from the feathered tenants of yonder sandbank.



MARTINS.

The Sand Martin, like all its congeners, is joined to its partner for life, and every season we find the old nest and locality frequented by the birds. We find that the Sand Martins, with wonderful instinct, only choose those portions of the bank for their purpose that are sufficiently firm to admit of tunneling. The site selected, the little creatures work away with unceasing zeal, scratching out a hole perhaps three inches in diameter, and extending some two or three feet into the solid bank. The bird also provides for drainage by making the hole rise gradually until it reaches the nest; and the holes are not always straight, and it is then with difficulty the arm of the observer can reach the nest. At the end of this passage the birds construct a very loose and slovenly nest of dry grass and feathers. The eggs, four or five in number, are of the purest white, and fragile in the extreme. They are much smaller than the Swallow's or House Martin's, and before the contents are removed possess a lovely tinge of pink. Most wonderful is the instinct that guides the Sand Martin to its own nesting-hole, especially when that hole is surrounded by hundreds of similar ones, differing to the human observer in nothing from the surrounding ones. But maternal love is strong within the mother bird, and her home would be readily found under still more perplexing circumstances. The young birds are fed when on the wing by their parents, and return in company with them to the nesting cavity for repose when the shadows of night are falling.

The song of the Martin is only occasionally heard, and is a short, wild, and rambling performance. Though the House Martins congregate with Swallows, still you but rarely see either House Martins or Swallows flying with the Sand Martins, especially where they are

numerous. The food of the Sand Martin is composed of insects, and the refuse is cast up in little pellets.

The second of these birds, the House Martin, is found in all places suitable to the Swallow, with whom it congregates, although it arrives much sooner and departs a little earlier than that bird.

The flight of the Martin is slightly different from the Swallow. Martins, as a rule, if a rule can be applied to such a motion as flight, do not fly so swiftly. You can tell the Martin from the Swallow by the patch of snowy white plumage on the back and rump, and the absence of the acutely forked tail. When the rain is falling heavily the Martin seeks shelter from its downpour, but when the summer rain is falling soft and light, and everything bears that refreshing sweetness so prominent during a summer shower, they delight to course through the heavens, and it is then their flight may be seen to perfection. Now the birds glide rapidly past you, and then with fluttering pinions climb the vault of air; then down again with a smooth gliding motion they sail gracefully to the ground, to again mount upwards and sail in trackless course. Now we see them gliding round the trees, and when they mount the air with depressed tail and fluttering wings their fine white plumage shows conspicuously against the sober greens of summer vegetation. But their flight is so infinitely varied withal, that the pen does little in attempting to describe it, and the birds must be seen *in ferâ naturâ* to form a correct idea of its airy gracefulness. I have been thus minute in describing the flight of this aerial group of songsters, because they spend so much time in the air, that their motions in that element form one of their chief characteristics.

The song of the Martin is heard but rarely, and when

heard, the bird is nine times out of ten seen sitting on a roof, tree, or other perching place. The song is low, sweet, and varied, but not so rich as that of the Swallow. When the Martin is at rest on the roofs of buildings it is amusing to see the awkward attempts to progress by the feet alone. They will move for a few inches with a rolling kind of motion, but the observer will find that their wings assist them even in this small attempt at a movement nature has not intended them to put forth.

The Martin, like all other members of this family, pairs for life, and thus we see the little wanderers, soon after their arrival, alighting on their old mud-built nests, or if they have been destroyed while the birds were absent, the little creatures with wonderful instinct cling to the site of their former home, and as the time approaches when they are called upon to propagate their species, a new nest is built in the same position. Unlike its congeners, the Swallow and Sand Martin, the House Martin builds its nest in the open air, where every passer-by can see it. We will suppose a pair of Martins are about to commence nest-building, and having chosen the site, which is either on the rocks, under the eaves of buildings, or the sides of windows or chimneys, the little builders with small pieces of soft mud commence the outside of their nest. If the Martins built too much of their nest at a time, it would only drop to the ground, and all their labour be in vain. But with an instinct we cannot help admiring, they allow one portion to harden before building further: layer succeeds layer as we see them clinging to their nest, moulding and shaping the materials, until the outside part is completed, leaving a small hole at the top for the entrance of the birds. This nest of mud is lined with dry grass and feathers, and when completed is a very warm and comfortable nest

indeed. Their eggs are a pure and spotless white when blown, like those of the Sand Martin, and usually four or five in number. When the bird is sitting upon them its mate keeps visiting it with food, and when the young are hatched these little insect hunters are taxed to the utmost from before sunrise till after sunset, for the hungry clamourings of their tender brood are incessant. The young Martins are tended by their parents right up to the time of their departure in October, and, like Swallows, they feed their offspring when flying through the air or when resting their weakly wings by alighting on the trees, fences, and buildings. The food of the Martin is composed of insects, and the refuse of their food is cast up in pellets. We often in the month of June see the Martins alighting in the turnip fields, for the purpose of securing the smaller beetles and flies which infest these situations; so are they also seen catching the various insects on the tall grass, by hovering above it until they have captured their prey.

In the autumn months the Martins congregate in vast flocks, and spend their time in coursing through the air or basking in the sunshine on the trees and buildings. And a joyous merry party they are, no care upon them, and abundance of food around. But as the year rolls on insect life becomes scarcer, and the chilling winds bid the Martins prepare for their long journey. At length the day of departure arrives, and all who are strong and healthy fly on rapid wings in an unswerving course to the south. Across the mountains, rivers, and woods of our own country they speed, and at last the broad ocean lays before them. But still on, on; to delay is death; and boldly they enter on their long flight over the briny surge of ocean. Arrived at last on the far distant shore, they mayhap spend a few days

sailing over the vineyards and olive gardens of France and Spain. But this is not their destination, and still with heads pointed to the south they fly on. Now the broad Mediterranean appears in sight; but this is not their winter home, and the birds must cross the ocean once more. By resistless impulse driven, over they fly, the weakly ones falling, to perish. And now the distant shores of Africa are in sight; at last their haven of safety is reached, and the birds, exhausted after their long pilgrimage, find here food in abundance, and a genial climate in which to bask until the sun in his northern journey sends them again to our country as heralds of the glorious spring.

THE SWIFT.

So like the Swallow in appearance, habits, and requirements, the Swift is but only a distant relation. Formerly this bird was thought to be nothing more than a kind of Swallow; but since anatomy has gone hand in hand with the science of ornithology, naturalists have found that the Swift is widely separated from it. But leaving the subject to the study of those well versed in ornithology, as the present little volume is for beginners, and only endeavours to treat with the habits of birds alone, we will return to the life history of this aerial songster.

The Swift is one of the latest migratory birds to arrive, for we seldom see him before the first week in May, sometimes much later, according to the state of the weather. He delights in the cultivated districts, and is found in the company of Swallows and Martins. Round the ancient towers of cathedrals and churches in the country towns, we see them in large numbers making the still air resound with their sharp shrieking notes.

A bird gifted with great powers of flight is the Swift, even more so than the Swallow. When in the air he bears no resemblance to any other British bird, excepting perhaps the Swallow; but even then the difference is very striking. When flying he is very similar to a crescent, pierced with a short dagger or spear, which represents the body of the bird, and the wings form

the crescent. With graceful wheeling motions, short turnings, and infinite twistings, together with his great rapidity of motion, he is, indeed, a wonderful bird. To see a company of them on a tranquil evening in early summer is a sight by no means to be despised. See them sailing far up in the azure vault ; a few strokes of those long scythe-shaped wings, and they are coursing round you, uttering their sharp notes ; then again they mount aloft, to wheel and circle as before. Now they appear but specks in the air, and their sharp notes are heard faintly sounding above. The flight of the Swift, however, taken altogether, is not so rapid as that of the Swallow, but at times these birds will chase each other through the air with incredible velocity.

Swifts return annually to their old nesting-sites, and consequently we know the birds are joined together for life. The Swift does not necessarily require an elevated site for its nest, as is very generally supposed, for they will build under the eaves of houses, in places similar to those tenanted by the House Sparrow, just as frequently as in the crevices of cathedrals hundreds of feet above. The Swift is never seen to alight on the ground or trees, and consequently obtains the greater part of its nesting materials when they are floating through the air. Straws and feathers are secured when the bird is on the wing, and conveyed to its nesting-hole, for be it known the Swift, like the Sand Martin, rears its young in a hole ; but with this difference—the Swift repairs to holes in rocks and buildings for its purpose. A slight nest of straws and a few feathers are all that is required, and these materials are woven together without the use of any sticky substance produced by the bird, as many persons would have us believe. The eggs, unlike those of any of the Swallow tribe, are only two, or but rarely three, in num-

ber, somewhat elongated, and of a pure and spotless white. The young Swifts are tended by their parents after they leave the nest, and I have reason to believe the young and their parents roost every night in the nesting-hole until the time of migration arrives.

The food of the Swift is insects, and I sometimes see them coursing over the grass fields, hawking for various small beetles. I often ponder over the unerring instinct that leads birds to seek that food best adapted to them. I see the Chaffinch on the manure heaps ; the Wagtails on the pastures ; Swallows and Swifts darting through the circumambient air ; Sandpipers on the mudflats ; Sparrows near man's habitation ; Ducks seeking for water plants ; Creepers and Woodpeckers on ancient timber ; Linnets and many other Finches obtaining the seeds of most noxious weeds ; and Falcons preying upon the helpless of their own vast feathered race. In a word, all seeking for that food Nature has best provided them with suitable appliances for obtaining.

The Swift, as I previously stated, is one of the last birds to arrive here in spring, and, as is frequently the case with such birds, it is one of the first to leave us in the autumn. Unlike the Swallows and Martins, you never see the Swift in such vast flocks preparing for their autumnal migration ; yet the Swift is gregarious, even as much so as the Swallow. Soon after the Cuckoo's departure, we may look for the absence of the Swift, and by the latter end of August, or beginning of September at farthest, we suddenly miss them from their old haunts. Formerly it was gravely supposed that the Swift, and all birds of the Swallow kind, lay dormant in crevices of rocks and buildings throughout the winter, and were again called into life and animation by the genial presence of a vernal sun. But when naturalists gave the

subject close attention, it was speedily shown to be a gross absurdity; and now it is known for certain that Swallows and Swifts retire every autumn to Northern Africa for the purpose of spending the winter months. The reason the Swift leaves us so early is said to be because the bird is but of delicate constitution; and, certain it is, the cold winds and frosty nights of autumn cannot be borne with comfort, if at all, by a bird approaching very closely in its structure to the Humming Birds themselves.

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THE KESTREL.

THERE are now but two raptorial birds—or, more plainly speaking, birds of prey—of any frequent occurrence in this country. True, the wanderer over the moors will perhaps see a few Hobbies and Merlins in the deepest solitudes, or notice a solitary Buzzard in the largest woods, but such occurrences are becoming rarer year by year, and the Kestrel and Sparrowhawk are the birds most commonly met with.

The Kestrel, or, as it is frequently called, the Wind-hover, from its peculiar habit of hovering motionless in the air, is perhaps the most frequently seen. We find him in the woods and coppices, or even in the moorland districts he is seen sailing majestically over the rugged ravines, or perched on the stunted trees growing out of the massive rocks. With us the Kestrel is a partially migratory species. They leave us at the latter end of autumn, and return early in the following year, sometimes as soon as February. But let not the observer be led astray by these remarks, for I have never yet known

a winter in which I have not seen this graceful Falcon from time to time.

The flight of this active little bird is composed of a series of graceful flappings and smooth glidings. He sails buoyantly over the woods, fields, and hedgerows, giving himself an impetus by a series of rapid flappings, and then skimming elegantly for a short distance, until his momentum is expended. Now lingering to perform those graceful quivering motions : he seems to move not, his rounded tail fully expanded ; then the flappings are renewed, and varied by the sailing motions. Suddenly poising himself for an instant, he darts downwards with the rapidity of an arrow, and secures an unsuspecting field mouse, quietly eating its meal from an ear of corn. Upwards he sails, with the quivering mouse in his talons. to his nest if in the breeding season, or off to some quiet nook where he can consume his prey in peace if the cares and anxieties of a family do not intrude upon him. Now he is seen coursing through the air at a stupendous elevation, his long pointed wings and beautifully rounded tail displaying themselves to perfection. Then in a series of beautiful curves he makes a spiral descent to a lower atmosphere, and is seen searching for prey ; but rest assured no thought of prey is in his square-looking head when sailing at such great elevations. Even *his* piercing eye would fail to distinguish the mouse in the corn field or the ladybird running gaily over the grass stem. What these elevated flights are for man knows not, and will probably never know ; but of this we may rest assured, that Nature has a purpose in sending the Kestrel so high in the circumambient air.

Among the many birds that hover in the heavens, perhaps the Kestrel is the most graceful, and indeed the most frequently seen in that position. You see the bird

hover when in search of prey, or when it appears but a speck in the highest ether, suspended as it were like Juno with a cord from heaven. You know Juno's story? On account of the severity with which she persecuted Hercules, Jupiter ordered her to be suspended between heaven and earth with a golden chain. How aptly this applies to the Kestrel! You see the bird motionless as it were, but cast your telescope in the direction, and you find he is in a perpetual quiver. Notice how he courses with slow and majestic flight on his unknown tour through the air, or with a few strokes of those long wings and ample tail he visits the lower atmosphere, and goes skimming over the smiling fields and hedgerows in search of prey.

With the Hawk we are apt to associate a deadly enemy to the little songsters that hop from spray to spray around us; but certainly with the Kestrel it is a decided error. Mice and coleopterous insects form his only food in summer; but in winter, when the mice are for the most part lying dormant and the insects seldom seen, he occasionally preys upon the smaller birds, but only as a last resource, for by the way the little birds receive his advances I am certain they know him not as an enemy. Of the countless numbers of mice the Windhover destroys I am reluctant to speak, for many persons will scarcely credit that this bird, in the breeding season, will and does destroy as many as thirty mice in a day. Calculate this, all landowners, game preservers, gardeners, and agriculturists, and molest not the Kestrel. We have not yet said anything about the beetles. Let us examine this pellet—for be it known all birds of the Hawk tribe cast up the refuse of their food in the form of pellets—taken from a nest of this bird. In it we find the bones and skins of several mice,

also the hard horny covering of numerous beetles, amongst which we notice one of the smallest species of ladybirds. Many persons will perhaps be puzzled as to where the bird finds these incredible numbers of mice, for in a ramble over the fields not one will probably be seen. The simple reason is this : the mouse is very quick at hearing, and is out of sight long before the observer reaches him ; but the Kestrel comes upon him from the air so softly, that he is secured without even a chance of escape.

He who roams through our thickest woods just as the trees are assuming their vernal garb will often hear a chattering cry from some tree top—a cry, by the way, not so discordant as that of the Magpie. 'Tis the Kestrel calling to his mate, who is not far away, probably in her nest in the Magpie's old abode in a neighbouring tree. Before we notice the nesting habits of the Kestrel, I would hazard a conjecture that these birds pair for life. Every season, if not molested, the Kestrels use the same tenement for their purpose. In several instances coming before my own observation the female bird has been destroyed, yet the solitary male has found another mate, and returned by resistless impulse to the old abode. The Kestrel has never yet been known to make its nest in a tree. In a word, this graceful little Falcon would be going against Nature's unerring laws were it guilty of so doing. Therefore when a writer informs us that the Kestrel builds its nest in a tree, I know at once he is in error, and has had but little experience with the nesting habits of the bird ; or if his Kestrels build nests in trees they must have conformed to these our present times of improvement, for Kestrels in this part of the country follow the old way of providing for the comforts of a family. True,

we find its eggs in rocks, or even in old barns and church steeples, but the eggs invariably lie upon a bed of pellets, or upon what materials chance may have placed there. But we shall see how Nature usually provides the Kestrel with a nest. The Kestrel of the woodlands repairs to the old abode of the Carrion Crow or Magpie for its purpose. In yonder oak tree is a Magpie's nest, which a pair of Kestrels have now inhabited for two seasons past: let us examine it closely. We find upon climbing the tree that the Magpie's nest has undergone a transformation; but whether from accident or design I know not. But certain it is all Kestrels' nests I have examined have been destitute of the fibrous rooty lining peculiar to a perfect Magpie's nest. Mayhap the Kestrels remove the lining, which no doubt is full of filth and dirt, for the purpose of cleanliness. The hard lining of mud therefore is the bed of the Kestrel's first egg, but as the full number of eggs are deposited, such an incredible number of pellets of the refuse of the birds' food has accumulated, that the eggs at last are on a lining of the softest texture. He who would take the trouble to examine a Kestrel's nest in the breeding season would become practically acquainted with the bird's sovereign usefulness to the gardener and agriculturist.

We will now take a more careful view of the contents of the nest. We find the eggs, six in number, sometimes only four or five, most beautiful objects. Like the eggs of Falcons in general, they are somewhat rounded and very highly coloured, being of a dirty white ground colour, blotched and spotted so thickly with deep reddish-brown of different shades as to almost entirely hide the ground colour. Many specimens are streaked and spotted with dark brown, others are almost devoid

of colouring matter. The female Kestrel when laying does not always deposit an egg each successive day until the full complement is laid, for I have known her be ten days laying six eggs. The female bird usually incubates the eggs, but the male often sits upon them. When the nest is approached the sitting bird silently leaves it, but sometimes not before the nest is almost reached, especially when the eggs are approaching maturity.

