

WILD NATURE'S WAYS

BY R. KEARTON, F.Z.S.
WITH ILLUSTRATIONS FROM
PHOTOGRAPHS TAKEN DIRECT
FROM NATURE BY
CHERRY & RICHARD KEARTON

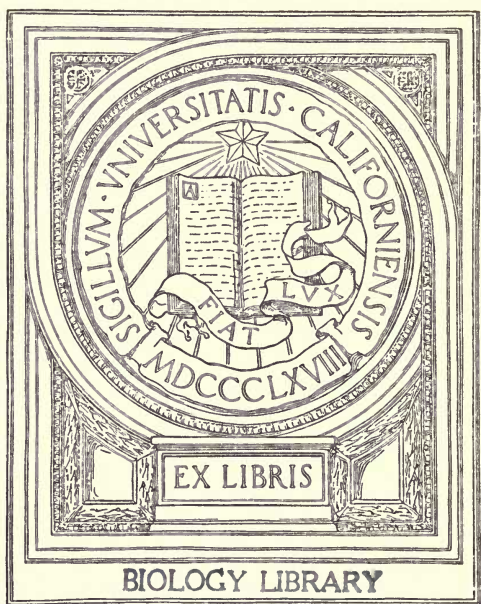




5/5, JUNE 28, 37

- 300 & 53/0/0

164/8

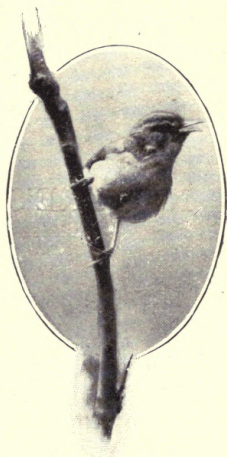


EX LIBRIS

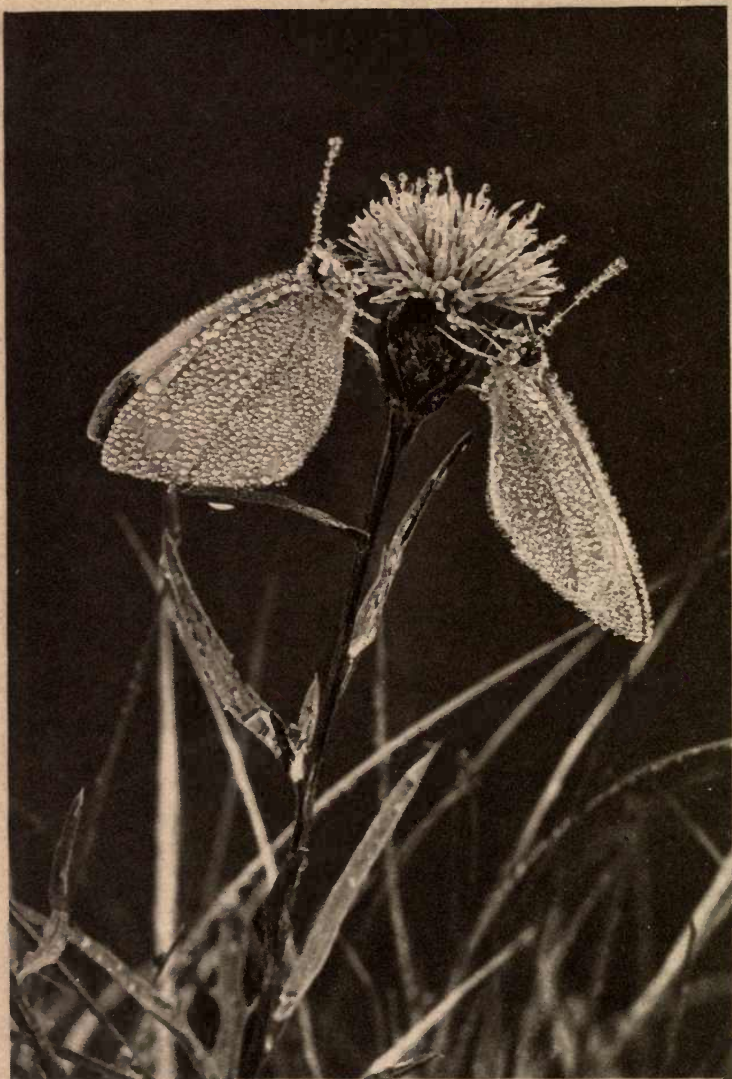
BIOLOGY LIBRARY



WILD NATURE'S WAYS



WOOD WREN



LARGE WHITE BUTTERFLIES COVERED WITH DEWDROPS.

WILD NATURE'S WAYS

By R. KEARTON,
F.Z.S. Author of "With Nature and a Camera,"

"British Birds' Nests," etc. etc.

With 200 Illustrations
from Photographs taken
direct from Nature by
CHERRY and RICHARD KEARTON



CASELL AND COMPANY, LIMITED
LONDON, NEW YORK, TORONTO AND MELBOURNE

MCMIX

4250
K4
BIOLOGY
LIBRARY

BIOLOGY LIBRARY

First Edition *November* 1903.

Reprinted December 1903, 1904, 1906, 1909.

ALL RIGHTS RESERVED

CONTENTS

. . .

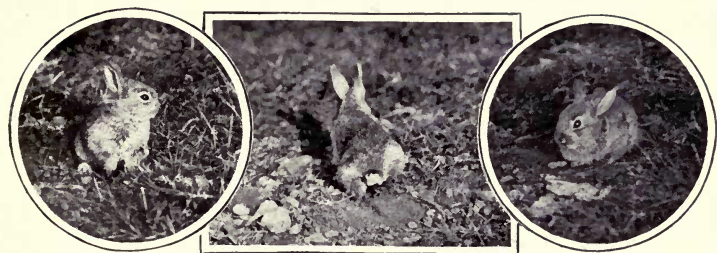
	PAGE
INTRODUCTION	ix
DECEIVING WILD CREATURES	1
SOME CURIOSITIES OF WILD LIFE	53
BIRDS OF MOORLAND, LOCH, AND TARN SIDE	91
INSECTS AND OTHER SMALL DEER AT WORK AND PLAY	121
BIRDS OF WOODLAND AND HEDGEROW	151
BIRDS OF BROADLAND AND STREAMSIDE	184
FRAGMENTS FROM THE SEASHORE	224
WINTER SHIFTS—HOW FEATHERED FOLK FARE DURING SEVERE WEATHER	263

LIST OF ILLUSTRATIONS

	PAGE		PAGE
Heading	ix	Male Golden Plover Covering	
Robin (Drawn 18th Century)	xii	Chicks	39
Robin (Drawn 19th Century)	xii	Female Golden Plover and	
Robin (Photographed 20th Cen- tury)	xii	Chicks	40
Missel Thrush — Contented, Expectant, and Bored	xiv, xv	Young Golden Plover	41
Sunset on the Sea	xvi	Photographing in a Cart-shed	42
Young Long-tailed Tit	1	Female Blackbird watching her Chicks settle down into Cavity of Nest after being Fed	43
Shouldering the Imitation Ox	2	Author Hidden under Wooden Mask	44
Mounted on the Imitation Ox	3	Author with Wooden Mask Off	45
The Stuffed Ox in Operation	5	Grasshopper Warbler about to sit down on Dummy Eggs	51
Skylark bringing Food to her Young	7	View on the Avon	52
Song Thrush — Substance, Shadow, and Reflection	9	Photographing a Flying Bird with a Gun Camera	53
Wood Pigeon	11	Song Thrush's Nest without Mud Lining	54
Turtle-dove	12	Ring Ouzel and Young Ones in a Nest on the Ground.	55
Stuffed Sheep	15	Eggs of English and French Partridges in the Same Nest	58
Sandpiper on Nest	16	French Partridge's Nest Under a Plant-pot	59
Wheatears (Male passing over Food to Female to take to Young)	19	French Partridge Sitting on Nest Under Plant-pot	61
Young Wheatears	20	Some Nests in Curious Places	65
Artificial Rock	21	Gull's Nest on Stone in Loch	66
Dippers (Male passing Food to Female)	23	Lesser Black-backed Gulls	69
Curlew Sitting with half- closed Eyes	28	Thrush Holding Food till her Chicks Grow Hungry Again.	70
Curlew Walking on to her Nest	29	Male Song Thrush Bringing Food	71
Curlew about to sit down on Eggs	30		
Hiding Tent Covered with Heather	32		
Merlin on Nest	33		
Sod House for Photographing Golden Plover	38		

	PAGE		PAGE
Robin Bringing Food to Young Thrushes	73	Angle-Moth on dead Beech Leaves	134
Robin Looking at Young Thrushes after having Fed Them.	73	Angle-Moth on Grass Stems	135
Song Thrush on Nest	73	Mimicking Moth on Rose-leaf	136
Stoat and Rabbit	83	Mimicking Grass Moth	137
Stoat about to Drag Dead Rabbit Away	84	Plume Moth	138
Bullhead Swallowing Loach	86	Looper Caterpillars on Ivy	139
Strange Attitude of a Frog whilst being Photographed	87	Caterpillars of Cinnabar Moth on Ragwort	140
Primroses Photographed in First Moments of the 20th Century	88	Processional Caterpillars on Hazel Leaf	141
Daisies Asleep, Photographed Before Sunrise	89	Eyed Hawk-moth Caterpillar	142
Daisies Awake, Photographed After Sunrise	89	Dead Rat lifted out of Grave being Dug for him by Sexton Beetles	143
Wild Canadian Geese	90	Rat being buried by Sexton Beetles	144
Descending a Cliff with Camera	91	Spider making Web	145
Cock Grouse on a Stone	93	Spiders' Webs laden with Dew	146
Hen Grouse Sitting on her Nest	95	Spider carrying Ball of Eggs	147
Young Grouse in Heather	97	Family of young Spiders on Web between top Stones of a Wall	149
Arctic Skua about to Cover her Eggs	99	Same Scattering to Safety.	149
Skua Going on to her Nest	102	Photographer on Author's Shoulders	151
Short-eared Owl's Nest	104	Young Long-eared Owl	152
Twite on Nest	105	Female Sparrow-hawk Building her own Nest	157
Corncrake on Nest	108	Sparrow-hawk Sitting on Nest	159
Red-breasted Merganser	110	Wood-wren on Hazel Twig	163
Young Red-breasted Mergansers	111	Jackdaw on Post	164
Peewit on Nest	113	Young Jackdaws	165
Peewit with Raindrops on Back Plumage	113	Male Redstart	167
Snipe Covering Chicks	115	Female Redstart	167
The Red-necked Phalarope Swimming	117	Blackcap on Nest	168
Boys Driving Phalarope	118	Lesser Whitethroat on Nest	168
Phalarope.	119	Hedge-sparrow Attending to her Young	169
A Moorland Beck	120	Garden Warbler on Nest	171
Fritillary Butterfly	121	Young Butcher-birds or Red-backed Shrikes	172
White Butterfly on Thyme	122	Bullfinch on Nest	173
Peacock Butterfly	123	Yellow-hammer going on to her Nest	174
Small Tortoiseshell Butterfly	125	Starling going to Nesting-hole	175
Brimstone Butterfly on Oxlip	126	Woodpecker going to Nest	177
Red Admiral	127	Anxious enquiry: Woodpecker Peeping out of Nesting-hole	178
Blue Butterfly at Roost	128	Nightingale	180
Tiger Moth	129	Song Thrush Photographed by Flashlight whilst at Roost in Hedgerow	182
Six-spot Burnet Moth, Caterpillar, and Pupæ Case	130	Nightingale Lane	183
Emperor Moth	131	A Typical Broadman	184
Brimstone Moth	132		
Swallow-tailed Moth.	133		

	PAGE		PAGE
Redshank's Nest Concealed in Grass Tuft	187	Puffins	235
Redshank Walking on to Nest	187	Stroking an Eider Duck on her Nest	236
Nest Revealed	187	Lesser Black-backed Gull	238
Redshank Covering Chicks	189	Arctic Tern on Nest	239
Young Redshank	190	Cormorants and Common Guil- lemots at home	241
Reed-bunting	192	Shag, or Green Cormorant, Guarding Young	243
Reed-bunting	193	Stone House for Photographing Oyster-catcher	247
Cuckoo	195	Oyster - catcher Approaching her Eggs	249
Sedge-Warblers	197	Oyster-catcher on Nest	251
Male Reed-warbler on Nest	202	Ringed Plover on Nest	255
Female Reed-warbler holding Food in her bill until her Chicks grow Hungry again	203	Ringed Plover about to Walk on to her Eggs	256
Female Yellow Wagtail going to Nest	205	Common Gull coming to Nest	257
Male Yellow Wagtail	206	Common Gull on Nest	259
Blackheaded Gull: Looking for a Nesting Site. Ex- amining the Situation. Bringing Building Mate- rials	208	The Bass Rock	262
Male Bearded Tit on Nest	211	Robin Feeding upon Cooanut placed on Horn of Stuffed Ox for Tits	263
Grasshopper Warbler on Nest	213	Jack Snipe Commencing to Feed	267
Water Rail coming on to Nest	215	Wild Ducks on Ice	269
Water Rail on Nest	217	Gulls on the Thames Embank- ment	275
Reed-covered Boat, with Author Peeping from his place of Concealment	219	Moorhens on Ice	278
Young Crested Grebes	220	Rook	279
Great Crested Grebe on Nest	221	Song Thrush coming to Feed	282
Garganey Teal's Nest and Eggs On the Broads	222	Hungry Sparrows at Breakfast	283
A Welsh Rock Stack	224	Blackbird and Apple.	284
On the Cliffs, Ailsa Craig.	225	Hedge and House Sparrows	284
Gannet about to Fly	227	Inspecting, Tasting, Enjoying	288
Gannet on Nest.	229	Another Arrival, and Suspicion	286
Razorbills	230	Confidence	287
Kittiwakes, Razorbills, and Common Guillemots Breed- ing together	231	Hazel Nuts split by Great Tits	287
		Blue Tit	289
		A Favourite Ditch for Snipe in Winter	292



INTRODUCTION

. . .

JOB said, "Speak to the earth, and it shall teach thee," and no man who has ever honestly taken this advice to heart is in a position to gainsay its truth.

To learn to appreciate the beauties of the world in which we live is a great victory. It establishes within us a never-failing source of pleasure, and enhances the value of existence a thousandfold. I would not exchange the everyday joys of a healthy observant ploughman for the worrying wealth and cares of a millionaire. The idea that to be rich in gold is to be happy is a dying, vulgar fallacy. Men are coming to know that there are greater possessions than those which can be measured by the surveyor's chain or locked in iron safes. A love of Nature is one of them, and it has the unspeakably good quality of endurance.

Nature appeals to us in a thousand tongues—every one of which may be known and loved. The

whispering winds of summer swaying the birch trees gently to and fro; the blasts of winter roaring through the leafless arms of the sturdy forest oak; the hollow boom and awe-inspiring moan of the restless sea in some dark cave, where the otter sleeps and the rock dove broods; the rich scent of the evening air floating across the clover-decked machar of the Western Isles; the reeds reflected in graceful beauty on the placid waters of a Norfolk Broad lying silent in the mists of the morning; the sombre blackness of a peat and heather shored Highland loch; the witchery of the soft blue sky studded with an archipelago of fleecy white clouds; the sun rising in golden splendour out of the eastern sea, and setting in sublime grandeur behind purple mountain peaks; the air palpitating with the songs of innumerable happy birds; the hum of a vast multitude of insects at work or play; and a great number of other happenings throughout the realms of Nature, make us feel the joy of being and witnessing what is going on around us and for us and all men.

Ruskin says that "the greatest thing a human soul ever does in this world is to see something and tell what it saw in a plain way." Precisely such is the ambition of this book. Text and pictures are a faithful relation of what my brother and I have seen and heard whilst wandering up

and down the quiet corners of the British Isles, seeking patiently after a more intimate knowledge of the ways of the wild birds and beasts that roam over the land.

My life is now devoted to the task of interesting my fellow-men in a new and bloodless way of studying the wild life of the countryside, and I am again and again told by people who have been induced through my lectures or books to use their eyes and ears that they never dreamed Nature study was such a fascinating subject. Especially pleased am I to be assured that boys are giving up blowpipe and collecting-box for field-glass and camera: in short, dropping mere robbery for observation and thought.

This work is, as its title implies, an attempt to show something of the most intimate relationships of wild creatures at home, amidst their natural surroundings, and entirely unaware of the fact that they are under observation of any kind whatsoever. It throws some new light upon the habits, instincts, and intelligence of the feathered inhabitants of our woods and fields.

I hope it is permissible for me to say that books of this kind are produced at the expense of a great amount of patience and physical endurance. In fact, a good deal of the literary and pictorial material which has gone to the making of the present work would never have

been gathered together at all had it not been for the fact that our enthusiasm for the subject has grown into a passion of such intensity as often to bid defiance to danger and suffering of the most acute character. I feel it incumbent upon me to say this here because I have on previous occasions laid myself open to the charge of making the work of natural history photography appear too easy, through not stating the difficulties and disappointments my brother and I have met with more emphatically.

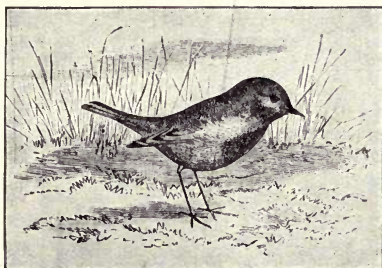
I invite any reader who wishes to understand something of the significance of this statement to try either or both of the following experiments : (1) Take a camera and use it whilst standing absolutely unprotected on a ledge of rock no wider than the seat of an ordinary chair, with a chasm six hundred feet sheer yawning immediately beneath. (2) Kneel in one posture for half an hour and look steadfastly through the keyhole of a door, multiply the time and pain by eleven, and add a complete disappointment, when some idea will be gained of what has happened to my brother and myself over and over again during the last few years.

Very few people indeed have any conception of the extreme closeness which is necessary for the lens of the camera to the shyest "sitter" before such pictures as are scattered up and down



ROBIN
Drawn 18th Century.

this work can be obtained. I therefore propose to give two or three actual measurements of distance. The oyster-catcher on page 249 was exactly nine feet away, the common curlew on page 29 within sixteen feet, and the corn-



ROBIN
Drawn 19th Century.

crake on page 108 six feet off. We are often asked why we do not make more use of the telephoto lens. My answer is because, for one important reason, we require to gather information as well as pictures, and for another



ROBIN
Photographed 20th Century.

reason, the subjects we take, as a general rule, are of such an exceedingly restless character.



MISSEL THRUSH
CONTENTED.

The pictures on the previous page show the advantages of the photographic method of illustration where faithfulness of detail and form are of the first importance to the student, and incidentally prove how rapidly the world has

advanced during the last two hundred years towards truth and accuracy. When one reads a solemn declaration to the effect that the first robin in the series was "exactly copied from Nature," as recently as 1737, and remembers that the second appeared in a work published less than twenty years ago, one feels truly grateful to modern science.

That the camera is capable of catching the

varying phases of the avian mind as expressed upon the countenance will, I think, be conceded upon an examination of the accompanying three pictures of a missel thrush at home. In the first the bird



MISSEL THRUSH
EXPECTANT.

is at peace and happy. In the second she is anxiously expecting something of importance to happen in her nest; and in the third she is



MISSEL THRUSH
BORED AND ANNOYED.

bored and annoyed, because, do what she will, her chicks refuse to be covered and keep thrusting their heads from beneath her plumage to gasp for a breath of fresh air.

For valuable assistance given with great kindness in the preparation of this book, I have to thank gratefully Sir Arthur John Campbell Orde, of Lochgilphead; Mr. Erskine Beveridge, of Dunfermline; Rev. M. C. H. Bird, of Stalham; Dr. Mackenzie, of Scolpaig; Mr. H. H. Mackenzie, of Balelone; Messrs. Charles and Frank Rutley, of Birchwood; Mr. Walpole Greenwell, of Marden Park; General Sir Richard Thomas Farren, Woodbridge; Major Petre, of Westwick Hall; Mr. Reginald Hudson, of Stratford-on-Avon; Mr. Alfred Richards, of London; and many other friends and bird-lovers throughout the country.

R. KEARTON.

November, 1903.



WILD NATURE'S WAYS

. . . .

CHAPTER I.

DECEIVING WILD CREATURES.



YOUNG LONG-TAILED
TIT.

TO excel in deception is not a very laudable accomplishment, but the heinousness of the crime may, perhaps, be softened in the eyes of the moralist by a knowledge of the fact that in this case the duplicity employed has been as entirely harmless to the deceived as it has been profitable to the deceiver.

Nature's children do not reveal their intimate ways to the bustling, human noise-maker, and he who would seek to know something of their interesting daily doings must first of all acquire the faculty to observe whilst remaining unobserved, and hear without being heard. The

behaviour of nearly all wild creatures is one thing when they know they are being watched, and quite another when they are not aware of the fact. Under the first condition, suspicion and anxiety are written large in every action, whereas under the second, confidence and peace of mind illuminate each movement and expression.

I have learnt some of the sweetest secrets of the sod by transfiguring myself into a graminivorous animal, rock, tree, or other equally innoxious object.

As the Greeks of old entered Troy in a wooden horse, it occurred to me one day that by the employment of similar stealthy means I might perhaps enter some of the secrets of the bird world. I therefore went straightway to a butcher



SHOULDERING THE
IMITATION OX.

and requested him to buy the largest fat ox he could lay his hands upon, skin it carefully, and send the hide to my old friend, Mr. Rowland Ward, of Piccadilly, who stuffed it so well that during its palmy days before it had been blown over and otherwise

injured, it was several times mistaken, when out in the fields, for a live animal.

One day, whilst covering it over with a cloth during the on-coming of a shower of rain, a labourer walking by on a path some



MOUNTED ON THE
IMITATION OX.

thirty yards away called out to me, "What's wrong with him, mister?" "Lost his clock-works," I answered jocularly. My interrogator growled something in the ruddy phrase of his kind to the effect that he was in possession of too many of the qualities of a fly to be deceived by anything like the young of a goat, and went on, considerably aggrieved by what he took to be silly facetiousness on my part.

The skin of the bullock is stretched over a wooden framework, rendering it strong enough to carry the weight of a man, and at the same time sufficiently light to be easily deported on the shoulder as shown in our illustrations. Admission to the interior is gained through a long horizontal slit in the skin of the underparts, and the camera, minus the legs of the tripod, fixed

upon a little platform in the brisket. The lens peeps out of a hole in the skin of the breast, and through another and smaller aperture above it the photographer watches his field of focus.

Although an admirable hiding device, the stuffed ox has one fatal drawback—if used during breezy weather, it is liable to be blown over. I remember once returning to see how my brother was faring whilst waiting for some subject, and arrived upon the scene just in time to witness man and beast occupying a very undignified position. The back of the ox had landed in a slight declivity, and the feet of both biped and quadruped were pointing towards the zenith. In order, therefore, to avoid accidents of this character during windy weather, we take four pegs and a quantity of string out with us. The former are driven firmly into the ground, and the bullock's legs lashed securely to them by means of the latter.

We have included an illustration showing the stuffed ox in actual operation. My brother was inside it at the time the photograph was made, but his legs and feet cannot be seen on account of the wealth of dock stems and leaves.

Upon receiving the sham bovine from the hands of the taxidermist we were naturally anxious to test its qualities as a hiding device.



THE STUFFED OX IN OPERATION.

and quickly had it standing beside a skylark's nest containing two young ones.

The bird was so completely deceived by the lifelike solemnity of the great mild-eyed beast standing within five feet of her nest, that she came again and again, without hesitation, to feed her chicks. She either failed to notice, or did not heed, the centipedal appearance given to him by the accession of a pair of human legs beneath his body.

The pleasant satisfaction of having a long-cherished idea so completely justified, and the exhilarating rapidity with which pictures of the lark were added, considerably mollified the effects of the awful pain I began to suffer in my lumbar regions through stooping over the camera so long in the Jonah-like quarters afforded by the interior of the ox.

Although at first startled by the unbovine-like noise of the focal plane shutter, which was being used for the making of rapid exposures upon her, the bird never once appeared to suspect my presence, so that when I was at last compelled by sheer agony to drop from my place of concealment whilst she was at home taking a rest, she received a genuine surprise. Upon catching sight of me, she sprang almost vertically into the air, and, dropping amongst the grass a yard or two behind her nest, stared with outstretched



SKYLARK BRINGING FOOD TO HER YOUNG.

neck in blank amazement at me sprawling beneath the bullock.

My experiences on the following day were of a very similar character. The realistic qualities of the stuffed ox inspired so much blind confidence in the skylark that she came and covered her chicks whilst I had an exposure meter standing on its edge within two or three inches of her nest. For want of anything better, I had placed it there in order to focus the figures on its face, as representative of the markings on the feeding bird's plumage before starting work for the day.

From a dietary point of view, young skylarks commence their education early, for I watched the pair of chicks try on several occasions to

catch winged insects that incautiously ventured too near their home even a couple of days before they fledged.

We next removed our hollow sham to the edge of a small pond much frequented by thirsty cattle and birds, where it distinguished itself by completely deceiving every species of creature that came to drink. The weather was excessively hot at the time, and through the combined causes of evaporation and consumption, the pond grew delightfully smaller day by day, thus enhancing our chances of picture-making by the natural reduction of area left for the birds to stand upon whilst drinking.

Hen pheasants came on several occasions with their families, but never drank much themselves, appearing always to be too much engrossed in the welfare of their charges. While the chicks sipped with great relish, or ran delightedly round the tiny sheet of water, their parents walked along high flood mark above, keeping a watchful eye on the surrounding country. Once an old cock pheasant and a jay arrived together, and the suspicious looks they gave each other whilst drinking were too ridiculous for words. To my undying regret, through waiting for the latter bird to assume a rather more typical attitude, I missed the ornithological photograph of a lifetime. Without showing any sign of being ready to take



SONG THRUSH.

SUBSTANCE, SHADOW AND REFLECTION

his departure, the jay suddenly sprang into the air and flew away. I instantly released my rapid shutter upon him, and, when I came to develop the plate, suffered the extreme mortification of finding that he had just managed to get his head out of the plate, and his portrait, with wings beautifully stretched out and legs still ungathered in, was guillotined.

An old song thrush next came along, and after sipping at the muddy water very leisurely for a while, hopped on to a flint, which formed a sort of miniature island in the pond, and stood with drooping wings, contemplating a bath. I made a slight noise in order to induce her to listen, and then exposed a plate. The result is reproduced in this volume, because of the somewhat interesting fact that the camera has caught substance, shadow, and reflection, and recorded all three on the same plate.

Small companies of greenfinches were constantly arriving, and fully upholding the character of their species for unadulterated selfishness. An old male would, after enjoying a good drink and first-rate splash-bath, take up his stand on the stone in the middle of the pool, and openly defy anybody and everybody of his kind to come near, although there was still enough water left to drown all the greenfinches in the county. When the old bully had retired to preen himself

in a neighbouring tree, the rest of the amiable flock would squabble and fight in the most un-seemly manner for places.

House sparrows were coming and going all day long, their breathless haste and the oppressive intensity of the July heat making them gape and pant like dogs.

Ring doves and turtle doves came frequently, and thrusting their bills almost up to the gape in the water, obtained it, as Gilbert White says, "by long-continued draughts, like quadrupeds." I photographed representatives of both these species one morning, and in the afternoon my brother, who had come to relieve me by taking a turn in the ox, where the temperature was of melting torridity, also secured an exposure upon each. When the plates were developed in the evening, we were surprised to discover that by a strange coincidence we had both photographed



WOOD PIGEON.



TURTLE-DOVE.

our birds in almost identical actions, attitudes, and situations.

One day a pair of barn swallows, busily engaged in building a nest somewhere, visited the pond ten times an hour for mud, and took from three to fifteen pecks, according to its consistency at the particular part where they happened to alight. On an average they brought a straw in their bills three times out of every five visits.

Altogether the stuffed ox proved an unqualified success from a concealment point of view, and by its aid we secured at the cattle pond photographs of pheasants, jays, ring doves, turtle doves, stock doves, song thrushes, black-birds, yellowhammers, greenfinches, chaffinches, and sparrows.

I reasoned with myself that if a stuffed bullock could be made so useful in meadows and pastures, a sheep treated in a similar manner ought to prove equally efficacious amongst birds living on moors and mountains, so requested my friend Mr. Charles Thorpe, of Croydon, to buy and prepare me the skin of one as a sort of extinguisher for the camera.

As the taxidermist's men said when they put the stuffed sheep, neatly swathed in canvas, into the van of the train by which I was travelling through Croydon on my way to the North of England, it had been "set up lying down," and a hole left in the chest for the lens of the camera to peep through.

Upon reaching Charing Cross and walking down the platform to look after the transference of my luggage to a cab, I found a small crowd gathered round something opposite the open door of the van, and discovered that my item of the fold was providing the sensation. Some seeker after knowledge had, in his eagerness to learn what the strange-shaped package contained, unfastened the canvas round the sheep's head, and it was gazing straight in front of it in that mild, dignified, "I-know-a-green-pasture-far-away" fashion of its kind. Several onlookers wished to know if it were an "old favourite," whilst others solemnly enquired if it were alive.

It aroused a good deal of interest and amusing interrogation wherever it was seen along my route, but the best fun was provided by an aged shepherd, who had not the advantage of a close examination.

Finding a sandpiper's nest in the bottom of a lonely little ghyll far up in the heart of the fells, I placed the camera, minus the legs of the tripod, on a flat stone in front of it, focussed, put a plate in position, and, attaching about fifty feet of pneumatic tubing, extended its full length in the direction that would give me the best view of the bird's nest. After carefully placing the sheep over the apparatus and tying the wool on the chest back, so that none of it should wave in front of the lens, I erected my little hiding tent at the opposite end of the pneumatic tubing, covered it with rushes, and retired inside, to wait the home-coming of my "sitter." I had not been concealed ten minutes before a shepherd arrived on the top of a steep hill above me, and began to send his dog round the stuffed sheep with the intention of herding it. When it failed to move my animal, the old man broke into unprintably hard terms concerning his canine assistant's lack of intelligence, but the poor, libelled brute knew more than his choleric master, especially when he came to leeward of the sheep, and caught the aroma of the stuffer's workshop.

After the ungentle follower of a proverbially gentle pastoral pursuit had taken his departure the sandpiper came home in a hurry. She was going straight back on to her eggs, when the great black eye of the camera, staring at her



STUFFED SHEEP.

from the sheep's chest, suddenly arrested her attention. This made her jump as if someone had shot at her, and flying away down the little moorland beckside, she did not return for hours.

This action puzzled me a good deal, seeing that no exception had been taken to the lens at the time it formed a chest eye in the stuffed bullock.

When the bird did eventually reappear, she



SANDPIPER ON NEST.

zigzagged warily to and fro at a respectful distance behind her nest, gradually growing bolder and bolder, until at last she timidly ventured home, and sat down. I was anxious not to do anything calculated to destroy her growing confidence in the harmlessness of the three-eyed sheep innocently lying down to rest beside her nest, so waited a long while before I made an exposure upon her. At last I gave the air reservoir at my end of the pneumatic tube a vigorous squeeze, and the sandpiper, leaving home with suggestive haste, commenced to run agitatedly back and forth across a piece of bare, storm-swept, rock-strewn ground on my right, protesting in her plaintive notes against something that was evidently not to her liking.

I had now to face the distinct disadvantage of having to reveal myself in order to readjust the mechanism in the interior of my "old favourite," and it was two hours before the bird would again venture on to her nest; and I do not believe she would have done so even then had it not been for the confidence-inspiring presence of her mate. Whilst she sat covering her eggs, as shown in our illustration, the cock stood on one leg upon a large stone close by, preening himself in the most unconcerned matter-of-fact way. Several times he stretched a leg and a wing in that sweetly pretty way so common amongst the waders.

During my long wait I was not quite idle. From a peephole on one side of the rush-clad tent I watched a pair of wheatears assiduously entering and leaving a hole amongst some earth-bound rocks on a steep brae side, wherein they had a family of hungry chicks. I said to myself, "It is your turn next," and after making a second exposure on the sandpiper, moved the whole of my plant—lock, stock, and barrel—over to the new field of action.

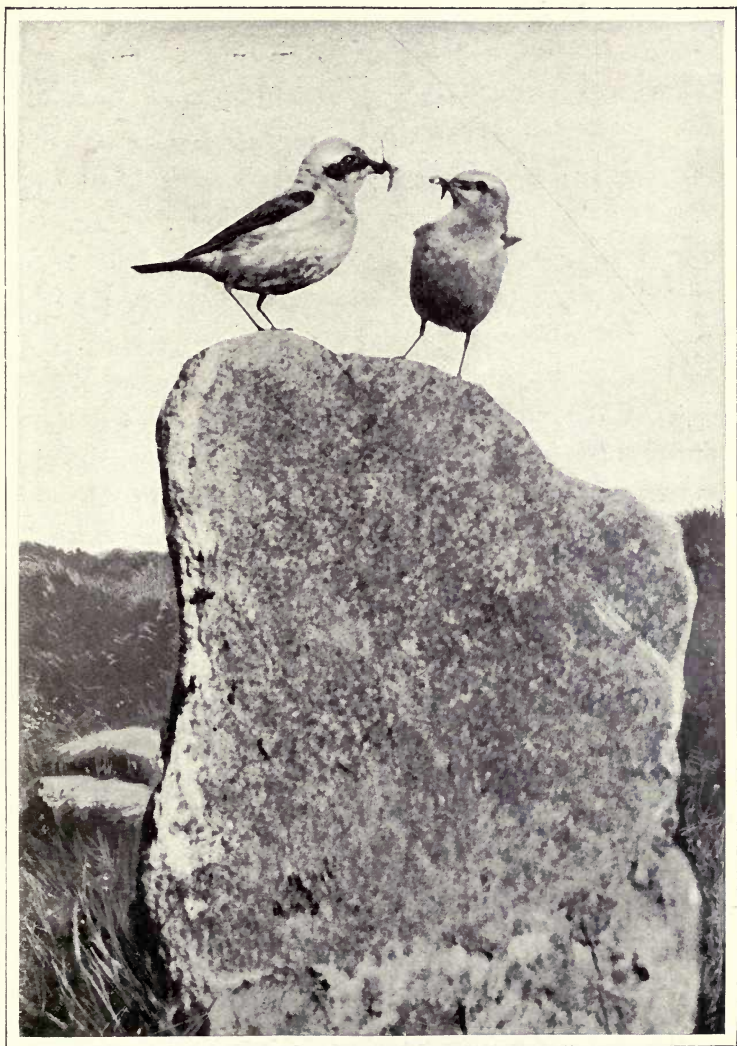
I had noticed that nearly every time the wheatears came along with food they alighted for a moment on a view-commanding stone close by their nesting hole. This I supposed to be done in order to make quite sure that no enemy

was near enough to secure the advantage of attacking them whilst in their dark, subterranean quarters, so focussed a matchbox placed on the top of the stone to represent the body of a bird, put a plate in, and the sheep over the camera. Partly on account of the peculiar configuration of the ground, and partly because I knew I was dealing with a bolder species, the hiding tent was erected much closer than before.

The male wheatear came along almost directly I had completed my arrangements, with a fine fat caterpillar in his bill, and was photographed in serious contemplation of the strangest wool-bearing animal he had ever seen. My reappearance to attend to the camera sent him off in a great state of alarm, and taking up his station on the highest part of an old tumble-down stone wall not far away, he *chack chacked* angrily at me for a few minutes, and then, becoming tired of that unprofitable occupation, swallowed his caterpillar, and flew off in search of more.

The female came along quite boldly, and before I had time to fire off my focal plane shutter upon her she had slipped down from the stone, and the next thing I became aware of was the rapturous chissicking of her young in the hole below. She had completed her errand.

The male soon came along again with another



WHEATEARS.

MALE PASSING OVER FOOD TO FEMALE TO TAKE TO YOUNG.



YOUNG WHEATEARS.

supply of food in his bill, but was too shy to venture nearer home with it than the usual post of outlook. There he stood, and deliberately waited until his mate arrived with her catch of insects, when I figured him, to his eternal shame, in the cowardly act of handing over his collection for her to take indoors.

On the following day I did not use the sheep, but sat in the tent and made a number of observations on the feeding habits of wheatears.

The nest contained a family of five well-grown chicks gifted with most insatiable appetite. At midday their parents were bringing them in food to the tune of thirty-six times an hour, and the pace gradually increased during the afternoon until four o'clock, when it reached the extraordinary maximum of sixty visits, counting, of course, in each case the combined efforts of male

and female. Moths, flies, small beetles, and caterpillars appeared to come along with the indiscrimination born of mere chance in catching them. The prey was in no case, so far as I could discern, killed before being carried underground. Once a dipterous insect escaped whilst being administered, and came out of the nesting hole in a hurry, with its executioner in hot pursuit. I felt sorry for the unfortunate creature when it was recaptured and carried back to the entomological dungeon, wherein a fresh outburst of welcome on the part of the chicks sounded its death knell.

When I came under the necessity of securing



ARTIFICIAL ROCK.

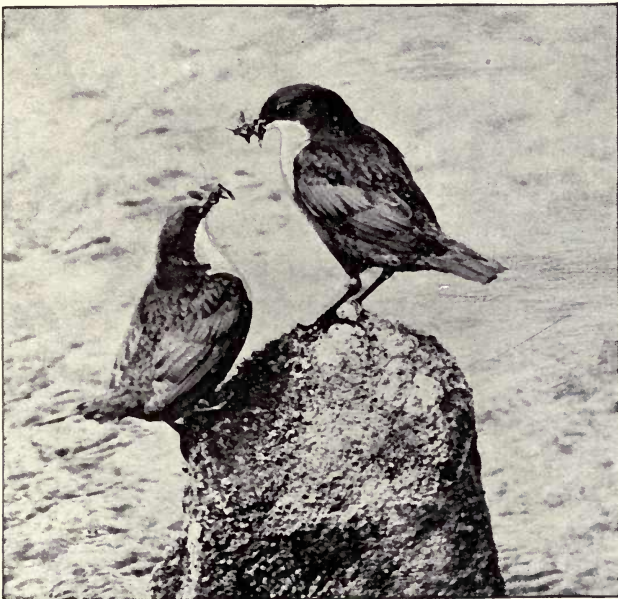
(Arrow marks position of Dipper's nest on boulder in the beck.)

photographs of ring ouzels, dippers, and other birds of like habits at home amidst their craggy surroundings, I again enlisted the assistance of my friend Mr. Charles Thorpe, who always enters enthusiastically into the carrying out of my schemes for circumventing wild Nature. He made me a limestone-grey artificial rock in five easily adjustable pieces, to hide in with the camera, and upon reaching my uncle's home amongst the Westmoreland Fells, I speedily had it fixed up near to a dipper's nest in a peculiarly advantageous situation for my purpose. It was built on the top of a large boulder by the mountain beckside, shown in our illustration, and after leaving the counterfeit rock, where it is to be seen, all night, I moved it the following morning to a position close behind the crag, half buried in the ground, on the right of the one upon which the mossy, ball-like nest is resting.

