

MAKING FRIENDS WITH BIRDS



GREAT TIT

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WITH
BIRDS



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F.R.P.S.



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TO MY WIFE
in gratitude for her tolerance of the
ways of a bird photographer



PREFACE

MANY books have been written about birds and bird-photography, covering almost every aspect of the subject. The photography of bird life is almost invariably associated with "hides." I have never used one, although I have photographed birds for many years.

The theme of this book is an approach from a different angle. Methods with birds and the camera are described in separate chapters to avoid encroachment on the bird stories, which are largely about family life. There is something very alluring about the chicks, which are not only a joy to watch as they grow up, but are charming subjects for camera studies.

My leisure being confined to evenings and week-ends, this has had to be a spare-time hobby, so, during the nesting season, I prefer to devote my time to photography rather than to journeying in search of subjects. My activities have therefore been mainly among the familiar birds found near my home and almost everywhere, such as the average observer will discover without going far afield.

These familiar birds are just as interesting as those which are scarce or remote, and insight into their home life and habits is a sheer delight. In this, as in every other field, the best things are found by personal experience. The subjects are there in abundance for all who care to look for them. The pleasure is infinite, the reward vast, the cost negligible.

Instead of acquiring a collection of odd pictures, I prefer to build a series round a species, illustrating domestic and other aspects of bird life. At a very early stage I was impressed by the evident disposition of some of the parents to conduct their affairs in my presence. This tendency was studied and exploited, resulting in my present technique.

To observe intimately one must approach closely. The obvious method is to use concealment; another is to abolish it entirely. Since my school days I have employed the latter system, every photograph in this book having been taken without a vestige of concealment. Naturally none is needed when nestlings are being photographed.

The basic principle is to "make friends" with the birds by winning their confidence. And how readily they respond! Methods are described fully, so that others may try them with equally good prospects of success. Young folk are just as likely to succeed as older people.

More and more people are discovering that to turn to Nature, in any

one of her manifold aspects, is to find the perfect antidote to the pace and stress of modern life. Should the reading of this book afford but a fraction of the pleasure which I have derived from the experiences, I shall feel rewarded.

I wish to express my thanks and acknowledgments to *Country Life*, the *Strand Magazine* and the *Sunday Sun*, in which some of the photographs in this book have been published, together with articles from which quotations have been made. I am grateful to Dr. G. C. Varley, of the Zoological Department, King's College, Newcastle, for his valuable work in identifying the food of the pied flycatcher, and am deeply appreciative of the kindness of Kodak Limited, who presented the Kodachrome film which enabled me to secure colour pictures.

And last, but certainly not least, my tribute to the Publishers. They deserve great praise for their perseverance in producing this book in the face of exasperating difficulties, shortages, restrictions, delays and frustrations. Throughout these tribulations their patience, co-operation and amiability have been a source of great delight to me.

A. F. PARK

RYDAL COTTAGE,
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CHAPTER I

Making Friends

IT was a little hen willow warbler who gave me the idea of making friends with birds, and the years of immeasurable delight which this hobby has afforded are due to her inspiration.

The first overtures were not on my part, for it was she who made friends with me. I regarded the occasion as a freak example of tameness, due to the strong influence of the maternal instinct, the eggs being almost ready to hatch.

In those days I had just begun to photograph eggs and young birds, not having aspired to adults. The willow warbler's nest was found in the middle of a trackless moor, lonely and remote. This was a new subject, so I photographed it, decidedly elated by my find. As I was packing up the camera, some eight feet away, she appeared on the scene, so I kept very still, and was thrilled beyond measure when she went to the nest and settled down. A few days later I photographed her with food, four feet away, and felt like a conqueror.

That day was the beginning of an epoch. My chief impression at the time was surprise that a bird in so remote a place should be so tame and friendly. Surely, it seemed, a bird which sought such seclusion must be a very timid individual.

Since those early days I have learned a lot about birds. It is a strange coincidence that my first subject should have been a willow warbler, for, although I have found tame members among many species, this one has been incomparably the most responsive. In fact, I have had more tame willow warblers than all other species combined, including garden birds in winter.

Thus, to all intending bird-tamers, particularly those who seek quick results, I unhesitatingly commend the willow warbler. Fortunately, this little migrant is very abundant, the summer population in the British Isles being in the region of a million. By watching the birds the nests can be found without much difficulty, so the would-be tamer should not lack material. Last season I found, without any special effort, seventeen such nests near my home.

A NEW APPROACH

For what I have missed by not having a "hide," I have found ample compensation in other ways. Whereas some birds become quickly recogn-

ciled to the presence of hides near their homes, others do not appear to take so kindly to them, since they are conscious of the presence of an unseen element which they cannot comprehend.

I have always worked on a different principle, that abolishes the use of concealment and eliminates the unseen danger, which is always the worst. In other words, I stay in the open, so that the bird can see precisely what has to be faced, and is thus enabled to sum up the situation and decide what action to take. A bird is immeasurably happier when such a choice is offered.

The next consideration is to win the confidence of the bird, so that a close approach will be tolerated. In the course of experience and experiment a taming technique was evolved which, in spite of its simplicity, or probably because of it, has been extremely successful.

This system is only applicable to the more confiding species, being dependent on the selection of the right type of bird. It won't succeed with an unresponsive one, so the first thing to do is to find the right type, which is not so difficult as it sounds.

Although willow warblers were the chief subjects of my experiments, the method is applicable to other birds which nest on or near the ground. There is little variation in its application except in tempo, which is governed by the bird: through long practice it has become a sort of formula, which produces results almost every time, and I see no reason why it should not succeed with others. It is absolutely essential, however, that it be applied with gentle understanding: a bird is a very sensitive and highly strung organism, so the relationship is delicate. Appreciation of this is the essence of "affinity," so often regarded as some rare and mysterious inborn quality possessed by the favoured few.

Though delicate, the partnership is in no way precarious. The subject will not, for instance, cease to respond on a mere caprice: should any change of behaviour occur, there will be a tangible reason, such as too rapid a movement, causing fright, or the too hasty introduction of a new factor, different clothes for instance or a change in procedure. Should anything cause real alarm, the relationship may be permanently impaired or even completely destroyed. I have never yet lost a bird thus, thanks to the meticulous care invariably exercised.

Many people come across tame birds at some time or other, and usually seem content to regard such contacts as strokes of luck and leave it at that. This was my own attitude, at first; later I exploited such occasions systematically.

FINDING THE RIGHT TYPE

During my earlier activities a lot of time was spent in unsuccessful efforts with birds which ceased to respond after a little while, or even

failed to respond altogether. This led me to wonder whether some method could be found for assessing temperament more rapidly.

I came to the conclusion that while there is a fairly uniform inheritance of the basic instincts and characteristics of a species (arising from evolution), the short-term influence of environment is a considerable factor in the moulding of temperament, particularly in the early stages.

On this reasoning, a life of danger would produce an inordinately shy and wary bird, whereas the product of an uneventful life, with few encounters with enemies, would be less alert to danger and thus more tame and confiding. A normal bird would result from average conditions.

Working on this hypothesis, I can generally gauge a willow warbler's responsive potentialities in a few minutes, simply by sitting down quietly twenty to twenty-five feet from the nest. If the bird does not come back within ten minutes, I consider the subject unsuitable and leave her alone. Should she return within this period, the stage is set for an approach. Thus, the position is crystallised at the very economical cost of ten minutes' observation. In this brief period about 75 per cent. of the "possibles" can be discovered.

The importance of temperament is paramount. The bird must be accepted for what it is. Broadly, it is either shy or tame, its basic character being inherent and immutable. The "tame" one can be coaxed and exploited; the "shy" one had better be left alone, for little or no progress will be made towards its conversion. Acceptance of this fact will save much time and effort.

Those birds which are disposed to tameness are fortunately numerous. There are degrees of tameness, so we had better set a standard. I define "tameness" as the state in which the bird will, entirely at its ease, come and attend to its affairs in the unconcealed presence of the observer two or three feet from the nest. On a rough estimate, I reckon that one hen willow warbler in seven or eight is tameable to this standard. In fact, the bird which is tame enough to function at six feet is just as likely to perform at three feet.

The temperament of the hen is in no way connected with the situation of the nest. It is the male who selects the territory, so his mate's temperament depends on chance, not location; her character was formed previously. Publicity would certainly not induce the rapid conversion of a shy bird into a tame one, nor would remoteness render a tame one shy.

APPROACHING THE SUBJECT

When the nest contains eggs, the hen is static, which limits the scope of taming activities. Quite a lot of useful work, however, can be done at this stage, in the way of making the bird familiar with one's presence. Should she be a close sitter the prospects are excellent, and such a bird

will usually remain on her nest for an indefinite period with the observer only a few feet away. One should visit the nest daily if possible, and stay near it for some minutes to maintain familiarity. This is a great asset with which to embark on the real campaign, when the chicks appear. This preliminary training usually results in the subject being half tamed by hatching time, when she will in all probability feed the young without further ado at a distance of six or eight feet from the watcher.

Should the newly discovered nest contain chicks, the first thing to do is to observe from a distance—say fifty yards—to ascertain the bird's approach route. Birds usually have a favourite line of approach and use it almost exclusively. It is generally a direct route between the main food supply and the nest. The advance should therefore be from the opposite direction, to avoid any encroachment on the route. In the event of an obstacle another route will be used, but the bird will perform better when it can follow its normal habits.

Having settled this point, I start at a distance of some twenty feet and await the return of the hen to her nest, her demeanour being a guide to my rate of approach. She is almost certain to be hesitant, so I allow her to make several visits before I begin to advance. When her composure has obviously been restored and as soon as she departs for food, I edge a few feet nearer. The moves are thus conducted in her absence, the slight changes of position being imperceptible on her return. This process of advancing in short stages is continued, at a tempo carefully adjusted to the bird's behaviour, always allowing her enough visits to become absolutely at ease before embarking on the next forward move. Haste is an element which should never enter bird-taming; compulsion is another evil to avoid. Persuasion is the dominant factor the whole time.

When seen by the bird while she is on the nest, one should be equally careful to advance in the right way. There is a vast difference between a quiet approach and one that is furtive, and birds are quick to sense it. Too purposeful an approach can easily appear designing, so the more casual it seems, the better the results. It is well to pursue a somewhat erratic course, and as most birds are disconcerted when stared at, one should avoid the direct gaze, while yet observing closely.

As the distance decreases, the stages should be curtailed, a foot at a time being adequate when one arrives within eight feet. By then the bird has got more accustomed to the intruder, so the multiple visits may no longer be necessary at each stage—in fact, the last few feet can frequently be accomplished more rapidly than the first distant move. Having progressed so far and provided nothing untoward occurs, the objective should soon be attained. By this means one can reach a spot only three feet from the nest without detriment or alarm to the bird, which indeed should be, and usually is, more comfortable and assured than at the beginning.

With the right subject the operation is never protracted and can usually be completed in one series of advances. Starting from the first encounter with a strange bird, the process takes from half to one hour on an average, though I have accomplished it in ten minutes when the subject has been obliging. Until the proficiency born of practice is achieved, the approach may not be completed the first day. When starting again it is advisable to commence slightly behind the stage previously reached. The second instalment will usually do the trick.

A campaign can be started at any stage in the development of the chicks, and is likely to proceed more quickly as they approach departure; for the hen is then so engrossed in her task that she has little time for worrying about such trifles as bird photographers and their strange ways. Such a late beginning, however, allows little time for observation and photography, so it is better to start at the egg stage and follow the family through the nesting phase.

DEVELOPING THE RELATIONSHIP

Having arrived at the nest, the best plan of all is to sit still and do absolutely nothing, merely allowing the bird to behave naturally. This is the surest means of promoting the most interesting and vital event of the relationship, which usually occurs at this point. So far no symptoms of tension or uneasiness have been evident, but the bird has been exercising a certain discreet watchfulness, as though thinking "It certainly *seems* all right, but——." There comes a moment when the last vestige of reserve is discarded and the situation is accepted at full face value, completely and unreservedly. This acceptance is a decisive though subtle transition, which is, nevertheless, discernible. It is expressed in the form of total relaxation, from which arises a remarkable exhibition of confidence.

One can virtually do anything with such a bird, which completely ignores the visitor and his activities. Not for one moment should this be construed as an indication that the need for care and caution no longer exists—the bird's confidence has only been engendered by quiet, gentle handling, and this treatment must be continued. Now that we are at such close quarters, we must be very careful and bear in mind that the bird is familiar with only a very limited set of movements.

Thus, a bird should never be confronted with a new element suddenly or at close range: any new object should be introduced at a distance and gradually brought nearer, at a rate determined by her reception. When a camera and tripod are brought into use, they should first be erected some ten feet away and operational movements rehearsed, including the clicking of the shutter, then brought forward by degrees. The substitu-

tion of a cine camera, with its unfamiliar sounds, should be similarly effected.

Once its confidence has been gained, a bird will not object to anything whatever, provided it be properly presented and is not, of course, intrinsically alarming. Incidentally, in the early stages it is advisable to wear the same clothes each time: the subject will thus become familiar with a certain ensemble. Birds can distinguish between human beings, and will quickly recognise a stranger and be shy in consequence. Don't therefore in your triumph inflict a stranger on your subject at close quarters. Introduce the newcomer gradually and let his performance be a replica of yours, and the bird will soon respond.

However tame the subject, it is a sound principle never to assume its reactions. Take nothing for granted and never force an issue, but always leave a free alternative, in case of objection. Often, in practice, the precaution proves unnecessary, but the principle still holds good.

By way of experiment, I have carefully applied my tactics to categories as "shy" and "normal." In the former case I have never succeeded in getting nearer than twelve feet, when I gave it up because the bird was obviously unhappy. By persevering with "normal" ones I have coaxed them to perform four feet away. Though superficially at ease they never really relaxed, as I could see by their constant vigilance. I failed to inspire the acceptance so unmistakable with "tame" ones. There will be intermediate grades, of course, but the semi-tame type will not respond as fully as the tame. Photographically, this does not matter.

Most of the males are a hopeless proposition, for they rarely muster enough courage to visit the nest in the presence of a human intruder. The highest effort of which they seem capable is to hang about with a beakful of food, which they usually consume in the end.

There is not much more to say about the development of the relationship, the essential purpose of which is to invoke the "acceptance" and all it implies, while avoiding clumsy and hasty actions. There is an irresistible fascination about the whole affair, which impels me, at the expense of other things, to return to the nest at every opportunity, though continuity of contact is no longer necessary to preserve the intimacy. After an absence of several days, I can return secure in the knowledge that I shall be able to resume precisely where I left off, and will find my little friend unchanged.

CHANCE ENCOUNTERS

Before working on these systematic lines, I came across many instances of tameness in the course of my rambles. They provided quite a good harvest of pictures one way and another, but at that time I had not learned how to make the most of them. With increasing experience I

learned to recognise these opportunities and their potentialities, which are seldom obvious.

Such occasions are fleeting, and have to be exploited there and then—to-morrow is usually too late. A bird-photographer's programme should never be rigid. Plans should be made, of course, but they should be flexible, ready to be adapted to the needs of the moment, otherwise many good subjects will be missed. How often have I embarked on some particular mission, only to find some fortuitous subject on the way! And how often has this new find provided something better than the original objective!

In this connection, I recall an occasion when I set forth in quest of a picture of young long-eared owls. On the way, I made a slight detour to see if a brood of whitethroats had flown. When I arrived I found that two had gone; the remaining three looked so charming and attractive that the impulse to photograph them was irresistible.

They were installed on a branch. Just as I was about to depart, after making a number of exposures, I caught sight of the hen, skulking in the depths of a hedge, with a beakful of food. She obviously wanted to feed them, so, just as obviously, I must allow her to do so. I retired behind a gorse bush, leaving the family on the branch.

She came and fed them almost immediately, ignoring the camera and tripod standing ten feet away. I kept still: nothing alarming having occurred, she soon returned and fed them again. By degrees the camera was moved closer until, ten minutes later, it was only three feet away. I was soon photographing the hen freely, releasing the shutter by means of string, from a point ten feet behind the camera, quite unconcealed.

The whitethroat is rather a shy species, but this particular bird was perfectly happy and at ease, deeply engrossed in her task and apparently oblivious of this formidable encroachment on her privacy. I got my owl pictures the following day; there was no "to-morrow" for the white-throat.

The same tactics have been applied to that very shy bird, the whinchat. A series of pictures was taken of one near the nest with food, and of another feeding her chicks on a branch. In the latter instance the nest was newly found, so the bird was a complete stranger to me. It was surprising that such a timid species should be so responsive, with no preliminaries. When dealing with birds one should always expect the unexpected.

From time to time one is sure to discover close sitters, which show little objection to being watched and photographed on their nests. Chaffinches are particularly confiding, and I have come across several which permitted the erection of a camera and tripod as they sat brooding, only four feet away. Cold or wet weather is helpful where these subjects

are concerned, as they are more reluctant to leave their eggs or chicks than on fine, warm days.

These few examples are typical of the chance encounters which occur. As a rule, I think, such subjects can rightly be considered to represent "responsive" members, which, being predisposed to tameness, are not disquieted by one's actual presence, though undoubtedly they will be watchful and cautious. By proceeding slowly and quietly one soon allays their suspicion and thus establishes an atmosphere in which the maternal instinct is able to function normally. In other words, the bird can get on with her job.

The genuine bird-lover will do all these things automatically. His innate love of his subjects will restrain any tendency to persist in the face of reluctance or to indulge in any action detrimental to their peace and welfare, such as keeping them too long from their eggs or chicks. Such a person will succeed, for the birds will soon sense the affinity.

Methods with titmice and robins in the garden are dealt with in the stories about those birds. The final chapters deal with the photographic aspect.

CHAPTER II

Taming the Titmice

As autumn approaches and insect food dwindles, the birds of the woodland and hedgerow repair to their winter quarters. The migrants depart to Southern climes, while others resort to the haunts of mankind, brightening our gardens through the drab days of winter.

None is more welcome than the titmice, those dainty little birds who are as happy upside down as any other way (Figs. 1 and 2). Suspended pieces of suet, bacon rind, coco-nuts and peanuts will soon attract a throng. When taming plans are contemplated, the sooner we start the better, so this repast should be provided in early September. The first thing to do is to put out something special, which is superior to the fare found in neighbouring gardens. These discerning birds will know the difference immediately, and will come in increasing numbers and so provide more subjects for our selection.

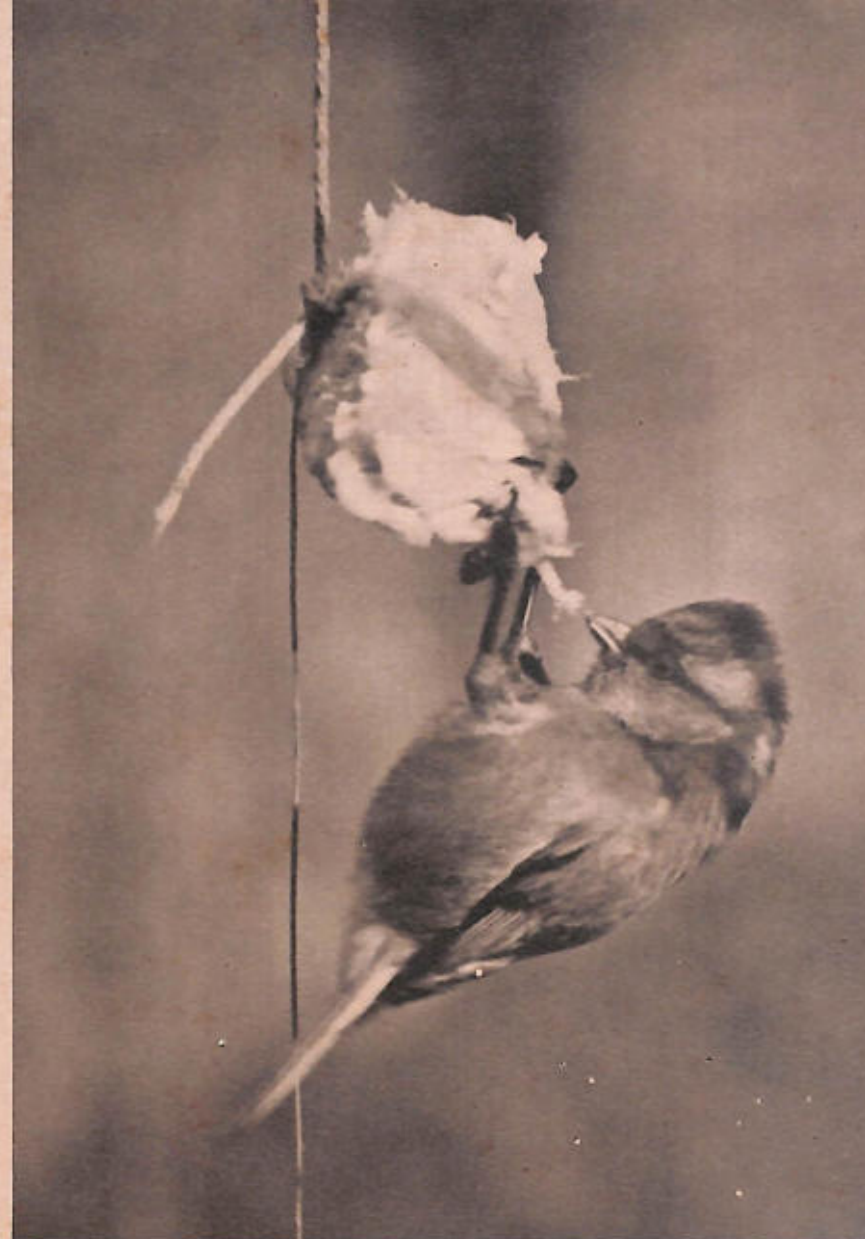
Walnuts in their shells, with portions chipped off, afford just the right degree of superiority, so several should be suspended in various parts of the garden. Before there is any real shortage of food to blunt their discrimination, it is quite entertaining to see them disdain the prosaic suet and coco-nut. This is just what we want—to get them thoroughly “spoiled” and impressed with the merits of our own particular garden.

Once the taming campaign has been started it should be maintained, even though little headway be apparent while the weather is mild. This constant association will consolidate the relationship and promote a rapid response to hand-feeding when hard weather supervenes. Even before the conditions become severe, some birds may come to the hand, depending on their temperament and whether they have become accustomed to human contact.

When these birds which have been trained during mild weather do respond, the result is permanent. This is seldom the case when hand-contact is introduced for the first time in hard weather. In such a case the urgent stress of hunger is a prime factor, which overrides instinctive fear and caution; these faculties being dulled by the cold. The fleeting nature of such a conquest is revealed as the days get warmer, when there



1. *Blue tit*



2. *Blue tit. The titmice are the acrobats of birdland*

will be a resumption of normal instincts and a reversion to the original untamed state.

The worst way of setting about this taming business is the obvious one—to stand with an outstretched handful of food. Nothing happens. Of course it won't! No wild bird could be expected to take the plunge all at once by flying to the hand of a being who is regarded instinctively as an enemy. A bird with so little sense as to take such risks would not survive long in the struggle for existence.

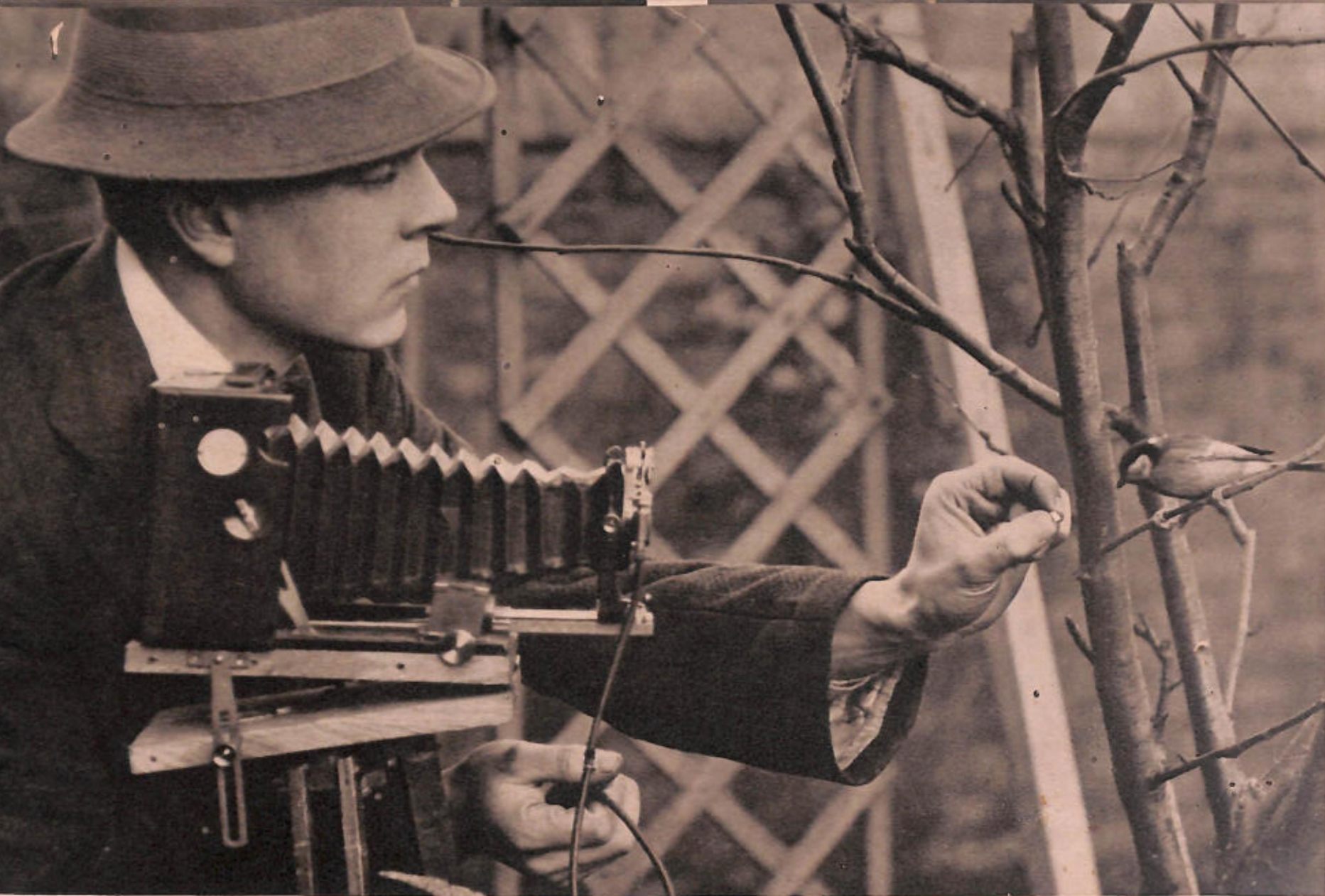
Having realised the futility of this course, we start on the right track, which is to provide a method whereby the subject can approach *by degrees*, on terra firma, and thus retain freedom of action and the ability to escape. This is the very essence of the matter, the vital element on which success depends. Flight to the hand is a single, complete operation, which cannot be accomplished in stages. When this simple though by no means obvious principle is overlooked, failure will be the inevitable result.

Let us now start in earnest. The first move is to withdraw all the usual food supplies. When our friends return, they are fed with pieces of walnut thrown to them, and so are taught to associate the food supply with a particular person. This is where the walnut scores, for the pieces provided are taken in preference to the free supplies of less delectable fare in the neighbourhood. In a short while the bolder birds will come right to one's feet. This brings us to the next stage.

Walnut has so far been a decided inducement, but here we descend to greater depths of infamy, and resort to shameless bribery. We now introduce—ALMONDS! The birds revel in this superfine fare. Let one piece of almond be thrown among several of walnut, and see which disappears first! Henceforth our terms are: no hand—no almond. Theirs is the choice, to accept or reject: many will accept.

The hand holding the pieces of almond is rested on the ground, or on a fence or branch. One of the bolder birds will view it with covetous eye. The tempting food shows no sign of coming, so he decides that it is he who must make a move. He will make some very tentative hops towards it, pausing at each stage to gain courage for the next advance, sometimes retreating and trying another angle of approach. By degrees he arrives at a spot about a foot from his goal, every faculty keyed to the limit as he makes his final survey. In a sudden access of courage he makes a wild dash, seizes a morsel, and flies for dear life.

Contact with the hand once established, the battle is practically won, and the rest is only a matter of time and patience. Nothing very dreadful having happened, the bird returns and is slightly less hesitant. He should be allowed to make several visits under precisely the same conditions, then the hand can be slightly raised, so that he has to stretch up in order to reach it, then lifted just out of reach, obliging him to flutter



3. *The author, as a youth, photographing a tame great tit*

up and alight on it. The hand is no longer an object to be feared, and soon he will fly straight to it, at any height, in any part of the garden (Fig. 5).

During the tentative phase, absolute stillness should be our watchword, and the nut should be in small pieces to induce frequent visits. If the almond be grated, the bird will remain on the hand for the entire meal, the particles being too small to be worth carrying away.

However tame the subject, care should be taken to avoid any noise or movement likely to startle him, for a sudden fright may play havoc with the friendship. Once when a tame coal tit was feeding from my lips, a sudden gust of wind removed my hat. The effect was disastrous, for my little friend was so startled that he never came back to take food from my lips, and would only resume his hand visits after much coaxing.

By proceeding in the right way, many hand visitors can be taught lip-feeding. This new method is introduced in the following way. With a morsel of nut between the lips, the face is held close to a branch or fence, from which the bird can reach the lips. This leaves to him the decision as to what constitutes a margin of safety. As likely as not he will contact the lips at the first or second attempt.

As soon as this new trick has been assimilated, one moves slightly back and holds a finger some three inches from the lips. The bird will hop over and use it as a perch. Soon he will fly direct to the finger-perch, without any stepping-stones.

Although blue tits are by far the most numerous (Figs. 1 and 2), for some inexplicable reason I have never managed to hand-tame them. Great tits respond well, but best of all are the coal tits. They have a great propensity for hiding food in crevices in walls and under pieces of soil, so their hand visits continue long after their hunger is appeased. Slightly smaller and less colourful than the blue tits, they have black heads with a white patch on the nape.

One winter I had no fewer than eleven tame titmice—eight great tits and three coal tits. Once a bird is tamed, others will follow suit. To a stranger, they all looked as alike as peas in a pod, but I could easily distinguish them, for each had a distinct personality and mannerisms. Each had his own name.

I had one little coal tit—"Coaly"—which came to my garden during three successive winters (Fig. 6). Each year he disappeared in early spring and returned in the autumn. In spite of six months' absence, during which all his wild instincts prevailed, he came back as tame as ever, and fed from my lips at the first approach.

One day I encountered him in a lane quite half a mile from home, and recognised him immediately. I took out a piece of nut, which he took from my lips, to the amazement of a casual onlooker. He would



4. Great tit. He has broken off a piece of nut, held tightly for the purpose of photography

come to my bedroom window-sill for his breakfast, which I kept in readiness by my bedside. He discovered this store, and would come right in and help himself, and would actually feed from my lips before I was up. They will even go to such amazing lengths as this.

A tame great tit came along with a mate one day. Within an hour this complete stranger was freely taking food from my lips. As regular visitors have never responded so quickly by example, I have often wondered to what extent her mate had communicated the story. The only alternative explanation would be that this was a rapid response on the part of an exceptionally tame bird.

There was different behaviour in the case of another tame great tit. He would make no attempt to approach the hand, much as he fancied the almond. Instead, he let me do the approaching, while he sat still on his favourite laurel, waiting for the gentle advance of an almond held in my finger-tips. To promote the next move I advanced my hand, holding the nut in my palm. When it was right up to him he hopped on to my hand and took the nut. After this he followed the normal course, and ultimately became exceedingly tame. It was just a case of a different temperament—he was rather a solitary individual, not mixing much with the others.

Those who succeed will assuredly want photographs of their conquests. Snapshots at three feet with a hand camera will furnish good records, but we shall do much better with a focusing screen and tripod. A person can then work alone. In addition, we shall get larger images and consequently better backgrounds.

The camera and tripod should be left on the scene for a while. The birds will then take no notice—indeed, they will often perch on the camera. Likewise, when the shutter is clicked at close range they will soon ignore it. Should they tend to jerk at the noise, a slight hissing sound will smother the click.

At this cold season there may be a temptation to work from indoors, photographing the subjects just outside a window. This will be a mistake, the position being bad photographically, as the subject will be largely in silhouette. We must get right into the open to achieve anything worthwhile, for the light is weak at this season and we need all we can get.

Our subjects are tame and can be brought just where we want them, so we select the best spot in the garden. Let us begin with a branch where there is side lighting and an open background, free from obstruction for a distance of twenty feet. If this be impossible, try to find a plain area, such as a solid wood fence or a wall (avoid a brick one, unless you can get well away from it) or a patch of bare soil or lawn.

We focus the selected part of the branch, and our assistant holds a nut in his fingers. Then in due course we focus on the bird itself. The assistant

is no longer needed, for we can release the shutter with one hand to photograph the bird at the other (Fig. 3). The hand should be held immediately behind the branch, with the nut just above and in the same plane as the branch. If in front, the hand will be well out of focus and we shall not get such a good side view of the bird. The nut should not be released immediately, for then our subject will linger, pausing awhile before making another attempt.

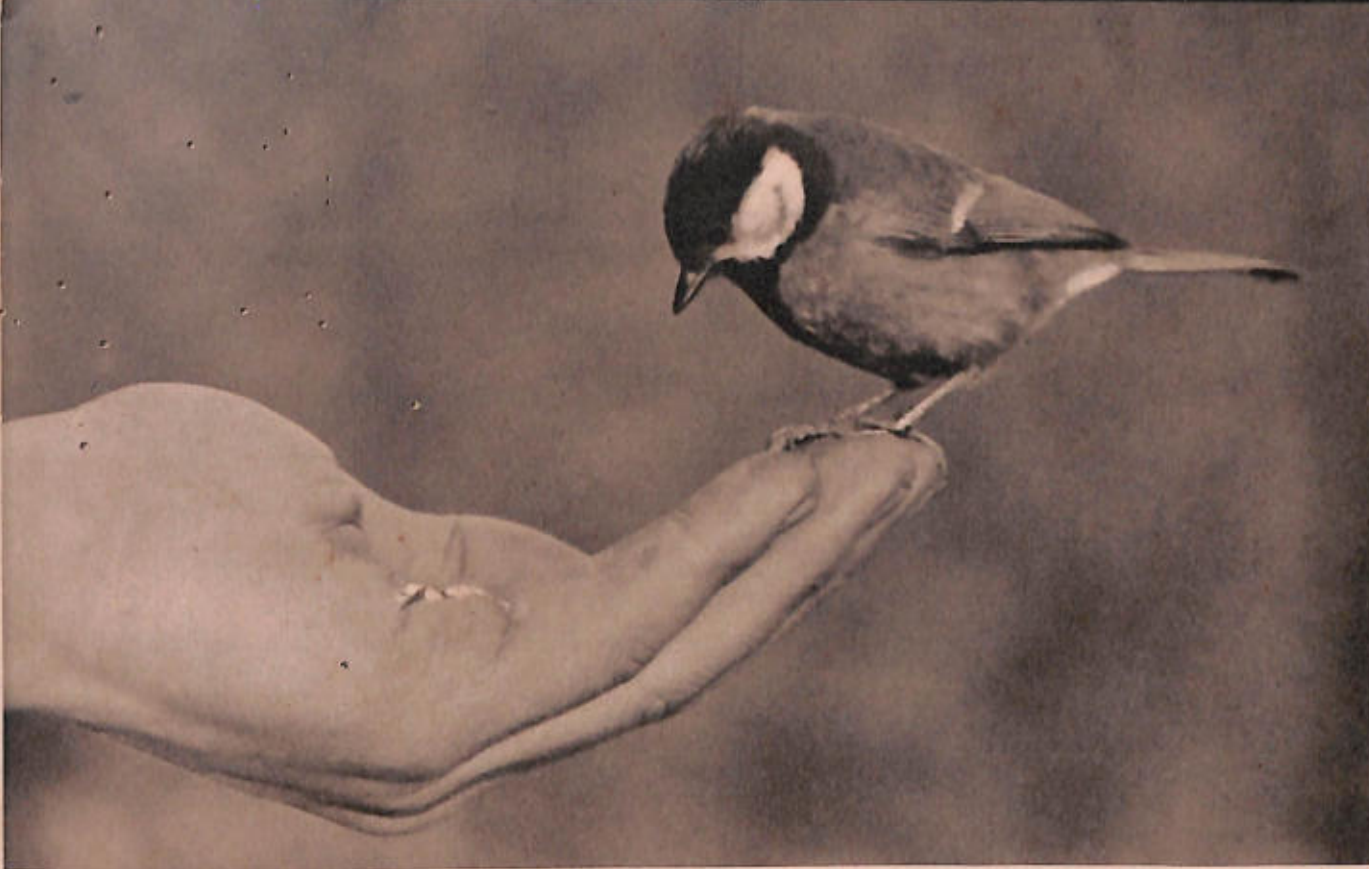
This is the moment for exposure. The subject being quiescent, no movement should occur with the relatively slow speed of $1/25$ th second. To arrest the very quick movements of titmice in action an exposure of $1/250$ th second or even less is needed, so the slower exposure is a great asset in the weak light of winter. With rapid Panchromatic material f.11 or f.16 will afford adequately exposed negatives in sunshine, the bird's plumage being light.

We can photograph birds on our own hand in mid-air when an assistant has helped with the set-up. In this case the forearm is rested on the handle of a fork thrust into the ground, the whole hand and wrist thus being suspended. We can then operate with our own hand held in the same fixed position with the assurance that it will be in focus and correctly placed. The bird will remain when the nut is chopped small, and we can wait for a good attitude and a quiet moment and photograph him in $1/25$ th second.