There are few more harmless birds than the Kestrel, and his life is taken for imaginary offences, when the real depredator is the Sparrowhawk. However harmless a bird may be, its innocence is not its shield if it happens to resemble one of its congeners of confirmed bad habits. One Hawk is noted for his proneness to carry off young game and poultry, *ergo* the whole race are as bad as he ; and thus the poor Kestrel is doomed to destruction for no fault of his own, and simply because but few will speak a word in his defence, or strive to place him amongst our many friends that are clothed in a garb of feathers.



THE SPARROWHAWK.

THIS small yet bold and handsome Hawk is seldom found in any save well-wooded districts—districts which abound with the small birds that constitute his food, rich, broad, well cultivated lands, occasionally studded with woods. He will also frequent the fir woods on the borders of the moors, and many a tiny Gold Crest and Willow Warbler fall victims to his rapacity. He also daily sallies forth and hunts the lanes, hedgerows, and coppices, taking a Bunting here, a mouse there, an unlucky Skylark or a pert little Sparrow—he is no respecter of persons; all are the same to him. Sent for the purpose of keeping the small birds in bounds, he performs his task equally and well.

The Sparrowhawk hovers in the air just like the

Windhover, only there is a certain stiffness—if I may use the term in describing the motions of one so graceful—about his flight, that at once informs you the terror of the woods and fields is abroad in search of prey. Though his motions, however, are sometimes similar to the Windhover, still the little birds know him at once as their mortal enemy. See with what alarm the Starlings pack together and scurry off at his approach ; or notice the actions of the Finches, struck dumb and motionless with terror, as he sails on high above them. Yet should the Windhover appear in sight no alarm prevails, and they let him perch on the trees at hand without even stopping their merry warbles. But like many tyrants, the Sparrowhawk sometimes comes to grief. Witness the Rooks, how they mob him when he happens to approach too near the trees which contain their helpless young ; and the smaller birds, how they sometimes pack together, and, trusting for safety in unity, chase him hither and thither in the circumambient air. He seems to mind these attacks but little, appearing to enjoy their feeble attempts to annoy him ; though he will often turn, poise himself for a moment, and then like an arrow from a bow swoop amongst the now terrified songsters, and bear one of their number off in an instant. And yet the Sparrowhawk, notwithstanding his actions, which, though they appear harsh and tyrannical to man, are only those the designing hand of Nature has taught him to practise, is always a bird I view with pleasure. With his long tail and rapidly moving pinions, short neck and dark slate-coloured plumage, truly he looks a bird of death. Yet, withal, he is a splendid ornament to our rural scenery, and it is with me one of the most pleasing sights to see him dart swiftly and silently past me, when

the shadows of night are falling, into the depths of the gloomy evergreens, where he oftentimes seeks repose.

As you wander through the depths of the woods or through the closest thickets you will sometimes notice a heap of feathers : these are the remnants of the Sparrowhawk's meal. Search closer, and you will probably find portions of the skull and entrails of the victim, and by your knowledge of the plumage of birds you will also be enabled to tell what little chorister has been destroyed. These remnants are most frequently found on elevated places, a moss-covered rock, large stone, or even the broad horizontal limb of a tree. The Sparrowhawk does not consume so many of the feathers as we should suppose, the wing and tail feathers are invariably rejected ; yet the bones are all eaten, so too are the feet. The refuse of his food—bones, fur, and feathers—is rejected in the form of pellets. The food of the Sparrowhawk is mainly confined to the smaller birds up to the size of a Thrush, although he is capable of destroying much larger birds : witness his depredations amongst the Partridges and Pigeons. The manner in which he takes his prey is somewhat different to the Windhover. He rarely hovers in the air previous to making his swoop, but dashes like a whirlwind at his quarry, and bears it off before we have time for thought. Most of the small birds are his victims more or less. The Bunting on the hedgerow, the Pipit cowering in the meadow grass, poor Cock Robin and the Dunnock near our habitations, and the Creeper and Wren in amongst the trees. The charming little Bullfinch loves the thickets, so too does the Sparrowhawk, and his lovely plumage, blood-stained and torn, often marks out the presence of this aerial pirate, and silently tells its own tale of death. But birds are not the only creatures subject to the perse-

cutions of the Sparrowhawk. You often see him dip swiftly and silently down amongst the marshy places, and bear off the unsuspecting frogs. Field mice, rats, and even young rabbits are also eaten, if we may judge from the contents of the pellets he ejects. I do not think the Sparrowhawk takes more than two or three small birds in the day, save in the breeding season, and morning and evening are the times he most frequently hunts for food. He courses rapidly up the hedgerow sides, beats the open fields within a few inches of the ground, and occasionally soars to some height in the heavens, probably for the purpose of surveying the ground beneath him. Now you see him glide noiselessly amongst the trees into the deepest shades, and the next moment he is out again and past you like a flash of light. His prey is always secured in his claws, and the death-stroke comes from the same source alone. The supposition that birds of prey strike with their beak is erroneous, for, sharp and powerful as it is, it is only used for tearing the captured prey in pieces.

I am of opinion that the Sparrowhawk, like birds of the Hawk tribe in general, pairs for life, and if not disturbed, they will frequently use the same nest for years, or build a new one close at hand. The Sparrowhawk rarely commences nesting duties until the month of May fills his woodland haunts with the birds of passage, which then form his chief food, and the food on which his young in part reach maturity. Notwithstanding the belief to the contrary, the Sparrowhawk always builds his own nest: in this respect he differs widely from the Windhover, but for what cause we are at present totally ignorant. Certainly it is not because no old nests are accessible, for the Carrion Crow and the Magpie build in plenty all around him, and their deserted

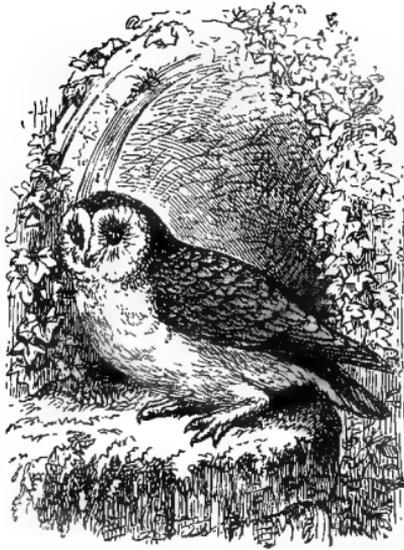
nests are on every side: still he shuns them all and makes his own. You find it far up the branches of the oak, more so probably than any other forest tree; in the gloomy fir woods he makes his cradle also; while not unfrequently the alder, towering to the height of sixty feet or more, bordering the stream flowing through the forest, is destined to bear his eggs. It is not a very large structure, and from the appearance below you would often take it for a mere lodgment of sticks, and not the home of a bird. It is invariably placed close to the trunk of the tree, and rarely in a crotch, merely lying on some broad limb, and firmly backed by the stem. It is made of dry sticks, nothing more, save indeed a few pieces of bark, and probably a little down from its feathered prey; or if incubation is advanced, numbers of pellets, the refuse of the bird's food. If in the fir woods the branches of that tree are used alone, the withered ones being preferred, although we oftentimes see one or two living sprays mingled amongst them, their bright green opening buds contrasting richly with the dull sober colours of the decayed ones. The eggs of the Sparrowhawk are four or five in number, and very beautiful objects. Their ground colour is a pale greenish-blue, and the markings are of a rich reddish-brown, sometimes approaching to black. They vary considerably in markings: some are almost spotless, others so boldly and richly marked as to hide the ground colour, while on many the colouring matter is all collected on the larger end, and forming a zone. You may remove the eggs of the Sparrowhawk, and still the bird will continue laying in the nest: this peculiarity is common to the Starling and most other life-paired birds. The Sparrowhawk is a close sitter, and will not unfrequently allow you to almost reach the nest before

she quits it. As is usual with raptorial birds, the female is much the largest, and, as a rule, the most courageous. Often has she brushed my head with her wings, and I have caught the savage glare in her eye when I have been examining her home. Upon leaving her nest, no sound escapes her as a rule, although she sometimes disturbs the surrounding stillness with a shriek fraught with anger and despair. The young are fed assiduously, and I notice that when the birds have broods depending upon them they are more bold and venturesome than usual. It is then the game coverts yield their tribute of young chicks to feed the young of this bold courageous bird; it is then the smaller birds are even more sorely pressed; and it is then they will dash swiftly and silently into the poultry yards and bear off the young chicks so quickly. When the young reach maturity they are abandoned by their parents, and the Sparrowhawk lives in the company of his mate alone for the remainder of the season.

The eyrie of the Sparrowhawk is a very interesting place to visit when the young are almost ready for flight. Young Sparrowhawks exhibit great diversity of size and colour. Indeed, there are seldom two in the same nest alike when they have attained their first suit of feathers. In the nest are pellets and feathers in abundance—not the feathers of game birds, as a rule, but usually of the smaller Finches and warblers, notably the Chaffinch and Willow Warbler. Animals are sometimes brought, as the fur of the rabbit and the mole tell us pretty plainly. A few days before the young gain the full use of their wings they spend the greater part of their time upon the branches of the tree, flying from branch to branch, trying and strengthening their pinions, and uttering their peculiar tremulous notes. The leaves

and branches of the tree are white with their excrements, but still little or no smell pervades the place. Before finally taking wing the young birds repair to the neighbouring trees, where for a few days longer they are fed by their parents, until the happy moment arrives when they separate, to roam the fields and woods in all the pride of their now strong and active pinions.

There is not a doubt but that the Sparrowhawk is a destructive bird, still there are points in his character which partially, if not completely, counterbalance his ravages. We must also bear in mind that it is not for us to question the wiseness of Nature in sending the Sparrowhawk amongst us, and that his inroads in our game coverts and poultry yards are never so severe as to merit our taking his life. Hawks, Falcons, Owls, and Crows, despised birds though they are, have an important part to play in Nature's economy, and we may rest assured that part is well and faithfully performed.



THE BARN OWL.

THE Barn Owl is another bird attendant on civilisation, and seldom indeed seen in the wild. They frequent the ivied ruins, caves, barns, and outbuildings, church steeples and hollow trees, where they lurk and sleep during the day, coming out at night time to feed. A sorely persecuted bird it is, partly on account of its love for night and darkness, and partly because it is thought to kill and devour game and poultry; yet, withal, it is a handsome one, and few birds are clothed in more rich and varied plumage. The Barn Owl, because he is seen flying over the churchyard at dusk, and taking refuge in the steeple, is said by the superstitious villagers to hold communion with departed souls, and his presence is looked upon with terror and hatred. It is the bird's

love of seclusion alone that sends him to the ivied belfry, and he is quite as harmless as the Jackdaws who share it with him ; only the one is abroad in daylight, and its actions are not suspicious simply because they are observable, while the other's requirements send him forth at a time when darkness hides his motions from view. This alone is the primary cause why he is held to be a bird of ill omen, as is also the poor, harmless, unoffending Goatsucker. Could Minerva see her once favourite bird, deeply grieved would she feel for its present hard and sorrowful fate. Would that he haunted the meadows in open day, his bitterest enemies would speedily become his staunchest friends.

As I previously stated, the Barn Owl is but rarely seen in the daytime. He keeps in his gloomy haunt, in company with the bats, until the sun has dipped behind the western horizon, and the gloom of night is settling fast around. It is then we see him quit his favourite haunt, which is also invariably his nesting-place, and betake himself to the neighbouring fields and stack-yards. When the moon shines brightly—although the presence of this orb is in no way essential to his appearance, for he is out on cloudy nights as well—you can gain some little insight into the way he catches his prey. Often at eventide, when strolling under the branches of the stately trees, enshrouded by their drooping branches, do I pause for a few moments to watch the actions of this bird of night. Silently he flits past me on almost noiseless wing, and then, quick as thought, darts downwards, rising again seemingly without effort. His piercing eye, most powerful in the gloom, detects the mouse cowering low amongst the herbage, which to me was invisible. Now he visits the higher air, and his wild, weird-like shriek marks out his wandering course. Now loud and shrill

above my head, startling me by its nearness ; and anon, in the distance, faint, like the far-off scream of a person in distress. He continues feeding and flying over the fields, and coursing round the ruined and dismantled towers, occasionally alighting, until the first streak of light heralds the coming day, when he leaves the fields to the Windhover Hawk, and retires to his favourite hole, there to digest his food in dark and moody silence, until the sun has performed his allotted journey through the heavens. The Barn Owl is, however, sometimes seen abroad in the daytime, having been disturbed in his haunt, for probably it is very rare indeed that he quits it voluntarily in the light of day. From some unexplained cause this bird seems to be disliked and mobbed by every bird of day. His appearance is the signal for a general uproar : the Rook will chase him through the heavens ; the Sparrows, and even the little Titmice, who would shrink and cower low in mortal fear if he came surrounded by darkness, now peck him and harass him unceasingly. The poor Owl seems fully aware of the mistake he has made, and seldom retaliates : his only aim is to seek a place of seclusion, for he seems well aware his only safety is in the darkness.

The Barn Owl remains in pairs the year throughout, although they seldom commence nesting before May. Nature has not intended this bird to figure as a nest builder ; she provides it with a bed in another way. The hole which the birds frequent throughout the year for nesting and roosting becomes filled with pellets, formed of the refuse of the birds' food, and upon these pellets the eggs are laid—just as is the case with the Windhover Hawk. Three or four in number, sometimes only two, they are about the size of a Pigeon's egg, white and spotless, but the shell is rough and without gloss.

Both birds sit upon the eggs, and should you approach them when sitting, they will hiss and snap their beaks, to manifest their displeasure at your intrusion. Young Barn Owls look like animated balls of down, with two large black beads for eyes. They are voracious feeders, too, if we may judge from the frequent visits of the old birds with food.

If you should happen to know of an Owl's nest, stand some evening near it when the old birds are rearing their young, keep quiet and motionless, and notice how frequently the old birds feed them. Every ten minutes or so the soft flap flap of their wings will be heard, the male and female alternately, and you will obtain a brief glimpse of them through the gloom as they enter the nesting-place. They remain inside but a short time, sharing the food equally amongst their brood, and then are off again to hunt for more. All night, were you to have the inclination to observe them, you would find they pass to and fro with food, only ceasing their labours at dawn. The young as soon as they reach maturity are abandoned by their parents; they quit the nest and seek out haunts elsewhere; while the old birds rear another, and not unfrequently two more broods, during the remainder of the season.

The food of the Barn Owl is composed chiefly of the various species of field mice, the larger kinds of night-flying beetles, and he will also occasionally snatch a benighted Finch or Warbler from the hedgerows, and take the rats from old water-courses and stack-yards. So that after all he is not such a pilfering, useless creature as is so generally imagined. Think, I pray you, what mischief the countless mice and rats would work, were they left unmolested. There would scarcely be a rick free from them, despite all the 'vermin killers' extant

and the young sapling trees in the hedgerows would be completely barked; for nothing suits the field mouse better than to gnaw the bark away, invariably causing the death of the tree. Then, too, the beetles he devours prevents them increasing too rapidly, and checks the quantity of their destructive larvæ, which prey so disastrously on our grass lands, cereal, and root crops; while the birds he takes are few, and certainly never missed. The pellets he ejects proclaim his usefulness; for if you examine one of them you find it contains the larger bones and skins of several mice, or portions of the skin of the rat, mingled with the hard wing cases of beetles, and but rarely with feathers. These pellets, if the bird has used the cavity for some time, occur in incredible numbers, and silently speak of his sovereign usefulness to gardener, agriculturist, and landowner alike; for there is not a bird of prey in Britain more harmless in its character. Instead of persecution, he claims and demands our warmest protection, for he is indeed one of Nature's grandest conservators.

The Barn Owl, upon the authority of the well-known Mr. Waterton, is a first-rate fisherman, and takes his prey from the waters like the Kingfisher, namely, by a sudden plunge. Extraordinary as this may appear, still I think were the bird, encouraged by our protection, to take his prey in daylight a little more frequently, this peculiarity would be far more frequently observed. I do not doubt for a moment but what this bird feeds regularly upon fish when the opportunity is offered, but they are for the most part captured under the cover of darkness. Dissection of the pellets thrown up by birds in favourable localities, would, however, place this matter beyond a doubt.



THE RING DOVE.

THE Ring Dove, Wood Pigeon, or Cushat, as he is variously known, is the only member of the Pigeon tribe found commonly in the inland woods and fields. He is the largest, too, of his order, and his varied and beautifully blended plumage and fine form make him a bird ranking as one of the finest ornaments of the woodland districts. His upper parts are slaty-blue, and the breast and under parts are of a delicate warm pink; on the sides of his neck are a few white feathers, from which he gains the title of 'Ring' Dove: this ring, however, is not seen in the young birds, and is a mark of maturity alone. The Ring Dove frequents the woodland districts and the neighbouring fields. While the Turtle Dove keeps to the deepest woodland solitudes, and rarely seeks

the fields and open places, the Ring Dove is perhaps as often seen out of the woods as in them, for the greater part of the year at least ; and though a wary bird, like the Stormcock, it is not what we can call a shy one.

The love note of the Ring Dove sounds particularly soothing and pleasant as we wander through the otherwise almost silent woods, just as they are about to don their leafy vestures under the gentle influence of an April sun. If the birds be abundant, their low and plaintive note, *coo-oo-oo*, *coo-oo-oo*, fills the entire forest with its murmur ; and yet so wary are the birds at this period, that we seldom or never get a sight of them, even though their notes are heard close at hand. Gentle, indeed, as the Dove is thought to be, still this does not hold good in the mating season, for two male birds will often fight with fury for the possession of a female. But these encounters are only between young or single birds, for I am satisfied that the Ring Dove does not separate when the young reach maturity, and will, if unmolested, breed in one certain locality for years. Again, where the birds are not plentiful, and this matter can be more readily studied, I find that the Ring Dove invariably flies in pairs, and remains in pairs the winter through. When the birds flock, however, which they frequently do in thousands, we cannot readily observe this. A pair of Ring Doves have bred here for years in a group of whitethorn trees, and frequent the district in company all the winter, seldom, indeed, straying far away.