As soon as I had retired within the hollow rock, and quiet was restored, the female came back up-stream, flying from stone to stone by easy stages, and curtsying daintily all the while until she arrived in front of her home, when she flew straight in without allowing me the remotest chance of taking a photograph.

By-and-by the male bird arrived upon the scene with the larva of a stone-fly in his bill, and after uttering a warning note of his coming,

rushed breathlessly straight into the nest. This led me to believe that the pert little fellow would fly away on larder work intent directly he re-appeared, but he did nothing so prosaic. Instead of this, he took up his station on a neighbouring



DIPPERS.

MALE PASSING FOOD TO FEMALE.

cobble, where the waters of the brook continually washed over his feet, and warbled a divinely sweet little song in soft, low notes, to his brooding mate sitting in the wee castle of moss perched on the crest of the boulder above him.

When this serenade ended, he commenced to

fly from stone to stone, all the while sidling nearer and nearer to my hiding contrivance, one corner of which projected over the sloping bank of the beck in such a way as to leave about six inches of open space. Presently he hopped on to the grass, and took an enquiring, upward peep inside. I kept perfectly still whilst he cocked his questioning little head first on one side and then the other, and eyed me over with manifestations of the greatest curiosity. Directly this critical inspection was over he flew away up-stream in search of more food.

The behaviour of this bird was sometimes unaccountably strange. Between his journeyings after sub-aquatic prey, he frequently collected pieces of moss, as if on nest-building intent, and, dropping them into the swiftly flowing beck, gazed proudly up at the home containing his mate and five newly hatched chicks. Occasionally he stood on a stone, yawning, and stretching his wings and legs for minutes together.

Although the dippers were bold enough, I found it exceedingly difficult to make photographic studies of them on account of the extreme rapidity of their business-like movements when near the nest, so left my place of concealment and, putting the hen off, barred up the entrance hole with a piece of selvyt which I always carry handy for the removal of dust from lens and field-glasses.

The female returned directly, and stood on a stone curtseying, whilst she made a careful survey of the obstruction. Before she had time, however, to formulate a plan of attack upon my barricade, her mate arrived with a supply of food, and there was enacted one of the prettiest scenes of feathered domestic felicity I ever had the good fortune to behold.

The breadwinner of the family passed his dietary tit-bits over, one by one, to his mate with the most delicate solicitude imaginable. At first she held the food in her bill as if desirous of saving it for her chicks, but changing her mind presently, swallowed the whole collection of insects, and twittered her thanks in low sweet notes as each additional morsel was consumed. When the last insect had been swallowed she opened her mouth as if in dumb request of more, but it was only a sign of overflowing affection, which the male understood and appreciated, for, putting his bill between her mandibles, they sweethearted in the most touchingly tender manner several seconds on end.

As soon as the cock had taken his departure on another foraging expedition, the hen turned her attention to what she no doubt regarded as the unwarrantable liberty taken with her home. She examined the obstruction which filled the entrance hole from above and below, right and

left, and upon becoming convinced that it was impossible to effect an entrance she appeared to be overtaken by a fit of angry despair, and dashed wildly into the limpid waters of the stream from different stones upon which she alighted. After a while, a much wiser course of action suggested itself, and, poising like a humming-bird on rapidly beating wings in front of the nest, she seized a hanging corner of my square of selvyt and gave it a vigorous tug. It yielded encouragingly, and she repeated her tactics until the offending material was completely withdrawn and floated serenely down the rippling brook below, when the happy, conquering mother-bird promptly joined her family, and, as a reward for affection and intelligence, was left in peace for the remainder of the day.

In spite of the extreme difficulty of making even rapid exposures upon these eternally curtsying creatures, I managed by a very liberal expenditure of fast plates, to secure a good series of pictures. A strange thing about the male was that he manifested a decided predilection for looking in my direction over his shoulder, instead of, as desired, with his beautiful snowy white breast towards me. I could have photographed him a hundred times in the former position for once in the latter.

Having been told by a farmer of a common

curlew's nest in a limestone boulder-strewn pasture not far distant, I carried my artificial rock along, and fixed it up some sixty yards away, and left it. Morning by morning for a week I moved the structure nearer and nearer, until at last I had it within sixteen feet of the nest and eggs of what I think every experienced sportsman will admit to be one of the shyest and wariest birds in this country.

Then I made a fatal mistake. I went inside with the camera to wait whilst being watched by my astute "sitter."

For five hours and a half on end I knelt in the cramped quarters afforded by the sham boulder, and suffered indescribable agonies in my nether limbs whilst the curlew walked round and round, getting tantalisingly nearer and nearer, and making me believe that another ten minutes of waiting would put an end to my misery; but it did not, and I was very reluctantly compelled to give in and admit defeat. During the last half hour or two the pain in my knees was so excruciating that I was (paradoxical as it may sound) only sustained by cowardice, or, in other words, a lack of the necessary courage to acknowledge failure.

The long wait had worked such havoc with my legs that I fell down and helplessly rolled over twice whilst descending a steep hillside to

my uncle's house, but that temporary inconvenience was not half so important as the lesson I had learnt in regard to the folly of waiting for a shy bird perfectly aware of my presence in such close proximity to her nest.

The following morning my uncle accompanied



CURLEW

SITTING WITH HALF-CLOSED EYES.

me to the scene of action, and after tucking me up and placing a stone or two on the top of the artificial rock so as to make it look more realistic, walked ostentatiously away across the pasture with a couple of collie dogs at his heels. He had not taken his departure more than fifteen minutes before the curlew was, to my unbounded delight, walking sedately on to her eggs. Just before sitting down, the bird stood and gazed thoughtfully at all that could be seen of the lens, which



CURLEW

WALKING ON TO HER NEST.

I had taken the precaution to have well within the hole in the side of the sham rock, and I made a time exposure upon her, which resulted in the full-page illustration over leaf.

So completely was this characteristically cunning bird deceived,



CURLEW

ABOUT TO SIT DOWN ON EGGS

and so silently did I work in exposing plates and changing dark slides, that she never suspected anything wrong, and in her fancied security kept closing her eyes and taking brief naps.

After a while, photographing the curlew on her nest became a thing of such monotonous ease that I wanted an opportunity of securing more pictures of her in the act of coming home, but was at my wits' end to know how to dismiss her without undue fright or the giving away of any information in regard to my presence. At last, by a lucky inspiration, I hit upon the idea of mewling like a cat. This made her all alertness

and attention instantly, and I could not resist the temptation of exposing another plate. By increasing the volume of feline music, I accomplished my desire, and, stretching her long legs, she walked slowly away, glancing furtively backwards over her shoulder as she retired. After walking round and round, picking up and dropping straws, thrusting her long bill enquiringly down the earth-shafts of innumerable dung beetles, and listening intently for a repetition of the strangest noise she had probably ever heard in all her life for an hour and a half, the whaup (as the bird is called in Scotland) came quietly back to her nest, and I made another study of her about to sit down and cover her four beautiful olive-green, brown, blotched eggs. This exposure was made with a rapid shutter, as the uplifted foot of the bird shows, and even the slight noise of the mechanism sent her away in great alarm.

Once or twice when a member of the numerous flock of sheep in the pasture grazed too near the curlew's nest for her liking, she ran round in front and tried to head the intruder off in some other direction.

In spite of their long abandonment on the previous day the eggs took no harm, and a strong, healthy chick ultimately emerged from each one of them.

Whilst studying Nature with eye and ear



HIDING TENT COVERED WITH HEATHER.

alert for every sight and sound, there is for me a splendid charm about what many people would call the solitary places of the earth. One day, when wandering by a babbling heather-fringed mountain beckside, my attention was suddenly arrested by a familiar *kek, kek, keking* note overhead, and, looking up, I beheld a bold little merlin flying across the ghyll with business-like directness. I watched him go down into some deep heather, and making careful mental notes of the landmarks lying between us, walked straight towards the place. He rose when I arrived within forty yards of the spot where he alighted, but, taking no notice of him, I pursued my course until his mate darted out of the heather close to my feet, and revealed the whereabouts of her eggs.



MERLIN ON NEST.

Early the following morning I erected my little hiding tent—which consists of eight iron legs a quarter of an inch in diameter, six feet in length, eyeleted at the top to a small ring, and covered with a skirt-shaped light canvas—within a dozen feet of the nest, and thatched it with heather, as shown in the picture on p. 32. Upon completing this deceitful structure I went away and concealed myself in a forest of tall bracken growing on a view commanding the hill-side about a quarter of a mile distant. In a very few minutes I had the great satisfaction of seeing the mountain falcon, or blue hawk, as the bird is called in some districts, alight on the top of my handiwork, and after surveying things a little while from its elevation, go straight down on to her eggs.

During the afternoon I fell in with a friendly shepherd, who kindly tucked me up inside my hide-all, and went his way. In about ten minutes from the time of the man's departure I was delighted to hear the wing-folding flick of the merlin just over my head, and waited with bated breath and throbbing pulses. She speedily flew down to her nest, but catching sight of the lens, instantly left it, and astonished me by commencing to flop about with extended pinions over the heather in a way strongly suggestive of the tactics a teal had just employed in trying to decoy me away from the presence of her family of tiny ducklings.

As nothing made either sound or movement she became gradually reassured, and her distrust of the awe-inspiring eye staring straight at her nest diminished, until she ventured back again and stood over her reddy-brown eggs listening intently.

I waited until she sat down, and the fierce, dour look on her countenance had somewhat subsided, and then fired off my fast shutter upon her. The noise made by the apparatus sent her away in a great hurry, but she alighted over my head again much sooner than I expected, and quickly going to ground, flapped her way awkwardly over the heather to her nest again. In two hours she became so used to the noise made by my focal plane shutter, that she absolutely refused to stir when I made an exposure.

When all my plates were exhausted there arose the problem of how escape from concealment was to be effected without unduly frightening the merlin. I mewed like a cat, rapped on the ground focussing glass of the camera with my knuckles, and rattled the legs of the tripod, but all to no purpose ; she saw nothing, and paid no heed to sounds. I therefore thrust my right arm out under the canvas at the back of the tent, and hurled my water flask over it. Directly the missile had left my hand, I quaked lest it should, by an unfortunate fatality, fall on the back of the

sitting bird. Although it bumped down in the heather within a few feet of the merlin, she took no notice of it, but sat stubbornly on until I was at last reluctantly compelled to give away my secret by crawling into full view.

The following day being Sunday, and having good reason to believe that the mountain falcon would receive some attention from a local professional collector, I dismantled my tent, and hid everything away in an abrupt declivity not many yards distant.

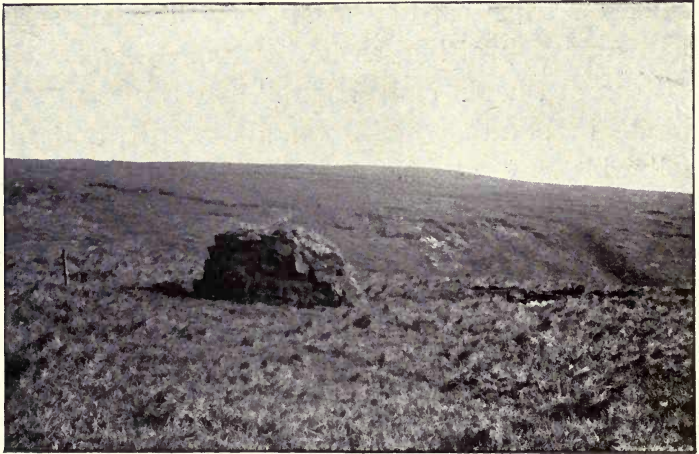
Determined to save the bird's eggs from the ruining blast of the blowpipe, I rose at 4.30 next morning, and walking up the hills with a good supply of sandwiches in my pockets, took up my station amongst the deep bracken already mentioned, and waited and watched all day.

On the Monday I tried to secure some more pictures of the merlin at home, as nearly all those I had already taken showed movement in the wind-waved heather around her. My luck had, however, completely forsaken me. After waiting an hour without any sign of the bird, I imagined I heard somebody whistling a popular air, and peeping out of a hole in the cover of my tent, was dismayed to see the small boy I had taken up from a shepherd's house to act as decoyman for me, and whom I had told to return straight home again after I had gone into hiding,

calmly sitting astride a stone wall some sixty yards away, waiting, as he afterwards explained, "to see t'haak cum hoam." A thunderstorm broke in blinding hail soon afterwards, and the following day, alas! I found that some member of a herd of hill-grazing cattle had trodden on the merlin's beautiful eggs and crushed them. Thus is the naturalist photographer's patience tried.

I love the golden plover's plaintive cry, because it brings back to me the memory of days of unforgettable sweetness, when, as a boy, I wandered, happy and hungry, from one trout stream to another, across wide stretches of breezy Yorkshire moorland, with rowan tree fishing-rod over my shoulder, and a home-made horsehair line of such visible strength dangling at the end that I now marvel how any fish gifted with ordinary eyesight could have dared to venture near it.

After having tried hard, and failed ignominiously, to find a nest belonging to this shy, wary, and misleading species on the great stretches of moorland lying between Shunnerfell and Water Crag during May of last year, I met a shepherd one morning who told me that he had found a nest the previous evening containing a brace of newly hatched chicks and two chipped eggs. I saw at a glance there was little time to be lost, and having no hiding contrivance of any kind with



SOD HOUSE FOR PHOTOGRAPHING
GOLDEN PLOVER.

me at the time, asked the man to secure a spade. Armed with this and the camera, we hied away up the hills. When we arrived at the place where the nest was situated, we discovered that the female and two chicks had completely disappeared, and that the remaining pair were just out of their shells and left in charge of the male until they should gain sufficient strength to enable them to run through the coarse herbage.

Placing my cap over the beautiful downy creatures in the nest, I set to work and built a sod house five feet away with giant turves cut for me by my powerful companion. We soon had the horseshoe-shaped walls of the structure high enough for the roof, to support which we

borrowed liberally from the dilapidated remains of a neighbouring sheep-fold gate.

Taking the camera inside, I focussed my cap through a narrow horizontal slit, left for the purpose in the turf wall, and after the shepherd had handed in my headgear and securely walled up the doorway behind me, he departed to tend his flock.

In a very few minutes the cock golden plover ran down towards the nest, calling reassuringly as he advanced, and sat down to cover his chicks without more ado. The lens being far back amongst the dark peat turves, and consequently in deep shadow, I suppose he failed to detect its attention-arresting presence. At any rate, he



MALE GOLDEN PLOVER
COVERING CHICK.



FEMALE GOLDEN PLOVER
AND CHICKS.

sat unconcernedly still until I made an exposure upon him by the aid of my focal plane shutter, when he jumped up and commenced to run hurriedly away, full of misgivings.

As the light was growing poor, owing to a temporary gathering of clouds, I deemed it advisable to substitute my silent time shutter, in case the brooding bird favoured me by the giving of a second opportunity to figure him.

In about an hour he returned with suspicion and fear plainly written in every look and action, and sat down on the younger and weaker of the two chicks. Before he had time to coax its companion crouching beside him beneath his sheltering wing, I made an exposure upon the pair, and promptly began to reverse the position of my dark slide with all the deftness I could command, intending to indulge in another shot ;

but he heard me, and, running away, commenced to call loudly to his mate for what subsequently turned out to be a change of places.

When the female arrived upon the scene, she proved to be an exceedingly shy and wary fowl, walking round and round, back and forth, calling to her young ones all the time, but never once venturing to sit down and cover them. I managed, through a fortunate improvement in the weather, to secure one snapshot of her, and then abandoned all further effort, having knelt for two and a half hours, with water dripping steadily down the back of my neck from the roof sods of the emergency hide-up. The chicks were soon strong enough to leave the nest, and I photographed one of them directly it had done so.

On rare occasions the naturalist photographer is favoured by circumstances in the matter of



YOUNG GOLDEN PLOVER.



PHOTOGRAPHING IN A CART-SHED.

hiding with his apparatus near to a bird's nest. The accompanying illustration shows how my brother secured our series of lantern slide pictures representing the domestic life of a pair of blackbirds. Their nest was situated in a thin, straggling hedgerow running parallel with the back of an old wooden cart-shed, and about



FEMALE BLACKBIRD WATCHING HER CHICKS
SETTLE DOWN INTO CAVITY OF NEST
AFTER BEING FED.



AUTHOR HIDDEN UNDER
WOODEN MASK,

four feet away. I cut two circular holes in the boards—one for the lens and the other for the eye of the photographer, and the birds never appeared to suspect anything wrong whilst the silent time shutter of the camera was being used upon them. The female on the preceding page was figured whilst admiringly watching her chicks settle down into the cavity of the nest after having been fed.

For bird-watching purposes I had a reversible jacket and cap specially made a year or two ago, and have found them of considerable service on a good many occasions when other methods of hiding have not been practicable. They are dead

grass brown on one side and living field green on the other, and, chameleon-like, I change my colour according to surroundings.

Feeling convinced that the human face is almost as awe-inspiring and distasteful when in close proximity to a wild bird as that of a cat, I made a wooden mask for myself one day out of a hollow ash stub, selected and cut for me by an old woodman. I chiselled a great deal of the interior away, so as to lighten the burden on my shoulders and make plenty of head room, and then cut a pair of eyeholes in it.



AUTHOR WITH WOODEN
MASK OFF.

Turning the green side of my reversible jacket outwards, and donning this odd piece of headgear, I secreted myself in the middle of a small hazel bush growing within six feet of a water-tub let into the ground in a wood for the convenience of pheasants, and waited developments. By-and-by along came a family of bullfinches to drink and wash. The chicks were the first to descend, and seemed fascinated with the delights of bathing. Standing on a number of slightly submerged flints in the middle of the old tub, they flapped their little short wings in ecstasy, and made the spray fly in all directions whilst their parents stood on the edge waiting their turn, and admiring the proceedings. Several times a bedraggled chick would return, like a small boy, for just another dip, which he indulged in with juvenile gusto.

Once a member of the company actually alighted on the old stub in which my head was enveloped, and the telephonic qualities of the wood made the noise produced by its feet sound as if a rook had settled there.

When the bullfinches had taken their departure, a robin came along and enjoyed himself for several seconds, ducking and splashing, although I never once saw him take a drink. Whether he detected my eyes staring at him through the holes in the mask, or noticed a branch which I was partly

leaning against vibrating in response to the heart beats taking place in my body, I cannot say, but he suddenly stopped in the middle of his ablutions, and listened with a sharp, enquiring eye turned in my direction, and presently flew away with suspicious haste and directness.

Studying the intelligence and affections of birds is a most engaging pursuit.

I have often exchanged blackbirds' eggs for those belonging to a song thrush, and *vice versâ*, without any notice whatever being taken of the substitution by either species, and once played a selfishly mean trick upon a redshank. Her eggs began to chip before the weather allowed me an opportunity of making photographic studies of her going on to the nest; so I exchanged them for those of a lapwing breeding close by, and compelled the unfortunate bird to incubate another week. The fraud was either undetected or unheeded, for the birds hatched off, and took away each other's broods in safety, and I can only hope that no domestic complications arose in either family afterwards.

With a view to making further experiments in the discerning qualities of the avian mind, I had four wooden eggs carved for me by a local joiner of the size and shape of those laid by a song thrush. My wife painted and varnished them for me, and as soon as they were dry I

took them out into the fields, and substituted them for a clutch of eggs in the nest of a mavis. Returning half an hour later to ascertain what had happened, I found the thrush sitting tight and cosy on my wooden counterfeits. When she took wing, I noticed something drop from her nether plumage as she scurried out of the hedgerow, and going to the spot where it fell, picked up one of my substantial shams, only two of which remained in the nest. The great heat of the bird's body had melted the varnish, and made the eggs adhere to her feathers, and I make no doubt she suffered something in the nature of a shock when she rose to fly away and found two of them clinging to her garments. I quite expected this uncanny experience would make her forsake the nest, and as she did not return to it again within reasonable time, I took her eggs and distributed them amongst other song thrushes and blackbirds I knew to be due to hatch out about the same time as she would have been in the ordinary course of things.

When the varnish on the remaining members of my clutch of dummies was thoroughly dry I experimented upon a blackbird with complete success.

Whilst in Westmoreland on one occasion I had a starling's nest containing three newly hatched chicks shown to me in a ventilation hole in one

of the substantial walls of an old stone barn. The aperture was about eighteen inches high and two inches wide on the outside, and a little over a foot in width on the inner, which opened on to a great loft. The hole had been stuffed up on the inside with a quantity of old hay, through which I made a small tunnel in order to watch the brooding bird at home. It was an ideal place from which to make observations, because, being dark on my side and light on that of the bird, it enabled me to watch every action on her part from a distance of only a few inches whilst remaining absolutely unseen and unsuspected myself.

Taking the chicks out of the nest, I put my wooden eggs in, and waited with one eye glued to the small circular hole in the stopping of old hay. In a few minutes back came the starling with a rush. She gazed in wonder at the contents of the nest for a few seconds, but, quickly making up her mind to accept the strangely altered condition of things, she sat down on the bits of painted wood without a trace of discontent in either look or action.

Putting her off again, I reversed the order of things, and waited. Upon returning, the starling stared in amazement at the change that had come over the scene during her absence; but her curiosity soon vanished, and she commenced

to brood her chicks in the most matter-of-fact way.

A severe method of testing how far blind maternal passion had subverted her intelligence now suggested itself to my mind, and, tapping the wooden floor of the loft with my heel, I frightened her away again. Taking the chicks out, I thrust my bared arm through the hay, and, placing my hand, knuckles downwards, in the cavity of the nest, waited—not very hopefully, I must admit—to see whether the bird would detect the imposture. Presently in she came, and, without making any preliminary inspection of the contents of her nest, sat down, and actually brooded my fingers. She hustled two of them up between her thighs and her body, and astonished me by the extraordinary heat which she imparted. She only brought food in once during my experiments, and that was whilst her offspring occupied the nest.

It is only fair to add that the bird was to some extent handicapped by the comparatively small amount of light penetrating the hole she occupied ; but the same cannot be said of peewits dropping their eggs beside imitations crudely cut out of a piece of wood with a pocket-knife. An old Norfolk marshman whom I knew years ago used to add to his maintenance by gathering plovers' eggs for the market, and when they were commanding the handsome price of ten shillings

per clutch at the opening of the season, every single egg was a consideration to the finder. In order, therefore, not to suffer loss at the hands of any competitor roaming the same land, the astute old fellow used to leave each bird that



GRASSHOPPER WARBLER

ABOUT TO SIT DOWN ON DUMMY EGGS.

had not finished laying a wooden egg when he carried off the money-making realities.

As an illustration of the ease with which cuckoos must impose upon small birds when carrying out their parasitic habits, I may mention that the grasshopper warbler figured herewith was photographed when about to sit down on

her nest, containing two of my wooden song thrush eggs, which were about twice the size of her own. I watched her cover the dummies over and over again, and never once did she show the slightest sign of suspicion in regard to the deception.

I tried my counterfeits upon a ringed plover one day, but her intelligence proved superior to unreasoning maternal passion. The incubating bird would not sit down upon the shams, which she hammered with her bill in a most sceptical fashion. When I had given her a fair trial, I took one of the three wooden eggs away, and added two of the bird's own. In a little while she came back, and tried to turn the deceptions out of her nest, but, failing to accomplish her desire, reluctantly sat down and covered good and bad alike.



VIEW ON THE AVON.

CHAPTER II.

SOME CURIOSITIES OF WILD LIFE.



PHOTOGRAPHING A FLYING
BIRD WITH A GUN CAMERA.

IN the present chapter I propose to speak of a few extraordinary happenings of the countryside, in the hope of stimulating the interest of readers who do not trouble to observe what is going on from day to day around them.

Among the greatest delights of natural history are its surprises. You can never say with certainty that the conduct of the individual wild creature—whether bird or beast—will be exactly that of the species to which it belongs. Mind, disposition, and circumstance all play their part in the doings of Nature's children to a far greater extent than is generally supposed.

One partridge will forsake her nest and eggs merely because you have discovered their whereabouts, whilst another will stand by her home with so much devotion that she will even come



SONG THRUSH'S NEST WITHOUT MUD LINING

back and brood after you have inadvertently trodden her tail quills out and smashed half her treasures.

You may find a thousand nests belonging to the common song thrush all plastered with mud in the same orthodox fashion, but you cannot say that circumstances will not one day compel a member of the species to build for herself a home similar in every respect to that of her relative the blackbird. As a matter of fact I found three or four such nests some years ago on the Surrey hills. A long period of droughty weather had rendered it impossible for any mavis breeding within a certain area to find the usual materials wherewith to line the interior of



RING OUZEL AND YOUNG ONES
IN A NEST ON THE GROUND.

her home, and fine dead grass was, in consequence, used as a substitute. The illustration on p. 54 represents one of the nests in question.

A whole volume might be written upon the subject of birds' nests in odd situations. Robins are notorious for their vagaries in this respect, but individuals of species far less associated with man and his doings often make wide and apparently needless departures from the unwritten rules of their family. I have during the last thirty years found scores of ring ouzels' nests in braes, banks, holes in old stone walls, tumble-down buildings, and amongst rocks, and never regarded the species as one productive of variations until quite recently, when I met with a nest in a rush-grown moss bog where nothing but a wild duck or snipe might have been expected. A strange thing about this case was that it was one of deliberate preference rather than necessity, because plenty of ideal situations were in existence within one hundred yards of the site chosen.

Having just read an American book in which the writer detailed his experiences on the subject of shifting birds' nests containing young from dark corners to light, open spaces, in order that he might photograph the restless parent birds attending to their domestic duties, I set to work and built a rough stone wall immediately behind

the rushes figured in the illustration. When my task was completed, I carefully lifted nest and young from their hollow in the rain-sodden ground, and placed them in a hole purposely left for their reception about a couple of feet from the base of the newly built stone wall, and then went into hiding in my artificial rock standing less than two yards away.

In a few minutes the female ring ouzel arrived with a splendid array of wriggling worms in her bill. Her astonishment was unmistakable. She cocked her head on one side, stared intently into the declivity recently occupied by her nest and chicks for some moments in silence, and then, uttering a distressed cry, dropped her food, and flew to the top of my stone wall, where she sat listening and looking—a veritable picture of maternal misery. Her huddled form and doleful looks made me, I must confess, feel something of a barbarian, and I was seized with a great impulse to replace the nest straightway. I think I should have done so, had not the male bird arrived upon the scene with a supply of greenish-brown grubs, and engaged my attention in his behaviour. He also showed considerable surprise at the absence of his callow brood, but did not allow distress to interfere with appetite for swallowing the grubs; he flew away, and did not reappear during the remainder of the time I spent at the place.



EGGS OF ENGLISH AND FRENCH
PARTRIDGES IN THE SAME NEST.

After thinking the matter over maturely on the top of the stone wall, the mother-bird flew down to re-examine the site of her departed joys, and whilst hopping round, discovered her nest in its new situation. I naturally thought that distress would now give place to rejoicing, but it did nothing of the kind. Instead of sitting down and brooding her chicks, she stood on the edge of the nest, and, to my bewilderment, began to pull the lining out in great billfuls, and in a fit of uncontrollable anger scatter it to the ground below. How I sighed for my camera and a gleam of sunshine whilst this was going on!

Desiring to give the American naturalist's experiments a fair trial, I stayed for nearly three

hours with the ring ouzels, and as the weather was dull and cold, I was compelled to keep the chicks alive by warming them, three at one time and two at another, against my own body. At last, when it became quite apparent that the mother-bird would be more likely to desert her offspring than reconcile herself to the new situation of her nest, I returned the structure to its original site, and within fifteen minutes of this taking place she was covering her brood again with a look of restored happiness.

I have, since the above occurrence, conducted similar experiments on many birds of this and other species, but have never fallen across another



FRENCH PARTRIDGE'S NEST
UNDER A PLANT-POT.

instance of the love of an odd nesting situation apparently outweighing maternal affection.

The red-legged or French partridge, as it is also called, was introduced into England some two hundred years ago, but has never gained a footing either in Scotland or Ireland. It is generally supposed to be inimical to the interests of its British representative, which it is said to drive away. As if anxious to refute this accusation, a bird of either species laid in the same nest, and commenced to share the labours of incubation side by side with sisterly amiability in Essex last spring. My brother journeyed a long way in order to secure pictorial records of this unique sight, but, unfortunately, a disastrous flood robbed him by an ace of his opportunity of doing more than show the nest and eggs after the water had subsided.

An uncle of mine living in the North of England once found a nest full of eggs belonging to a red grouse and a common partridge. The former bird took entire possession, and hatched off all the young.

The red-legged partridge's eggs figured on the previous page were photographed in the spring of 1901, and although the inverted flower-pot was situated in a kitchen garden surrounded by a flint wall, the parent bird speedily conducted her downy family under a small wicket-gate and



FRENCH PARTRIDGE SITTING ON
NEST UNDER PLANT-POT.

away to the open fields beyond. The fractured piece of old earthenware was allowed to lie undisturbed in the hope that the bird, or one of her descendants, might re-occupy it the following breeding season; but it remained untenanted, and I arrived, without difficulty, at the conclusion that some sportsman's gun was responsible for my disappointment. I had a very pleasant surprise, however, last May, when my friends informed me that a French partridge had commenced to lay again under the old plant-pot, where my brother, after a considerable amount of trouble, eventually succeeded in photographing her.

Some birds appear to court disaster by the very daring they display in the selection of a nesting place. During the last four years I have known a partridge, a blackbird, a pied wagtail, and a robin attempt to breed in a target pit, where bullets hail at least three or four days a week, and the sergeant responsible for the upkeep of the range practically lives. The first-named bird deserted because every nettle which formed her cover was cut down by fugitive bits of lead; but the last two would undoubtedly have brought out, if not reared, their young had the markers not robbed them.

The reason for the selection of odd nesting situations by birds belonging to many different species is well-nigh inexplicable.

I placed the old tin can figured on page 65 against the trunk of a tree growing in a wood containing thousands of eligible sites, and yet a blackbird came and built in it. If her idea was one of safety, she was mistaken, for some enemy sucked all her eggs.

Again, it is difficult to conceive why a pair of swallows made their nest in the old shoe shown in our combination page of pictures, seeing that there were plenty of better situations available in the same boatshed.

At the house where the nest photographed on a bell fastenings was secured, another pair of swallows reared a brood in one which they built on the frame of a picture hanging in an occupied bedroom, the windows of which were left open night and day.

The shallow structure with a large chick in it was built on a ceiling lath which had become detached at one end, and was so pliant that it swayed up and down like the slender branch of a tree. Here the swallows had every excuse for their selection, because the store-room contained no other available site.

The house martin's hemispherical nest also figured on the same page is of considerable interest to ornithologists, because it has been asserted that the bird never builds a structure of this shape. It is very difficult to understand

why this pair of birds should deliberately have chosen a situation which necessitated such a radical departure from the architectural style common to their species, seeing that there was plenty of available building room alongside the homes of their neighbours. They certainly secured no advantages, because they had twice the amount of work to do in making their own roof, and ran far more risk of drippings being blown against them than they would had they contented themselves with an ordinary site. My brother secured his photograph just as one of the birds was in the act of leaving the nest.

I have on several occasions found the stock dove breeding in a rabbit burrow, and one day was astonished to discover one nesting on the roof of a summer-house in a wood close to Caterham Valley. A gale of wind had torn the outer half of one of the sheets of zinc which formed the covering of the wooden roof loose and folded it back over the other half, which remained fixed in such a way as to form a kind of pocket, in which the bird made the nest shown in our illustration.

Birds of prey often exhibit the most sublime tenacity in their love for a favourite old breeding haunt. I know places scattered up and down the country that appear to exercise a positive fascination over falcons, ravens, and hawks of



BLACKBIRD'S NEST IN TIN CAN.



SWALLOW'S NEST ON LATH.



SWALLOW'S NEST ON BELL FASTENINGS.



HOUSE MARTIN'S HEMISPHERICAL NEST.

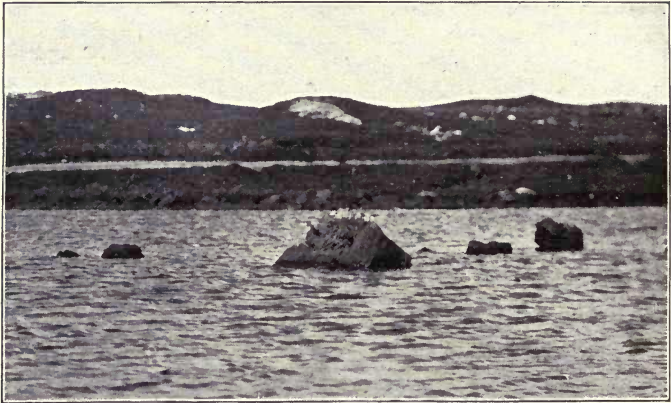


STOCK-DOVE'S NEST ON ROOF OF SUMMER-HOUSE.



SWALLOW'S NEST IN OLD SHOE.

SOME NESTS IN CURIOUS PLACES



GULL'S NEST ON STONE IN LOCH.

different species. No amount of persecution seems to make them waver for a moment in their allegiance. If either member of a pair should fall a victim to gun or trap, the survivor straightway disappears in search of a new mate, and I have known the second wife or husband, as the case might be, brought home within twenty-four hours of the calamity to the departed.

Even if male and female should both suffer death in one season, a fresh pair of birds will frequently arrive the following year to battle, with pathetic bravery, against odds of infinite length.

Stranger still, hereditary rights would appear to be maintained by some birds in a nesting site even at the cost of violating a family habit. The common gull is a gregarious bird, yet from time

immemorial a solitary pair has bred every year on the stone depicted in our illustration on the opposite page, situated in the middle of a small Hebridean fresh-water loch.

It is by no means an uncommon occurrence for two birds belonging to widely different species to make use of the same nest with alterations and improvements during a single season. Last May a blackbird built and used a nest in a young oak tree near my home, and in July a turtle-dove added a storey, and occupied it.

This utilitarian record is, however, easily beaten by the experience of a Birmingham ornithological friend, upon whose accuracy of observation and veracity I can place complete reliance. A magpie built her nest, and a kestrel hawk took possession, and laid a clutch of eggs in it. She, in her turn, was, however, robbed by a collector, and the structure was afterwards successively and successfully utilised by a tree sparrow and a great tit for the propagation of their kind.

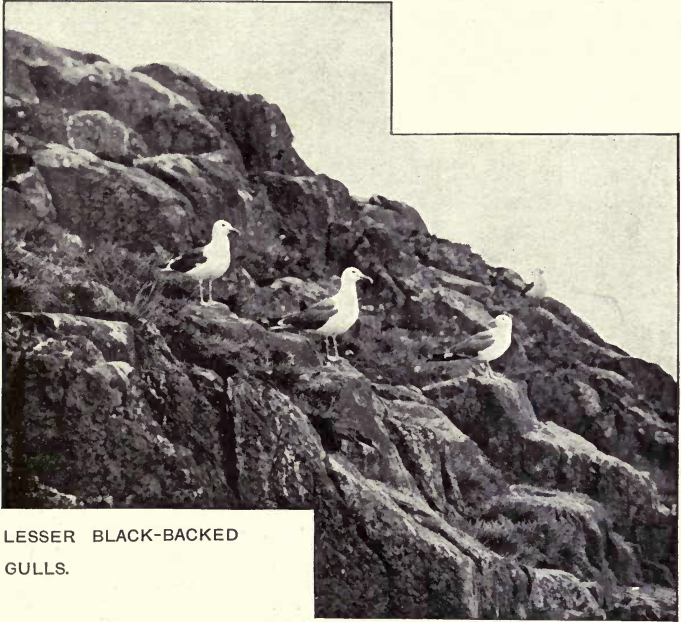
Open avian robbery of an unsuspected character occasionally takes place.

A blackbird has been known to annex the home of a song thrush and line it with fine grass whilst it was occupied by eggs, which she respected to the extent of not covering over.

At the Farne Islands a year or two ago an eider duck and a lesser black-backed gull nested

in close proximity to each other. One day, both birds were frightened away from their incubating operations, and the latter, returning home first, took the opportunity to devour her neighbour's hopes and expectations. There was nothing very wonderful or un-gull-like in this, but the eider duck's subsequent retaliatory behaviour was certainly novel. She turned the tables upon her enemy by taking complete possession of her nest and eggs, and undertaking the work of nidification for her.

I am sometimes told by people whose acquaintance with what I would call the operative side of natural history is somewhat limited, I fear, that all the interesting facts connected with British ornithology have long ago been discovered and chronicled in books. Experience has persuaded me that Nature, although alluringly rich, does not yield up her secrets in such an easy, wholesale way as to render this possible. She has her unguarded moments, of course, but generally insists that the discoverer of her ways shall work hard for the little he learns, and I would not like to confess how many hours of cramped misery it has cost me to find out a few things that would perhaps be regarded as mere trivialities by many people: for example, to establish the fact that nearly all wild birds that feed their young on insects like to deliver the



LESSER BLACK-BACKED
GULLS.

food alive into the mouths of their hungry offspring. If the unfortunate victims should die, through being grasped too long or hard between the mandibles of their captors, they are either dropped to the ground or swallowed by the old birds, and a fresh supply promptly sought after.

In spite of the jealous way in which Nature hides her secrets, it sometimes happens that the student stumbles upon little scraps of curious information quite fortuitously.

One day, I found the nest of a song thrush in a small chalk-pit close to my home, and determined to secure a series of sun pictures of the



SONG THRUSH ON NEST.

parent birds at work, brooding and attending to the multifarious wants of their chicks. I accordingly erected my little hiding tent close by, and covered it carefully with twigs, dead grass, and whatever other flotsam and jetsam of the woods I could find lying around. As soon as the birds had become thoroughly convinced of the harmlessness of my contrivance, I entered it early one morning with the camera and a prodigious supply of plates.

It was not long before the female thrush (distinguished by her lighter and larger spotted breast) came along with a protesting crowd of wriggling worms, which she distributed very impartially amongst four little yellow mouths opened wide in supplication. The weather was very chilly, and after feeding her chicks, the mother-bird sat down in the nest and puffed out her

plumage in such a way that no breath of cold morning air could reach her featherless and almost downless brood beneath.

As the day grew on apace, and consequently became warmer, the bird left her nest, and went away in search of food, which her husband was bringing in beggarly quantities, and with no great frequency.

From a supplementary peephole in my hiding tent I discovered a pert cock robin feeding his wife, sitting on a nest upon the opposite side of the chalk pit. His industry and solicitude were so great that his mate's appetite became satiated to the extent of an utter refusal to open her bill for the most tempting morsel, and, to my astonishment and delight, her husband kindly brought the food over and gave it to the grateful baby



MALE SONG THRUSH
BRINGING FOOD.

song thrushes in front of me. My surprise was so complete that during his first visit I utterly forgot to use the camera. This neglect on my part proved of little consequence, however, for he afterwards gave me plenty of opportunities of exercising my skill. His assiduity knew no bounds, and the comical way in which he cocked his little head on one side and gazed at the open-mouthed recipients of his charity was an ornithological treat such as I may never enjoy again.