Working alone, I have even photographed my friends at my lips. After focusing the helper, I take his place on a chair; if the camera is out of reach, the shutter is released with string, held in the free hand. It is cold work hanging about waiting for subjects when there is snow on the ground, so this solo work taxes one's endurance to the full.

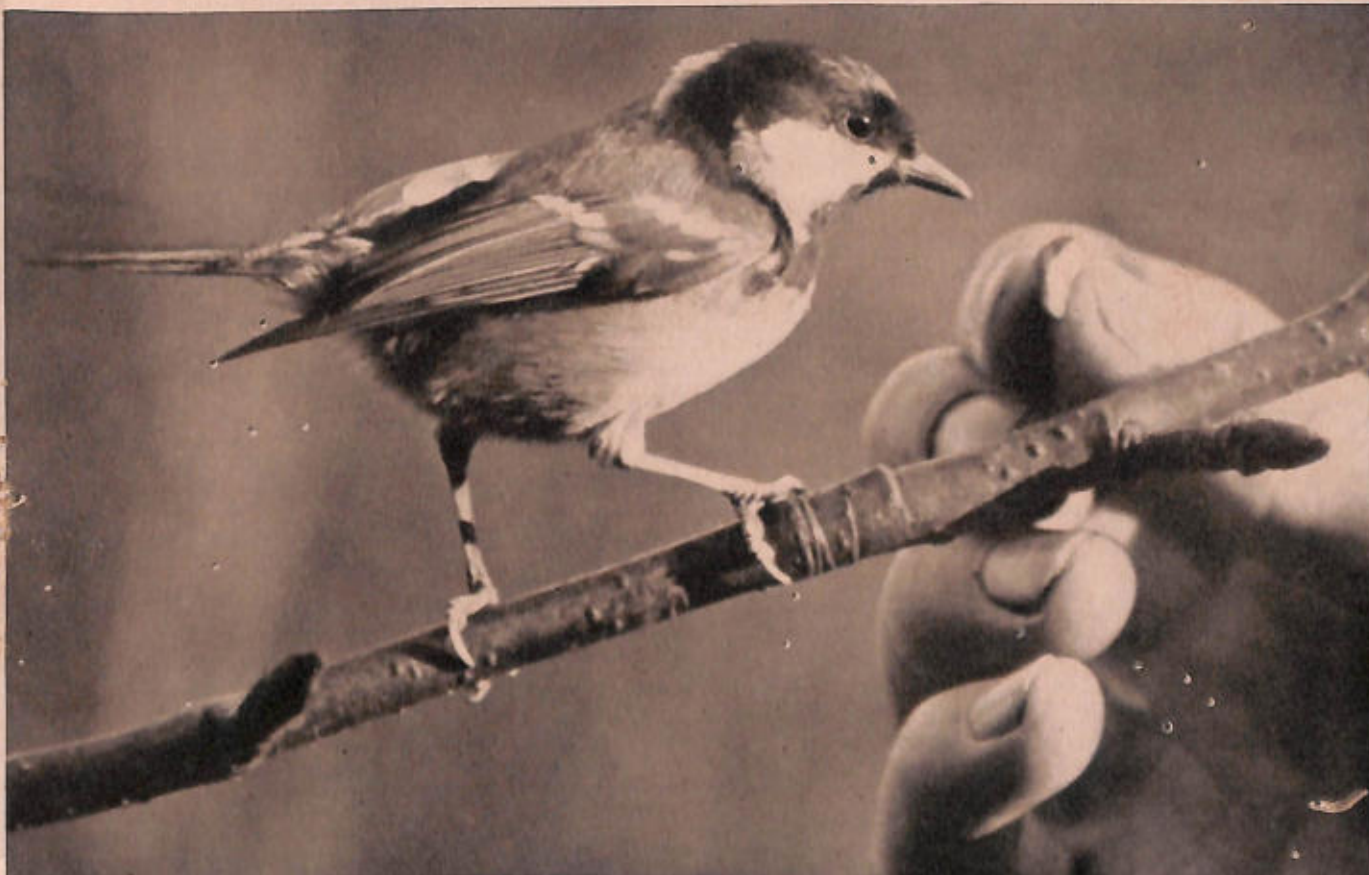
For photography, suet and nuts should be suspended on stout wire, which keeps them more rigid. When the subject alights on food suspended on string, there is so much oscillation that movement is almost impossible to avoid, apart from the subject's swinging out of focus. Here again, at the right moment $1/25$ th second will suffice.

Coco-nuts should be suspended horizontally, one end being sawn off; this keeps the nut dry and limits the bird to one plane at the entrance. Halves hung cup-wise will collect rain and snow, and the bird will perch anywhere round the rim, presenting difficulties of focusing and position.



5 (Top). *Great tit fully tamed*

6 (Bottom). *This coal tit returned for three successive years*





7. Photographing the eggs of a long-eared owl,
laid in an old carrion crow's nest



8. Long-eared owl's eggs in a commandeered
crow's nest

CHAPTER III

The Long-eared Owls find a Nest "To Let"

SPRING was late that year. The whole month had been cold and wet and winter still lingered as I plodded across the stubble towards the wood where the owls dwelt. It was the third week in April, and the April showers were frozen. Scurries of hailstones and snow sped by, whirled hither and thither in the boisterous breeze. Then came a spell of brilliant sunshine and a glistening world of melted snowflakes.

Hardly the season for birds, one would think, and the small birds apparently shared this opinion, judging by their absence. My quest was for long-eared owls, which were almost certain to be nesting, in spite of the inclement conditions. Every year I find them in this wood, almost invariably in the same area of a hundred yards' radius.

They are partial to Scots firs, of which there are large plantations in this wood. Seldom do I find the owls themselves there. In a section of mixed trees there is one spot where some thirty Scots firs are interspersed, and in one of these I can be fairly certain of finding the owls' nest, season after season. Why they should choose this small area, disdaining a multitude of other sites, apparently more eligible, is difficult to explain. These few firs must possess some special appeal in the owls' estimation.

Such partiality is prevalent among birds, and is usually incomprehensible to human mentality. I am aware of the favoured haunts of many species of birds, and can almost count on finding a certain kind of nest in a certain spot every year, which is very helpful when time is limited.

One might roam the countryside for a long time without ever seeing an owl. This is not surprising, as they are nocturnal in habit. Their hunting is done at night, and Nature has equipped them admirably for their mode of life. As a pigeon flies one hears the loud flapping of wings and the whistle of air through the wing feathers. This would never do for owls, unless they changed their habits. A thick covering of down fills the spaces between the feathers, rendering flight absolutely noiseless. Woe betide the foraging field mouse, seized in a flash without a sound of warning! In the daytime the owl roosts, and is clumsy if disturbed, when, dazed by the light, it will fly into branches.

Unlike the average perching bird, which has three toes in front and one behind, owls have two in front and two behind. This structure affords a

better grip on their prey, which is generally carried in the talons. The owlets inherit this structure, as can be seen in their manner of perching. With all these attributes—silent flight, powerful talons and beaks, keen vision in the dark, an acute sense of hearing—they are well endowed for the life they lead.

According to ancient tradition, the long-eared owl is an emblem of wisdom, but he is not wise when it comes to nest building. What with sleeping all day and hunting all night, he has never had time to learn the building trade, so picture him searching for something "to let." In the topmost branches of a lanky ash, an old crow's nest stood grim and gaunt. Battered and torn by the elements, it was now reduced to a precarious hulk, a pitiful relic of former glory. "Just what I was looking for," said the owl appraisingly, so without further ado he rented it for the season. No doubt the view was excellent, but what a home for a bride! Though not exactly enraptured, she nodded her approval, and in desultory manner the happy pair started spring-cleaning and repairing the nest.

Long-eared owls never build nests of their own, but invariably utilise that of an old sparrow hawk, crow or wood pigeon (Figs. 7 and 8). Sometimes they find a nest of substance, but often they choose such a derelict one that I have known the eggs to fall through the bottom of it or a large portion of it break away. Also, the nests of carrion crows, originally well cupped, have often become flattened like platforms when commandeered, with the result that the eggs are thrown out in the spring gales (Fig. 8).

This propensity for a favoured area can be turned to good account during the winter months. By removing all the old nests in trees difficult to climb and those in bad situations photographically, we can save ourselves much unnecessary effort when hunting for owls' nests the following season. The birds will generally choose a nest from the restricted range left—as often as not the one in the worst place for our purpose! Even so, there is consolation in the fact that it is definitely better than those we thinned out.

The term "long-eared" is somewhat misleading, for the tufts which give the birds their name are not ears but merely ornamental appendages. The ears consist of small apertures in the side of the head. The owls are birds of prey, subsisting on an entirely carnivorous diet, made up principally of mice, voles and small birds, like meadow pipits. The food is swallowed whole—fur, feathers and bones. A youngster three weeks old will swallow a mouse intact. When the fleshy part of the food has been assimilated, the indigestible portions are ejected via the throat in the form of furry pellets, called "castings." On an average, these long-eared owls lay from three to five eggs.

Let us return to the "house-hunting" pair and follow their fortunes. With most species the nesting phase is an orderly process. As a rule, one



9 (Top). *These eggs were laid at intervals over a period of eleven days*

10 (Bottom). *Young long-eared owl, six days old*



egg is laid each day, at approximately the same hour, and incubation does not begin until the clutch is complete. All the eggs thus hatch at about the same time, and the progress of the chicks is uniform, ensuring that they are all ready to leave the nest together. As all will have attained the same standard of physical and mental development, all will behave in the same way after dispersal, which makes it easier for the parents to tend and control them.

The nest in the ash was roughly patched, and in due course an egg appeared. Three days later it was gone, having been thrown out of this very exposed nest in the gale overnight. No time was lost by this enterprising pair, and a fortnight later they had found a new home, scarcely a hundred yards from the other.

This was a better choice, being a substantial structure—a sparrow hawk's nest of two seasons ago, as I happened to know. Built in a forked branch, some fifty feet from the ground in a thick Scots fir some seventy feet tall (Fig. 9), it was well situated for photography, though somewhat shaded by overhead foliage. Not only was it patched, but a new lining had been added.

This estimable lady had unusual ideas about egg-laying. A roundish white egg appeared, which she incubated for four days. She then elected to lay another. Two days later a third egg appeared. After sitting on these three for three days, she decided that five was the ideal family, so another two were produced. Thus, the last egg was fresh when the first had had ten days' incubation.

Events progressed smoothly during the next fortnight; then a welcome diversion occurred. The first owlet was hatched, a helpless little mite with a generous covering of woolly down (Fig. 10). The mother owl sat closely on the eggs and on this chick, vigorously swooping and knocking off my cap as I photographed him at the age of six days. One egg had disappeared, probably having been kicked out of the nest through too hurried a departure. The observer should always be careful of his eyes, as owls are savage in defence of their young.

Eight days elapsed, and then I found a family of three—one big brother and two small infants—all thriving well (Fig. 11). They had the strangest little wizened faces imaginable, definitely owl-like, despite their immaturity. In the meantime another egg had disappeared.

On a rich diet of mice and shrews, the family grew plump and strong. The eldest, now seventeen days old, with ear tufts in evidence, was beginning to feel the wanderlust, walking about on the nest and regarding the adjacent branches with meditative eye. For the most part, his brothers spent their time squatting in somnolent mood, their ages being thirteen and eleven days respectively (Fig. 12).

The parents were now much less aggressive, no doubt through famili-



11 (Top). *One big brother and two small infants*

12 (Bottom). *Seventeen, thirteen and eleven days old*



arity with my visits, combined with the realisation that they portended no harm to the family. One week later I paid another visit, wondering whether I should find the senior in the nest, or whether he would have wandered into the tree-top branches, where by instinct they remain until strong enough for flight. Should they overbalance, they sustain little injury, as fluttering wings prevent a headlong drop. Their chances of survival are lessened when they become accessible to ground enemies.

To reach my photographic stance, along a branch on a level with the nest, I had to pass very near it. At this critical moment the owlets might well respond to instinct and disperse. At first they received me aggressively as soon as my head appeared above the nest. Their plumage bristling, they glared and hissed, with a vigorous display of beak-snapping, which turned into pecking when an attempt was made to touch them. But through frequent association they soon knew me unmistakably, and I ceased to get a hostile reception; instead, they just stood and watched me.

The wing feathers were now well developed, and the barred breast feathers were discernible through the down. The eldest—twenty-four days old, with piercing eyes, bright yellow with dark-blue pupils, set in his quaint black face—was now of impressive appearance. He was obviously on the verge of departure (Fig. 13).

When I called again five days later he was gone. I saw him on a nearby tree, inaccessible by branch-to-branch progression, so he must have fluttered across under the power of baby wings. The others, twenty-five and twenty-three days old, watched me intently, but allowed me to pass and photograph them (Fig. 14). As I returned I attempted to touch them, but they quickly hopped out, with no display of hostility. Nursery days were over.

On another occasion, two were brought down in the camera case from a nest where photography was impracticable. They were about three weeks old. I wanted a picture of them standing on a branch, but one persisted in squatting down (Fig. 15). Gently I tried to coax him, but he had a young will of his own. I attempted to raise him by putting my hand underneath his breast, but he tightened his grip on the branch to resist the upward pressure, determined to rise in his own good time and not a moment sooner.

Decision came at last, and on somewhat shaky legs he rose in solemn majesty (Fig. 16). Out of curiosity I tried to make him squat again, but through sheer perversity he resisted the downward pressure! And there they sat regarding me, the embodiment of wisdom. I climbed the tree once more, and left my little friends musing, safe and secure in their lofty home.



13 (Top). *A week later. The eldest is ready to leave the nest*
 14 (Bottom). *On the verge of departure, twenty-five and twenty-three days old. The eldest has gone*





17. Photographing a rook's nest



18. An excellent site. The branches, forming a multiple fork, are all on one bough. All sway as one unit

wings till near the ground, where they behave normally until obsessed by another spasm.

The height at which their nests are built is governed by their weather predictions. With a fair season in prospect, the nests are established in the topmost branches. Should a season of gales seem probable, they build at a lower level, which results in fewer casualties. I have often noticed this variation in altitude, and have found it a tolerably accurate indication of the weather for the next two months, which covers the nesting phase. I have never compiled statistics, but in general their instinct appears to be sound.

Sooner or later in February, they abandon their winter habits and show increasing interest in the old rookery. During the greater part of the year peace and harmony prevail in the community, but now there arises a period of competition, when squabbles and jealousies are rife. Surviving nests are inspected and eagerly claimed by the enterprising first-comers, while others lose no time in taking possession of eligible sites, guarding their property long before the first stick is laid.

The nesting phase is a period of the utmost importance, comprising far more operations and considerations than are apparent at first glance. Unless the whole performance is efficiently conducted, the species will fail to survive. We see the nests in haphazard array, each apparently just a collection of interwoven twigs in a forked branch, of which there are thousands. There is a great deal more in it than that, however, for the choice of a site is no casual affair, but the result of deliberate survey and assessment. The first sites to be claimed are the selfsame forks in which last year's nests were built, these having been blown down in the winter, and not a single stick being left as a clue. Why should these particular forks be chosen, rather than hundreds of others apparently as good? Simply because they fulfil certain essential conditions, as we shall see.

Elms are much in favour, as they provide the right kind of forks for the bulky nests. A single fork is inadequate, for there the nest would lack adequate anchorage and would rock and swivel to destruction. A multiple fork is essential, for this provides a crutch ensuring stability, and the nest can be built round the branches, not merely within the recess. This fork must also be at the right level, neither too high nor too low, according to the weather prediction. This is the ideal, of course; but it cannot always be attained. We now begin to see that suitable sites are decidedly limited.

The fork is not easily found, for the branches comprising it must all be on one bough. In a gale all then sways as one coherent unit—nest, branches and bough—with little movement which might cause damage (Fig. 18). Interlocking branches of adjacent boughs often provide multiple forks, but such a choice would be disastrous. Lashed by a gale,



19 (Top). *The eggs are small for the size of the bird*
20 (Bottom). *Young rooks, ten days old*



the branches writhing in opposing directions would soon tear the nest asunder. Inexperienced young birds sometimes lack this discrimination. Such carelessness must not be perpetuated, so the welfare of the species is best served by a drastic course of destruction. The laws of Nature are stern in their decree.

Although a number of old sticks may figure in the coarse foundations, the bulk of the nest is constructed of live twigs, nipped off the tree tops by powerful bills. A structure of dead sticks alone, brittle as sticks of candy, would very soon disintegrate. Despite the diligence of the builders some nests make little progress, for thieves and rogues abound, brazenly pilfering in the absence of the owners. When caught red-handed by the irate occupants, lively battles ensue, usually ending in a rout. When thieves are persistent, one of the owners is obliged to remain on guard.

The cup of the nest is finished with finer twigs, then a lining of dead leaves, mud or dry grasses is added. The cup is unusually deep, like the shape of an egg-cup—a provision to prevent the eggs from being catapulted out. As a further safeguard, the eggs are particularly small for the size of the bird. As nest-building progresses, the rivalry subsides and good fellowship prevails once more, each pair being fully occupied with its own particular interests.

By the third week in March some eggs will be in evidence, even if the weather has been cold. There are from three to five eggs in a clutch, blotched with dark brown and olive on a ground of pale green in varying shades (Fig. 19). Owing to the depth of the nests, the eggs are not easy to photograph. At a distance of five or six feet, the viewpoint must be at a corresponding height above the nest level in order to get a sight of the eggs (Fig. 17). In a rookery of two hundred nests, only four or five are sometimes thus accessible. Chestnut trees provide the best sites for camera work, for the branches in the topmost reaches are strong and not too thin, besides being very numerous.

After some three weeks' incubation, in which the males take their turn, the chicks begin to emerge. The young of many species are hatched well covered with down, but those of the rook are born absolutely naked. To compensate for lack of covering their skins are somewhat thick and tough, and dark grey, almost black, in colour. By no stretch of imagination can they be called handsome, or even comely, but as their feathers appear they become more prepossessing.

In one accessible nest I found two chicks in mid-April, the only survivors of a clutch of four eggs (Fig. 20). In spite of sound construction in admirable forks, many nests had suffered depletion in the recent spring storm, and the ground was sprinkled with broken eggs. Should two eggs be taken from a clutch of four, the birds would almost inevitably desert. Not so, however, when depletion arises from natural causes, for I have



21. *Two young rooks which fell from the tree tops*



22. *Gaping in the heat*

seen many cases of single eggs being incubated. Complete disasters can be blessings in disguise, for the second broods usually survive the shoot on May 10th.

These ten-day-old chicks had not yet opened their eyes, but blue-black plumage had appeared in patches on head and body while, as in all young birds, the wing feathers showed the most advanced development. When hatched the chicks lie in disorderly array, a jumble of heads and tails; but at quite an early age they assume an orderly arrangement, all heads facing in the direction of the parents' approach, which is always consistent. This compact method ensures mutual warmth and economical use of accommodation, so essential in the case of a full brood, besides providing a smooth surface for the brooding parent. When disarranged the chicks promptly re-establish themselves in their original position, by a process of heaving and shuffling.

Temperature is an important factor in the welfare of birds, which, with their thick covering of non-conducting plumage, are insulated from external extremes. The nesting phase being early in a rookery, the chicks appear before the foliage is out. There they lie, while the parents are foraging, gaping in distress as the relentless sun beats on their backs (Fig. 22). Some birds will shade their young with outspread wings; probably the rooks do the same.

On May 7th activity was at its zenith, with parents working overtime in an effort to appease insatiable appetites. From all directions came a constant procession, with beakfuls of succulent grubs and worms, invariably turning to alight against the wind. And all the time there was a raucous chorus of guttural cawing, reinforced by an undertone of feeble baby squawks expressed in the language of the tribe.

Many of the youngsters had already left home and were perching on branches in the tree tops. There they spent the next few days while their wings developed the strength to fly. Having watched them grow up, it is sad to reflect that the next few days spell doom for the great majority. There they are shot, unable to escape, the few survivors being those still in the nests. Those in the chestnuts have a better chance of survival, since they are hidden in a canopy of dense foliage. To a bird lover it is a tragic procedure; but in other spheres it is deemed necessary in order to keep their numbers within bounds. More than once, let me whisper, I have moved them out of danger and have found them safe and sound after the shoot.

Surveying the scene from the ground, I noticed a youngster sitting by a nest, in what appeared to be an ideal spot for the camera, so I promptly ascended. Reaching the spot, I found him sitting placidly by the side of a nest in the extreme top of the tree. This month-old youngster, a credit to his parents, watched my movements with interest

for awhile, then prompted by some inner urge, he suddenly realised that it was past his teatime. To draw attention to this gross neglect, he voiced his sentiments by cawing three times at one-second intervals, every half-minute or so.

His tone was plaintive at first, then a decided note of petulance crept in. I wanted a record of the incident, so with camera sighted I waited, determined to snap at the second "caw," regarding the first as a prompting. SNAP—but the caw never came, the only exception among dozens of threes! Such are the trials of a naturalist! I managed to get him next time (Fig. 23), and then left him on his airy perch. By working quietly I had kept him reassured, content to sit still, though an easy line of retreat was available.

Whilst I was busy aloft, my small son Kenneth was roaming about in the wood. This budding young naturalist, aged seven, was bursting with pride over a capture he had made of two young rooks, about a month old—two of several which, through some misadventure, had landed at this lower level. A final snap with my very last film (Fig. 21), a wistful good-bye from Kenneth, then another climb with the wanderers.

We packed the camera and set off for home. At the edge of the wood we paused, thinking we heard a familiar sound. Above the general clamour, in accents decidedly strident, came "Caw!—C-A-A-W!—C-A-A-A-W!"

23. *He voiced his sentiments in plaintive tones*



CHAPTER V

The Coot takes a Swim

FROM the reed-fringed banks of the lake I watched the coot disporting himself as with jerky strokes he paddled to and fro. Replete with aquatic insects and succulent water plants, his mood became more pensive, and I wondered if he was comparing these golden days with that fearful ordeal last winter.

Frost had seized the land in a fierce grip and ice had spread over the water until at last the whole lake was frozen solid. The frost lasted for many days, and the coot and his companions used to stand miserable and forlorn on the ice, for their food supplies were entirely cut off (Fig. 25).

Abruptly his reverie ended, and with resolute strokes he paddled homewards, his white forehead showing in conspicuous contrast to the rest of his dusky feathers.

The coot is not really bald—it is merely a patch of white feathers on his head which gives that impression. He is often confused with the water hen, which frequents the same haunts but is rather smaller and has a red forehead, a bill with red base and yellow tip, and brownish wings and back. The water hen is readily distinguished by the white streak on her flanks and the pure white underside of her bobbing tail. The coot has a white bill to match his “bald” forehead and in general appearance is black.

His wife sat in patient though watchful solitude, while the water lapped round the nest. All her wits were needed, for she dared not leave her eggs for a moment with all those marauding gulls about ready to swoop on the nest.

It was some time before the coot returned, but the hen did not mind. She remembered his worthy efforts, when he had worked like a Trojan, helping to collect reeds and rushes until the nest was about a foot high. This sturdy pile was loosely anchored among the reeds, thus affording a twofold safeguard. Attached in this way there was no chance of it breaking loose when lashed by waves in a gale, and should the lake be flooded, the nest, instead of being submerged, would float on the rising waters.

The eggs lay in a shallow recess in the top of the nest, out of the way of the splashing water below. Coots never fly straight to the nest, but approach by walking or swimming. This particular nest was built over



water, and the rough, prickly sides looked formidable and uninviting, so how was he going to get up? In the worthy manner of coots they had built a smooth sloping gangway of reed stalks (Fig. 24), so in comfort and ease he walked upstairs to the nursery and took charge of the eight eggs.

Coots' eggs, finely spotted with reddish brown on a light stone ground, are often mistaken for those of the water hen (Fig. 26), but these are slightly smaller with a warmer ground of buff, spotted and speckled with orange and brown. Aquatic birds are endowed with oily feathers, repellent to water, so that they can swim to the nest and go straight to the eggs with dry plumage.

Unlike young landlubbers, most of which stay in the nest for a fortnight or more, young coots take to the water very soon after hatching. One morning I found three in a nest when they were only a few hours old (Fig. 27), but by the afternoon they had gone. For several days they swim about in the sanctuary of the reed bed, safe from voracious pike, which cannot swim freely among the tangled roots and stems below the chicks and seize them by the leg. When a family is surprised, the chicks will disappear altogether, while the mother will submerge, grasping underwater stems with her feet, leaving only her beak above water.

While most of the nests are to be found among the reeds, coots also build in open water. I found one of these nests that same day, lightly attached to a growing patch of water plants, rising and falling with the movement of the rippling water. Seen against the light, with the reflection of the sky in the water beyond, the effect was very attractive, so I snapped the scene before passing on (Fig. 29).

Punting across the lake one day, I found a chick in open water two hundred yards from the nearest land, bent on a voyage of discovery. This little bird, though only three inches long, was valiantly battling against the wind and waves, tossed like a cork, but making good headway. Though bound for a fixed destination and swimming with all the strength of his tiny legs, the young coot was blown right out of his course.

Round the bend came a swan with eight cygnets; right into their ranks he barged, a helpless mite at the mercy of giants—like a scene from *Gulliver's Travels*. The swan received him with good-natured tolerance, making a slight detour to avoid a collision, while the cygnets ignored him completely. The whole affair happened so quickly that I could only hope for the best, being too far off to do anything about it. I was really far more anxious than the participants.

Worn out by his epic voyage and forgetting his original destination, this venturesome youngster allowed himself to drift until he reached a tranquil harbour. He was quite unaware of his amazing luck in escaping the perils of that trip in open water where pike abounded.

As I punted towards the shore I caught sight of two more of these



25 (Top). *Coots and water hens on the ice of the frozen lake*
26 (Bottom). *Water hens' eggs are darker, with larger markings*





27 (Top). *Newly hatched coots in nest*

28 (Bottom). *At the age of one day he enjoys his first swim*





29. Cool's nest among herbage in open water



30. *Note the larger toes and sturdy legs to provide driving force when swimming*

chicks which had disobediently strayed some yards into open water; of similar age to the intrepid one, they were probably members of the same brood (Fig. 28). I managed to catch one over the side of the boat, and carefully headed the other towards the land.

When he reached the bank, out of the only element he knew, he stood on his large thick feet, calmly surveying the position and devising a means of escape (Fig. 30). I noted his sturdy legs which, aided by his expansive toes, clearly accounted for his agile water performance. The fuzzy black down, which extended to his little drooping wings, afforded scant protection against cold water, so I picked him up too and held the two young birds in my hand for ten minutes.

Compared with the young sedge warblers (Fig. 138), these young coots are only slightly larger, yet an adult coot weighs about $1\frac{3}{4}$ lb. and a sedge-warbler only half an ounce. But we must bear in mind that the fortnight-old warblers were almost fully grown, whereas the coots were not more than a day old.

As soon as they were revived by the warmth of my hands, I placed the truants on the ground, facing towards the land. The moment I put them down, they turned round and stampeded for the water. In they plunged, and paddled as fast as they could straight for the reed-bed where the mother bird was clucking.

CHAPTER VI

The Charming Pied Flycatcher

WENDING my way homewards one sultry day in early June, I had a momentary glimpse of a small bird moving in the tree tops ahead. Thunder was threatening, my tea was long overdue, I felt tired and overheated; nevertheless, I jumped off my bicycle to observe, knowing that many good things come from casual beginnings.

A few moments later I saw the bird again and identified it as a flycatcher. Soon I had a closer view, which revealed the subject as a hen pied flycatcher, with food in her beak. This was decidedly worth investigating, so I unslung my heavy camera and settled down to watch.

On my left lay a small orchard, a grass-covered area somewhat under an acre in extent, containing a dozen gnarled apple trees, in several of which there were holes. For the next few minutes the bird flitted among the trees, then flew towards the nearest one, just twenty feet from where I stood. I climbed over the wall and found the nest in a hole some five feet above the ground and fortunately not visible from the path (Fig. 31).

Before describing my experiences with the owners of this nest, I propose to make a few remarks about flycatchers. In Britain we have two species of flycatchers—the spotted and the pied. The former is found throughout the country, but the distribution of the latter is an ornithological mystery. The pied flycatcher is limited to certain localities in Wales, Cumberland and the extreme North of England, and is rarely observed throughout the greater part of the British Isles.

This erratic distribution has not yet been explained. Both species seem partial to the same kind of food, though their manner of securing it is different. The same kind of district—well-wooded, hilly country—is favoured by both, and the choice of nesting sites is similar—holes in trees and masonry—so the localisation of the pied is not due to the lack of nesting amenities.

My native county, Northumberland, is one of the favoured areas. In the Allendale district, seven hundred and fifty feet above sea-level and surrounded by moors, I found the subjects of this story in a wooded valley some two hundred yards from a small river near my home. Another pair nested two miles farther down the valley a couple of years previously, in a depression at the end of a birch stump, vertical and open to the





sky. The birds were tame, but the place was too frequented for photography.

Apart from the question of distribution, the species is noted for its inconsistency. For a number of years there may be several pairs in a district, then the species may not be seen again for a season or two. Once the brood leaves the nest, the whole family has the habit of disappearing suddenly and completely. This delightful migrant is truly a bird of strange contradictions and extremes, so elusive and mysterious, yet so friendly and confiding.

The name flycatcher is very appropriate, though the food is not confined to flies. The diet consists of insects of various kinds, caught in the air with the agility afforded by powerful wings. The typical flycatcher method of hunting is to perch on some stance, such as a post or fence or a stump or branch at any height up to the tree-tops, then dart at some passing insect and circle back to the starting-point. Certain favoured stances are frequented day after day. The pied flycatcher often hunts at a lower level than the spotted, even to the extent of foraging in the grass and picking insects and grubs from the herbage. The legend that rain portends when the swallows fly low is based on truth: they fly low for the purpose of capturing the insects found there when bad weather threatens. Flycatchers do the same.

Let us return to the orchard. With the aid of a torch I found that the nest lay some nine inches from the entrance, at the end of a narrow passage. The chicks appeared to be about a week old—five or six of them, as far as I could judge. I sat down by the wall, twenty feet from the spot; then the hen flew into the tree, surveyed me for a few moments and entered the hole with food. Before she emerged the cock appeared, and without hesitation flew down to the entrance, clung on the edge, then fed his family as soon as the hen came out. •

I moved nearer when the birds had made a number of visits without showing any sign of concern. As this made no difference to their behaviour, I advanced in short stages until in the space of twenty minutes these lovely birds were conducting their affairs, entirely at ease, as I sat but eight feet away. I then went home for my belated tea and pondered over the prospects.

Here, indeed, was a splendid combination. I had found a lovely subject; the birds were friendly and responsive; the nest was in a low situation, permitting approach by degrees—it might have been twenty feet aloft, photographically inaccessible; the foliage was sparse, affording enough light for photography. Above all, I had just started my holidays and was free to give all my time to this subject. I therefore decided to do so, though it meant the sacrifice of my plans concerning a willow warbler whose confidence I had gained. No qualms arose through this decision—

32. *Flycatcher Country (Northumberland). The birds nested in the orchard partly obscured by the barn near centre of print*

I could find many other willow warblers, but pied flycatchers were rare.

The following morning I went back to the orchard and introduced the camera and tripod. Progress was rapid, and I was soon photographing the birds at the nest entrance, with the camera focused at three feet and myself only eight feet away. Both birds were delightfully tame, in which respect there was nothing to choose between them. The cock gave the impression of being the tamer, because he was such a go-getter, so decisive

33 (Below). *When a perch was provided both birds were there within five minutes*

34 (Opposite). *Male at nest entrance, showing typical manner of clinging, with tail bent against the tree trunk*





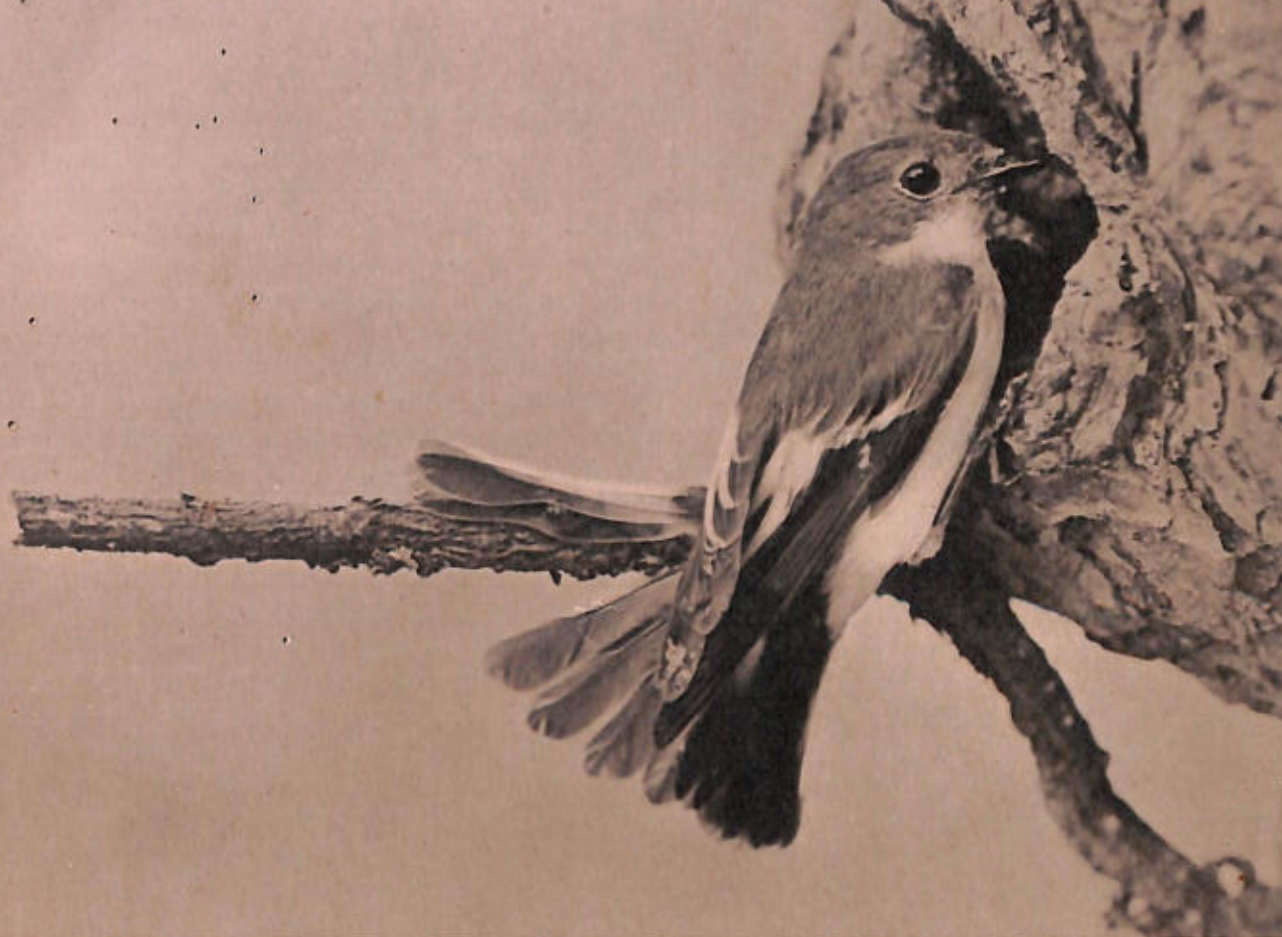


35. *Showing how the photographs were taken*

and purposeful in action. The birds would often return together, and I noticed that the cock was invariably the first to enter, while the hen clung to the rough bark near the nest until the way was clear.

Their procedure was very consistent at the nest. Each bird would cling on the lower edge of the knot with tail bent beneath and pressed against the tree, presumably to provide stability (Fig. 34). Both attended to nest sanitation. They took equal shares in feeding the family, but one or the other would sometimes disappear for fifteen minutes or so, in order to feed while the partner carried on.

Several photographs were taken, each being largely a replica of the others, a similar position being assumed each time. In the hope of securing some variation in position, I selected a thin, dead twig from the apple tree and fixed it at the nest entrance to form a small perch. The plan was an immediate success, the perch being apparently appreciated by the birds, who henceforth used it almost invariably. I photographed both birds together on the perch within five minutes of its erection (Fig. 33). I also hoped that when the chicks became venturesome they might find



36. *The hen had a habit of fanning her tail*

the twig useful as a vantage-point, but my holiday ended before they left the nest.

These aristocrats were a joy to observe, being so intent on their family affairs, so charmingly tame and friendly. The cock was strikingly handsome, a study in black and white with a conspicuous splash of white on each black wing and another on his forehead. The hen was handsome too, with her warm brown plumage and pure white breast, though she lacked the white forehead and bold wing markings of her mate, her wings being barred with two white lines. The cock would often utter a series of staccato calls, similar to the notes of the redstart or the chats. I never heard the hen give this call or any other.

Two days later we were such good friends that there was no need for the string release. By then I was standing alongside the camera, now but two feet from the birds, and was using the bulb release (Fig. 35). At this close range my $7\frac{1}{2}$ -inch lens produced images about four-ninths natural size. When working on such a large scale, approximate focusing does not suffice; here I could focus on the birds themselves and thus achieve the

accuracy required. The perch had been fixed very carefully so that it lay parallel with the back of the camera when viewed against the best part of the background (a fairly plain area free from distracting tree trunks). This ensured that the birds would be in sharp focus wherever they perched on the twig—seemingly a small point, but actually one of importance.

As the distant background of grass was in full daylight, it photographed as a light tone, providing an ideal setting for the birds on the partially shaded perch. From the photographic angle this was fortunate, though at times I wished that the overhead foliage were absent. The birds were vigorous and agile on the wing, but delightfully quiescent on the perch; this tranquil period was consistent, and was confined to the first half-second after alighting, after which there was a brisk movement to the nest. By seizing the critical moment I was able to give exposures of $1/25$ th second, using f.8 or f.11. Both birds ignored the impact of the shutter.