The Ring Dove is another bird often coming near man's dwelling for the purpose of rearing its young ; yet, once that duty accomplished, they leave us and repair to the woods and fields, and shun our presence with a per-

tinacity for which at present we are totally at a loss to account.

A favourite situation for the Ring Dove is in the plantations of young firs, and there they build their nests in great plenty. We also see its rude and shallow nest in almost every forest tree, sometimes in the hedgerows, and not unfrequently in the yew or holly. But if placed in the forest tree, the site is invariably found to be on a flat branch, the nest being usually built close to the trunk. In the branches of the yew or holly it is built more at the end of the branches, for there it can find the best support. Rude indeed is the nest of the Ring Dove : nothing more than a platform of twigs, through which the eggs can readily be seen, put carelessly together seemingly without form and purpose. Yet if we examine this rude cradle we find it not so poorly made after all, and then we must bear in mind that the future young will aid considerably in its construction.

The excrements of birds of the Pigeon tribe are of a peculiar nature and without smell, and these excrements are never removed from the nest, as is the case with the Starling, for instance, but are suffered to remain. They soon harden on being exposed to the air, and, combined with the platform of sticks, form a structure strong and durable for the young birds to inhabit until their pinions can bear them through the air.

The eggs of the Ring Dove are two in number, in some few rare cases only one, somewhat small for the size of the bird, although they vary considerably in this particular, of a pure shining and spotless white. This bird is a very wary one when sitting, and leaves her charge long before the intruder approaches, doubtless impelled by instinct so to do, for her presence would only contribute to the discovery of the nest, which with-

out her is comparatively safe in its leafy site, for to the casual eye it appears nothing more than a lodgment of dry sticks accumulated there by accident during the gales of the previous winter.

When the two young are hatched the efforts of the old birds are taxed to the utmost to supply them with food, for judging from the times the parent birds visit the nest, they are voracious feeders. Almost as regularly as the Rook, we see the old Ring Doves passing rapidly through the air to and from the nest. They do not feed them like other birds, as the Thrush or the Warbler, but from the crop, the young drawing their sustenance from the bill of the parent, which sustenance is of a pulpy nature. The young Ring Doves advance to maturity somewhat slowly; but, once able to fly, they are abandoned by their parents, who often have another, sometimes two more broods in the season, though, as far as I can learn, not in the same nest. As an instance of the late breeding of this species I may mention that I have met with young birds in the middle of November which have certainly not left the nest more than ten days or a fortnight at most.

Ring Doves are gregarious in the autumn and winter months. At these times it is no uncommon thing to observe them in immense flocks on the stubbles or turnip fields. In such numbers do these birds occur, that I am led to believe that this bird is partially migratory, and augmented in numbers in the late autumn months. When we bear in mind the small number of the birds produced at once, and the incessant plundering of their nests, both when they contain eggs and when the young are almost ready for flight, we are forced to the conclusion that the large number of birds seen in autumn and winter are birds from other localities, it may be

distant ones, wandering no doubt from one district to another in search of food, their numbers increasing as they go. The Ring Dove often roosts in the branches of the evergreens, and sometimes in the fir plantations. As the sun is just about to disappear behind the horizon, tipping the clouds with gold and filling the western sky with bewitching colours, I often pause and watch these birds retire to rest. As they fly over my head, their flapping wings fill the air with pleasant sounds. Silently, though on strong and rapid pinions, they wing their way, spread hither and thither as they near the roosting place, and, alighting in little parties in different parts of the trees, settle down to rest. If October's month has waned the birds are silent, for they lose their notes early in that month, not to regain them till the following spring.

It has often been asserted that the Ring Dove is the original species from which our endless varieties of Dovecot Pigeons have descended ; but here I think is an incontestable proof of the fallacy of this belief. The domestic Pigeon, although it often perches on trees, has perhaps never in one single instance been known to roost in them. Further, by no artifice yet discovered can we completely domesticate the Ring Dove, or tempt him to breed in confinement. A bird of the forest, he defies our every effort, and no doubt a bird of the forest he will remain as long as his race exists, delighting in its freedom, and rearing his young untrammelled by the servitude of man in its arboreal depths, free as air, and untamable as the winds of heaven.

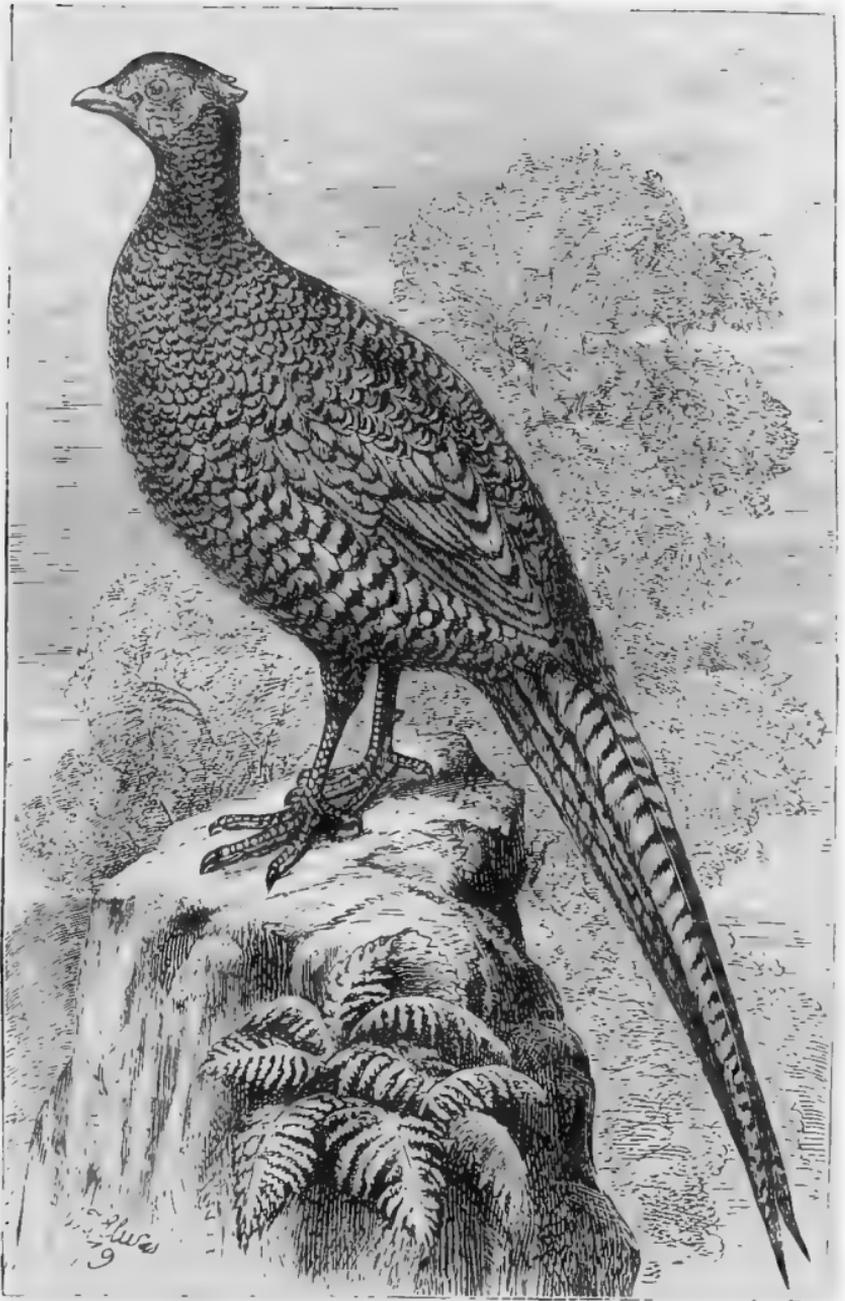
The food of the Ring Dove is confined for the most part to vegetable matter, peas, beans, lintels, grain, and small seeds of various kinds. They are voracious feeders, too, their crops often containing upwards of two ounces of various seeds. They frequent the newly sown land

and prey upon the seed grain ; they search under the oak trees for acorns, and under the beech trees for the mast, sometimes feeding in the branches ; they frequent the stubbles in autumn and pick up the scattered grain, also eating the tender heart shoots of the clover ; they feed upon the growing turnip plants, and in keen weather when the snow lies deep they will make a meal on the turnips themselves. There is not a doubt but what the Ring Dove, yearly increasing in numbers as it is, is a bird destructive to the farmers' crops. But the case is analogous with that of the domestic Sparrow. Could we restore the sorely persecuted Buzzard Hawk to its woodland haunts, or encourage the Harrier and the Peregrine Falcon and the Goshawk to live once more in our company, we should then have little room for complaint : the Ring Doves would be kept in bounds, and the Falcons would be in their proper sphere, and all would be well. But as there is little chance of seeing the larger birds of prey again in any numbers, I fear we shall have to put up with the evil, and thank our game preservers for upsetting the balance Nature so beautifully ordained. Yet withal the Ring Dove has some few good points in his favour ; for when we examine the contents of his crop, we oftentimes find, besides grain, the seeds of noxious weeds, as the charlock and dock, and his flesh also forms a wholesome article of food.

THE PHEASANT.

WE shall probably never know the exact time the Pheasant was introduced into Britain. But certain it is he is now fully naturalised amongst us, and roams the woods and fields with as much ease and freedom as his native jungles of the East; for we are told that his home is in the ancient kingdom of Colchis, on the eastern shores of the Black Sea. A bird of rare beauty, he frequents the woods and plantations, and, where the hedgerows afford sufficient shelter, the fields. He sometimes frequents the scrubby birch plantations and fir woods on the borders of the wild; but the place he loveth best is in the richer and well-cultivated tracts of country.

The Pheasant is subject to much variation in plumage; but curiously enough these variations are for the most part confined to the male birds. The female will, however, sometimes assume the plumage of the male, yet when this does occur she is never known to breed. We sometimes see them pure white, or white mottled with their rich and splendid general plumage. There is also a permanent variety known as the Ring-necked Pheasant, having the rich plumage of the neck encircled with a band of feathers of snowy whiteness: the female bird however never exhibits this peculiarity. Like most showy birds, the male Pheasant delights to



PHEASANT.



frequent the densest cover, is shy and timid, and hides his rich and varied charms in solitude.

So carefully is the Pheasant preserved for the sport it yields, and so tame and semi-domesticated has it become in some places through the protection afforded it, that we can scarcely deem it a wild bird in this country, or view its habits as strictly normal. True, he has that in his nature which defies our efforts to completely domesticate him, an inherent timidity, which sends him into cover upon the slightest alarm, in spite of the protection and safety with which he is surrounded. There are, however, many places where the Pheasant roams wild and almost uncared for, and there I intend you to stray and study his habits—places where, left to himself, he doubtless displays a near approach to those habits and instincts which his kindred do in their Eastern solitudes.

The Pheasant spends by far the greater part of his time on the ground, searching for food, much after the manner of domestic poultry. When all is quiet in early morning, or when the sun is approaching the western horizon, the Pheasant quits his cover and repairs to the neighbouring fields in search of food; although where the herbage is tall and dense he will remain amongst it throughout the day, only quitting it at nightfall for his roosting place. His food is varied, composed of grain, insects, worms, tender shoots of many kinds, and various small seeds and berries, notably those of the elder; and as you stroll through the woods in autumn you will often see him in the open glades, feeding upon the acorns and beech mast. Should it be a male bird, he invariably runs off at your approach, for the Pheasant is a bird that only takes wing when absolutely compelled; but if a female, she will probably crouch close to the

earth and remain motionless, her colours blending so beautifully with the withered leaves that she is comparatively safe. Should you chance to direct your attention towards her, she will start suddenly up, and, running rapidly through the intricacies of the undergrowth, is speedily lost to view. This crouching at the approach of danger is common to many birds, but in none that I am acquainted with does it occur to such a marked degree as in the present species. I have often watched female Pheasants feeding, when my presence has been unknown to them, and noticed how quickly they crouch to the ground when a distant footfall or even the snapping of a branch is heard.

When night is about to wrap the woods in its folds, and you hear the discordant scream of the Jay and the harsh chatter of the Magpie previous to settling down to rest, you hear the Pheasant crow. Not like the dunghill fowl, but in one loud and dissonant scream. Crow succeeds crow, and then you may rest assured the Pheasants are about to seek a roosting place, which is usually in the shelter of the evergreens in autumn and winter, although many birds roost on the ground in the former season, or in the other trees, notably the silver birch, and larch in summer. If in your wanderings you should chance to pass the place where a male is roosting, and happen to disturb him, he at once betrays his presence by crowing long and loud, and then flies rapidly off, to pass the remainder of the night on the ground.

The Pheasant lives a solitary life, save in the short pairing season, which takes place in April or May. It is also a polygamous species, and we often see as many as five or six females in the company of one male. In the pairing season combats are of frequent occurrence between the males for the possession of the females. The male bird

remains in the company of his mates for a short period, and then betakes himself to his life of solitude again, leaving the female to bring up her family alone. This is perhaps a wise provision of Nature, unnatural as it may appear, for his presence near them would only aid in the discovery of the nest, and the female birds are fully competent to fulfil the duties falling upon them. The females separate, although in some instances where the birds are well preserved two females will share the same nest, as is sometimes the case with domestic poultry, and each seeks out a fitting place for her home, under the brambles, amongst bracken, or in the withered grass up the hedgerow side. Her nest is merely a cavity scratched out and lined with a few leaves, dry grass, or fern; and her eggs are as unobtrusive as herself, deep brown or olive-green of different shades. They are rather smaller than the eggs of domestic poultry, are subject to much variation in size, and from ten to twenty in number. I once knew of a Pheasant who had the extraordinary number of twenty-six eggs, nearly all of which hatched satisfactorily. When the bird leaves her eggs to search for food, invariably in early morning and evening, she covers her eggs carefully with leaves or any other material with which her nest is surrounded, thus shielding her eggs from view. When she is at home her own sober plumage harmonizes closely with the surroundings, and forms the chief protection both for herself and her charge. When leaving her nest, too, she is wariness itself, and flies from it always, returning in the same manner, thus leaving no scent which the vigilant weasel can follow, or track which man can read.

It is not often all the eggs prove fertile, and when the young are hatched she leads them and shelters them under her wings, just as our own domestic hen tends her

brood. Should ants' nests be at hand, she leads them thither and unearths the eggs for them. The young advance to maturity somewhat slowly, and are seldom strong on the wing before the latter end of July, sometimes much later, according to the time they were hatched. I am of opinion that but one brood is reared in the year, and the female and her young sometimes remain in company until the following spring.

I will not dwell upon the slaughter of these handsome birds in the autumn and winter months; how, after they are fed and tended with the greatest care, they are slain in thousands, and how this cruelty is shrouded under the name of a grand *battue*; for the description of such scenes is at variance with my object, which is only to treat with the life histories of birds *in ferâ naturâ* (which are of little interest to the naturalist, though looked forward to by the sportsman as days of keenest enjoyment).



PARTRIDGE.

THE PARTRIDGE AND QUAIL.

THE Partridge is another game bird, and, like most birds to whom protection is afforded, one of common occurrence. We must not, however, seek him on the barren moor—there our search would be but poorly rewarded ; nor must we look for him in the woods, for probably not a glimpse of him should we get. But on the smiling fields he nestles close amongst the herbage. Where the rich stubbles and clover fields abound, bordered with low and tangled hedgerows, he finds a home suitable to his terrestrial habits ; for be it known the Partridge, although his feet differ not in their anatomy from the Pheasant, is a bird never known to perch in trees : on the ground he lives exclusively, roosting upon it, and obtaining his sustenance and rearing his young upon it likewise.

Like most ground birds, the Partridge is a skulking species, and will prefer to crouch low and motionless until almost trodden upon. He then rises suddenly, and on whirring wing, now sailing, now flapping, flies it may be over several fields ere alighting, his deep brown upper plumage contrasting richly with the yellow stubbles or the deep green of the clover. The Partridge pairs very early in the year—that is to say, the birds hatched in the previous season, for I hazard the conjecture that this bird remains in pairs for life. At all seasons they may be seen in pairs, and doubtless when their life history is better known this matter will be fully confirmed. The first sign the Partridge gives us of his coming nesting season is in his voice. By the latter end of April, as we wander over the fields at eventide, we are often startled by a peculiär cry, it may be close at hand or even several fields away, and can only be compared to a snatch of idiotic laughter. Cry after cry is heard, and if we remain still we shall probably see the author of it advancing through the shadows in short stages, uttering it as he comes, and, by the light of the moon, or the last streaks of the parting day, we are enabled to recognise him as the Partridge. This peculiar note is his love *song*, with which he serenades his mate right through the laying and hatching season. Should we hear it, however, in the late summer months, the sportsman will tell us that it bodes him no good, for in nine cases out of ten the brood of the year has been unfortunate.