Once, when he arrived with food and alighted on a hazel twig growing immediately over the nest, the female song thrush happened to be at home, and there was an exchange of looks. By one of those aggravating mischances, unfortunately not uncommon in the experience of the naturalist photographer, I missed a wonderful picture of avian expression. From whatever impulse the generous action of the robin sprang, the owner of the nest made it unmistakably plain that his assistance was not appreciated by her, at any rate. Redbreast did not stay to argue, but discreetly retired into the wood beyond, and waited until the back of the mavis had been turned in search of more victuals, when he promptly re-appeared upon the scene and opened the floodgates of his charity more widely than ever. He brought food at such an astonishing rate that when the thrush came back



ROBIN BRINGING FOOD TO YOUNG THRUSHES.



ROBIN LOOKING AT YOUNG THRUSHES AFTER HAVING FED THEM.



THRUSH HOLDING FOOD TILL HER CHICKS GROW HUNGRY AGAIN.

with her somewhat insignificant-looking catch, her chicks would not open their mouths to receive it, and she was therefore placed under the rather humiliating necessity of sitting down, as shown in our illustration, and holding it in her bill until such time as they should grow hungry again.

Wishing to ascertain what relationship existed between the affection and intelligence of these two species of birds, I ran over and borrowed a couple of young thrushes that were covered with feathers and almost ready to fledge from a nest not far away, and, taking the food-surfeited chicks out of their home, put the strangers in, and retired with the callow brood into my place of concealment to await developments.

When the male song thrush arrived with food, he gave it to the changelings without taking the slightest heed of the fact that they did not belong to him. His mate certainly did notice that there was something radically wrong, judging by the expression on her countenance, but very soon became sufficiently reconciled to the situation, not only to feed, but to sit down and cover the strangers.

I now turned my experimental attention to the robin sitting on the opposite side of the chalk-pit. Exchanging her clutch of eggs for two of the baby song thrushes in my hiding tent, I retired again to wait and watch. As soon as

all was quiet, back flew the redbreast in a hurry to her home, and received a very unpleasant shock. Directly she set foot on the edge of her nest, the young thrushes shot up their heads and opened their mouths wide in request of food. This startled the robin into precipitate flight and the liberal use of very uncomplimentary avian language. She scolded for several minutes whilst maturely considering the situation from a safe distance, and then timidly ventured to indulge in a second inspection of the strange phenomenon, with a precisely similar result.

After a good deal more reflection, and many angry exclamations, she returned a third time, and boldly stood her ground until the chicks, weary of begging in vain, gradually subsided into the cavity of the little nest. Then she hopped in, and attempted to brood them. This was immediately the signal for a fresh outburst of dumb demand on the part of the young birds, and, vigorously shooting up their heads, the robin slipped awkwardly between them. Quickly convinced that there was nothing to eat being given away, the callow impostors settled down and were covered by their duty-accepting foster-parent.

By-and-by, along came cock robin with a supply of food. I was anxious to ascertain something of his powers of perception, but his mate did not gratify me. She sat tight on the

nest, and the male fed her whilst standing on her shoulders in the same way that meadow pipits and other small birds may frequently be seen feeding young cuckoos after they have left the nest.

I now changed things all back to their original condition of existence, and although there was a certain amount of mild surprise visible in the attitudes of both the female song thrush and redbreast, everybody quickly became used to, and apparently well contented with, the old order.

These and similar experiments already mentioned, convince me that the parasitic path of the cuckoo is an extremely easy one.

Strange accidents sometimes befall birds. Whilst in the Highlands of Scotland last summer, trying to secure photographs of red-necked phalaropes swimming on the surface of a small pool close to a favourite loch, a couple of bare-legged boys came to watch me at work, and volunteered to drive the confiding little birds within my field of focus. As there were no stones available for casting, with a frightening splash, into parts of the loch too deep for the boys to wade, the elder of the two took a number of stale eggs from a deserted moor-hen's nest and began to hurl them beyond the birds. To my amazement and great grief, one of these clumsily thrown missiles struck a phalarope on the head, and killed it instantly.

A year or two ago I found the remains of a lapwing that had perished miserably on the Westmoreland Fells. The luckless creature had got one of its legs entangled in a piece of coarse sheep's wool attached to a growing heather stalk, and by its struggles to free itself had twisted the wool into a yarn of such consistency and strength as to render escape hopeless and starvation inevitable.

During a natural history trip to Broadland last spring, I had a brood of unfledged yellow wagtails under daily observation. One morning, when I visited the nest, I found a member of the otherwise happy thriving family showing signs of great distress. The chick was gasping in such a convulsive way as to suggest that it would soon bid adieu to all the dainty flies and other pleasant things of this world. I lifted the little sufferer from the nest, and was surprised to find that a companion accompanied it a couple of inches away and upside down.

A cursory examination proved that all the trouble was caused by one end of a fine piece of nest lining fibrous grass having become entangled about the neck of one chick and the other twisted round the thigh of its companion. I quickly released both birds, and thereby re-established the comfort and harmony of the whole household.

The remarkable behaviour of another brood

of yellow wagtails, living in a nest close by, illustrates the extreme rapidity of mind development in young birds. One day when I visited them, although open-eyed and well advanced in feather dress, they shot up their heads like jacks-in-boxes, and opened their mouths in greedy request; but the very next, although I had not handled them, and am certain that no one else had done so, they crouched low in the nest, and made no sign, except one of anxiety to hide from me. Such a complete reversion of mental attitude in less than twenty-four hours is difficult to understand when it is considered that I did absolutely nothing calculated to form an object-lesson in the dangerous.

Although it is a well-known fact that many members of the duck family lose their flight feathers so rapidly during the moulting season that they are unable to make use of their wings, such a calamity rarely befalls any passerine bird. One instance has, however, come within my experience. Whilst staying with some friends in the North of England, I had a perfectly plump and healthy missel thrush brought to me, unable to fly. Examination and experiment revealed the interesting fact that the bird had lost such a large number of quills from her right wing as to unbalance her completely.

It is by no means an uncommon thing for a

humble bee to take possession of a wren's nest and use it for her own domestic requirements, but I imagine it is not often that such a small creature aspires to either the room or elevation afforded by a squirrel's drey. Three years ago, whilst searching a plantation on the slopes of the Pennine range, the small boy who was doing my tree-climbing for me suddenly withdrew his hand from a squirrel's nest I had requested him to investigate, and made a startled exclamation. In response to an enquiry on the subject of his alarm, he answered, "Tharr's summat quear about this!" And he hurled the whole thing viciously to the ground before I could stop him. I naturally expected to find an ill-fated family of baby squirrels in the shattered structure, but my surprise was as great as that of the boy's when I found a humble bees' nest and a dead stoat amongst the moss, dry grass, and twigs.

The trunk of the fir-tree was branchless for a yard and a half from the butt, and the drey between thirty and forty feet from the ground, and how the stoat—which had apparently been dead before the humble bee took possession—came there is a mystery to me. I cut his tail off, and brought it away as a souvenir of the strange occurrence.

A friend of mine, whilst taking a walk one day through a Surrey wood, heard a jay com-

mence to shriek piteously not far away, and hurrying in the direction of the sound, was astonished to discover that the wary bird had been caught by a stoat. His presence put an end to the encounter, and the bird (which had been rolling over and over upon the ground, a confused bundle of feathers) flew away, apparently little the worse for its perilous experience.

In all the course of my observations of wild Nature, which has been by no means inconsiderable, only twice have I seen stoat and rabbit encounters.

In one case I arrived upon the scene just in time to witness the beginning of the struggle near to some burrows, ran to a house about one hundred yards away for a gun, and got back, to find the bloodthirsty murderer in a steel trap and bunny gone.

The other struggle of which I was an eye-witness ended less happily for the rabbit.

Immediately behind Caterham Valley, wherein I reside, is another waterless little ghyll, given over almost entirely to the propagation of rabbits and the learning of marksmanship by men who are not likely to be asked to test their skill upon the rabbits, but upon their own kind in the event of war.

During certain days of the week, in spring and summer, it is much used, and not a safe

place to wander near, because whatever the red flags you see fluttering gaily on the surrounding hill-tops may signify to you, they do not by any means prevent stray bits of lead from wandering a long way beyond the area they enclose. A ricochet bullet passing close over your head sings a nasty song, and I expect if it hit you, would leave an equally unpleasant mark.

Requiring a sun picture of a rabbit rather urgently one day, I took my camera into a field immediately behind the rifle range, and not far from the targets, focussed the mouths of some exposed holes in a big burrow half overgrown with nettles, put a plate into position, and began to call rabbits out to be photographed.* At this juncture a number of marksmen commenced volley-firing, with the result that ricochet bullets began to screech their uncertain way over my head. The first suggested that my position might not be quite safe, the second convinced me, and in less than ten minutes the third made me decide to leave, although rabbits were stirring amongst the nettles and rushing excitedly from hole to hole.

* My ability to do this has been questioned, but I am quite prepared to demonstrate my skill in this direction to any reputable person in exchange for a similar piece of information (not already known to me) in fieldcraft. Many things that appear very wonderful and mysterious to the lay mind are mere common-places to the man who has specialised.

Picking up my apparatus, I walked away in the direction of home, filled with annoyed contempt for the marksmanship of citizen soldiers. I had not retreated forty yards before a rabbit began to scream again outside the burrow I had just left. Returning to pick up what circumstances naturally suggested would be the victim of a stray bullet, I beheld a three-parts-grown rabbit kicking its way convulsively out of a little forest of stinging-nettles, half of which grew on one side and half on the other of a rough fir slat fence dividing the rifle range from the field in which I stood.

When almost in the act of stooping to pick the unfortunate animal up, I was astonished to discover that it had a stoat holding viciously on to the back of its neck. I involuntarily raised my foot with the intention of wreaking vengeance on the assassin, when it flashed across my mind that as it was manifestly too late to save the rabbit, why not try to photograph the pair? Upon espying me so close, the stoat's malignant little eyes fairly blazed, but instead of releasing his hold, as I had expected, and beating a hasty retreat, he simply turned the head of his victim with the resolute determination of a capable rider on a restive steed, and the next struggle carried both beneath the fence and on to the range beyond.

By this time I had forgotten all about the dangers of ricochet bullets, and with trembling haste excitedly pushed the lens of my camera between two palings, focussed, put a plate in, and fired off the focal plane shutter. But alas! hunter and quarry had now got so much hidden amongst grass and nettles that there was small room left to hope for a successful negative. This induced me to leap over the fence and place the rabbit (which was now quite dead) in an opener and, consequently, more favourable position for my purpose. The stoat retired under pressure beneath some stunted blackthorn bushes, but reappeared again directly I got my apparatus ready; and quiet, save for the intermittent crackle of rifles six or seven hundred yards away, was restored. Following a rabbits' track which ran parallel with the fence, he came and peeped impudently between two bark-clad slats at me, as I knelt beside my camera, and, quickly making up his mind that I was nothing of a very dangerous character, bounded away in search of his prey.

I had taken the precaution to drag the rabbit along the



STOAT AND RABBIT.



STOAT ABOUT TO DRAG DEAD RABBIT AWAY

ground from the place where I found it lying to the open space where I desired to photograph it and its slayer, but the stoat did not appear to be guided by scent in his search for it. He leapt about in the grass until he discovered it by sight, and I secured the illustrations herewith reproduced of him in the act of taking re-possession of his victim.

My efforts at securing pictorial records of his doings became too persistent for stoat patience, and, ruefully giving up his prize, he returned to the burrow from which he had recently emerged. In less than five minutes there was another piercing scream, and rabbits of all ages began to bolt, helter-skelter, north, south, east, and west. A half-grown one came and sat for a moment in front of me. The quivering nostrils and blazing eyes of the little fugitive told a pathetic tale of terror. It was followed almost immediately by its relentless foe, but, contrary to expectation, instead of giving up the struggle and abandoning itself to helpless fascination, it bolted, and I watched it run without stopping in an almost straight line for four or five hundred yards. The stoat followed for about half the distance, and then gave up the chase, and returning to the burrow, I saw him no more.

Whilst photographing loaches and bullheads in shallow parts of the River Eden on one occasion,



BULLHEAD SWALLOWING LOACH.

a boy who was reflecting light for me with a mirror, suddenly exclaimed: "I can see a bully with a tail at either end of his body, mister." This somewhat startling assertion proved to be literally true. The fish had just caught a loach more than half its own length, and had succeeded in swallowing all of it except the portion shown in our illustration.

In the days of my youth I have tickled trout with bullheads, members of their own kind, and even water shrews in their mouths, but how such a slow, easy-going fish as a bullhead could make one so nimble and vigorous as a loach captive is to me a mystery, I must confess. It might have been sickly or injured, of course; but no evidence supporting such a theory could be traced when the prisoner was released from its captor's jaws.

The behaviour of even the lowliest of wild

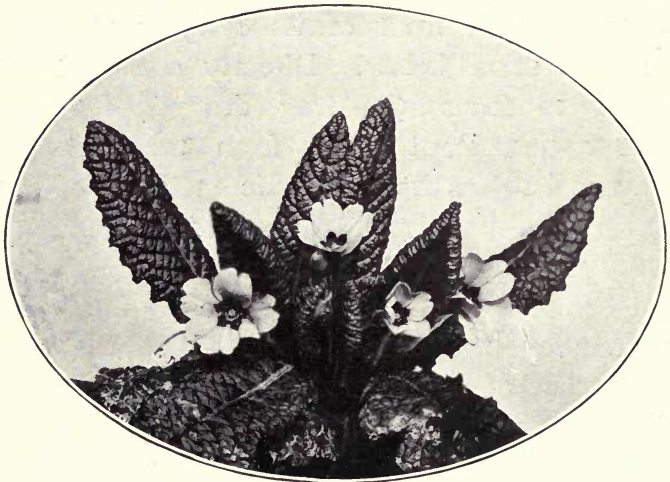
creatures is sometimes difficult, if not impossible, to explain. Requiring a photograph of a frog on one occasion, and finding a specimen amongst rushes and other coarse herbage, rendering it difficult to figure the amphibian, I placed it on the top of a lichen-clad rock. Immediately this was done the creature staggered me by placing its fore-feet in front of its eyes, as shown in the illustration below. Directly my back was turned to focus, the frog dropped its spoilt child antics, leapt down from the rock and away as hard as its gymnastic methods of progression could carry it. I brought it back again to my prehistoric studio chair, but it was a long time before it would again assume the interesting attitude of bashfulness displayed at the commencement of our interview. Whether the reptile's strange behaviour had its origin in mere



STRANGE ATTITUDE OF A FROG WHILST
BEING PHOTOGRAPHED.

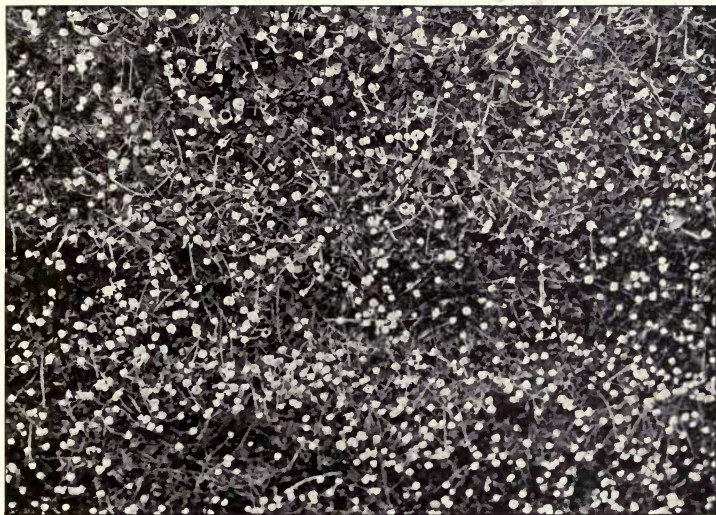
sulkiness, or was the result of pain caused through my hand pressing too heavily on some old and invisible injury, it is difficult to say.

The closing days of the nineteenth century were so mild that primroses were in bloom in many woods throughout the south of England.

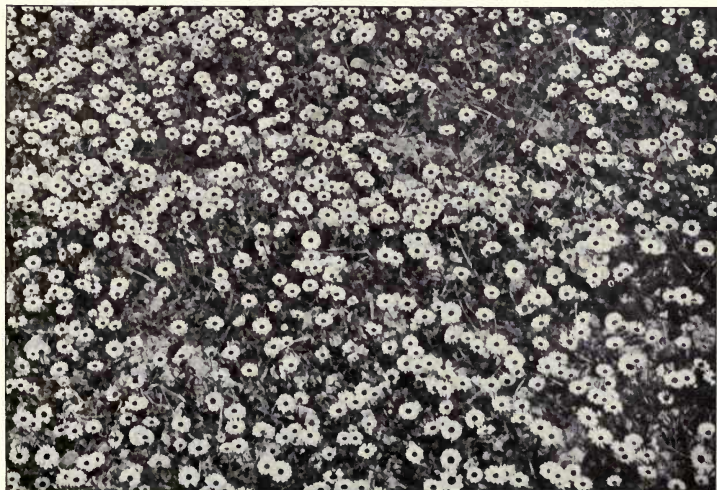


PRIMROSES PHOTOGRAPHED IN FIRST
MOMENTS OF THE TWENTIETH CENTURY.

Wishing to celebrate the commencement of the new century by some photographic exploit, we got a root of these flowers under focus during the last evening of the old one, put a plate into the camera, charged our magnesium flash-lamp with powder, and waited for the last stroke of midnight to boom from a neighbouring church steeple. Directly that happened, we fired, and secured



DAISIES ASLEEP.
(PHOTOGRAPHED BEFORE SUNRISE.)



DAISIES AWAKE.
(PHOTOGRAPHED AFTER SUNRISE.)

the foregoing record during the first moment of the twentieth century.

Many people miss the pleasures of the countryside through their inability to see the interesting changes that are constantly going on around them. I have been told by scores of men and women who have lived in the country all their lives that they had no idea there was so much difference in the appearance of daisies asleep and daisies awake until they saw enlargements on the lantern screen of the pictures reproduced on the previous page.

The photographs were taken near to London, before the sun had risen and afterwards.



WILD CANADIAN GEESE.

THE DESCENDANTS OF BIRDS INTRODUCED
TO A NORFOLK MERE FORTY YEARS AGO.

CHAPTER III.

BIRDS OF MOORLAND, LOCH, AND TARN-SIDE.



DESCENDING A CLIFF
WITH CAMERA.

WHEN I first opened my eyes, I beheld fair hills, clad in the glory of purple heather, and filled with the sweet music of the moorcock; and so much of original instinct remains within me that, when my life work is done, I long to return thither for the sleep that knows no waking.

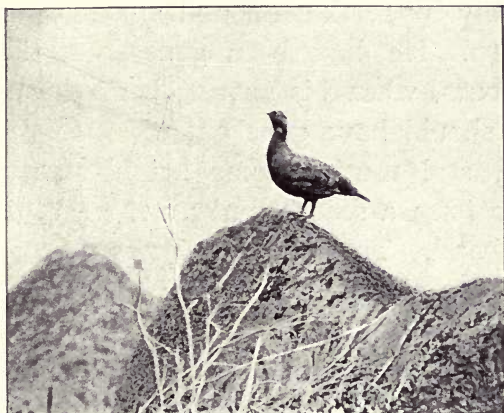
Man is a creature of strange follies, and my heart goes out in feminine tenderness to the poor fellow who lost a situation and three hundred pounds a year because he could not resist the temptation to run away to his beloved native hills when, in fancy, he heard the grouse becking whilst lying in his bed at dawn, on the twelfth of August, in a far-away, grimy manufacturing town.

Considerably less than a century ago poor men made a living by shooting the lordly grouse in the romantic old way—over dogs; but so fashionable has the sport become, that it is now almost exclusively the pastime of millionaires and combinations of prosperous merchants, who pay fabulous sums for good moors, and engage small armies of men to repress the natural enemies of the bird. Not long ago, whilst in the Highlands of Scotland, I counted no less than eighteen heads of ravens nailed up in a gamekeeper's vermin museum.

The call-note of the female red grouse is easily imitated, and, when well done, proves a most seductive attraction, as most poachers are aware, to the males. By repeating it, my brother drew the old cock figured in the illustration on the opposite page within practical range of his gun camera.

Grouse are very talkative birds, and there can be no more glorious experience for either ornithologist or sportsman than to sit hidden in some deep moss hag during the dappled dawn of a fine autumn morning and listen to them.

At the first peep of day the females commence to cry *yow, yow, yow*, and are answered almost immediately by their companions springing into the air on whirring wings, and calling out in loud, far-sounding notes, *birbeck, goback, goback, goback*. I have many times seen members of the



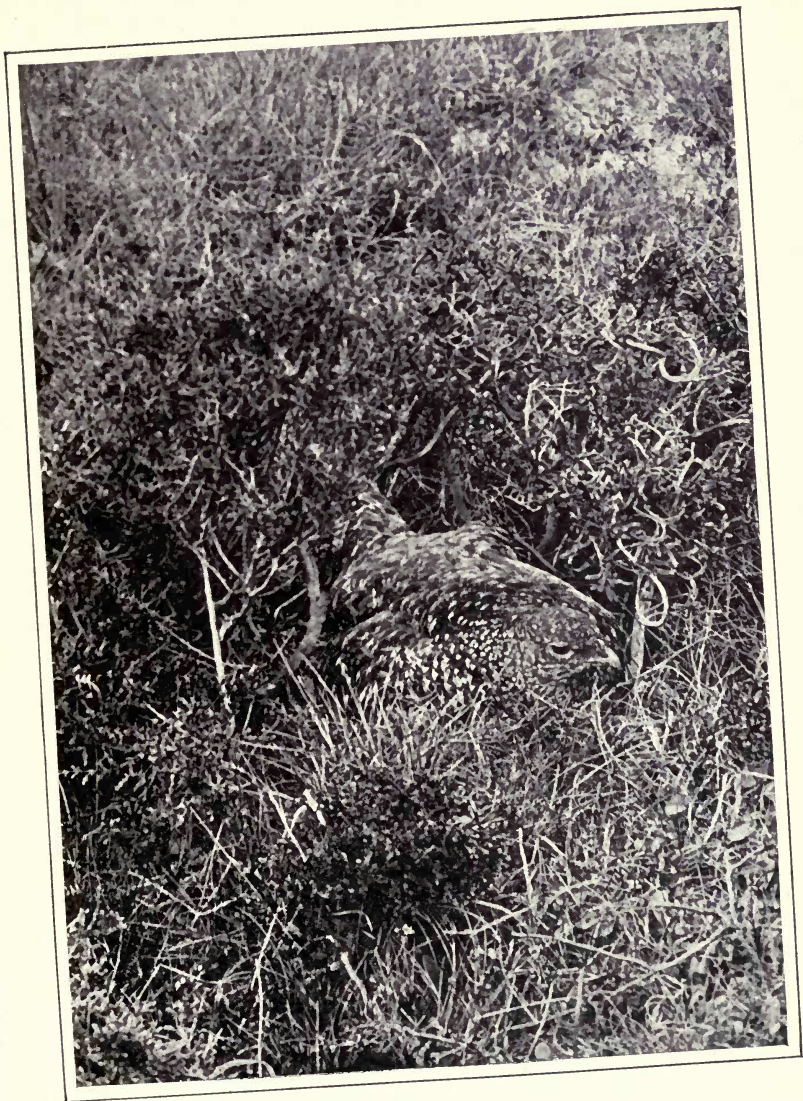
COCK GROUSE ON A STONE.

species, in the exuberance of their joy when completing this song, throw back their heads, and elevate their tails, until they almost touched each other. They also have another note, generally uttered whilst they are on the ground, which is an exceedingly plain and emphatic *cock-away, cock-away*. All sounds made by the male red grouse have so much of the quality of the human voice in them that they have frequently been mistaken by people unacquainted with the wild life of the moors.

Some years ago an old man named Birkbeck, living amongst the Westmoreland Fells—where the name is pronounced Birbeck—had a little domestic tiff with his wife in the middle of the night, and decided to end matters rather

drastically by getting up and going away, never to return. He had been gone from the house some hours, when his spouse, becoming alarmed lest he should have gone out to destroy himself, got up, and rousing some neighbours, induced them to form a search party and go to look for her husband. These men had not proceeded far, before they observed the old man coming down from the hills. When they met him, they enquired how it was that he had changed his mind so speedily. "Well," replied the veteran, "when I got upon the moors and the grouse began to awake, they commenced to say, '*Birbeck, go back go back, go back,*' and I thought as the very fowls of the air had taken to giving me sensible advice, I would adopt it and return to my dear old wife after all."

The red grouse is a bird capable of assimilating a certain amount of education, as most modern sportsmen who have taken the trouble to study its habits are aware. Some years ago I knew an old man who held absolute sway over a piece of heather-clad property situated almost in the middle of one of the best grouse moors in the world. When the twelfth of August came round, he never fired a shot, but set thousands of fine copper-wire snares in the sheep tracks, knowing full well that when his neighbours began to drive and shoot, the birds would be likely to fly on to



HEN GROUSE SITTING ON HER NEST.

his property, thinking it to be a haven of rest, instead of a veritable death-trap. This man told me rather admiringly that he had watched an old cock grouse run past and leap over no less than eighteen snares set in succession.

The brooding moor-fowl—as the bird is called in many localities—is rather a close sitter. Two years ago, whilst in the North of England, I started out nest-hunting on the hills one morning, unhampered by photographic impedimenta, on account of the unpromising character of the weather. In the afternoon I found a hen grouse sitting on her nest in an exceptionally open place. The bird was so tame that she allowed me to stroke her back plumage, and only clucked in a soft, motherly note when I put my fingers gently beneath her body. The skies had cleared, and here was a chance of picture-making that raised my enthusiasm to boiling-point. Away I rushed, three long miles down the hills, for my camera and plates. In due time I returned, hot and tired, but filled with a great hope. Throbbing with excitement, I fixed up in front of the nest, but, alas! just as my head was about to disappear beneath the focussing cloth, there was an ominous whirr, and I was left to gaze brokenheartedly on four newly hatched chicks and three chipped eggs. A few days after this trying experience my brother, who was working in



YOUNG GROUSE IN HEATHER.

Derbyshire at the time, sent me a print of the picture reproduced on page 95. He had secured the photograph and I the disappointment. When danger threatens a family of young grouse the chicks scatter for safety in the heather.

The Arctic skua, otherwise known as Richardson's skua, although a bold pirate of the seas, resorts to moors in the Hebrides, Shetlands, Orkneys, and on some parts of the mainland of Scotland, to breed, and I have found its nest in close proximity to those of the red grouse and golden plover.

It has been my good fortune to witness the interesting tactics of this winged buccaneer whilst engaged in open robbery on several occasions. As soon as he espies a number of smaller sea-gulls feasting upon a shoal of surface-swimming fish, he marks out a successful member of the

party, and promptly gives unremitting chase. It does not matter how the fugitive twists, doubles, or dives through the air, the robber's swifter wings always secure to him the advantage until the terrified gull is at last reluctantly compelled to disgorge its prey, when it is allowed to go its way without further molestation. If the harried bird should attempt to seek safety by alighting on the water, its unrelenting oppressor quickly disconcerts it by a series of tremendous downward swoops, which generally have the desired effect of inducing the wretched sea-mew to take wing again. My friend Mrs. Jessie Saxby has seen an enraged skua even strike and kill an obstinate gull that would not relinquish its catch of fish.

The illustration of an Arctic skua appearing on the opposite page cost me a good deal of trouble and a horse and trap the journeying over forty-eight miles of rough road. I heard of a distant Hebridean gamekeeper, who had a nest belonging to the species under observation for me ; but alas ! when I reached the place, it was too late—the chicks had already taken their departure. My field-glasses and a little patience, however, soon rectified the consequences of this misfortune, and in brilliant, breezy weather, I fixed up my hiding tent near by a second nest, and went inside to wait and hope.



ARCTIC SKUA ABOUT TO COVER
HER EGGS.

For over two hours the female skua did nothing but fly overhead, and alight on different knowes from sixty to a hundred yards away, and critically survey my handiwork, whilst the male danced servile, and what appeared from the indifference of his spouse to be unappreciated, attendance upon her. Convinced that the vibratory movements of my little tent before the strong wind were responsible for this, I furled canvas, and took the whole thing away a gunshot and a half, and, stretching myself at full length in the heather, awaited the coming of the gamekeeper, who was to return to me at a certain hour. In less than five minutes the bird was covering her eggs with a look of restored peace of mind on her countenance.

When the keeper, who had been delayed by some unforeseen business, arrived with a bottle of tea his wife had good-naturedly made for me, it was getting well on into the afternoon. I related my discouraging experiences to him, and propounded a scheme for the erection of a turf hovel in which to hide with the camera. His native shrewdness and the experiences of his vocation were on the side of my idea, and he immediately went off in search of a spade. With this we dug a hole almost hip deep in the ground for the accommodation of my feet and legs, and then placing the tent irons in position over it, covered them with great strips of turf, and left.

Immediately we had turned our backs, the skua rose from the knoll where she had been sitting with her mate intently watching us, and, flying to her nest, sat down with as little regard for our hollow excrescence as if it had been an ordinary heather knowe—which, indeed, we had striven to make it resemble as much as possible.

This was as satisfactory to my companion as it was encouraging to me.

If you want to find the way to a gamekeeper's heart, show him some scheme by which to outwit effectually the cunning of a wild animal, and when he has proved by experience that your idea is fuller of reason than fancy, you have made a friend for life of him.

Next morning the weather proved to be dull and windy, with a drizzling mist that made the loch peppered moor look black and dismal, and photographic chances gloomy in the extreme. However, remembering that the disappointment of the morning is often only the black bag in which the opportunity of the afternoon is hidden, I went forth to try.

The weight of the turves had driven my slender tent irons far down into the soft peat earth, but, in spite of this unavoidable reduction of space, I managed to squeeze the camera and myself into the dank apartment. The gamekeeper placed a large sheet of turf over the

hole through which I had just crept, and went his way.

In ten minutes the skua came back with the evident intention of dropping on to her nest right away, but catching sight of the lens peeping from beneath a shaggy eyebrow of heather on the side of the artificial knowe, she sheered off, and thought the matter over maturely whilst crouching



SKUA GOING ON TO HER NEST.

out of the wind behind a knoll thirty yards to leeward. Half an hour afterwards she tried again, but when she saw, in the slightly altered language of the poet,

“The great cyclops with one eye
Staring to threaten and defy,”

her heart failed her, and she alighted a few yards away, and, like the females of many other ground-builders, when afraid to venture on their nests,

commenced to crouch and hustle in a make-believe sort of way that she had eggs under her. This hollow pretence at brooding was evidently very unsatisfying, for in two minutes she gave it up, and, flying forward against the wind, pitched lightly on her nest, and engaged in the real thing.

The darkness of the weather made it almost impossible for me to indulge in rapid exposures, and the waving of the bent grass and heather, to say nothing of the constant head movements from side to side of the bird, rendered slow ones exceedingly difficult. However, on the principle of "nothing venture, nothing have," I made a number of more or less haphazard shots, one or two of which turned out good beyond all expectation. In two hours I made ten exposures, and then waited for a further period of like duration in an achingly cramped and more than moist position for a fresh supply of plates, which my companion discovered he had forgotten only when he arrived within a hundred yards of my hiding-place.

The unfavourable character of the weather and my physical condition, decided me not to wait until the keeper returned with the reserve plates, which he was anxious to fetch.

Whilst retracing our steps along the shores of a small loch, we saw a short-eared owl hunting for prey, and her peculiar erratic flight could be

likened to nothing so much as a piece of brown paper being carried up and down hither and thither by a fickle wind. She had a nest close by containing two chicks and two unfertile



SHORT-EARED OWL'S NEST.

eggs, the remaining three members of the family were like those in the nest, of varying sizes, and scattered about in the surrounding heather at distances of from fifteen to fifty yards from their old home. The short-tailed field vole shown in our illustration had



TWITE ON NEST.

evidently only just been caught, because it was quite warm.

The bold little twite is a bird of the heather and brae side, but at the same time very partial to shrubs growing in Highland gardens for nesting purposes. Whilst in Scotland on one occasion, a lady friend showed me a nest belonging to this species in an ivy geranium trained against the inside back wall of a lean-to greenhouse. The parent birds were busy feeding a family of chicks, and found their way in and out of the building through a broken pane in the glass roof.

I found two more nests belonging to members of the species in the garden. One was in a stunted gooseberry bush, and the other in a straggling young honeysuckle plant tied back to the stone wall surrounding the enclosure, and close by the much-used doorway, giving entrance to it. This latter specimen I kept under daily observation for more than a fortnight.

On the 14th of June it contained the first of six eggs, and on the 19th the last. When I paid my morning call on the 28th of the month, the bird had three chicks; thus the full complement of eggs was only in the nest seven clear days.

My experiences in photographing the brooding bird at home are not worthy of recital, because her boldness reduced my task to the point of

simplicity, however near the camera was placed to her nest.

One day we were visited by a deluge of rain, which was driven by a strong wind against the wall occupied by the twite. Knowing that the straggling branches of the honeysuckle afforded her very little shelter, I went out, and cutting a large rhubarb leaf, suspended it like a curtain in front of the nest, and stood on one side to see what would happen. In a minute or two back came the uneasy little bird, full of maternal anxiety to resume her duties. She eyed the obstruction over critically, and hesitated, but her indecision lasted only for a moment, and, creeping behind the rhubarb leaf, she sat down and enjoyed its shelter with an air of great satisfaction.

A stone's throw from the garden a girl, seeking lay-away hens' eggs, found a corncrake's nest in a bunch of nettles growing close to an old dry wall, one Saturday afternoon, and I had it shown to me the following morning.

The dear old soul who took me to see it did not recognise the enormity of her offence against Providence until some mischievous member of a numerous family of Skye terriers brought a dead corncrake home. This was at once interpreted as a judgment for showing me the bird's nest on the Sabbath. I pointed out that the faith within me was far too small to believe in the



CORNCRAKE ON NEST.

righteousness of punishing the innocent to the point of annihilation, and allowing the guilty to go free, and straightway went to discover the bird seated on her eggs, well and happy.

After a good deal of trouble in hiding the camera, I succeeded in figuring her at home.

A curious thing about a brooding corncrake is that when covering her ten or eleven large eggs, she almost assumes the dimensions of a common partridge, but directly she rises to her feet, which she does with a peculiar kind of quiet grace difficult to describe, she shuts up like a book, and slips away with the noiseless stealth of a shadow into the surrounding herbage.

This species is very numerous in some parts of the Hebrides. One day a crofter's boy and I found four nests, and on another two, and in each instance they were not fifty yards away from the swampy shores of a loch. I have noticed that in large clutches of ten or eleven, one egg is frequently much lighter in ground colour than the rest.

The red-breasted merganser is quite a common bird on many Highland lochs where trout are plentiful. In Inverness-shire I have found as many as three nests on an island of no greater area than the ground upon which the average suburban villa is built, and our illustration of a brooding female was secured on the mainland.



RED-BREADED MERGANSER.

close by. This bird sat so closely that she allowed me to take her off her eggs, and appeared to have a regular track in the deep heather leading down to the edge of the loch, where I frequently saw her fishing in the evening.

One day when I passed she was just in the act of escorting her downy family from the cosy old nest to the water, and although the youngsters scattered very cleverly when I disturbed the procession, I managed to find and secure a pair of them.

It is a melancholy reflection that one of the most beautiful and useful British birds is nearly everywhere steadily decreasing in numbers, owing to the fact that its eggs are being more and

more persistently sought after as breakfast-table delicacies.

I know one favourite haunt of the joyous lapwing not far from a North Country tarnside, where, luckily, the foot of the egg-gatherer seldom treads, and it is still possible to go and find as many as four full-clutched nests in an hour.

On one occasion I fixed my hiding-tent up close to a peewit's nest at this particular spot, and covering it with plenty of rushes and bent grass, went my way. Next morning I returned with the camera and a supply of plates, and spent several hours of fruitless waiting under the canvas. The bird had watched me go into hiding, knew perfectly well I was still there, and



YOUNG RED-BREASTED MERGANSERS.

was consequently in no hurry to face the ordeal of resuming her work of incubation with an enemy in such close proximity. She passed her time in flying overhead suspiciously, crying *peeweeep*, *peeweeep* in a voice much more raucous and less musical than that of her mate ; or running about agitatedly on the ground, pretending to pick up food which had no existence except in her imagination. Frequently she would stand in deep meditation for a few seconds, and then suddenly rise and wing her way to a neighbouring hill-top, as if about to abandon the whole matter in despair. But distance ministered not to her mind's unrest, and she quickly came back again.

At last I became convinced that my way of contending with such great natural shyness was vanity, and withdrew.

My next attempt was made under such a radical revision of tactics that the lapwing was completely deceived. I induced a friendly shepherd to stand by while I entered the place of concealment, and then to walk slowly away in pursuit of his duties. Within five minutes of the time the anxious bird had escorted the man, and his attention engaging dogs to a safe distance, she was sitting contentedly on her nest, and I had secured her portrait.

So completely was the guileless creature taken in by my shepherd ruse that she either did not



PEEWIT ON NEST.



PEEWIT WITH RAINDROPS ON BACK PLUMAGE.

notice the lens peeping from the rushes and bent grass, or did not heed it. At any rate, she showed the measure of her satisfaction with existing arrangements by frequently closing her beautiful dark eyes, and indulging in a momentary nap.

During the morning a gentle shower commenced to fall, and in order to show the fidelity of the camera, I photographed the peewit with a multitude of raindrops gleaming and twinkling on her back plumage. In the afternoon the skies cleared, and the sun rode in uninterrupted splendour through blue seas of space. The weather grew so oppressively hot that the bird gaped and panted where she sat, and several times left her exposed quarters to assuage her thirst in a neighbouring rill.