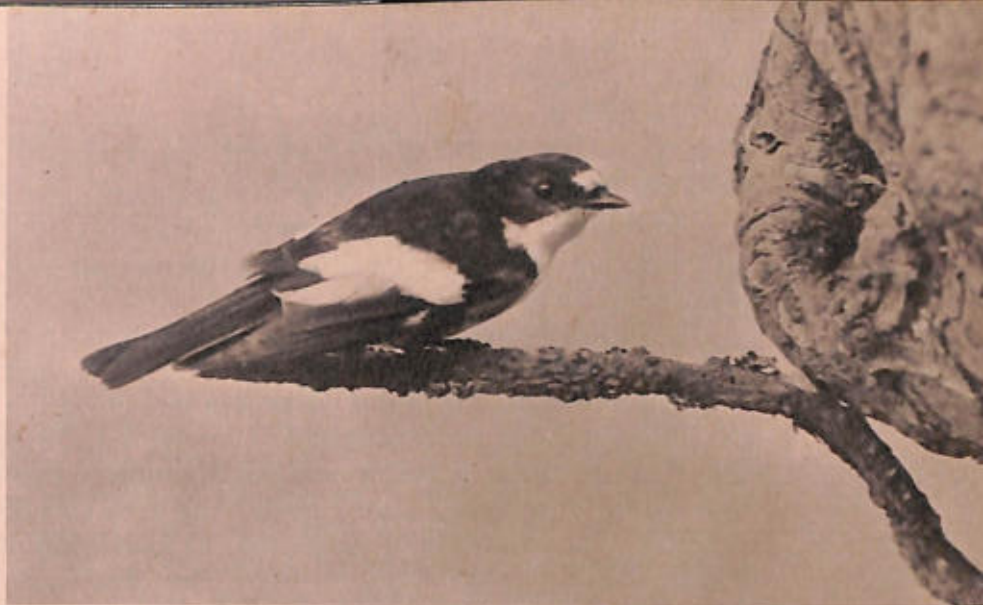
Owing to the unsettled weather there were days when camera work was impossible, but I watched my flycatcher friends every day for a week. The hen had a habit of fanning her tail (Fig. 36), which was probably an expression of some emotion that I failed to discern. She would often alight with fanned tail, and at other times would start the fanning process as she stood on the perch. This action had nothing to do with my proximity, for I frequently saw it occur in the distance. Another of her habits was to extend her wings in varying degrees and droop them on occasions. The cock was not addicted to either of these habits.

About five inches from the entrance the passage narrowed considerably, then widened into a recess just large enough for the nest. As both birds made their exit head first, there was evidently room to turn in the recess. When the youngsters reached a certain stage of development there was insufficient room for this turning movement on the part of the male, who resourcefully adopted the technique of backing out! The hen, being somewhat slimmer, was not obliged to resort to this course, even when the family was ready for departure.

In the case of the hen, a single nest visit sufficed for both feeding and hygiene attention. The cock was equally attentive, but his sturdy physique obstructed the light, so that after feeding the chicks and backing out he had to survey the situation from the perch and re-enter if his services were needed (Fig. 37). The hen, too, would occasionally survey from outside after leaving the nest, as though suspecting a call.

On one occasion when the hen was in the nest, the cock came to the perch without food. He raised his head and uttered a low, indeterminate warbling call, which brought the hen hurriedly to the entrance just as I released the shutter (Fig. 38). The pair remained on the perch for some moments, but nothing of consequence happened. Both birds then flew

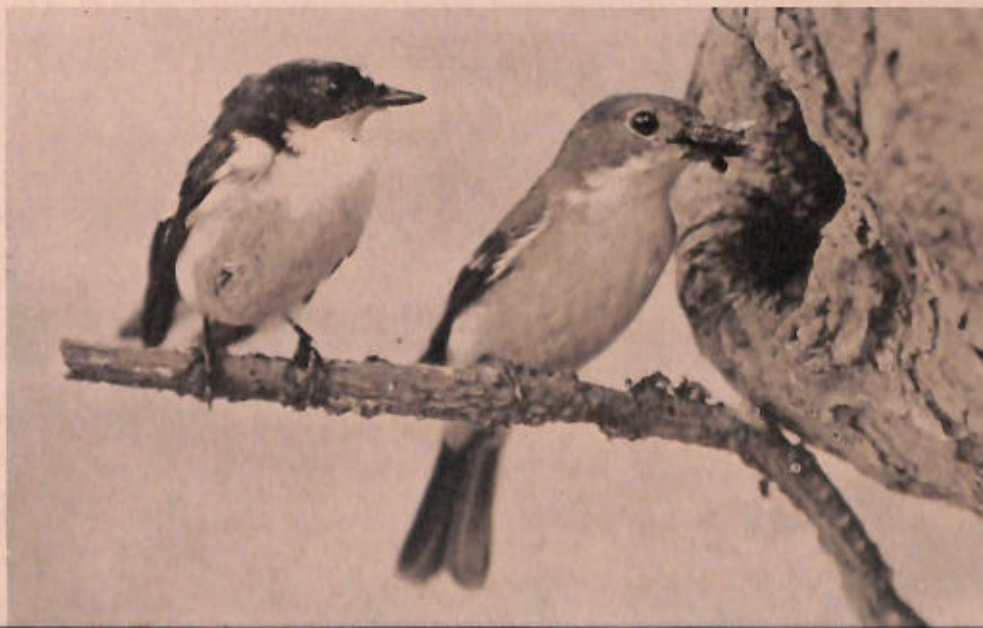
37. The male surveying the hygiene situation after leaving the nest



38. The cock raised his head and uttered a low warbling call



39. The male was so devoted to his mate that he would often join her before he had collected food. (This also illustrates his ruffled plumage)



away for food. I have no idea what significance lay in this episode, which was an isolated occasion, though I heard this soft warble in the distance three or four times. It was quite distinct from the "chat-chat-chat" previously mentioned.

The more I saw of these lovely flycatchers the more was I aware of their exceptional mutual devotion. The cock was particularly affectionate towards his mate. In many instances when she came to the perch with food he joined her before he had collected food himself, as though for the sheer joy of being in her company (Fig. 39). When he came thus empty-handed he would wait on the perch until she had paid her nest visit, and then the pair would depart together. If such conduct on his part was not inspired by affection, it was assuredly not due to any protective instinct. Protection implies danger, but no danger or other need for protection was evident here, least of all in the form of my presence. Among birds I have never seen such harmony, co-operation and devotion as was evidenced by this pair.

Now that the youngsters were almost fully grown, the food traffic was enormous. For the most part the parents arrived singly, but sometimes they happened to arrive together. In order to promote these visits I would sometimes stand ahead of the camera, nearer to the nest, as soon as one of the birds approached; when the other appeared I would resume my place by the camera. I secured several dual pictures in this manner. In the end this procedure was futile, for the birds would come back to the nest—sometimes together—as I stood in front of the camera, little more than a foot from the perch. The birds had, in fact, become too tame for my purpose.

The hen captured all her food on the wing and thus kept her plumage dry. The cock secured about two-thirds of his food in this manner; he foraged in the wet grass for the remainder, to the detriment of his breast feathers, which soon became soaked and bedraggled. His "backing" tactics played havoc with his spruce appearance, his damp plumage being ruffled and rubbed the wrong way (Fig. 40). Preening was attempted in a desultory manner, but it was not until the day's work was done that he tackled his toilet in earnest. He was always well groomed in the mornings.

As already mentioned, the cock invariably acted first when the pair arrived together. If the hen happened to occupy the inner half of the perch, the male would jump over her to reach the entrance. More than once I saw him pass food to the hen, who promptly took it to the chicks. This happened only when she found him on the perch as she left the nest—never when he joined her on the perch. Once when they arrived simultaneously from opposite directions the cock reached the perch first and stood near the middle. There was no standing room for the hen, so she

clung on the side, her tail bent forward beneath her to assist in balancing (Fig. 40). She maintained this rather strained position until her mate fed the chicks and departed.

I had now reached the last day of my holiday, and had come to the conclusion that the family would not leave the nest that day. The chicks were now so advanced and their wing power and instinct of fear so well developed, that I reckoned they would probably take flight direct to the tree tops rather than linger on the perch.

As I had now secured enough pictures of the birds and still had the afternoon before me, I decided to make use of this exceptional opportunity by recording a number of additional food visits. These photographs were enlarged to natural size and submitted to an expert entomologist, who was good enough to study them and identify the food depicted. From the analysis of forty-five beakfuls of food I was able to compile the following table:

THE PIED FLYCATCHERS' FOOD

Food represented		Total quantities brought by birds (45 visits)	
Order	Species	Male (21 visits)	Female (24 visits)
Lepidoptera:			
Caterpillars	?	2	—
Geometrid moths	?	—	1
Flame-shoulder moths	<i>Ochropleura plecta</i> (L)	1	—
Coleoptera:			
Dung-beetles	<i>Aphodius</i> (?)	1	1
Diptera:			
Daddy-long-legs flies	{ <i>Tipula gigantea</i> , Schrk. }	3	—
Down-looker flies	„ sp.	14	20
Bluebottle flies	<i>Rhagio scolopacea</i> (L)	2	1
Anthomyiid flies	<i>Calliphora</i> (?)	1	—
Empid flies	?	2	3
Plecoptera:			
Stone flies	<i>Empis tessellata</i> F.	3	3
Ephemeroptera:			
May-flies	{ <i>Perla</i> sp. }	5	2
Hymenoptera:	„ (?)		
Sawflies	?	1	—
Flies, various (species not identifiable)	—	13	20
Total food units		48	51

This supplementary series of photographs was taken with a view to throwing some light on the distribution of the pied flycatcher, which may be influenced by the food question. I am greatly indebted to my entomologist friend for his work in identifying the food. He returned the prints with the following comments: "From the variety of the food identified, it would appear that most insects of sufficiently large size are taken, unless

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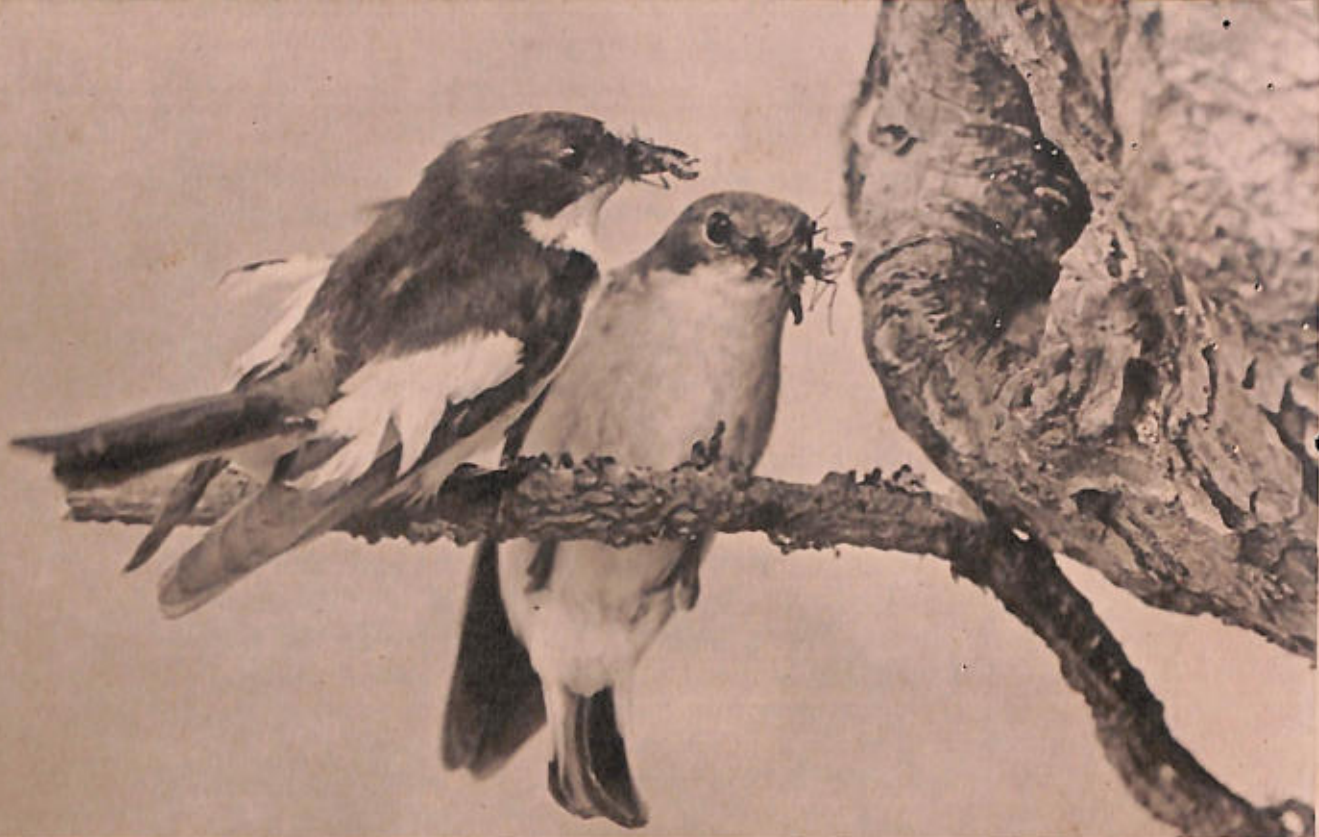
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40 (Top). *There was insufficient room on the perch, so the hen clung on the side*

41 (Bottom). *Food Series. Hen. Food: Geometrid moth*

42 (Opposite). *Food Series. Cock. Food: Caterpillar, sawfly and down-looker fly*



there might be special distastefulness or sting as a discouragement. I doubt very much whether food governs the distribution of the pied flycatcher. The insects identified are all much wider in distribution than the bird."

This photographic line of investigation will have to be followed in other pied flycatcher areas and also applied to the spotted flycatcher before its value can be determined. The experiment suggests that here the camera can play a valuable part, for photographs can be studied at leisure and will probably yield more information (particularly when in colour) than that afforded by visual observation restricted to a series of fleeting glimpses.

It seems that in this case the food aspect has little to do with the issue, so I leave the matter to those who are studying bird food.

When I left the birds that Sunday evening I knew how remote were the prospects of seeing them again. It was Friday before I could return; I found the nest empty and the orchard woefully dead and deserted, its very spirit gone. After a week of evening visits I saw a cock pied flycatcher and watched him feeding near the nest for several minutes, but had no means of knowing whether he was my recent friend or a casual visitor. I saw nothing more of the species that season.

Before departing I examined the trees and found a number of holes choked with debris and grass tufts. Those suitably located for camera work were cleared out, so if any flycatchers, spotted or pied, should visit the orchard next spring, they will find a choice of six eligible nesting sites.

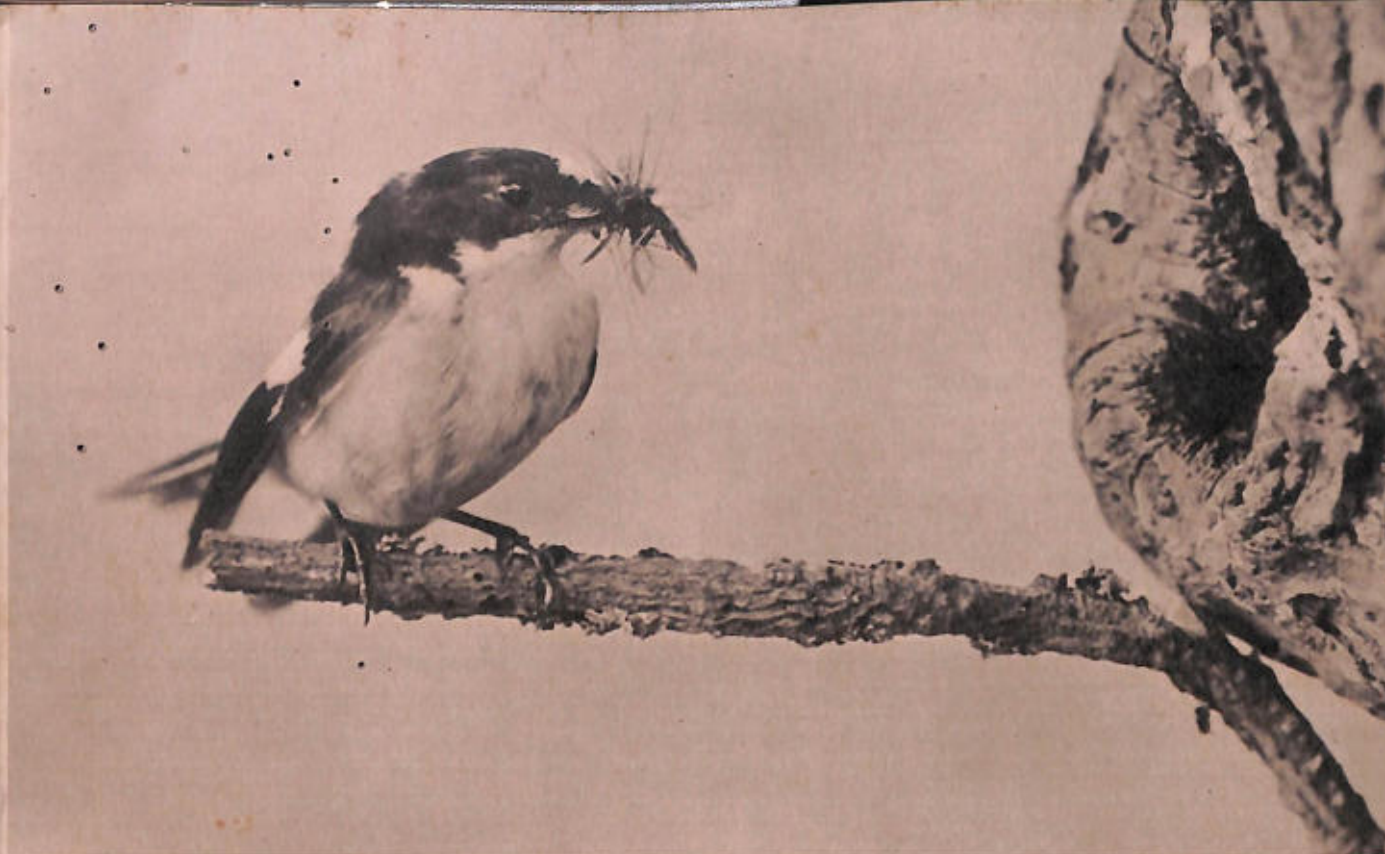
They will also find a visitor of quite a different species, for I shall be there first.



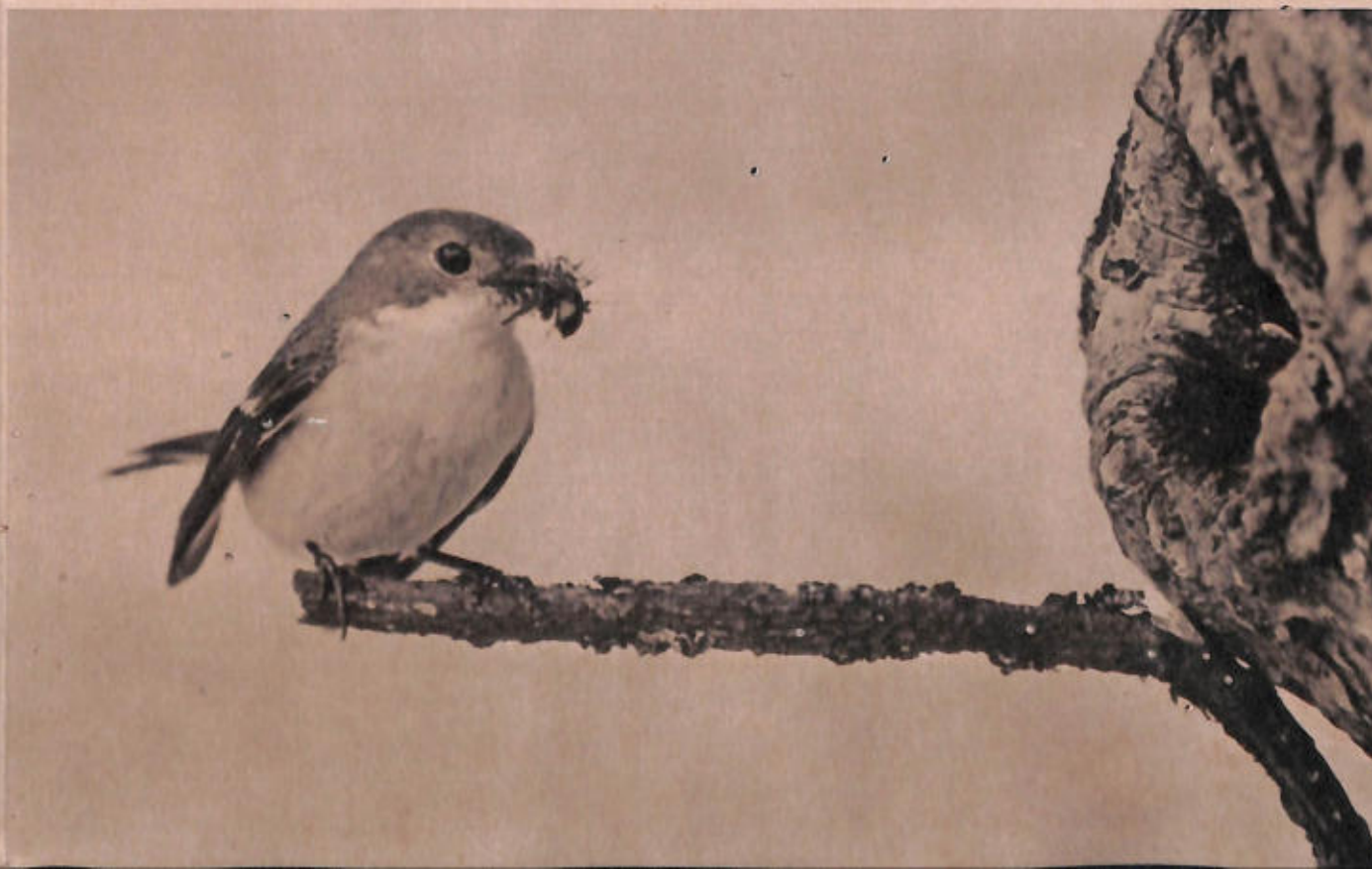


43 (Top). *Food Series. Hen. Food: Down-looker fly*
44 (Bottom). *Food Series. Cock. Food: Daddy-long-legs*





45 (Top). *Food Series. Cock. Food: Four May-flies and one stone fly*
46 (Bottom). *Food Series. Hen. Food: Dung-beetle and two down-looker flies*



CHAPTER VII

Flight of the Sparrow Hawk Chicks

A RINGING cry reverberated through the woods—"Tui-tui-tui-tui-tui-tui-tui-tui-tui-tui-tui-tui!" So my journey was not in vain on that sweltering May day, for this was the nesting sparrow hawk's manner of chiding intruders. Such audacity too—daring to infringe her territorial rights!

On May 14th I always visit the spot, with a double objective in view. For this is the wood frequented by long-eared owls; not only the same wood, but the selfsame patch of scattered Scots firs in which I usually find the owls' nest. And in one of these thirty firs there is almost certain to be also a sparrow hawk's nest within a hundred yards of the owls'.

Strange indeed that these two should nest in such close proximity, for both are birds of prey, and each would relish a meal off the other's young. By some unwritten law they leave one another in peace, perhaps on the principle of "honour among thieves," or perhaps because one hunts by day and the other by night, so that each in turn will be sleeping and brooding during the hunting period of the other. Whatever the ethics may be, the arrangement is obviously workable, or it would not endure year after year.

Unlike the kestrel, which hovers aloft, scanning the landscape for signs of life before pouncing, the sparrow hawk is notable for his dashing, impetuous flight. Although he will often skim over the fields and swoop on small birds and animals, this is not his favourite type of hunting. He prefers to fly alongside a hedge, then dart through a gap or a gate, and woe betide any small bird caught unawares! He seizes his prey in strong talons, then there is one last scream and all that remains is a puff of feathers.

Gamekeepers wage ruthless war on this predatory bird, not because of his interest in small birds, but because of his ravages among young game. Such captures are only occasional, for the sparrow hawk's preference is for sparrows, larks, pipits, mice and birds up to the size of a thrush, and sometimes a tender young rabbit or leveret by way of variety. He often resorts to farmyards, not so much for the chickens, which he takes occasionally, as for the small birds which abound in such places.



47 (Top). *The handsome eggs of the sparrow hawk*
48 (Bottom). *Sparrow hawk chicks, eight days old*





49. *Sparrow hawk chicks, fifteen days old*

Among hawks and other birds of prey the female is larger and bolder than the male, attacking without hesitation birds larger than herself. To compensate, she has certain good qualities, being an affectionate mother who will risk her life in defence of her young. Where carrion crows and hawks are concerned, it is the practice among keepers to shoot the hen on the nest, and cases are even known of the partner rearing the family by the side of his dead mate.

Sparrow hawks usually choose a fir tree, but the nest might be found in any tree in the area, so I made a thorough survey before embarking on a climbing campaign in a heat wave. These birds are cunning, and sometimes in order to deceive an intruder they will alight at old nests. I climbed six trees without result, then caught sight of an obviously new nest in an isolated fir beyond the precincts of the regular area. Having decided that this would be my final climb, I took off my coat and heaved and gasped up twenty feet of bare trunk to the first sound branch.

I reached the nest, some sixty feet above ground, and a glance revealed my reward. In a slight depression in a sturdy platform of sticks was a clutch of five strikingly handsome eggs, boldly blotched with rusty brown on a ground of bluish-white (Fig. 47). The nest was unlined, with finer twigs in the centre, and contained a solitary feather, which was doubtless

the remains of a repast. Last year's nest had four eggs, but as often as not there are five.

Fervently hoping that the keeper had not found them, I went to inspect in early June. When no chiding protest heralded my approach, I feared the worst. Events had prospered, however, for I beheld a family of ten-day-old chicks, soft and downy, closely nestling together for warmth (Fig. 48). In appearance they were not unlike farmyard chickens, and they regarded me with drowsy black eyes, possibly wondering what this strange visit portended, for I was certainly the only human being they had ever seen.

When I saw them again they were eighteen days old, their heads and beaks clearly proclaiming their origin. They huddled together in the nest, which was awkwardly placed for photography, so I collected a couple in the camera case and brought them down to a branch (Fig. 49). Being accustomed to squatting they were not disposed to perch. Their downy covering had thickened since birth, and was now in process of replacement by rapidly developing feathers, particularly on wings and tails. Barred breast feathers peeped here and there through the fluff. When taken back home they nestled close to the others again as though nothing had happened.

As I passed by the lodge the keeper emerged, with shotgun and dog—fortunately bound for the opposite direction—in quest of carrion crows which had been troublesome. In the course of a discussion on birds I told

50. *Sparrow hawk chicks, twenty-one days old*





51 (Top). *Sparrow hawk chicks, twenty-four days old. Two have already left*
 52 (Bottom). *He surveyed the abyss with prolonged intensity*
 53 (Opposite). *He was now revealed in his true identity*







54. *Testing his wings on the verge of flight*

him of some owls I had found. Luckily the subject of hawks was never mentioned, so I carried my guilty secret, though once before he had left them alone for the sake of my photography. I think he must have somewhat neglected the hawk wood that year; the whole subject was delicate and it was best not to go into it too deeply.

Another week's progress brought the sparrow hawks almost to the stage of departure. They no longer squatted, but stood firmly erect, their sharp claws gripping tightly and their tails slightly fanned to preserve balance in the breeze (Fig. 50). They still had downy white heads, but now their breasts were covered with rich brown feathers, except where stray tufts of down survived.

They no longer looked like farmyard chickens, but clearly revealed their true identity. What mercy could any victim expect from those piercing, pitiless eyes, those cruel determined mouths, those sharp, curved beaks of terrible power? (Fig. 53.) No wonder they prosper and hold their own, so admirably are they equipped for a career of piracy.

Suddenly they gazed intently towards the wood, their keen ears attuned to a sound I had missed. In frantic haste I ushered them into the camera case and threw my coat on the top. A moment later the keeper appeared and found me absorbed in photographing a fungus—how I blessed its presence! Rogues undoubtedly, but I could no more hand them to their doom than eat a pet rabbit. It was not for me to deprive them of the many hazards of a full and adventurous life, abruptly ending, for some, in a gamekeeper's larder.

Three days later I arrived at an opportune moment and had the delightful privilege of watching their departure. Two had already left and the remainder were ready to follow, standing in a group, alert and self-possessed, fully aware of their power to escape (Fig. 51). No sooner was a photograph taken than one took flight to some spot in the tree tops.

Then I witnessed a beautiful sight. Walking across the nest, one bird stood right on the brink of the abyss, surveying the outer world with prolonged intensity (Fig. 52). A few seconds later he had made up his mind, knowing precisely what he intended to do. Firmly gripping the nest, he raised his lovely barred wings and flapped them with vigour, deliberately measuring their power to perform the task in prospect (Fig. 54). With the utmost confidence and resolution he launched himself into space, deftly landing on the branch he had marked, fully thirty feet away in a neighbouring tree. I never saw a neater performance.

The last bird followed immediately, landing beside his brother. And so they embarked on the full tide of life with excellent prospects of survival. For the sparrow hawks' nesting season was over, and the keeper was busy with other affairs. I sometimes wonder how much he knew.

CHAPTER VIII

Pluck in the Hedgerow

THE pine trees shook their shaggy heads and a shower of raindrops pattered down, while a gay cock chaffinch, quite undaunted, sang lustily in the old rowan tree.

His joyous melody echoed through the woods and fell on the ears of his mate below, but it was mainly intended as a challenge. Spring was in the air, and his song expressed in fitting manner his exuberant spirits. He looked a worthy swain, with his gay and colourful plumage so reminiscent of tropical splendour.

The nest was not hard to discover, being built on the top of a fence, and partly supported in a forked branch at the edge of a hawthorn hedge. It seemed incredible that two small beaks could forge so exquisite a structure. Fine grasses and hair, cobwebs and feathers were all perfectly and closely interwoven to form a tiny symmetrical cup which would almost hold water, while a smooth, even finish was given to the outside with moss and lichen.

As I looked at that mossy cradle built with such skill and precision, I thought of the common sparrow. Just picture that cheerful ragamuffin, so lacking in manners and polish, and his crude, untidy dump of a nest. Yet the sparrow and the chaffinch are very close kinsmen, each being a member of the finch family. Their bills will tell you that—strong bills designed for cracking seeds.

In that delicate nest were five eggs, sparsely covered with purplish-brown spots. Like many a chaffinch, the hen was a very close sitter (Fig. 55), remaining unconcernedly on the nest while I set up the camera at point-blank range and made half a dozen exposures.

With ardour and zest the cock sang his lilting refrain while his mate took her turn on the eggs. It was indeed a delightful scene.

For a week the romance ran its happy course before it ended in grim tragedy. The gallant male got entangled in a noose of horsehair, and I found the hen sitting on her eggs while her mate lay strangled over the side of the nest. The pathos of it, that their very perfection of craftsmanship contributed to his undoing, for the noose might have given way had the ends been less firmly anchored.

I thought she would desert, but this staunch little mother was braver



than I gave her credit for. Instead of abandoning herself to her grief, she continued sitting on her eggs until in time they were hatched. From dawn till sunset she tended her hungry brood with great devotion. She found solace in this heavy task, and she had good reason to be proud when alone and unaided she had reared the entire family.

Let such courage as this be a warning to those who would thoughtlessly rob a bird's nest.

A WORD TO YOUNG READERS

This tale of courage has been told as a plea on behalf of the birds. These lovely creatures, whose presence makes our countryside so delightful, have a hard struggle for existence, against numerous dangers and natural enemies (Fig. 56). It is a sad thing that they should suffer such thoughtless persecution through mankind, who should know better.

Much of this hardship is due to misguided egg-collecting, arising from ignorance of the habits of birds. There are boys who will collect birds' eggs in moderation, taking only one from a clutch. Such action in itself is not so reprehensible; but even so there is often a tragic sequel. When one egg is taken from a clutch of four, the bird will probably carry on. The next boy sees the tracks and finds the same nest with three warm eggs in it and, thinking that no harm can be caused, takes another. This leads to desertion.

The next boy to arrive finds two cold eggs in a deserted nest and takes them without compunction. Thus a thoughtless act ends in tragedy. The first on the scene was the worst culprit for leaving the fatal tracks. This is my main reason for stressing the avoidance of track-making.

Even those with a humane outlook may unwittingly cause a disaster through unfamiliarity with the habits of birds at laying time. They would refrain from taking a warm egg from a nest, but feel no sense of guilt in taking eggs that are cold and apparently deserted. Cold eggs should never be taken forthwith. A bird lays one egg a day and does not start to incubate them until the clutch is complete; thus, if ten eggs are going to be laid, there will be nine cold ones in the nest one day and ten warm ones the next. In rainy weather, too, the eggs will be wet, which increases the semblance of desertion. A hen will continue to lay in a sodden nest, and a week may elapse before it is dry enough for incubation to begin.

Many a nest of "deserted" eggs is thus in reality an incomplete clutch. I have seen countless examples of such interference, causing as much damage and loss as wanton pilferage of whole clutches. Sometimes a day is missed in egg-laying, so no nest should be classed as "deserted" until at least two days have elapsed without an increase in the number of eggs—longer if they are wet.

I doubt whether birds visit their nests during the laying phase except



56. *Birds have many natural enemies. These yellow-hammer's eggs have been sucked by a field mouse*

for the express purpose of laying. When visiting nests at such a time I seldom see the owners, who, when incubation begins, will scold any intruder. When observing a robin's nest at laying time I found that the four eggs had been taken by a boy seen near the spot. Luckily I recovered them and restored them to the nest, which had been empty for eight hours. Later that evening the fifth egg was laid and another the following day. I have no means of knowing what actually happened, but would assume that the hen had not visited the nest while it was empty. Had she found it empty at laying time, I think she would have laid instinctively in the accustomed place before deserting the nest.

There are those who will take the whole clutch, regardless of the state of incubation, and even the nest too, little realising the hardship and distress imposed by such a callous action. To them I would say—read this book, then decide whether you would prefer this set of pictures or a collection of empty egg-shells. In any case, apart from the loss of young

lives, such plunder is unrewarded more often than not, for eggs partly incubated cannot be blown or kept.

Many a newly built nest is taken even before the owner has used it. In many cases there is an interval of some days between the completion of the nest and the laying of the first egg. In this respect I have often been deceived myself. In the Chapter "Ways of a Nesting Chaffinch," it will be seen that there was the unusually long lapse of thirteen days, due to a spell of cold weather.

Wait until the broods have flown if you want to make a collection of nests. Most of them are left intact and unsoiled, through Nature's provision in the matter of hygiene. The droppings of nestlings are enclosed in sacs—like the membrane enclosing an egg yolk—which are carried away by the parents.

The taking of young birds to be reared as pets is another practice to be deplored. All their wild instincts will develop although in captivity, and how they must fret and long for their freedom! It is far better to watch them in their native wilds.

Just one more point. When you find a nest with eggs, don't share your secret unless you are certain it will go no farther. When a nest is visited by too many people, however well-intentioned, tracks are bound to be made—and you've seen what that means. If ever you are tempted to take eggs—don't; try, just once, the effect of leaving them to hatch and of watching the chicks grow up, and you will realise what a poor affair is egg-collecting in comparison. Once the eggs have been hatched, it is safe to tell your friends.

CHAPTER IX

Bramble-patch Beauties

WHENEVER I think of whitethroats there comes a vision of a peaceful little lane where this happy family lived. It was in fact hardly a lane, but rather a derelict track between pastures, with indefinite paths winding through and fading away in the tangle.

It was a tangle indeed, of furze and brambles, broom and bracken, hemlock, stitchwort and nettles, all thriving and mingling in glorious abandon. That is the sort of place whitethroats like, particularly where there are brambles.

All birds to me are lovable, but the warblers hold first place in my affections. Without exception, they are all so dainty, so delicate, so gentle, so harmless and, above all, so tiny that all one's protective instincts are aroused. No sign in spring is more welcome than the first sweet notes of the warblers, for no other species has given me more pleasure, not so much because of any one quality, but through their general æsthetic appeal.

A warm reception is due to the tribe of warblers, for they certainly pay us a pretty compliment. All the way from arid Africa they come to our shores each spring, expressly to rear their families. The climate which we abuse is ideal for them, and here they can find insect food in abundance.

One aspect of the way the whitethroat nests leads me to make some comments on the question of territory. In the course of experience one discovers that a certain spot comprises a suitable nesting territory for a particular species, so that one can return each season with the certainty of finding a member in occupation. The territory might extend for anything up to a hundred yards in each direction, the nest being in any part of it.

With whitethroats the matter goes much farther, for I have repeatedly observed their extraordinary partiality for certain fixed spots within the territory. The lane just mentioned is a jungle of bramble clumps, scrubby bushes and mixed vegetation, affording literally thousands of eligible sites for the nest, which might well be in any square foot of it. Yet one particular bramble patch is invariably occupied by a pair of whitethroats each year, the nest being, without exception, within a definite six-foot area. The reason for this preference is obscure; after studying this patch and noting its density and overgrowth and its relative



57. *Whitethroat's nest embellished with willow cotton*



58. *A typical whitethroat's nest*

position to vantage points and sources of food, I have failed to discern any advantage whatever.

Some advantage undoubtedly exists in whitethroat judgment; it cannot be a case of the same pair returning, for this has gone on for years, and the occupants will thus be different individuals each time. I know also of half a dozen other favoured whitethroat sites. This species often builds one or two "experimental" nests before being satisfied, and I have found these at the same time and in the same limited area as the occupied nest. These nests might well be the results of a "learners'" course, for their order of construction can frequently be judged by their progressive improvement, culminating in the final one. This question of the choice of one particular area is worth further study.