The nest of the Partridge is made in May, sometimes not until the beginning of June. The female bird merely scratches out a cavity, and lines it with a few leaves and bits of withered herbage. It is often made down the hedgerow sides, in the ditches, sometimes amongst growing corn or clover, and not unfrequently

in the most exposed situations. The eggs, in colour, exactly resemble those of the Pheasant, but are only half the size. Although the Partridge is not a polygamous bird, still its eggs, like those of game birds in general, are large in number. It is no unfrequent thing to find twenty eggs, while twelve and eighteen are of common occurrence. I consider it doubtful whether the birds lay again if their first clutch is destroyed ; but the matter is hard to learn, as we have no means of identifying the birds. Colour is the Partridge's protective power, and notice how closely her plumage corresponds with the colours of the surroundings, made even more effectual in the usually dark situation of the nest. She will remain sitting upon her eggs, trying her protective wiles to the utmost, and will often allow you to stroke her gently with the hand. If rudely disturbed she will often flutter as if wounded, and with drooping wings try her utmost to lead you from her treasured eggs. Like the Pheasant, the Partridge on leaving home voluntarily covers her eggs, and I do not believe the male bird sits upon them at all. The young, however, are tended by both parents, and should you disturb them, the old birds rear and tumble before you, or fly rapidly off, and the young ones crouch close to the ground, and by that means seek to evade the danger.

Few things are more pleasing than to watch the actions of a brood of young Partridges and their parents. See how proudly the old birds walk about, and how closely the little ones follow them, to pick up the food, their low whistling notes sounding pleasantly, and harmonising with the whole scene. Notice how every few moments the old birds look warily around, and as the wandering Hawk glides swiftly across the sky, observe how, with a warning note, she gathers them beneath her wings,

or causes them to crouch to the earth, silent and motionless as marble. Months elapse ere the young birds gain the full use of their wings, and the entire brood and their parents invariably keep together until the following mating season.

The Partridge roosts on the ground: if it be in the autumn and winter months the entire covey roost together, invariably forming a circle, with their heads outwards. Should danger then approach, no matter in what direction, the birds are always ready to receive it. The alarm note sounds, and the birds either crouch low and motionless, or separate and fly quickly off, not to again unite until daylight returns. Despite all their vigilance, I fear the rat and the weasel make sad havoc in their ranks.

The Partridge becomes social in the autumn and winter, yet not what we can call gregarious. Covey joins covey, and if not molested these packs will keep in company, feeding and roosting together. It is, however, only where the bird occurs in large numbers that these gatherings are seen, for as far as I can learn it is not a migratory or even a wandering species. There are parts of the day when the partridge is inactive, crouching low in the herbage and basking in the sun. These times are in the middle of the day; and at morning and evening the bird seeks its food—it has no other cause for activity, save in the breeding season. In the autumn months Partridges delight to nestle close in the grass fields, and at feeding time repair to the neighbouring stubbles: they will also remain the greater part of the day amongst turnips, on whose tender shoots they sometimes feed.

Were you to examine the Partridge in the hot months of the year, you would probably find vast quantities of parasites amongst its plumage, and this doubtless is the reason the birds are so addicted to dusting themselves.

Wherever a dusty place occurs in their haunts the birds frequent it, generally in the middle of the day, when the sun shines the hottest. There you may see them fluttering and rolling in the dust, and cleansing their feathers with their beak and claws. When finished, they either betake themselves to the feeding grounds or run into the dense herbage.

The food of the Partridge in the earlier months of the year is composed of the tender shoots of herbage ; it also feeds on the newly sown oats and other grain. As the year passes on this fare is varied by insects, beetles, and grubs. When the young are newly hatched, and ant-hills are near, the old birds lead their young to them, to feed on the eggs. In the autumn months the stubbles are visited for the grain and tender shoots of clover ; blackberries growing round the hedges are also eaten in considerable numbers, as are also many kinds of small seeds.

The Quail is a much smaller bird than the Partridge, being somewhere about the size of a Lark, but it closely resembles it in its general form, although its plumage is differently coloured, and its habits are widely different. Quails are migratory birds, arriving in the spring and leaving us again in the autumn : they frequent the same localities as the Partridge, but show a decided preference for the fields of growing corn. At eventide, or early in the morning, their shrill piping calls are heard, although the birds are seldom seen. In the vernal season combats are of frequent occurrence between rival males.

Unlike the Partridge, the Quail does not pair, but one male lives in the company of several females until the eggs are deposited, when he quits their company, like all polygamous birds, and leaves the females to rear their broods unaided. The cavity, for it scarcely deserves the

name of nest, is made amongst the growing corn, or sometimes in the meadow grass, and the eggs, as is usual with this order of birds, are large in number. Some nests contain as many as twenty, others only sixteen, while a few nests will contain but eight or twelve. I strongly suspect, however, that two females lay in those nests which contain so many eggs. The eggs are very handsome ones, being a yellowish-olive in ground tint, blotched and spotted with rich brown of various tints: they are about the size of a Blackbird's egg. The young are brought to maturity under the care of the female birds, where two females lay in one nest the birds dividing the brood between them. Quails, like Partridges, are seldom stirring in the middle of the day, only feeding in the morning and evening, and their food is similar to that of the Partridge.

The migrations of the Quails are a salient feature in their life history. They winter in Africa and other southern lands, coming northwards in the spring in incredible numbers; and, what is rather singular, is, the male birds precede the females several days, sometimes a week, or even more. These birds return with unerring certainty to their haunts of the previous season.



THE RED GROUSE.

HE who would wish to observe the Red Grouse in his natural haunt, must leave the lowland districts and direct his attention to the upland wilds. Here he meets Nature in all her wild and solemn grandeur. He sees the mountains in rugged majesty send their heads to the skies ; he wanders amidst the rocky crags, hurled from above, like mighty

Fragments of an earlier world ;

he threads his perilous way over the marshy tracts and on the borders of the mountain currents, mayhap pondering over his nothingness and the scarcity of animal life. Now wandering over the interminable stretch of heath, he starts the Twite from its lowly bed, and it utters its complaining note and retires still further into the wild ; or he hears the Curlew's piping call, as on

rapid wing it cleaves the air above him on its way to the marshy tracts. Suddenly he flushes the Red Grouse, the bird he has come to seek, from its heathery bed, and with harsh grating cries the bird bids him *go bac, go bac, bac-bac-bac*; and on rapid wings, now fluttering, now sailing, it flies before him, and again alights a hundred yards away. This, then, is the home of the Red Grouse, and these his alarm notes with which he ushers an intruder into his favourite, though wild and lonely, haunt. A bird of which we should be justly proud, when we bear in mind that in no other land, out of the British Isles, is he found in a state of nature. Here he remains stationary on his barren moor; in summer, scorched by the summer sun, he frequents the shady heath tufts; in the winter, when the blasts sweep over the naked heights, swirling with resistless fury down the bleak mountain sides, he crouches low in the herbage, and ever and anon his startling notes ring out loud and clear, as if bidding defiance to the very elements.

The Red Grouse is a ground bird, roosting on the ground, and drawing his sustenance from the herbage growing upon it; and so closely does his plumage resemble the heathery waste, that detection is almost impossible, and from this circumstance his chief safety from predaceous birds and animals alone depends. Yet sometimes we see him in the stunted trees growing on the moor, but more often see him perched on the walls or rocky boulders. We must, however, bear in mind that the bird but rarely visits the trees; indeed, those lovely ornaments of the vegetable world seldom grace the bleak open moor; and I am pretty certain that when a Grouse is seen in the branches of a tree, and thought to be the Red Grouse, it will upon closer examination usually turn out to be the female of the

Black Grouse, a bird, by the way, often in the trees, and resembling the Red Grouse in its appearance.

In cold stormy weather Grouse are found in greatest plenty on the sheltered hill sides, and lie still closer than is their wont. Once on the wing at these times, however, they fly with increased rapidity, the wind aiding them in their flight. As a rule, when flushed, these birds fly but a short distance, although they sometimes go a mile or more before alighting.

The Red Grouse is a monogamous species, and pairs very early in the season, although we seldom find their nests till early May. Amongst the heather, under a stunted bush, or beneath the shelter of a mass of rock, a home can speedily be arranged. Simple it is in the extreme, merely a hollow lined with a few sprigs of the heath, and mayhap one or two withered leaves and bents. In this cavity the female bird lays from eight to twelve handsome eggs, creamy white in ground colour, speckled and mottled all over with deep purplish-brown. They are about the size of a Pheasant's, possibly a little smaller. Few birds sit more closely than she, and her mate is seldom far away. You may walk near her, yet she stirs not ; you may stand and gaze at her as she lies crouching low and fearful over her priceless charge, and she remains quiet and motionless as the rock which partially shields her home. You cannot help admiring how her own mottled plumage resembles the colours of the heath, and how beautifully nature has provided her with protective powers. Should you bend down to examine her more closely, personal safety masters her maternal love, and she glides rapidly and silently away, leaving her eggs exposed to your view. But one brood is hatched in the season, although if the first clutch of eggs be destroyed the birds will sometimes lay again.

As soon as the young are hatched they are able to quit the nest, which they do, and follow their anxious parent, who finds food for them, and shelters them under her wings at nightfall. Should you come unexpectedly upon a brood of young Grouse and their parents, the old birds will sometimes display alluring motions until their young have sought safety, when they separate, and fly quickly off, only to return and collect their scattered brood when the danger has passed.

Many persons will scarcely allow a protective instinct to birds of such tender age. But let them come suddenly upon a tender brood, and notice how the little creatures, hatched it may be but a few hours, spread themselves in all directions, and, while their attention is arrested by the parent birds, lie close to the ground and remain motionless until they leave them again to their parents' care, those persons I say must at once abandon these views in favour of a protective power. True, the little creatures are unconscious of the good they are effecting; but still they are born with that in their nature which causes them so to act by resistless impulse, and when they reach maturity these motions cease their mysterious power, and motions befitting their more matured lives take their place. Such is Instinct in one of its many strange and unreadable forms; and yet when we study its many and varied forms, effectual though they are in their proper sphere, and compare them with that power common to man alone, we cannot fail to notice the infinite void between them.

The young Grouse, like game birds in general, gain the use of their wings but slowly. July arrives ere they are at all strong on the wing: sometimes this event is much later, as the sportsman of the twelfth, the memorable twelfth of August, knows full well. The Grouse is

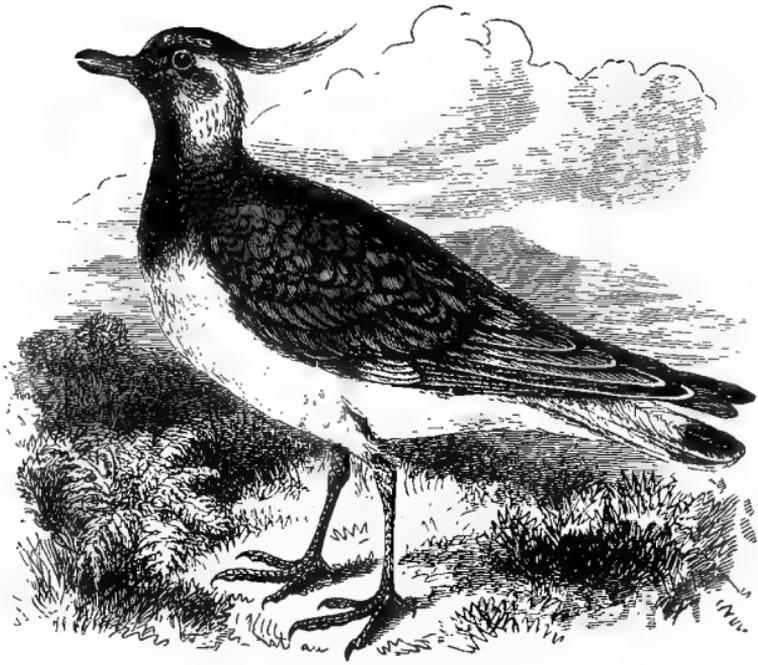
also subject to a certain disease, of most frequent occurrence in wet and unfavourable seasons.

The Grouse has not far to search for his food. His seemingly barren home, arid and sterile at a glance as it seems to be, is yet a sumptuous storehouse. The heath with which the moor and mountain sides are clothed affords him its tender shoots; the bilberry and cranberry, that grow over the rocks and stud the heath with their dark green patches of foliage, yield him a plentiful crop of fruit, on which he greedily feeds in the autumn months. The rank vegetation also affords him its seeds, and grubs and insects abound in the summer months. When the snow lies deep over the wild, the Grouse repairs to the hollows and places where the snow was driven past, and ekes out his sustenance from the buds and tender shoots of the herbage; or, perched in the branches of the silver birch, he picks out the seeds and buds. Where the Grouse is carefully preserved the heath is burnt down in large patches yearly, and the young tender shoots of its returning vegetation are a highly prized delicacy of the birds, who flock to these patches in immense numbers. The bird, however, is not a gregarious one; still the broods and their parents often remain in company till the following mating season.

In the winter months the Grouse is the only bird seen in any numbers in the upland wilds. True, the Kestrel sometimes pays him a visit, and the Merlin has his home amongst the rocky boulders. Yet the little Pipits we saw on every side in summer have now left for the warmer lowlands and pastures; the Curlews and the Plovers have bid the moor adieu, and are gone far away to the distant coast; and now in winter, with the exception of a wisp of Snipe, or mayhap a storm-driven Mallard or Gull, the moor is in the sole

possession of the Grouse. Thus, in studying the life history of the Red Grouse, we cannot help but notice how the feathered tribes are distributed throughout the land. Wherever we wander we find birds peculiar to the district, and whose varied modes of life are in harmony with the surroundings.

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THE LAPWING.

IN the spring and summer months the Lapwing lives on the inland pastures and moorlands. We find them in greatest plenty in the marshy tracts, sometimes several hundreds living in one scattered colony. Then, too, in smaller numbers, they frequent the fallow land and open commons. I, for my part, love to see the Lapwing on the bleak, dreary moor, where the reed tufts dot the wild grassy wastes, marking the marshy swamps, or where the stunted heath informs us that the ground is dry and sustaining, enlivening the air with its cries,

and adding to the beauty of the surrounding scene by its rich and varied plumage.

As you wander over their breezy haunts, you have good opportunity of witnessing their easy buoyant flight. Your first appearance calls forth the signal of alarm, and one by one the birds rise from the ground, and with flapping pinions sail above your head, their snow-white plumage glistening in the light. There is a certain bold impressiveness about their flight that fails to bend to the pen's descriptive powers. Now they soar, seemingly without effort, then on flapping wings they wheel round and round. Anon they dart rapidly down, as if hurling themselves to the ground; and then, mounting the air again with easy grace, fly in ever-changing course, darting, wheeling, tumbling, and reeling, as though beating time with their pinions to their wailing and expressive cries—cries that seem to speak of defiance and alarm; defiance at your puny efforts to cross their dangerous haunt, and alarm for the safety of their eggs or young lying exposed on the waste around. *Weet-a-weet, pee-weet-weet*, sounds in all directions, as if the birds were beseeching you to quit their unattractive home, and leave them to the solitude which they love. Your retreat is the signal for alighting, and one by one they flap rapidly just above the ground, and then alight. In the air the Lapwing is a somewhat singular looking bird, and its immense stretch of wing and strange and rapid motions enable you readily to distinguish it from any other bird that cleaves the air. If you watch them closely you find that they alight somewhat different from other birds, and keep the long wings extended for a few moments, and then gracefully fold them. At a distance the upper plumage of the Lapwing appears of a mouse colour; yet when you examine it closely you find it is

a lovely green, loricated with metallic purple and bronze.

The Lapwings visit the inland districts for the purpose of rearing their young. About the period of the vernal equinox they leave the coast and retire to their old upland haunts, where they soon pair, and the duties which sent them thither commence. As we wander over their breeding grounds the birds rise, but seldom indeed remaining upon their nest until closely approached, and wheel in airy flight above our heads. But do not confine your attention to the birds alone, if you wish a sight of their home and eggs. As you approach a little reed tuft, the Lapwing just above your head drops to the ground, and uttering its mournful note appears to be severely wounded—a sure sign that you are near the object you seek. Disregard the motions of the parent bird, and confine your attention to the reed tuft, and there you will doubtless see the cause of the bird's strange and varied antics. In the centre of the tuft, mayhap, a little home has been constructed; merely a hollow lined with a few bits of withered herbage, and the eggs, always four in number, if the full complement is deposited, lie in the nest with their small or pointed ends turned inwards, to take up the least possible amount of space. You find the eggs subject to little variety, although they differ sometimes in size and shape. They are pale olive-green or brown in ground colour, spotted and blotched with deep brown approaching to black. As you examine them, you will probably note that they are very large when compared with the size of the bird, a circumstance, by the way, common to birds known as Waders. Nests of the Lapwing are also often found on grass lands, usually on the summit of a mole hill; or the eggs are found in the lowland districts, on the

ploughed lands, without nests, often in the cavity formed by the heavy feet of the horses or cattle, but wherever we find the eggs they are almost invariably laid on some little eminence. The young Lapwings can run as soon as hatched, and are fed and tended by both the parent birds. Pretty little creatures they are in their mottled brown plumage, and ever in motion ; but should danger threaten they instantly nestle into the herbage like young Partridges, and remain motionless, while their anxious and ever watchful parents endeavour to lead the intruder away by their alluring motions.

The Lapwing is a bird particularly active at nightfall, and its shrill wailing notes are heard when the sun's departure has wrapped its haunt in mist and gloom. The birds have a purpose in keeping such late hours, for the worms that form their main support come to the surface of the ground in largest numbers at dusk. It has been gravely asserted that the Lapwing taps the ground with his feet, for the purpose of bringing the worms out of their holes to the surface of the ground : the Starling is said to act in a similar manner for the same purpose. But both these birds are never put to these singular motions for the purpose of gaining a meal, and worms are always to be secured either on the surface or partly protuding from it. Again, were these motions really resorted to, the bird has not the power to strike the earth with sufficient force to alarm the worm creeping beneath it. Snails, insects, and grubs also form much of the Lapwing's food during the summer months.