In the spring of 1902, whilst hunting for a ring ouzel's nest, in order to secure illustrations of the adult birds for our edition of "White's Selborne," I accidentally made the acquaintance of a pair of bonny wee baby snipes crouching in their soft coats of down amongst the coarse herbage of a moss bog. Fixing up my tent which a boy was carrying for me close beside them, I entered it, and awaited developments, with no great exuberance of hope, I must confess, on account of the terrifying way in which a strong wind was shaking my hiding contrivance about. Judge of my surprise, however, when

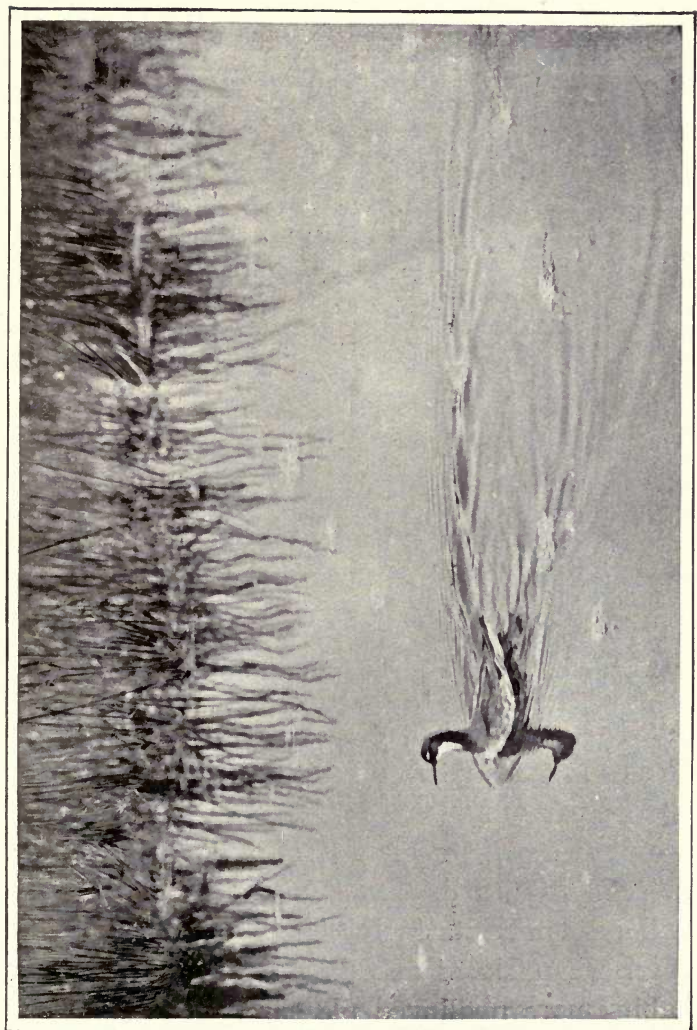


SNIPE COVERING CHICKS.

within ten minutes, the brave mother-bird thrust her long bill through the trailing rushes behind her chicks, and began to call them in all sorts of endearing little notes, of which I did not previously think the species vocally capable. As they did not immediately respond to her maternal blandishments, she crept through into the open, and, depressing her tail and elevating her breast, invited them to come under her by all sorts of affectionate signs and sounds. As soon as she had succeeded in getting them beneath her sheltering plumage she sat with the proverbial boldness of brass, and allowed me to photograph her over and over again.

My surprise had been great when the female came along so readily under discouraging circumstances, but it was still greater when the male bird boldly walked up with a supply of food, the precise nature of which I could not very well make out, owing to the accommodating length of his bill and the restricted character of my peep-hole of observation. As soon as he had divided his dietary treat between the chicks under his mate's approving supervision, he took charge of one, and she the other, and they sat for ten minutes side by side, Darby and Joan fashion, looking a veritable picture of matrimonial felicity.

This action on the part of the male snipe



THE RED-NECKED PHALAROPE SWIMMING.



BOYS DRIVING PHALAROPE.

proved conclusively that the birds had suffered some loss, and that they only had two instead of four chicks—the usual number reared by the species.

The red-necked phalarope is one of our rarest, tamest, and most elegant summer visitors. It still

breeds—or, to put it more accurately, attempts to do so—in one or two old haunts in the Hebrides, and elsewhere.

I have spent a good deal of well-repaid time in studying its engaging and confidential ways and can unhesitatingly assert that there is no species capable of affording the student of bird habits more unalloyed pleasure. Last summer I waded knee-deep in the silting-up bay of a loch for seven hours on end, studying and photo-

graphing the members of a small colony, consisting of three or four pairs. The different couples appeared to have their own favourite pools and shallows, which they diligently hunted morning, noon, and night for food. They swam along very hurriedly, looking from side to side in busy, eager haste, pecking here and there as if there was not a moment to be lost and the welfare of the whole universe depended upon their exertions.

I obtained a beautiful series of photographs of both males and females by focussing some particular part of the surface of a favourite pool, and then standing on one side with my pneumatic tube and waiting until a bird swam across it. One day, a couple of schoolboys volunteered to help me, by driving the phalaropes within my field of focus, and by this novel sporting method enabled me to expose several plates. On the following day I was all alone, and the birds seemed to have been so used to my apparatus, that by dint



PHALAROPE.

of care and patience I secured a number of exposures with the camera only some six or seven feet away from the bold little swimmers. I also obtained a wetting. Through standing so long in one place, I sank mid-thigh deep, and one of my boots became so obstinately fixed in the mud and silt at the bottom of the loch that I fell down, and was compelled to drag myself ingloriously out on all fours.

A strange thing about the phalaropes was that they would swim much nearer the camera when there was absolutely no inducement to do so than they would when it was fixed up in front of a nest with a clutch of half-incubated eggs in it.



A MOORLAND BECK.

CHAPTER IV.

INSECTS AND OTHER SMALL DEER AT WORK AND PLAY.

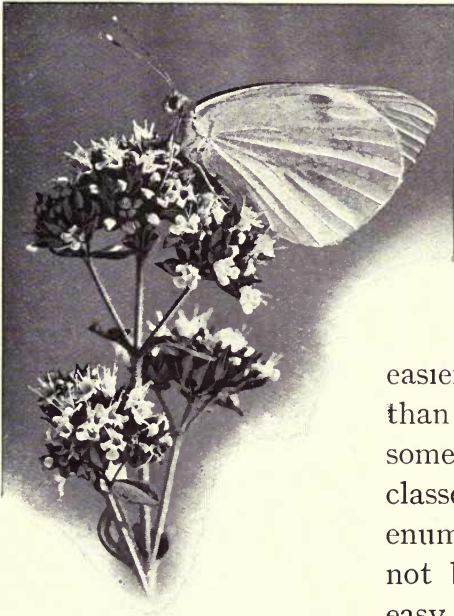


FRITILLARY BUTTERFLY.

IT is difficult to conceive that the study of entomology was held in so little esteem a century or so ago that an attempt was made to set the will of a distinguished personage aside because its maker collected insects, and must therefore needs be considered a lunatic.

Happily, all this has long ago been changed. Prejudice has been hopelessly overthrown by reason, and vast numbers of people now find an inexhaustible mine of recreative pleasure in studying the beautiful forms, interesting habits, and wonderful instincts of butterflies, moths, bees, beetles, spiders, ants, and other small forms of life with which our woods and fields literally teem.

Butterflies claim first place in the esteem of the great majority of students—partly, no doubt,



WHITE BUTTERFLY ON THYME.

from æsthetic reasons, and partly because their diurnal habits render the acquirement of knowledge in regard to them

easier and pleasanter than in the case of some of the other classes of subjects enumerated. They are not by any means so easy to photograph, however, during fine, sunny days, when they

are full of playful flittings from flower to flower, as might at first sight appear. In order to secure a picture of a large white specimen, my brother watched the behaviour of a number one fine summer's day until he thought he had succeeded in detecting a favourite piece of wild thyme for them to alight upon. Focussing this, he put a plate into position, and attaching his pneumatic tube, stood as far away as it would reach, but alas! as soon as ever the recording eye of the camera was fixed on the flower, the butterflies took a fancy to another

some distance away. The apparatus was changed again and again, with precisely similar results. At last, when on the verge of despair, it occurred to our photographer to focus one favourite flower, and then pull up all the others right round about, and within half an hour of this being done the illustration opposite was secured.

The frontispiece to the present work was secured more or less by accident. We suffered a very sudden fall in the temperature one afternoon in September, 1901, on the Surrey hills, and the butterflies were so benumbed by the cold that they were compelled to go to roost practically wherever they found themselves. Going for a walk in the evening, I discovered



PEACOCK BUTTERFLY.

the pair of large whites asleep on a flower, and rushing back for the camera, made a number of exposures upon them, but to small purpose, as development proved that there had not been sufficient light whereby to make good negatives.

Determining to rise before the butterflies next morning, I left my bed at daybreak, and went forth with the apparatus, to find that a very heavy dew had fallen throughout the night. Upon reaching the scene of operations I discovered that the wings and antennæ of the butterflies and petals of the flower upon which they rested were covered with minute beads of dew. This greatly interested me, and after exposing half a dozen plates, I stood by and waited until the sun rose to see what would happen when it had attained sufficient power to dissipate the moisture. Directly the globules of water had evaporated, the butterflies jumped up, and flew away, apparently not one whit the worse for their night's outing in unorthodox quarters.

The blue butterfly (*Lycæna icarus*) habitually sleeps in exposed places where it is swayed to and fro by the wind, lashed with rain, and besprinkled with dewdrops, but always more or less upside down, as shown in the illustration on page 128.

The peacock butterfly is one of our largest and most resplendent diurnal lepidopterous in-

sects, but by no means easy to photograph. The specimen represented above was figured in an East Anglian garden in the autumn.



SMALL TORTOISESHELL
BUTTERFLY.

Although the small tortoiseshell butterfly is said to be much less common in this country than it used to be, I know many nettle-clad tracts of land where it may fairly be described as abundant.

In a sheltered spot near my home I have watched members of the species on fine days during nearly every month of winter entering or leaving a number of old rabbit burrows in which they hibernated.

Curiously enough, during each of my five or six visits to the Farne Islands I have found specimens of this insect, alive or dead, in every room of the ruins of St. Cuthbert's Tower. I suppose the explanation must be that they are carried across the four or five miles of sea from the mainland by adverse winds, and seek refuge within the substantial stone walls of the ancient building.

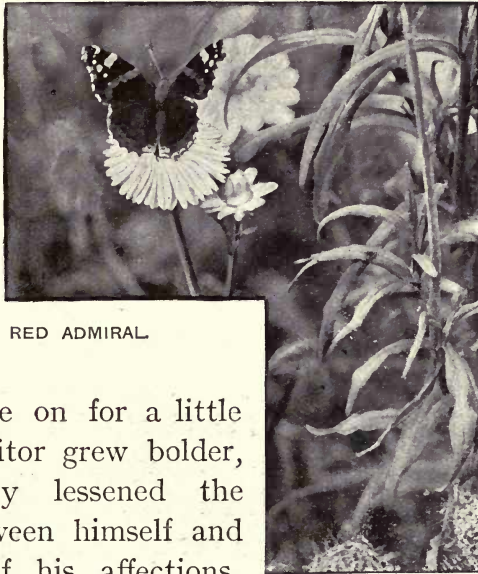
The courtship of these butterflies is exceed-

ingly interesting to watch. One balmy April day I was sitting down on a sunlit bank resting, when a pair came and alighted close in front of me, and went through a series of strange love-making antics. The wooed one stood still, with her wings erect, about two inches in front of the male, who spread his gorgeous organs of flight out to their fullest extent, and made them vibrate



BRIMSTONE BUTTERFLY
ON OXLIP

in the same tremulous way that many small birds move theirs during the pleasant days of courtship.



RED ADMIRAL

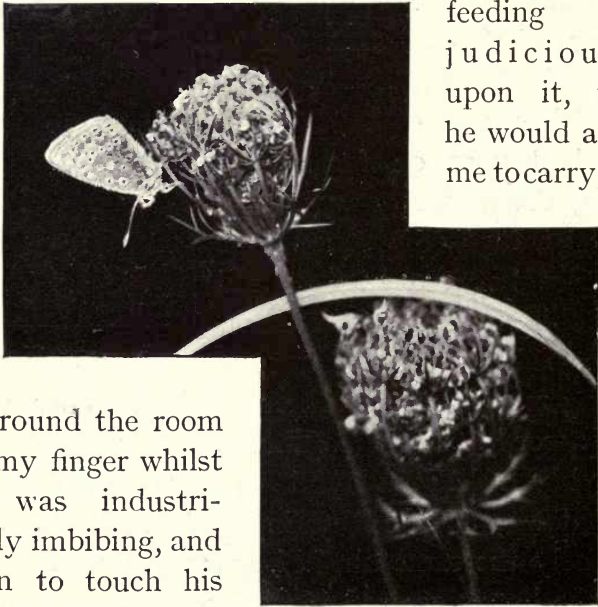
When this had gone on for a little while, the suitor grew bolder, and gradually lessened the distance between himself and the object of his affections, until the beloved one suddenly sprang round and faced her admirer. Then, with one accord, they rose into the air, and after enjoying a little playful winged excursion up and down, alighted again, and went through precisely the same kind of performance.

The handsome red admiral is a comparatively easy butterfly to photograph late on in its autumn season, because it is so fond of honey that it will stay almost any reasonable length of time on a smeared flower. Cupboard love is a powerful factor even in the insect world, and I have had a member of the species alight on my finger in an open field to partake of honey, for the sweets

of which I had made it long madly by baiting a favourite flower near at hand.

As an illustration of what may be done with a drop or two of honey, I have this very day so tamed a bluebottle fly that found his way into

my study, by feeding him judiciously upon it, that he would allow me to carry him



all round the room on my finger whilst he was industriously imbibing, and even to touch his well-groomed, much-cared-for wings.

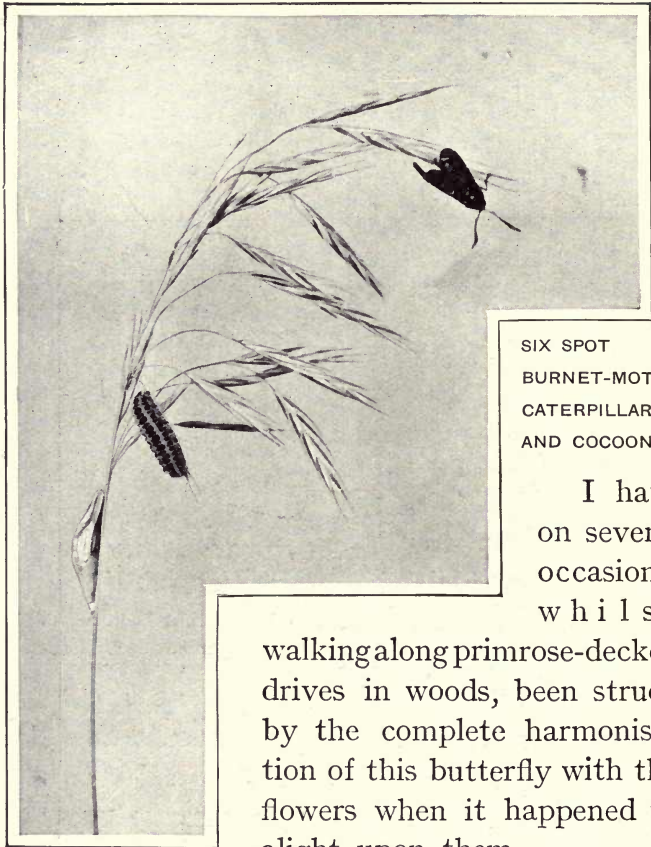
BLUE BUTTERFLY AT ROOST.

The powerful flighted, hardy brimstone, supposed by some authorities to have suggested the idea of "the butter-coloured fly," is an exceedingly difficult creature to photograph. It is, like other insects, subject to great seasonal variation in numbers. In this neighbourhood it was very



TIGER MOTH.

abundant in April, 1902, but during the corresponding month of the following year comparatively scarce.



SIX SPOT
BURNET-MOTH
CATERPILLAR
AND COCOON.

I have
on several
occasions,
whilst

walking along primrose-decked
drives in woods, been struck
by the complete harmonisa-
tion of this butterfly with the
flowers when it happened to
alight upon them.

Moths, although as a rule creatures of the night, are much easier to figure with a camera than butterflies, because, when found by day, they are generally quiescent, and may be easily attracted to a given spot during the calm, warm hours of summer darkness by what entomologists call "sugaring," which consists of

besmearing the trunks of trees with a decoction made of rum, treacle, and essence of jargonelle pears. They may then be photographed by the aid of a magnesium flash-lamp.

The tiger moth is a handsome fellow, subject



EMPEROR MOTH.

to great variation in colour and markings. It is the imago or perfect insect of the common "woolly bear," well known in almost every part of the country where anything in the nature of a garden is kept.

During the summer of 1902 I had nocturnal



BRIMSTONE MOTH.

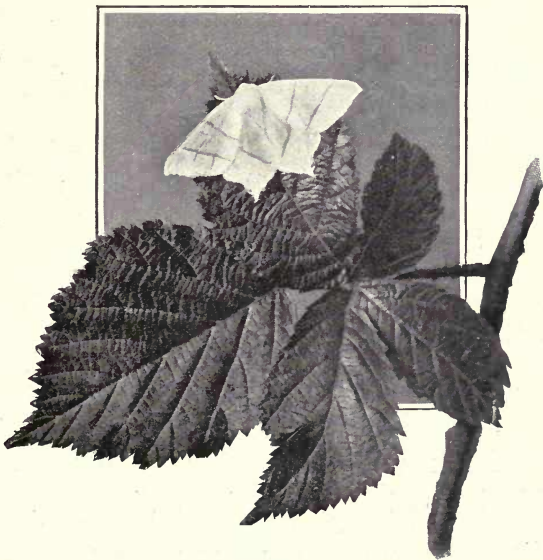
visits paid me in my study by several of these lusty creatures, and when the shadow of their wings, with an expanse of from two to three inches, fell across the page of my book, it was like that of a bat or bird. Throughout the very rainy summer of 1903 I only saw a single example.

The female emperor moth figured on the previous page was found and photographed, just after it had left its pupa case, amongst rushes on the Norfolk Broads.

The seasonal fluctuations of insect life are nothing less than wonderful. Two or three years ago six spot burnet moths literally swarmed in

Caterham Valley. The caterpillars formed their tough, boat-shaped, yellowish cocoons everywhere—on garden palings, doors, the glass of windows, inside and out, and even on zinc pails in daily use. In 1903 things were entirely reversed, and both this diurnal moth and the common meadow brown butterfly were suffering from a parasite which is somewhat similar in shape to a dog tick, scarlet in colour, about half the size of a pin's head, and able to run about freely.

Although the brimstone moth is said to be common, I have very seldom met with it either by day or by night. The specimen figured herewith



SWALLOW-TAILED MOTH



ANGLE-SHADES
MOTH ON DEAD
BEECH LEAVES.

was accidentally discovered whilst hunting for a redstart's nest in an old stone wall in Westmoreland.

I have met with the swallow-tailed moth close to London on both the northern and southern sides, and one of our greatest living authorities has stated that it is not uncommon in suburban gardens.

Mimicry, or "the close external likeness which causes things really quite unlike to

be mistaken for each other," is one of the most fascinating bypaths of natural history.

The upper parts of many British moths bear such a remarkable resemblance to patches of lichen that, when resting on the shady sides of stone walls and the trunks of trees, they are readily mistaken for something belonging to the vegetable instead of the animal kingdom.

The wings of the lappet moth bear a wonderful likeness to a dead brown leaf, not alone in colour,

but also in shape. Those of the angle-shades moth during diurnal repose are so folded as to render their owner easily mistaken for a small grub-eaten, curled-up, dead leaf. The specimen figured in our illustration was difficult to detect



ANGLE-SHADES MOTH ON GRASS STEMS.

when at rest amongst the leaf-strewn autumn grass, and much more so when it reclined amongst the dead leaves of beech twig.

I have frequently mistaken the small moth figured in our illustration on the next page for a sparrow's droppings in my garden.



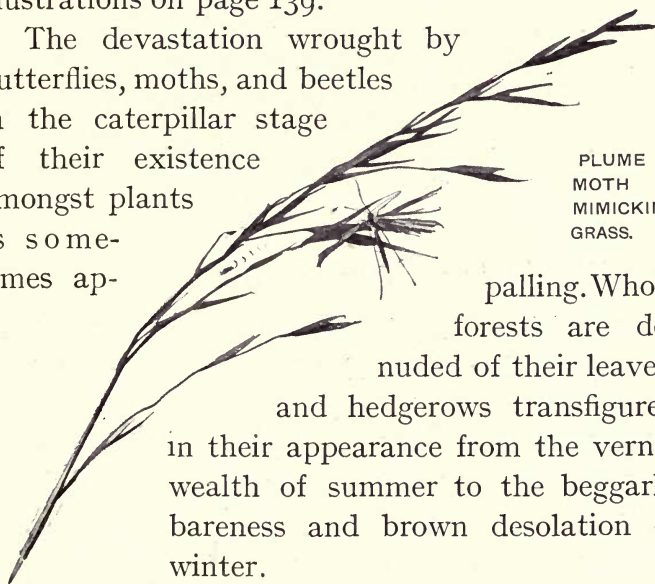
MIMICKING MOTH ON ROSE-LEAF.

Many small moths mimic grass seeds, and thereby, no doubt, frequently deceive even the sharp eyes of hungry birds. The example depicted in the illustration opposite is very difficult to find when it has flown a few yards away, and alighted amongst thousands of ripe grass seeds, which it matches to a nicety in coloration.

The large white plume moth is evidently not counted amongst the desirable edible trifles which insect-eating birds hunt after all day long, for it suspends its conspicuous body in all sorts of avian haunts without appearing to suffer harm through the publicity in which it indulges.

Many caterpillars are protected by mimicry. The loopers, as they are called, fix themselves by their claspers to a branch, and by making their bodies stand out rigidly from it give themselves the appearance of little twigs, as shown in the illustrations on page 139.

The devastation wrought by butterflies, moths, and beetles in the caterpillar stage of their existence amongst plants is sometimes ap-

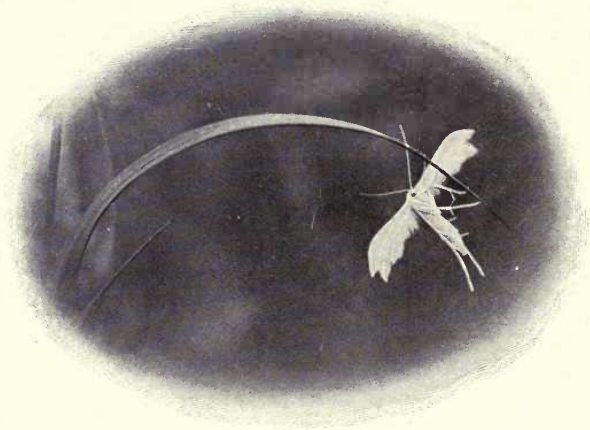


PLUME
MOTH
MIMICKING
GRASS.

palling. Whole forests are denuded of their leaves, and hedgerows transfigured in their appearance from the vernal wealth of summer to the beggarly bareness and brown desolation of winter.

Our first illustration (p. 140) shows a portion of a ragwort plant killed by caterpillars of the Cinnabar moth, and the second (p. 141) a colony of caterpillars of the Buff-tip moth destroying a hazel leaf—the ninth attacked in their all-consuming advance from the end of the branch.

The speed at which these creatures can eat is nothing less than marvellous. Last spring I made some observations on the gastronomical



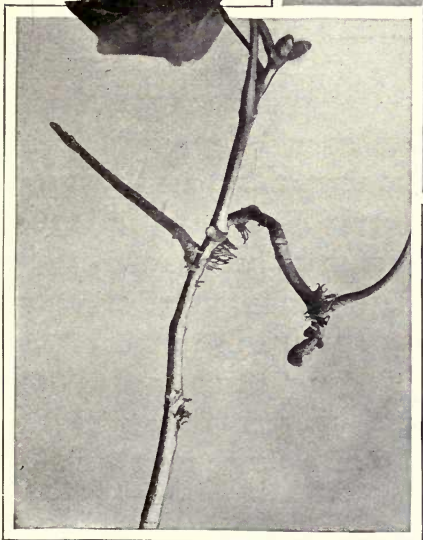
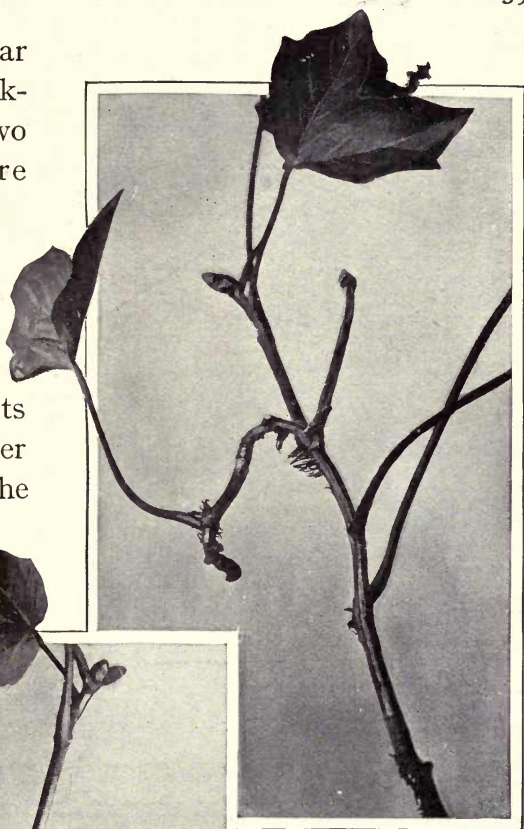
LARGE WHITE PLUME MOTH.

accomplishments of caterpillars of the drinker moth, and found that in from five to ten seconds they could cut a piece out of a coarse strong blade of sedge grass one-sixteenth of an inch in width and a quarter of an inch in length.

The beautiful caterpillar of the eyed hawk moth figured on page 142 was found feeding on an apple tree in my brother's garden. Although not a rare insect, it hardly ever occurs in sufficient numbers to cause real harm to the fruit tree which forms its favourite food.

Of the three common British humble bees, the species with transverse black and yellow bands seems to be by far the most numerous in the south of England, where, according to my observations, the entirely yellow kind is comparatively

rare. As far north as Yorkshire the two species are very nearly balanced as to numbers, but when we reach the Uists in the Outer Hebrides the



positions are entirely reversed.

The black bee with the orange-tipped abdomen appears to be much more evenly distributed,



CATERPILLARS OF CINNABAR
MOTH ON RAGWORT.

from a latitudinal point of view, than either of the above-mentioned species.

Last June, whilst in the Western Isles, I spent several days on the shores of a shallow loch, and was struck by the great abundance of white clover, yellow bees, and short-tailed field-mice and shrews. The nests of bees and mice were every-

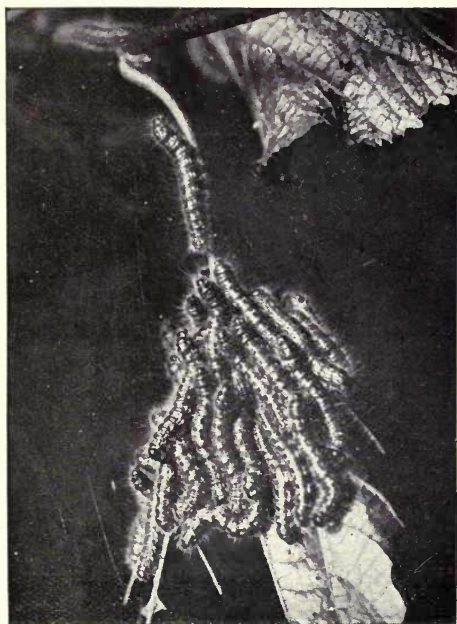
where amongst the rushes and bog grass. Upon opening several of the former, I found that the single females in them always repaired the damage by carrying the moss backwards.

Wasps are exceedingly interesting creatures to study. They visit my beehive in search of any unconsidered trifle they can pick up, and it does not appear to matter whether they find the newly thrown out body of a drone or a member of their own species, it is cut up and carried away to their nests for the benefit of the voracious larvæ.

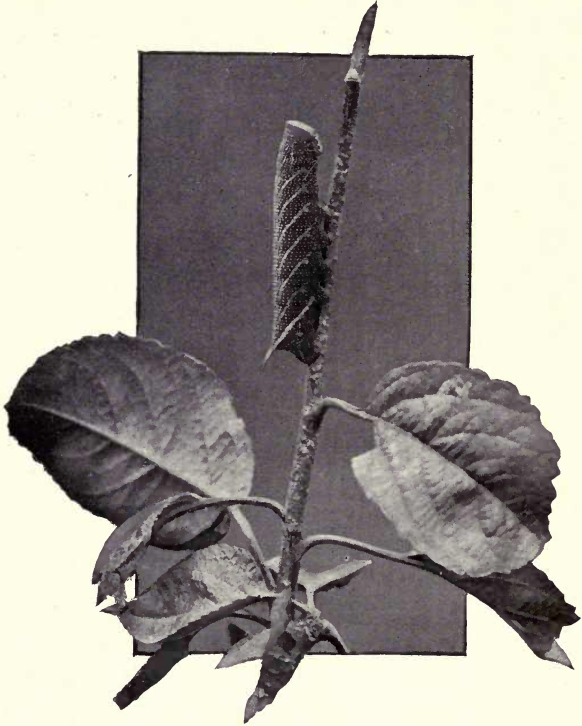
Impregnated females hibernate during the winter months, and it is interesting to note that during this period of quiescence they hold firmly on to something with their mandibles, and depress the wings until their tips lie under, instead of over, the end of the abdomen.

On the last day of January, 1901, I found a torpid wasp inside my stuffed ox standing in the garden, and placing it in a matchbox, took it indoors in order to note its behaviour in relation to tempera-

ture. In a fireless room, with the thermometer registering 43° Fahr., there was no sign whatever of life in the creature. When taken into a heated room, there was no movement shown until 54° had been reached, at which



PROCESSIONAL CATERPILLARS
ON HAZEL LEAF.



EYED HAWK MOTH CATERPILLAR.

temperature a concertina-like action commenced in the abdomen, and a twitching action of legs. At 55° the insect commenced to clean antennæ, at 56° to walk out of box, and at 70° to fly about room quite briskly. I tempted it with honey and other kinds of food, but in vain. At no temperature would the untimely awakened wasp eat.

Upon the temperature being allowed to fall, the creature gradually grew less and less animated,

until 44° had been reached, when it retired into a hole and went to sleep. After allowing it to rest an hour or two, I again tried it with a rising thermometer, and found that the second time it commenced to stir at 48° .

Although insects annoy, punish, and rob man, they also do him incalculable service. Flies, beetles, and ants all combine to dispose of the dead bodies of animals, and accomplish their task with such astonishing rapidity that it has been asserted that three bluebottle or flesh flies will devour a dead horse as quickly as a lion. The larvæ of this fly grow so quickly that in a single day they increase their weight two hundredfold.

Beetles are *par excellence* Nature's scavengers, and work, not in thousands, but in millions, to rid the surface of the earth of noxious matter,



DEAD RAT LIFTED OUT OF GRAVE BEING
DUG FOR HIM BY SEXTON BEETLES.



RAT BEING BURIED BY SEXTON BEETLES.

and although engaged in a dirty occupation always keep themselves beautifully clean.

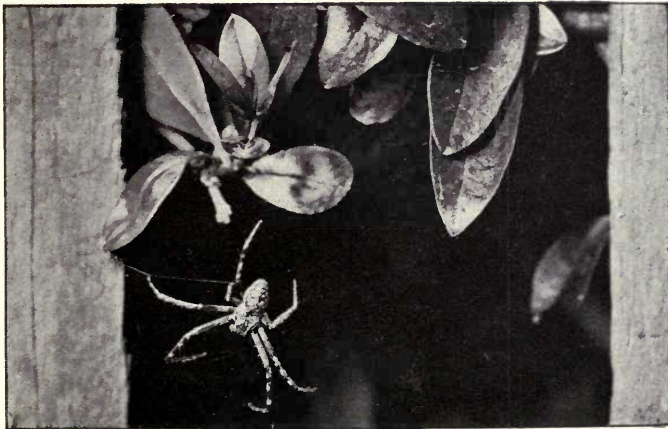
One afternoon, a spring or two ago, I noticed a dead rat lying in a field near to my home, and happening to pass that way a day or two afterwards, was surprised to discover that it had more than half disappeared in the ground, and that a small hillock of mould had been thrown up near to it. Raising the carcass with my walking-stick, I found a couple of great sexton beetles in the grave beneath. The excavation measured five inches in length, two in width, and two and a half in depth. At one end the little miners had made for themselves a small underground safety chamber, into which they retired to rest, or for safety when disturbed in their work.

For scientific attainments, affection, and cunning few creatures in the world of minor beings

can compare with spiders. They are weavers, hunters, aëronauts, telegraphists, preservers of meat, magicians, devoted nurses, and many other clever things, according to species and circumstance.

Spiders' webs are, as a rule, like mushrooms—growths of the night. The individual figured in the illustration below was photographed by magnesium flashlight between ten and eleven o'clock on a still summer's night whilst she was in the act of commencing to build a web between two palings of a garden fence.

It is only during early autumn mornings, when everything is powdered, so to speak, with minute beads of dew, that we really become aware of the immense service spiders renders us



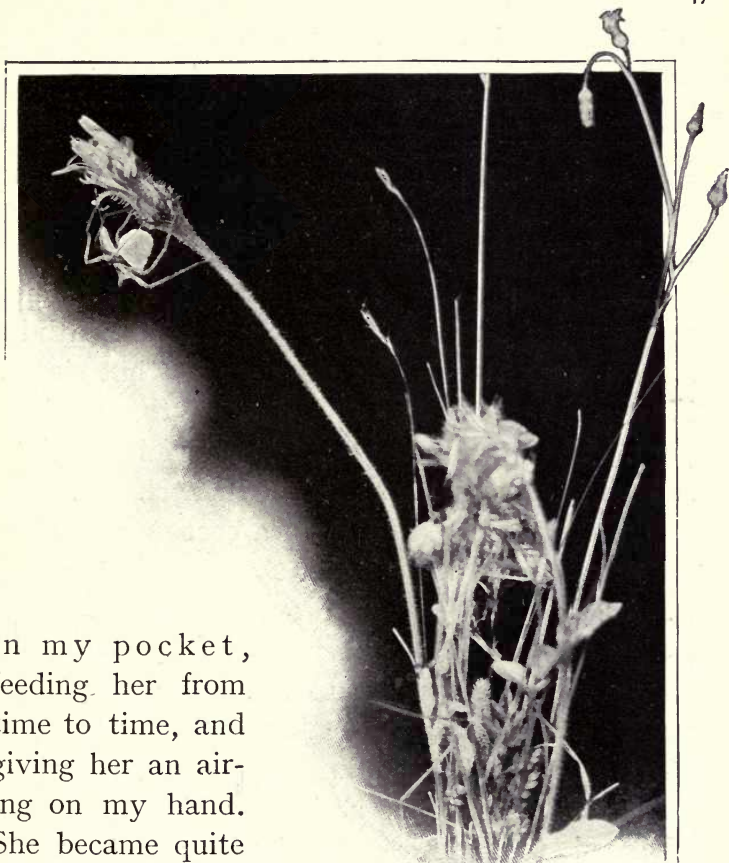
SPIDER MAKING WEB.

in clearing the air of a vast number of troublesome flies. The illustration below shows the dew-laden spiders' webs set on a very limited portion of a hedgerow, and makes one wonder how any winged insect lives to tell the tale.

Whilst in Scotland last summer, I caught a beautifully variegated female spider amongst some ling, and placed her in a matchbox in my pocket. In a few days she laid a ball of eggs as large as a dried pea, and embedded the whole in a beautiful cushion of silk of exactly the same tint of yellow as that of the paper by which the chip-box was bound together. For weeks I carried her about



SPIDERS' WEBS LADEN WITH DEW.



SPIDER CARRYING
BALL OF EGGS.

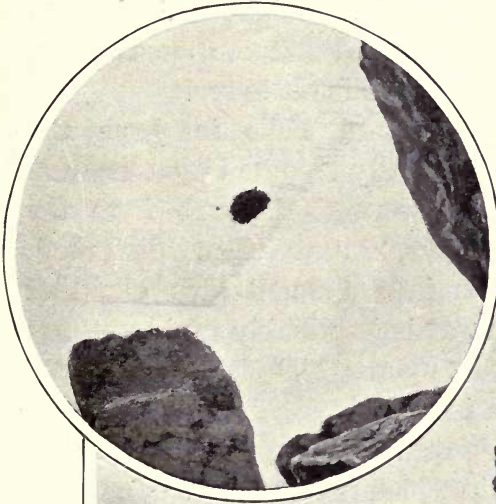
in my pocket, feeding her from time to time, and giving her an airing on my hand. She became quite tame, but would never venture far away from the matchbox and her beloved eggs. Whether she had run the allotted span of her species, or was overtaken by a premature decline of health, I do not know, but she seemed aware of her impending doom several days before

death overtook her. Instead of eating her food, she sealed it all up, and made a sort of larder of tinned meat for the consumption of the young, that fate destined her never to see. It was quite pathetic to watch the creature working down to almost the last available moment of life and strength.

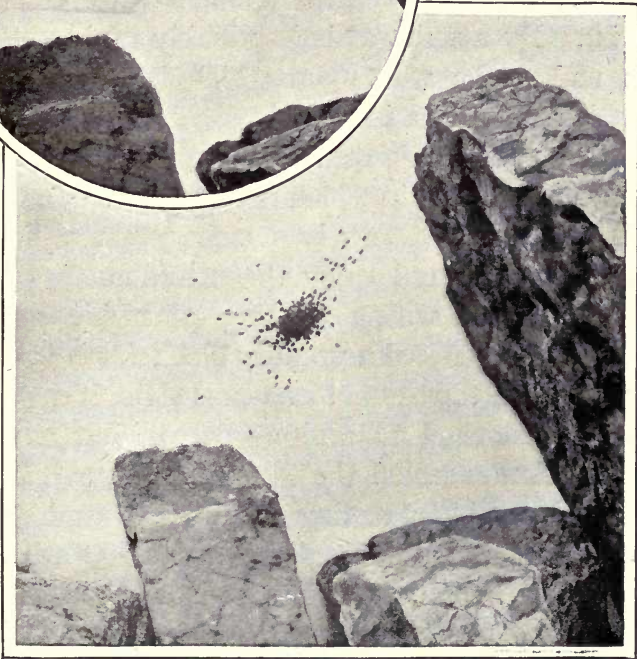
Some species of spiders form a sort of gossamer umbrella or bower in the grass, and sit beneath it, nursing a great ball of eggs, such as that shown in the photographic reproduction on the previous page. They exhibit the most wonderful devotion, and will die rather than desert their charge.

Others place their eggs in a cocoon, and then weave a silken cage of great strength right round it. Inside this cage they sit and watch for enemies that would soon work irreparable havoc amongst their newly hatched young. Such a wonderful wealth of affection have these spiders for their offspring that I have known them, even when badly maimed by an accident which has overwhelmed their home, heroically set to work collecting the scattered eggs and repairing the damaged cocoon.

The artifices they employ in order to deceive their enemies are nothing less than astonishing. Whilst on the Broads on one occasion I discovered a species which appeared to be conscious of the fact that it matched in colour the reed stems upon which it rested. It had a long straw-coloured



FAMILY OF
YOUNG
SPIDERS
ON WEB
BETWEEN
TOP STONES
OF A WALL.