In leisurely manner I roamed through the lane, for Nature yields no secrets to those who hurry. The harsh notes of a whitethroat came from the depths somewhere ahead, then into the air he rose with a burst of excitable song, and rapidly descended again with peculiar tumbling flight. His mate was the obvious cause of all this excitement, for there, just ahead, she fluttered along the ground—she had a broken wing, it seemed. I hastened forward to pick her up, but she hopped and fluttered ahead, just eluding my grasp. For twenty yards I followed, then suddenly she recovered and disappeared through the hedge. This artful bird, with typical whitethroat guile, was trying to lure me from the nest, to which she quietly returned as soon as I was enticed beyond the danger-zone.

59. *The young a few days old*



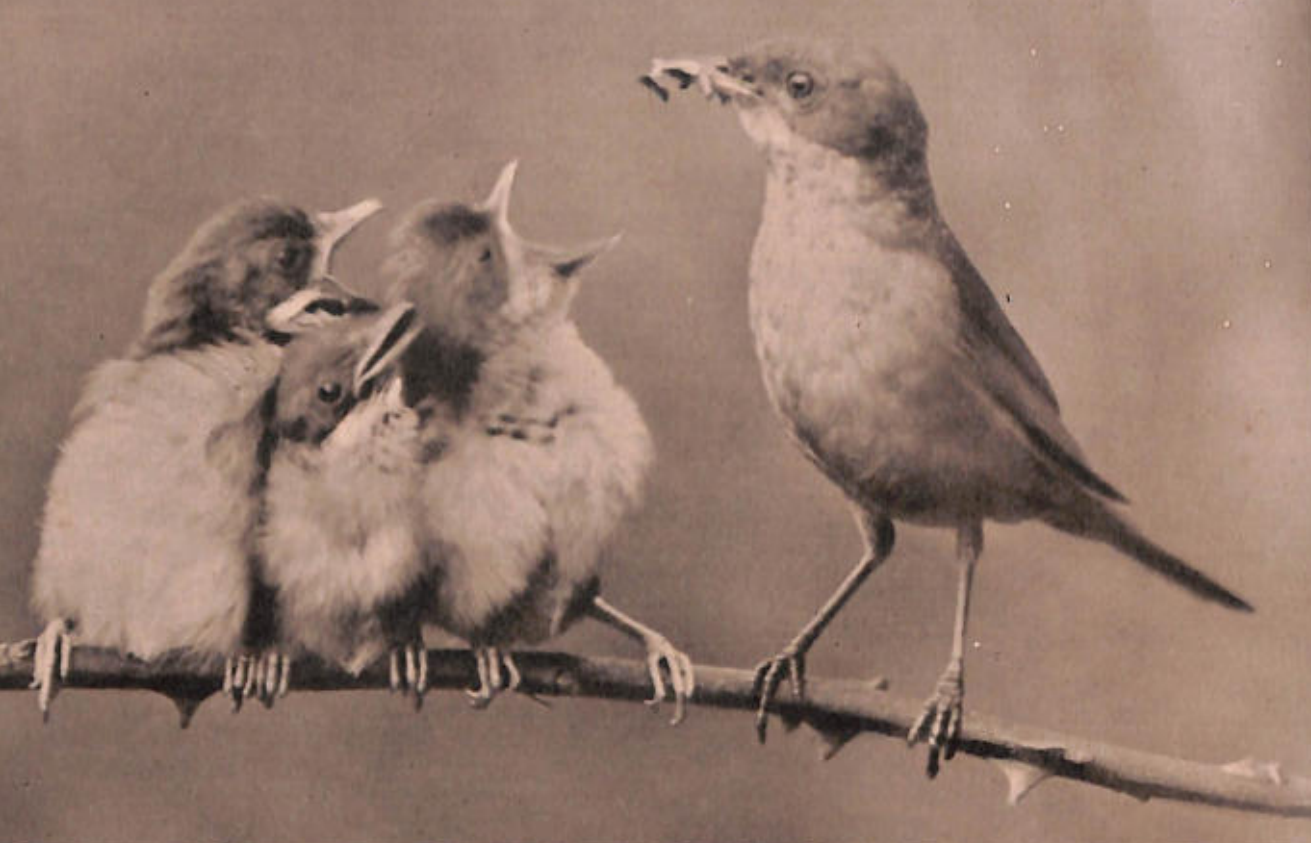


60. *At nest-leaving age, ten days later*

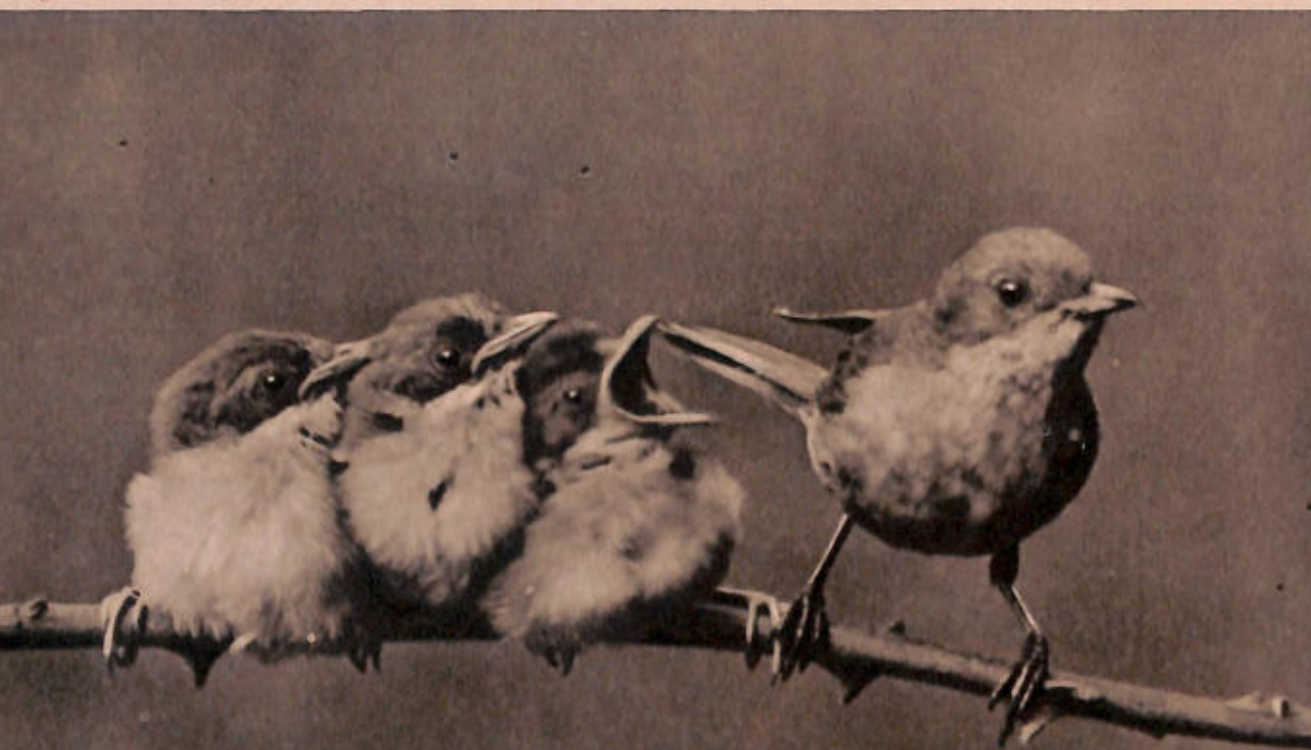
On this occasion her ruse was quite futile, for I knew of old just where to look, and found the nest where I expected to find it. In that slender receptacle of dried grasses there snugly reposed a full clutch of whitish eggs, mottled and speckled in brownish grey (Fig. 58). The nest was quite plain, though whitethroats and garden warblers often make use of the fluffy seeds of the willow, weaving patches of this willow cotton into the nest for softness and warmth.

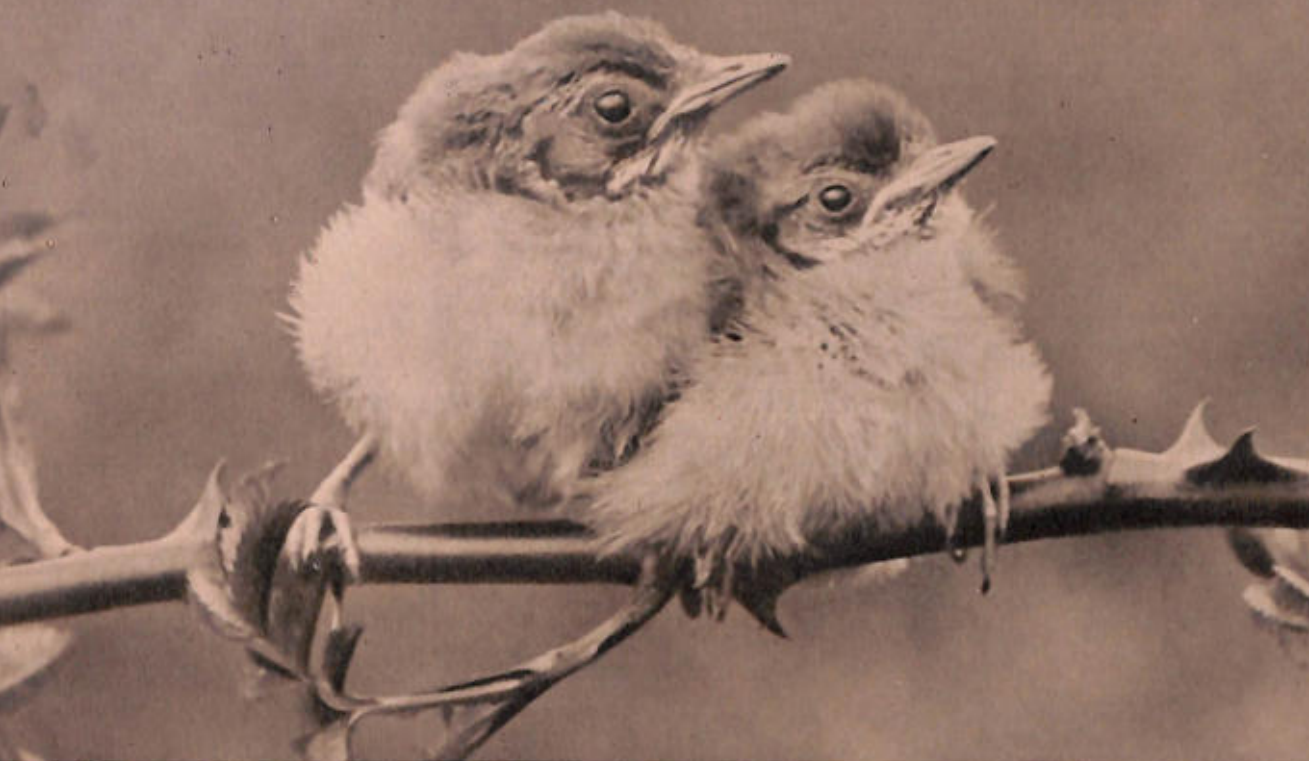
I once found a nest half covered with a substantial layer of willow cotton. Egg-laying time had probably supervened before its completion (Fig. 57). Soft nesting materials are always in great demand among birds, anything choice being seized with avidity. When feathers fly in the course of spring-cleaning, they will soon be seen and captured by the ubiquitous sparrows. Strange tastes are sometimes displayed, for I have found bus tickets in the linings of rooks' nests and scraps of bright paper used to camouflage a chaffinch's nest as a substitute for harmonising lichens.

For the next ten days I was busy with long-eared owls, but managed to find time for three or four visits to the lane. At first the whitethroat practised her broken-wing tactics, but gradually gave it up when she found that I took no notice. If capable of reasoning, she would have

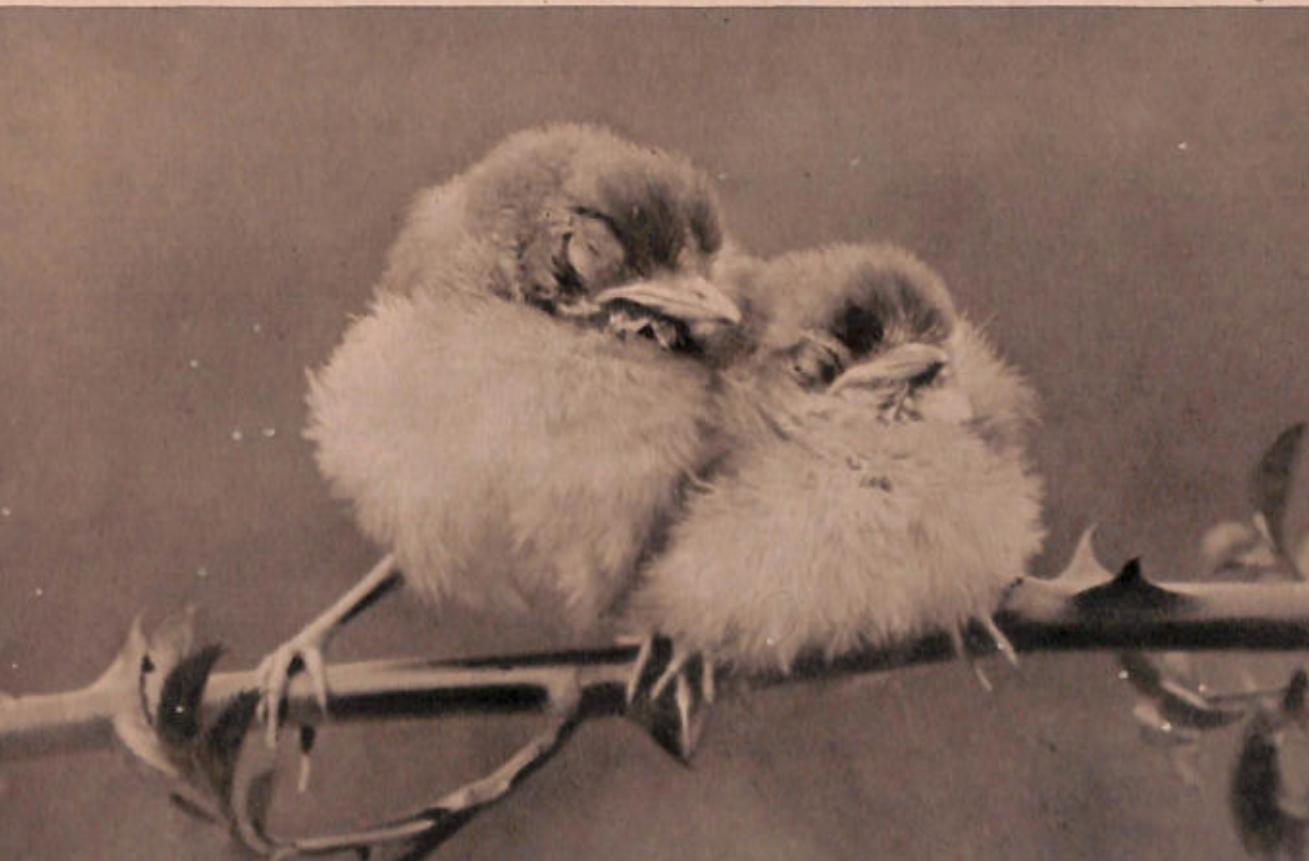


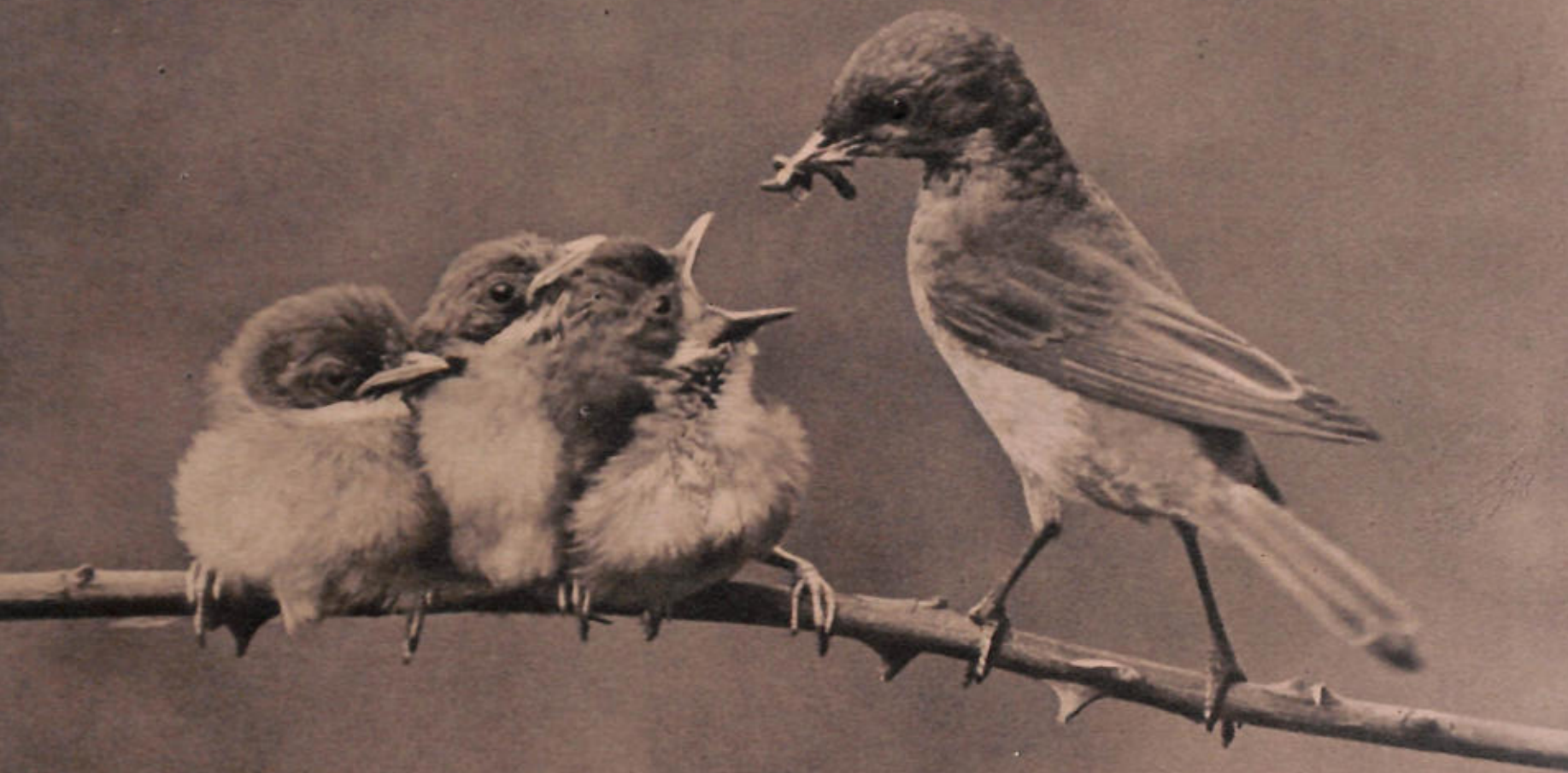
61 (Top). *The centre chick was nearly squeezed off the branch*
62 (Bottom). *He made a grab at her tail*





63 (Top). *A languorous day, a hearty meal*
64 (Bottom). *The sequel was inevitable*





65. *She stood over her chicks, wondering which to feed*

realised the futility of her ruse, for it was obvious that the nest was no longer a secret. As birds act on instinct rather than reason, it seems most probable that my visits had ceased to worry her.

In due course the youngsters appeared. These tiny pink morsels of flesh and bone, practically naked, were anything but handsome for the first few days, but in their mother's eye they were beauties (Fig. 59). Then followed a ten days' course of grubs and caterpillars, and what a transformation! Now that she'd reared them to the nest-leaving age, the mother had cause to be proud of her children, who were then just soft little balls of creamy fluff, with white throats already evident.

The better to do justice to their beauty, I arranged them on a brier stem (Fig. 60). They sat there, calm and contented. As I looked at the lovely trio I indulged in a flight of fancy, reflecting that in any birdland beauty contest they would easily gain first prize—and none would dispute the award.

From a state of calm repose their attitude changed to alert excitement as their sharp eyes caught sight of their mother in the distance. Zealously she watched me from the hedge, then proved beyond doubt the strength of her devotion. With a beakful of food she hovered around. My course was perfectly obvious, so I withdrew to a clump of furze. At once she flew to the branch and stood solicitously over her chicks, wondering which to feed (Fig. 65). I never beheld a more exquisite scene.

She was no longer a wily bird. This being her first visit after an interval, the nearest chick was the only one who realised what was going on, though the second had his suspicions. Next time there was no doubt whatever, for the farthest one in his enthusiasm almost squeezed the brother next to him off the branch (Fig. 61). The chick who was nearest had an unfair advantage, and but for his mother's strict impartiality, he would have had much more than his share.

His table manners were deplorable, his appetite inordinate. When his mother, having fed all three from one beakful, turned to depart, her tail swung round. He with the appetite, thinking it was some innovation in the catering line, made a grab (Fig. 62). It may have been a mere coincidence, but I fancy he missed the next turn! With such a family to look after, life is never monotonous.

One chick went off for a flight, and I left him for the moment, keeping him in view. As for the other two, after a languorous day and such a hearty meal the sequel was inevitable. Their drowsy eyes began to close, fluffy heads to nod, and soon they had fallen asleep (Figs. 63-4).

Photography clearly finished, I took all three to the nest and left my charming young friends to their dreams.

CHAPTER X

Speckled Brood

HOWEVER harsh the elements, they lack the power to daunt this hardy songster, the missel thrush. As the bleak winds of winter roar through the leafless trees, you will hear his loud, wild song, delivered in short bursts of a few notes, unlike the song thrush, whose melody is much more sustained. From the topmost bough he will issue his challenge, defiant of hail, rain or snow, as though exulting in the promise of spring. No wonder they call him the Storm Cock.

The missel thrush is the largest British song bird, but his vocal powers fall short of the melodious accomplishments of his cousin, the mavis, whose size he somewhat exceeds. The breast of the missel thrush is of lighter hue, and his deep brown speckles are bolder and more extensively distributed, triangular on throat and breast, round or oval in other parts, larger on the flanks. When people tell me they have seen "a very clean-looking thrush," I know which bird it was.

As might be expected, this bird is an early nester, for he is quite undeterred by bleak and boisterous conditions, and builds his large and untidy nest high up in an exposed fork of a leafless tree. Should a snowfall occur while laying is in progress, the nest and eggs will be buried; but it takes more than this to cause desertion, so routine will be resumed when the snow has melted. I have seen a hen missel thrush incubating in a blizzard with a layer of snow on her back.

When intrusion occurs in the nesting area, the missel thrush expresses defiance by a harsh and grating call, like the sound of a fingernail being passed quickly backwards and forwards over the ends of the teeth of a comb. The rather massive and untidy nest is constructed externally of twigs, roots and moss, frequently with an inner bowl of mud, then a lining of finer grasses and roots. Sometimes the nests are quite neat, as in the case of one I found low down in an alder by a river bank (Fig. 66). Five eggs form the average clutch, though there are often four, greenish or reddish white in ground colour, finely spotted with brownish red—quite distinct from the lovely blue eggs of the song thrush.

Walking along a woodland path one crisp spring morning, I heard a considerable commotion in the spinney nearby, so I crossed the brook by means of a fallen tree to see what was going on. All the birds seemed



66. *Nest of missel thrush*

excited, but most excited of all was a pair of missel thrushes, whose grating voices dominated the scene. I soon discovered the cause of the confusion—a harmless, frolicsome squirrel, just taking his morning airing in the tree tops, but he scampered away at my approach. The squirrel had no ulterior designs, but the birds did not trust him.

When peace was again restored, the missel thrush puffed out his chest, and with singular absence of guile flew to an elm, in which, at a distance of fifty yards, I saw an untidy nest. Built in a fork and devoid of cover, it



67. *Spring greetings from missel thrush junior*



68. *His back was speckled too*

was rendered even more conspicuous by several loose straws which waved to and fro in the breeze. Four half-fledged chicks lay huddled together for warmth, quite unaware that their welfare had occasioned such alarm.

The nest was empty next time I called, but the family had evidently only just departed and had not strayed very far. As soon as a brood of chicks leave the nest they vanish like magic, each bird immediately obeying the instinct to seek cover. Should such a chick be discovered, he should be left where he is and on no account presumed "lost," for the parents know precisely where each is concealed, and are well able to keep a watch on the whole family, however far they wander or however well they are hidden.

Looking after their wayward young is a harassing time for the parents. They must bring food enough for youngsters almost as big as themselves, and they must forgive escapades and flagrant misdemeanours that would earn human children a good sound spanking. These young birds are always hungry, and their wants are expressed in sundry squeaks and squawks and high-pitched treble pipings.

The first few hours are critical for these defenceless birds. They have no sense of danger, and even drop off to sleep in the open, so that many fall victims to prowling enemies. Instinctively aware of their wings, their first achievement is a fluttering scramble at ground level, at astonishing speed for such juveniles. This hazardous ground phase is usually short, and they soon find their way to the relative safety of low branches; should flight be attempted, they lose height immediately, coming to earth in a matter of yards. Within a few days, however, they are able to maintain height over short distances until, with increasing power, they can overcome gravitation and fly away.

The missel thrush chicks were undoubtedly close at hand, so I watched from a short distance in the hope of locating them. With a beakful of food, the mother thrush gave a call and listened with head on one side. I heard a faint "Tweet!" from a clump of bracken. The mother bird flew over to it, and returned with her beak empty.

Chick number two was next on the list. He was concealed among grass tufts by the brook, and was keeping still in compliance with parental instructions. The first one believed in publicity, for he found that by shouting and making a fuss, he got much better attention! In the lower branches of a birch farther afield, the third was fed next time, and so, in irregular turns, these three were fed for some twenty minutes. I wondered what had happened to the fourth.

Just then a plaintive squeak sounded above, from a youngster not fully awakened. In this wild cherry tree, smothered in blossom, he had taken his afternoon nap (Figs. 67-8). It made as pretty a picture as ever I saw.

CHAPTER XI

The Confiding Robin

GARBED in autumn shades, in perfect harmony with his mellow setting, the robin might well be regarded as the real harbinger of autumn. Long before the russet tints appear, he adds a note of colour and cheer to our gardens. Bold, audacious, aggressive, ready to make friends, with an impudent air of independence, his qualities endear him to all (Fig. 69).

Where the taming of garden birds is concerned, the robin has probably received more attention than any other species. This is undoubtedly due to the robin himself, for he positively invites the idea by his very boldness, coming audaciously to our feet while we dig, so closely matching the earth that he stands the risk of having a fork or spade stuck into him.

The taming of a robin proceeds on the same lines as with titmice, only the food is different. Instead of nuts and suet the robin likes crumbled biscuit, moistened to make it more palatable, though grated suet is not disdained. But there's one particular food for which he will go to almost any lengths, a food so delectable that nothing else exceeds its appeal—mealworms (Fig. 71). These juicy, luscious worms, which live on bran, provide an inducement almost impossible to resist, so mealworms for robins are as almonds for titmice. Armed with this fare and aided by hard weather, no would-be robin-tamer could be more admirably equipped (Fig. 72).

Whereas we have the choice of many titmouse subjects, with robins the position is entirely different. Each robin, male and female alike, has a winter territory, and woe betide another robin which has the presumption to trespass! The Lord of the Manor will be on the scene immediately, and there will be a fight, sometimes resulting in the loss of an eye, if the usurper accepts the challenge. These territorial rights are scrupulously preserved. They usually embrace two or three small gardens or part of a large one; man-made barriers such as fences are of no consequence where birds are concerned, for a bush in the middle of a garden may constitute the frontier line, as the robin in the adjoining domain knows very well. A friend of mine had two tame robins, and he would stand by the boundary bush feeding each in turn on his own side of it. Inducements to



69. *Bold, audacious,
ready to make friends*



70. *Robin nesting
in a plant pot*

encroach were of no avail, for neither would cross the border even when the other was out of sight.

As there will thus be only one robin to photograph at a time, it is a matter of luck whether it be a cock or a hen. As a general rule among birds, the hens are infinitely the more brave and confiding; and although some cock robins become very tame, I have never had much luck with them. As with titmice, there is usually a tentative approach stage, via a branch or fence, then a course of hand-contact, which varies in time according to the temperament of the bird.

One winter I had a particularly confiding robin—a cock, for a wonder, who was very aggressive over territorial rights, chasing intruders almost every day in a severe spell of snow. Then one day in early spring I saw two robins in the garden and no sign of a chase or combat. There was clearly only one interpretation of such conduct—he had brought a mate along. This was a good sign, portending the choice of a nesting site somewhere near, for once they have paired they take up residence in the nesting territory, which is different from the food territory of winter.

Sure enough they started to nest in my garden, not in any of the nesting boxes, but in a plant-pot provided experimentally, and fixed horizontally against the house wall above the back door, the drainage hole affording entry (Fig. 70). When nesting boxes are provided, care should be taken that the entrance hole will not admit a larger bird, or the species for which the box is intended will be unlikely to take possession. The entrance to this plant pot was just large enough to admit a robin, but a pair of envious starlings, too large to squeeze in, were covetous of this eligible dwelling, and thrust their heads in and pulled out the nesting material as fast as the robins brought it.

Incidentally, it is a good plan when fixing nesting boxes to add a few dead leaves, straws, etc., as an inducement to the birds to build, for they may think there has been a nest there already. If they take possession, the first thing the owners are likely to do is to discard all the old material, dumping it overboard. In all probability they will ultimately collect the whole lot again among other materials, so that it is actually used as intended, but in accordance with the birds' notions, not ours. I was considerably amused when the hen caught in the air a straw ejected by her mate and carried it straight back, thoroughly pleased with her find.

Recently I had a tame hen robin which, in spite of her alacrity in responding to fence-approach tactics, would never be persuaded to perch on my hand, even in the most severe weather. Possibly she had been frightened when hand-visiting elsewhere, or her conduct might have been explained by the fact that she was never impelled by acute hunger, being too well fed in the locality. Had the tempting mealworms been withheld, she need only go to a neighbouring bird table.



71. *A tentative approach for mealworms*

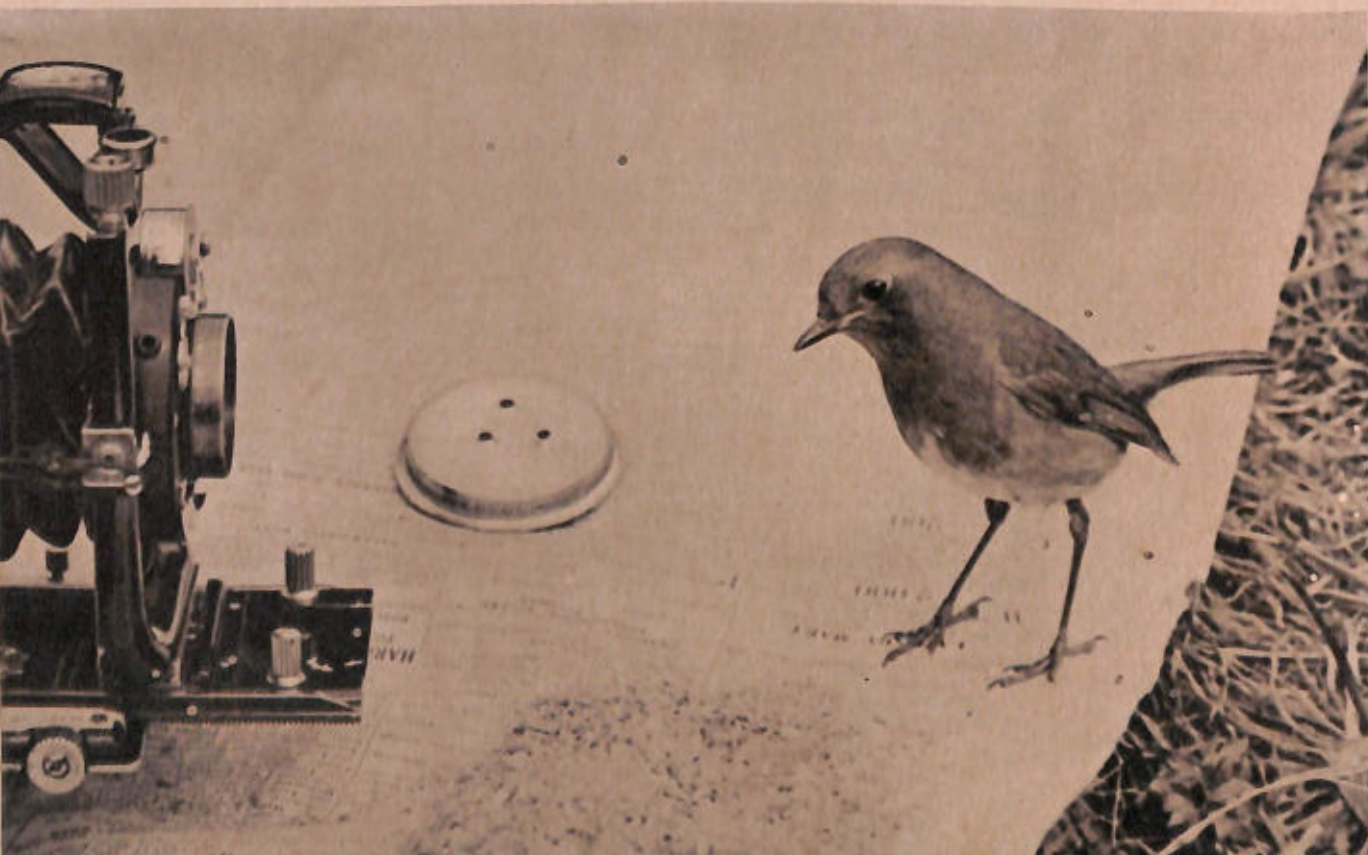


Her temperament was very rigid. She did everything whole-heartedly, but showed an obstinate immunity to persuasion. Within the limits of her responsiveness she performed readily, and we remained good friends throughout the winter and early spring. When taking movies one day I had placed a spare camera and a heap of bran and mealworms on a newspaper laid on the damp grass. When my friend returned she ignored my hand and made a bee-line for the mealworm dump, and had the banquet of a lifetime (Fig. 73). Incidentally, robins photograph better on orthochromatic or "chrome" films, such as Verichrome. The orange breast is rendered too light by a panchromatic emulsion, especially in sunshine, so that the bird is not at all robin-like in the resulting print.

About the end of March, when her visits had become less frequent, I noticed her hopping about in the rough grass and hazel bushes in the adjoining garden, which was part of her territory. When I went to investigate she just sat still and preened herself. After I had photographed this performance she accepted a couple of mealworms in a somewhat half-hearted manner, resumed her preening in another bush and just stood looking at me, disdainful of proffered mealworms. This indeterminate behaviour was quite unusual, and continued for some twenty minutes.

The next half-hour was delightful. After a final preen she shook herself vigorously, stretched her wings, regarded me for some moments, and then

73. *She raided the mealworm dump*





74. *Dead leaves for the nest foundation*

abruptly abandoned her air of indifference and flew resolutely away. She had obviously made up her mind about some particular issue.

Two minutes later she reappeared with a huge billful of dead leaves (Fig. 74).

So that was her secret, as I had already suspected! That preening business was nothing but camouflage. I was still standing in the same spot, when she flew past me and down to a hole in the bankside only six feet away, where she was nesting. There was a great rustling of leaves for about twenty seconds, then off she went. For half an hour she worked assiduously, carrying prodigious loads of dead leaves, sheep's wool (Fig. 75) and pieces of felt. With camera in hand I photographed her at a distance of four feet, winding on the films as she poked about in the nest.

She was deeply engrossed in her task and completely ignored me. There was no hesitation—on the contrary, I would have welcomed a little, for her movements were so quick and decisive that I only managed to make eight exposures during some twenty visits. There was no fixed route to the nest, so I focused roughly on a bramble stem which she tended to favour as an alighting stage. After half an hour's brisk work she suddenly ceased, accepted four mealworms from my fingers, then knocked off for the day. Two days later the nest was lined and completed.



75 (Top). *A huge load of sheep's wool. The nest entrance is on the right*
76 (Bottom). *Robin's nest*





77 (Top). *Like many robins, she was a close sitter*
78 (Bottom). *Ready to leave the nest*



Among wild birds, with the exception of such domesticated species as starlings and sparrows, nest-building is usually an operation of profound secrecy. The amazing performance of this little robin was unique in my experience; she had indeed made up for any shortcomings at the hand.

Knowing her decisive "all or nothing" character, I am convinced that when I first blundered into her nesting area her first instinct was one of secretiveness, which later, as a result of our friendship, gave way to confidence. I cannot conceive of such a performance had we been strangers. Five eggs appeared, but in due course a prowling cat brought disaster.

By keeping a close watch in the area, I found the new nest which was built some days later. Many robins' nests are built behind a rampart of dead leaves, having the appearance of a casual drift; but this nest was quite undisguised. It was made of roots, dry grasses and a little moss, lined with hair, and deeply set in a tuft of grass, among brambles and meadowsweet in an adjoining wood, about a hundred yards from the first one.

This time they had a clutch of six eggs, closely speckled in reddish-brown on a yellow-white ground (Fig. 76). Robins, as a rule, sit closely, and this one was no exception (Fig. 77). As the wood was the playground of a number of small boys, I had little opportunity for photography.

Six chicks eventually appeared and all were safely reared. Shortly before their departure they filled the nest, closely resembling young hedge sparrows with their soft brown plumage, mottled and speckled (Fig. 78). I was tempted to take out two and photograph them on a branch, but they looked so cosy and snugly arranged that I hesitated to disturb them, particularly as there were cats about.