When the winds of autumn sweep dismally over the uplands, and the heather and gorse flowers have faded, the Lapwings bid their inland haunts adieu and wing their way to the distant coasts, most probably migrating in the night. Were we to follow them, we should find

that they frequent the salt marshes and the lands bordering the sea, and often on the beach, following the receding waves, to pick up the various animal substances. In the winter months flocks of Lapwings from the sea coast are frequently seen crossing over the inland tracts of country. These flocks often foretell a coming snowstorm, before which the birds are retiring to grounds open and more tenable. Yet once the storm abated, the birds again seek the coast, to reap the endless harvests of the ocean, for there is not a tide but what spreads the sands with animal matter in abundance, there is not a wave that breaks upon the shore but what comes laden with food in plenty for them.

We have yet to learn why the Lapwings leave the sea coasts in spring, to spread over the inland moors and pastures. Food can scarcely be considered as the primary cause, for the Ringed Plover and many other shore birds, apparently differing in few of their requirements from the Lapwing, remain on the sandy shores, and rear their young a stone's throw from the waters of the deep. Depend upon it, when migration and its causes are studied more carefully, many of the actions of the feathered tribes, to us at present unaccountable and mysterious, will become plain, and exhibit facts which we are now little or not at all aware of.

THE COMMON SANDPIPER.

ON the banks of our mountain lakes and streams and lowland sheets of water lives a little bird in the summer months known to the country people as the Summer Snipe, and to one well versed in the study of ornithology as the Common Sandpiper. It is an unobtrusive little creature enough, yet withal a very engaging one. Running nimbly on the sands, it probes them with its long beak, to secure the worms hiding there, its little footprints marking out its course. Its long legs enable it to wade with ease, yet it never swims, for its requirements need no such form of motion. If you disturb it when wandering round the sandy or marshy shore it rises suddenly, and with rapid graceful flight pursues its way close to the water to a place of seclusion, uttering its shrill and piping *weet-weet* as it goes.

If wishful of studying his habits, you must delay your visit to his haunts until the month of April calls the migratory birds hither, and releases the mud flats, sands, and marshes from the relentless grasp of winter. It is then, by resistless impulse driven, he quits his winter haunts and repairs to the localities mentioned above, for the purpose of feeding on the worms and insects, and rearing his young. You find he is somewhat shy and retiring at all times, but by a cautious advance you will generally succeed in watching his actions on the margin

of the waters. Those dull uninteresting mud flats are his storehouses ; those stretches of golden sand studded with the white shining pebbles abound with the food which he loves, the food on which his young can alone reach maturity, and this circumstance is probably the only explanation of his presence here. Sandpipers do not commence their nesting duties immediately upon their arrival, although they invariably arrive in pairs, and seldom quit the water side during the whole period of their stay.

Sandpipers are incessantly in motion, and never fail to amuse the observer with their merry gambols. Now pausing for a moment, with head held suspiciously erect, as if aware of your presence, then again returning to their labours. Nimble they run over the muddy wastes, skirting the very edge of the rippling waves, or occasionally wading into them, to secure a small insect or beetle, all the time jerking their short tail, and now and then uttering their call notes. Returning to the shore, they probe the mud with their long slender beaks, and draw forth the mud worms and various forms of aquatic insect life lurking there. The Sandpiper is not formed for diving or swimming, and though you observe him carefully during the whole time of his stay, you will never see him adopt these motions. His long legs carry him to the depth he wishes without wetting his plumage, save indeed the head, which is sometimes, though rarely, submerged. He is a bird of the shallows alone, and rarely if ever seen on the banks of the deep waters, and no more fitted for a truly aquatic life than the delicate sylvan choristers themselves.

Instances have been brought forward where the Sandpiper has been known to swim. But this, as far as

I can learn, has only occurred when the bird has been wounded, and taken to the water to escape capture, or unwittingly fallen into it. I have known a Blackbird, a young bird and scarcely able to fly, swim or rather *float* on the surface of a sheet of water over which it endeavoured to cross on pinions which proved unable to carry it in safety. The poor bird struggled hard to gain the shore, and I may say floated admirably, yet one could plainly see he was in an element Nature never intended him to be. His plumage soon got saturated, his struggles more and more feeble, and at last he lay lifeless on the water. These remarks are analogous with the swimming Sandpiper; for although he is a bird destined to seek his sustenance on the borders of the waters, and in their shallows as far as his legs will support him, still he is no more fitted to swim through them or dive under their surface than the poor unfortunate songster mentioned above.

Few birds indeed are more attached to their haunt than the little Sandpiper. Yearly they return to their old breeding grounds, and though you plunder their nests and otherwise disturb them, they still return with unflinching certainty to the home of their choice.

We often see the Sandpiper running as nimbly on the walls as round the edge of the water; yet I cannot find that they perch in trees, although the formation of their feet does not prevent them from so doing. Another peculiarity attached to birds of the wading tribe alone is the practice of flying with the wings greatly curved, more so than any other class of birds. I often see the Sandpiper mark the course of his rapid flight by a series of rings made by his arched pinions striking the placid surface of the waters.

But time passes rapidly away, and the purpose

which sent the little Sandbirds hither must be seen to. By the second week in May they have sought out a nesting-site. It is never far away from the water side, and although often in the most bare and unsheltered places, it is found with the greatest difficulty. On the sandy banks carpeted with coarse grasses she will often make her home; she will retire some little distance from the waters and deposit her eggs amongst the herbage on the higher lands; or she will take up her abode on a little stretch of sand, and amongst the masses of rock and tufts of heather hatch her brood in comparative safety. When, however, we do discover her nest, we find it is invariably sheltered on one side at least, sometimes by a mass of rock, at others by a scrubby bush. As we stroll over this sandy waste in full expectation the little Sandbird warily and silently watches our actions; she crouches lower still in fear as we unwittingly approach her home, and when almost trodden upon, she dashes forward with a feeble *weet* of anguish and utter despair, and by her various alluring motions endeavours to lead us away and draw all our attention upon herself. If we were to pursue her, she would lead us away for some distance, and then suddenly gain the use of her seemingly broken wings, and with a note of exultation fly rapidly away, to return when we quitted her breeding ground. But let us look carefully around near where she started forth. After a by no means easy search we find her little home under a heather tuft. Her bush of heather is the counterpart of a hundred others around, and her nest is inconspicuous in its simplicity. It is only a little hole, round and well formed it is true, lined with little bits of the heather and a few dry grass stems. The eggs are four in number, placed with the small ends inwards, and in such

a manner that if we once remove them it is almost impossible to replace them as to lay so close and compact. We cannot help but notice when examining her eggs how closely they harmonise with the surroundings. Take one of them out and place it upon the sandy ground, and direct your attention from it a moment, and then mark the difficulty you experience in again noticing it. And handsome eggs they are, and very large for the size of the bird, too. Indeed, had we not seen the little creature leave them, and not been acquainted with this matter, we should have thought them to be the eggs of a much larger bird. They are pale yellow or stone-coloured in ground colour, mottled and blotched with deep reddish-brown, intermingled with faint dashes of much lighter brown and purple, sometimes streaked on the larger end with very deep brown. And now having minutely examined her home and its contents, let us not make it desolate; let us reverence the protective wiles of the anxious mother; let her return to complete her weary labour of love, and rear her brood in peace.

The male Sandpiper is seldom far away from his partner. When incubation is going on he takes his place upon the eggs, although he does not sit so long as the female. When the bird leaves its nest of its own free will, and unmenaced by danger, it invariably runs for a few yards before taking wing. As soon as the young are hatched they leave the nest and repair to the water-side with their parents. Young Sandpipers are engaging little creatures when in the downy plumage, and quite as active as their parents. As the months roll by the little creatures advance to maturity. Their pinions become stronger and stronger, and ere long they are able to fly for short distances. Their beaks, too, once short, now reach their proper length; their

frames become more robust, and they daily become more fitted for the long and perilous journey that awaits them.

The Sandpiper, like the Swallow, needs the presence of perpetual summer, and when the first days of autumn arrive we see them probably more active than usual, and far, very far more noisy. The time of departure has arrived. Suddenly we miss them from their sandy wastes, no longer see their little footprints marking out their wandering course on the mud flats. They have left us for more genial climes, and that, too, in the night—for birds of this order that migrate invariably do so at that time ; or if only of a wandering disposition, we find they journey from one place to another under the cover of darkness. I cannot find that the Sandpiper assembles in flocks for the purpose of migrating, and it is very probable they do not. The young, however, migrate with their parents, and as these parties near their southern destination they may probably unite in companies to spend the winter ; but this, after all, is mere conjecture, and must be taken for what it is worth.



THE SNIPE.

AS we wander round the mountain lakes, over the seemingly interminable swamp, where the ground beneath us trembles under our weight, and we have to pick our way carefully, stepping from one cluster of rushes to another, we are apt to ponder over the absence of bird life. True, we have passed a short while ago a company of Plovers on the higher grounds, and seen the Red Grouse in plenty on the drier land, still here all seems desolate. As we pause to admire the sublimity of Nature in her wildest aspects, the perfect silence seems oppressive, and a slight feeling of sadness creeps irresistibly upon us. Nothing breaks the solemn stillness of the wilderness save the incessant lap lap of the waters, stirred into motion by the mountain breeze, or the rustling murmurs of the reeds and the splash splash of our

footsteps as we wander cautiously along. Suddenly, however, we flush the Snipe from his hiding-place amongst the reeds. Silently, though swiftly as a meteor, he dashes still further into the morass, to escape our sight and seek safety in its deepest solitudes. Here, then, we have a bird who prefers this silent lonely marsh to the richer lands, who delights rather to live amongst its dank vegetation than in the richest of our pastures. And why? The Snipe knows full well that, aided by his long beak, he can find abundant food amongst its oozy soil, and at the same time keep in comparative safety, for his plumage harmonises closely with the colours of his reedy haunt, and in the seclusion which he loves.

By far the greater number of Snipes leave us in the spring and retire northwards to breed, yet in the upland districts they may be found breeding in suitable places in tolerable numbers.

Until the beginning of April the male Snipe is a bird but rarely seen, preferring rather to run and skulk amongst the vegetation than take wing, unless absolutely compelled. But no sooner does the sun begin to make his power felt, and moorland and pasture alike assume their vernal vestures, than we see the Snipe ascending into the air, uttering his strange and pleasant notes. After attaining the zenith of his flight, he will descend on rapidly moving pinions, causing the strange humming sound known as 'bleating.' These flights occur at intervals until he finds a mate, although even when the eggs are deposited, and the female sitting upon them, he will often mount the air to a great elevation and fly in circles over his reedy haunts below.

The home of the Snipe is built in various situations. Sometimes it is found amongst the coarse grass or

heather on the drier portions of the moor, while at others it is placed in the centre of the reed tufts in the swamps, where to reach it means going up to the waist in mud, slime, and water. It is a very unpretending little home indeed, its materials being found close at hand, and but little skill is displayed in forming them. Little bits of reed and dry grass are used, if in the swamp ; while if on the moor, portions of the heather are used instead. The eggs of the Snipe, as usual, large for the size of the bird, are always four in number, and in shape of course much pointed, yet not so much as those of the Sandpiper. They are olive-green in ground colour, spotted and blotched with rich brown, and sometimes streaked round the larger end with much deeper colour. The parent Snipe will display various alluring motions should you disturb her, yet she often quits her eggs silently at the first sign of your approach, and, noiselessly gliding through the herbage, seeks a place of safety, and leaves her eggs, trusting that their colour will prove their shield. Sometimes, however, especially if her eggs be near hatching, she will crouch low, and remain silent and motionless upon them, and though you approach her closely she moves not, except probably to nestle still closer over her eggs, dearer to her than her own life. During the whole period of incubation the male Snipe strays but little from the vicinity of the nest, and takes his turn upon the eggs while his mate recruits her failing powers with food.

Young Snipes have the beak nothing near so long as their parents, and are covered with a downy garb of brown. Both the old Snipes attend them, forage for them, and protect them if need be from the prowling Crow or Hawk. Should a human intruder appear upon the scene, he would find, as is the case with all birds of

the order, that the old birds reel and tumble before him, or otherwise try to take his attention, and the brood separate and instantly crouch low and motionless amongst the herbage, there to remain until the danger has passed.

I have reason to believe that the Snipe, as soon as its young have gained the use of their pinions, abandons them, and also separates from its mate, and remains solitary for the remainder of the year, or at most unites in little parties, either drawn together by the position of their food, or for the purpose of migrating. In the late autumn months the Snipes which retired to the swamps of Northern Europe now return to winter here. In hard weather they sometimes frequent the hedgerows, especially where a sluggish stream occurs. So, too, we see them in the woods or plantations in company with the Woodcocks, and even amongst turnips in the swampy parts of the field. Snipes perform their migrations in the night. Most wonderful is the instinct which leads them to a fitting haunt when in the course of their journeyings, especially when we know the birds travel in the night time, when landmarks are invisible, and the whole face of the country wrapped in murky gloom. One day a locality may not contain a single Snipe, while the next they occur in abundance. Where the birds are numerous you find they rise here and there, never congregate, and busy themselves with their own affairs alone. Solitary they are in the fullest sense of the word, not even sociable amongst themselves, seldom more than a pair together, and their only unions are formed for purposes already dwelt upon.

The Snipe is not a swimming bird, and seldom takes to the water. I have, however, seen a bird of this species when flying over a mountain lake suddenly dash

into the water, and, after plunging about for a few moments, again resume its flight ; but what caused these singular motions in ice-cold water—for the time was midwinter—I know not.

The bill of the Snipe, if closely examined, will be found a study in itself fraught with interest and wonderment. Its length enables him to probe deeply his boggy haunts, and the nerves with which it abounds enable him to *feel* his prey. His food consists of worms for the most part, although insects are often secured, and doubtless other animal substances that abound in the soil peculiar to his haunts.

The Snipe, like his cousin the Jack Snipe, shows a strong love for his haunt, and you may repeatedly disturb and alarm him, yet he still frequents the place as long as food is plentiful, and by a little attention to his habits you are able to find him whenever you wander through his haunt.

THE LANDRAIL.

THE Landrail is a bird far more often heard than seen. A shy and wary creature, he delights to dwell amongst the densest vegetation, and is but rarely observed on the wing. His body is admirably formed for penetrating the dank herbage, and the colours of his plumage, beautiful though they are, are exceedingly sober, and make him an object inconspicuous amidst surroundings the same.

Landrails are migratory birds, and their migrations are undoubtedly performed in the night. It is difficult to give the exact time of their appearance, for being such retiring birds, their presence is invariably made known by their shrill and monotonous call notes; and as it is doubtful whether both male and female call alike, it is also a matter of uncertainty which arrives the first, or whether they journey in company. However, in the northern parts of England, as soon as April departs in favour of the smiling month of May, their well-known call notes are heard in the grass and clover fields, notably those lying low and in the neighbourhood of water. The birds do not frequent the corn fields so much as is very generally supposed; the bird's name of *Corncrake* doubtless being misleading in this respect.

Before going further with the life history of the Landrail, I would briefly dwell upon a peculiarity in its habits as yet totally unaccounted for, and that is

the irregularity of its appearance. Landrails are seldom known in the same numbers for even two successive seasons. One season they are abundant, and the still evening air is laden with their cries; the next, but one or two birds will be heard. Now, from what I have observed respecting this irregularity of appearance, I find that when the birds occur in such large numbers, and remain to breed, a rainy season almost invariably occurs. The birds are therefore enticed to stop with us, for a wet season must of necessity prove a successful one for them, and one harmonising with their requirements. Again, I am also led to believe that when the birds come in such vast numbers they are probably on a more extended migration, and stay in certain districts for a few days for rest and food. Probably, too, these birds, unknown to us, vary their routes to the places visited, and this, then, will explain their scarcity or abundance in various seasons and in different localities; for it is just upon their arrival that we notice them in the greatest abundance, and in a few days their numbers materially decrease. Truly this motion of the Landrail is as yet almost completely enshrouded in mystery, and our opinions on the matter, crude as they are, can only be drawn from sources, at best, perplexing and unreliable. We will now return to our Rail hiding amongst the vegetation, and as far as possible trace out his shy and retiring habits.

The Landrail pairs annually, and I have reason to believe some little time after their arrival here. Before that event (pairing) takes place, the birds are of a wandering disposition, and indeed until a nesting ground has been selected they are continually on the move. We hear them calling in one particular field one evening, and perhaps not again in that locality for several days.

Many a pleasant hour may be passed in early summer, when the moon shines bright, by listening to the unmusical yet to me pleasing cry of the Landrail. The flowers throw off unwonted fragrance, and, save the chatter of the Goatsucker as he preys upon the night moths, the occasional cry of the Owl, or the drowsy hum of a wandering beetle, the Landrail's cries are the only ones that disturb the still air of night. Now the bird is within a few yards of you, and you hear him rustle in the thick cover, and his grating cries startle you by their nearness. The next heard of him is at the distant end of the field ; anon, in the centre ; ever wandering, approaching you and then retreating, his *crake-crake, crake-crake*, awakening the solitudes of night, and answered by his companions in the neighbouring meadows. By far the greater part of the night he is heard to call, and when the sun is rising over the eastern horizon, making the dewdrops on the grass stems glisten like diamonds, and the lovely summer foliage shine like emeralds of the finest lustre, his notes, too, are heard mingling with the voices of the birds of day.

The bird's keen sense of hearing, and the rapidity of his retreat from the approach of an intruder, has caused many persons to believe that the bird possesses the power of throwing his voice in various directions. To one ignorant of the true habits of the Landrail, nothing seems more natural. Yet let him wander through the bird's haunts, and note how rapidly they glide through the herbage, and he will at once be able to readily account for the bird's seeming powers of ventriloquism.