SAME SCATTERING
TO SAFETY.

body and legs, and, when disturbed, ran to the back of the reed stem on which it lived, and stretching some of its legs straight in front of it

and the remainder equally straight and close to each other behind, clapped flat and motionless, and thus rendered itself difficult to see.

On the Westmoreland Fells in June the stone walls are numerously tenanted by a medium sized spider, which suspends its web from the projecting "throughs," and when disturbed, magically vanishes into a small grey cloud of mist. By a series of indescribably rapid motions it makes the web upon which it rests vibrate until it becomes invisible.

When the little members of a family of spiders leave the cocoon in which they have been hatched, they spin for themselves webs upon which to take exercise and enjoy the sunshine.

One day, whilst walking alongside an old dry wall, I noticed a peculiar black knob between two of the top stones. At first sight it appeared to be attached to nothing at all, but a closer inspection revealed the fact that it was a family of baby spiders resting on a crude and scanty web, which harmonised so completely with the grey sky behind as to render it almost invisible.

After photographing the happy assembly as I found it, I put another plate into position, and touching one of the threads of the web, made it vibrate. There was an instant stampede, and I re-photographed the tiny creatures scattering for safety as shown in the picture on page 149.

CHAPTER V.

BIRDS OF WOODLAND AND HEDGEROW.



PHOTOGRAPHER ON
AUTHOR'S SHOULDERS.

WOODS are frequently solitary and silent, or restless with life and ringing with song, according to the character of the trees growing in them.

In Southern England, where hazel-bushes, ash stoles, and slender birches grow in clumps with bramble-clad glades between, and occasional oak

and beech trees sending forth their giant arms to shadow primrose or bluebell-decked banks, there will the ring dove clatter his wings and coo softly to his mate, the nightingale ravish the pale moonlight with sweetest song, the inquisitive jay chatter and the willow wren warble all day long, to say nothing of a dozen other species.

The deep shadows and solitude of pine forests suit the habits of few birds, saving such as the long-eared owl, and are generally painfully silent,



YOUNG LONG-
EARED OWL

except for the occasional twitter of an adventurous tit hunting the needle-

clothed boughs high overhead.

I know many bird and wind-planted woods of ash, rowan, hazel, white, thorn, and holly high up amongst the hills in the North of England that are tenanted by few species, excepting carrion crows, tawny owls, sparrow hawks, and occasional pairs of missel thrushes, chaffinches, and wood wrens during the breeding season, although they supply vast stores of food for the winter consumption of redwings and fieldfares.



In such a wood I found a sparrow hawk's nest during June of last year, and as it was rather low down on the horizontal branch of a mountain ash growing on a steep hill side, I determined to try to photograph the bird at home. In spite of these exceptionally favourable conditions, however, I discovered, upon fixing up my apparatus, that the elevation necessary for the acquisition of a good view of the birds' eggs even in the flat-topped structure they occupied, sent me such a long way up the hillside that the nest only figured about the dimensions of a small hazel-nut on my plate. The place was far removed from the haunts of firewood-gathering village children, and every tree was allowed to lie and decay where it fell, so I set to work and dragged together such trunks and branches as were movable by one man's strength. For these materials I found lodgment behind the stems of two tall old hazels growing a little way above the tree containing the hawk's nest, and by dint of much labour built for myself a huge elevating stack of dead wood. On the top of this I fixed my hiding-tent, and covered it over securely with green rowan twigs and moss.

Several times whilst I was at work the sparrow hawk gave expression to her uneasiness of mind by plaintive notes uttered in the distance, or demonstrated it by dashing at lightning speed through the neighbouring tree-tops, and making

the smaller branches clatter and swing violently to and fro in consequence of accidentally striking them with her powerful wings.

Although the day was far spent, I could not resist the temptation of going into concealment and trying my hand upon the birds. To my dismay, I discovered that the air-ball by which both the shutters of the camera were worked was missing. It had, in all probability, been caught between two top stones of one of the numerous walls I had climbed, and been forcibly torn away from the pneumatic tubing to which it was attached. I had no reserve air reservoir of any kind with me, but thinking I might be able to release the mechanism of the rapid shutter with my fingers, I propped the slow one in front open with a piece of stick, and got everything ready.

In less than five minutes the sparrow-hawk was back at her nest, but took her departure again before I could, in my handicapped condition, make an exposure upon her. She had espied the lens, and for over an hour she darted back and forth through the trees, saying distinctly unpleasant things about it. When she did settle down to the duties of incubation, it was quite too dark for the making of rapid exposures, so I sat still awhile to listen, learn, and admire. Presently I heard a stone clink ever so softly in

the bed of a dried-up beck at the foot of the hill, and, peeping cautiously through a hole in my tent cloth, I beheld an old hare limping daintily towards me. She sat up and listened for a while within a couple of yards of my pile of worm-eaten timber, and then went her way in the same leisurely gait in which she had crossed the brook. Not more than ten minutes elapsed before she was followed by a second, and then a third, all travelling in the same direction to their common feeding-ground. The last, like the first, sat up and listened intently for a few seconds when close to my place of concealment, and by way of experiment I snapped a wee twig at my feet. The slight crack instantly broke the spell; the hare bounded away up the hillside, and the hawk left her nest in a great hurry.

As the place was so utterly secluded, I deemed the camera safe enough from molestation for the night, and, unscrewing the lens, put it in my pocket and went away, satisfied that to-morrow had something in it worth striving after.

Early the following morning I started out for the lonely ghyll, under the depressing influences of an unpromising change in the weather. When I had covered little more than half the distance, a heavy shower of rain drove me beneath the friendly shelter of a holly tree. Whilst waiting anxiously for the skies to clear, I heard a magpie

give voice not far away, and putting a blade of grass between my thumbs, answered him in his own vernacular. He was not long in responding, but the discovery of a human being instead of a member of his kind disagreeably astonished him, and he promptly took his departure again.

Upon reaching my destination and going into hiding, the day grew so dark and gloomy that photography of any kind was quite out of the question, so I determined to utilise my time in the making of observations.

When the hawk returned, she stood for a minute on the edge of the nest, listening and making a careful survey of everything within her range of inspection. As soon as she became satisfied that all was well, she stepped awkwardly forward, and, sitting down, raked her eggs under her breast with her hooked bill and chin, and finally hustled them into position beneath her by the usual side to side movements that always seem to give incubating wild birds so much comfort and satisfaction.

In a very short time a heavy shower of rain began to fall, and she found constant and annoying employment in shaking the accumulating drippings from the foliage above off her head and neck.

During the afternoon the weather improved somewhat, and the male bird arrived upon the scene, and commenced to call very persistently

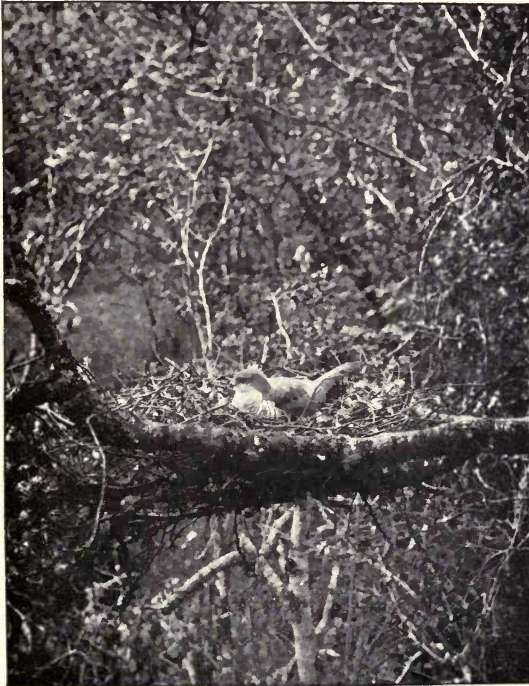


FEMALE SPARROW-HAWK BUILDING
HER OWN NEST.

from a little distance. At first the sitting hen appeared to take no notice whatever, but presently grew more alert, and, suddenly springing off her eggs, went away to join her mate, who, judging from the skeletons of several peewits lying on moss-grown knolls and fallen tree-trunks round about, had in all probability brought her some dainty morsel. She had not been gone many minutes before the male pitched lightly on the edge of the nest and admiringly examined the eggs. I expected, from his interested demeanour, that he was about to sit down and cover them, but after gratifying his vanity, he dashed off like an arrow through a vista in the trees, and I beheld him no more.

The following day proved finer, and I succeeded in making a number of studies of the sparrow-hawk at home, and then moved my wood stack nearer still, and doubled its height. The bird tried to neutralise this further familiarity on my part in a strange way. She commenced to fetch small dead birch twigs and place them in position on the front edge of the nest, and I photographed her with one in her bill, which, I think, goes some way towards proving that the species is capable of building its own nest, instead of always adapting the old home of a crow squirrel, magpie, or wood-pigeon, as some naturalists have contended.

At this time I was conducting a systematic photographic campaign in the North of England, and hearing from my brother (who was working in the South) that he had secured pictures of



SPARROW-HAWK SITTING ON NEST.

the chiffchaff and willow wren for our edition of "White's Selborne," I made desperate efforts to complete the gallery of the three confusing British warblers by adding an illustration of the rarer wood wren.

By the assistance of two farmer's sons, I managed to find a nest belonging to this species, but, alas ! it was in a small partly wooded pasture tenanted by a huge bull, of threatening aspect and sullen demeanour. More than one dangerous experience having taught me never to risk an unauthorised interview with one of these ferocious brutes without a reliable lethal weapon in one pocket and a cheque-book in another, I sought hard and long, but in vain, for a wood wren's nest in quarters affording greater personal safety.

It was obvious that I could not take my tent or any other hiding contrivance, such as the stuffed ox, into that pasture—for had the bull come along whilst I was *in situ obscura*, he would have had me at considerable disadvantage—so donning my reversible jacket and cap mentioned in the opening chapter of the present work, and carefully loading a heavy army revolver, I sallied forth.

When I reached the place where the nest was situated, on a green grassy bank running up rather sharply from a small stream, on the farther side of which a number of tall larch trees grew, the bull was nowhere to be seen or heard. Noiselessly fixing up the camera, I focussed a hazel twig purposely stuck in the ground near the wren's nest for her to alight upon, put a plate in, and, covering the whole apparatus with a grass-

green cloth, sat down to wait under the shadow of a small bush growing close behind my apparatus.

The bird appeared to be very shy, and contented herself with flying uneasily in and out amongst the branches of a giant sycamore that almost overshadowed her nesting-place, all the while uttering her doleful *tway, tway, tway* note. Casting about for reasons to explain this shy conduct, I discovered one. The bull had loomed so large in my mind, that I had forgotten to reverse my cap and jacket, and was sitting, an island of dead grass brown in a sea of vivid green. Directly a change was made, the wood wren showed her appreciation by alighting in the bush over my head.

From this moment our acquaintance ripened rapidly, but, unfortunately, the bird did not expedite my departure from the uncongenial spot by giving away many favourable opportunities of figuring her. Instead of alighting on the hazel twig I had under focus when she brought food to her young, she more frequently hovered over the nest like a humming-bird for a second or two, and then dropped straight down to it.

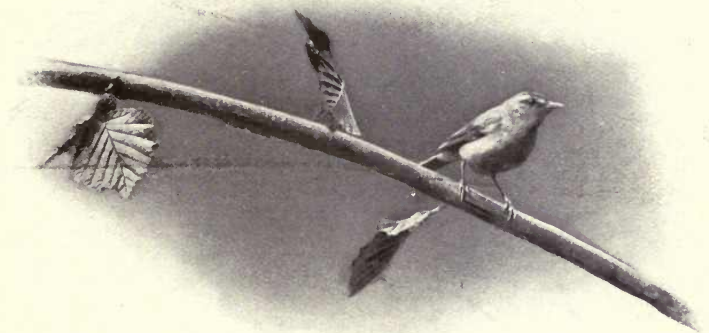
Although she received no assistance from her mate, who was for ever reiterating his chattering song in the tops of the larch trees across the brook, she had no difficulty in securing an ample

supply of food for her chicks, as May flies were abundant, and greatly relished.

Between industrious bouts of feeding she would frequently creep into her little domed house, and take a rest, but with a feeling akin to that of being in "the valley of the shadow of death," I drove her forth again and again to a resumption of her labours and the affording of photographic opportunities. Several times she utterly refused to go to her favourite hazel bush in search of insects, and either flew straight back to her nest or alighted for a brief moment on my twig. She grew so bold that on one or two occasions, when I moved my hand stealthily towards her to see how near she would allow me to approach before stirring, she actually pecked at my fingers, struck with her wings, and hissed like a little fury.

Up to this time the bull had neither put in an appearance nor made himself heard, although I knew he was in the small pasture ; but presently his terrible voice began to make the little ghyll ring, and, fearing he would soon discover me, either by sight or scent, I drew my revolver, and made the last two or three exposures in the best light I had had during the day, with the air-ball of the camera in my left hand and the weapon of death in my right.

Jackdaws, although to the casual observer birds of the church steeple and ruined tower, are



WOOD-WREN ON HAZEL TWIG.

nevertheless very fond of breeding in cliffs situated in woods and in clumps of hollow trees growing round old farmsteads. My brother photographed the specimen shown on the following page whilst in the act of hammering some edible trifle which he had just stolen from a neighbouring swine trough.

This species is endowed with very small eyes, but great intelligence. On one occasion, whilst staying at an hotel in Dumfries, I threw some pieces of bread into the garden for the birds. One jackdaw, bolder than his fellows, ventured close up to the window through which I was looking, for the food, and sensibly took away two crusts with him at once into a tree, where he held them down to a branch with his feet whilst he vigor-



JACKDAW ON POST.

ously hammered them with his bill into pieces small enough to be swallowed.

The self-satisfied pair of young jackdaws figured in our illustration were photographed directly after they had left their home in a hollow tree.

In little scattered woods, high up amongst the Welsh mountains, also in the heart of the Cumberland and Westmoreland Fells, a great many pairs of redstarts may be found breeding. They utilise small holes in trees, rocks, and old dry walls, as a rule ; but one day, I was surprised to find a nest in a little corner on a grassy bank where a meadow pipit might have built.

Placing the stick, figured in our illustrations

on page 167, in the ground hard by for the birds to alight upon when they brought food for their chicks, I pitched my hiding tent close at hand, and covering it with colt's-foot leaves, left it for a day or two, in order that the redstarts might get thoroughly inured to its intrusive presence before I started my photographic operations.

It is an interesting problem as to how far wild birds credit each other's fears and alarms without some kind of support being lent by the evidence of their own senses. Experience has



YOUNG JACKDAWS.

led me to believe that they do so to no great extent.

I waited my opportunity to enter the place of concealment whilst both the male and female redstarts were away, collecting food; but, unluckily, the latter returned more quickly than I had anticipated, and espied me crawling beneath the colt's-foot leaves and canvas. She straightway swallowed the small green caterpillars she held in her bill, and taking up her station in an ash-tree close by, rattled out her alarm cry with as much earnestness and persistency as if I had been a marauding cat. Presently her mate came upon the scene, and in silence took up a position beside her. She told him a dreadful tale of the dangers of approaching their nest, but in the absence of anything either to see or hear, he evidently did not believe a word of the alarming news, and flew straight down to my stick, and thence to deliver the wriggling throng he held between his mandibles to the hungry youngsters in the breast of the bank. Again and again he came, with such wilful and complete indifference to his mate's warnings and entreaties, that she grew tired of her occupation, and went away. In course of time she ventured timidly home, and I figured her with an expression of suspicious alarm on her countenance, which contrasted greatly with the bold, confident look of the male.



MALE REDSTART.

easiest to study at the nest. The male bird assists in the work of incubation, but I have never yet heard him beguile the tedium of his task by song, as has been asserted.

The lesser white-throat (p. 168) was photographed whilst taking a rest on her nest

Blackcaps, lesser whitethroats, and hedge sparrows are frequenters of woods of varying sizes and thick hedgerows.

The first bird is, in addition to being the sweetest singer next to the nightingale visiting this country, one of the very



FEMALE REDSTART.



BLACKCAP
ON NEST.



LESSER WHITETHROAT
ON NEST.

full to the brim of well-grown chicks, in a small bramble-cumbered Surrey wood.

The industrious little hedge sparrow attending to her household duties, after having given her voracious young ones the food she had brought, was also figured at the same place.

Not long ago I had an incubating member of this species under daily observation, and when I visited her one morning, discovered that she was pathetically sitting on an absolutely empty nest. Something or somebody had robbed her of her five beautiful turquoise blue eggs, and thinking that I might save her time and an amount of

heart-searching, I ran over to a chaffinch's nest not far away, and borrowed two eggs, but although I waited a goodly while in hiding, she never returned, and I had to replace them in the nest of their rightful owner.

One day, whilst making some ornithological investigations in a small birch and hazel wood, I accidentally found a garden warbler's nest in a low whitethorn bush.

The female owner convinced me that birds do not always sing from pleasure, for again and again when I approached with the camera, intending to figure her on the nest, she quietly slipped off, and commenced to imitate her mate's song, but in a weak, creaky kind of voice, not at all approaching his fine mellow notes, which were being poured forth at the same time in a different part of the little thicket.



HEDGE SPARROW
ATTENDING TO HER YOUNG.

The building of a birch and hazel screen behind which to hide the camera enabled me finally to overcome the bird's suspicions, and secure an exposure just before the breaking of a heavy thunderstorm.

I have been singularly unlucky during the last two breeding seasons in my efforts to photograph a male red-backed shrike or butcher bird in the act of feeding his offspring.

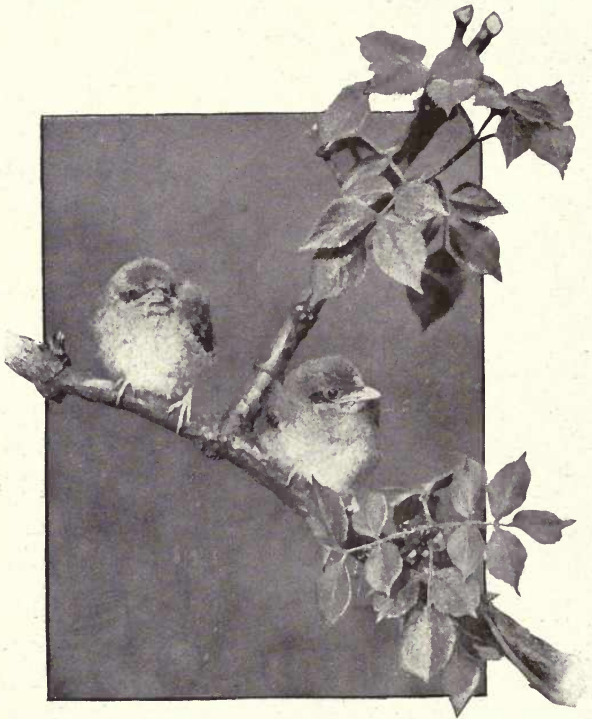
In July, 1902, I found a nest in a thin, straggling hedge, containing such a well-feathered brood of young ones that I deemed it expedient, on two heads, to sit up all night. The advanced stage of development reached by the chicks made it plain that there was not a moment to be lost, and feeding at dawn is generally fast and furious, and consequently fuller of chances than later periods of the day. I was too late, however, for directly I fixed up my paraphernalia the pert little shrikes left their old home one by one, in response to the earnest invitations of their food-bearing parents, and I had to content myself with vignettes of them seated on elderberry and other sprays in the dilapidated hedgerow.

Upon returning from the Highlands in the corresponding month of last year, and sitting down to write the present work, I was one day astonished to see a splendid male butcher bird revolving his tail on the uppermost of twenty-



GARDEN WARBLER ON NEST.

eight telegraph wires immediately in front of my house. Presently, down he glided across the road, and secured an insect on a patch of grass beneath the window through which I was looking,



YOUNG BUTCHER BIRDS
OR RED-BACKED SHRIKES.

and carried it off to his mate sitting on a nest, containing four eggs, in a dust-smothered dog rose-bush not twenty yards from my front door. All day long he fed her, with hundreds of carriages, carts, motor-cars, and bicycles rattling past within



BULLFINCH ON NEST.



YELLOW-HAMMER GOING ON TO HER NEST.

twenty feet on one side, and trains constantly rushing up and down a double line not more than fifty on the other.

Day by day I zealously guarded the nest against the attentions of mischievous cats and boys, the old cock giving me unfailing notice of the dangerously close approach of either by his harsh *chack, chack* alarm note.

In due season the young were hatched, and both parent birds were kept busy in the commissariat department. The nest being in such a public place, I was anxious not to attract undesirable attention to it by fixing up my apparatus in the busy hours of the day, so made arrangements to commence operations at sunrise

one morning. To my dismay, I was baulked again by finding all the young ones dead in the nest.

The male and female hung round the place for a week afterwards, the former feeding the latter with all the tenderness and gallantry of sweethearting days, thereby leading me to believe that they might attempt the rearing of a



STARLING GOING TO NESTING-HOLE.

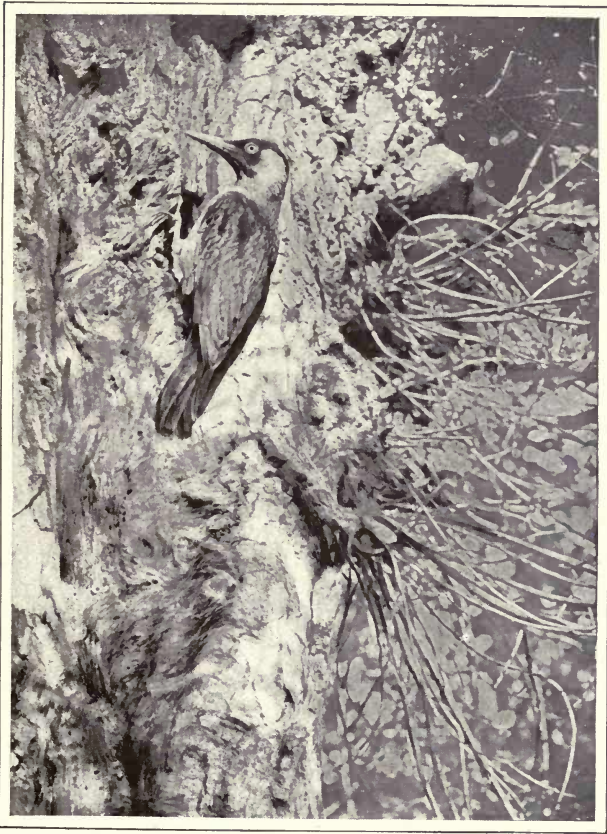
second brood ; but I suppose it was too late in the season, and they disappeared, to my great regret, childless.

The bullfinch is one of the birds that has distinctly benefited by the Wild Birds' Protection Acts, and may now be fairly described as numerous. Incubating females of this species sit very closely. The individual figured in our illustration (on page 173) allowed my brother and our friend, Major Petre, to part the branches in front of her without concern.

Bullfinches sometimes breed very late in the season. Whilst in Essex some years ago, I found a nest containing only half-grown young ones in the middle of September.

The yellow-hammer is also another late breeder, and a great lover of hedgerows and furze bushes. Its short, oft-repeated song is probably better known than that of any other British bird, and, although accounted monotonous by some people, is, I must confess, a welcome sound of the countryside to me, in spite of its hackneyed syllabic rendering.

The nest is generally situated on or near the ground, although I have on several occasions found it at an elevation of four or five feet in hedgerows. Some years ago I discovered one close to the permanent way on a railroad embankment, where the sitting bird was shaken all day



WOODPECKER GOING TO NEST.

long by the passage of heavy mineral trains, to which she did not pay the least regard.

Some of wild Nature's ways are not at all commendable from a moral point of view.

Two species of birds in this country constantly suffer loss by having their nests stolen from them,



ANXIOUS ENQUIRY: WOODPECKER
PEEPING OUT OF NESTING HOLE.

and made use of by two others. The ubiquitous, bullying sparrow takes forcible possession of the house martin's nest, and rears unwelcome broods of young in it, and the starling persistently steals the green woodpecker's home. I have watched a pair of the last-named birds hewing away at intervals for a fortnight, and as soon as they had completed their nesting hole, they were impudently driven forth to start their labours all anew by a pair of untidy old starlings. Indeed, it is doubtful whether many green woodpeckers are now able to breed in England at all until the starlings have been accommodated with nesting quarters.

By selecting a nesting hole in a low-down situation in the trunk of a tree, and building a

hiding bower close by, my brother was recently enabled to secure the brace of illustrations on pp. 177 and 178 of a green woodpecker about to enter her home, and peeping out with an expression of anxious enquiry plainly depicted on her countenance.

Not long ago, whilst seated beneath a decaying ash-tree, watching an industrious wryneck feed her family of lusty appetited chicks scattered amongst the lower, and yet living, branches, an old woodpecker of the above species arrived with a young one amongst the upper dead limbs. Their behaviour was both curious and interesting. The old bird jerked her way up one side of a branch, hammering and searching, whilst the young one kept parallel on the other, with an ever-ready mouth held round the side to receive any lurking trifle that its parent might secure.

The nightingale is justly the greatest favourite of all the feathered vocalists that throng the grove. He sings as much by day as he does by night, although comparatively few people seem to be aware of the fact, and makes a model husband, dropping the frivolities of song, and helping his wife with a will to feed the chicks as soon as they are hatched.

Towards midnight on the seventh day of May, 1902, we had a thick white fog in Caterham Valley (where I live), yet, in spite of that de-



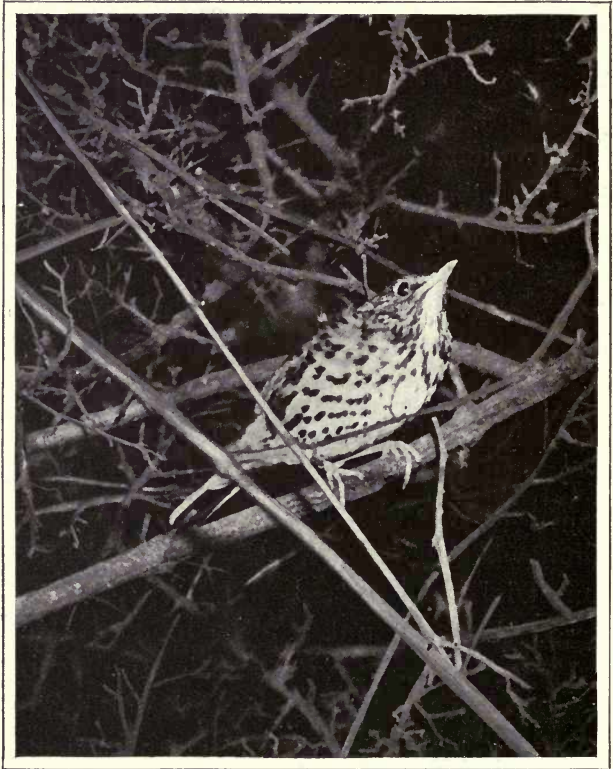
NIGHTINGALE.

pressing circumstance, the nightingales were singing as blithely as if they had been exercising their marvellous vocal powers under the most cheerful conditions.

The power of vision in birds is very wonderful. Owls can make far more use of even the rays of a noontide sun than is generally supposed. One day I found a tawny owl sitting on two eggs in an old carrion crow's nest which had been built in a small ivy-encumbered ash-tree growing on a steep hillside. I opened the place out, so as to obtain a good view of the nest and its contents from an advantageous point on the precipitous bank above, and left. Next day the sun shone brilliantly, and, fondly imagining that I had nothing to do but go and photograph the owl sitting with her eyes closed, I sallied forth. To my surprise, the bird took her departure directly I commenced operations. Determined to give her a fair trial, however, I fixed up the camera, focussed the nest, put a plate in, and attaching the longest piece of pneumatic tubing in my possession, dragged it up the steep hillside, and then went into hiding under an overhanging crag ten or a dozen yards beyond.

I could tell exactly where the owl was located in the wood from the chivvying and scolding of the blackbirds and chaffinches, and by-and-bye heard her uttering that rather peewit-like cry

common to the species. Nearer and nearer she came, with her tormentors making an increasingly prodigious din, until at last she flew on to the nest, and sat down, with the sun blazing full in



SONG-THRUSH PHOTOGRAPHED
BY FLASHLIGHT
WHILST AT ROOST IN A HEDGEROW.

her face. I allowed her plenty of time in which to get settled down, and then attempted to creep softly down to the air-ball at the end of my pneumatic

tubing. But she saw me directly I stirred, and instantly took her departure. I tried again and again, but with equally disheartening results.

Whilst photographing the song-thrush reproduced herewith at roost by flashlight, one moonless night in April, we accidentally frightened a member of the species off a nest containing four far-incubated eggs. I knew that the chicks could not withstand the fatal effects of the frosty night air for long, and did not consider it probable the owner of the nest would find her way back in the dark. She must have done so, however, for two days afterwards the nest contained four lively chicks.



NIGHTINGALE GROVE.

CHAPTER VI.

BIRDS OF BROADLAND AND STREAMSIDE.



A TYPICAL BROADSMAN.

QUITE apart from the attractions of great avian wealth, East Anglia is one of the most charming places on the face of God's fair earth. To the toil-worn man or woman in search of such excellent restoratives as peace and sweetness I would unhesitatingly say, "Go to the Norfolk Broads,

for there you will find the loveliest pages of the great book of Nature lying wide open to be gazed upon with never-ending wonder and delight."

I have slept on them when bleak November blasts have flecked their dark bosoms from end to end with zebra-like stripes of foam, and there has not been a sound except the low cadent rustle of a million reeds swayed violently to and fro by the mad fury of the storm; also in June, when the mists of morning have lifted like an elfin curtain and the rising sun has flooded every-

thing with light and fragrance to the music of a thousand happy birds, making the air palpitate with their notes of gladness.

In addition to this particular part of Britain being a favourite halting-place for migrants on their journeyings north or south, according to the season, it has a splendidly varied and interesting list of breeding species, a few of the most characteristic of which I propose to deal with in the present chapter.

The birds of Broadland may be roughly divided into two classes—those you see and hear a great deal of and those you generally only hear.

The redshank belongs *par excellence* to the former class, and in some districts its loud and oft-repeated *took, took, took* note may be heard morning, noon, and frequently all night long. Although much in evidence, it is a shy, suspicious bird when anything like an intimate acquaintance with its domestic arrangements is attempted. It hides its nest with consummate skill in the coarse herbage of the marsh, and generally leaves it on the first intimation of approaching danger. Frequently the eggs are more securely hidden by the bird's twisting and bending of the grass stems and blades immediately over them into an all-hiding tuft. And whether from design or mere fickleness, several nesting sites are scratched out in tussocks round the one actually occupied.

Our first illustration represents a grass tuft with a redshank's nest concealed in it just as it was left by its owner, and the second secured from exactly the same point after the grass had been parted and the eggs revealed. When the bird came back, she showed the most unmistakable anxiety to hide her home, and sitting on the nest, busied herself in dragging blade after blade of grass back to its original position with her bill.

I remember once visiting a nest belonging to this species rather late in the evening, and as I neither saw the bird quit it nor heard her familiar cry near the place, became apprehensive lest the hiding contrivance I had built close at hand had made her forsake it. Stooping to ascertain whether her eggs were warm or cold, I was greatly astonished to discover the bird sitting at home, and although I touched her somewhat roughly on her back, she did not appear to mind, but sat quite still until I withdrew.

The female redshank manifests the greatest solicitude for the welfare of her young. I watched the individual figured in the full page illustration reproduced on p. 189 covering her downy chicks within a few feet of me during the threatened downpour of a shower of rain. She made the happiest, proudest little mother I ever saw, and her tenderness was a subject for admiration.



1. REDSHANK'S NEST
CONCEALED IN
GRASS TUFT
2. REDSHANK WALKING
ON TO NEST.
3. NEST REVEALED.



Every time a wee enquiring head was thrust from beneath her plumage she gently pushed it back again with her bill, all the while talking to the uneasy seeker after knowledge in soft, persuasive notes.

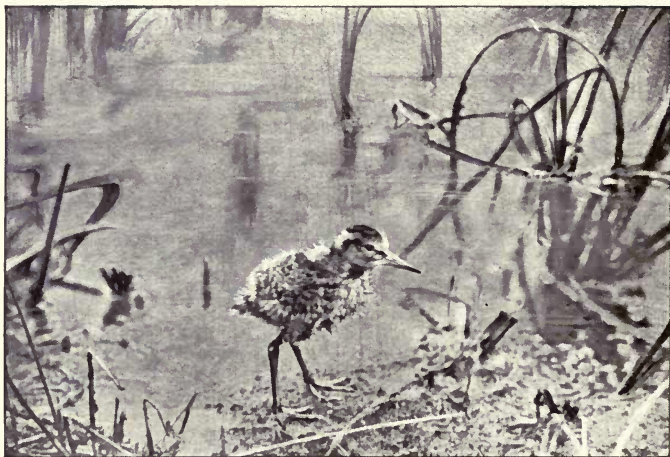
Her mate kept calling to her from a distance, and she answered him while she sat in her loud *toodle, toodle, taloodle* note, which sounded as if it had come from a bird many times her size after the small sweet voice in which she had talked to her baby chicks.

A strange thing about the species is that although the chicks will readily swim from small islands upon which they have been hatched, and adult birds can easily do so, they do not often take to the water. When the young ones are making a voyage in response to maternal wishes, instead of joining them, as one would naturally expect such a devoted parent to do, she flutters overhead, and contents herself with giving advice and encouragement to the youthful adventurers below.

Another species which never fails to arrest the attention of the visitor is the reed bunting, or the reed sparrow, as it is more generally called. The black head and conspicuous white collar of the male give him a "nigger-in-clean-linen" appearance, which he shows off to the greatest advantage when he is not undertaking his share



REDSHANK COVERING CHICKS.



YOUNG REDSHANK.

of the duties of brooding, by sitting on some elevated spray and beguiling the tedium of his mate's task in very simple but oft-repeated strains.

Whilst staying alone in an old house-boat belonging to a friend on the Broads last spring, I had three pairs of these birds breeding within a stone's throw of me, and determined to secure sun pictures of some of them if I could. Having no hiding contrivance of any kind at hand, I set to work and built myself a stick and reed house with backloads of materials which were kindly brought for me by one of the most intelligent and enthusiastic ornithological marshmen in the county of Norfolk.

As soon as the frail wind-shaken structure

had been completed to my satisfaction, I knelt down on an armful of marsh hay thoughtfully provided by my companion inside it, and waited the home-coming of a pair of birds that had been very busy all the morning feeding their family of five hungry chicks cosily huddling together in a nest situated immediately in front of my temporary abode.

The female appeared for a long while to be doubtful about the wisdom of venturing near the great black eye of my camera, staring stolidly from a newly-placed heap of reeds, but as her distrust of it decreased, she grew bolder, and gradually drew nearer and nearer, flying from one elevated stem to another, until at last, to my great delight, she pitched on the dead dock stem shown in the picture on the next page. After making a careful examination of everything by a number of nervously rapid side to side glances, she became convinced that the object of her errand was worth the risk in carrying it out, and making a series of half-hopping, half-gliding downward movements, she quickly reached the cover of the luxuriant herbage, where she evidently felt safer. Running forward along a kind of tunnel made by many journeyings, she fed her offspring, and promptly went away in search of more food. Once the ice was broken, she came with increasing frequency and confi-



REED-BUNTING.

dence. The male bird, however, proved to be an arrant coward. Neither his consort's growing boldness nor his sense of parental duty would lead him into what he evidently considered the jeopardising of his personal safety, and he contented himself by sitting on some coign of vantage at a re-

spectful distance and plaintively reiterating three notes, which sounded wonderfully like "*Don't hit me! Don't hit me!*"—a peculiar emphasis being laid on the note represented by the second word.

This female reed bunting was the most accomplished little gymnast I ever saw. She could place her body parallel to the upright dock stem whilst grasping it with her feet, so widely parted that no artist who had dared to commit her grotesque attitude to canvas could have hoped to escape the charge of exaggeration.

When she came with food, she frequently bore the appearance of having dipped her head into the water for it, and nearly always gave her chicks warning of her approach by a wagtail-like note. The necessity for this note was difficult to understand, because in spite of the facts that the nestlings had their eyes open and were feathering fast, they had no discriminatory sense of sound, and would respond by eager mouth-opening just as readily to the squeaking made by my camera whilst being racked in and out, or a passing red-shank's cry, as they would to their parent's voice.

Small dragon-flies were frequently brought along as food, and one day whilst punting up a



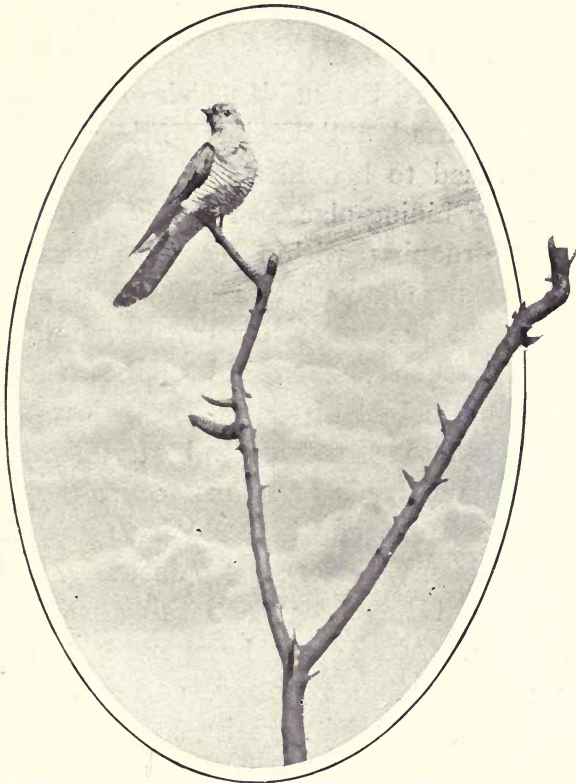
REED-BUNTING.

secluded dyke, I witnessed the sight of a reed sparrow hawking one of the large specimens, which it dexterously caught and decapitated, flying away with the head, and dropping the wings and body, for which it did not return.

There is no place, in my experience, to be compared with Broadland in May for cuckoos. They are there literally in scores, telling their name night and day to all the countryside. I have seen as many as five chasing each other, whilst north, south, east, and west of me others could be observed flopping awkwardly down into the long marsh growth, diligently searching for caterpillars of the drinker moth.

Noticing that when everything was saturated with dew in the early hours of the morning they sought for some dead dock stem or withered reed rising higher than its fellows to indolently perch upon, I reasoned that the birds might possibly be induced to use some resting-place within range of the camera, so forthwith secured an old forked piece of blackthorn, which I thrust butt end downwards into the soft ground some fifteen feet in front of my place of concealment.