Shortly afterwards they left the nest, but I found one unexpectedly a couple of days later, when he was about sixteen days old. He hopped and fluttered all over the place, and kept me busy for fully twenty minutes before I succeeded in catching him, his principal technique being to plunge into one bramble thicket after another as fast as I could get him to move out.

When at last I persuaded him to settle down he sat with a deceptive air of calm contentment (Fig. 79), but I knew that he was biding his time until he saw prospects of a successful bid for freedom. His mottled appearance was due to each brown feather being tipped with yellow, and but for his robin-like head he bore no resemblance to the red-breast clan.

His speckled plumage will remain until the autumn moult, when patches of colour will dapple his breast until there can be no mistake about his identity. His breast will then be orange, and only faintly reddish, for scarlet breasts are peculiar to Christmas-card robins.



79. *Young robins have speckled breasts until the autumn moult*

CHAPTER XII

The Little Brown Hedge Sparrow

NOT so long ago the tenor of life was simple, calm and unhurried, when modesty ranked as a virtue and people were disposed to live and let live. Life nowadays is lived at high pressure; the human race has changed with the times, and is inclined to deprecate old-fashioned standards. But Nature proceeds in the same old way, quite unaffected by artificial trends, showing little perceptible change with the passage of centuries.

The little brown hedge sparrow seems to embody that old time atmosphere, for few birds are so simple and unassuming, so innocent and unobtrusive, so peaceful and modest, so gentle and unaggressive (Fig. 80). All he seeks is to be left alone to his own affairs; he has no quarrel with anyone and gives no cause for quarrel to any other bird nor to mankind, for he steals no grain or fruit and performs no act to arouse the hostility of any living creature.

Most of us know him in our gardens, where he creeps about like a mouse, now shuffling along, now proceeding with fussy short hops, continually picking up minute morsels of food which are so small as to be disdained by other birds. When food is scattered, he never carries pieces away, but picks up the crumbs left by other birds, subsisting on such minute particles that you can seldom discern what he is eating. When other birds are sparring and squabbling, he just keeps out of the way, and none attempt to molest him as they chase their own kind away.

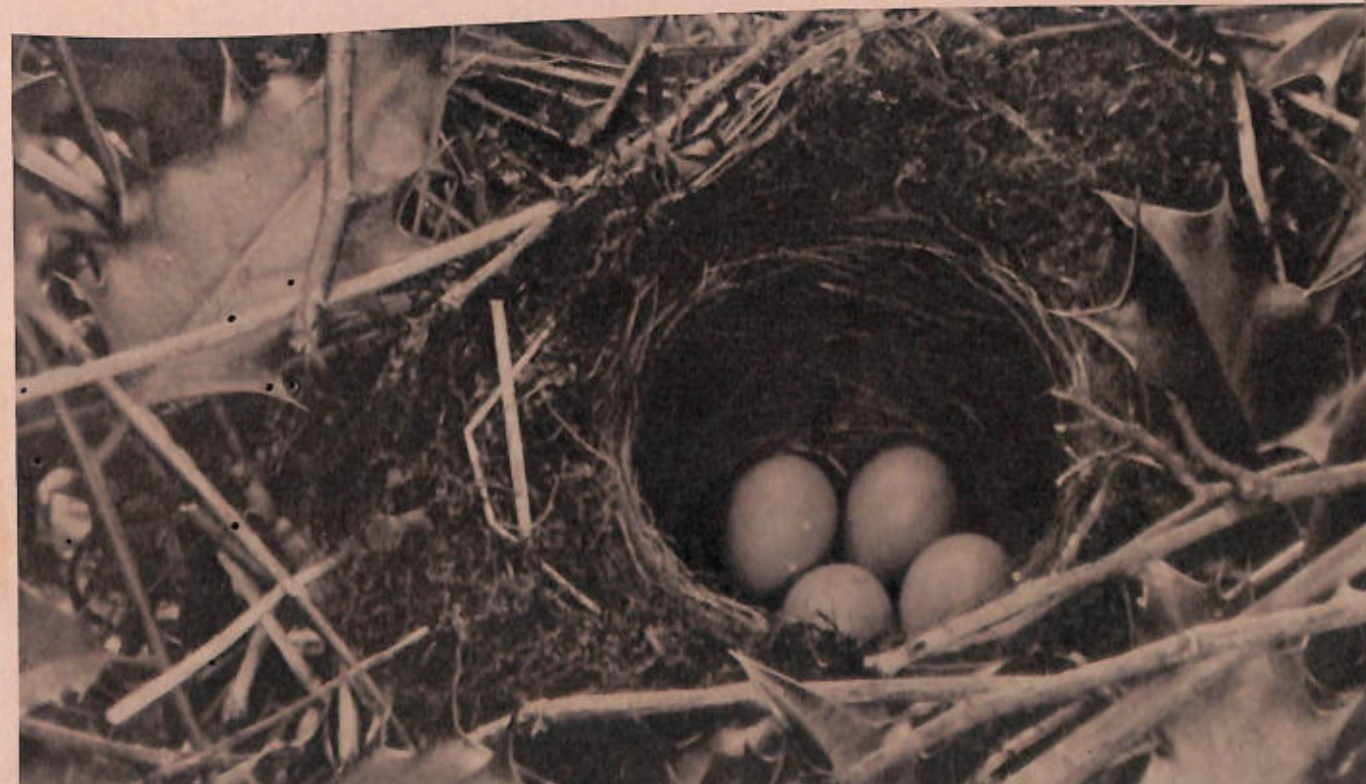
Though decidedly plain and drab in looks and resembling a hen sparrow, his plumage is darker and considerably more colourful, particularly when the sun is shining. He claims no kinship with that finch, the sparrow, for the brown hedge sparrow is a genuine member of the warbler tribe, all of which are migrants, except the Dartford warbler and himself. To describe him correctly the name hedge accentor should be used, but shuffle wing or hedge warbler are equally suitable. But he is usually known as the hedge sparrow, which name is very appropriate.

Compared with other warblers, his song is not distinguished—just a short burbling phrase, quiet and gentle, in perfect keeping with himself. Throughout the year his habits are consistent, and he sticks to the same old haunts in all seasons, beloved by everyone for his simple, confiding



80. *Few birds are more gentle and unassuming than the hedge sparrow*
ways. The cock and the hen are as nearly as possible alike, and they are
both equally gentle in their habits.
So far the picture has been painted in restrained and sober shades,

81. *Bright blue eggs in a mossy cup*





82. *Young hedge sparrows, about twelve days old*

but now the palette requires some brilliant new colours to furnish the highlights. For the nest we need a supply of bright green to depict the moss used so lavishly in its construction. These mossy nests are beautifully neat and compact, reinforced with twigs and roots and smoothly lined with hair and wool. When we come to the eggs we dip into brilliant azure, for the exquisite polished eggs of the hedge sparrow are a bright sky-blue tinged with green, like those of the thrush, but smaller and unspotted. Those bright blue eggs in that mossy green cup provide a high note of distinction in an otherwise sombre scene (Fig. 81).

Sometimes the nests are adequately concealed, as in a holly bush or evergreen; but many are painfully conspicuous, especially the early ones, which are built in leafless hedges and afford a ready prey for the ruthless egg-collector. The principle of minding their own affairs is applied in the domestic sphere, for this bird is disposed to sit closely, male and female alike.

I once found a hedge sparrow's and a blackbird's nest in the same bush within six feet of one another. The hedge sparrow was the first claimant, and while it was building the blackbird appeared and started making a nest in a fork about three feet higher on the opposite side. The smaller member was unlikely to encroach on the other's interests, and the blackbird found no cause to complain about his quiet, inoffensive neighbour, so they dwelt in amity and reared their respective families. The dual tenancy was not due to shortage of sites, as numerous bushes were at hand.

After about a fortnight's incubation the chicks appear and stay in the

nest for another fortnight, their diet being insect food. As might be expected their plumage is brown, but baby feathers are always clean and fresh, and here we find a lighter colour-scheme than that of the parent birds. The brood at which I was looking was approaching departure, and two of the young birds kept opening their beaks, not in anticipation of food, but gaping in the heat (Fig. 82).

Two days later they stampeded from the nest as soon as I drew near, but one was captured and sat on a branch for his portrait. With his well-speckled breast he bore a strong resemblance to a young robin, though he was slightly smaller and was less robin-like about the head (Fig. 83).

A spirit of restlessness came over him, and I knew by his eager scrutiny and the jerky flicks of his stumpy tail that he was ready to be off. Having finished with him, I left him to his own devices, expressed in the form of a floppy flight to the ground, then a lolling scramble to a dense honeysuckle grove where some of the family were already hiding. The mother was well aware of his arrival, for I saw her disappear in his direction with food.

As a matter of interest, I tried to find his exact hiding-place, but after ten minutes' intensive scrutiny I came to the conclusion that a search for a needle in a haystack would be easy in comparison. I retired and watched; then, but twelve feet away, a little brown hedge sparrow immediately vanished into the honeysuckle and returned with empty beak. She knew!

83. *His plumage was speckled, like that of a young robin*





84. *Deeply ensconced on her eggs*



85. *She was watchful and alert*

CHAPTER XIII

Ways of a Nesting Chaffinch

A FEW years ago I had a most interesting experience with a chaffinch, which, like many outstanding events, began in a very ordinary and even unpromising manner, with no indication of the delight to follow. In early May I discovered a newly constructed chaffinch's nest quite low down in a lichen-covered alder close by the banks of a small river. The chaffinch is notable for its nest architecture, but even so, this was a particularly fine specimen.

Not only was the nest unusually handsome and much deeper than the usual cupped receptacle, and of course covered with lichen to match its site, but it was very favourably placed for photography, being only five feet from the ground and not hemmed in by branches. Altogether it was a photographer's dream-nest, but this was no time to indulge in flights of fancy, for there were no eggs in the nest, which, for all I knew, might already have been robbed.

Nevertheless, although I had never seen the owner of this new nest and had no idea what sort of individual she would prove to be, I visualised a taming campaign which, should the bird be responsive, would be thorough enough to promote success through the chick-rearing stage. But I had to curb any premature hopes, remembering how a chaffinch of the previous year had been extremely tame during incubation, but had changed completely at hatching time, just when I expected a strengthening of the maternal instinct. The cock was entirely responsible for the change, for his excitement and alarm infected the hen, which I am certain would have been all right on her own account.

There were no eggs the next day, nor the next, nor the next again—not even on the twelfth day after I had found the nest, in spite of the prevalence of dry though cold conditions. My hopes had gradually receded and now stood almost at zero. Though my eagerness had been tempered by the old adage about not counting one's chickens, here there were not even eggs to hatch.

My pulse quickened when I saw one egg in the nest the next day—thirteen days after finding the nest—then two, then three, on succeeding days. When I got within sight of it the following day, I saw the hen on the nest—my first glimpse of her—and thus reckoned she had begun to sit on

four eggs. Now was the time for tentative operations, so I approached in small stages, very quietly, ready to pause or withdraw should there be any symptoms of uneasiness.

None were displayed, and in the short space of four minutes I had covered my thirty-foot approach and was standing three feet from the nest, while there was still no sign of concern on her part. She was obviously inherently tame to permit such liberties on first acquaintance. I stood there for fifteen minutes, and the chaffinch remained quite still except for a slight turn of the head when I talked to her, as is my habit with birds. Experience has led me to believe that the human voice has a reassuring effect, by relieving a silence that might otherwise appear oppressive or even ominous.

Encouraged by this auspicious beginning, I took my camera along the next evening, fixed it on the tripod, and cautiously advanced until I had erected the tripod, focused, and photographed the hert chaffinch only three feet away (Fig. 84). My movements were of course very gentle, and included the lowering and replacing of an intervening branch, which she watched without concern. The main barrier had been overcome with unusual speed; I had been fully accepted, so it was now a case of developing the friendship.

The bird was off the nest when I called the next day, and to my amazement I saw five eggs. It seems therefore that when I first approached she must have been in the process of laying her fourth egg and had just laid or was busy laying her fifth when I photographed her. This was confirmed when all five hatched on the same day (one nestling did not survive).

During the whole incubation period—ten days—I paid a daily visit, and remained for some minutes to maintain familiarity, though her subsequent behaviour indicated that this daily "training" was not really necessary. On several occasions she actually went to sleep on the nest! She always faced the same direction, with her back to the river immediately behind, in which position she could readily observe danger on land, none being likely to occur from the direction of the river. As an experiment I bent down out of sight and made slight sounds, but she never even raised her head to see what was going on.

Some days later I saw a great change in the chaffinch's behaviour, for she no longer sat motionless, but was alert and interested in all around her, turning her head at every bird call and movement (Fig. 85). I had not seen the eggs for a week as she had never left them in my presence, but now, for the first time, she left the nest, and I saw the reason for all this restlessness. Hatching was in progress—two eggs and three chicks—so this was the crucial moment. How would she react—was this to be the end of our relationship?





The cock too was in a great state of excitement. My anxiety about the hen's behaviour was soon allayed, for she returned in three minutes and went to the nest without an instant's hesitation. It was a joy to behold her maternal devotion as she stretched her head close to the nest and made a deliberate and prolonged survey of the hatching scene. In her beak were several tiny grubs, some a quarter of an inch in length, which were fed to the newly hatched chicks. With the same deliberation she then hopped into the nest and spent fully a minute in arranging the contents to her liking (Fig. 86), then snuggled down and remained there for ten minutes. The whole procedure was repeated in detail throughout the afternoon.

The hen's absorption in these intimate operations was so complete that she was utterly indifferent to my activities, enabling me to change the dark slide, re-set the shutter, and take two or three pictures in the course of a single visit. At the same time I was using a Cine-Kodak, fixed on a separate tripod and focused at two feet. At the appropriate moment I started the mechanism, and while this Cine record was being made automatically, I was busy with the other camera. When confronted with this double array the chaffinch never hesitated nor deviated from her normal routine, nor did she pay the slightest attention to the combination of purring mechanism, shutter clicks or my own movements, which no longer needed to be in slow motion. Such complete disregard of so formidable a visitation at such a time seemed almost incredible.

Her favourite route to the nest was via the branch behind and to the right, and she then fed the family from a convenient fork, never standing on the edge of the nest. To observe her reaction to an obstruction, I stood behind the nest, but she used the usual route, passing within a bare six inches of my face. This was done repeatedly, so I was evidently too minor a consideration to induce any change of plan.

The nestlings were reared extensively on insects (Fig. 87), of which there were plenty above the river, and they responded with gaping beaks even when only one day old. Daddy-long-legs figured largely in the diet (Fig. 88), doubtless because they were in abundant and very obvious supply, and I frequently saw unswallowed insect legs projecting from closed beaks! As far as I could ascertain, the territory extended some eighty yards up-river and down, and included the trees on the far side. The cock never took any incubation turn when I was on the scene, but he helped with the feeding programme after I had retired some yards. He resented my intrusion and chided vigorously, but eventually he grew more confident.

As I watched the hen at work one evening she ceased her activities, spent a little while in smoothing and arranging the chicks, then, having tucked them in (Fig. 89), settled down for the night at 8.15 p.m. (Sum-





89 (Top). *The chicks were tucked in for the night*

88 (Opposite). *Daddy-long-legs figured largely in the diet*

90 (Bottom). *"Bedtime" was at 8 p.m.*



mer Time). Subsequent observation showed that 8 to 8.15 p.m. was "bed-time" (Fig. 90), regardless of weather and light conditions. There was no deviation from this timetable as the chicks grew in size and appetite, whereas neighbouring birds were vocal and active until 9.45 p.m., and a brood of pied flycatchers nearby was sometimes fed until 10.10 p.m. Compare the pictures of the little mother deep in her nest while incubating and those of the same bird raised high on a nestful of well-grown chicks.

Scrupulous attention was paid to the important question of nest-hygiene, for the mother bird closely examined the situation with head on one side (Fig. 91) at the end of every visit, attention being needed about three times out of five. In this matter the chicks were very intelligent, the hen flying off in my direction every time after this attention, but otherwise departing by the approach route which led back to the main food source over the river.

On one occasion she delayed departure and stood awhile, gazing intently upwards with elevated crest, so I clicked the shutter, wondering what it was all about. The cause of this demonstration proved to be a willow warbler, which actually had the audacity to go foraging in the upper reaches of her nesting tree! She evidently decided that the matter was not worth pursuing and just carried on; maybe she disdained the intruder because of his smallness or was not interested in the higher regions, her own activities being confined to the lower levels (though never, in my observation, on the near side of the river).

The weather had been persistently dull and wet for three weeks and heavy rains prevailed on the eleventh day, but when an evening break occurred I went along to see how the little chaffinch was faring. No sooner had I arrived than a thunderstorm broke, which brought her back at once. She distributed the food she had brought, then proceeded with the urgent task of sheltering the family, fussing over them like a broody farmyard hen.

Despite the downpour I realised that this was too good to miss, so I hurriedly got the camera into action. The bird settled sideways, puffing out her sodden, matted feathers, her tail splayed against a branch; but this position afforded scant protection to the chick behind her. The mother bird then began to shuffle round on the nest, with half-opened wings. This seemed more promising, though it left too little cover for the chicks on her right front. The movement was continued until finally, with left wing half-opened and right wing fully extended over the chick on that side, she found the position which gave most protection (Fig. 93). Some raindrops can be seen on her plumage in this photograph, but as she frequently rose and shook them off, they never accumulated.

As I poured the pools from the bellows folds I refrained from expressing my sentiments about the English climate, fully aware that but for this



91. *A hygiene inspection*



92. *With elevated crest she glared at the feathered intruder*

vile weather these scenes would never have occurred. When the rain stopped the chaffinch remained for twenty minutes until the heavy drip had ceased. The spectacle of this drenched little bird, battling alone with the elements in spite of the close proximity of a human being, was a sublime example of maternal devotion. If only I could have helped!

The thunder had cleared the air, and the next day was hot and sunny, while the young birds, now overcrowding the nest, were extremely restless (Fig. 94). They gaped in the stuffy heat, and the one which constituted the top layer was finally driven out in sheer discomfort by the heavings of the even hotter members beneath, which almost sent him overboard. He hopped out, then fluttered to a branch some two feet above the nest. When the mother returned she fed those in the nest after looking up at the truant, which the family observed too. She visited the nest twice more, then the venturesome youngster fluttered and scrambled to a branch in the next tree, about twelve feet away.

This was the end of the story as far as I was concerned. The cock was greatly excited, and both parents now fed the wanderer exclusively. I went away for some tea and found the nest empty when I returned—no longer a neat round cup, but a shapeless, bedraggled remnant, inclined at an angle of twenty degrees.

Against the background of tragedies I have seen amongst birds, the whole story of this chaffinch family stands out in delightfully happy contrast. Trials and tribulations there had been, but nothing serious went amiss, not a single fright was experienced and the youngsters were launched in perfect weather after days of pouring rain. Throughout the campaign I might not have been there, for all the notice that was taken of me, while the hen's behaviour was perfectly natural the whole time, for it never varied when I watched her from a distance.

Much as I would have liked to photograph the eggs, I made no attempt to do so; to be caught in the tree was to risk alarming the birds, thus hazarding the whole relationship at the outset. Similarly, I refrained from any interference with the young, even at the final stage, owing to the cock's acute excitement. After the marvellous confidence of this little hen chaffinch, it was unthinkable that I should in the end cause her any distress.



93 (Top). *The position of maximum protection*

94 (Bottom). *The chicks contemplating departure*



CHAPTER XIV

The Raven's Early Nest

ALTHOUGH singularly lacking in endearing qualities and generally regarded as a precursor of bad tidings, the raven is nevertheless of some interest to ornithologists. His sinister reputation is derived from his propensity for carrion and his extraordinary intuition for discerning an ailing animal, whose demise brings him to the scene with uncanny rapidity, principally through his acute sense of smell. His guttural croak, echoing among the rocky fastnesses of his domain, added to his dingy, sepulchral appearance, can scarcely be considered to leaven his ill-omened character.

These birds of legend and superstition are the largest members of the crow family, being some twenty-five inches in length. They are widely distributed throughout the Northern hemisphere and are found throughout the British Isles on cliffs and crags, both inland and on the seashore. They attain a great age and pair for life, haunting the same locality for an indefinite number of years. Should one of a pair be killed, the survivor will find a new mate in an incredibly short space of time—with unseemly haste, it might appear, considering their marital faithfulness.

Living in remote seclusion most of the year, ravens are driven by hunger to approach outlying shepherds' crofts in the stern conditions of mid-winter, but they never lose their wariness and cunning. Though addicted to carrion, which provides a ready-made meal, they subsist largely on hares, rabbits, rats and the like, with eggs and lizards by way of variety.

After the long barren days of winter, I invariably look forward with particular elation to the first raven trip of the season, which takes place in late February or early March, according to conditions. There is something very exhilarating in that long trek over the rocky moors, invigorated by a keen wind and aglow with the effort of exertion. Then follows the thrill of scrambling adventures on ropes into the gullies and crags. The outing is a joy in itself, irrespective of the main issue, but it is of course enhanced if success is achieved.

In the wildest crags of Northumberland, the lordly raven dwells and reigns supreme. His haunt is invariably lonely and remote, and must provide a nesting ledge either completely inaccessible or difficult of access, so with these limitations there are only four or five eyries in the





96. *The nest was a pile of heather roots and branches*

county. In the expansive wastes of rolling moorland there are several places where a southern slope terminates abruptly in a northerly cliff-face, and here we find the ravens. Most of the sites are known to collectors, so the eggs are usually plundered, but there is one more difficult of access than the others, and here a brood is usually reared.

The severe snowstorms of February had delayed nesting operations that particular season, but the route became passable at last, so off we went on a journey of high hope to the loneliest site of all in the gloomy, icy recesses of the Cheviots (Fig. 95). As we squelched across the boggy track, evidence of winter's severity appeared, where massive snowdrifts filled the burn's course, to be tunnelled later by thaw water. Amid snow-patched hills we ascended to the sound of tumbling water, merrily cascading beneath snow bridges fringed with glittering icicles. Such is the setting at the ravens' nesting time.

The crag towered a hundred and fifty feet above; so up the rough sides we scrambled, now on crisp snow patches, now on frozen tussocks, then by carefully picked steps to the roping point, some distance above the nesting ledge. With eager caution the buttress was negotiated with much embracing of rocks, sundry scrapings for footholds and various jerks as rope was paid out. Such methods might not conquer Everest, but our sole concern was to reach the shelf. Then there was another short slide, hoping for the best, and we were on to the ledge at last. One glance revealed that our feat was rewarded.

Some two and a half feet in width, the nest consisted of a substantial pile of heather roots and branches, rather loosely interwoven, with a deep depression in the inner edge, heavily lined with sheep's wool (Fig. 96). In it were five beautiful blue-green eggs, speckled with brown, no two of exactly the same tone, one being several shades darker. Like most crows' eggs, they were somewhat smaller than one might expect for the size of the bird. We each came in turn to view the nest, which was cosily tucked in a corner at the far end of the shelf, a protective overhang on one side and a drop of sixty feet sheer on the other, with a steep scree at the foot. An unpleasant spot for a fall, but a delightful sanctuary from the ravens' point of view.

This mountain eyrie is too remote for constant observation, entailing a sixty-mile car journey, then a long, rough trek—a very full day's work altogether. The next week-end we made tracks for another site, and were fortunate in finding a nest with three eggs in it. This one usually survives, being built in a vertical cliff eighty feet high.

From the summit the nest could be seen clearly, tucked in a niche about half-way down, which was just large enough to support it but with little margin for safety (Fig. 97). A length of rope was secured to a crow-bar driven into the ground at a spot reckoned to afford a vertical descent



97. *From the top of the cliff the eggs could be seen*



98. *The nesting ledge was reached*



99. *Young ravens, five weeks old*

direct to the ledge, there being no provision for lateral movement, and after one or two experimental starts and some manœuvring, the ledge was reached (Fig. 98). As our crude methods afforded no means for ascent, the climber had to be lowered from the ledge like a sack of grain, so a preliminary test was essential to ensure that the rope was long enough to reach the base. To find oneself twelve or fifteen feet from the ground when the rope gave out would not be the ideal ending to a day's outing!

Hearing from a friend in Yorkshire, I went one day to see a brood of young ravens. To reach the nest entailed roping again, and indeed few broods survive in nests which can be reached without. There were five lusty youngsters almost ready for flight, their age being in the region of five weeks, and they were packed in an orderly arrangement, all facing inwards towards the cliff (Fig. 99).

With baleful gaze from their brownish eyes they watched my approach and shrank back as I advanced. This handsome brood, with jet-black heads and well-developed pouches at the base of upper mandibles, well covered with dusky purple-black plumage, lustrous and iridescent, would obviously soon be able to look after itself. With joyous sense of hope fulfilled, we left the ravens to the mountain echoes.

CHAPTER XV

Romance in the Ivy

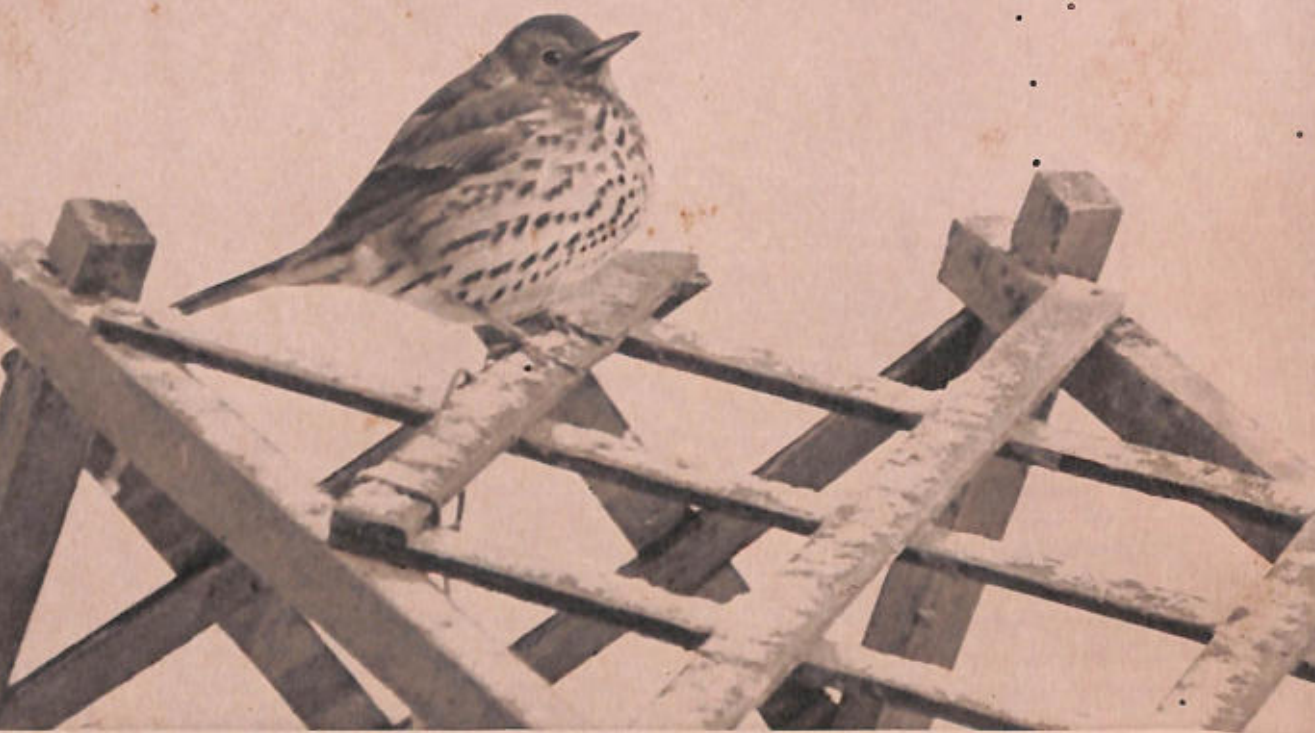
IT is doubtful whether any species holds a more distinguished place among our wild birds than the mavis or song thrush. Everybody knows this captivating bird and his characteristic slow and deliberate habits, which afford the observer a chance to have a good look at him, his attractive appearance, his lovely nest and eggs, and his delightful voice. More than any other species, perhaps, does he contribute to the charm of the countryside—not that one need go far afield, for as a visitor to both town and country gardens, he is as familiar as the sparrow.

A country walk without the sight of a thrush would at any season be a unique occasion, for there is a resident population of these birds estimated at some three millions in our island. Birds, however, are not always noticed in proportion to their numbers; the little brown meadow pipit, for instance, is not nearly so much in evidence as the thrush, being smaller and merging into his surroundings, yet their numbers are about the same.

Similarly, the sight of starlings in their hundreds would suggest that this bird greatly outnumbered the robin, but in fact there are some seven millions of each—the robin is generally seen singly, and is very inconspicuous in his natural surroundings, though prominent enough when seen in gardens. Our commonest birds are the chaffinch and the blackbird—about ten millions of each—yet there is probably an impression that there are more blackbirds than chaffinches.

The thrush never seems in the slightest hurry about anything. It is interesting to watch him searching for worms on the lawn, tapping the ground with his bill, then listening with cocked head for any underground sounds, watching in readiness to seize the luckless worm which emerges as a result of the vibrations. He is very partial to snails, and is adept in dealing with them, dashing them against a stone and then extracting the edible parts. A suitable stone will be used regularly, and these "thrushes' anvils," as they are called, are frequently seen in an area thickly strewn with broken shells.

The rich, melodious refrain of the thrush needs no description. In the evening I have often listened, enthralled, to this singer pouring forth his melody from the top of a tree as though his heart would burst with



100. *The speckles are arranged in wavy lines*

joy. Blackbird and mavis are in vocal performance a close second to the nightingale.

Although worms, snails, insects and wild berries are the thrush's staple diet, he is very partial to soft fruit in season, particularly ripe strawberries, currants, raspberries and cherries, for which he is much abused. Surely this one failing can be condoned when set against his extensive catalogue of virtues!

The garden scene in winter is enlivened by his welcome presence. A regular bird-table visitor, he prefers to carry a large morsel away and have his meal alone, rather than mix with the crowd. One thrush in my garden had a habit of resting on a snow-covered arch, with feathers puffed out to provide looser and more effective insulation. A glance at his breast shows that the speckles are not distributed at random, but conform to an orderly arrangement in wavy lines (Fig. 100).

One of my hunting grounds is a large wooded estate bordering on a busy main road on one side and enclosed by a massive stone wall, mellowed by time and by the weather. This wall divided scenes of extreme contrast: on one side, the world of mankind, with a constant stream of traffic and people surging by in their thousands; on the other, the world of the wild birds, where a mavis sat brooding in a bower of ivy, motionless and alert.

Before the leaves appear on the trees there is a great demand for ready-made nesting sites such as wood piles, evergreens and ivy, such sites remaining in favour among thrushes, blackbirds and hedge sparrows even when there is plenty of alternative choice. At such times these birds will frequently nest on the ground, usually among grass tufts on the bank of a stream, sometimes utilising the cover of a growing plant such as a foxglove. One nest in particular, built in the ivy, was an excellent example of the builder's skill, for it provided perfect insulation against the biting east wind which prevailed at this season—early April (Fig. 101).

The nest was constructed of several succeeding layers of different material. The outer shell was a thick closely interwoven layer of moss, roots, twigs and grasses, sufficient in itself to furnish an adequate nest. The hen thrush had other ideas, however, for this external casing was lined with a layer of mud, applied in small pellets and cemented with saliva. That was not all, for before the mud had hardened she had covered the surface with a sort of stucco of dead wood broken into small shreds and kneaded in with her beak. While the cup was still resilient, it was moulded into a smooth, symmetrical form by means of her breast, the nest being thus compacted to exclude air and water. With protective ivy in addition, it was impervious to the harshest elements.

In this nest three eggs had been laid. Everyone knows the exquisite blue of these smooth, polished eggs, spotted with black, which are seen to such advantage against the plain background of biscuit-coloured mud lining. They are the loveliest of all birds' eggs, I think, and they never diminish in æsthetic appeal however many I see, just as one's joyous anticipation of spring is never dulled by repetition. Nature study never palls, but synthetic pleasures soon lose their savour.

When an April squall descended the thrush returned posthaste to her nest, where she snuggled deeply down, despite the perfect insulation, to ward off the battering hailstones. Sitting there devotedly, framed in a setting of rain-spattered leaves, she made a charming picture (Fig. 102). I rigged up the camera and advanced quietly, carefully avoiding her gaze in case she should depart, realising she had been seen. By proceeding gently I succeeded in taking several photographs at very close range without a sign of uneasiness on her part.

The liquid, melodious notes of the thrush are heard while his mate is busy with the eggs, but there is little time for singing when a ravenous family needs attention. They are fed in turn, as nearly as possible, so that all are evenly nourished and thus ready to leave together. But there is scarcely a brood without its strong man of the family—a lusty chick which in its eager enthusiasm manages to stretch a fraction higher than the rest and probably gets an extra share for a short while.

His gain is only transitory, for it will induce drowsiness, when the rest



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joy. Blackbird and mavis are in vocal performance a close second to the nightingale.

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One of my hunting grounds is a large wooded estate bordering on a busy main road on one side and enclosed by a massive stone wall, mellowed by time and by the weather. This wall divided scenes of extreme contrast: on one side, the world of mankind, with a constant stream of traffic and people surging by in their thousands; on the other, the world of the wild birds, where a mavis sat brooding in a bower of ivy, motionless and alert.

Before the leaves appear on the trees there is a great demand for ready-made nesting sites such as wood piles, evergreens and ivy, such sites remaining in favour among thrushes, blackbirds and hedge sparrows even when there is plenty of alternative choice. At such times these birds will frequently nest on the ground, usually among grass tufts on the bank of a stream, sometimes utilising the cover of a growing plant such as a foxglove. One nest in particular, built in the ivy, was an excellent example of the builder's skill, for it provided perfect insulation against the biting east wind which prevailed at this season—early April (Fig. 101).

The nest was constructed of several succeeding layers of different material. The outer shell was a thick closely interwoven layer of moss, roots, twigs and grasses, sufficient in itself to furnish an adequate nest. The hen thrush had other ideas, however, for this external casing was lined with a layer of mud, applied in small pellets and cemented with saliva. That was not all, for before the mud had hardened she had covered the surface with a sort of stucco of dead wood broken into small shreds and kneaded in with her beak. While the cup was still resilient, it was moulded into a smooth, symmetrical form by means of her breast, the nest being thus compacted to exclude air and water. With protective ivy in addition, it was impervious to the harshest elements.

In this nest three eggs had been laid. Everyone knows the exquisite blue of these smooth, polished eggs, spotted with black, which are seen to such advantage against the plain background of biscuit-coloured mud lining. They are the loveliest of all birds' eggs, I think, and they never diminish in æsthetic appeal however many I see, just as one's joyous anticipation of spring is never dulled by repetition. Nature study never palls, but synthetic pleasures soon lose their savour.

When an April squall descended the thrush returned posthaste to her nest, where she snuggled deeply down, despite the perfect insulation, to ward off the battering hailstones. Sitting there devotedly, framed in a setting of rain-spattered leaves, she made a charming picture (Fig. 102). I rigged up the camera and advanced quietly, carefully avoiding her gaze in case she should depart, realising she had been seen. By proceeding gently I succeeded in taking several photographs at very close range without a sign of uneasiness on her part.

The liquid, melodious notes of the thrush are heard while his mate is busy with the eggs, but there is little time for singing when a ravenous family needs attention. They are fed in turn, as nearly as possible, so that all are evenly nourished and thus ready to leave together. But there is scarcely a brood without its strong man of the family—a lusty chick which in its eager enthusiasm manages to stretch a fraction higher than the rest and probably gets an extra share for a short while.

His gain is only transitory, for it will induce drowsiness, when the rest



101. *The mud lining affords perfect insulation*



102. *Sitting closely in an April squall surrounded by rain-spattered leaves*

will get his share for a while. This consistency of feeding is really very remarkable, for it applies equally to a brood of nine or ten in a dark hole. As the large brood of a long-tailed tit or wren, on the other hand, approaches the nest-leaving stage, the chicks are fed at the small entrance of the domed nest. The parents are only concerned with the two or three craning their necks right out of the entrance, so the youngsters must take self-appointed turns. The arrangement works efficiently, as the young birds depart simultaneously.

The confiding ways of the thrush were exemplified on another occasion, when I came across a nest of well-grown young. I saw the mother with food, so I stood aside, awaiting events. Undeterred by my near presence, she came and fed them several times; then I decided it was about time for a photographic attempt. The camera made no difference to her routine, which was deliberate and consistent; after feeding the family she would sit on the edge of the nest, motionless, for upwards of a minute, then off she would go for more food.

The nest was heavily shaded by trees and a thick overhang of ivy, prohibiting snapshot exposure. As far as she was concerned, I could have given several seconds, but the movement of the chicks fixed the exposure at a maximum of half a second. The mother's behaviour was interesting, for she would permit the changing of a film as she sat, but refused to return while the camera was in position, even when I retired. When the tripod was removed she would come back immediately and allow me to

103. *He puffed out his speckled breast*





104. *A back view, to show his half-inch tail*

move up again and re-focus. This behaviour was evidently actuated by some fixed element in her temperament, for familiarity failed to alter it in any way.

The youngsters left home when about sixteen days old. I captured two and placed them on a branch, where they sat contentedly. Young thrushes are ideal camera subjects, for not only do they inherit the handsome breasts of their parents, but also their slow deliberation, permitting exposures more adequate than with most young birds.

One flew off and the other hopped along to one end of the branch. He was evidently well aware of his prepossessing appearance to judge by the preening and puffing of breast feathers, as though to make sure that I was thoroughly impressed by the special quality of his speckles (Fig. 103). Not content with that, he kept flicking his diminutive tail, which was no more than half an inch long, in case it escaped my notice.

Such an obvious hint could scarcely be ignored, so, just to please this engaging little bird, I turned him round and photographed his tail (Fig. 104). Without implying that he doubted my integrity, I noticed that he watched over his shoulder—just in case!