When a high wind is blowing we sometimes have great difficulty in denoting the direction from which their cries proceed ; now sounding high and close at hand, and anon appearing faint and distant, as they are

borne away by the breeze. But this does not make the Landrail a ventriloquist, and between the lulls of the wind we hear his notes from one direction, clear and powerful as usual, provided he is stationary, or in different directions as he wanders hither and thither through the herbage. It is, in fact, the observer himself who is at fault, failing to remember, or being unaware, that the slightest breeze that disturbs the air of a summer night is sufficient to influence the bird's notes in this respect.

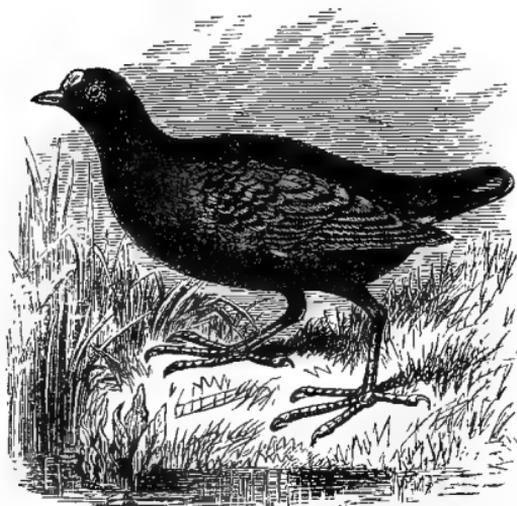
The note of the Landrail can be closely imitated by drawing a knife blade smartly across a stout comb. Very little skill is required, and by remaining perfectly motionless and quiet, the birds will often visit you, sometimes flying through the air and alighting at your feet, or more frequently coming through the herbage. The birds in the mating season are probably more often seen than at any other time of their stay. I have known them in the mating season, lured by a call, alight on the neighbouring hedgerows; and I have also heard them call when flying through the air, shortly after their arrival. Landrails are with difficulty flushed, even by dogs, and they are slow fliers until they get well into the air, flying with their legs hanging down, and are very rarely flushed a second time. From what I have observed, the Landrail does not call so frequently in cold, dull weather, and still less so during the period of incubation, and his notes entirely cease in the late summer months, and he remains silent until he leaves us for warmer latitudes.

The food of the Landrail, as might be supposed, is composed largely of animal substances. His rich and humid haunts yield him worms, slugs, and snails in abundance, together with various kinds of beetles and insects; tender shoots of herbage are also eaten, as is also the seed of various grasses.

A little before the summer solstice, when the herbage is thick and close, the Landrails set about the duties of nesting. The nest is placed in the clover fields, amongst the mowing grass, and but seldom or never in the grain fields. It is a much better made nest than we should probably suppose, and made in a small hole in the ground. The materials used are coarse and dry stems of herbage, sometimes a few dry leaves, and lined with the finer grasses. The eggs, from eight to twelve in number, and often sat on as soon as laid, are somewhat small for the size of the bird, and warm yellow in ground colour, spotted and blotched with reddish-brown of various shades, and light gray and purple. They are subject to no little degree of variation, and you will sometimes find one egg pale blue in ground colour, speckled with reddish-brown, amongst a clutch of the usual colour. The parent Rail displays silent motions as her protective power, and upon the least alarm she quits her eggs and makes off silently through the herbage. The bird will sometimes remain silently sitting upon her eggs, and sit so closely as to lose her life by an unlucky stroke of the mower's scythe. Landrails will not unfrequently remove their eggs to a safer retreat if their nest is repeatedly disturbed. Young Landrails are covered with black down, and their actions are fully as shy and retiring as their parents'; and if captured when only half matured, they will bite and struggle fiercely for freedom.

The autumnal movements of these birds are even more difficult to describe than the vernal ones, simply because the birds are silent for months before they quit their haunts. When the grass fields are shorn of their crops, and the hay is gathered in, the Landrails retreat to the clover fields, where they can find seclusion amongst

its rich and exuberant growth. They also frequent the turnip fields, if they afford sufficient shelter, and feed on the vast quantities of worms and snails found there. In autumn the Landrail will take shelter amongst the growing corn, but only as a last resource, and when other cover is wanting. When in such situations it invariably comes to the grass lands to feed, and may be seen at eventide and early morning, feeding like the Thrushes, occasionally holding his head erect and looking warily around—at the least alarm either crouching low and fearful to the earth, or running through the hedgerow into the standing corn. Doubtless the Landrail's departure is influenced by the decay of the herbage. When that fails his hiding-place is gone, and he must depart to seek more secluded haunts. As the birds probably go in the night, we are at a loss to know whether they journey in flocks; but the probability is they migrate singly, or in little parties, pushing their way in stages, hiding in the day time, and winging their way through the darkness as mysteriously and silently as they came. I have known the Landrail, in some few rare instances, winter in this country, but such instances are only exceptions of the rarest kind, and to which a reason it would be difficult to assign.



MOORHEN.

THE MOORHEN AND COOT.

Where Coots in rushy dingles hide,
And Moorhens shun the day.

THE shy and retiring Moorhen's home is amongst the reeds and dank vegetation by the water-side. You get an occasional glimpse of them on the banks of weedy pools of stagnant water, or in the reedy branches of canals and drains. A favourite place, too, is in the tangled marshy bed of old watercourses, and on the little islands that often stud fishponds and lakes. Sometimes we see them swimming with peculiar bobbing motion of the head amongst the reeds and water-flags, or at other times walking gracefully about the banks, picking up their food, and incessantly jerking their tail. Or not unfrequently you see many of the birds perched amongst

the rushes that stud the shallow pool, preening their plumage, while others are seen paddling quietly about, occasionally diving in search of food, or chasing each other through the water for sport, their peculiar notes fully harmonising with the whole scene. The note of the Moorhen is indeed a peculiar one. I can only compare it to the noise made by drawing your thumb smartly across one of the bass strings of a fiddle. At the least alarm they either dive into the water, to reappear amongst the reeds, or run swiftly off, to seek safety and seclusion in the herbage on the bank.

The Moorhen remains with us throughout the year, although I am led to believe their numbers are increased in the autumn and winter months by arrivals from northern latitudes. Morning or evening, or after a shower of rain, are the times the Moorhens are most frequently seen searching the grass land for the worms, slugs, snails, and insects which constitute their chief food ; although grass and other vegetable substances, such as the tender shoots and seeds of water plants, are frequently eaten. There is something peculiarly graceful about the actions of the Moorhen when walking about the land, and their incessant jerking of the tail also adds to the gracefulness of their movements. But, as we have already seen, the Moorhen does not confine himself to the land alone ; he is equally at home on the water, where he spends much of his time. Now you see him dive for the tender shoots of the water plants or an aquatic insect ; then up again, to swim hither and thither, or float motionless, which he often does for a long time. Should danger threaten him when on the water, you find he usually dives instantly, and pursues his way under water, and again ascends amongst the herbage growing in the pool, where he lurks until all is quiet again.

When in a semi-domesticated state it is very probable Moorhens remain in pairs for life ; and what I note as peculiar is, no matter how the birds are preserved, still they do not increase in numbers corresponding to the young birds hatched. Sometimes three broods are reared in a season, say of eight birds each ; still the next the birds are not seen in increased numbers. They must therefore for the most part forsake their birthplace when they reach maturity, and seek abodes elsewhere—a circumstance more common, I am led to believe, than is usually supposed, not only in this species, but in most birds.

The Moorhen makes its nest amongst the herbage on the banks of the water, or even in the centre of the pool amongst the water-flags. Sometimes they will build on the top of the pollard willows, or in the branches of the trees overhanging the water. It is a large and well-made structure, composed of the aquatic herbage and mayhap a few withered leaves. The eggs, from six to twelve in number, are rather larger than those of the Landrail, otherwise they closely resemble them, being pale reddish-white, blotched and spotted with purple and deep red. The young Moorhens, little creatures black as jet, take to the water almost as soon as hatched, where they are tended by their parents until they can forage for themselves, when they doubtless quit their birthplace for localities elsewhere.

To see the Moorhen swimming gracefully over the water or walking with ease about the adjoining land, one would think he would be awkwardness itself when in the branches of a tree. Yet the very reverse is the case, and not only does he frequent the trees, but he will often show a decided partiality for them. In the depth of winter, when his favourite pool is covered with an icy

pall, and the snow lies deeply over his wonted feeding grounds, the Moorhen is oftentimes pressed for food. At these times you often see him sitting in the hawthorn trees, consuming the haws, or preying upon the hips of the wild rose on the neighbouring hedgerows. Where the haunt of the Moorhens is in wild and unsheltered places, they will often seek shelter amongst the tangled undergrowth of the neighbouring woods ; and if evergreens are near at hand, nothing suits them better than to wander under the low drooping branches, or, if need be, seek their shelter at nightfall for repose.

Moorhens change their locality under the cover of darkness, and their peculiar cry is often heard, now clear and loud, and anon faint and weird, from the inky sky of night. I have known this bird keep the air for hours, coursing hither and thither through the darkness, doubtless seeking a suitable resting-place ; for otherwise, the Moorhen is not what we can call a nocturnal bird.

The Coot is a much larger bird than the Moorhen : its feet are different, its plumage is much darker, and the forehead is bare of feathers and of a delicate pinky-white ; hence the name of *Bald Coot*, a title by which it is commonly known in those districts where the birds abound. A glance at the Coot, and you are at once aware that his home is on the waters. He frequents the quiet lakes and ponds of the interior, and the vast sheets of water in the low-lying counties ; so, too, he is often seen in winter time enlivening the ocean with his active motions, and blackening the mud flats with his numbers when he repairs at eventide to rest. But though his true home is the water, still he is active enough on the land, walking about quite as gracefully as the Moorhen ; and, what is stranger still, when we look at his seemingly awkward feet, he often perches in the

branches of the trees, and sits as safe and unconcerned as the most active little Titmouse. This teaches us that we must never be led by outward appearances alone in forming an idea of a bird's habits or motions, for very often the reverse of our conjectures is right.

The Coot obtains its food in the daytime. You may see other wild fowl dozing away their time, while the Coots are busy feeding, either in the waters or on the neighbouring grass lands. In the waters the Coot feeds on the smaller fishes—a school of young roach or minnows is rapidly thinned in numbers. Besides fish, at the bottom of the water are quantities of aquatic insects, on which the Coot also feeds, for be it known he is an expert diver: the tender shoots of the water plants and their seeds are also eaten. When on the dry land, the Coot eats great quantities of common meadow grass, also the snails and worms lurking amongst it. Then, too, when in the neighbourhood of the ocean, the vast quantities of animal matter tenanted the deep and thrown up by its ever restless waters are consumed. Though the Coot occurs in such abundance in the winter season, still but comparatively few of the birds remain to breed, and those for the most part are the birds that remain in their haunts throughout the year, and seldom or never congregate with the migrants from other lands.

You rarely indeed find the nest of the Coot before May, when the reeds and flags afford it abundant shelter. Sometimes it is built on the dry land, amongst the tangled reeds and grass clothing the bank, at others it will be built amongst the rushes growing in the water, sometimes its foundation being commenced under the surface. Birds that build their nests in these situations invariably make a large and bulky nest, and the Coot

forms no exception to the rule. In the first place the coarse grass and water-flags are used, massed together with very little beauty, it is true, but the *skill* cannot be questioned. As the nest approaches completion we find the reeds and flags much finer, and the cavity which contains the eggs is lined with the finest materials. In this very often water-surrounded and floating home the mother Coot sits upon her eggs. They are from eight to twelve in number, stone colour, with deep brown and black specks, seldom or never blotched, and are about the size of a Pheasant's egg, only rather different in shape.

Silence is the protective power the Coot most frequently displays, and the sitting bird either glides quietly off into the reedy fastnesses the instant she becomes aware of your approach, or remains crouching low and motionless, trusting in her silent wiles for safety.

The young of the Coot do not exhibit the bare patch on the forehead, nor do they until the following season gain it in the same perfection as their parents. We have not as yet the slightest idea as to the cause of this baldness or of the purpose it serves, and which may be said to be analogous with the bare patch at the base of the bill of a mature Rook, although I admit they bear but little resemblance. It might be urged that the Coot's incessant collision with the herbage when grazing, or against the stems and roots of the water plants, cause this absence of feathers. But then we must bear in mind that the Moorhen should, if this were really the case, be bald also. Many of the secrets which existed in the life history of birds, and their functions and anatomy, have been made plain, and doubtless in the dim and distant future, when the science of ornithology approaches the acme of its perfection, the as yet unaccountable baldness of the Coot and naked skin of the Rook will satisfactorily be accounted for.



THE SWAN.

THERE is not a bird in Britain more graceful in its motions or of such purity of plumage as the domestic Swan. Wherever his snow-white plumes and large and handsome form floats buoyantly upon the still waters the scene is far, very far, enhanced in beauty. No wonder he has furnished the bard of all ages with abundant matter for song; for to see this elegant creature, with neck gracefully arched, wings slightly elevated, and breast parting the glassy surface of the water, as he starts forward in successive bounds, is indeed a sight of matchless beauty.

The domestic Swan, so called to distinguish it from the other members of the Swan family that from time to time pay us visits, and from its invariably living, in this country at least, under the protection of man, is seen on the ornamental waters, fishponds, lakes, and

rivers. It is also known as the *mute* Swan, a name acquired by its silent habits, its only voice usually being a hissing note.

If the Swan be allowed the use of his pinions, he will not unfrequently visit neighbouring waters. The Swan upon the wing perhaps appears still more noble than when upon the water. His immense stretch of wing speedily carries him into the highest ether, and he pursues his journey in safety ; for there is not a bird that cleaves the air dare attack him, save, indeed, of his own species, and from the fire-arms of man he is safe as long as he keeps the sky. When he is about to alight you see him gradually descend in circles, the sunlight causing his plumage to shine with a radiant fairness, and to contrast richly with the deep blue of heaven, and after coursing over the water for several times he finally alights, and, gracefully folding his wings, pursues his way, this time aided by his oar-like feet, through the waters in the direction his wants or his whims impel.

The Swan pairs for life, and each pair of birds keeps zealous guard over certain parts of the waters, repelling all intruders with a fury unlooked for in what we are apt to suppose so gentle a bird. I have seen two male Swans fight with such fury as to cover the water with foam, striking at each other with their muscular wings, and seizing each other's beak with great tenacity, all the time keeping up a hissing noise. These combats continue until one of the birds retreats, worn out and conquered, leaving the troubled water covered with feathers, while the victor sails triumphantly off, to guard with still greater care any further encroachment on his privacy.

Swans do not always breed each successive season, sometimes only at intervals of two and sometimes three years. If the water contains an island, so much the

better for the Swans, who invariably build their large and bulky nest upon it. It is placed amongst the herbage bordering the water, and made of aquatic plants, dry grasses, and withered leaves. The eggs, as may be supposed, are very large, and from five to seven in number, olive-green without markings. In most birds when the eggs are deposited we find they never do anything further to the nest, but with the Swan it is different. As incubation proceeds, the sitting bird gathers all the herbage within reach of its beak, and adds it to the bottom part of the structure, so that when the eggs are hatched the nest is probably many inches higher than when they were first laid. I can only account for this strange procedure by classing it amongst the many protective arts displayed by birds in connection with their nests. For as the Swan invariably, or nearly so, builds her nest close to the water's edge, any sudden rise of the waters would probably mean the destruction of her eggs, so she prepares for the emergency in the above rather remarkable manner. Even though her nest be away from the water she still displays this peculiarity, for she is prompted to do so by an imperative and resistless impulse within her, irrespective of the situation. Both birds sit upon the eggs, although the female does so most frequently, the male bird merely relieving her while she seeks her food. The male bird is also the sentinel, and woe betide any unfortunate bird or animal that comes suspiciously near the nest. Even man himself is not respected, and the birds will hiss, or even attack him, if he still persists in his approach.

The young of the Swan are called Cygnets, and they differ vastly from their parents. Instead of wearing a snow-white garb, like them, they are clothed in plumage brown and dingy, yet withal they bear a certain swan-

like look, and their carriage distinguishes them from more ignoble birds. In their infancy it is no uncommon thing to see the mother bird with several of her young on her back, conveying them through the water: the same thing often occurs on the dry land, the parent bird assisting them to mount. The old Swans tend their young, forage for them, fight for them, and shield them with the greatest care, for the first season. After that period has passed all affection for them appears to cease, and the old birds drive their offspring away as so many intruders. The young Swans have now but a sorry time of it, and are perpetually harassed by their parents, who pursue them the instant they take to the water. Upon reaching maturity the young birds pair and take possession of certain parts of the waters, and they in their turn become the oppressors.

The food of the Swan is for the most part composed of vegetable substances. The birds are seen grazing upon the banks of the waters, and, aided by their long necks, securing the tender shoots of the water plants growing at the bottom of the pool. The seeds of water plants are also eaten, as are also various forms of aquatic insect life. The Swan has also a partiality for fish, and I have seen them catch and swallow whole, young tench; and even the perch, with all his array of spines and scaly armour, is not safe from their attacks.

EVERGREENS AND BIRD LIFE.

HE who studies animate and inanimate Nature in all its bearings will find relations of the most complex character existing between widely different objects. That such relations, for instance, exist between evergreen plants and birds, is manifest to every observer of Nature ; and to this subject, therefore, I intend devoting a few of the pages of this little volume, partly with the view of furthering the cultivation of evergreens, whose ornamental qualities equal, if they do not exceed, any other objects of the sylvan world, and partly to encourage the protection of the smaller birds around us.