A cuckoo almost immediately showed its appreciation of my efforts at providing a substantial outlook in the middle of a great brown sea of dew-steeped vegetation by coming and alighting upon it. I could easily have made a



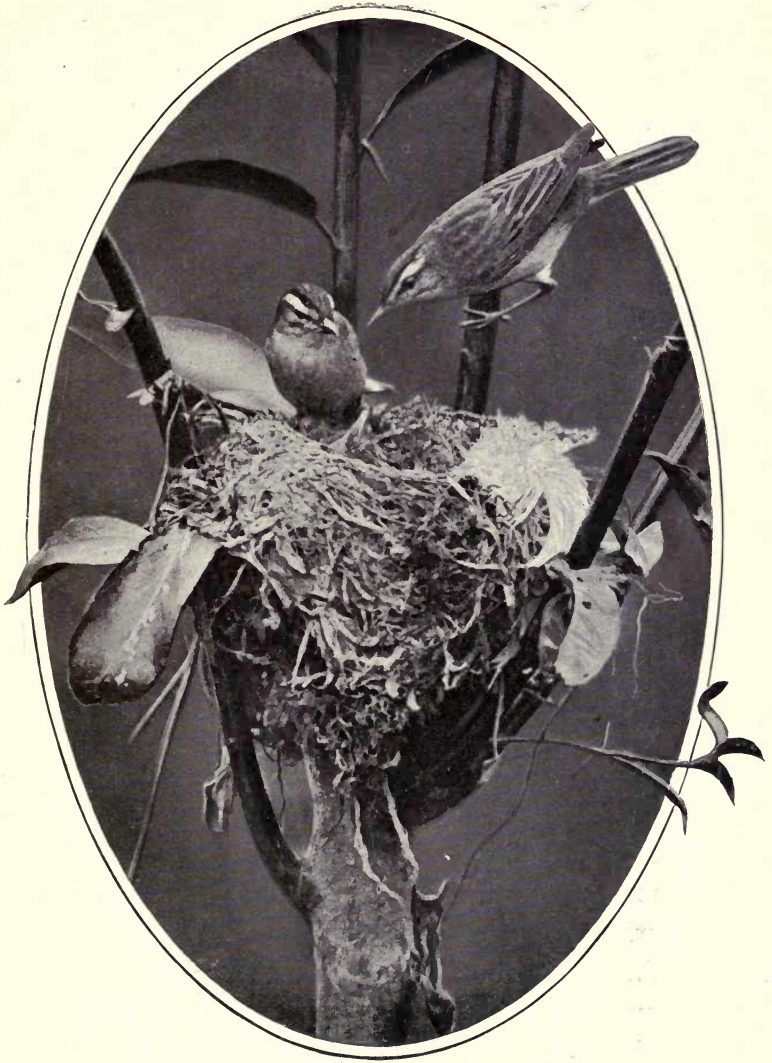
CUCKOO.

time exposure of any reasonable length on the sedate creature had it not been for the awkward circumstance that a breeze which had suddenly sprung up was making the stick vibrate in a most annoying fashion. This compelled me to use my rapid shutter, the noise of which startled the bird into instant departure. I had not long

to wait, however, before my improvised perch was again utilised.

Once I heard the sudden flick of folding wings close to my head, and peering cautiously upwards, was surprised to behold a cuckoo sitting on the roof of my hiding-place. The bird's frayed tail feathers, drooping within a few inches of my face, told an eloquent tale of oversea wear and tear, but at the same time made me wonder a little why such shabby old clothes should be worn at the height of the season of love-making. I attempted to thrust a hand carefully through the sticks and reeds and thus secure my visitor, but although she had hitherto been entirely unconscious of my presence, she instantly detected the fact that there was something coming, and took wing. Altogether I exposed five plates upon cuckoos that morning, and four of them turned out successful negatives.

The wee, gay, restless imitative sedge warbler, or, as it used to be called in olden times, sedge bird, is abundant in East Anglia, and common in almost every other part of the country where sedge-clad marshes or sluggish willow fringed streams exist. I have met with it amongst a cluster of two or three dozen sallow bushes growing in a little sequestered ghyll away up in the heart of the Westmoreland Fells, where it was, as usual, bubbling over with song and unalloyed happiness.



SEDGE WARBLERS.

During my last photographic trip to the Broads I several times stayed up all through the short hours of summer darkness developing plates, and when the weather was fine the male representatives of two pairs of these birds breeding close to the house-boat robbed the situation of its loneliness by keeping up an unending rivalry of song. If atmospheric conditions had called a truce in their war of notes, and I turned out during the wee small hours when even the peewits were at rest, and broke the deathly stillness of night by tossing a bucket of chemical-tainted water into the dyke, the splash immediately woke the birds and fanned their vocal ardour into full blast again.

Although the male sedge warbler makes an excellent husband and father, he does not appear to possess either architectural ability or ambition to acquire it, for when his little helpmate is nest-building with incredible industry, he contents himself by idly following her about or the taking of short, fluttering singing excursions in the air just over their prospective home.

Whilst on the river Avon, close to Stratford, a summer or two ago, with a couple of ornithological friends, we found two sedge birds' nests, containing eggs, on the stems of young pollards growing in the middle of a small island. Passing that way about an hour afterwards, we were

surprised to find that both nests had disappeared, and their owners were flying round the vacant sites, showing unmistakable signs of anxiety and distress. A little lower down stream we overhauled two boys, who proved to be the robbers. Some grave references to the Wild Birds' Protection Acts, and the pointing out of the fact that both clutches of eggs were too far incubated to be of any use for a collection resulted in the speedy restitution of the property. Within ten minutes of the time the nests were replaced their owners were back upon them, and harmony was restored all round, excepting, perhaps, in the minds of the juvenile marauders, who proved to have no intelligent interest whatever in oology.

The sedge warblers figured in the illustration on page 197 were the foster-parents of a young cuckoo, of which they seemed to be inordinately proud.

For experimental purposes I borrowed a baby reed warbler a day or two old, and, placing it in the nest of these birds, went into hiding only a couple of feet away. The young cuckoo had, unfortunately for my purpose, passed the period of casting everything out of the nest, but seemed to be very desirous of trampling the irksome intruder underfoot.

When the female sedge bird came home with food, she placed it all in the capacious mouth of

her foster-chick, and then stood and gazed in blank astonishment at the dusky stranger sprawling impotently in the rear.

Time after time, when not buried beyond the power to do so by the lusty body of its companion, the frail reed warbler manfully held up its wee wagging head, and opened its mouth in dumb request, but in vain—for instead of giving it a morsel, the old birds made several attempts to lift it from the nest, as if it had been refuse to be removed in the ordinary process of scavenging.

The reed warbler, although having its grand headquarters in Broadland, breeds in many other parts of the country, affording it suitable conditions of existence. It builds a beautiful deep cup-shaped nest, which is generally suspended between three or four reed stems over the water. The specimen figured in our brace of illustrations is a very poor example of the architectural skill of the species, because of the lamentable fact that it was found in a part of the country where the birds are so persistently robbed that they are compelled to make attempt after attempt at housekeeping.

I had the owners of this particular nest, which contained a brood of tiny young ones, under observation for some time. The duties of the household were very equally divided between

the male and female, and carried out with such devotion and affectionate tenderness as would have won the admiration of the most matter-of-fact student.

They fed their chicks with commendable assiduity for half an hour, at the end of which time the hen sat down on the nest and covered them. In a few minutes her mate arrived with a splendid collection of small green aphidæ, such as infest rose-bushes, and she got up and stood admiringly on one side whilst he dropped the food with great impartiality down the little yellow lanes presented for its reception. After gazing fondly at his offspring for a moment or two, he hied away in search of more viands, and returned with his bill almost hidden by the legs and wings of a bundle of flies. This time the female sat stock still, and opened her mouth, evidently knowing that the food had been brought for her.

Time after time they changed places, and took turn and turn about at brooding and insect-hunting. I noticed that the cock sat higher and uneasier in the nest than the hen. He frequently rose to take an admiring look at his sons and daughters. Once, when both parent birds were at work searching, the feeding waxed so fast and furious that the chicks became satiated to the point of refusal—a thing which does



MALE REED WARBLER ON NEST.

not often happen in the bird world, and like an economical housewife, the hen sat down and held the creature she had caught in her bill until such time as they should grow hungry again.

I have nowhere met with such numbers of the graceful yellow wagtail as on the Broads and in the Yorkshire dales, where the bird breeds abundantly.



FEMALE REED WARBLER
HOLDING FOOD IN HER BILL UNTIL HER
CHICKS GROW HUNGRY AGAIN.

Last May I gave the members of two pairs of these birds a good deal of attention at arm's length, and they yielded some well-repaying information upon the subject of individuality in the avian world.

The female of one pair was a poor specimen, from a pictorial point of view, on account of the fact that she had in some way lost her old tail,

and her new one was only half grown. This bird was quite bold, and readily allowed me to photograph her at her nest. In fact, she was brazen, for when I placed my cap over her chicks in order to try to force her mate into alighting on a piece of stick I had fixed in the ground a few feet behind, she actually alighted on my obstructive headgear, and finally crept beneath it to get to her young with food.

In the case of the other pair of birds, things were absolutely and surprisingly reversed. The male—a timeworn-looking individual—was so courageous that he could hardly be driven away from the precincts of his nest, whereas his mate—a beautifully prim little bird—was so shy that she never once gave me an opportunity of photographing her. Time after time she sat on some gracefully bent spray towering advantageously above the rest of the marsh growth, and piped shrill notes of alarm until the small dragon flies and moths she held in her bill died, when she swallowed them, and flew away down wind in search of more.

I do not for a moment suggest that there was any connection whatever between clothing and courage. Shabbiness of attire and boldness were mere coincidences serving to emphasise the more strikingly how far individuality plays its part amongst creatures whose lives and doings are



FEMALE YELLOW WAGTAIL
GOING TO NEST.

popularly supposed to be governed by monotonously rigid laws of instinct.

Not one of the four individuals I had under observation showed any disposition to give winged insects the slightest quarter. If the outermost



MALE YELLOW WAGTAIL.

victim in a row held between the mandibles managed to wriggle itself free, and fell into the grass below, it was instantly followed and recovered. If a fly of any size passed incautiously overhead it was pursued and invariably caught by a dexterous vertical flutter.

Although the black-headed gull is a gregarious

sea-fowl, I have on a good many occasions met with solitary pairs breeding on small tarns high up amongst the hills of the Penine Range, where they were forty or fifty miles away from the sea.

Probably the finest colony to be met with in this country is located at Scoulton Mere, in Norfolk, where the species has bred season after season for over three hundred years in unbroken succession, in spite of the discouraging fact that from ten to twenty thousand of their eggs are collected every spring and sold for culinary purposes. Directly the birds have re-established themselves in their ancient haunt the fact becomes known to the inhabitants of the country for miles around, as they quickly resume their beneficial avocation of industriously following every working plough in search of grubs.

I have rather good reason to remember the three illustrations of a black-headed gull appearing on the next page, because their acquisition cost me over an hour and a half's waiting with my bare knees on a partially submerged piece of board, which grew very hard and cold during the latter part of my vigil.

My favourite of favourites amongst the birds of Broadland is the sweetly pretty bearded tit, or reed pheasant. During the last seven or eight years it has been my pleasant fortune to study the species at various times and with increasing



LOOKING FOR A NESTING SITE.



EXAMINING THE SITUATION.



BRINGING BUILDING MATERIALS.
BLACK-HEADED GULL.

admiration, especially for the attentive hard-working male. The individual depicted in the illustration reproduced on page 211 shared the duties of incubation with his mate, and throughout the day I spent in their company they changed places on an average once every half-hour. When the male was at home he sat as if he enjoyed the work and appreciated his responsibilities, but not so his mate. She fidgetted all the time, tidying the appearance of the nest, turning the eggs over, preening herself, and anxiously peering into the reeds and listening for the coming of her husband. Every time his sweet, ringing, *tsing, tsing* call-note sounded above the rustling music of the tall reeds swaying in the wind, she seemed glad, and vacated her post of duty with unmotherly alacrity.

As my brother and I have publicly been charged with something uncommonly like fraud for publishing native-taken photographs of the bearded tit alive and well amidst its natural surroundings, and since it has been recently included in a list of "Lost British Birds," it is extremely encouraging to read in a chapter, contributed to Dutt's just issued work on the Norfolk Broads, by the Rev. M. C. H. Bird—one of the best practical field naturalists in this country—that the species has steadily increased in numbers during the last decade.

Concerning this ornithological gem, I would in all respect say to those whom I may call the black sheep of the collecting flock, Do have mercy. If your zeal demands a clutch of eggs, take one, but do not add three or four more to your cabinet. Remember that to help in the least degree to accomplish the extinction of anything beautiful and interesting is a crime against future generations, and the man who deliberately robs posterity of a pleasure is guilty of the most pitiful kind of selfishness.

The grasshopper warbler belongs to the second class of birds mentioned in the opening page of the present chapter. It is much and unmistakably heard especially during calm summer evenings, but not often seen, excepting in the early hours of the morning, when I think, out of dislike for the dew-laden vegetation, it mounts the topmost branch of some willow bush or advantageously high reed stem to exercise its vocal organs. I have watched it turning its head from side to side in the first rosy blush of sunrise, whilst the grasshopper-like notes trickled from its quivering throat in one long, unbroken stream.

Although common on the Norfolk Broads, where its notes may be heard to the greatest advantage on account of the almost unbroken peace and stillness, water is not such an essential



MALE BEARDED TIT ON NEST.

to its existence as good cover in the shape of rank grass furze bushes and old tangled hedgerows.

When a grasshopper warbler leaves her nest, she travels through the grass by such peculiarly quick little mammalian-like movements that, taken with her size and colour, she is absolutely certain to make the novice exclaim : " Ah, there goes a mouse ! " and often she deceives the experienced field naturalist. In returning to her nest the bird also progresses in short rushes, stopping ever and anon to listen in a way very suggestive of the tactics of a mouse.

I had a nest belonging to this species under the closest observation for several days last May, and exposed three or four dozen plates upon the female owner, who became so convinced of the harmlessness of my intentions that she would sit quite still in spite of being uncovered, as shown in our illustration, whilst I knelt in full view of her, and less than a couple of feet away. Over and over again, when I left my hiding shelter of sticks and reeds to arrest the undesirable movements of some recalcitrant blade of grass within my field of focus, she would run and hide in the structure a yard away, and remain there until I had finished my outside work, when we simply exchanged places for the taking of the next photograph.

I hold the opinion, and I think that my



GRASSHOPPER WARBLER ON NEST.

experience entitles me to it, that almost anything may be done with even the shyest and wariest of wild animals by patience and kindness. Hearing of a water rail's nest, I induced a friendly marshman to help me to remove a reed screen, that had been built elsewhere by an intensely practical old gunner for hiding purposes, to its precincts. We fixed the structure up some six or seven feet away from the bird's nest, and after trampling a narrow lane in the sedge grass and rushes, so that she could see it, retired.

Big with excitement, I punted over to the place the following morning, and creeping stealthily into the tiny fold made by the four walls of reed, prepared for action, and knelt down.

In about half an hour the weird cry of a rail close at hand broke the silence, and at the same time rather startled me. It was repeated whilst the bird walked slowly round my place of concealment, and a torturing fear flashed across my mind that she could see me. After a few more minutes of almost breathless waiting I was intensely gratified to observe a large red and black bill darted with the rapidity of a bee's sting between the blades of sedge grass at the back of the nest, and instantly withdrawn again. This strange performance was repeated scores of times during the next half hour, and then sud-

denly ceased. I was now overtaken by a mood of despair, and charged myself with having selfishly attempted too near an approach to such a timid, suspicious creature. A measure of relief came, however, to my feelings, when I espied the bird's beautiful dark eye glued to a hole just beyond the far edge of her nest as mine was to one in the reed screen. Thus we stared eye to eye, with nothing else of either of us to be seen for minutes together. Gaining confidence, I suppose, through lack of either movement or sound of any sort on my part, she soon afterwards thrust her head into view, as shown in the accompanying picture, and then shyly withdrew it again as she had done her



WATER-RAIL COMING
ON TO NEST.

bill. After a wearisome repetition of these nervous tactics, the bird's courage and my hope culminated in her coming through on to the nest. The absence of cover appeared to worry her considerably, and she began to drag the rushes and sedge grass that I had parted, over her. Loth to have my chances of a plain, unobscured illustration spoilt, I fired off my focal plane shutter. For a moment the water rail seemed paralysed by the noise, but, quickly recovering herself, vanished like a flash, and did not reappear for an hour and twenty minutes, during which time I was enduring the discomforts of an almost tropical sun overhead.

Further waiting and stonestill quietness on this and the following day resulted in the acquisition of half a dozen good negatives.

The great crested grebe is one of the handsomest and most characteristic birds of Broadland, and, although shy and wary in the extreme, may, by the exercise of great care and the employment of proper means, be studied at close quarters throughout almost every phase of its aquatic life.

Upon being shown a specimen of this bird's large raft-like nest a year or two ago, I observed that its position afforded opportunities for the making of photographic studies of the grebe at home, if such an accomplishment was possible, and evolved a plan. This was to induce my



WATER-RAIL ON NEST.

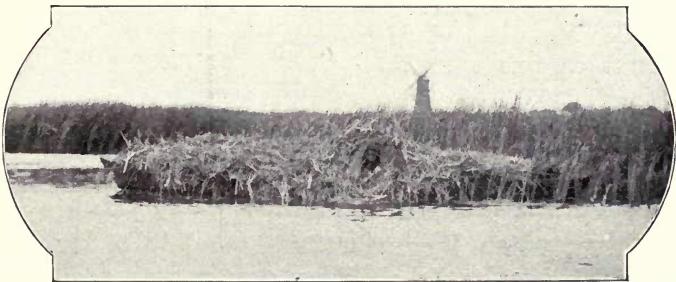
ever-willing and enthusiastic marshman friend to fill an old boat to overflowing with reeds and coarse marsh hay, and moor it at some distance from the nest, but in full view of it. After the craft and its unobtrusive cargo had been left a day and a night for the loon's inspection, it was moved somewhat closer. This method of quiet ingratiation went on steadily for the next three or four days, when I put in an appearance with the camera.

Inducing my companion to go forward in his fowling punt and place a ginger-beer bottle upright in the centre of the grebe's nest, I lowered my camera overboard into the broad, where all the full length of the legs of the tripod was submerged, saving an inch or two at the top, and focussed the bottle as representative of the bird's neck and breast. The camera was carefully swathed in litter, and I was buried deep in the boat beneath it with just a tiny peep-hole commanding a view of the nest and its immediate surroundings and left to my fate and sufferings with a characteristically cheerful "Good luck" from my companion.

For five and a quarter hours I was lying with my knees in bilge water, and every bone in my body aching excruciatingly, whilst the loon chased away coots and water-hens that incautiously strayed too near for her liking, or leisurely watched

the eye of my apparatus from the safety of her reedy retreat behind the nest. She knew quite well that the heat spontaneously generated by the decaying mass of vegetation on and beneath which her eggs were lying was doing everything necessary for their well-being, and was therefore in no hurry to return.

At last, when the limit of human endurance had almost been reached, she cautiously thrust her head through the reeds behind her nest and set all my dying hopes aflame. With a wildly beating heart I watched her come forward, jerk herself out of the water on to the nest, uncover her eggs, and sit down. Then I made a terrible discovery. I had accidentally burst the teat, releasing the mechanism of my focal plane shutter, and was therefore compelled to lie with my arms over the side of the boat, so as to be able to make



REED-COVERED BOAT

WITH AUTHOR PEEPING FROM
HIS PLACE OF CONCEALMENT.

good the deficiency with my fingers, and directly I attempted to do so, became heartbreakingly aware that my hands were useless. The pressure of the gunwale of the craft on the muscles of my arms had played such havoc with their physiology that they were temporarily paralysed.



YOUNG CRESTED GREBES.

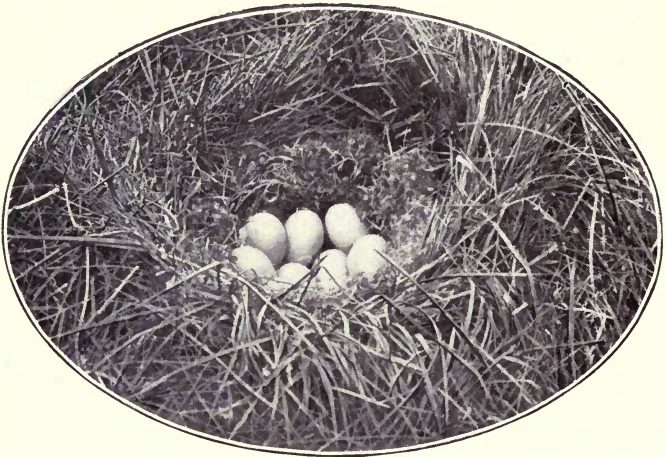
With breathless care I wriggled backwards, and dragging my useless limbs into the boat, waited until the power of movement came back to them, when I cautiously moved in a forward direction again, and fired off. The grebe instantly took alarm, and by two or three incredibly swift movements of her bill covered the eggs, and



GREAT CRESTED GREBE ON NEST

vanished like a flash over the side of her nest without leaving a ripple on the water.

Although the result was good, considering the length of time my plate remained in the camera before it was exposed, my brother has by similar methods to those I employed eclipsed it in



GARGANEY TEAL'S NEST AND EGGS.

obtaining the photograph reproduced on the previous page.

I know of no prettier sight than to watch young grebes through a pair of good field-glasses riding like miniature zebras on the backs of their parents as they swim majestically across the placid waters of an open broad in the peaceful even-tide. They take their first lessons in diving by holding on to the plumage at the back of the

necks of their parents with their bills, and being carried below.

Whilst on the Norfolk Broads last spring I had the good fortune on more than one occasion to secure a good view of two or three specimens of the rare and interesting garganey, or summer teal, and was shown a nest full of eggs that would have delighted the eye of many an ardent oologist known to me in this country. A few years ago the species was said to be encouragingly on the increase as a native breeding bird, but I am sorry to say that some of the best authorities in East Anglia appear to be agreed that it is now mysteriously disappearing.



ON THE BROADS

CHAPTER VII.

FRAGMENTS FROM THE SEASHORE.



A WELSH ROCK STACK.

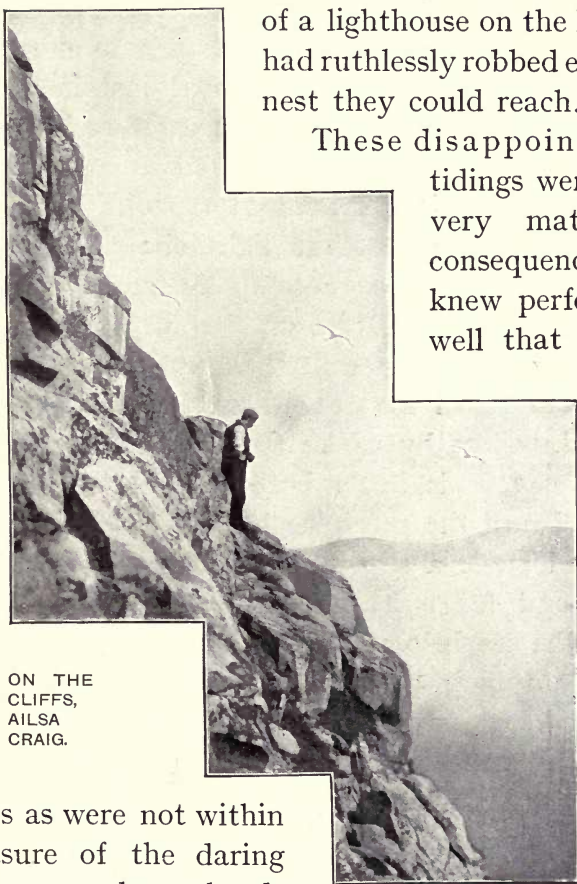
NO feathered friends strike the imagination of the beholder with so much force as sea-fowl. Whether they be seen wheeling in noisy clamour round the summit of some rocky headland upon which they breed, or reposing on the sunlit waves of the ever-restless ocean, they are things of grace and beauty, and impress the mind with

a vividness that neither time nor circumstance can stale.

Near the end of June, 1900, I travelled North with the intention of revisiting the Bass Rock in quest of photographs of gannets and their young at home. When I neared North Berwick, however, I met two ornithological friends who had already been there, and they informed me that my project was useless, as a number of masons and labourers engaged in the construction

of a lighthouse on the Bass had ruthlessly robbed every nest they could reach.

These disappointing tidings were of very material consequence. I knew perfectly well that such



ON THE
CLIFFS,
AILSA
CRAIG.

nests as were not within measure of the daring of men whose heads were inured to giddy heights would be useless to me, hampered with photographic paraphernalia, so I straightway decided to cross over to the west side of Scotland and try my luck on Ailsa Craig, which is in every way a rougher and more perilous rock stack upon which to study sea birds,

Arriving early the following morning at Girvan, on the Ayrshire coast, I was fortunate enough to secure passage in a sailing boat just bound for the awesome rock to pick up a cargo of undressed curling stones.

Upon landing, I induced my old friend Mr. Thompson, head of the lighthouse staff and a capital cragsman, to accompany me to the cliffs, and photographed him on the way, in order to give the reader some little idea of the difficulties and dangers of the ground over which we had to travel. Close by where the picture on the previous page ends, in the bottom right-hand corner, the edge of the precipice begins, and if either of us had made a slip we should have rolled over this, and fallen a sheer five or six hundred feet into the sea below.

By taking advantage of a goat track we worked our way round and down to where the solan geese breed on ledges inaccessible to all but the sure-footed and daring. It is by no means an easy task to convey an adequate idea of the perils and difficulties of camera work on such stupendous crags without laying oneself open to the charge of exaggeration by people who have never tried it.

Several times I stalked a gannet seated on her nest literally foot by foot and inch by inch, stopping ever and anon when she showed the



GANNET ABOUT TO FLY.

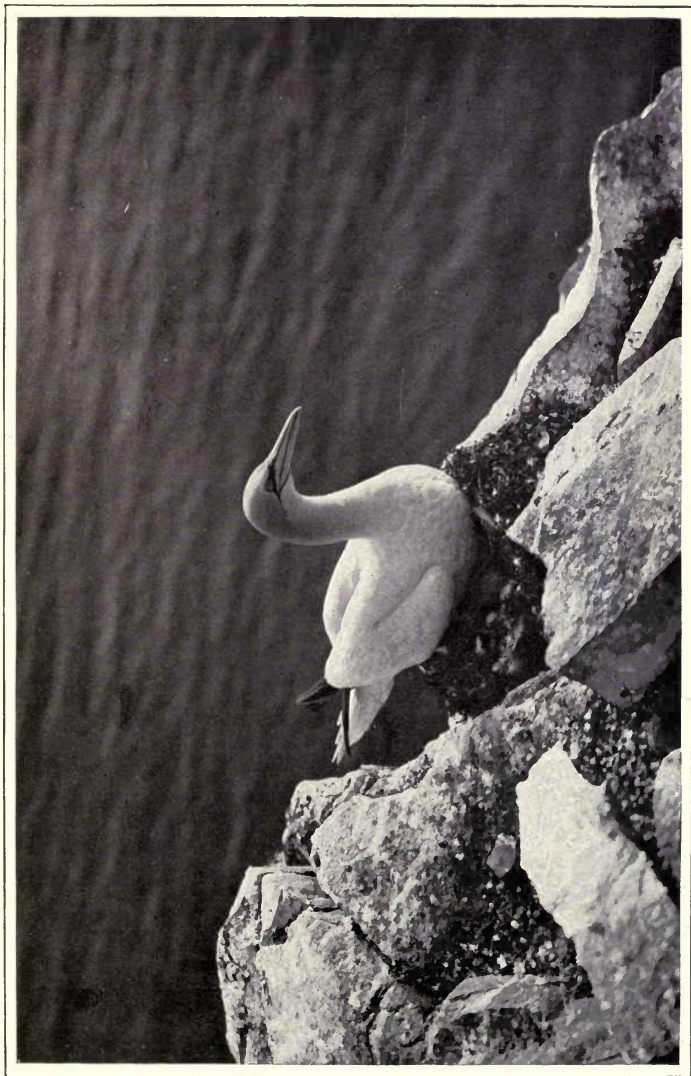
slightest sign of uneasiness at my approach, and just when I had succeeded in fixing the perversely awkward legs of the tripod amongst rocks steeper than the roof of a house, some unknown cause would suddenly disestablish me in the bird's confidence, and stretching forth her great wings she would fly away out to sea. These tactics were very tantalising after the great strain of dividing one's most acute attention between a timid bird and the fear of making a footslip which would have ended in instant death. However, they were the means of teaching me something interesting to the student of flight. I observed that when the birds raised their wings

preparatory to departure they frequently elevated them in unison, and was fortunate enough to secure a photographic study showing this initial aërostatic action with some degree of clearness.

A peep over the edge of the mighty cliff revealed vast numbers of gannets sitting on their untidy nests of seaweed and dead grass far below—some in corners all by themselves, where scarcity of room made them huddle in uncomfortable attitudes ; others so close together on ledges that their tails touched, and all wearing a look of dignified gravity. Thousands were in the air flying to and fro along the face of the crag as if on some serious business intent, whilst others were indulging in the pleasures of a lazy winged waltz, very bewildering to behold from such a great height.

Towards evening the soft play of fading light on the snowy white plumage of brooding birds would have gladdened the heart of any artist gifted with nerves strong enough to enable him to ignore the haunting fearsomeness of the situation.

Razorbills appeared to be very numerous on this particular part of the Craig, and, together with the puffins, were constantly scuttling from amongst the loose stones beneath our feet. Groups of them sat on lichen-clad rocks on the very brink of the precipice gazing stolidly at us, and flapping their wings from time to time as if



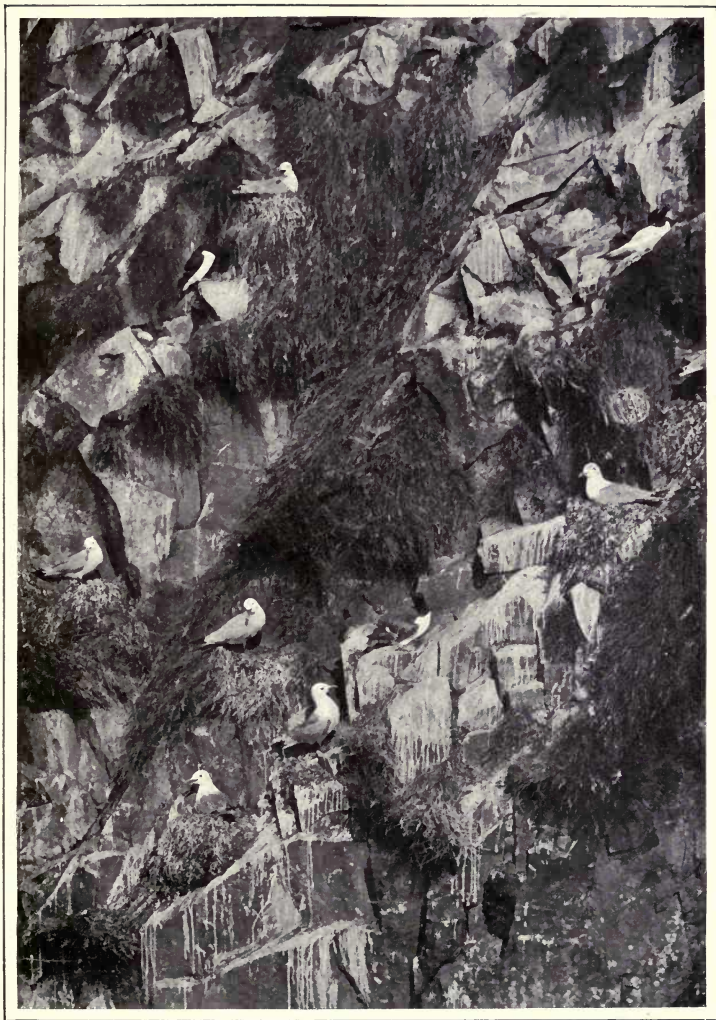
GANNET ON NEST.



RAZORBILLS.

to mark their pleasure in the declining heat of the sun, which had distressed them to the point of gaping during the afternoon. Our illustration, which was secured by a rapid exposure, proves that they do not move their wings in unison.

On the following day I visited a famous kittiwake haunt called the Slunk, reached by a climb over the top of the Craig, and the descent of a long grass-clad slope of terrifying steepness. Once down on the edge of the cliff, however, you can walk with ease out along a narrow promontory of rock, and, turning your back to the sea, get an excellent view of a fine colony of these charming little gulls at home, with an occasional common guillemot, and razorbill, nestling in peaceful harmony in their midst on a rock face less than a dozen yards away.



KITTIWAKES, RAZORBILLS, AND COMMON
GUILLEMOT BREEDING TOGETHER.

In spite of the fact that two unfortunate visitors had lost their lives at this particular spot by a fall over the cliff, I yielded to an impulse to visit it again the next day, partly influenced by a doubt whether I had secured good negatives and partly as a surrender to the alluring pleasures of watching the birds at such close quarters. I regret to say, however, that I suffered a great disappointment, and was the unwilling witness of a sickening exhibition of heartless cruelty.

A number of pleasure-seekers arrived on the Craig that morning, but its rough, inhospitable sides and dizzying steepness soon proved too much for all excepting two young members of the party. These two accompanied the chief assistant of the lighthouse staff and myself to the Slunk to see the birds. When we drew near I was mortified to witness an old white billygoat, belonging to the herd of "gone-wilds" living on the place, suddenly dash from a shady corner formed by the rocky promontory mentioned above, and startle nearly all the kittiwakes off their nests. Had I not already seen members of the species to which this patriarchal animal belonged walk across a stage on the corks of a row of empty champagne bottles, and give other proofs of their sure-footed nimbleness, I never would have believed that any quadruped could rush at top speed along such an awful path as

this old goat traversed and live to tell the tale. His wonderful display of skill and courage made me half forgive him for the destruction of my photographic hopes.

Fixing up my apparatus, I commenced to make studies of such few kittiwakes as had had the temerity to remain on their nests, when my attention was suddenly arrested by the clatter of a stone against the face of the rock upon which the birds were breeding. My indignation may be better imagined than described when I discovered that the two visitors were engaged in hurling stones at the innocent and defenceless creatures which at their end of the jutting piece of rock on which we stood were not more than seven or eight yards away. Before I could stop them, the inhuman young rascals struck a devoted guillemot sitting on her egg with a stone as large as a man's fist, and she rolled off the ledge and went twirling—a disordered bundle of feathers—down, down, hundreds of feet into the sea below. This made my blood boil with indignation, and I lashed out in language which was very much more forcible than polite.

One poor guillemot had a baby chick, which she was cuddling and guarding in the most affectionate manner between her legs, and when the shower of stones compelled her to leave it, her look was pitiful in the extreme.

Mr. Thompson told me that if a common guillemot has the unwisdom to lay her egg on a ledge with such an acute outward slope that even the advantages of its well-adapted shape will not prevent it from rolling away to destruction, she pushes it as far back as possible upon the intrusion of a human visitor, and, by a look of pathetic appeal, plainly asks him to go away and leave her in peace. Should the bird be compelled to leave, and the egg in consequence roll over the cliff, she will often dive headlong through the air after her treasure in its mad career towards the sea far below.

I found puffins rather shy—I think on account of the fact that they were being caught by the tenant of the Craig in nets spread over their breeding holes amongst the rocks. They drive the rabbits from their underground habitations with merciless determination. Several times whilst seated on a boulder making observations after the light of day had grown too weak for photographic purposes I was suddenly startled by the piercing scream of a distressed rabbit ringing out on the still evening air, and found unmistakable evidence of young ones having been killed by the powerful beaks of their feathered persecutors.

The Farne Islands, off the coast of Northumberland, are visited every spring by vast numbers



PUFFINS.

of sea-fowl on breeding intent, and some of the happiest hours of my ornithological life have been spent, whilst living free from the restraints of convention, in the ruins of St. Cuthbert's Tower, on the innermost of the group, and watching the birds. Unfortunately, the time limit of fifteen minutes with the birds, which it has been found necessary to impose upon visitors, has rendered it almost useless for the serious student to waste his money in journeying to the place.

It is the only station round the English coast where eider ducks still breed, and protection has apparently filled the birds with so much confidence in the good intentions of mankind at this particular season that you may stroke them



STROKING AN EIDER DUCK
ON HER NEST.

on their backs whilst brooding without in the least disturbing many of them.

In the spring of 1902 a high tide washed a number of nests away. One duck showed so much reluctance to leave her charge that she sat tight even when the waves were breaking right over her, and leaving long tangles of seaweed athwart her back. The devoted creature stuck to her post until the shingle was washed away and her nest and eggs sank beneath her into the sea.

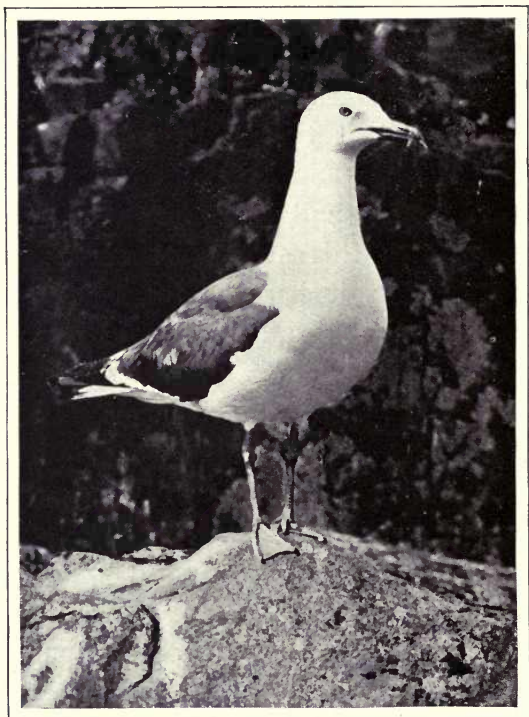
Sandwich, Arctic, and common terns breed in vast numbers at the Farnes, and the prodigious din they make when a lesser black-backed gull drops down in their midst and seizes a chick belonging to one of them is past all belief. The

arch robber heeds not their clamour, however, but calmly swallows his victim whole, and flies away. Robert Darling, one of the watchers engaged to protect the birds, told me that he had seen a lesser black-back swallow a young tern that could actually fly.

Incredible as this statement may appear, I can readily believe it, because I have watched his relative, the herring gull (a bird of about equal size and infamous character), gulp down a young peewit so well grown that it nearly choked its captor.

Although not birds of overflowing devotion, individual lesser black-backed gulls sometimes show extraordinary courage and pugnacity in the defence of their eggs and chicks. One of the keepers told me that during his long experience on the Farnes he had been twice attacked by members of the species, having his cap taken off on one occasion, and his head so forcibly struck by the formidable bill of the aggressor on another as to render it sore for days afterwards.