Ambition fully satisfied, he flopped his way to a bramble patch.

CHAPTER XVI

Reed-bed Acrobats

THERE is no need to dwell on a description of the reed bunting's haunts, for I find him invariably wherever the sedge warblers resort. For choice he resides in the region of water, whether river, canal or lake, but I fancy he prefers lakes, which undoubtedly provide in abundance the surroundings he favours for subsistence and nesting. These two species are so alike in their choice of habitat that I always think of them together, although they are quite unrelated and totally different in habits and appearance.

In the summer months the reed bunting rarely quits the vicinity of water, but his nest is often found some distance away, whereas his companion shows a pronounced preference for building in or very near swampy places. In winter the sedge warbler migrates to southern climes, but this bunting, which is resident throughout the year, often resorts to stackyards in search of food, in company with sparrows and finches and his near kinsman the yellow-hammer.

His appearance might well seem to justify the name black-headed bunting, by which he is frequently known; but the term is a misnomer, being applicable to another species of bunting. He is also known as the reed sparrow, a term which seems more appropriate, for when seen at a distance the appearance of both sexes is decidedly sparrow-like, though closer inspection reveals richer and more colourful markings. The male is really handsome, with his rich black velvety head and bib and his broad white collar, so conspicuous when seen from behind. These bright and cheery little birds contribute in adequate measure their share of charm to the waterside.

As I threaded my way through the overgrown tangle of reeds, meadow-sweet, brambles, willow herb and scrubby bushes just beyond the marshy border of the lake, I heard the ringing "Tschee!" of male reed buntings and felt certain of finding nests, as I always did in this spot. Both sexes make this call, but at nesting time it is usually the male, to warn his sitting partner, though she joins in when disturbed. Few of the nests are visible at once, and many will be missed unless one happens to wander in their immediate vicinity, so closely do most of the hens sit.

When thus disturbed at close quarters, both male and female resort





106. *Reed bunting's nest among meadow-sweet*

to the tactics of whitethroats, fluttering along the ground feigning a broken wing. Instead of looking for actual nests, I watched closely an area of about a dozen feet ahead. Practice has proved the efficacy of the method, for one sees not only the furtive departures ahead, but is instantly aware of any nearer movement. If too small an area is watched, most of the more distant moves are missed. The best way of finding nests is to watch the birds themselves.

Following this principle I was soon rewarded by the sight of a hen employing her stratagem, so I knew that my search was limited to a few square yards in front. In the case of the whitethroat the ruse is adopted much farther from the nest, unless the sitting hen be surprised at closer quarters, as will occur in rainy weather.

The immediate area was a wilderness of dead reeds, prostrate and erect, and was profusely carpeted with the new crisp growth of meadow-sweet of so rich a green as is only found in water plants, whose roots go deep enough always to find coolness and moisture. To damage this lovely foliage was quite inexcusable, apart from its aspect as cover for the nest, so I carefully eased the leaves aside and found the nest in a minute, almost on the ground, deep in the verdant retreat (Fig. 106). At present one luxuriant leaf sufficed to conceal the entire nest, but the growth would be at least eighteen inches high by the time the young were fledged.

In that well-cupped nest of grasses and hair lay five eggs, strikingly blotched and hair-lined with purple-brown on a darkish purple-grey ground. All the buntings' eggs are of this pattern (Fig. 107), varying in markings and ground tone, but all characteristic in type. I found three more nests that afternoon, but none could compare with the beautiful setting of that first one among the meadow-sweet.

Some days later I spent a very enjoyable hour or two at one of the nests. The eggs were nearly ready to hatch, at which time the maternal instinct is strong. This is shown by a marked desire on the part of the hens to return, even in the face of intrusion or danger. Reassured by my stillness, the mother bird gradually crept nearer, proceeding via the reed stems, and finally returned to the nest and remained there so long as I kept still. I set up the tripod some six feet away, and with my primitive string arrangement photographed her at the nest half an hour later.

It was very entertaining to watch these agile little birds flitting lightly from stem to stem, and balancing delicately as they swung on the reed stems with effortless grace and poise (Fig. 105). On the impact of alighting the stems were set swinging like inverted pendulums, as these charming acrobats preserved balance with fanned tails—a skilful trapeze act.

Most of the afternoon was occupied in getting two photographs of this



107. *The handsome eggs are boldly marked*

incident, not because the hen was shy, but owing to her erratic movements. Only a few reed stems could be focused simultaneously, and whenever I concentrated on a particular group she had the knack of alighting to one side, just out of range, though not through any objection to the camera, for as often as not she came too close. The gymnastics of these birds would have made a delightful movie subject, but there were no amateur cine cameras in those days.

At such times as this the cocks are not renowned for their courage, for they leave it to their wives to face bird photographers and similar inflictions. In this case the husband was an exception, being every bit as solicitous as his wife, so I photographed him as well. After approaching on swaying reed stalks, he would alight on a bramble stem just by the nest, quite as unconcerned as his partner (Fig. 108). On this firmer support he would stand and look round for a moment before going down to the nest to take a turn.

Nothing untoward occurred, and the brood of four was successfully reared. At the age of twelve days, they were well covered with speckled plumage of soft and harmonious shades of light brown, presenting a strong resemblance to their mother (Fig. 109); but I noticed that each was adorned with a fluffy ring of down, extending right around the back of the neck, still somewhat vague but sufficiently marked to be indicative of father's white collar.



108. *The cock came to investigate*

As yet I could not distinguish brother from sister, but no doubt would exist after their first moult in the autumn, as young female reed buntings do not have white collars.

109. *Young reed buntings, with collars in evidence*





110. *The domed nests are profusely feather-lined*

CHAPTER XVII

The Friendly Willow Warbler

As related in the chapter "Making Friends," the willow warbler is the first species with which I had dealings at close quarters. That first experience was no isolated occasion, but proved to be the forerunner of a series of examples of tameness such as I should never have imagined possible. Just why the willow warbler should be so outstanding I have never been able to fathom, but the fact remains that it is.

In view of the experiences about to be described, I sought to repeat the performance the following year, but my plans were completely spoilt by the weather. Out of the first six nests I found, no fewer than four of the hens proved responsive, returning freely to their eggs only four feet from where I sat, while in two instances the cocks were equally tame. The month of May was persistently wet, and all four nests became casualties through the same cause, one which I have neither read about nor experienced before—black slugs.

These slimy creatures revelled in such conditions and the place was infested with them. They seek dark holes and recesses in which to retire, and these domed willow warblers' nests furnished ideal sanctuary. I have previously found slugs in old nests, so when I saw one on the dome of one of these occupied nests I realised the potential danger, and visited eleven nests daily and cleared dozens of these pests from the vicinity. My efforts were of no avail, for in one case after another I found a black slug curled up on a clutch of cold eggs, the nest being rendered absolutely untenable by his presence.

In one instance the tragedy occurred when the eggs were due to hatch, and in another I found the hen brooding at one side of the nest in actual contact with a black slug on the other side. I removed the creature, to whose viscid slime three chilled eggs adhered, and the hen actually remained after this upheaval and succeeded in rearing three chicks—she was not one of my tame ones. Altogether, no fewer than seven clutches out of eleven were lost in this way, including those of all my tame members.

So tiny a bird is quite unable to deal with such an adversary—a solid fat creature the size of a finger, which would not hesitate to crawl on her back if she were to remain. In yet another nest the hen was feeding

six-day-old chicks, with a slug on the back of one—and yet the bird survived. Until this season I had never seen or even suspected disaster through this cause; such a series of calamities was appalling, and the same fate was suffered also by two meadow pipits' nests, so there must have been many more examples unknown to me.

When April arrives no sound is more eagerly awaited than the welcome song of the willow warblers. Day after day I listen in vain, then one day—about the 12th in this district in Northumberland, 750 feet above sea-level—the whole place is alive with their silvery notes, sung in a descending scale. One marvels at such a performance from so tiny a singer—a slim little bird with all the gentle virtues of the hedge sparrow, his olive-green plumage so inconspicuous among his surroundings.

The nests are always domed. They are constructed of fine dried grasses, and have a luxurious lining of feathers, mostly woven in but many loose among the eggs (Fig. 110). Almost invariably these nests are built right on the ground among grass and herbage, often at the foot of a scrubby birch sapling, and as a rule they are well concealed. The majority face towards the north, which affords the requisite coolness and shade; even when built among trees and shaded from direct sunshine, most of them face in a northerly direction. Although six to eight eggs are attributed to the species, I have only twice found as many as seven—such delicate little white eggs, spotted and speckled in reddish-pink.

I have lost count of the number of willow warblers I have photographed

III. *When flushed she went no farther than a nearby stem*





112. *Brooding unconcernedly*

at the nest. Hitherto I had not thought of exploiting their tameness in any particular way, being content to observe and enjoy. As soon as they start nesting I am urged to find my tame one for the season. Once I find her I become resigned to the fact that under her spell I will not get much else done. Should anything go wrong there is still no respite, for I must go in search of another.

My 1944 willow warbler was a gem—the best I have ever photographed. I had already found six or seven nests, and was about to decide which bird would be the best subject when I came across another nest unexpectedly. As I roamed along the river banks on Whit Monday a member of a village picnic party called to me and asked if I knew what kind of bird it was which kept going in and out of a nest close by. I went across and saw a willow warbler's nest with six eggs.

There were eight in the picnic party, of whom five were children. The surrounding grass was trodden and trampled, and it was no wonder that the bird "kept going in and out" with all those kiddies romping about. My first concern was to restore the flattened grass, so I teased it up as best I could and implored the youngsters to keep away from the nest and tell nobody about it. To their great credit they kept the secret, and I shall always bless them for doing so, for it must have been a great temptation



113. *Seizing a feather placed at the nest entrance*

to disclose it. Such was the very precarious beginning of this wonderful experience.

In the quiet of the following evening I went back, half expecting to find the eggs gone, but to my great relief they were intact. The bird happened to be off the nest, and from what I had seen of her already I was tolerably assured that she would respond. The fact that she had tolerated such disturbance was a clear indication of her character, for many would have deserted under such tribulations. Such considerations led me to start the approach process at ten feet, reckoning that she would take kindly to my gentle methods after what she had endured.

This surmise proved so correct that in the short space of six minutes she conformed to my standard of tameness by returning freely while I sat three feet away. To photograph the eggs I erected the camera and tripod, and while I was under the focusing cloth I found myself focusing the eggs one moment and the bird herself the next—she had returned and settled on them! This was an excellent augury, but there were so many hazards to reckon with that I dared not dwell unduly on the rosy prospects thus offered.

By rustling the grasses I gently flushed her off, but so quickly and persistently did she return that it was quite a job to get my egg picture

(Fig. 111). As she went no farther than a stem some eighteen inches in front of the nest and returned in a few seconds, it was necessary to have everything ready for a brief exposure the moment she left. Her conduct indicated advanced incubation, but the eggs were actually fresh and did not hatch for another eight days.

As I was readjusting the short grasses round the nest she returned and passed within six inches of my moving hands, then into the nest. I waited awhile, but she appeared to have settled down for the night, so, reluctant to disturb her again, I gently closed down the slightly opened dome and arranged some grasses over the opening, during which she never moved an inch.

This chance discovery of her amazing fearlessness of hands—moving hands too—led me to make some experiments during the next few days. In a short while, as I held my hand on the very threshold, she would return to the nest and remain there (Fig. 112). There was no attempt to peck or attack the hand, and I found that the only way of evoking any demonstration was to rustle the grasses behind the nest, which brought her to the entrance in a defiant attitude. There were two such displays before she ceased to react.

Her defiance arose from her inability to perceive the cause of the sounds, which were evidently attributed to another source and not to myself, since I was in view. Similar rustling in front of the nest was ignored, for she could see the harmless cause. I was even allowed to touch her on the

114. *Accepting a feather from the fingers*





115 (Top). *Wing and tail pressing against thumb*

116 (Bottom). *Brooding the chicks with tail on hand*



nest. These experiments were conducted with restraint, despite her indifference, for there was no purpose in mere repetition.

SOME EXPERIMENTS WITH FEATHERS

All willow warblers' nests are profusely lined with feathers, this one being no exception; and quite by chance I discovered the irresistible appeal of feathers to the owner. When she observed a loose one projecting from the dome of the nest she plucked it out and tucked it into the lining, which immediately suggested another means of experiment.

While she sat brooding I allowed a small feather to drift to the ground, some six inches in front of her; scarcely five seconds elapsed before she left her eggs, seized the feather (Fig. 113), wove it into the back of the nest and resumed brooding. This was decidedly interesting, so I retrieved a supply of feathers from a disused long-tailed tit's nest and henceforth carried a small boxful. During the next week or so I supplied her with nearly four dozen; sometimes she would raid the box, so I had to hide it before she became satiated, apart from the question of the nest's capacity!

Throughout the chick-rearing phase she never missed a feather. When she found feathers scattered in the nest area—sometimes as many as five at a time—she fed the chicks first and invariably collected all the feathers before resuming her excursions. Although the weather was cold, I think she would have gone on collecting feathers under any conditions, her instinct presumably being to remove all evidence which might betray the nest's existence. (The following year I experimented with six willow warblers, all of which removed every feather in sight. Three of them carried the feathers away and discarded them; the other three discarded all the large feathers and took the small ones to their nests, regardless of colour.)

Since feathers appealed and hands were not feared, why not combine the two? I therefore offered a feather by hand, and was thrilled, though by no means surprised, when it was accepted readily (Fig. 114). When two were presented together they were taken in immediate succession, a journey for each. Further experiment showed that the mother bird took them singly because two could not be conveniently grasped together and manipulated in the nest. When one was held broadside on it was seized by the quill; when held by the quill it was grasped by the thickest accessible part, next to my fingers. A scrap of the plumed portion was grasped by the most tangible part—nothing in the feather line was ever disdained or discarded.

To test the willow warbler's reaction to colour, I offered feathers in pairs of different shades and established that her order of preference was white-brown or grey-black. Thus, white was preferred to all other shades,

and brown or grey went before black, but I detected no distinction between the intermediate brown and grey. When an assortment of feathers was scattered round the nest, the white ones were always taken first, even if they were not the nearest, then all other colours indiscriminately. To ascertain if size played any part in the choice I offered two different sized feathers of one colour (one $1\frac{1}{2}$ inches and the other $2\frac{1}{2}$ inches in length) and found that the smaller was always favoured. A large white, however, was invariably chosen against a small brown, grey or black, indicating that colour (white) had more appeal than size. When mixed colours and sizes were scattered, all the whites went first, but I saw no evidence that either size or colour was a consideration respecting the others, which were taken according to conspicuousness, as seen from the nest. Whenever she had dealt with an "avalanche," she carefully surveyed the area to make sure that the clearance was complete before leaving.

Later, after extracting my contribution of some forty-five feathers, the dissected nest was found to contain two hundred and twelve. The proportion of white was overwhelming, the count being a hundred and ninety-nine white, six brown or grey and seven black. The analysis of size revealed: white—a hundred and eighty-two small and seventeen large; other colours—all small. (Subsequently I found the same preponderance of white in other nests.)

I tried one more variation. Dried grasses, like those of the nest structure, were offered alongside a feather. Several times the bird took the latter but displayed no interest in the grasses, though once she took one and toyed with it for a few moments, my persistence no doubt having led her to think it possessed some special virtue which she had failed to perceive.

This feather episode, above all, demonstrates the bird's absolute ease of demeanour. I cannot conceive any circumstances under which any bird could be forced, or even persuaded, to take nesting material from the fingers against her inclination. Even though I have had the actual experience, the episode seems almost incredible.

THE HAND: SOME TESTS AND REACTIONS

As soon as the chicks appeared I resumed my hand experiments at the nest, the result of every one being a foregone conclusion. The mother bird reacted in the manner expected to everything that confronted her, taking everything in her stride as a matter of course. Nothing daunted her, nothing I did influenced her equanimity or the rhythm of her programme.

The closed hand was placed on the ground, one finger extended halfway across the nest entrance, leaving free access on one side in case of objec-



117 (Top). *When the fingers were separated she fed the chicks through the opening*

118 (Bottom). *The departure of the chicks was imminent*





119 (Top). *The mother just glanced at the wandering chick*
120 (Bottom). *Waiting with food, until the obstinate chick moves on*



tion. Although she had allowed me to touch her on the nest, I must not assume her willingness to perch on the hand, so this tentative introduction left a free alternative. To extend the whole hand across the entrance would be tantamount to compulsion, for she would thus be forced to contact the hand in order to reach the chicks. The precaution was not needed, for she hopped straight on to the finger, from which perch she fed the family. She was accustomed to feeding them from a central point and intended to continue, finger or no finger.

It made no difference when the whole hand was extended—it was not considered an obstacle, if indeed she ever gave it a thought. Her visits were leisurely and she never sought to limit the extent of hand contact, for she often stood close by my folded thumb with her wing and tail pressing against it, when she had plenty of room to avoid such contact (Fig. 115). Again, she would often brood the young chicks after a meal, as all birds do; when so disposed, she would just hop into the nest and snuggle down, with her tail resting on my hand (Fig. 116), which I usually held there as long as she remained—once for seven minutes. The withdrawal of the hand from under her was ignored.

Nest hygiene received her scrupulous attention, this important detail of routine being conducted in the same assiduous manner when she operated from my hand. Had she been anxious to leave the hand at the earliest moment she would have skipped this operation. The versatility of my hand was obviously appreciated, for she often used it as a beak-wiper after feeding operations.

To see how she would behave when confronted with an obstruction I attempted to ward her off, but she just slithered past my hand, in no way perturbed. When I held it across the nest entrance to form a barrier, she quickly fed the chicks through a chance opening at the edge. When the entrance was completely sealed off she calmly waited until two fingers of the hand-barrier were separated, then thrust her head through the narrow opening and fed the family (Fig. 117). These particular experiments were performed once—and once only—for I had no desire to impede this wonderful little mother or to have the hand become a nuisance.

I was working alone the whole time, with camera on tripod, the incidents around one hand being recorded by releasing the shutter with the other. Incidentally, I was in full view from the path nearby, which was much too well patronised for my liking. Worse still, the only seat within half a mile was just opposite the spot; in fine weather it would have been occupied continuously, completely immobilising my activities, so I positively welcomed the cold and wet conditions. Even so, I had to exercise the utmost vigilance to avoid being seen: had one small boy seen what I was doing it would have meant the almost inevitable ruination of the whole enterprise, so I became quite expert at snatching away



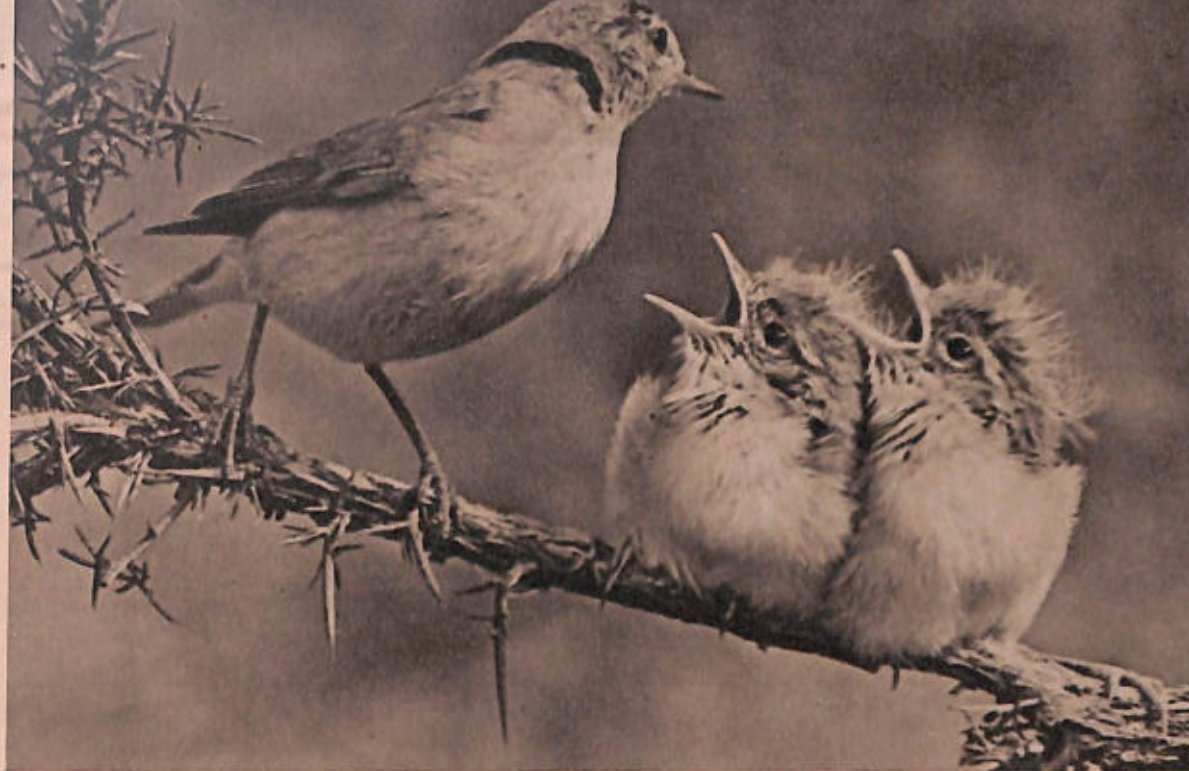
121 (Top). *The winsome family*

122 (Top, right). *The chicks were fed while being arranged on the branch*

the camera and diving behind a bush. What with dull days and heavy rains, frequent and prolonged interruptions and the constant resetting of the apparatus, it is a wonder the campaign was kept going.

When the youngsters were eleven days old I could see that their departure was imminent (Fig. 118). One, with the wanderlust, kept venturing a few inches outside. I placed him on my hand to see what would happen, but his mother just glanced at him in passing, probably wondering what the bad boy of the family would be up to next (Fig. 119). When he saw the family being fed in the nest he kept hopping back in case he missed a turn, so I had to fish him out each time—he was never fed outside the nest at this stage, though I kept him there during twenty food-visits. An amusing diversion occurred when he chanced to hop in just as his mother arrived. He completely blocked the entrance and kept her waiting with a beakful of food until he moved on (Fig. 120).

Caterpillars placed on my hand or offered in my finger-tips at the nest entrance were, by a turn of the head, taken and transferred to the gaping beaks, without a change of position on the part of the mother bird. Being such a practical little soul, she saw no sense in wasting good food, and no doubt regarded this as service *par excellence*! These caterpillars afforded variety, as the willow warblers' diet consisted almost exclusively of insects caught in the air. Out of hundreds of visits I only saw caterpillars brought on three occasions: I have seen others of the species utilising caterpillars almost exclusively, with only an occasional insect.



123 (Bottom). *She changed her mind and fed the lower chicks*





124. *The chicks were fed on the hand*

Now and again the mother bird lingered on my hand, apparently just resting, and would preen herself there for two or three minutes. She would occasionally regard my hand meditatively, giving it inquisitive little tweaks as though wondering just what it was and whether it was edible; except in these leisure moments she paid no attention to it. When a friend appeared on the scene and watched me awhile, I invited him to perform. The bird was hesitant and made three unsuccessful fluttering attempts before actually returning. Although the set-up was familiar, she detected the stranger.

THE CHICKS LEAVE THE NEST

Half the family had left the nest when I appeared the next morning, but by watching the parents I soon located and captured the wanderers, and eventually got all six established on a branch, some thirty feet from the nest, partly screened from observation by some welcome birches.

What lovely little creatures they were! With breasts of creamy down, soft as gossamer, yellow throats and olive-green backs and wings, they were really a most attractive family, so tiny and dainty, like all warblers (Fig. 121). Most young birds are very refractory as one tries to arrange them, but these caused very little trouble, doubtless because they knew me through constant association.

Being so accustomed to my activities at the nest, the mother thought nothing of my handling the chicks in this entirely different environment, under totally different conditions. She was in fact so unconcerned that

she continued feeding them whilst they were being arranged on the branch, without my having to pause (Fig. 122). As she could not reach the middle chicks from either end of the long row, she fed them while hovering or standing on the backs of the others, who did not mind at all, for their mother's weight was a mere two drams. When they sat in two tiers she visited the appropriate level, but once when she came to the upper branch to feed the chicks on it she changed her mind and fed a lower chick from above, thus demonstrating her agility (Fig. 123). The droppings (still sac-enclosed) below the branch were carried away as diligently as from the nest—instinct being still at work when the need no longer existed.

The chicks were fed with equal alacrity on my hand held in mid-air. I was still working alone and found difficulty in focusing and positioning the hand held thus, so I rested it on the branch instead (Fig. 124). Sometimes a particle of food fell to the ground and was invariably retrieved, even when a search in long grass was entailed and it would have been quicker to get a new supply. Once she abandoned the effort, but began again on her next visit, and actually found what she sought. Nothing was wasted.

The youngsters were obviously interested in everything around them in this strange new world and generally saw their mother returning long before I did. By their eager alertness I knew when a visit was due (Fig. 125) and one or another would have his beak open in anticipation (Fig. 126). While I knelt behind the camera manipulating the roll-holder with both hands, on one of which two chicks were perched, the busy little mother came on to my shoulder, down my arm and fed them where they sat, in the midst of my movements. There were others on the branch, so it was evidently the turn of these two.

When a rainstorm arose I hastily got my camera under cover and placed four chicks in the case. Had the whole family suddenly disappeared the mother would doubtless have been distressed, so I left two on the branch and held my cap six inches above them. She continued feeding them in the rain, under this improvised umbrella, so for some ten minutes these two had the share of six. When the storm abated they were so replete that they ignored the next visit (Fig. 127), so I brought the rest into the rota to ease the situation.

My film supply was now exhausted, so I allowed events to take their course. In ones and twos they gradually cleared off the branch and were left to their own devices, and thus the family dispersed. The branch was visited in turn as long as any remained, then once again after the last had departed.

I have had some remarkably tame willow warblers, but never such an amazing one as this. Not for an instant had my subject ever to "tolerate"

my actions; she was placid and serene the whole time and never suffered a moment's uneasiness in my presence. There was simply nothing to "tolerate"—indeed, I was far more likely to be regarded as a universal provider. The presumption that I had found the only willow warbler with such responsiveness is most unlikely. There must be others, so I am hopefully anticipating a repetition of this wonderful experience.

THE FAMILY AFTER DISPERSAL

When the family dispersed I thought the story had ended, as one can seldom follow a brood after its departure from the nest. Being on holiday I was able to keep track of the family for the next four days, during which time they remained within forty yards of the nest, though I reckon they were capable of fifty-yard flights from the second day.

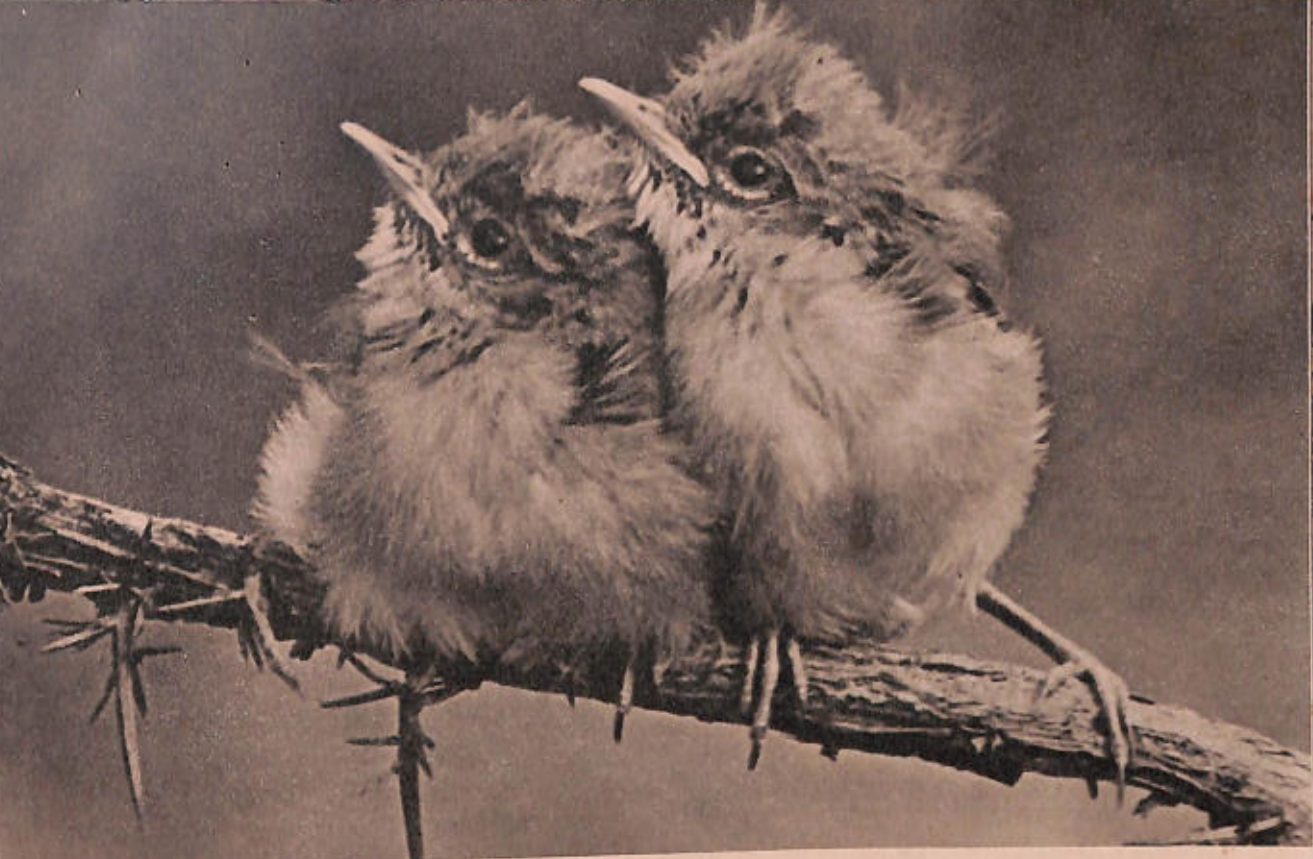
The dispersal from the branch was completed at about 4 p.m. At 6 p.m. I returned and found that the youngsters had already gravitated into two compact groups, two nestling together in the shelter of a foxglove, the other four in a loose cluster on the ground among undergrowth and mossy stones, fifteen feet from the others.

At 8 p.m. neither group was there; twice the mother flew into the scrubby lower branches of an alder, so I went across. During the last two hours she had, in some marvellous manner, contrived to marshal the scattered family together, and there they sat, all six, snuggling closely in a row on a branch only four feet from the ground, surrounded by foliage and campion flowers and relatively safe from ground enemies.

They were still there at 10 p.m., half of them asleep, and neither parent was in attendance. There they spent their first night in the open—such a helpless, pathetic little row of young birds, at the mercy of the elements and of every natural hazard. By singularly good fortune the night was calm and dry and not too cold.

The next morning all six were being fed in a birch, thirty feet from the roosting branch, so they must have emerged safely from the first critical night. They still snuggled closely in a row and spent the whole day in the same tree, six to ten feet above ground, changing positions at hourly intervals. It was usually one of the birds at the end of the row who prompted a move, by hopping and fluttering to an adjacent branch; a second would follow, then in ones and twos the rest would go, too, forming a loose cluster which invariably became a compact row on a single branch. These moves and formations were spontaneous, with no parental prompting, and the maintenance of this compact unit must have represented great economy of time and effort to the parents.

Two of the young birds were carefully captured and kept in my hand for fifteen minutes, during which time they were fed six times, alternating with visits to the others. This occurred after twenty-four hours' freedom,



125 (Top). *Seeing their mother approaching*
126 (Bottom). *The hungry one opens his beak in readiness*





127. *The satiated chicks were not interested*

so the hen had not forgotten me. They spent the second night, again in a row, twelve feet up in a big hawthorn, some twenty feet from their daytime birch.

On the third day I found them in two groups some twenty feet above the ground, in trees fifteen yards apart; the cock looked after two chicks and the hen the group of four. The groups moved from tree to tree, but kept separated. At night a cold north wind arose and all six, now re-united, roosted in a row in the sheltered lower reaches of the alder where they had spent their first night, only seven feet above ground.

They kept in one group throughout the fourth day, after which they still re-grouped, but more frequently and on a bolder scale, entailing direct flights of fifty feet to neighbouring trees. The instinct to nestle together produced amusing results, for the outer chicks, protected on one side only, were always edging inwards for warmth until the middle members succumbed to the double pressure, being literally squeezed off the branch! At 6 p.m. I found them again, much more active and venturesome, now tending to follow the parents instead of waiting.

I failed to locate them again within three hundred yards in each direction, so they had probably crossed the narrow river, which was now just a series of shallow flows among stones. Thus was safely launched, in the full vigour of youth, the charming little family which had provided the most delightful of all my bird-watching experiences.

CHAPTER XVIII

The Ring Dove Twins at Home

THERE is magic in the cooing of a ring dove—magic which recalls the days of my youth. Halcyon days in retrospect, though perhaps not quite so carefree at the time; but most of the failures and frustrations have faded, leaving nothing but a happy memory. Such is the mellowing influence of Time, which stresses the joys and softens the sorrows.

Those were wonderful days indeed, in that glorious first season of bird photography, when every subject was grist to the mill. Such a medley of contrasts and emotions, such keenness and fervour, such excitement and bitter frustration, such wonderful triumphs in that unexplored land of limitless horizons! How vivid are the memories of that first ring dove's nest high up in a fir tree; the study of ways and means, the household clothes-line borrowed surreptitiously, hauling up the tripod and fixing it securely before that precious plate was expended! (Fig. 128). Everything just *HAD* to be right, as schoolboy pocket-money would only run to one exposure, or two at the most for extra special subjects—and very few seemed anything else! Then the triumphant march from the dark-room, exulting in that marvellous negative (was there ever such a masterpiece?), such gloating over the print and hardly a wink of sleep for a fortnight! Those were the days.

The scene is indelibly impressed on my mind: the pure white eggs gleaming in their sombre surroundings, the delicate nest of twigs, so slenderly latticed that the eggs could be seen through it from below (Fig. 129), the setting of green foliage, the sunshine and breeze, the airy aloofness of the spot. But best of all was the glorious sense of adventure and achievement.

Memories generally fade, but that early enthusiasm has endured unimpaired, inwardly as intense but outwardly expressed with more restraint. The memory of that first subject will always thrill me and will invest every ring dove's nest with romance. With the picture of the nest the series had to be closed, as my slender resources would not permit the recording of the young birds except at the expense of other subjects. I discovered scores of nests subsequently, but many years elapsed before I found one in a place which afforded time for regular observation and the making of a record of family affairs.



Nature provides many wise dispensations to ensure perpetuation among birds. Some are prolific, laying a dozen eggs or more, while others produce only one in a season. Yet both maintain their numbers with a fair degree of uniformity, the whole process being a delicate balance between the fecundity of a species and its mortality rate. In the slow course of evolution each species develops defences appropriate to the particular hazards which it encounters, but when conditions change rapidly and new dangers arise, survival depends on prompt adaptation, entailing a change of habits or environment. Nature grimly decrees—adapt or perish.

Two eggs suffice to maintain the numbers of the ring doves—always twins; but as a compensation there are several broods. Though preferring a lofty fir they frequently nest at a lower level, for example in a tall bush or hedge. I found one nest in the middle reaches of a chestnut, right in the heart of a rookery. Although there were several rooks' nests in that tree, the ring doves reared their brood without molestation, for their noisy neighbours were solely concerned with their own particular level.

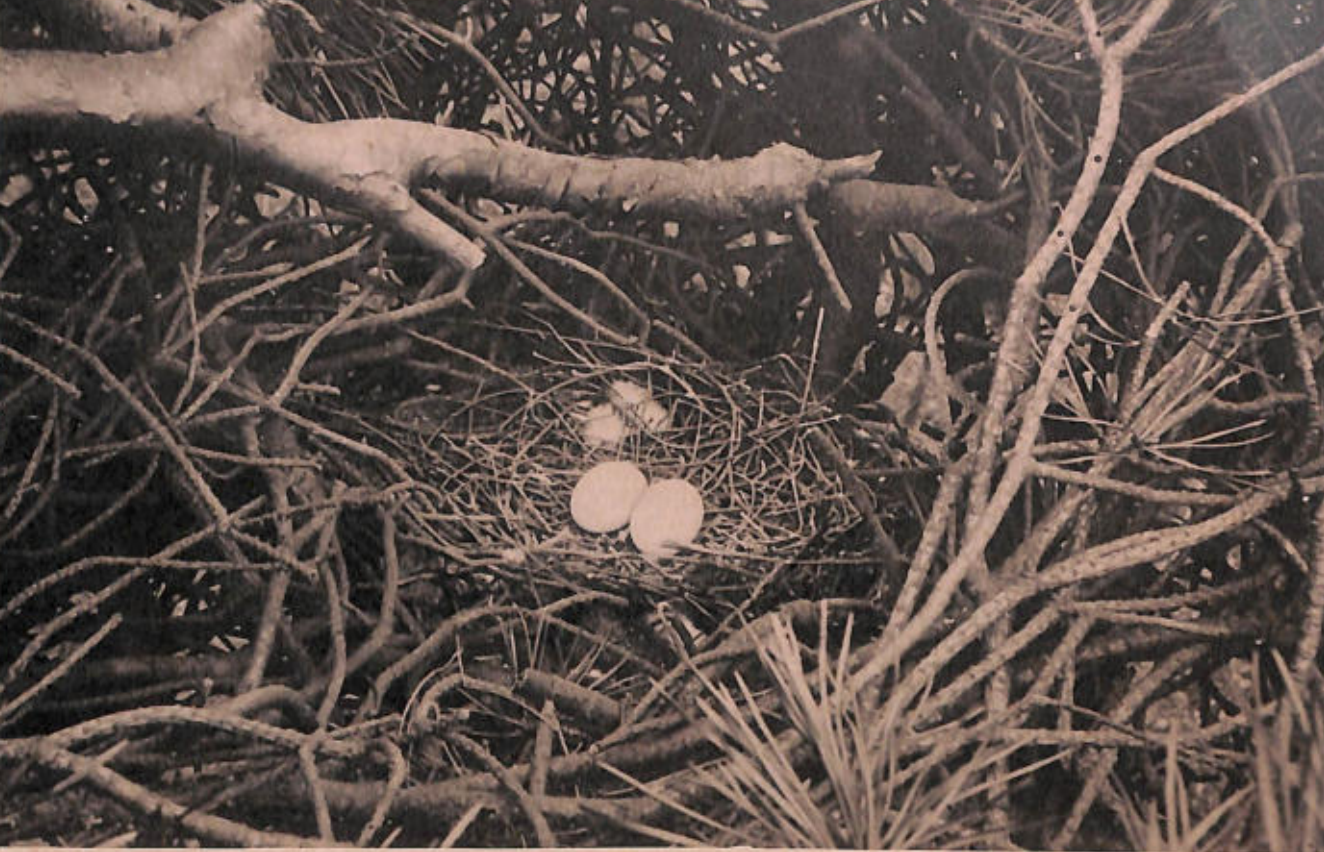
Territorial rights extend vertically as well as laterally, so we find distinct spheres of influence at different levels; a harmless neighbour in the tree tops becomes an enemy and competitor at a lower level. One year I observed a pair of sparrows impudently building in the side of an occupied rook's nest, in defiance or disregard of this principle. And those brazen interlopers got away with it, indifferent to or ignorant of the utter contempt of their massive hosts.