Those insessorial birds whose hardy temperament allows them to remain on our shores at all seasons of the year, naturally require some place of safety whither to retire from the strife of the warring elements in the winter months. Can we conceive of anything more suitable for this purpose and meeting all conditions than the ever verdant evergreen, which at all times of the year is found clothed in beautiful foliage. When November's blasts have robbed other trees of their arboreal covering, and all is cold and cheerless, the holly, yew, ivy, or stately fir spread out their foliage, enticing by their warmth and shelter the feathered tribes in countless numbers. If, therefore, these useful trees were absent from our land, the number of resident birds and winter visitants would greatly decrease. In summer the

presence of evergreens is not so much needed, for the sun, being higher in the heavens, has greater power, and vegetable life is at its acme of vigour, and affords in part the shelter required. But in winter what a change occurs! How bare the leafless trees and hedgerows! The evergreens now stand out prominent as friendly beacons, offering harbours of refuge for every weary songster that seeks their shelter. Birds may, however, be seen in small numbers enlivening the woods and hedgerows with their presence in the daytime; but whither go these feathered creatures when the sun sinks below the western horizon?—To the nearest belt of shrubbery or cluster of evergreens, where, amid the luxuriant foliage they remain safe from enemies and cold until morning dawns, when their several requirements lead them forth anew amongst the more exposed and leafless tracts of country.

He who would wish to encourage the feathered tribes around him should pay special care and attention to the cultivation of evergreens; for, not to speak of their exceedingly ornamental qualities, they afford food, protection, shelter, and nesting-sites for great numbers of insessorial birds. How often we admire with heartfelt pleasure the thick masses of scarlet berries upon the holly, the more sparsely distributed fruit of the yew, the clustering berries of the ivy, or the more sober-tinted but still not less beautiful cones of the fir. Many admire them because of the festive season at which they are held in such high repute; but to him who loves to study bird life in its ever varying phases they will ever appear as storehouses furnished by Nature for the feathered tribes when other kinds of food are wanting. Observe with what avidity the various Thrushes consume the fruit of the holly, ivy, or yew. Notice the number

of fringilline birds that frequent the cone-bearing fir tree—from the tiny Titmouse to the larger Finches. Many other birds, when driven by hunger—'necessity's supreme command'—prey upon the fruit of these evergreen trees and shrubs.

A word as to the nesting facilities afforded by the evergreen. Early breeding birds, such as the Thrush, Blackbird, and Hedge Accentor, naturally seek some warm and sheltered place for the cradle of their young, at a season when cold weather is of far from unfrequent occurrence: concealment, too, is wanted. Evergreens amply fulfil all these conditions; hence we invariably find the first nests of the season snugly located amongst the holly, yew, laurel, or ivy. The delicate little Gold Crest and sprightly Chaffinch make frequent use of these trees and shrubs for domestic purposes; and as the year rolls on, the Greenfinch and active little Wren, doubtless drawn hither by security and concealment, hatch and rear their young in peace and safety. These are but a few of the many birds using evergreens for their purpose. Close attention will reveal a goodly list, amongst them being many of our shyest and rarest birds. Again, the circumstance of birds repairing to these situations no doubt greatly shields their eggs and young from predaceous animals, as the cat, weasel, and brown rat; for even these freebooters are kept at bay by foliage so dense and impenetrable.

The careful observer will not fail to notice that on the advent of keen weather birds are uncommonly numerous in shrubberies and other places where evergreens abound, only emerging from their retreats when nature requires a further supply of food. Amongst evergreens birds in the winter months sing more frequently, and their song, in my opinion, is louder and

more free than the music of birds elsewhere. Thus he who loves to cultivate the evergreen on his domains, and molests not the feathered tribes encouraged by the seclusion and retirement offered to them that flock so freely to his shrubberies, will seldom fail to have abundance of bird music around him, be the weather never so unpropitious or the season unfavourable for bird melody ; and as the vernal year approaches he will hear the love song of the Bunting and Chaffinch and other birds long before they dare commence in more exposed situations.

Pause, gentle reader, let imagination captivate thee for a brief period, and accompany me this cold and cheerless January evening into a dense and well-stocked shrubbery. The notes of the feathered tribes are sounding in all directions. Perched on a stately tree, the Stormcock is giving forth his powerful notes, notes which, although slightly monotonous, still never pall. There a Cole Titmouse is uttering harsh and grating cries as it searches the evergreens for stray insects ; while Robins in all directions are pouring forth their tuneful melody. A Song-thrush from yonder towering holly is piping his mellow notes in all his varied splendour. Little Wrens are noisy too ; the sprightly Chaffinch, noisy Blackbird, and yelping Redwing also swell the concert with their notes. As night approaches the scene becomes much more animated ; on every side our feathered friends are seen, and their varied notes fill the air with pleasing sounds. The sun is just sinking behind the western hills in an ethereal sea of gold, and instinct prompts the birds to seek out their roosting places. All is now silent, save the yelping call of the Redwing and the sharp call notes of the Robin and Wren. Ever and anon a Thrush is seen darting downwards into the dense and friendly shelter of the yew or holly, while

the chirping Sparrows have found a safe retreat amongst the clustering ivy. There a company of Tits is seen, wanderers no doubt throughout the day, settling into the nearest evergreens at night. Redwings regularly repair to the friendly shelter of the holly, while the gay little Chaffinches are seen seeking the dark canopy of the yew. The dusky form of the Blackbird is now seen flitting hither and thither in the gloom, uttering his well-known cries, which sound wonderfully clear and startling in the calm and frosty evening air. The waning day is fast disappearing, and the moon has commenced shedding her borrowed rays upon the scene. A Redwing comes hastily into the bush under which we are standing : quickly perceiving us, he utters a call note of alarm and is off to seek more suitable quarters. A party of Greenfinches now locate themselves in this spreading yew, while the Starlings hastily retreat into the ivy growing so densely round yon hoary ash. In the deepest solitudes we hear the piping cry of the Bullfinch, or hear his soft and plaintive note calling to his mate close at hand. Above our heads the Cushats, from the fields a mile away, are winging their way to a favourite haunt in the pine's gloomy branches : silent at this season, their rustling wings are the only sounds we hear. The Wren utters his few last notes, and seeks the safety of the wide spreading laurel's branches. Now the Redwings arrive *en masse*. A late feeding bird are they, and as a rule seldom seen near their roosting place, save one or two pioneers, till darkness is close at hand. See them settle on the tallest underwood, uttering their well-known notes, and after a brief reconnoitre silently flying into the desired roosting place. A Robin is singing his requiem to the parting day ere he seeks repose in the

yew on which he is warbling. The Rooks, having kept up a Babel of sounds, retire to the stately firs, and all for a time is silent. Now a Magpie, disturbing the almost solemn stillness with his harsh chattering notes, warily enters the looming crown of yonder pine; and in the distance we hear the Jays, noisy as is their wont at nightfall, settling down to rest in some favourite and lofty holly. Silence finally reigns supreme, only broken by the murmuring of the west wind as it kisses the evergreens with its gentle breath, and sighs mournfully and low round the naked branches in its passage up this calm and peaceful valley.

Thus, gentle reader, thou hast seen that some birds retire to the holly, others to the yew or laurel, while others nightly seek the dark foliage-capped fir, while yet again many repair to the ever trailing ivy for their purpose—hast seen that, provided sufficient accommodation be found for them, all the birds of the locality will repair to the shrubberies of evergreens, to nestle amongst their perennial branches. I may also inform thee, that shouldst thou have a taste for ornithology, as I trust thou hast, that shouldst thou make frequent practice of roaming through plantations of this description, thou wilt be enabled to greatly increase thy knowledge of the feathered tribes, enticed thither by the seclusion, protection, and concealment thy perennial thickets afford; for in their arboreal depths is the chosen place for animated nature. Even when the summer sun is smiling around us, thou hast seen that evergreens still play an important part in the economy of the feathered race, for many a sylvan songster warbles incessantly from their glossy sprays, while in safety sits his mate upon her home, embosomed amidst their foliage.

In conclusion, gentle reader, I trust I have shown

thee how closely the evergreen is connected with bird life—how closely its ever verdant branches are linked with the welfare of the birds of the field—birds that are to be met with almost everywhere we bend our steps, and which, if it were not for these perennial vegetable safeguards, would probably be denied an existence on our shores save when the sun is shining in the northern tropic.

HINTS TO ORNITHOLOGISTS.

Nature never did betray the heart that loved her.

A HINT ofttimes proves of the greatest service, and it is in this belief that I pen down the following few remarks, trusting that they will be of benefit to the novice, and aid him in the difficulties that will befall him more or less on the threshold of the science he has adopted.

In the first place, a few general hints for the field, together with one or two instructions how best to attain an insight into the habits of birds, will doubtless be of service. The observer cannot do better than provide himself with a first-class telescope or field-glass, which, like his note-book, should be his inseparable companion. Morning and evening will be found the best times for 'field service,' although a stroll taken at no matter what hour of the day is, to an observer who makes the best use of his eyes and ears, always productive of interest and information. As ornithology and oology are in my opinion inseparable, both will be treated with under one head; and therefore the observer, if information be the sole object he seeks, must be prepared to explore many a perilous cliff, and climb numbers of the loftiest trees, for the purpose of prying into the nesting economy of various birds. But with the latter mode of observation especially I would pray him to use the greatest caution, and make

himself acquainted with the nature of the several trees whose branches he explores. He will then mount fearlessly up the oak's sturdy limbs, and trust himself safely to the short dead branches of the pine. He will view the treacherous limbs of the elm with mistrust, and cautiously commit himself to the brittle and unstable alder. The weeping birchen twigs will sustain him without danger, but he will view with suspicion the somewhat unreliable branches of the beech. And so he will acquaint himself with these various little items, and profit accordingly by them. Even when treading the dreary swamp he can pass safely and almost dryshod by stepping on the reed tufts, and thus approach closely the objects he seeks. One of the best modes of observing the actions of birds is from the branches of trees well concealed by the foliage. My own love for arboreal celsitude has served me well, some of my most remarkable observations having been made when seated in the branches, viewing animated nature, unknown and unseen, from the deepest foliage.

The various haunts of birds at different times of the year must also be made acquaintance with. Then the observer by his previously acquired knowledge can find any particular bird his fancy dictates or his wants require. Thus in seed time he will repair to the newly sown land if he wishes to see the Bunting and Chaffinch; yet at nightfall he will just as surely find them amongst the evergreen's perennial foliage. In winter time he will repair to the meadows and turnip fields if he wishes a sight of the Meadow Pipit; but in summer he must seek it on the far-stretching and barren moor, where it retires at that season to rear its young. In the autumn he will find the birch coppices replete with Titmice and Gold Crests, but in the winter they frequent the hedge-

rows and forest trees ; while in summer he will find the Titmice where decayed timber is abundant, and the Kinglets either amongst the evergreens or far away on the borders of the moors, nesting in the fir plantations. He will find the Willow Warblers and Blackcaps amongst the tangled vegetation of the woods ; but if he visits the fruit gardens in autumn, his little feathered friends will be there to greet him. And so I might proceed, giving cases almost without number under this particular head, where the observer by a close attention to his subject can read truthfully and unerringly the habits of the feathered race—attention which must be given at all times and seasons, and with unwearying care, if he desires to be in ornithology what Canova was in sculpture or Rubens in painting—namely, a proficient and a master.

How easy of acquisition could I make the identification of the many feathered creatures the aspiring ornithologist will meet with in his rambles, did I possess the art of faithfully representing on paper their many and varied notes. But this is impossible, and I fear will ever remain so. The only means of acquiring such knowledge rests with the observer himself, and I may say is one of the steps that leads to a thorough knowledge of ornithology. It is of the greatest importance that the observer should make himself acquainted with the song and call notes of every bird around him. He is then in a position to at once recognise any particular bird ; and if displaying any previously unknown habit, it is immediately 'brought home' to the proper species, even though a close identification were impossible. For instance, I, by a close attention to the notes of the Rook, can discriminate between the peaceful caw with which she welcomes her mate or speaks condolence to her little ones, from

the harsh and discordant caws she utters when an intruder wanders under the tree which contains her home, or when a Hawk is lingering suspiciously near—can tell in a moment when she is receiving food from her loving partner, or simply calling to her sable kindred around her. Again, when I hear the Chaffinch's sharp call notes in the nesting season ringing out so anxiously, and in quick succession, I know at once that some dire calamity is threatening her little home, and I hasten to assist her in repelling the disturber of her family cares. I hear the inexpressibly low and sweet call notes of the little Willow Warbler as she courses over a neighbouring bush, clothed in the garb which May bequeaths, and I know her home is not far away. Or sometimes the Stormcock flits anxiously from tree to tree, uttering her unmusical cries, and I am then aware her young are near at hand. When the Blackbird gives forth his bold call notes I know he has just been flushed, and is flying off to more secluded quarters; for by my knowledge previously gained I know he never utters these peculiar notes save when on the wing and alarmed. I need not enlarge upon this subject further, but will conclude by saying that almost every bird with which I am acquainted utters peculiar notes under certain circumstances, and I will leave to the young ornithologist the pleasant task of finding them out for himself.

A word as to the habits of birds. As the student progresses in a knowledge of his subject he will be able, when he sees a bird performing various motions, to tell at once what the bird is engaged in. If he sees the Kestrel hovering on quivering wing over the fields and hedgerows in early summer, he will know that the bird is searching for the mice in the meadow grass to supply its hungry young with food. If he sees the Rooks flying

over the nesting trees in a compact body in the breeding season, his knowledge will inform him that all is not right, and that some intruder is disturbing the ever watchful colony. If he sees the Sandpiper or Plover tumbling and reeling about before him, he will know the wary bird is endeavouring to lure him from her treasured eggs or young. Should he see the Swallows flying high above him in the azure vault of heaven, he will know that fine weather is at hand, or *vice versa*; for after studying their habits at various times, he knows the insects which compose their food are acted upon by the weather in the altitude of their flight. And thus we might go on; for not a single action of any member of the vast feathered race is observed, but what is attended with a long string of interesting facts, did we know how to read them aright. It is only by the closest attention, and by comparing one observation with another, that we are enabled to read as it were the many and varied habits of birds, from their actions at various times and seasons, and under different circumstances.

To obtain a thorough knowledge of the birds of the field, the greatest attention must be paid to comparative anatomy, for by its aid we are enabled to solve or rebut some of the deepest questions affecting the economy of birds.

It has been oftentimes asserted that the Water Ousel is capable of walking at the bottom of the stream; but he who closely observes this sub-aquatic little bird will find that its passage under the surface of the stream is performed by the aid of its short wings—much as ducks do when sporting and gamboling in the pool. The notion of the bird's powers of walking under water is proved to be erroneous by Newton's theory of gravitation, and all known laws of animal mechanics. I bring this instance

forward as one amongst numbers, to show that even in the simple habits of a bird some of the grandest laws known to man work most potently, and silently condemn the erroneous statements made by the misinformed.

This little bird (Dipper) also illustrates the fallacy of the belief that the oil gland of birds, situated at the root of the tail, is used for lubricating their plumage. He who dissects the Dipper will find this gland no larger than the gland found on our land Thrushes ; yet we should suppose that if such organ were used for lubricating purposes that it would attain to a much larger development through the wants of its sub-aquatic owner—proof sufficient, therefore, that such is not the case. Again, the strong arguments that can be brought forward against the contents of such gland being used for oiling the plumage are so overwhelming, and the few facts we are able to glean bearing on this subject are so directly opposed to such a line of belief, that the wonder is it has been entertained so popularly and so long.

As to the pleasures derived from pursuing the science of ornithology in Nature's interminable range, there are delights the field ornithologist experiences quite unknown to his stay-at-home namesake. For instance, what a thrill of pride courses through him as he clings to the topmost branches of the tallest pine tree, making himself acquainted with the rude cradle of the Sparrowhawk ; or when examining the beautiful and richly marked eggs of the Windhover, laid bare and nestless in the Magpie's old abode, some sixty feet or more in the branches of a towering oak. When, if ever, do our closet naturalists inspect these lovely objects in their elevated cradle ? Again, how elated the field

naturalist will feel when, after hours of patient watching, he gets a sight of a troop of timid Jays, or the Woodpecker busy in his search for food on some noble tree. How elated when scaling the cliff's rugged side in search of sea birds' eggs ; or, tramping over the wild and barren moor, he flushes the Snipe or Ring Ousel from their heathery bed, or startles the Curlew from its meal in the fathomless marsh ! We might enlarge upon this subject *ad infinitum*, but to a field naturalist these pleasures are well known, and to the closet personage uncared for. Suffice it to say, that he who takes Nature for his tutor will experience delights indescribable from every animate and inanimate object of the universe ; from the tiny blades of grass to the largest forest tree—the tiniest living atom, seemingly without form or purpose, to its gigantic relation of much higher development. The pages of Nature's mighty book are unrolled to the view of every man who cares to haunt her sanctuaries. The doctrine it teaches is universal, pregnant with truth, endless in extent, eternal in duration, and full of the widest variety. Upon the earth it is illustrated by endless forms beautiful and grand, and in the trackless ether above, the stars and suns and moons gild its immortal pages.

The closet naturalist takes much more pride in determining new species, giving them jaw-breaking names, measuring with rule and compass the dried and withered skins, which bear the indelible stamp of hideous deformity, or writing long treatises on the habits of birds and animals that seem to look on in withering scorn from their cases around him. All this is deemed highly scientific by his brother savants ; but, my word upon it, no person can form the slightest idea of the habits of birds and animals from books written by such persons ;

and he who professes to instruct us in their varied habits, if he be not one of good Dame Nature's school, had far better employ his time and brains in something less liable to damage the cause of natural history.