The bravery of individuals in the feathered world is sometimes quite astonishing. Even the gentle, defenceless terns will occasionally summon sufficient courage to attack vigorously human beings intruding either by accident or design upon the privacy of their breeding quarters. One day, whilst wandering along the beach of a small



LESSER BLACK-BACKED GULL.

island tenanted by a colony of sea swallows, as the terns are popularly called on account of their long, forked tails and swordlike wings, I was suddenly struck on the crown of my head by what I at first supposed to be a pebble jokingly hurled at me by some friend in hiding. It turned out, however, to be an Arctic tern trying to drive me away from the neighbourhood of her nest, if such the mere depression on the top



ARCTIC TERN ON NEST

of a quantity of flotsam and jetsam thrown up by an exceptionally high tide could be called. I said admiringly to myself, "Here's a bold bird," and, promptly fixing up my apparatus, focussed her newly hatched chick and egg, attached the longest piece of pneumatic tubing I possessed to my shutter, and waited in hiding under an old sand-coloured mackintosh. The courageous mother-bird was back again directly, and the full-page illustration on the previous page was quickly obtained.

On the Megstone Rock, close by the Farne Islands, a fine colony of cormorants breeds year by year, in spite of the discouraging fact that a high spring tide sometimes washes every nest and egg away, and leaves the birds under the painful necessity of starting their housekeeping all over again. During my last stay in the ruins of St. Cuthbert's Tower I had a cormorant, which appeared to be a kind of social outcast from the above-mentioned colony, under almost daily observation.

Whether this solitary bird was a bachelor unable to find a wife, or a spinster unable to meet with a husband, I cannot say, but it apparently had no aspirations in life beyond those of catching fish and standing quite still in one place for lengthy periods, giving its organs of digestion an unimpeded opportunity of dealing with their remains. Its meal hour appeared to have some



CORMORANTS AND COMMON
GUILLEMOTS AT HOME.

not very remote connection with the state of the tide, and an excess of industry in diving suggested the timing of its efforts upon my watch. I found that on an average it remained submerged thirty seconds, and was five seconds on the surface breath-taking between each plunge. Directly hunger had been satisfied, or the chances of catching any more fish had passed, it retired to a favourite rock, and spreading out both wings, basked in the warm sunshine according to the beloved custom of its species.

There is always something strangely sug-

gestive to me of the skin of an animal stretched out and nailed up to dry on a barn door about the basking attitude of a cormorant.

On the Makestone Rock at the Saltee Islands off the South Coast of Ireland, cormorants and guillemots breed together in great numbers. Our illustration represents a small corner of the rock.

The shag, or green cormorant, shown on the opposite page guarding its downy chicks—which are after a certain age the most nervous creatures known to me—is a smaller bird than its congener, the cormorant, and rather partial to dark holes and corners in which to nestle. I have found it breeding in caves so dark that you could not distinguish it sitting on its eggs until your eyes grew accustomed to the poverty of the light.

Naturalists of an older school disputed whether this bird used its wings to aid propulsion under water or not. My experiences in the Shetlands, St. Kilda, and the Outer Hebrides go to prove that it certainly does make use of its wings when either badly scared or otherwise placed under the necessity of travelling at great speed in deep water. Some idea may be gathered of the depth to which this bird can dive after its prey when it is stated that it has been caught in a crab pot lying forty yards below the surface of the ocean.

On the west side of Scotland the green cormorant or scart, as it is there almost universally



SHAG, OR GREEN CORMORANT
GUARDING YOUNG.

called, is highly esteemed as an article of food, and I have been told on good authority that it is difficult to distinguish scart soup from that made from the more orthodox hare.

The oyster-catcher is one of the liveliest and most characteristic birds of the seashore. Its

conspicuous black and white plumage, orange-coloured bill, and purple legs at once attract the attention of the observer, even if it does not advertise its whereabouts by loud and oft-repeated vocal effort. Whilst campaigning in the Outer Hebrides last summer, I determined to try to photograph this shy and wary fowl at home in its native wilds, and succeeded beyond my most sanguine expectations, although circumstances compelled me to set about my task with the camera only nine feet away from the "sitter."

The extremely rocky nature of the shore, upon which I found several scattered pairs of birds breeding, made it quite plain that it would be impossible to fix my little hiding-tent up anywhere near a single one of their pebble-paved nests. Some kind of hiding contrivance of the most effectual character for both camera and operator was, however, an imperative necessity, and as I had not my artificial rock with me, the next best thing that suggested itself to my mind was a rough stone house. I accordingly selected a site which would give me the greatest distance from the nest and yet preserve a good view of its contents, and, doffing my jacket, promptly commenced building operations.

Although it was a case of stones, stones everywhere, nothing but stones, few of those near at hand were suitable for my purpose. I

was therefore compelled to carry a goodly number, that were almost heavy enough to have been composed of iron ore, a great distance on my back before the horseshoe-shaped walls of my photographic studio were raised high enough to receive the roof. The problem of securing timber to support the heavy stone slabs and block up the doorway was solved by descending a deep hole, broken, according to Highland tradition, through the roof of a sea cave by one of King Odin's heels when he alighted on the solid shores of North Uist after his record leap of at least eight miles to escape the fury of his irate queen. Here I found plenty of driftwood deposited by the ever-beneficent Gulf Stream, but getting it to the mouth of the pit without assistance was another story. For half the distance I could shoulder it and ascend with some degree of ease and safety, but during the rest of the journey the timber had to be held in my arms whilst I slowly worked my way upwards with shoulders pressed against an overhanging bank, and feet on a thin layer of crumbling rubble lying over a smooth-faced bed of rock sloping with dangerous steepness towards the bottom of the pit. Nothing would save the wayfarer who made a slip at this particular point from rolling down a rough slope for fifty feet and alighting on a bed of tide-tossed boulders, calculated to do some damage.

I managed to haul enough driftwood out of the cave to enable me to complete the roof of my hiding-place, and partly bar up the doorway, before I left it to the mature consideration of the oyster-catcher and her mate, who was in constant attendance, ready, as I afterwards proved, to do his share of the brooding.

Next morning, when I arrived upon the scene the warmth of the eggs told an encouraging tale. They had only just been quitted, and feeling greatly pleased to know that the harmlessness of my overnight's work, although so close to the nest, had fully established itself in the suspicious mind of the wily oyster-catcher, I commenced my day's work with a light and hopeful heart. Putting the camera into position, with the lens peeping through a hole left in the stone wall of the improvised studio, I focussed my cap, placed over the eggs to represent the body of a sitting bird, and waited the coming of a cowherd boy who was to tuck me up in my hiding-place, and, by walking away somewhat ostentatiously, deceive the wary fowl I wished to portray into thinking that all human danger had disappeared from the scene. In due season Angus arrived, half hidden beneath the ample folds of the largest and heaviest cloth overcoat I ever beheld. This had been sent for the preservation of my comfort by a thoughtful Highland soul,



STONE HOUSE FOR PHOTOGRAPHING
OYSTER-CATCHER.

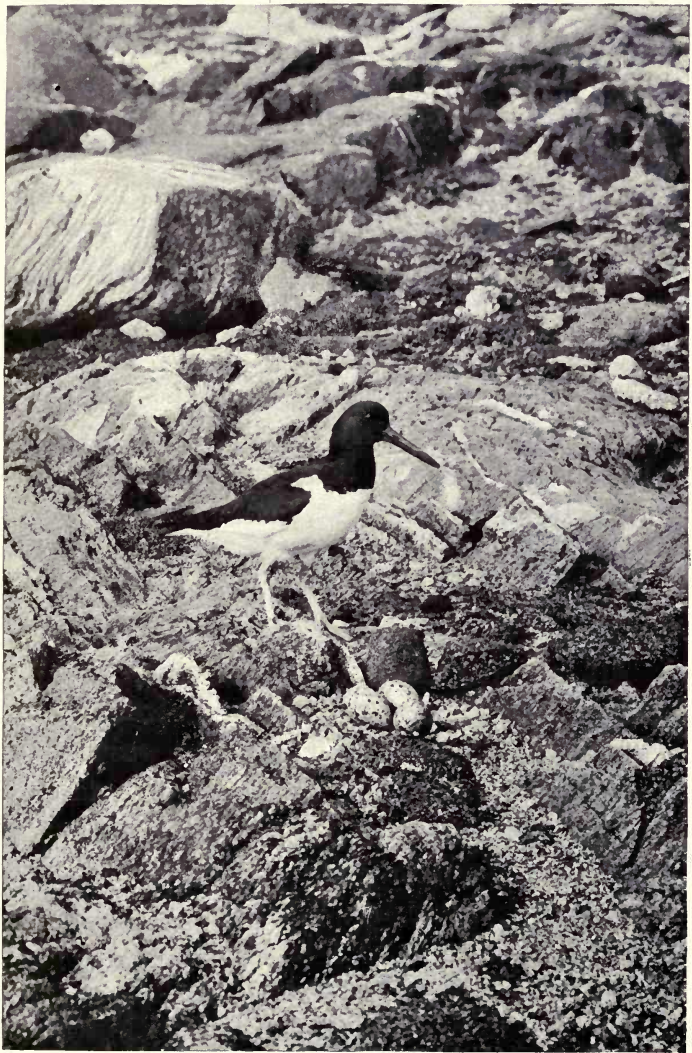
whose kindness I shall ever remember with gratitude, for in spite of the fact that both calendar and length of day declared we were close upon midsummer, a bitter nor'-easter made the shade air feel a good deal more like Christmas.

After a hurried visit to the hinterland of the cave in search of more driftwood wherewith to bar up the entrance to the stone house effectually, I entered, enveloped in my friend's great homespun overcoat, put a plate into position, and knelt down behind the camera. Angus securely barred me in with the fragments of plank, and then walked away, whistling some tune which appeared to be urging all the world to cheerfulness,

In about twenty minutes the oyster-catchers ceased their loud duetting on a favourite vantage rock some sixty yards away, and the female flew towards home. Through narrow chinks to right and left of me I watched her walking round and round my hiding-place trying to solve the mysteries of the black eye staring in the direction of her nest, and lessening the diameter of each circle as she gained confidence. The blood of generations of true sportsmen within me throbbed with excitement as I watched her creep closer and closer to her eggs, for in pitting one's intelligence and patience against the shyness and cunning of a wild animal, whether bird or beast, there is an unmatched exhilaration about the moment of overcoming.

At last, when my excitement was at fever heat, she walked up, and hustling her eggs with her breast until I could hear them chink on the pebbles, she sat down, and I instantly made an exposure, knowing by experience that a brooding bird seldom sits long the first time she returns to her nest with a suspicion that all is not quite right. Her acuteness of hearing was so great that, in spite of the constant booming of the tide upon the craggy shore close behind us, she heard me directly I commenced to change my plate, and shot off her nest like an arrow.

There is something wonderful about the ability



OYSTER-CATCHER
APPROACHING HER EGGS.

of wild animals to differentiate sounds. I have watched a blackbird sitting on her nest in absolute composure whilst a violent thunderstorm was shaking the very air around, and yet when I made the slightest noise in my hiding-tent, erected near by, she took instant alarm.

In about half an hour the oyster-catcher came back, and repeating her circular peregrinations of inspection for ten minutes, regained confidence, and covered her eggs for the second time.

A peculiarity of birds that make shallow nests is that when they sit down upon them they do so very much breast first, like a ship sinking by the bows, and work their eggs into position amongst their nether plumage by a series of side to side wriggling movements.

After I had exposed two or three plates at intervals upon the female oyster-catcher, and noted with pleasure that she was growing encouragingly bolder, the male came to take his turn at the work of brooding. Whether the presence of his mate gave him confidence, or he regarded the mysterious black eye of the camera peeping through the wall of the stone house with greater indifference I cannot say, but he set about the duties of incubation with a much smaller waste of time than his mate. Here I did what proved to be an indiscreet thing. The light had grown very poor, and having aforesaid



OYSTER-CATCHER ON NEST.

induced many birds that were constantly moving their heads from side to side to sit still and listen intently while I made a time exposure upon them by mewling like a cat, I held forth in lowest and sweetest feline tones. The result was as little expected as it was desired. Instead of staying to listen, the brooding bird shot off the nest instantly, and for a solid hour and a half walked round and round angrily, picking up pebbles and turning over small stones with his wedge-shaped bill. From time to time he stood on an elevated rock, and, facing the wind, puffed out his plumage, and shook himself or stretched his wings as if awearry of the whole business.

I had now endured over three hours of cramped misery, kneeling behind the camera, with a bitter wind whistling through every chink in the dry

walls of my hiding-place, and when neither courage nor power of will could stifle a groan called forth by the excruciating pain in my nether limbs, I crawled forth and went my way, leaving the birds in peace.

The behaviour of a ringed plover living close by was such that I concluded she had a clutch of eggs lying somewhere in the immediate neighbourhood, but do what I would by carefully quartering the ground and searching every square yard of it within certain limits, I could not find her nest.

Next day I returned to the oyster-catchers, and by going through very similar experiences to those detailed above, managed to secure a few more exposures upon both male and female covering eggs and near-by nest. Whilst in waiting I had matured a plan by which to locate more precisely the nesting-place of the ringed plover, and thus enhance my chances of finding her eggs. The stone runner, as this species is very appropriately nicknamed in Norfolk, is ever on the watch for signs of an enemy, and instantly leaves her eggs to the care of harmonisation with surrounding natural objects when danger threatens. A knowledge of this very sensible habit led me to the conclusion that if I carefully parted the planks barring up the doorway of my house at the bottom, quietly wriggled through the aperture

and then suddenly jumped up, I should see where the sitting bird commenced to run from, and have my task considerably simplified. This was done, and in less than two minutes I solved the cunning plover's secret.

The little pebble-lined declivity was within twenty yards of that occupied by the oystercatchers, and a marvellous thing about the matter was not how the eggs had escaped my eyes, but my feet, for in carrying stones during my building operations I had walked at least a score of times over and hard past the nest.

A difficulty here presented itself. The dipping of one of the clutch of eggs into the water of a rock pool showed that incubation was far advanced, and if I wished to figure the brooding bird, immediate action was necessary.

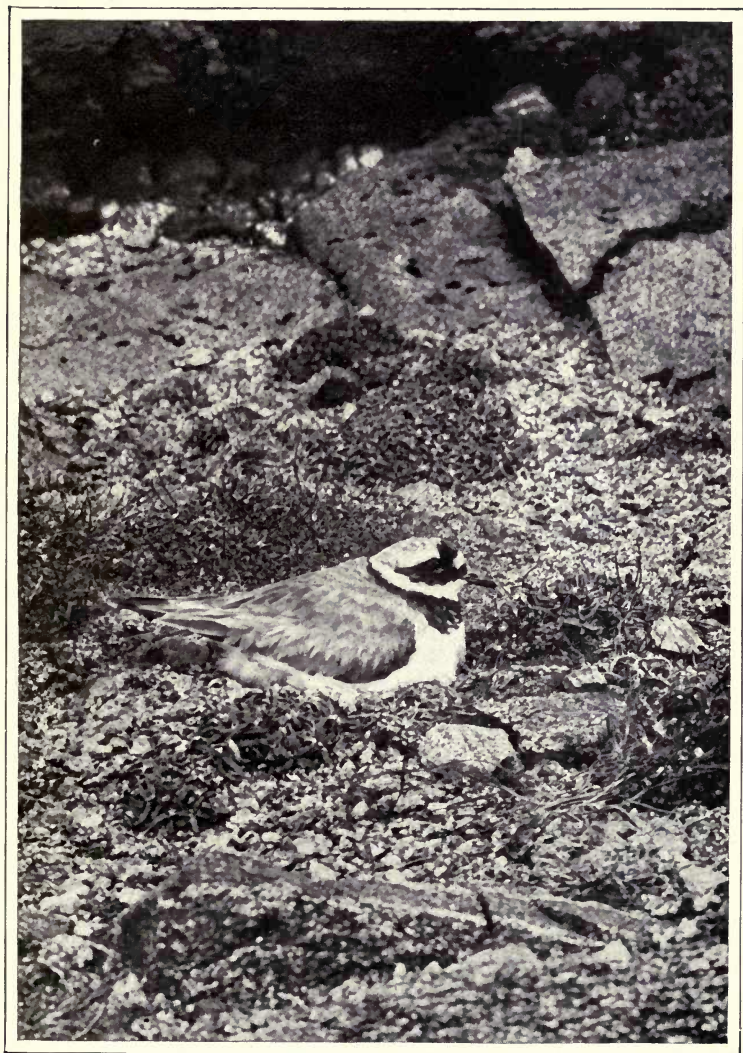
I had not nearly finished with the oystercatchers, and although building materials were scarce, I could not think of housebreaking there in the interests of a new studio. As all useful reflection soon exhausted itself on the matter, and looking on makes nothing grow, I promptly commenced to roll such crags as I could stir into the position of foundation-stones. These boulders gave me an encouraging start, and I required it, for I was tired, and the rest of the stones were very heavy and far to carry. Although it was late in the afternoon when I started my task,

the unquenchable fires of enthusiasm carried me through, and I completed the new structure roof and all before sundown.

The following day being Sunday, we all enjoyed a much-needed rest—at any rate, I did, after taking one anxious peep and finding things going well with my “sitters.”

Monday was hailed with excitement, and provided an amply satisfying measure of hard work. I knelt five hours with the oyster-catchers, and secured a number of what turned out to be successful pictures, our full-page illustration on page 249 being one of them.

Angus arrived with my lunch about two o'clock, and half an hour afterwards he had shifted the doorway timber from Oyster-Catcher House to Ringed Plover Villa, and I was tucked up and waiting for the latter bird to come home. Five minutes after my assistant had taken his departure she was covering her eggs, and I straightway added her portrait to our gallery. The slight noise of the fast shutter frightened her so much, however, that she did not venture to return to her nest for an hour and ten minutes. All this while she kept running round and round the stone house, trying in vain to solve the mystery of the strange sound-maker inside. She frequently picked up pebbles in the same way that the oyster-catchers had done, but, unlike



RINGED PLOVER ON NEST



RINGED PLOVER ABOUT TO WALK
ON TO HER EGGS.

them, did not stand in one posture for minutes together listening and thinking. Her habit was to make little hurried rushes with her head down, and, stopping for a second or two, dash off again, as if she had forgotten something. I stayed at my post for four hours on end, and after exposing a goodly series of plates by the aid of my more silent studio shutter upon the bird on and near by her nest, crawled forth, scarcely able to walk home to my friend's house.

In a day or two both species hatched out their young, and I noticed two habits apparently common to them both. All egg shells were

removed thirty or forty yards, and nest depressions practically filled up by lining pebbles having rolled down. Doubtless the struggles of the chicks were answerable for the latter circumstance.

Not far away a small colony of common gulls were breeding on a rough rocky promontory, and I determined to try my skill upon the species.

Somebody ill-acquainted with the qualities of sea-gull mind once invented a slang phrase intended to be indicative of its extreme credulity. As a matter of fact most of the members of the gull family are far too intelligent to be imposed upon, and they make you painfully aware of that fact when you try to photograph them at close quarters.

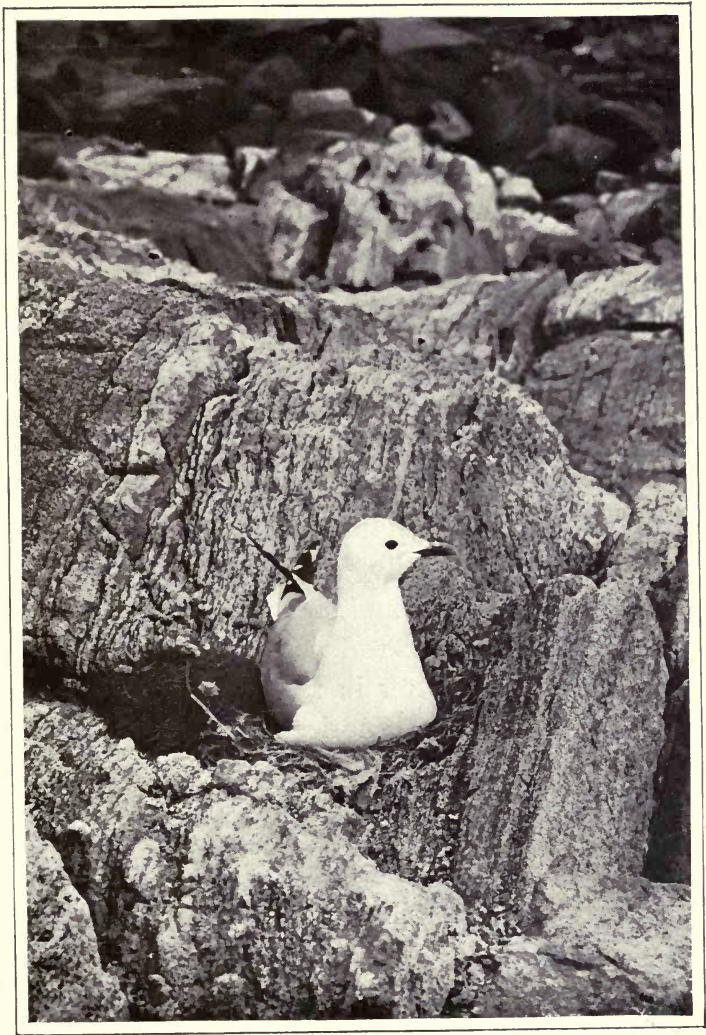


COMMON GULL
COMING TO
NEST

In order to secure the study of the specimen reproduced on the opposite page, I had to build a third house, and such was the file-like sharpness of the rocks over which I had to carry my building materials that the ruin of a pair of strong boots was quite completed.

One very breezy day I made a number of exposures upon her from my place of concealment, but the poor light and sea spray deposited on the lens, in addition to wind-ruffled plumage, rendered the negatives useless. This was no great disappointment to me, because the unfavourable weather had not allowed me to hope for much that day, and the bird's encouraging behaviour had led me to do so for the next. She came back to her nest fairly well, and every whit of my experience with other species went to prove that she would grow bolder as time went on. My surprise was therefore great when I afterwards discovered that she grew shyer day by day, and was gifted with such wonderfully acute hearing powers that she could even detect the rustle made by a small diary leaf when I turned it over during my note-taking whilst hidden in the stone house. I ought, however, to mention that, owing to the peculiar formation of the rock bed on which she had built her nest, my lens was only seven feet away from it.

In spite of the utmost care being taken, I



COMMON GULL ON NEST.

only made two or three exposures upon the bird during two days, at the end of which time a raven severed our further acquaintance by sucking the eggs.

Whilst waiting and watching one day for the common gull, I saw something of the unneighbourly behaviour of my old friend the ringed plover. She would not suffer any other bird to rest within a certain area which she had marked out for herself and her four downy tots of chicks. It did not matter whether it was an oyster-catcher or a rock pipit that happened to stray too near her claim, she rushed upon the intruder like a little fury, and speedily expelled him.

Numbers of rock and stock doves were breeding along the coast where I was at work, the former in caves and the latter in rabbit burrows on the edges of the cliffs. I noticed several specimens amongst the cave-dwellers bearing signs of artificial selection. They were either escaped domestic varieties or the descendants of such—probably the latter.

A fine old peregrine falcon flew past me on several occasions, and the fleshless remains of pigeons lying about amongst the rugged crags told their own tale of taxation and tragedy. This bold marauder occasionally falls an indirect victim to his own appetite, however, for a few years ago one floated ashore dead, near to this

place, with his talons inextricably fixed in the back of an unfortunate wild duck.

Whilst hunting for birds' nests one day on a tiny island at the mouth of a bay, I found a rat's hole with a little hillock of limpet shells outside, and mentioning the fact to my friend Dr. Mackenzie, with whom I was staying at the time, he informed me that he had once discovered a rat in a strange trap on the same island. It had been caught by the nose by a limpet, and held down to the rock until the rising tide had drowned it. He also told me that he had dissected several limpet-fed rats living on this isle of fresh air straight from the Atlantic, and found signs of past tubercular trouble of a severe character in nearly all of them.

The unsophisticated Sassenach is very liable to attribute certain characteristics and idiosyncrasies to Highland and Lowland Scotsmen alike, and occasionally receives surprising proof of his ignorance. If I had been asked whether I considered caution and reticence common features of Scottish character up till last June, I should have unhesitatingly answered, "Yes, certainly." During that month, however, I learnt something of the unwisdom of sweeping generalities. One day, whilst in the Outer Hebrides, an aged shepherd and a boy of some sixteen summers voluntarily helped me to search for a bird's nest

which I wanted to find rather badly. During our wanderings up and down a rough, stone-strewn piece of ground, I made the sporting offer of half a crown to the finder. As the elder searcher proved to be the lucky one and the boy only found a seagull's nest, which I did not want, I gave him a shilling as a sort of consolation prize. By the evening the news had spread far and wide that I was giving half a crown per clutch for ringed plover's eggs, and a shilling for those of seagulls, and a lad arrived almost as soon as I did at my friend's house with a basketful, which he was anxious to sell me. Poor boy! he had walked miles, big with hope, and had to return heavy with disappointment.



THE BASS ROCK.

CHAPTER VIII.

WINTER SHIFTS.

HOW FEATHERED FOLK FARE DURING SEVERE WEATHER.



ROBIN FEEDING UPON
COCOANUT PLACED ON
HORN OF STUFFED OX
FOR TITS.

WHEN the rowan and blackberries have all been consumed and bitter November blasts come roaring like hungry wild beasts out of the frozen North, driving worms and other forms of lowly life to their sleeping quarters deep down in the bosom of Mother Earth, the hardships of bird life commence in earnest.

Vast multitudes of fieldfares and redwings travel south to share with thrushes and blackbirds such store of hips and haws as a barren or bounteous summer may have left upon the leafless twigs of hedgerows and bush-clad common for them.

In spite of repeated failures, many people profess their ability to forecast the character of

a coming winter by the abundance or scarcity of wild fruits. A little observation will, I think, suffice to show that there is not much in this beyond the part played by mere accident. Nature has little care to bestow upon the weak individual of to-day; her great concern is for the welfare of the species to-morrow. The effect of this is that we have now with us a stronger and healthier stock of feathered winter residents than we should have had if the severe weather at the beginning of 1895 had not killed off all the weaklings and undesirables from a propagation point of view.

Very few people know how hard wild birds are compelled to work for a living during the winter months, even when there is little or no snow upon the ground, and the means by which many species manage to survive during prolonged periods of severe weather is, I must confess, a mystery to me.

Whilst walking through the gaunt woods in winter we often hear some hungry searcher after a morsel of food hopping over the dead leaves or diligently turning them over in the hope of discovering a lurking trifle beneath. But how much of this kind of work must be done before a single meal is found it is difficult for a human being to conceive. In order thoroughly to appreciate the difficulties of birds trying to find

sustenance during December, January, and February, I have placed myself as far as possible, body and mind, in the position of a famished bird, and gone forth on a bleak winter's day into the woods to search for food. On my hands and knees in a copse composed of oak, wild cherry, beech, and hazel, I have carefully turned over the leaves one by one right down to the bare dank mould below. Two square yards of clearing and eager scrutiny yielded one small worm, one acorn, one sound hazel nut, and a tiny snail. A second search in a different part of the same wood only furnished a single half-torpid worm to the two square yards. A fortnight later I cleared six square yards in the same carefully methodical fashion for the finding of a single beggarly hazel nut of the smallest dimensions.

Of course, some allowance must be made for the difference between the eye sharpness of a hungry bird and that of the most carefully trained human observer; but even then the result of the last-named search, side by side with a knowledge of the enormous appetite of, say, a robin redbreast, makes one wonder at the large measure of a wild bird's hope and admire its marvellous perseverance.

Of course, when the majority of streams and sheets of fresh water are frozen over, and the earth lies wrapped in a thick blanket of undrifted

snow, the difficulties and sufferings of all wild creatures are multiplied a thousandfold. Common snipe and jack snipe descend from the hills in order to probe the mudbanks of such small lowland streams as still remain unsealed by hard frosts. The jack snipe figured on the opposite page was photographed in a ditch close to Redhill, in Surrey, just as it was about to commence feeding. During the prevalence of intense frosts the majority of these birds leave our islands altogether, but a few still remain, even when reduced to such a pitiable condition that there is no ground left soft enough for their long bills to penetrate in search of worms and mollusca, excepting round springs, and they are so weak that they will allow themselves to be taken by hand.

Wild ducks living inland experience great difficulty in procuring an adequate supply of food when ice and snow abound. Stubble fields, water meadows, and shallow weed-grown pools are all held in a grip of iron. Any food still left in them is as securely locked up as the wealth of the Bank of England at midnight, and they are therefore compelled to haunt springs and small running streams in search of their nocturnal meal.

Such individuals as live within daily flights to and from the sea love to visit small streams just where they trickle into the salt water, and the



JACK SNIFE COMMENCING TO FEED.

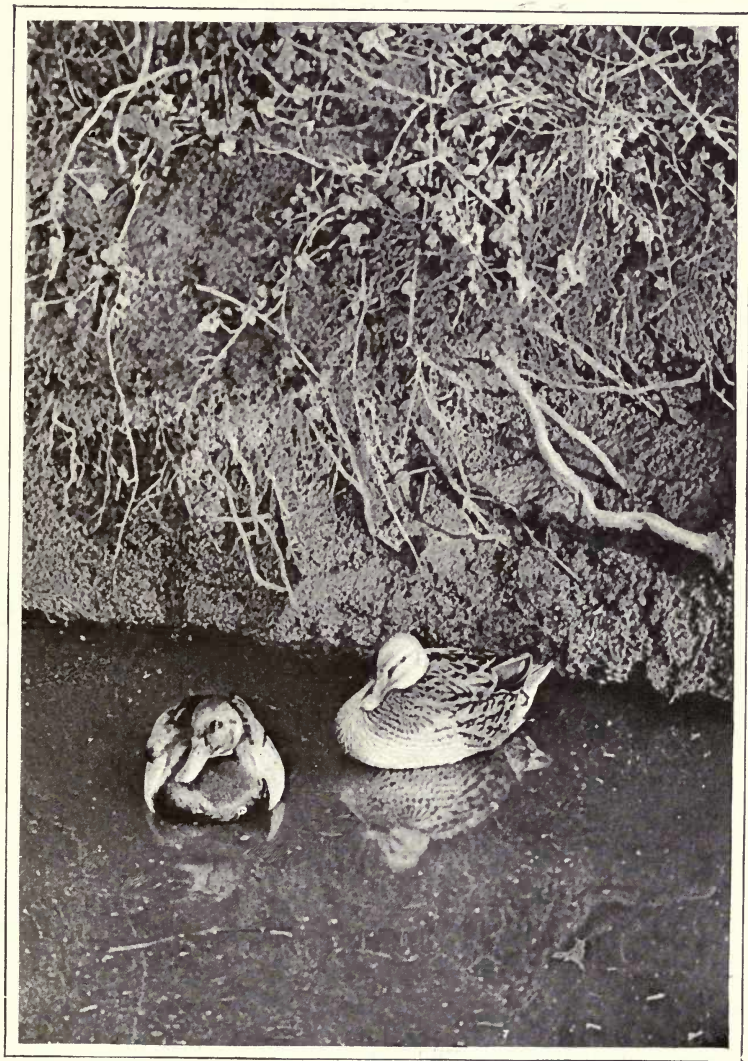
shore shooter, taking full advantage of this piece of knowledge, baits such streams with bruised corn during severe weather, and works sad havoc in the ranks of the hungry fowl from some place of concealment near by.

Wild ducks seek their food from dusk until within two hours or so of dawn, when they begin to wash and preen themselves. At the first intimation of daybreak they commence to fly back to the sheets of water upon which they are accustomed to spend the day.

There is no prettier sight for the naturalist than to peep through the narrow vertical slit in a decoy screen and see two or three hundred wild ducks scattered over the ice beyond the open water at the mouth of the pipe on a sunny winter's day. Some of the birds are sleeping peacefully with their broad bills sheathed in their back plumage, others stand about in little expressionless groups, whilst here and there a belated fowl may be seen busy preening itself.

I have noticed that inland wild ducks appear to have the strange faculty of knowing during the first onslaught of hard weather which of their feeding places will be frozen over and which will not, without even taking the trouble to visit them.

They are also somewhat fastidious in regard to the direction of the wind. I have waited long and patiently at a favourite feeding place,



WILD DUCKS ON ICE.

and then discovered that they did not arrive because the wind was blowing strongly from their daily resting tarn towards the weed-clad feeding pool near which I was hiding. Wild ducks dislike flying with a breeze because it disarranges their plumage and renders their flight somewhat unsteady.

In the absence of acorns, pheasants that are not hand-fed are very glad to make a meal off hazel nuts if they can secure them, and when hard pressed by hunger will even fill their crops with such non-nutritive food as the acrid leaves of the common wood spurge and the fronds of the polypody and shield ferns.

Strong winds either accompanying or following hard upon the heels of a heavy fall of snow are a blessing in disguise to both red grouse and partridges, because they bare ridges and expose food which would otherwise be very difficult to come at. A quiet fall of snow, followed by a partial thaw and supervening frost, on the other hand, brings black disaster. It hermetically seals the food of these birds, and drives them famished into all sorts of strangely unnatural places and actions.

In 1895 grouse were shot in mistake for wood-pigeons whilst alighting in oak-trees during the dusk of evening miles and miles away from the nearest moor, and were to be seen even walking

about the streets of market towns in the North of England. Thousands perished of hunger, and thousands more managed to keep life and feathers together by availing themselves of the fruit and buds of hawthorn bushes. A strange thing is that they acquired such a taste for this kind of food that they are, like the sea gulls and the Dutch cheese on the Thames Embankment, loth to give it up, for whilst in Yorkshire as recently as last winter I saw several members of the species, during quite open weather, tugging away shamefully at the buds on hawthorn trees. Of course, I saw red grouse, long before the memorably severe weather in question, sitting in or on trees, but never before actually feeding from what they produced.

During my farming days I could never make out the connection between an open winter followed by a black cold spring and the rich crop of yellow rattle which was sure to appear in the summer. The explanation may perhaps be sought in the following interesting fact. Yellow rattle is a parasitic plant which preys upon the roots of grasses and other herbs. It has a strong upright stem, which will stand erect through several inches of snow, and during severe weather partridges feed upon its seeds.

The very severest of weather seems to have no terrors for the hardy wood-pigeon. If there

is neither an acorn nor a beech mast left in an English wood, turnip-tops and other field crops that remain green in the winter months will do equally well. Even if these were all to be buried far beneath a phenomenally heavy fall of snow, the bird would stuff its crop with ivy leaves and berries, and retain its plumpness even on such humble fare, supplemented now and then with maize stolen from some wood in which pheasants were fed.

Woodcock, like snipe, feel the hardships of long severe frosts more, perhaps, than any other birds, because of their peculiar method of feeding, and a perfectly wild member of the species has been known to visit a Brighton garden to jostle with thrushes and blackbirds for food doled out by the hand of a kind benefactor. My friend Dr. Mackenzie, of North Uist, says that during frosty weather he has frequently seen members of this species crouching on the high road in the hoofprint of a horse, and has actually driven over them whilst resting in such declivities.

The tempestuous weather experienced during the last few days of 1894 prevented sea-birds from getting a sufficient supply of food in the open ocean, and they were thus driven in great numbers into harbours and estuaries in search of all sorts of garbage. As the great frost which followed tightened its grip, black-headed gulls, kittiwakes,

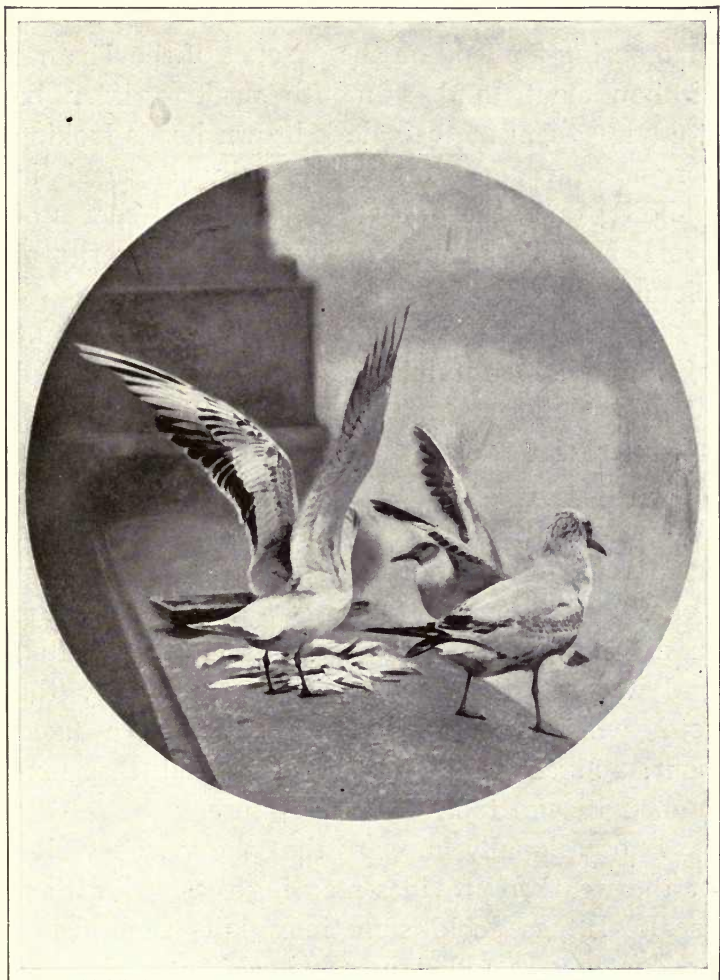
common gulls, herring gulls, and an occasional lesser black back in immature mottled grey and brown plumage, were driven higher and higher up the River Thames by the insatiable pangs of hunger. At last they arrived above bridge, and met with hospitality as surprising as it was welcome. In spite of the intense cold, crowds of people of all ages and classes stood on the Embankment and threw crusts of bread, biscuits, bits of cheese, and scraps of fish to the birds as they wheeled and screamed, rose and fell, restless as the ever-changeful sea from which they had come.

I had studied every one of them at home by lonely tarn-side, on frowning ocean crag, or the pebbly shore of some far northern isle, and must confess that they looked sorrowfully out of place in the very heart of grimy London town. To see these beautiful grey and white birds of wind and wave floating down the river on dirty rafts of ice, or seated in sullen rows along the gunwales of deserted coal barges, was to me the most distressing sign of marine beggary. Whilst watching the birds one day I was greatly delighted to catch sight of a diminutive ink-stained printer's boy feeding the boldest of them on crusts of bread which he was scarce tall enough to see alight on the bosom of the river after he had cast them over the parapet. Taking the

hint, I straightway walked over to a neighbouring shop and bought a bag of fresh fish, which an assistant, at my request, cut up into small pieces for me. This food vanished like magic when I reached the Embankment. It was, of course, only a tiny drop in the great ocean of want, but ere long I had the satisfaction of seeing my fish-monger with laudable enterprise meeting the dinner-hour demand for "gull food" by getting parcels of fresh herrings and sprats ready for humane sympathisers to buy and distribute from bridge and bank amongst the starving birds.