One season when hunting for sedge warblers' nests in the swampy margin of a lake, my ears were constantly assailed by the murmurous cooing of doves. There were some large nests in the tall trees adjoining, so, responding to the challenge, I climbed several but failed to find my objective. With baffling persistence the cooing continued, soft and elusive, most difficult to locate. Then came a rainy day, unpleasant in many respects but an ideal time for finding nests, for birds then sit more closely to protect their eggs and chicks, delaying departure until the last moment.

There was no cooing that day as I squelched through the swamp, but suddenly there was a loud clapping of wings, denoting a hurried and belated departure. A few yards ahead grew a tangled willow, some fifteen feet in height, surrounded by acres of reeds and watery waste. Towards this tree I waded with high hopes. The secret was out at last, for there on a platform of twigs, only eight feet from the ground, lay the ring dove twins! But for the rain this story would not have been written, for there was no particular feature about this tree to attract my attention.

The nest was snugly built on a scaffolding of branches, sheltered by overhead foliage and deeply set in a fantastic enclosure of intertwining

M.F.B.—II



129. *The nest, as photographed in Fig. 128*

branches, gnarled and twisted in grotesque disarray. From the next branch the sight was most picturesque, those tender young doves in that rampart of security, attractively framed in the stately Gothic entrance. That imposing front entrance was strictly ornamental, all the traffic taking place at the tradesmen's entrance in the rear! The whole scene was reminiscent of a fairy palace in a Hans Andersen tale.

So this was the ring dove's nest—call him a wood pigeon or cushat if you like, though I consider the term "dove" more appropriate to his emblematic tradition. As befits the symbol of Peace, the home life of this pair was an idyll of bliss, with nothing to impair their domestic rapture. He was certainly a model husband, helping all day to feed the children, billing and cooing from morning till night, and devoutly absorbed in his home life. When I found the nest the twins were about a week old, but now, after another week, they had more than doubled their size, though otherwise there was little perceptible change in appearance (Fig. 130). They were just larger versions of the same plump balls of light fawn fluff, their broad bills soft as yet, with the consistency of rubber. They made no attempt to move beyond turning their heads in unison, as though coupled, to watch my every movement.

This visit occurred one Saturday, but I was back on the scene the

following afternoon, to take some pictures of a reed bunting's nest nearby. I went to the willow to see that all was well, and with considerable dismay saw no bright eyes watching my approach, as was their wont. Though my progress through the water was slow and correspondingly silent, those vigilant young birds were always aware of my approach. As I neared the spot I saw that both were there, but wondered at their ominous stillness.

When I had climbed high enough to observe, I found relief and a pleasant surprise: I had arrived in the middle of their Sunday afternoon siesta. There was something inexpressibly touching and appealing in the spectacle of those tender infants snuggling together, gorged with rich food, warm and drowsy, and completely unaware of my presence. I withdrew stealthily, got the camera ready and ascended again, with the utmost precaution to avoid any noise, for they would be most unlikely to resume their nap if disturbed. Luck was on my side, for I got my picture and departed without their being aware of my visit. No one ever tiptoed in a nursery more quietly than I moved that afternoon.

The twins were three weeks old when I saw them again; one glance sufficed to show that rationing played no part in this household, for they literally bulged with food. In accordance with pigeon custom they were fed on "pigeon's milk"—a soft, semi-fluid, pulpy product consisting of partially digested corn and vegetable food. Instead of the parents transferring food to the young, as it is the common practice among birds, these

130. *Young ring doves, two weeks old*





131 (Top). *Three weeks old. Fat and prosperous, a credit to his parents*

132 (Bottom). *Three and a half weeks old, they now resemble their parents*



youngsters thrust their soft bills down their parents' gullets and helped themselves from the well-filled crops.

Eloquent testimony to the regime of peace and plenty in which they flourished was borne by their distended crops, which were almost as large as their bodies and literally hung over the branch on which I had placed them. I photographed one in profile to do better justice to his handsome covering of dove-coloured plumage and to give some idea of his general appearance of prosperity (Fig. 131). His wings were well developed, the primaries neatly edged in white, with conspicuous white feathers on wing coverts, and some fluff was still evident on most of his body. When I sought my son Kenneth's opinion (Fig. 133), he said, "Isn't he FAT, Daddy!" with which I heartily agreed.

When the doves were a month old they were ready to leave home, this last week having made a great deal of difference. Gone was their baby rotundity, and now in outline they bore resemblance to adults, with full ability to perch. The white patches on their wings were well grown, and they now had sizable tails to help to steer and balance (Fig. 132). These adolescents were ready for flight, so we knew that this would be our last glimpse of them. One final stroke on each fluffy head, and we said good-bye to the ring dove twins.

133. *Three weeks old*





CHAPTER XIX

The Garrulous Sedge Warbler

FOR days the spring rains had descended, borne on the wings of the south-west wind. Dry and firm a week ago, the scrubby marsh fringing the lake now oozed and glistened as I waded along.

With that selfsame wind the warblers had arrived, and how they revelled in the moisture! From every thicket came a burst of merry song, but dominating all was the vociferous chorus of sedge warblers, whose boisterous chatter was incessant. All the warblers are notable vocalists, but for sheer exuberance I give first prize to the sedge warbler. That garrulous bird never seems to tire, and not only sings in the night but will mimic the notes of sparrows and other birds by day. And all this imposing performance from a bird whose weight is less than half an ounce.

Although each species among the migrants arrives within a few days of a given date each year, the exact time of arrival is largely governed by the weather. Having wintered in Africa and along the shores of the Mediterranean, their course for Britain is northerly, so their fortunes are extensively conditioned by the wind prevailing at the critical moment. When irresistibly urged to embark on their long journey, thousands will succumb through exhaustion if adverse winds should blow them out to sea. Their migratory flight continues throughout the night. Migration entails a prodigious expenditure of energy and great loss of life, but this expensive process is evidently worthwhile or Nature would have long ago decreed otherwise. But it seems something of a miracle that such tiny wings should possess such sustained power.

Though, all members of one family, the warblers are very diverse in character and habits. Most are renowned for their sweet and melodious song, but the sedge warbler's chattering can in no way be called a song, though our riverside walks may be cheered by his breezy loquacity. Both whitethroat and sedge warbler have harsh and grating voices, in extreme contrast to the exquisite silvery cadences of the willow warbler and the dulcet tones of the blackcap and garden warbler. Compare the confiding willow warbler with the shy whitethroat and sedge warbler, and we see what divergence can occur in one family.

As I picked my steps through the reed bed there came an angry twittering interspersed with high-pitched notes of admonition, so I



135. *Sedge warbler's nest, mainly constructed of dead reed flowers*

guessed that a nest was near. Some birds betray their homes through a noisy departure, but this species is so subtle and elusive that you must search for the nest itself.

In that jungle of meadow-sweet, nettles and osiers, therefore, I poked and pried, but my diligence that day was unrewarded. Resuming my search the next morning, I thoroughly explored the area, taking care to avoid treading on foliage and so making tracks, and finally I discovered the glint of eggs deep down among the grasses. So that was the cause of the fuss! So deep was the cup, so screened by rank herbage, that the eggs were invisible unless viewed from directly above.

Though some eggs vary tremendously, those of the sedge warbler are usually true to type, slim and oval, yellowish-brown and closely fleckled all over. The nest consisted of a deep and closely woven hammock of fine grasses slightly lined with hair and willow cotton, suspended from, rather than built among, the stems of three or four nettles and reeds (Fig. 134). On the way back I came into another territory and found a second nest, particularly soft and cosy, constructed almost exclusively of the dead feathery flowers of reeds, which provided a nice warm nursery (Fig. 135). The first had four eggs, this one five, but both clutches were complete, as the hens were sitting. Six is quite a common number, however.

Some days later I returned with the camera, judging that the broods would be almost ready for flight. My plans were forestalled, for I found the first nest woefully empty but intact, so the brood had doubtless been safely reared. I went along to the other, and with singular good fortune arrived at a critical moment, for all but two of the young birds had gone (Fig. 136). One was content to remain, but the other had definite plans of his own. Strongly imbued with the wanderlust, he watched for a chance to escape. To restrain him I covered the nest with the palm of my hand, but with valiant efforts he tried to wriggle past.

To keep him captive I laid my cap on the nest rim while the camera was being prepared. When all was ready I removed the obstruction, quickly focused and grasped the bulb. A moment later he hopped to the edge of the nest, ready to dive into the sanctuary of herbage beneath (Fig. 137). I clicked the shutter as he was on the brink of departure, but before he could plunge to freedom, I had caught that wayward young bird.

As for their appearance, I need say no more than that they were warbler chicks. Thinking they might be cold, Master Kenneth held them in his hand for a few minutes (Fig. 138), then, drowsy and warm, they were carefully put back in the nest. They were not so drowsy as I thought, however, for the moment my hand was removed they hopped to the edge, and plunged overboard without a pause. So the world was the richer by two more sedge warblers.

136. *Young sedge warblers about to depart, four have already left*





137 (Top). *Poised ready for a plunge into the undergrowth*

138 (Bottom). *Young sedge warblers, twelve days old*



CHAPTER XX

Tawny Owl Family

THERE is a strange, uncanny fascination about owls; they are so quaint, so eerie, so unlike other birds. Unseen, in the dim night watches, their melancholy hooting proclaims their presence; when seen, they are unheard, as on silent wings these phantom spirits pass by, quartering the countryside in search of prey.

This weird appeal suffers no diminution, and indeed seems to increase, with familiarity—so in joyous anticipation I climbed over the fence by the old stone bridge, and made for the tawny owls' stronghold.

Through this wooded countryside there flows a placid little stream, meandering here through meadows, now ablaze with golden gorse. I followed its primrose-studded banks for half a mile until I reached a straggling woodland. After the sun and the rain, buds were swelling and bursting, and the ground was jewelled with wood anemones.

In contrast to this scene of newly awakening life there stood in gaunt relief a lightning-shattered stump, in picturesque decay. A tap showed that it was hollow. A glance in the hole on the opposite side revealed that my mission was fruitful, for there lay a clutch of tawny owls' eggs.

For years this had been the owls' ancestral home (Fig. 140), and here they reared a family each spring, except on the few occasions when at laying time the site was wet and untenable. Where they nested alternatively I never found out—certainly not in this wood, for this was the only eligible site. And far from eligible it looked, being painfully conspicuous and only six feet from the ground. Safety lay in seclusion, for this was a little bit of "nowhere" and no one passed that way—none but the few who knew the haunt and kept it secret.

Unlike the long-eared owl, which utilises a second-hand nest in the tree tops, the tawny chooses a hollow in a tree, usually fairly high up. Occasionally, when suitable hollows are not available, they lay their eggs on the ground at the foot of a tree. In the daytime they roost in trees, standing, in their wisdom, with their backs against the sun (Fig. 139). When discovered in their roosting quarters, they show reluctance to depart, and are decidedly annoyed when disturbed.

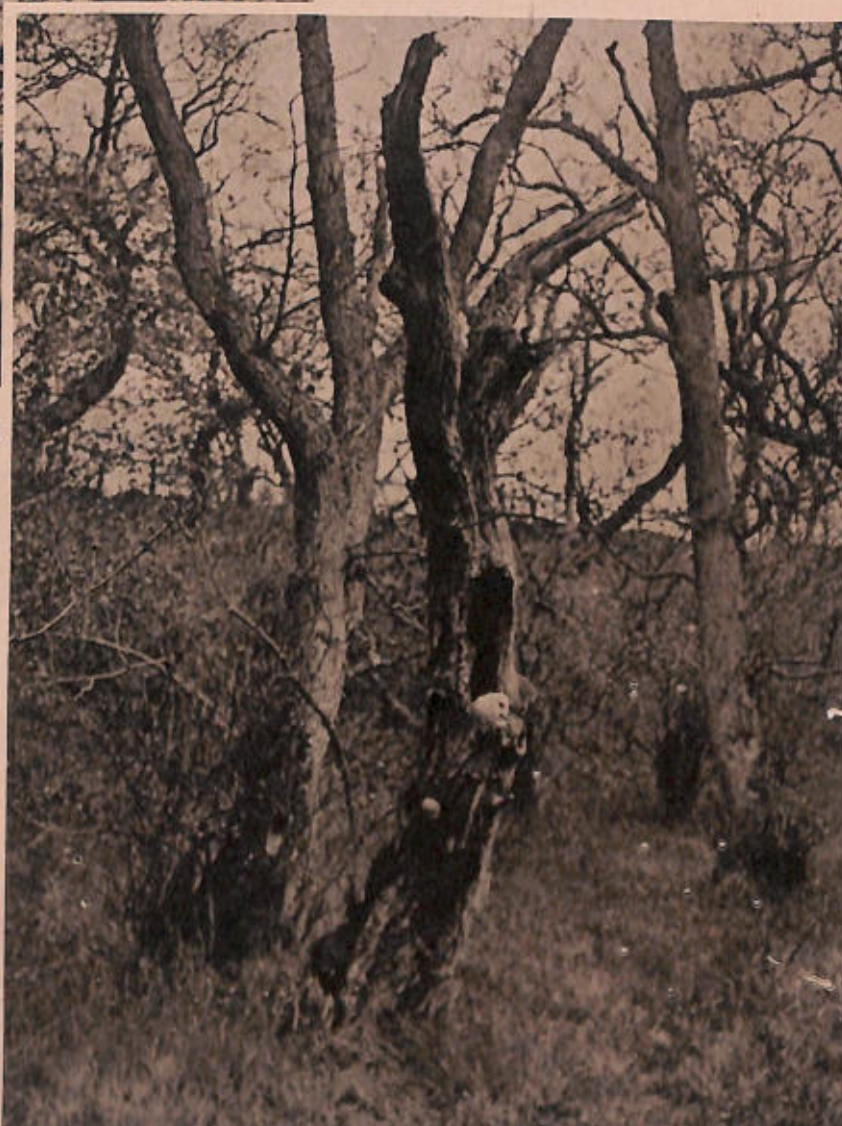
Let us study this nest more closely. Owls' eggs are often found two feet or more below the level of the entrance hole, thus entailing a scramble



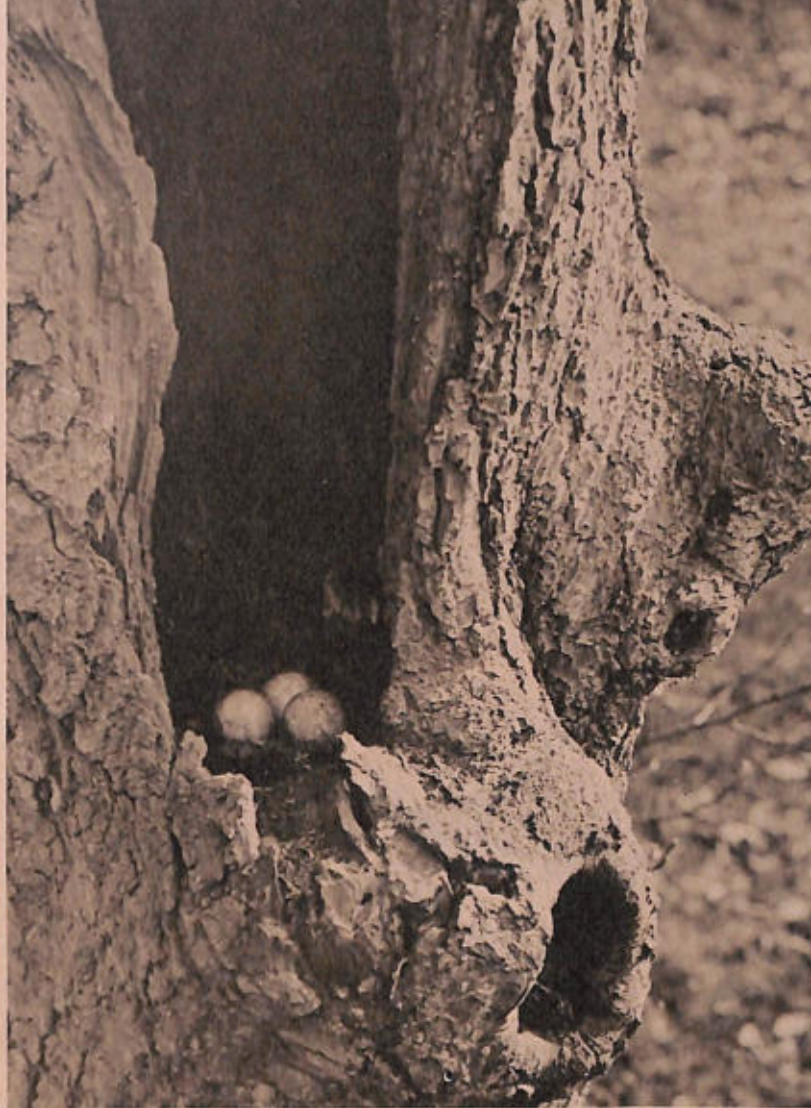
139. *Tawny owl roosting at
sundown*



140. *The tawny owl's ancestral
home*



141. *The eggs were laid at the opening permitting observation while brooding*



142. *About ten days old*





143 (Left). *Three weeks old*

144 (Right). *Surveying
the scene with intelligent,
dark-brown eyes*



in very restricted quarters each time the bird departs. This particular nest might well have been built for the express benefit of the photographer, for it was very low down and the eggs were on a level with the base of the opening. By standing on a stone the eggs could be photographed in comfort, with the camera held at eye level.

Of nest building or renovation there was no evidence whatever, nor was there, indeed, the slightest necessity for it. Ideal material was already there in abundance—a resilient cushion, several inches deep, of soft flaky wood chips, fallen from the walls of the crumbling interior. Wood is a very poor heat conductor; the whole mass was warmed in the course of incubation, and this stored heat maintained the temperature of the eggs, which were pressed into the wood flakes by the weight of the brooding owl. More than once I have found an egg completely buried. Had it hatched thus submerged, the chick would soon scramble to the surface. Three eggs had been laid so far this season (Fig. 141), but I did not know whether the clutch was complete, as the number ranges from two to four. The eggs are roundish and white, with rough, chalky shells, akin in



size to those of a farmyard hen. This first whiteness seldom endures for long, the eggs in wet weather becoming stained through contact with damp wood and plumage.

The entrance to the nest was fully exposed to the cold blasts of the prevailing east wind which it faced. On the right was a large hollow knot, well filled with wood chips. It would seem wise to use this cosy recess, but the mother owl laid her eggs exactly in front of the entrance, which was often deluged with driven snow and rain. This choice reflected her greater wisdom, for there she could observe while brooding, and if she dozed, there was no chance of her getting caught unawares.

Other subjects were occupying my time, so a month elapsed before my next visit. Upon reaching the spot I found a family of four, snuggling closely for warmth, their eyes tightly closed (Fig. 142). As incubation commenced when the first egg was laid, the chicks hatched out at intervals, their sizes showing the order of egg production. The eldest, in front, was apparently some ten days old, then followed the two on the right, which were two or three days younger, while the owl on the left was obviously the junior, being perhaps some five days old. There was a far smaller discrepancy in age among the family of this tawny owl than is often the case with the long-eared owl.

None of the birds were in sight as I approached the nest just ten days later. Peeping into the tree I found, as expected, the whole family cuddling together in the dim recesses of the annexe. Most of their time was spent there, for they love a dark corner, apart from the question of greater warmth. Time and again I took them out, but back they scrambled before I could get the camera in action. I managed a picture at last, an instant before they scuttled back (Fig. 143). They were then nearly three weeks old, and their mother refrained from attacking, which was rather exceptional, for with young they are vicious and dangerous.

Wondering whether they would still be there, I paid another call when exploring the area one week later. My arrival was opportune, for their instincts had developed to the stage which prompted departure. One was squatting at the nest entrance, while another, bent on exploration, had managed to scramble his way to the knot, and there he sat soliloquising, quite pleased with his achievement. This adventure evidently satisfied his ambition for the moment, and no attempt was made to wander farther.

The other two were not in sight, but a search in the vicinity revealed one perched on a bough fully thirty feet high, his gaze directed downwards, following my movements intently. The fourth would be somewhere near, but limited time forbade further exploration. The family would not depart in strict rotation according to age, for a junior of adventurous spirit would leave before a more placid senior, so I could not tell which members these two represented. The one at the entrance was un-

doubtedly the junior of the family, while the one on the knot looked three and a half weeks old, so was probably the second oldest, the truant in the tree top presumably being the senior.

On my closer approach the younger one dived into the annexe while the other just stood on his sturdy legs, surveying me intelligently with dark brown eyes (Fig. 144). He was certainly a handsome young fellow, his greyish-white down well speckled with rich brown feathers, and his chestnut-brown wings prettily barred. Although it was rather cold, I refrained from the impulse to restore him to the nest, for Nature knows best how to look after her creatures. Here he was safe and sound, and were he put back he would assuredly not remain. Excited by disturbance he might not again achieve such safety, possibly landing on the ground, where his unpractised defences of beak and claw would be of little avail against a seasoned stoat.

And now a brief tale of another young tawny, who in babyhood suffered a dire adventure. For years I had watched a sombre old yew, which had weathered the elements for three centuries or more. Some ten feet from the ground the main trunk branched into four, forming at the junction a deep and cosy cleft. It was an admirable site for a tawny owl's nest, so year after year I went in early spring, but there was never a sign of possession.

One year I was busy with other matters at the appropriate time, so my visit was omitted; through some ironical circumstance the owls chose to nest there that season. Passing that way on a later occasion, my first intimation was the sight of an owlet which had left the nest and ensconced himself on a yew bough. "Oscar" he looked, so Oscar he became (Fig. 145).

The following day I returned, expressly to get a movie record. No sign of Oscar anywhere, and he was unlikely to have wandered far, being only three weeks old. At a nearby cottage I learned with dismay that some boys from the city had found him the previous day and taken him away to be kept as a pet.

By a stroke of good fortune the address of one of the boys was known, so I made my way to the city. After much searching and enquiring I found myself in a dingy slum garret. There, near the ceiling, on a grimy old clothes-pulley, sat a pathetic and woebegone owl. On the table was a saucer of bread and milk, untouched—as well it might be.

After a somewhat delicate half-hour I emerged with Oscar in a box. Back to his native woods he went, back to a life of freedom, little the worse for his adventure. Then he eagerly swallowed some pieces of raw meat. The kindly cottagers promised to watch for intruders, so I felt that his welfare was assured. After sundown his parents would find him, in the leafy heights where I left him. And that was the last I saw of Oscar.

CHAPTER XXI

The Garden Warblers return to their Dell

NATURE was in a kindly mood that dewy May morning as I sat in the birch wood, watching and waiting. Here the birches grew thickly, but gave place a little way ahead to a sheltered and secluded clearing where the sun broke through, but which was protected by the dense woods all round. Large hawthorns grew in abundance, now covered in snowy blossom, and also briars, rank with unchecked growth, their branches garlanded with honeysuckle sprays; the rest of the glade was choked with riotous undergrowth.

The spring breezes bore from this dell sweet scents mingled with the songs of birds. The woodland was pervaded by the chorus of willow warblers, but much as I admired their exquisite silvery notes, sweet and yet wistful, I strained my ears for a certain undertone. My efforts to detect it were in vain, so I rose and proceeded towards the dell.

My steps were directed towards a certain brier tangle, for there, every season, I find a particular objective. A few moments later I heard the welcome call, low and subdued, but quite unmistakable—"Tek-tek-tek-tek-tek-tek-tek!" The garden warblers had returned. Just as that other warbler, the whitethroat, will return unfailingly to a certain limited area, so will the garden warbler. This particular rose thicket, one among scores, holds some mysterious fascination for this species, for there is always a nest within half a dozen yards of it.

Although subdued at first, the undertone became more audible and insistent as I approached, clearly indicating that I was "getting hot," so I paused by the brier and looked about me. Without a shadow of doubt the nettle-bed demanded exploration, so I systematically eased the luxuriant plants aside with the aid of a long stick. After a few minutes' search I was rewarded. There was the same flimsy hammock as before, daintily slung round the stems of a number of nettles, deep in the lanky growth, but this time it was built of fine grasses and lined with horse-hair and a little willow-cotton (Fig. 146).

The hammock was no larger than a tea-cup. It was so frail and loose in structure that one could see right through the walls, which were nevertheless tough and flexible, and the whole nest weighed only but a fraction of an ounce. Yet it was so deceptively strong that it emerged intact from the wear and tear of a brood of five or six.

The hen was disposed to be friendly, coming quite close and obviously anxious to return to her six olive-green eggs, blotched and clouded with brown. By cultivating her friendly attitude, I was privileged to photograph her that same afternoon (Fig. 147), but this was the beginning and the end of the contemplated series, for the eggs soon vanished—the work of predatory jays, I suspect, which frequented the adjacent woods.

When a nest becomes a casualty, another will probably be built in the same area, for this is the chosen territory for the season, and others that would suit are in all probability occupied. I allowed a fortnight to elapse before I returned to explore, and again heard the warning "Tek!" The new nest was built among nettles, reeds and meadow-sweet and already contained three eggs (Fig. 148). Being on a short holiday, I kept it under daily observation and found four eggs the following day. The hen then commenced to sit.

Two days later I saw a clutch of five, so the last egg had been laid when four had been incubated for one day. One egg per day is the rule at laying time, though sometimes a day is missed in a cold spell; but this does not affect simultaneous hatching, as incubation only commences when the full complement is reached. This was therefore an uncommon case of further laying after sitting had begun; the period of incubation is consistent, so I decided to watch closely at hatching time, for one chick should surely be a day later in coming out.

There were no other garden warblers within five hundred yards, so there was no competition and a wide choice of nest sites in the area. But the lure of that brier prevailed, for the second nest was built within five yards, the first being only six yards from the bush, on the opposite side.

The pair seemed to have forgotten their recent sorrows, for the olive-brown hen sat brooding while her mate sang love lyrics in a May tree, which, stirred by the spring breeze, shed cascades of white petals around him. The beautiful idyll was charming to see, for never was a swain more gentle and attentive than was this garden warbler. Between the rapturous medodies he flew down to the nest and murmured to the hen, and later even took his turn on the eggs.

With hatching time came the confirmation of my reckoning—there were four chicks a few hours old and one egg not yet even chipping (Fig. 149). Like all newly hatched warbler chicks, they were tiny pink morsels of flesh with no covering. The fifth egg hatched on the next day, but at the age of four days they all looked alike in the nest (Fig. 150), and only by examining them in the hand could I distinguish the junior.

Nothing disturbed the placid romance, though at a later stage disaster nearly occurred when one of the chicks fell out of the nest, and by sheer good luck I found him just in time, cold and wet, but still alive. Room was found in the crowded nest and all five were duly reared.







147 (Left). *The hen was disposed to be friendly, ignoring the camera*

148 (Top). *A slender hammock of dry grasses*

The time for dispersal arrived, and one morning all but one of the birds departed. When a brood is ready to leave there is usually a restless member who takes the lead and whose example the others follow. At this stage they are all keyed-up, and the crackle of a twig as one approaches is enough to catapult them from the nest.

The chick which hatched last was evidently not quite ready to leave, but he was not affected by the departure of the rest. He remained in solitary state for one more day (Fig. 151), probably missing the accus-

149. *Four newly hatched chicks and a belated egg*





150. *At the age of four days they still have no covering*

tomed warmth of his brothers and sisters and wondering why the crowded nest had suddenly become so commodious. As long as any chicks remain in the nest they will be tended diligently, though if one should fall out prematurely, he will be left to perish, as the parents will not heed him while the main brood remains in the nest.

These little brown warblers will soon learn to fend for themselves, and by autumn old and young alike will be prepared for their long flight to Africa. And when, next spring, they return to the land of their birth, they will find a warm welcome in that fragrant brier dell.

151. *This belated chick had the nest to himself for one day*



CHAPTER XXII

The Whinchats Respond

PROBING along a hedgerow you will find blackbirds' nests in abundance, for their presence is proclaimed by a shrieking and clamorous departure. But try that method with whinchats and you will never find a single one. I have limited a nest to a ten-foot area and yet failed to locate it until the youngsters were being fed.

These handsome birds are extremely timid, seeking seclusion in the wildest and most remote places, and always shunning the haunts of mankind. Arriving in late spring from their winter quarters, they soon settle down in their nesting territories, allowing some little time to elapse before deciding to build. They prefer lonely railway embankments, remote open spaces and overgrown country lanes—places where herbage is rampant.

During my second year of bird photography, I found a nest in an open country lane. It was a lane with wide verges, fenced on each side, the rough road being a mere eight feet wide. A tangle of bracken and tufty moorland grasses provided the seclusion the whinchats sought for their nest. For a fortnight I spent some hours there each day and did not see a soul till the very last day.

This gives some idea of their love of seclusion, and to this day I am surprised at the readiness and extent of the response, not only of the hen, but also of the cock, though it took longer to gain his confidence. When he did respond he soon lost his shyness and finally became as tame as the hen. This was decidedly unusual; for not only among whinchats, but in almost every species of bird, the hen is the one with the courage.

At that time I was only eighteen, and had too little experience of whinchats to put the affair in proper perspective. Before I found another showing any disposition to respond, an interval of twenty years had elapsed, though meanwhile, through lack of time and facilities, I had made no special effort with others which I had found. The last one responded spontaneously, with no initial effort on my part.

Let us return to the lane and hear the tale of this pair, which, in spite of the lapse of time, I can recall in full detail, this being my outstanding bird experience at that time. As I walked up the lane a bird call sounded from somewhere ahead—"Ui-tack, tack! Ui-tack, tack!"—a short

whistle, then two staccato notes like two small pebbles knocking together. This was a whinchat's alarm call, so I paused to observe, then saw a whinchat perched on a post a hundred yards ahead.

Whinchats do not come all the way from the Mediterranean merely to admire the prospect from English fences, so I decided to investigate the matter. I waited—and so did he. Returning that way, I saw him again, on a different post, but in the same area. Both birds sounded the characteristic alarm, so I watched from a distance of two hundred yards. In twenty minutes one appeared to flit into the bracken, so I gave her ten minutes in which to settle down and then moved slowly forward on the grass verge, carefully watching the approximate spot.

Before I had covered a dozen paces, she flew out, fully a hundred and fifty yards ahead, which clearly denotes her timidity. I returned on successive days, but it took five days to find that nest, it was so cunningly concealed on the ground among dead bracken (Fig. 152). From directly above the nest was completely invisible, for it was deep in its surroundings and well hidden by overhead cover. Even when viewed horizontally the greenish-blue eggs could hardly be seen, the nest being deeply recessed at the end of a tunnel in the grass. The whinchat has the reputation of making one of the most difficult nests to discover—well does she deserve it.

Before the eggs hatched the hen by degrees became more reconciled to my daily visits, not leaving her nest until I got within fifteen or twenty yards—a considerable improvement on the original hundred. I tried the effect of sitting down quietly at the point where my presence disturbed her, and felt that progress was being made when she returned within a few minutes. The cock did nothing but sound the alarm, restlessly flitting from post to post.

When chicks appeared and had to be fed, the hen's reserve showed rapid relaxation, due no doubt to the combined effect of familiarity allied to unalarming conduct on my part and to the urge of maternal duties. In a couple of afternoons I had reduced my distance to the width of the road, so that she continued her duties completely unconcerned while I sat on the verge exactly opposite. Encouraged by this progress, I thought it was time for the camera to come on the scene, so it was fixed on a tripod and moved in stages to a point six feet from the nest. At first she disliked the clicks of the shutter, but soon found them harmless and not worth heeding.

The next afternoon I took a number of photographs, releasing the shutter by means of string. The bird always alighted on the curved stem of a bracken immediately over the nest, and here she would pause after feeding her family. I admired her rich brown plumage and handsome markings, and noted her eye streak and lovely light buff breast.



152. *Whinchat's nest—one of the most difficult to find*

But most of all I admired her wonderful placidity. There is something very exhilarating in watching the growth of confidence.

As the youngsters developed, her visits became more frequent and food in prodigious quantities was brought along. Insect food was produced in great variety (Fig. 153), ranging from fat green caterpillars to daddy-long-legs, grubs, mayflies, moths and butterflies with wings still fluttering. By now we had become such friends that I had moved the camera to two-and-a-half feet and was using the bulb to make the exposures. I confined my efforts to the bracken, recording the bird with all types of food; photography at the nest was impossible without opening it out—a course which I would not consider.

When the hen first responded the cock was the essence of timidity, not making the slightest attempt to come near. As time went by he began to gain confidence and would sometimes muster enough courage to perch on one of the fence posts some fifteen feet away. When I retired to the other side of the road, he would perch on the nearest post with a



153. *The hen with two moths*

beakful of food, and once he hovered over the bracken but failed to alight. To assist him I erected a perch between the post and the bracken, and here he came to inspect (Fig. 154).

Thus encouraged, his assurance rapidly increased, and I was soon photographing him freely, with the camera less than three feet away and myself unconcealed, just across the lane. What a handsome bird he looked, with his rosy pink breast, more richly marked than that of his wife, and proudly bearing in his bill a fat and luscious caterpillar (Fig. 155). An aristocrat, if ever there was one! In the end there was nothing to choose between the pair in the matter of tameness. From that obscure beginning I never for a moment expected such a result, but there it was. Just another case of confidence engendered by gentle treatment.

A glance at the nest before leaving revealed that the end of the story was near. The following day, I noted a change of behaviour, for instead of going to the nest from her bracken perch, the hen flew into the grass some six feet away. There I found two chicks, beautifully speckled in warm shades of brown (Fig. 156). The other two were still in the nest, so I lifted them out and got the whole family settled on a bramble stem,



154 (Top). *The cock came to investigate*
155 (Bottom). *Proudly bearing in his bill a huge caterpillar*



where they watched contentedly my efforts with the camera, their beautiful colouring aglow in the soft June sunshine (Fig. 158). Some young birds are not easy to identify, but in this case the characteristic eye streaks and light markings on throats and necks clearly proclaimed that they belonged to the whinchat fraternity.

As I was absorbed in my task, I had failed to observe the approach of a farmer and his dog, who suddenly appeared on the scene—the sole intruders for a fortnight. When the youngsters saw the stranger they reacted immediately, looking askance at the dog and then instinctively huddling together for mutual protection (Fig. 157). Chicks will cuddle for warmth, but no such motive arose on this hot and languorous day. The action was prompted by fear alone. As soon as the intruder had passed by they quickly regained their composure.

My other tame whinchat was found many years later, under different circumstances. From the prosaic interior of a railway carriage, I noticed a cock whinchat perched on a fence at the foot of an embankment. Next day he was there and the next again, so, knowing that I should have no peace of mind until I had investigated the situation, I went along that evening. Like all whinchats' nests, this one was elusive, though the parents were feeding their young; but I managed to find it eventually.

When the chicks were about a fortnight old, I returned with my camera, prospectively. A spark from an engine had fired the dry grass, which, still smouldering dangerously near the nest, had caused the youngsters to depart a day or two prematurely. Three were located quite close to the nest, so, having some time at my disposal, I rigged up a branch and photographed them.

When dealing with birds, there are times when apparent certainties fail to materialise, while on other occasions something quite unexpected transpires, as in this case. Before many minutes had passed the hen appeared with food, so I retired in accordance with my standard practice. With a beakful of food she made a few fluttering reconnaissances, hovering almost over the branch and evidently trying to assess that alien factor, the camera on its tripod, left just where I had been using it, close by the branch.

Evidently satisfied, she came again and fed the chicks, somewhat hurriedly, but with no particular manifestation of alarm or uneasiness. She just needed a little reassurance, so I allowed her to make a dozen visits in the same manner. This had the desired effect, for she relaxed markedly, showing a disposition to linger rather than hurry away after disposing of the food.