These remarks, though severe, are just; for it is this class of writers who so seriously damage and retard the progress of ornithology; who gravely inform us that our Wagtails never perch on trees; that our Coots are clumsy objects on the land; that our Kestrel Hawks build nests, and our Sparrowhawks take possession of deserted Crows' nests; that our Starlings and Lapwings tap the ground with their feet to frighten out the earth worms beneath the surface; that our little brown Flycatcher is songless; and a thousand other errors, as inconsistent with known facts as they are ridiculous.

But let us hope better days are in store for ornithology, and that when these ill weeds are rooted from her literature, then she will bloom in ever maiden fairness, and reach the zenith of her fame. Much needs to be done; vast fields occur in all parts of the world, offering unlimited scope for a whole army of devoted workers. Even in our own land the vineyard is not worked out, great as have been the strides of improvement taking place of late years; and on every side facts, fresh and new as the morning's dawn, await those who labour in her cause.

Full many a flower is born to blush unseen,
And waste its sweetness on the desert air.

My object in giving to the public these few hints is in the hope that many a young naturalist may find them as useful as I, who have followed this delightful subject in Nature's lovely garden for years, have found them in regularly practising them. Therefore, gentle reader, if thou art, by reading these few hints, drawn into a study

of the subject they embrace, mayest thou enjoy some of thy pleasantest hours in following it ; for be they spent in the smiling fields, among beetling crags, in the dense and impenetrable forest, on the shores of the mighty deep, in the fastnesses of the trembling morass, or on the barren moor and arid plain, thou wilt not fail to find objects of thy quest exhibiting plumage, form, and habits, ever changing and diversified. .



FIG. 1. DRILL.

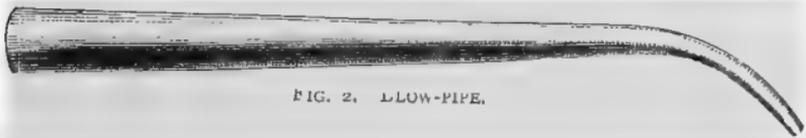


FIG. 2. BLOW-PIPE.

INSTRUCTIONS FOR THE PRESERVATION OF ORNITHOLOGICAL OBJECTS.

NO matter in what section of natural history the student pursues his studies, it is imperative that he should have specimens illustrating his peculiar line of research, and which I would advise him, as far as possible, to collect himself. Yet, however many objects he may collect, they are comparatively worthless if not prepared and arranged in a scientific and orderly manner. I intend, therefore, to devote the concluding pages of this little work to the way in which the ornithological student—for I consider oology and ornithology as inseparable—may best attain these results; and as the eggs of birds are easier to obtain than the birds themselves, and will probably be the most interesting to the beginner, they first shall claim our attention.

I need not dwell on the method of searching for eggs and nests, for that can be found by experience and surrounding circumstances alone; but I will, in the first place, briefly glance at the instruments used in emptying the egg of its contents. It was formerly the custom to

make two holes in the egg, one at either end ; then two holes in the side were used ; and finally, at the present time, but *one* hole is used to withdraw the contents, and eggs otherwise blown are far less valuable. To make the hole in the shell a drill is used (see Fig. 1), and the contents are removed by the aid of a blowpipe (see Fig. 2). The former of these two instruments is made of steel, and the latter of glass, or metal—the latter material being preferable, as will shortly be seen.

Having obtained your egg, with the drill between your thumb and finger carefully pierce a hole in the side you intend to place downward in your cabinet, making the hole in size proportionate to the egg. Then delicately holding the egg with the hole downwards between the thumb and finger of your left hand, take the blowpipe in your right, and place the smaller end of it near the hole, and by blowing steadily the contents will soon be removed. Now fill your blowpipe with water, and blow a small quantity into the egg : then shake it well, and remove with the blowpipe. This must be repeated until the water comes out pure and unstained, and then your egg is ready for the following operation. You are doubtless aware that inside the egg is a delicate white membrane attached to the shell : this requires to be preserved from the attacks of insects, and to attain your object proceed as follows. With a glass syringe proceed to inject a small quantity of alcohol in which has been dissolved a little corrosive sublimate, and then, having well shaken your egg, you can remove the remains of the preserving liquid with the blowpipe, and the shell is then free from the depredations of insects, and the membrane will retain its pure and spotless hue for ever. Place the egg, hole downwards, on a sheet of blotting paper to dry. It is imperative that your eggs should thus be

preserved, otherwise they are constantly exposed to the attacks of insects, as I know full well, having lost several valuable eggs through neglecting these precautions.

Should your eggs be hard set, you will need no small amount of care and trouble in blowing them, and I should advise you to leave them, when you find them thus, to their owners' care. However, rare specimens in this condition are often obtained, and it is well to be acquainted with some means by which the contents can be removed.

In the case of a hard set egg, I would advise you to make the hole rather larger than usual, and then try what you can remove with the blowpipe. Insert water into the egg and shake well, and then again use your blowpipe. Pieces of the embryo chick within you can now easily remove with a large pin, the point turned in the shape of a hook—a crochet needle, for the larger eggs, answers the purpose admirably. And thus you must proceed, removing the contents bit by bit, and not forgetting to use plenty of water, occasionally stirring the contents well with your hook, and in some instances it is best to allow the egg to stand for a day or so with a little water inside. By following these few simple instructions you may, with care, empty the worst eggs; but I must impress upon you the necessity of patience and perseverance, coupled with no small amount of tenderness in handling.

In your collecting expeditions I would recommend you to take with you a box and a quantity of cotton wool, in which to pack your specimens. Take your drill and blowpipe, too; and always make it a practice, as far as possible, to blow your eggs as soon as obtained: you can finish them when you get home, according to

the above instructions. The reason for this is obvious. Eggs are far easier to carry when empty than when full, and the risk of breaking them is greatly diminished. You will also find that the best method of bringing eggs down trees is to put them in your hat, with a little cotton wool.

Again, you must be extremely cautious how you attempt to clean any of your specimens by washing them, for in many eggs the colouring matter is easily removed, especially if they be but newly laid. So also I would advise you not to varnish your specimens, to make them brilliant, such proceeding giving your eggs a very artificial look, and being directly opposed to nature. In many specimens you will find the colours after some little time fade considerably, but as far as I am aware no method has yet been discovered which prevents this taking place. The best and only plan is to keep them from exposure to the light as much as possible.

The above remarks apply to the means for preserving the egg ; but before your specimen is ready for the cabinet something further has yet to be done, and which, if neglected, causes all your previous trouble to be in vain if you wish your collection to be, in a scientific sense, truly valuable. As soon as your egg is obtained and blown, place upon it in lead pencil some letter or number, as reference to your memorandum book, which should always be carried with you, and in which must be noted the following particulars relating to it. The date upon which it was taken, the locality, the situation of the nest, any peculiarities you may notice in the site or eggs, or in the conduct of the parent birds, and any other interesting fact connected therewith. This will suffice until you reach home, when these remarks must be transferred to the note-book proper, relating to your

collection, and which should be headed in the following manner.

The first column of your note-book will contain your own number, progressive of course ; the second will contain the number attached to the species on the printed list of birds you adopt for reference ; the third will contain the name of the species ; the fourth the date on which it was collected ; the fifth the locality in which it was taken ; the sixth the name of the collector ; the seventh the situation of the nest ; and the eighth should be set apart for any general remarks of importance. The collector can abolish a part of these columns, and simply retain the first two, and put the remainder of the matter in one general column. The former mode, however, I consider to have the preference, although certainly more elaborate, for the several items of interest can be reviewed at a glance.

Now as to the egg itself. With a pen and ink proceed to mark on the shell, as neatly as possible, the catalogue number and your own private number, placing the former just over the hole in the side of the egg, and the latter beneath it, on the other side of the hole near the small end of the egg. Of course eggs of the same clutch will be numbered alike. These numbers, if done well, will look very neat, and are far preferable to labels, which are always liable to get rubbed off or become soiled and dirty. The side of the egg containing the hole and the reference numbers is turned downwards in the cabinet, and what appears to be a perfect egg is exposed to view. The simplicity and utility of this method of arranging your specimens enable you to obtain easy reference to them, and of course enhances their value.

I scarcely need impress upon the collector the desirability of thoroughly authenticating his specimens,

receiving none into his cabinet round which hangs the least shadow of suspicion and doubt. Observe the parent bird—both if possible—before taking the eggs. This will bring you into habits of exactness and correctness, and I may also say enlighten you considerably in the various little secrets of the birds themselves.

The *nests* of the smaller birds are also equally as interesting as the eggs. They should be taken if possible before the birds have commenced to sit, and, where practicable, the branch or twig on which they rest should always be removed. As nests are liable to harbour insects, it is a good plan to apply a solution of corrosive sublimate dissolved in alcohol. The same plan of reference can be adopted, with the exception that small labels should be firmly attached with string, on which are placed the numbers. I need not inform you that nests must receive no rough usage, and should be kept carefully, otherwise their beautiful symmetry vanishes, and they present an appearance totally foreign to their once matchless beauty.

The ornithological student will find that the preservation of birds is a far more difficult and tedious process than preserving eggs. Practice and perseverance, however, will ensure his ultimate success. Before noticing the actual process of skinning a bird, it may not be out of place to give a few hints on the mode of collecting them.

The seasons birds should be obtained are when they are in the finest plumage, in the autumn and winter months, and just prior to their nesting season. The collector should use dust shot for all the smaller birds; nothing larger than No. 8 for birds up to the size of a Plover; and so on, increasing the size of the shot for the larger species. Should the bird be still alive when

picked up, it must be pressed firmly beneath the wings, and it soon ceases to exist. Fill the shot holes with cotton wool, also the mouth, and then wrap carefully up in fine tissue paper before placing in your game bag. By following out these few simple items your bird will seldom become stained, or its plumage ruffled, in which case, by the way, it is next to impossible to produce a satisfactory specimen. Should the bird, in spite of all your care, become blood-stained, you can remove the stains with the aid of a little warm water applied with cotton wool. When you dry the feathers, keep constantly agitating them with the blade of your penknife or a little stick. If you neglect this precaution, the feathers when dry will present a very ragged and miserable appearance.

A word as to the instruments used in dissecting a bird. The operator needs no more than a sharp penknife and a pair of scissors with finely pointed blades; together with cotton wool, tow, needle and thread, and, lastly, a little glass bottle of solution of corrosive sublimate dissolved in alcohol, similar to that used for preserving eggs. Cases of instruments for skinning birds, elaborate and expensive alike, are offered for sale; but I would advise you to have nothing to do with them: the simpler your appliances the better. The articles I have named are fit for every purpose, provided they are used with a gentle hand.

Supposing, then, that your bird is secured. Place it, with the head pointing to your right shoulder, on your dissecting table, on which should be spread a sheet of cotton wool—this will prevent the plumage of your specimen from becoming deranged—and proceed as follows. With the back of your knife blade evenly part the plumage from the lower part of the breast quite to

the vent. Now cut the skin on the breast with the knife for a little way, and then, with the fine-pointed scissors, you can, with the greatest ease, cut the skin to the vent. Care should be taken whilst performing this operation to only cut the outer skin, for if the inner one is severed the bowels will protrude, and soil the plumage. With the scissors, however, the difficulty, with the least amount of care, is almost overcome.

Still keeping the bird in the same position, proceed to gently push the skin away from the body on the left side, adding wool between the skin and the body as you proceed, until the thigh appears. Then with the scissors sever the thigh bone a little below the middle joint, and on the part of the thigh remaining on the carcass of the bird, tie a piece of your thread about six inches long. Now, turning the bird round, so that its tail will point to your right shoulder, do exactly the same on that side, not neglecting to fasten a similar piece of thread on the other thigh: the reason for this will be seen shortly.

Now, by gently pressing the skin from the flesh on each side, always bearing in mind that you must apply wool as soon as the skin is removed from the body, to keep the plumage free from grease and dirt, you are enabled to reach quite down to the root of the tail, where with your knife you must cut deeply into the flesh until the backbone appears, which with your scissors is now easily severed, and the tail is dissected from the body. You need do no more here at present, save applying a quantity of wool to protect the plumage from harm. You will now see the use of the strings which you previously tied on the thighs of your bird. These two strings tied together form a noose on which the bird can be suspended while you complete the operation of skinning it, an item that will greatly aid you in your

labours, and at the same time prevent the plumage from becoming ruffled. Care must be taken, however, that you do not stretch the skin, or your trouble will be useless, and your labours will not please you.

From time to time, as you proceed, it is well to examine the bird and see that the plumage is straight.

The skin is now easily separated from the body right down to the wing joints ; but I would have you to remember that on the back the skin is very tender, and must on no account be *pulled*, but must always be removed by gently pressing with your thumb. The wing bones now appear, which must be severed with the scissors, close to the body. The main difficulties are now over, and you will find the skin is easily removed from the breast and neck, right down to the skull : here, however, you must use the greatest caution. The ear roots, which lie very deep, must be cut out, and great care used, or you will tear the skin to a certainty. After having dissected the ears, by dint of pressing the skin with your thumb, the eyes will appear, over which is a delicate blue membrane. This must be cut very carefully, otherwise you spoil the orbits of the eye, a disaster, by the way, without remedy. After dissecting the skin from the eyes you are enabled to reach the beak.

At this stage you must now lay your specimen on the table again, taking care not to stretch the skin nor soil the plumage. Then, with the point of your knife, gouge out the eyes, taking care not to burst them. Then, by cutting off the hinder portion of the skull with your knife, you are enabled to remove the brains. Cut away the fleshy parts adhering to the skull and throat, also removing the tongue. The skin is now completely dissected from the body ; but still much remains to be done if you wish to produce a pleasing specimen.

Having now cleaned the skull, you must proceed to apply the solution to all parts of it, and to the skin of the head and neck as well. Fill the sockets of the eyes with wool. Before going further you now turn the skin back again, for you will note that it is now inside out as it were. Holding the skin between your fingers, with the head towards you, gently push it back again through the neck, until you see the beak appearing. Seize the beak now between your thumb and finger, and, by gently pulling, the head will gradually slip through, and your skin is turned back again without the loss of feathers. In some birds, as Ducks, Woodpeckers, Plovers, &c., the head is very bulky, and this operation must be effected with the greatest care, or else the skin will be inevitably torn.

The wing bones are now cleaned of the muscles and tendons, the skin being removed until you see the roots of the quill feathers, proceeding with the greatest caution, always shoving the skin with your thumb, for the skin here adheres to the bone, and is removed with difficulty. Having cleaned both these bones, apply the solution to these parts, for you will not be able to reach them again, and then tie a piece of thread to each of them, about six inches long. Tie the bones together, adjusting them in such a manner as to leave the same space between them as existed before the bird was dissected: this will cause the wings of your specimen to keep their place.

Now proceed to clean the thigh bones. Seizing the leg and foot in your left hand, and holding the skin in your right, by pressing gently upwards the skin is soon separated, and the thigh appears. After cleansing this of all flesh and tendons, proceed to anoint the bone and skin with the solution, and then wrap the bone with tow, forming as near approach to the thigh as possible. By gently pulling the leg and foot the bone will slip back to its place: the same must be done to the other thigh.

The root of the tail remains to be dissected of all the flesh and fat that adheres to it, taking care to remove the oil gland. Anoint well with the solution, and also apply the solution now to the other parts of the skin which have not already received it, and then you have the perfect skin of your bird ready for the finishing process.

Obtain a piece of wire—wood answers the purpose as well—and proceed to wrap it round with wool, to make an artificial neck, which, after the wool that was placed inside during the operation of skinning is removed, must be pushed up the neck of the skin, care being taken that it is not too long, for if allowed to dry in that position no skill can afterwards remedy it. The body of the bird is now filled with cotton wool, care being taken to make your specimen a little more bulky than it was originally, to allow for its shrinking, and with your needle and thread proceed to sew up the skin, beginning on the breast and ending at the tail, being careful not to disarrange the plumage.

Here then lies your specimen, looking a trifle larger than before, but otherwise resembling it in its general appearance. Now, as a finishing touch, anoint the mouth and throat with the solution, the orbits of the eyes, which should be properly adjusted with your needle, the tips of the wing-bones, and, finally, the legs and feet. Arrange any of the plumage that may chance to be disordered, and your specimen, if you have minutely followed these few brief instructions, will please you, and you need have no fear that the insects will attack it, or that its pristine beauty will materially fade.

A word as to your plan of reference, and then I will conclude. You may adopt a similar plan to that recommended for eggs; but on a label, attached to the leg of the bird, should be noted the following particulars.

The two reference numbers, the name of the collector, the sex, the date and locality, and also the colours of the legs, bill, and iris, and other parts, as caruncles, wattles, &c., which fade considerably soon after death.

As your skin is drying, it must be looked at from day to day, and any little needful matters attended to. When dry, your specimen should be wrapped in tissue paper, and kept from the light as much as possible. Of course these remarks do not profess to instruct the novice in the art of *stuffing* birds, but simply in preserving their skins. They are certainly better kept as such, than mounted on a wrong principle, as is the present custom; and therefore I withhold instructions that would only lead to far from pleasing results.

I cannot do better than conclude these few remarks on preserving ornithological specimens, by quoting the remarks of Mr. Waterton, when treating with this subject, and I will express the hope that he who makes a practice of collecting and preserving these objects will do so in the spirit of a true naturalist—namely, as one who dislikes to destroy life, and only does so of necessity. For should these instructions ‘unfortunately tend to cause a wanton expense of life—should they tempt you to shoot the pretty songster warbling near your door, or destroy the mother as she is sitting on the nest to warm her little ones, or kill the father as he is bringing a mouthful of food for their support—oh, then! deep indeed will be the regret that I ever wrote them.’