Although we have experienced a series of mild winters since those dearthful days, the black-headed gulls at any rate have not forgotten their benefactors, and return season by season, with unfailing regularity, to gladden the hearts of many Londoners. They have grown wonderfully bold, and it is an amusing sight to stand on the footbridge spanning the sheet of ornamental water in St. James's Park, and watch them fearlessly taking all sorts of scraps from the outstretched hands of an admiring crowd. They appear to be inordinately fond of cheese, and will catch the tiniest crumb thrown to them in mid air almost as dexterously as a swallow would hawk a gnat.

There is something strange in being able to photograph these birds in their winter garments



GULLS ON THE THAMES EMBANKMENT.

clamouring for food on the parapet of the Thames Embankment, and a month or two later be studying them in their dark brown hoods looking for a breeding site, or actually engaged in building operations on the reed-fringed shores of some Norfolk mere, as shown in the series of pictures on page 208.

Seagulls sometimes show a wonderful amount of cunning in obtaining food. A medical friend of mine living near to Morecambe Bay told me, a winter or two ago, that he could not make out why a number of these birds visited his garden regularly at the same time every morning. At length he discovered that they came to dig up bones and bits of fat hidden by a small pet dog in different parts of the grounds. They waited and watched the four-footed creature bury the food, which was served out to him at a fixed hour, and as soon as he had retired they exhumed it, and took their departure.

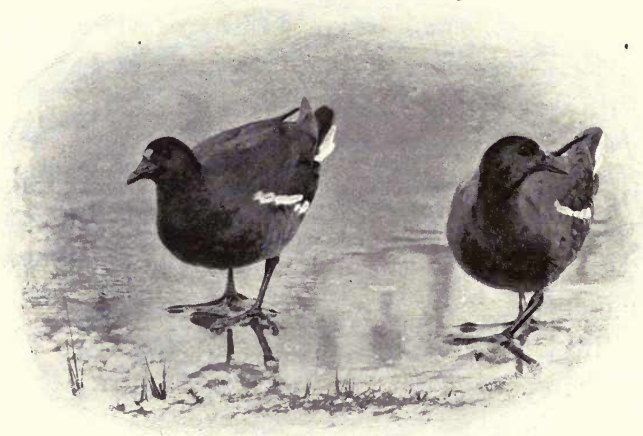
It occasionally happens that the very severity of the weather provides starving sea-fowl with a meal. Intense cold sometimes kills such fishes as conger-eels and wrasse or red sea-perch, and when their bodies are washed ashore they are devoured by ravenously hungry birds hovering about the tideway in the hope of finding some edible trifle.

Frosts soon drive hooded crows away from

the fields, where they have been searching for beetles and worms, to the seashore. Here they seize shell-fish, and flying into the air to some height, drop them on rocks in order that they may be fractured and thus rendered vulnerable to attack. Whilst on the west side of Scotland in the winter I have watched members of the species engaged in this interesting pursuit, which was mentioned by a writer as long ago as the twelfth century.

When pools beloved by water-hens are armoured in ice and the adjoining meadows are hidden deep beneath wreaths of snow, the birds are sometimes emboldened by want to the point of entering farmyards and scrimmaging with the fowls, like boys in a football match, for a share of their food. During such times of scarcity a potato or an apple is greatly relished, and will entice even the shyest of "sitters," as our illustration on the next page testifies, to pose in front of a well-hidden camera.

I know a small spring-fed stream amongst the Westmoreland Fells which is a favourite rendezvous for wild ducks, snipe, and water-hens during cold snaps, and one day, whilst wandering along its banks, witnessed a strange accident. A sheep-dog that had followed me from the farmhouse at which I was staying scented a water-hen hiding beneath an overhanging bush, and



MOOR-HENS ON ICE.

promptly disturbed it. The frightened bird instantly dived, and commenced to swim up stream. I watched its leaden grey form disappear beneath a long tangle of beet-coloured roots trailing gently to and fro about a foot beneath the surface of the crystal current. Quick as thought my hand went to my watch-pocket, and I commenced to time the subaquatic stay of the fugitive. Admiration of the poor bird's enduring powers mounted higher and higher until one hundred and twenty seconds had been registered, when an element of doubt crept into my mind. A further sixty seconds convinced me there was something wrong, so I rushed off for a stick, with which I poked the hiding bird out of its place of concealment.

To my great regret it rose to the surface and floated pathetically down the beck—quite dead.

I have on one or two occasions released members of this species apparently entangled beyond the power of escape in thick bushes, but I never once saw the trailing roots under which the bird dived stir in a way to suggest anything struggling beneath them.

It is difficult to conceive how our vast flocks of rooks exist when the earth is as hard as rock and no friendly ploughshare turns a clod from Land's End to John o' Groat's. At such times they feel the pangs of hunger most acutely, and fly uneasily to and fro, racked by a continual war between want and wariness. It is quite



ROOK.

laughable to watch them greedily waiting on some tree, telegraph wire, or stick heap at a safe distance for a sparrow, with privileged impudence, to visit the precincts of some dwelling-house and fly off with a piece of food. Directly the little brown forager has passed some imaginary line of danger, the sable thieves give chase, and, dodge and double as he will, they ruthlessly harry him until he drops the tit-bit. If the falling scrap happens to alight in a thick hedge-row or evergreen, they hunt the ground with an amount of care and persistency which is astonishing even in a hungry rook, but never appear to dream of examining any more elevated situation for the missing food.

In spite of the conquering march of science, squalid mounds of refuse from large towns lie all over the countryside to offend the organs of sight and smell. I have seen the crowns of such heaps as had by spontaneous heat melted their way through a heavy fall of snow literally black with rooks, diligently searching for unsavoury trifles.

Farmers with conscientious scruples about the use of firearms on the Sabbath have assured me that these birds know when it is Sunday, because they are much bolder in approaching sheep troughs to steal corn on the first than any other day of the week.

The jackdaw is a much more venturesome

fowl than the rook. He will, when hard pressed, rummage even dust-bins and pig-styes in search of any unconsidered trifle, which he will carry to the top of some coign of vantage and hammer into pieces small enough to be swallowed.

During ordinary winter weather, house sparrows, hedge accentors, and robins pay kitchen sinks daily visits, and throughout rigorous times are compelled to share with blackbirds, starlings and song thrushes such culinary trifles as fortune may wash down to them. A representative of the last-named species used to visit my garden every morning and afternoon for her rations. One day a curious accident befell her. She was wrestling strenuously with some grains of rice adhering to the sides of a pudding dish which had been placed on a sloping bank for the benefit of all and sundry winged visitors. Whilst standing on the lower edge of the utensil the thing suddenly turned clean over in response to her weight and exertions, and entrapped her beneath it. This little accident appeared to scare her very much indeed, but in spite of it she was back at her wonted time next morning in search of breakfast.

A very pleasant feature of the growing interest taken in the study of natural history has manifested itself during recent years in the increasing numbers of people who now feed

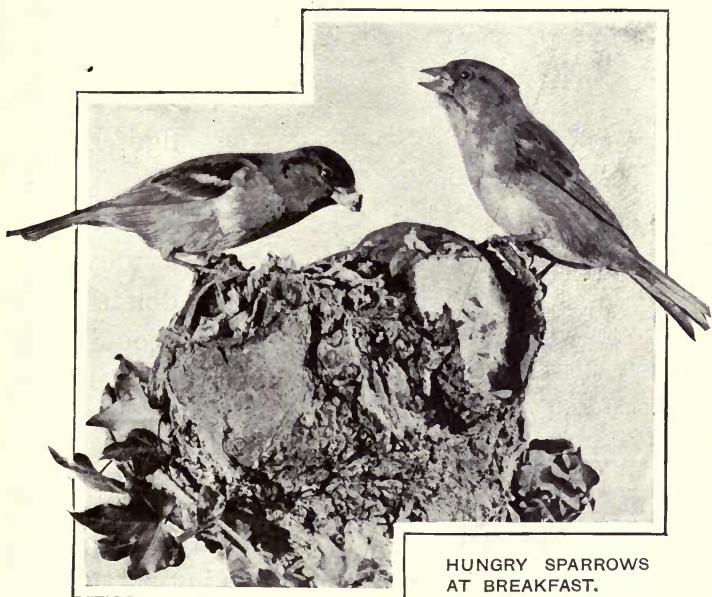
hard-pressed wild birds throughout the winter months.

When the weather is extremely inclement, almost any sort of fare—such as crusts of bread, crumbs, scrapings of pudding-dishes, cooked potatoes, bits of suet, bacon rind, and meat bones with something left to peck at still adhering to them—proves acceptable. I have known starving birds eat even brown Windsor soap.

The flotsam and jetsam of the kitchen is soon exhausted, however, and then arises the problem of what it is best and cheapest to provide as a substitute. For song thrushes, blackbirds, starlings, robins, and hedge accentors I buy quantities of dog biscuits, which are soaked, crumbed, and



SONG-THRUSH COMING TO FEED.



placed in a hole chiselled in the trunk of a decayed tree, or in a hole in the head of an old stump, such as that from which the pair of hungry sparrows are shown snatching a hasty meal in the illustration above. This arrangement keeps the feathered table tidy, and at the same time affords a good opportunity, as will be gathered from a glance at the picture, of making camera studies of the recipients of one's hospitality.

An apple, pegged down when the ground is not frozen impenetrably hard, exercises an irresistible charm over many birds, and affords the photographer ample opportunities of exercising

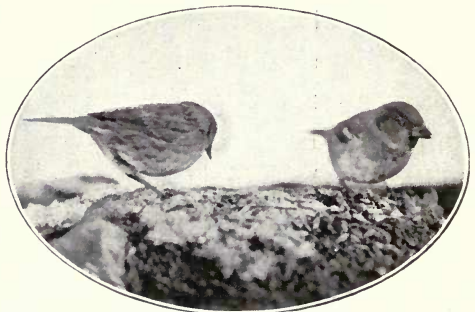


BLACKBIRD AND APPLE.

his skill. The male blackbird figured in our illustration in a somewhat doleful, although characteristic winter attitude,

was a most courteous fellow, for whenever a female member of his species came along to partake of the fruit, he promptly retired, in order to give the lady an unimpeded opportunity.

Wild birds, like domesticated individuals, appear occasionally to strike up friendships with members of other species than their own. The house sparrow and hedge sparrow figured in the accompanying vignette were inseparable friends, and constantly fed together all last winter in my garden.



HEDGE AND HOUSE SPARROWS.

In looking after the welfare of garden species during severe weather, it should never be forgotten that they are at such times almost as much in need of water as food.

Some birds enjoy a bath even in the coldest of weather, and to watch a robin or an old cock starling delightedly splashing about in a dish of water with lumps of ice floating on the surface, immediately before retiring to roost, when both a steely-blue sky and the thermometer foretell another night of black frost, is enough to make the hardiest observer shiver.

One would think that the mercury must occasionally, however, fall too low for such winter ablutions, for in the memorable first two months of 1895 the thermometer fell to 20° below zero in Scotland. Kingfishers were found frozen to iron rails, wild geese to the ground, and robins were seen to enter cowsheds in order to sit on the backs of animals for the sake of imparted warmth.

For the tits I buy small cocoanuts, saw a piece off either end, and making a groove round the centre, suspend them in the garden. Great, blue, cole, and marsh tits all love this kind of fare, once they taste it, and the series of photographs of the first-named species reproduced on the two following pages testifies to their antics and the amount of fun they provide whilst attacking the food.

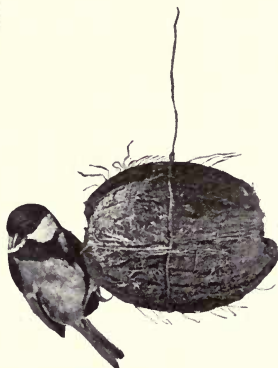


INSPECTING.

to see whether he or she may not partake.

In the depth of winter this is sure to lead to the

stronger of the two birds bullying and chasing the weaker away with a great display of anger. Strangely enough, however, after about the middle of February the males become much more docile and companionable towards the females, which



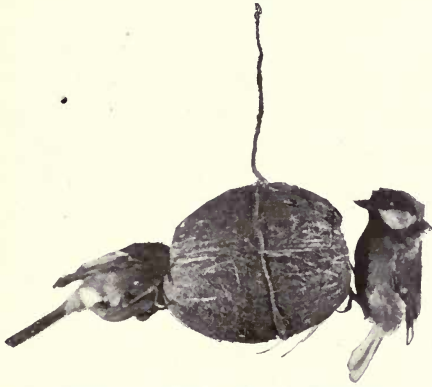
TASTING.

Surprisingly soon after a cocoanut has been placed in position, a blue tit will find it, and be chased away by a great tit, which, after a hurried sort of examination common to the whole family, will drop down to one of the holes made by the saw and

chisel a piece of the fruit off with his powerful bill and taste it. By-and-by another member of the species is sure to come along



ENJOYING.

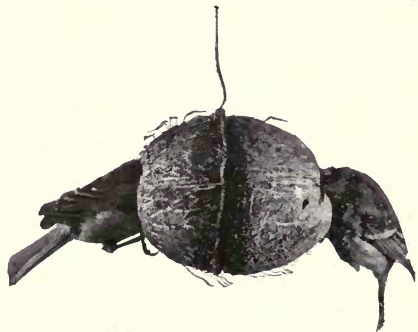


ANOTHER ARRIVAL, AND SUSPICION.

would lead one to believe that there was, after all, some observed germ of fact in the legend anent St. Valentine's being the birds' wedding-day. At any rate, I never remember seeing two great tits partaking amicably of the same piece of food before about the middle of February.

A source of great trouble and often downright annoyance to a wedded pair of oxeyes feeding from respective ends of the same cocoanut is that whenever one bird puts its head inside to peck, it darkens the interior, and makes its companion withdraw in a state of alarmed suspicion.

The fourth picture in our series was secured at such a moment, and incidentally proves the wonderful fidelity of the camera in recording the ruffling of



CONFIDENCE.



HAZEL NUTS SPLIT BY GREAT TITS.

the plumage at the back of the bird's head by a gust of east wind. The last illustration of the series tells its own story of confident enjoyment.

On boisterous wet days in March and the commencement of April great tits come to my garden regularly for food, but on fine days they appear to occupy themselves in searching for and splitting hazel-nuts in a neighbouring wood. The latter part of this task is accomplished by holding the nut down upon some branch with their powerful feet, and raining a quick succession of powerful blows along the line of least resistance, which the birds are quick to discover is where the forces of germination would rend asunder the two halves of the shell in a few weeks.



BLUE TIT

T

Occasionally a nut under treatment will slip from the grasp of an industrious oxeye, strike a twig in its descent, and shooting off at a tangent, escape the sharp eye of the bird by rolling beneath a curled dead leaf. Under such circumstances I have watched a great tit search long and diligently in vain for the lost nut.

In times of great scarcity I have seen a member of this species tugging away like a miniature carrion crow at the remains of a dead rabbit, whilst not ten yards off a marsh tit was hurriedly chipping and chiselling old oak apples to pieces, in the hope of finding some edible trifle, such as a spider, lurking within.

Blue tits seem to be endowed with good memories, for as soon as their natural food grows scarce in the woodlands they resort to gardens where they have aforesaid fed liberally upon suet provided by some sympathetic human friend.

Greenfinches, like their relatives the chaffinches, are, during hard weather, birds of the farmyard, and no grain of corn showing sufficient of itself to establish its identity escapes their sharp eyes.

They are inordinately fond of sunflower seeds, and, remembering this, I always carefully harvest all my sunflower heads in the autumn, and preserve them for winter fare. It is quite laughable to see a slow heavy old cock greenfinch sitting (or, rather, lying) down upon one of these, steadily and

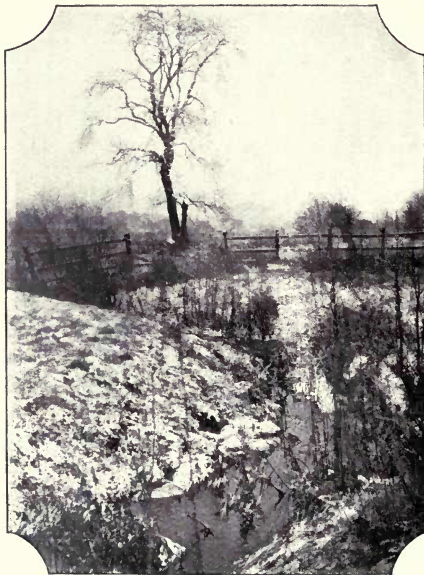
deliberately extracting seed after seed, and separating the dark husk from the snowy fruit inside. He is a most selfish bird, and if a companion comes along to partake of a share the fellow in possession angrily opens his mouth, spreads his wings, and threatens the most dreadful things, but this is generally mere bluster, and it is seldom followed by a square and earnest battle. Sometimes an impudent old oxeye will rush in and extract a seed from beneath the very bill of the astonished greenfinch.

Starlings are often reduced to terrible straits of privation by prolonged periods of severe weather. At such times the flayed carcass of a sheep or cow lying on the snow is a veritable godsend. It is visited all day long by a busy, tugging, chattering crowd, full of bickerings and false alarms. When hard pressed by hunger, these birds will even descend dark rabbit burrows in search of food.

The frail brown wren hunts diligently throughout the winter months for torpid flies, spiders, and other small deer lurking amongst the moss-clad stones of old dry walls, under banks, and stumps of trees.

Robin redbreasts seem to spend the whole of the winter months in fighting and feeding, with a little snatch of song now and again in praise of their accomplishments in both directions. It is

an exceedingly lucky thing for the human race that its members are not troubled with appetites similar in capacity to those of robins. One day I dug worms for a redbreast that kindly allows me to share the tenancy of my garden with him, and by a process of careful calculation I worked out a sum which showed that if an ordinary healthy man possessed an appetite similar to that of a redbreast, he would be able to consume a barrowload of sausages every day.



A FAVOURITE DITCH
FOR SNIPE IN WINTER.

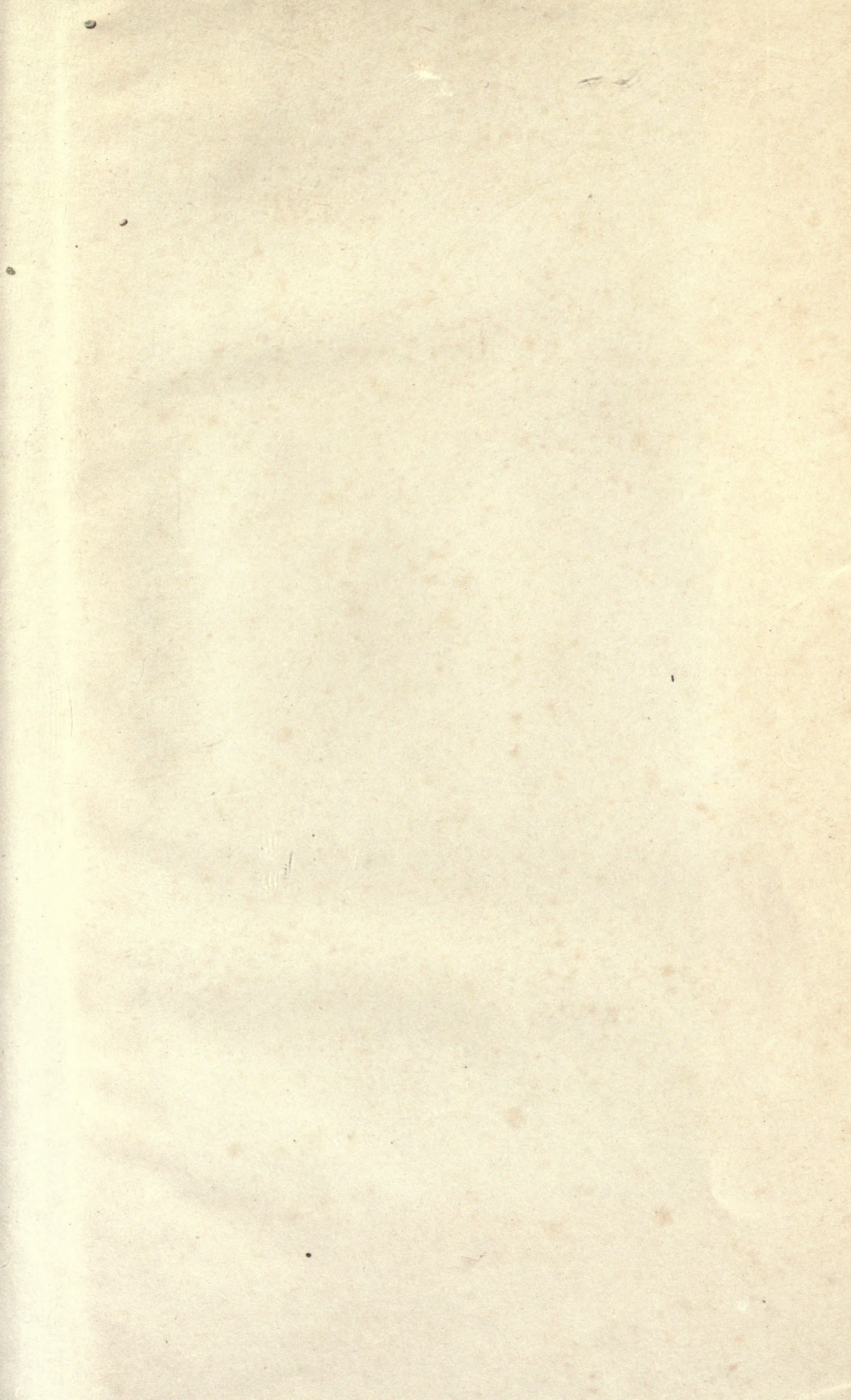
INDEX.

- Accidents to Birds, Strange, 76, 77, 277
 Actions of Birds that make Shallow Nests, 250
 Affection, Maternal, of Starling, 49
 — of a Common Guillemot, 233
 Ailsa Craig, 225
 —, Dangers of, 226
 Architecture of Reed Warbler, 200
- Bass Rock, 224
 Bees, Humble, 138
 —, —, How they Repair Damage to their Nests, 140
 —, —, Stealing Wrens' Nests, 79
 Beetles Nature's Scavengers, 143
 —, Sexton, Burying a Rat, 144
 Bird-food, Searching for, in Winter, 264
 Bird-life in Woods, 151
 Bird Robbery, 67
 Birds, Actions of, that make Shallow Nests, 250
 —, Acuteness of Hearing of, 248
 — and Favourite Breeding Haunts, 64
 — — Feline Sounds, 251
 — — Insects, 68
 — — New Mates, 66
 — — Severe Frosts, 285
 — — their Food in Winter, 281
 — — Wooden Eggs, 50
 — Attacking Human Beings, 237
 — Bathing in Winter, 285
 —, Credulity of, 165
 —, Cruelty to, 233
 —, Exchanging Young of, 74
 —, Hardships of, 264
 —, How to Feed, in Winter, 282
 —, Individuality of, 203
 —, Intelligence and Affection of, 74
 — of Broadland, 185
 — — Different Species Making Use of Same Nest, 67
 —, Strange Accidents that Happen to, 76
 — that Appear to Court Disaster, 62
 — — do not Sing from Pleasure, 169
 — — Steal, 178
 —, Wedding Day, 287
 —, Vision of, 181, 183
 Blackbird Admiring her Chicks, 44
 —, Courtesy of a, 284
 —, Nesting in a Target Pit, 62
 —, Securing a Series of Photographs of a, 42
 Blackbird's Nest in Tin Can, 63
 Blackcap, 167
 Bluebottle Fly and Honey, 128
 Broadland as a Holiday Resort, 184
 —, Birds of, 185
- Bullets, Ricochet, 81
 Bullfinch a Close Sitter, 176
 — — Late Breeder, 176
 — and Wild Birds' Protection Acts, 176
 Bullfinches and Bathing, 46
 Bullhead Catching a Loach, 85
 Bunting, Reed, 188
 —, —, Habits of, 191
 Butterflies and Dewdrops, 123
 — and Honey, 127
 —, Blue, 124
 —, Courtship of, 125
 —, Difficulties of Photographing, 122
 —, Peacock, 124
 —, Red Admiral, 127
 —, Study of, 122
 —, Tortoiseshell, 125
 —, —, at Farne Islands, 125
 Butterfly, Brimstone, 128
 —, —, and Primroses, 130
- Caterpillars, 137
 — and Ragwort, 137
 —, Appetites of, 137
 — of Eyed Hawk Moth, 138
 Cattle Pond, Stuffed Ox at, 8
 Clothes, Reversible, for Natural History Studies, 44, 160
 Cormorant, Diving Habits of, 242
 —, Green, Nervousness of Young, 242
 — Soup, 242
 Cormorants at Home, 240
 —, Feeding Habits of, 240
 Corncrakes, Habits of, 109
 Corncrake's Nest, 107
 Cowardice of Reed Sparrow, 192
 Credulity of Birds, 165
 Crows, Hooded, and their Food in Winter, 277
 Cruelty to Birds, 233
 Cuckoos, Ease with which they impose upon Small Birds, 51
 —, Photographing Adult, 194
 —, Plumage of, 196
 Curiosities of Wild Life, 53
 Curlew and Sheep, 31
 —, Deceiving a, 28
 —, Eggs, 31
 —, Photographing a, 27
- Daisies Asleep and Awake, 90
 Deceiving Wild Creatures, 1
 Devastation Wrought by Insects, 137
 Dipper, Curiosity of a, 24
 —, Song of, 23
 Dippers, 22

- Dippers, Difficulty of Photographing, 24
 —, Strange Behaviour of, 24, 26
 Dove, Ring, 11
 —, Stock, Curious Nesting Places Chosen by the, 64
 —, Turtle, 11
 Doves, Rock, 260
 —, Stock, 260
 Dragonflies, 193
 Drink, How Doves, 11
 Duck, Wild, Feeding Habits of, 266
 Ducks and Moulting, 78
 —, Wild, and Wind, 268
 —, —, in Winter, 268
- Eggs, Artificial, and Peewits, 50
 —, — Birds', 48
 —, Changing of Birds', 47
 Elder Duck and Lesser Black-backed Gull, 68
 —, —, Devotion of, 236
 —, —, Tameness of, 235
 Entomology and Insanity, 121
 Experiments on Birds with Artificial Eggs, 48
- Face, Human, and Birds, 45
 Falcon, Peregrine, 260
 Farne Islands and Sea Fowl, 234
 Fieldfares and Hedge Fruit, 263
 Fish Killed by Hard Frost, 276
 Food, Bird, Searching for, in Winter, 264
 — for Tits, 285
 — of Birds in Winter, 281
 — Hooded Crows in Winter, 277
 — Pheasants in Winter, 270
 — Red Grouse in Winter, 270
 — Wood Pigeon in Severe Weather, 271
 — to Give Birds in Winter, 282
 Friendships, Strange, 284
 Frog, Strange Behaviour of, a, 87
- Gamekeepers and Friendship, 101
 Gannets at Home, 228
 —, Flight of, 227
 —, Stalking, 226
 Goats, Nimbleness of, 232
 Grebe, Great Crested, Photographing a, 216
 —, —, —, Teaching Young to Dive, 222
 —, —, —, Wariness of, 218
 Greenfinches and Sunflower Seeds, 290
 — in Winter, 290
 —, Selfishness of, 10
- Grouse, Red, a Close Sitter, 96
 —, —, and Advice to Runaway Husband, 94
 —, —, —, Education, 94
 —, —, —, Hard Winters, 270
 —, —, —, Sport, 92
 —, —, —, How Chicks Scatter, 97
 —, —, —, Notes of, 92
 —, —, —, and Human Voice, 93
- Grouse, Red, Shot in Mistake for Wood Pigeons, 270
 Guillemot, Common, 230
 —, —, Affection of, 233
 —, —, and her Egg, 234
 Gull, Black-headed, Breeding Haunts of, 207
 —, Common, and Nesting Site, 66
 —, Lesser Black Backed, 68
 —, —, —, —, Attacking a Man, 237
 —, —, —, —, Swallowing Capacity of, 237
 —, Photographing a Common, 258
 —, Wariness of a Common, 260
 Gulls, Common, Intelligence of, 257
 Gymnastic Feats of Reed Sparrow, 192
- Hares Going to Feed, 155
 Hawk, Sparrow, Building her Nest, 158
 —, —, Food of, 158
 —, —, Photographing a, 153
 Hearing, Acuteness of, in Birds, 248
 Heat of a Bird's Body, 48
 Hibernation of Wasps, 141
 Hiding-place, How to Make a, 100
 Honey an Enticing Food for Butterflies, 127
 — and Bluebottle, 128
 House, Building a Stone, to Hide in, 244
 —, Sod, Building a, 33
- Incubation of Twite, 106
 Individuality of Birds, 203
 Insect Life, Seasonal Fluctuations of, 132
 Insects and Birds, 68
 —, Utility of, 143
 Intelligence of Jackdaws, 163
- Jackdaws and their Breeding Haunts, 162
 —, Intelligence of, 163
 — in Winter, 280
 Jay, 8
 — Caught by Stoat, 80
- Kittiwakes at Home, 250
- Lapwing, 111
 —, Habits of, 112
 —, Strange Accident to, 77
 Loach Caught by Bullhead, 85
 Loopers, 137
- Magpie, Calling a, 156
 Martin, House, 178
 —, —, Hemispherical Nest of a, 63
 Maternal Passion, 50
 Merganser, Red-breasted, 109
 Merlin, Boldness of, 35
 —, Fate of Eggs of a, 37
 —, Finding Nest of a, 32
 —, Photographing a, 34
 Mimicry, 134

- Mind, Development of Chicks, 78
 —, Experiments on Bird, 47
 Morality of Nature, 177
 Moth, Angle Shade, 135
 —, Brimstone, 133
 —, Emperor, 132
 —, Lappet, 134
 —, Plume, 136
 —, Six-spot Burnet, 132
 —, Swallow-tailed, 134
 —, Tiger, 131
 Moths, 130
 —, "Sugaring" for, 131
 —, that Resemble a Bird's Droppings, 135
 — — — Grass Seeds, 136
- Natural History, Delights of, 53
 Nature and her Secrets, 68
 —, Morality of, 177
 Nature's Children, Behaviour of, 1
 Nesting Sites, Hereditary Rights in, 66
 Nestlings and Notes, 193
 Nests, Curious, of Song Thrush, 54
 — of Birds in Odd Situations, 56
 Nightingale, 151, 179
 — Singing in a Fog, 179
- Ouzel, Ring, 56
 —, —, Strange Behaviour of a, 57
 Owl, Long-eared, Haunts of, 151
 —, Short-eared, Nest of, 104
 —, —, Peculiar Flight of, 103
 —, Tawny, and Bright Sunlight, 181
 Oyster-catcher, Acuteness of Hearing of, 248
 — — and Feline Sounds, 251
 — —, Habits of, 256
 — —, Photographing an, 243
- Partridge, 53
 — and Red Grouse Laying in Same Nest, 60
 — Nesting in a Target Pit, 62
 — — under Plant Pot, 60
 —, Red-legged or French, 60
 Partridges and Yellow Rattle, 271
 —, French and English, using same Nest, 60
 Phalarope, Red-necked, Habits of, 119
 —, —, How I Photographed, 120
 —, —, Killed by Moorhen's Egg, 76
 —, —, Studying, 118
 Pheasants and their Chicks, 8
 — — Food, 270
 Photographing a Blackbird, 42
 — — Common Gull, 258
 — — Merlin, 34
 — — Sparrow Hawk, 153
 — — Wood Wren, 160
 — Oyster-catchers, 248
 — Ringed Plover, 253
 — — under Difficulties, 162
 Photography and Circumstances, 42
 Plover, Golden, Behaviour of a, 38
 —, —, Cry of, 37
 —, —, Photographing a, 37
 —, —, Wariness of a, 41
 —, Ringed, and Wooden Eggs, 52
- Plover, Ringed, Difficulty of Finding Nest of, 252
 —, —, Habits of, 256
 —, —, Photographing, 253
 —, —, Unneighbourly Conduct of a, 260
 Plumage of Cuckoos, 196
 Primroses Photographed during First Moment of 20th Century, 88
 Puffins and Rabbits, 234
- Rabbits and Puffins, 234
 — — Stoats, 80
 —, Calling, 81
 Rail Water, Photographing a, 214
 — —, Shyness of, 214
 Rat Buried by Sexton Beetles, 144
 — Caught by Limpet, 261
 Rats and Tuberculosis, 261
 — that Live on Limpets, 261
 Razorbills, Wing Movements of, 228
 Redshank, Habits of, 185
 —, Nest of, 187
 Redstarts, 164
 Redwings and Hedge Fruit, 263
 Robbery, Avian, 67
 Robin and Bath, 46
 — — Young Thrushes in her Nest, 74
 —, Appetite of a, 292
 — Feeding Young of Song Thrush, 72
 — Nesting in a Target Pit, 62
 —, Suspicion of a, 47
 Rock, Artificial, for Hiding in, 22
 Rooks and Sunday, 280
 — — Winter Scarcity, 279
 —, Shyness of, 280
- Sandpiper and Stuffed Sheep, 14
 Scotsmen, Idiosyncrasies of, 261
 Seabirds and Cheese, 274
 — — Hard Weather, 272
 —, Cunning of, 276
 — on the Thames, 273
 Sea Fowl and Farne Islands, 234
 — —, Beauty and Grace of, 224
 Shag, Diving Habits of, 242
 —, Nervousness of Young, 242
 — Soup, 242
 Sheep, Stuffed, 13
 —, —, and Sandpiper, 14
 —, —, — Shepherd, 14
 Shrike, Red Backed, Feeding Habits of, 170
 —, —, —, Male Feeding Female, 175
 —, —, —, Photographing, 170
 Skua, Arctic, Behaviour of an, 102
 —, —, How it Secures its Food, 97
 —, —, Photographing, 98
 Skylark, 6
 Skylarks, Education of Young, 7
 Snipe and Severe Frost, 272
 —, Common, 266
 —, Jack, 266
 Sparrow, Hedge, Sitting on Empty Nest, 168
 —, Reed, 188
 —, —, and Dragon Fly, 194
 —, —, Habits of, 191

- Sparrows as Thieves, 178
 —, House, and Heat, 11
 Spiders, Accomplishments of, 145
 —, Artifices of, 150
 —, Devotion of, 148
 —, Heroism of, 150
 —, How they Guard their Eggs, 148
 —, Preserving Food for Young, 148
 —, Service Rendered by, 145
 —, Young, How they Scatter to Safety when Threatened by Danger, 150
 Snipe, Common, and Chicks, 114
 —, —, Male Feeding Chicks and Brooding, 116
 Starling, Deceiving a, 48
 Starlings as Thieves, 178
 — in Hard Weather, 291
 Stoat and Rabbit Encounters, 80
 — Catching Jay, 80
 — in Squirrel's Nest, 79
 —, Photographing a, 83
 Stuffed Ox, 2
 — — at Cattle Pond, 8
 — —, Drawbacks of, 4
 — —, Success of, 12
 Swallows and Building Materials, 12
 —, Barn, Nesting in an Occupied Bedroom, 63
 Swallow's, Barn, Nest on Bell, 63
 —, —, — in Old Shoe, 63
 —, —, — on Bell, 63
 —, —, — Lath, 63
- Taming Wild Creatures by Kindness, 212
 Teal, Garganey, Disappearance of, as a British Breeding Bird, 223
 Temperature at which Wasps Wake from Winter Sleep, 141
 Tern, Arctic, Attacking a Man, 237
 Terns at Farne Islands, 236
 Thrushes, Young Song, Fed by Robin, 71
 Thrush, Missel, and Moulting, 78
 —, Song, 10
 —, —, and Chicks, 70
 —, —, — Wooden Eggs, 48
 —, —, — Curious Accident to a, 281
 —, —, — Nests of, 54
 —, —, — Finding her way back to her Nest in the Dark, 183
 —, —, — Sitting Down on Nest with Food in her Bill, 74
 Tit, Bearded: Appeal to Egg Collectors, 210
 —, —, — Habits of, 209
 —, —, — Not an Extinct British Bird, 209
 Tits and Hazel Nuts, 288
 — at Cocoanut, 286
- Tits, Blue, Endowed with Good Memories, 290
 —, Food for, 285
 Trout, Food of, 86
 Twite, Boldness of, 106
 —, Length of Time it Sits, 106
- Visual Powers of Birds, 181, 183
- Wagtail, Pied, Nesting in Target Pit, 62
 —, Yellow, 202
 Wagtails, Yellow, Accident to, 77
 —, —, and Food, 206
 —, —, Behaviour of, 204
 Warbler, Garden, 169
 —, Grasshopper, and Wooden Eggs, 51
 —, —, Habits of, 210
 —, —, Photographing a, 212
 —, —, Architecture of, 200
 —, —, Sedge, 196
 —, —, —, and Young Cuckoo, 199
 —, —, —, Experiments upon a, 200
 —, —, —, Nest-building Habits of, 198
 —, —, —, Song of, 198
 Warblers, Reed, and their Young, 201
 —, Sedge, and Stolen Nests, 199
 Warnings Unheeded by a Bird, 166
 Wasps, 140
 Water for Birds in Winter, 285
 Waterhen, Curious Accident to a, 277
 Waterhens and their Food in Winter, 277
 Weather Forecasting by Hedge Fruit, 263
 —, Droughty, Effect on Song Thrushes' Nests, 54
 Webs, Spiders', 145
 Wheatears and Stuffed Sheep, 17
 —, Feeding Habits of, 20
 Whitethroat, Lesser, 167
 Wild Life, Curiosities of, 53
 Winter, Birds in, 262
 Woodcock and Severe Frosts, 272
 Wooden Mask and Birds, 46
 — —, Making a, 45
 Woodpecker, Feeding Habits of Green, 179
 Woodpeckers, Green, 178
 Wood Pigeon, Food of, in Severe Weather, 271
 Woods and Birdlife, 151
 Worms and Frosty Weather, 263
 Wren and Food in Winter, 291
 —, Wood, Appreciation of Colour, 161
 —, —, —, Habits of, 161
 —, —, —, Photographing a, 160
- Yellow Hammer and Song, 176
 — —, Nesting Sites of, 176



THIS BOOK IS DUE ON THE LAST DATE
STAMPED BELOW

AN INITIAL FINE OF 25 CENTS
WILL BE ASSESSED FOR FAILURE TO RETURN
THIS BOOK ON THE DATE DUE. THE PENALTY
WILL INCREASE TO 50 CENTS ON THE FOURTH
DAY AND TO \$1.00 ON THE SEVENTH DAY
OVERDUE.

BIOLOGY LIBRARY

NEW BOOK SHELF

JUN 18 1957

LD 21-10m-7,

M85571

GL50

K4

BIOLOGY
LIBRARY

THE UNIVERSITY OF CALIFORNIA LIBRARY