The fire had evidently disturbed the family routine, for the chicks were ravenously hungry, nearly falling off the branch in their eagerness to reach the food. The hen worked like a Trojan, but still they were un-

PHOTOGRAPHIC DATA—Continued

Figure	Camera	Lens	Exposure (In Seconds)	f. No.	Emulsion	Filter	Lighting
102	S	7½"	6	32	O	—	D
103	S	7½"	½	16	O	—	D
104	S	7½"	½	16	O	—	D
105	S	11½"	1/50	11	O	—	B
106	S	7½"	30*	64	O	—	D
107	S	7½"	3	44	O	—	B
108	S	7½"	1/25	16	O	—	B
109	S	7½"	1/10	16	P	—	B
110	S	7½"	60*	64	O	—	D
111	S	7½"	1/25	13.5	P	—	B
112	S	7½"	1/5	22	P	—	B
113	S	7½"	1/50	11	P	—	B
114	S	7½"	1/50	16	P	—	B
115	S	7½"	1/25	16	P	—	B
116	S	7½"	1/25	16	P	—	B
117	S	7½"	1/25	16	P	—	S
118	S	7½"	¼	22	P	—	B
119	S	7½"	1/25	16	P	—	B
120	S	7½"	1/25	16	P	—	B
121	S	7½"	1/100	16	P	—	S
122	S	7½"	1/100	16	P	—	B
123	S	6"	1/200	16	P	—	S
124	S	7½"	1/300	16	P	—	S
125	S	7½"	1/50	16	P	—	B
126	S	7½"	1/50	16	P	—	B
127	S	7½"	1/100	13.5	P	—	D
128	S	7½"	1½	32	O	—	D
129	S	7½"	45*	64	O	—	D
130	S	5"	1	22	O	—	B
131	S	7½"	1	22	O	—	B
132	S	7½"	1	22	O	—	D
133	R	6"	1/20	11	O	—	B
134	S	7½"	12	44	P	—	D
135	S	7½"	15	64	O	—	D
136	S	7½"	1/5	22	P	—	S
137	S	7½"	1/5	22	P	—	B
138	R	6"	1/20	11	O	—	B
139	K	5"	1/25	16	O	—	D
140	K	5"	1/10	11	O	—	D
141	K	5"	1/10	11	P	—	B
142	K	5"	1/10	11	P	—	B
143	K	5½"	1/10	13.5	P	—	B
144	K	5½"	1/10	16	P	—	S
145	S	7½"	¼	16	O	—	D
146	S	7½"	16	44	O	—	D
147	S	7½"	3	22	O	—	D
148	S	6"	8	44	O	—	B
149	S	7½"	½	32	P	—	B
150	S	7½"	¼	22	P	—	B
151	S	7½"	½	22	O	—	B
152	S	7½"	16	44	O	—	B
153	S	7½"	1/25	16	O	—	S
154	S	7½"	1/25	16	O	—	S
155	S	7½"	1/25	16	O	—	S
156	S	7½"	1/5	22	O	—	B
157	S	7½"	1/10	11	O	—	B
158	S	7½"	1/10	16	O	—	S
159	S	7½"	1/100	16	P	—	B
160	S	7½"	1/25	11	O	—	B
161	R	6"	1/250	11	P	—	B
162	S	7½"	10	44	O	—	B
163	K	5½"	1/25	16	O	—	S
164	R	6"	1/120	16	P	—	B

MAKING FRIENDS WITH BIRDS

PHOTOGRAPHIC DATA—Continued

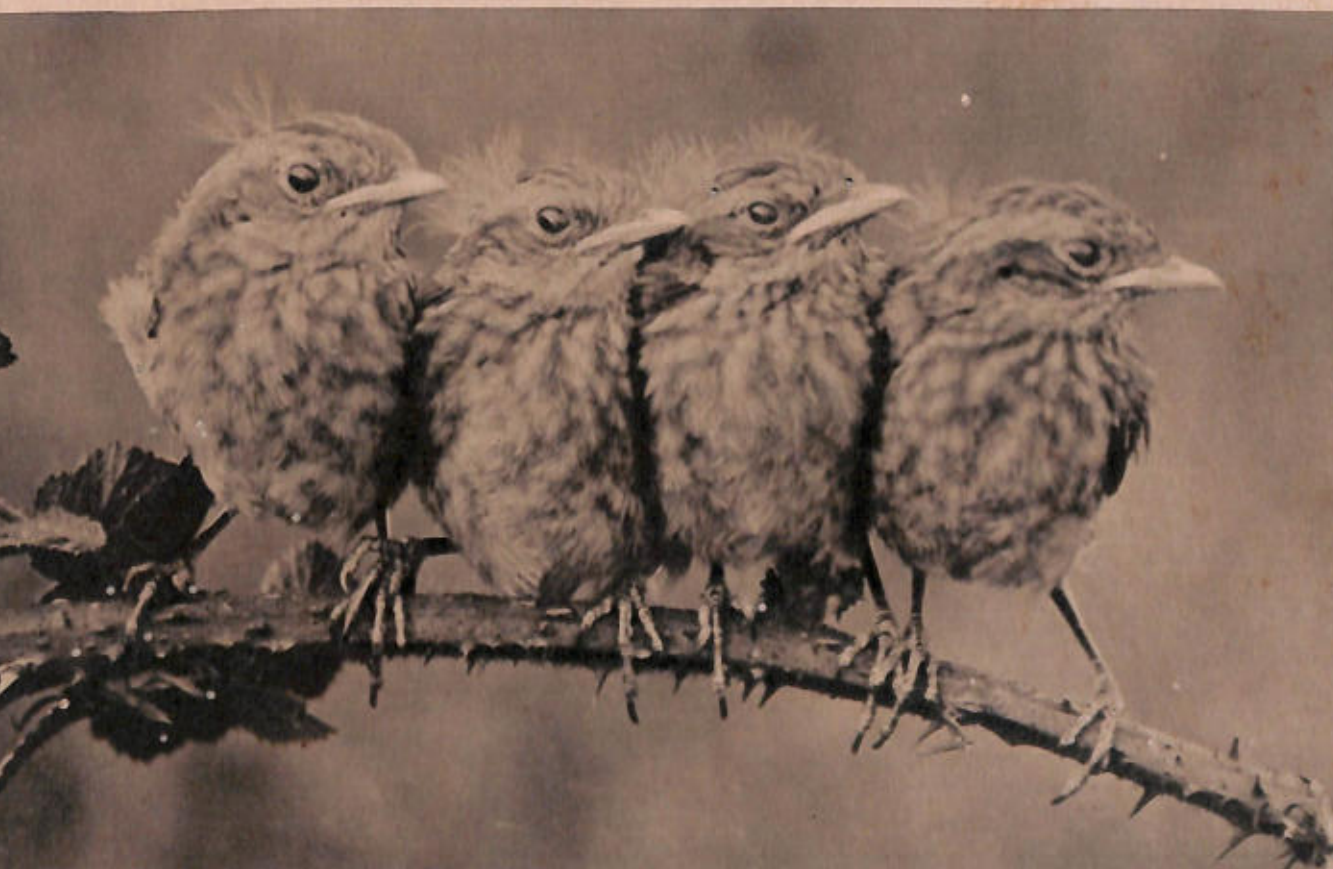
GREENFINCH SERIES

Figure	Camera	Lens	Exposure (In Seconds)	f. No.	Emulsion	Filter	Lighting
Day of hatching	S	7½"	$\frac{1}{2}$	16	O	—	B
1 day old	S	7½"	1/10	9	O	—	D
2 days old	S	7½"	$\frac{1}{4}$	13.5	O	—	B
3 " "	S	7½"	$\frac{1}{2}$	11	O	—	D
4 " "	S	7½"	1/10	11	O	—	D
5 " "	S	7½"	$\frac{1}{4}$	16	O	—	S
6 " "	S	7½"	$\frac{1}{2}$	13.5	O	—	D
7 " "	S	7½"	$\frac{1}{2}$	11	O	—	D
8 " "	S	7½"	1/5	16	O	—	S
9 " "	S	7½"	$\frac{1}{2}$	8	O	—	D
10 " "	S	7½"	$\frac{1}{4}$	11	O	—	B
11 " "	S	7½"	1/25	8	O	—	D
12 " "	S	7½"	1/3	8	O	—	D
13 " "	S	7½"	1/25	8	O	—	B
14 " "	S	7½"	1/25	13.5	O	—	S



156 (Top). *Two chicks near the nest*

157 (Bottom). *When a dog appeared they huddled together in fear*





158. *The young aristocrats sat at ease*



159. *Having just fed the family, the mother gazed in bewilderment on a row of beaks still gaping*

appeased. One Oliver Twist is enough for a family, but with three the problem is acute. No wonder the mother bird, having just fed them, gazed in bewilderment on a row of beaks still gaping! (Fig. 159.)

In accordance with practice she tried to feed them in turn, but this operation was difficult owing to the general scramble which confronted each visit, the youngster on the left often pushing out of turn.

To brighten the proceedings, an amusing incident occurred. The food supply came from the embankment, and the hen always alighted on the right of the branch, stretching past the others to reach the outer chick. To reach this eager claimant more quickly she alighted on the back of the nearest, which, quite unprepared for this sudden accession of weight, lost his balance and turned a back somersault! (Fig. 160.)

Despite the blurring, the photo clearly depicts the incident and also demonstrates the surprising amount of movement that can occur in 1/25th second.

I clicked away until no films were left. The whinchat's visits continued for another half-hour, then at long last there were signs of appeasement. I took the chicks back to the nest and found them content to stay.

Reviewing the occasion, I am inclined to think that hunger caused their premature departure, and that I arrived just as the feeding rhythm was restored after a period of interruption. Had I not arrived, they would have been fed in the grass. As it was, they stayed in the nest for another two days.

160. *The chick overbalanced when the parent alighted on his back*



CHAPTER XXIII

Bird of the Breezy Uplands

FOUND in abundance throughout the country, the lapwing must surely be one of our best-known birds. Should his distinctive crest, rounded wings or boisterous aerial evolutions fail to denote his identity, his voice will provide a certain clue, for it is impossible to confuse his call with that of any other bird. In high-pitched screaming tones he will repeatedly proclaim his name—"pee-wit!—pee-wit!—pee-wit!—pee-wit!"

The sun-kissed, breezy uplands and ploughed fields would lose their very spirit without him. In winter his presence is missed in these rolling hillsides, when the earth lies in frostbound silence, for then he resorts to more sheltered localities, haunting in large flocks the low-lying marshes and tidal estuaries.

One hard winter I observed a particularly large flock, consisting of rather more than thirteen hundred birds, as nearly as I could count in the print (Fig. 161). This vast assembly occurred through the temporary fusion of several flocks which, after wheeling round for some minutes, separated into seven or eight units, each of which proceeded independently. When food is scarce it might be thought that birds would fare better singly, but in Nature's economy the flock system has proved the more efficient, for a greater number of searchers results in more numerous discoveries of supplies.

Some time in February, as winter ends and the ground gets less hard, the green plovers begin to reappear in their upland haunts, resplendent in their gay spring plumage. Long before actual nesting begins, they claim and guard their territories, then in due course experimental "scrapes" become evident, the presence of which indicates the approximate position of the subsequent nest.

The nests are for the most part very primitive, with no other preparation than a scanty gathering of straws or stalks in a bare depression in a ploughed field or in grassland. Rushes abound in many of these high elevations, but their cover is not sought, in spite of the bleak conditions of this early season. Sometimes a nest is found near a single protective tuft, but they generally occur in short windswept grass, on a slight eminence commanding an extensive view, so that enemies can be detected at a



161 (Top). *A larger winter flock of about one thousand three hundred peewits*
162 (Bottom). *Peewit's nest in a ploughed field*





163. *Young naturalist, aged two, examining a peewit's nest of his own finding*



distance. Sheltered, low-lying ground is avoided, partly because of the danger of flooding and partly in order that the birds may guard against sudden surprise.

The eggs, ranging from stone-coloured to olive-brown, blotched and spotted with dusky black, can easily escape detection, especially on ploughed ground littered with fragments of stubble, where they harmonise particularly well with their environment (Fig. 162). The pear-shaped eggs, usually four in number, are invariably arranged with pointed ends inwards, thus covering the minimum of space. Should one or more be reversed, the parent will invariably rearrange them correctly before resuming brooding.

When peewits are suspected to be nesting in a certain field, a good way of finding them is to creep along behind a wall, then suddenly appear above it, watching keenly for departing birds, which habitually run some distance before taking wing. Look somewhere behind the course of the bird and the nest will very probably be discovered. After a snowfall sufficient to whiten the ground, the nests are revealed as dark patches where the sitting birds have left. I have known peewits survive in two or three inches of snow, which does not lie long in April.

In front of my house there is a ploughed field in which three or four pairs of peewits nest regularly. This field is also the resort of rooks, which feed there all through the winter. When the peewits arrive these regular rook visitors are much puzzled by their hostile reception, for their intentions are quite harmless; though I would not say that they would be over-scrupulous if they were to find a clutch of eggs. It was really entertaining to watch the peewits swooping down with untiring persistence until fully a dozen resentful rooks were finally driven off the field.

At the tender age of two years, my son Kenneth accompanied me on a short outing to a peewit area. I showed him a number of nests, then he toddled about trying to find one himself while I was busy with a snipe's nest. Presently he called, and I found him beside a nest; great was his elation when I told him this was a new one, so I commemorated this great occasion by snapping this budding young naturalist in the act of examining an egg, just before testing it against his cheek for warmth (Fig. 163). The assurance that it was the best nest of the lot provided him with a topic for several months.

You will never find young peewits in the nest, for they toddle away as soon as they are hatched, their mottled grey down matching the ground so amazingly that you can look at a squatting chick without seeing him, particularly as they lie motionless in obedience to their parents' call. Even day-old chicks will "sham dead" and lie limp and inert in the hand; but when put down and all is silent, bright eyes are opened and little heads cautiously raised, and away scuttle the young rascals when

they think the coast is clear. Should you see one running, keep your eyes fixed on the exact spot where he disappears in the act of squatting; let your gaze wander for one instant, and you will be surprisingly lucky if you find him.

One day I caught sight of a good-sized chick in a stubble^o field. He depended on speed to elude me as I ran, but squatted when he saw me overtaking him. It was impossible to photograph him standing in the open, as he scuttled away at full speed as soon as I removed my hand. With the aid of a passer-by I finally managed to get him more or less cornered against a stone wall, where he squatted on a slab of stone; so I focused him and stood in readiness, finger on shutter release. Finally his patience was exhausted—not much before mine—and the moment he rose I clicked the shutter.

Standing firmly on his long, sturdy shanks, he was a delightful little bird to watch, so eager and alert, with lovely white underparts, the rest of him finely speckled and mottled in white, black and many shades of brown (Fig. 164). With his keen, intelligent eyes and his white collar, broadening into a white patch at the back of his neck, he was indeed a handsome sight.

Seeing a chance to escape he seized it with avidity and raced away, using the last ounce of power he could extract from those youthful legs. He fled through the stubble like a soul possessed, without a glance to right or left and with one solitary fixed purpose in mind.

In this headlong retreat he soon covered two hundred yards, then disappeared in a hollow. Some seconds later I caught sight of him again swiftly proceeding on an uphill course, before he faded away in the distance. •

CHAPTER XXIV

Early Days in a Greenfinch's Life

AT a fairly early stage in my dealings with birds I went one day to photograph a brood of young yellow-hammers, which I reckoned to be just about ready to leave the nest. To my surprise and disappointment they had gone, though apparently only half-grown a few days previously.

This sort of thing had happened before, and on other occasions I had been surprised to find them suddenly fully developed, so it was evident that to an observer they did not progress in regular stages. I decided that the best way of settling the matter was to take a series of photographs, and thus record the exact changes which took place daily, from hatching to the nest-leaving stage.

It was obvious that this would be a tricky affair. A casual approach to such a project would almost inevitably lead to disappointment, so clearly the whole business must be studied in advance and a plan of campaign formulated, to provide for every eventuality. This was possible except as far as the weather was concerned, and this was an unpredictable factor which would govern and could ruin the whole enterprise. Only one course was possible—to take a chance and hope for the best.

There were many things to consider. As I could only work in the evenings after business, the first essential was a nest readily accessible from home, so that the waning evening light could be utilised at its best. Furthermore, the nest itself must be so situated as to facilitate the removal of a chick. Newly hatched chicks are so tiny and delicate that an attempt to lift one with the fingers, from the crowd in the well of the nest, would be very liable to cause injury. A safe way of removal is to roll the chick into a teaspoon by means of a soft twig, then gently tip him out in the required spot.

In order to depict his daily growth he must be photographed on the same scale throughout. His tiny size when hatched should not mislead one into using too large a scale, or there will be trouble later when he is fully grown. I had no idea what my subject might be, but, knowing the sizes of young birds at nest-leaving age, I could decide in advance the best scale to use. For a bird up to the size of a warbler or finch—about one-third of the natural size; for a thrush or the like—about one-fifth, or a quarter.

A large scale will present difficulties. Later, I started a willow warbler series; the new chick looked so tiny on the scale mentioned that I started a double series, respectively one-third and two-thirds of the natural size. For the first seven days I rejoiced in the larger scale, but after that it became unmanageable, partly because the image was too large, but mainly through movement. On this large scale (two-thirds) the chick must be in the precise plane required, as a variation of as little as a quarter of an inch is sufficient to put him out of focus—hopelessly so when on the near side. The smaller scale affords a little latitude, but not much, which is an advantage, since well-grown young birds are restless when removed from the nest.

Another essential device is a "safety net" beneath the subject—a duster or handkerchief fixed hammock-wise to four sticks. A fall of three feet might injure the tender chick, apart from the question of finding him before he became cold. Until some feathers appear the subject becomes chilled very quickly, so my practice was to set up the camera and tripod and focus on a matchbox where the subject would be placed (in this case a broad branch with a small, shallow depression on top, which helped to keep the bird in position). For the first seven days the chick should not be kept out of the nest for more than two or three minutes at a time, which is adequate for photography when everything has been previously set, with the exception of the momentary fine focusing on the subject himself. Leisurely methods are out of the question when the chick is brought out, and will surely cause casualties. Likewise, a fall into wet grass might have fatal consequences, even though the chick be immediately restored among his warm brothers.

Having decided on this plan, I searched for a suitable nest, and found one in an old hawthorn tree only ten minutes from home. This was the nest of a greenfinch, containing four eggs, and as there were some hours' variation in their hatching, the young birds were of slightly different ages, so I had to be careful to get the same one each time. For the first four or five days it was necessary to examine them in my hand and select the largest, but after this it did not matter which was chosen, as no difference could be discovered.

I had to visit the nest every day for eight days previous to hatching, as I did not know the state of incubation. Hatching fortunately occurred at a week-end, the first chick appearing at 2 p.m. on a Saturday. As my series had to be taken in the evenings I took the first photograph at 7.30 that day, when he was five or six hours old. There were still three eggs, but at 6 a.m. on Sunday, I found three chicks and one egg, well chipped, so there was a difference of some sixteen hours in their ages. A photograph was taken at the same time each succeeding evening until the brood was fully fledged, at the age of fourteen days.

The different stages during these twenty-four-hour intervals are clearly shown in the illustrations on pages 196-197. As the young birds were reared by their parents under perfectly normal conditions, they are typical of others and true to Nature. On the other hand, a laboratory experiment would be impracticable, as I doubt if a young bird of this type could be reared otherwise than by its parents. Chickens, which pick for themselves, are an entirely different proposition.

In a short time the mother got so accustomed to my daily visits that she showed little concern when I took her little ones out of the nest, and would simply hop on to a branch a couple of feet away until I had made my selection, then she would resume her nursing, even when I was up the tree. The weather was extremely bad on occasions, but it was a case of making an exposure whatever the conditions, or else abandoning the series. Some of the pictures are below standard on this account, through under-exposure, but nevertheless they suffice to complete the links in the story.

The wind was a source of considerable trouble, as it kept the fine down on the young birds in continual motion, and this necessitated shorter exposures than I should otherwise have made. At other times it was raining, and a sheet of glass had to be used to protect the young bird, while a hood was needed to preserve the lens from raindrops. Whenever possible I made duplicate exposures; but under the worst conditions, when duplication was particularly desirable, it was impossible owing to consideration of the subject's welfare.

In order to maintain the scale the camera was racked out to the standard position each time, the correct distance being achieved by moving the front leg of the tripod until the subject was in focus. The progressive increase in size shown in the photographs is thus solely due to the young bird's development and not to any fluctuation in camera distance. This is the only way of attaining the desired result; no variation in size could possibly arise through faulty camera positioning, as an error of a fraction of an inch would put the chick out of focus.

Altogether the little subject bore the operations very well, but the exposures had to be rapid, both in the earlier stages, when the breathing was more perceptible and wind-blown fluff troublesome, and later when he was less inclined to sit still as he gained in strength and felt his power. Sometimes, just as the shutter opened, he would suddenly decide to stretch his legs or wings or settle down more comfortably, so another exposure had to be made.

About $1/3$ rd second represented the maximum exposure that could safely be given; owing to wind, I was often obliged to give $1/25$ th second when I should have chosen $1/3$ rd second; and in a poor light, with both wind and rain, I was forced to rely on a maximum of $1/10$ th second, with



Day of hatching



4 days



1 day



5 days



2 days



6 days



3 days



7 days



8 days



12 days



9 days



13 days



10 days



14 days



11 days



Just hatched (for comparison)

great risk of movement, although the conditions demanded one or two seconds' exposure, as for instance the pictures of him taken when eleven and twelve days old. In the hope of better conditions I have subsequently attempted three other series, but each was broken by the weather. When all is considered, a solid fortnight of good weather is a great deal to expect, so instead of depending on fickle daylight, synchronised flash-bulbs might be a better solution. However, I obtained a set of negatives which served the purpose, and all the set-backs and difficulties were soon forgotten.

On looking at the photographs, it will be noticed that during the first nine days the bird was not strong enough to hold up his head, and first did so when ten days old, while from the eleventh day onwards he was able to sit up quite easily. Also, that not until the ninth day were his eyes kept open, although they were opened momentarily from the eighth day.

The wings show from birth, but the feathers on them are not very perceptible until the fifth day, after which their development is rapid. The dark bars on the wing feathers first show when the bird is nine days old, while five days later, with the exception of the tail, he is completely fledged and the down has disappeared. After the wing feathers, the next to develop are those on the top of the back, which run in a line from neck to tail. At the age of seven days the feather shafts on the body are quite evident, the tail stump becoming visible at the same time. The tail is not fully developed at nest-leaving age, but is completed soon afterwards. The ears, in the form of orifices behind the eyes, show from birth until the seventh or eighth day, when they become obscured by growing plumage.

When I saw our young friend on the fourteenth day in his rich plumage, predominantly a yellowish green, I was dubious about seeing him again. So strongly did he feel the call of the open spaces that much patience was required to keep him in position long enough for my photograph. Compare him with the first picture and see the astonishing transformation achieved in the short space of a fortnight, not only in size, but in every other way.

The rest of the family was sitting on the edge of the nest and on adjoining branches, when I took him back at 8 p.m. An hour later I returned and found the mother on the nest, but I did not know how many chicks she brooded over. I did not disturb her, as it was better for the family to have another night at home, and in any case, they would naturally tend to disperse during the day, preferably in the early part. The nest was empty when I called at 6 a.m. the following day, but I spotted two youngsters in the topmost branches.

Such is the story of a greenfinch's babyhood.

CHAPTER XXV

The Photographic Aspect (1)

I HAVE heard it said that bird photography is not a hobby but a disease. When I reflect upon my own erratic comings and goings, missed meals, torn clothes and other idiosyncrasies peculiar to enthusiasts, I have the guilty feeling that it is. And I actually rejoice in its incurability! So entrancing is this occupation that I find it difficult to envisage the bird observer who does not at some time feel the urge to make camera records of what he sees.

When I started this work my knowledge of birds and photography was scanty. In vain did I search for books giving really practical information, so I had to find out for myself, through a lengthy and costly process of trial and error, with many disappointments and lost opportunities. In one book, for instance, the sole reference to young birds was that they make pleasing pictures and should be photographed; not a word about procedure nor a hint that there were any difficulties.

These chapters provide the sort of information I would have welcomed in my novitiate days. If my methods appear somewhat exacting, it is because there is so much that is worth considering. It can be assimilated in small doses.

As in most things, we get just as much out of this as we put into it. We can do it simply, without undue exertion or too much bother about details, and derive much enjoyment thereby. But we must not expect the results that accrue from a more serious and painstaking approach. The measure of success achieved will be exactly commensurate with the care and effort applied. If there are any short-cuts, I have yet to find them.

APPARATUS

People often ask me what I consider to be the best outfit for bird photography. The answer is simple—there is no “best” outfit. The choice of apparatus depends on the type and standard of work contemplated, and there is much diversity of opinion on this subject. There are three main types of suitable apparatus: miniatures and small roll-film Reflexes with telephoto lenses; larger Reflexes, also with telephoto lenses; stand cameras, used on tripods. All have their advocates and all will do the job. To go to the other extreme, I have seen excellent

pictures of nests, and of sea birds, taken with box "Brownies" plus "Portrait Attachments."

The production of bird pictures presents problems and difficulties which must be surmounted at some stage—either in the field or in the darkroom. As a general rule, the easier the field operations the more exacting the processing sphere. Snapshotting methods with small hand-cameras make the taking of pictures easy and pleasant, but the results usually depict too much background and not enough bird. Thus are the difficulties transferred to the processing stage, for this foundation is not the right basis for good pictures in a worthwhile size. Apart from definition, the background will seldom be right. I prefer to solve the problems on the spot by using a larger camera and devoting ample time to preparation, and the rest is then comparatively easy.

Whatever the apparatus, there is one common factor of considerable importance—the desirability of a lens of greater focal length than is normally fitted, with sufficient extension for its use at close quarters. This provides the means of securing large images with good perspective; shorter focal lengths demand too close an approach, often causing distortion. Suitable focal lengths for general work are: for 35-mm. cameras—90 mm.; $2\frac{1}{4}$ -inch square—6 inches; $3\frac{1}{2} \times 2\frac{1}{2}$ inches—6 inches to 7 inches; $\frac{1}{4}$ -plate— $7\frac{1}{2}$ inches to 9 inches.

There are problems of focusing, apart from perspective, with short focal lengths. For example, in the case of a large image of a small bird, facing the camera, f.11 may suffice with the lens advocated for getting both head and feet sharply defined, whereas f.22 may be required for a shorter focal length. The latter would entail four times the exposure, which would often be prohibitive through movement of the subject.

The owner of a "normal" camera should not, however, be deterred by his lack of lens power, but should realise and keep within his limitations. Too close an approach should be avoided, even if the subject will submit. Two feet is quite near enough; at this, or any other distance, perspective will be the same with any size of camera and any focal length. The only variation will be in the size of the image and the amount included.

Just as a successful relationship with birds depends on careful attention to numerous small details, so with photography. Disregard at any single point, however trivial, will result in some shortcoming in the final picture. Bad backgrounds and assertive out-of-focus areas are the most prevalent faults seen in bird pictures, and both are largely avoidable. Care and correct methods will result in pleasing and attractive pictures which are not just records. Every effort should be made to visualise and remedy faults on the spot, instead of transmitting them to the negatives.

I started this work with the only camera I then possessed—one of the

folding type; with 5-inch R.R. lens and single extension, taking $\frac{1}{4}$ -plates. This soon proved inadequate for the close-ups I sought, so I acquired a $\frac{1}{4}$ -plate camera of the hand-stand type, with triple extension (15 inches), which happened to be fitted with a $7\frac{1}{2}$ -inch lens, f.7.7, in a Unicum shutter. Since then I have experimented with almost every type of camera, and have not yet found anything to beat, or even equal, the results obtained with this old outfit and my original methods. This is in no way due to a stodgy or "rutty" outlook. If I could find a better way of getting what I want, I should adopt it immediately.

Much of my work is still done with this camera, for which I now have other lenses, among which are—a 6-inch, in Velosto shutter (quiet in action and speeded to $1/3000$ th second), a 4-inch and a $4\frac{3}{4}$ -inch for cramped situations, and an interchangeable front lens element which converts the $7\frac{1}{2}$ inches to a focal length of $11\frac{1}{4}$ inches. For tree-top subjects I use an ordinary folding Kodak, taking roll films. My $\frac{1}{4}$ -plate Reflex is seldom used for birds, as it is too slow and the focal plane shutter is too noisy.

My favourite lens, the $7\frac{1}{2}$ -inch, is used on most occasions. Its aperture of f.7.7 is adequate, for I like to work at f.16 or smaller. F.4.5 would be no asset, owing to its small depth of focus. This lens is transferred to another shutter, when speeds up to $1/3000$ th second are needed. Though long since obsolete, this Unicum shutter has two great virtues—it is quiet, and it takes a ball and tube release. The flexibility afforded by its two feet of rubber tubing ensures the release of the shutter without any movement being imparted to the camera—a vital consideration with "time" exposures when a long bellows extension is in use.

Before roll-holders appeared I used plates and cut films, $\frac{1}{4}$ -plate size. Two roll-holders, taking No. 120 films (one for Verichrome, the other for Panchromatic), are now my mainstay, the dark slides being used when larger pictures are required or when only a few exposures are in prospect.

Developing is done in tanks, the spiral-groove type for films, by the time and temperature method. Kodak tank developing powders are used exclusively, for the slight yellowish tinge imparted to the negatives by this pyro-soda formula endows them with that subtle "printing quality" peculiar to pyro. By diluting the developer to two-thirds normal strength and increasing the normal time by 50 per cent., I obtain negatives free from excessive highlight density—the soft, rather delicate, "juicy" type which yields prints rich in gradation and soft tone values. "Contrasty" prints are my pet aversion.

Among fine-grain developers I favour D 76 (an elon-hydroquinone-borax formula), but I prefer the old pyro. In this technique of large images the grain problem simply does not arise, as no excessive degree of enlargement is entailed. Whenever possible, my pictures are composed to fill the whole negative area, so that full-size lantern slides can be made

by contact, resulting in a bold screen presentation free from granularity.

I do not care for hand-camera snapshots of nests, unless they are in open situations and the eggs reasonably large, like those of peewits, black-headed gulls, etc. If a tripod can be used I use one—it solves so many problems. Metal tripods are too low and too unstable; I use a wooden one, which, with legs well spread, supports the camera almost at eye level. A metal tripod, not extended, readily ensures the desired low viewpoint for ground nests.

A tilting top is essential, as will be found by trying to achieve a downward tilt of forty-five degrees or more without one—but beware of a headlong crash! It can possibly be done by shortening the front leg, but this will almost invariably bring the camera too near to the object and the leg is difficult to avoid in the picture. The metal ball-and-socket type, which is small and compact, is only suitable for light cameras. Mine consists of two pieces of wood, about 8×6 inches, hinged on the longer dimension, and fitted with slotted metal side struts, with locking screws. This provides a tilt up to ninety degrees, and I would be lost without it.

PHOTOGRAPHING NESTS

Before we can photograph our nest we must find it. Many can be discovered by straightforward searching, but this should only be done where trampling does not matter. By learning to recognise the alarm calls of birds as we approach their domains or watching for those carrying food, we can find quite a lot of nests.

Another way is to sit down and observe in a likely-looking area, after walking through it to disturb any possible inmates. Things will soon begin to happen; if a bird goes twice to the same spot there will almost certainly be a nest near. The position should be changed after a while, lest we have inadvertently sat too near some nest. From a single point, three or four can sometimes be located. Each spot should in turn be approached more closely, so that the position can be limited to a few feet, when it will be possible to walk straight to the nest. It is important, too, to leave the area quietly and carefully. An experienced worker leaves little trace of his handiwork.

The art of nest-building is not confined to architecture. The nest is more than just a cradle for the family—it must also provide concealment from enemies. This is achieved by various devices, such as protective coloration, inaccessibility (nests in holes), etc., but the bird photographer's obligations are mainly in respect of those where herbage affords concealment.

We are sure to find many nests in bushes and grass, where the clearance of intervening vegetation is entailed. Let us not, in our zeal, be so

thoughtless as to deprive the birds of this vital protection by destroying it. Instead of breaking off branches we should bend them carefully out of the way and tie them, while grasses can be eased aside or lightly pressed down, then everything can later be restored to its original state.

Excessive trampling in the nest area can be avoided by confining the feet to a few footprints, over which the adjacent herbage can be adjusted after operations. In long grass, particularly when wet, one cannot help making conspicuous tracks. Never leave a single track leading to a nest, or the first egg-collector who comes along will see it. We can put him off the scent by continuing the track for some distance beyond and making a number of offshoots on both sides of the nest. Thus can we fulfil our obligations to the birds we seek to befriend.

There is a tendency to take nest pictures from too high a viewpoint, giving a tilted, unnatural appearance in the print. It is certainly easier to get everything in focus from a position almost vertically above, but the temptation should be resisted. When using a hand-camera, with eye-level finder, a low viewpoint can be secured by lying down and resting on the elbows, and supporting the camera against the face, some fifteen inches above ground.

In the case of cup-shaped nests, the camera should be just high enough to show the tops of the front eggs above the nest rim. Deeper nests, like those of rooks and sedge warblers, obviously demand a higher viewpoint. When dealing with domed nests, like those of willow warblers, the opening will need to be slightly enlarged, which can be done by pressing upward with the back of the fingers, to reveal the eggs and assist in their illumination. It should be closed again, of course.

At full aperture, with a close-up, the front and back eggs will not be in focus simultaneously, and the rim of the nest will register as an aggressive blur. We should focus on the front rim, however, though all the eggs will be out of focus. When the diaphragm is adjusted to a small aperture everything essential will be in focus, including the back of the nest and all the near surroundings. If the range is too great to cover, alter the focus to favour the nearer planes. Failure to focus far enough forward is the main cause of unpleasant fuzzy areas; diffusion in the rear is of minor consequence.

The best point of focus can be ascertained by studying the image on the screen and noting the nearest and farthest objects required in sharp focus. As a rough guide, the principal focus should be behind the nearest object, on a point about one-third of the distance from front to rear. This is the point at which the minimum amount of stopping down will afford good definition over the whole range.

Wind is the worst enemy. To circumvent it I use the fastest material available, and thereby keep exposures short. On gusty days, one can,

by using an "everset" type of shutter set at "B," make the exposure in relays, during lulls, when a straight run would be impossible.

Sometimes a persistent breeze will keep grasses continuously on the move, with no appreciable lulls. I discovered a little dodge for overcoming this difficulty. Suppose an exposure of $1/4$ th second is required; ruinous blurring would result were it given in one dose, so, with an ever-set shutter set at $1/100$ th second, the requisite number of snapshot exposures is given—in this case twenty-five. In theory, there should be a dazzling array of multiple images, but in practice there is not, because individual grasses will be in average positions often enough to register distinct images, which will smother the faint supplementary images arising from other positions. Leaves also respond to this treatment, but less movement is tolerable than with grasses.

Slower emulsions are usually advocated for time exposures, as they give more contrast. Photographically, near objects are more "contrasty" than distant ones, so we are not troubled on this score; indeed, we must take precautions to keep it subdued. In this respect, a subdued lighting, too flat for landscape photography, is ideal, for it helps to keep the tones soft.

Direct sunshine is very attractive aesthetically but unwelcome photographically. It creates harsh contrasts and introduces unwanted highlights all over the subject, completely falsifying the tone values. Nests are usually situated at some depth, so in any case receive less light than their surroundings. It is these surroundings, already relatively better lit, which receive the brunt of the sunshine, and thus present an almost insoluble problem.

The high speed of Panchromatic emulsions is invaluable in enabling exposures to be kept short under windy conditions, but for most nest subjects I prefer the rendering given by Orthochromatic material. According to the angle at which they grow, many leaves will reflect light, even when they are not shiny. Such leaves are rendered too light by Panchromatic material, with its greater sensitivity to green. Shiny foliage, like ivy, can be very troublesome; assertive leaves can usually be tucked out of the way. I seldom use colour filters for nests. If an orthochromatic film requires a filter, the desired result can usually be obtained with a Panchromatic film used without a filter. I generally carry both types of material.

Unobscured sunlight provides some very attractive lighting effects in open situations. When there are grasses round the nest, an oblique contra-lighting will produce a very pretty shadow pattern on the eggs. When vegetation is sparse or absent, the tops of the eggs are beautifully outlined by the sun when photographed against it. A lens hood is advisable in such cases. With too harsh a lighting a softer effect can be secured

with a little manipulation. Given an exposure of, say, 3 seconds, without sunshine, by shading the nest for about $2\frac{1}{2}$ seconds and allowing the sun to illuminate it sideways for half a second, a delightful effect of soft modelling results, with more "life" than a sunless exposure.

For average nests, without sun, exposures will be on the basis of $1\frac{1}{2}$ seconds at f.45 with material such as Kodak Super XX Panchromatic film. One-fourth of this basic exposure will suffice for open nests against the sun. I get the right type of negative with nest subjects by developing for two-thirds of the standard time with normal developer, or preferably, full time at two-thirds strength.

CHAPTER XXVI

The Photographic Aspect (2)

PHOTOGRAPHING FLEDGLINGS

HAVING discovered and overcome the difficulties arising in nest photography, we now graduate to young birds, which present another set of problems. Whereas movement of the surroundings, through wind, has been the main concern so far, we must now contend with movement of the subject. Nestlings, even in earliest infancy, are anything but "still life" subjects.

The surroundings are now of less consequence, so we can largely eliminate them by going closer to our subjects, thus recording them on a scale which shows their form and markings to better advantage. This closer proximity aggravates the depth of focus problem, though it is now mainly confined to the nest, from front to back. Movement prohibits time exposures, so a small stop with long exposure is impracticable. The difficulty is mitigated by adopting a higher viewpoint—just enough to avoid the front of the nest, whereby the "tilting" effect will not be too evident. More elevation is required when the chicks are very young and confined to the bottom of the nest. Later, they fill the nest and their heads are above it, so a lower angle of view is feasible. The focus should be on the front chick, even though in the photograph he be the only one sharply defined.

For chicks in moderately shaded nests, as in open bushes, an effective average combination is $1/5$ th second at f.16. When they are in open nests, $1/10$ th second will suffice, sometimes at f.22. To record them with open beaks, in anticipation of food, $1/25$ th or $1/50$ th second will be needed. In a poor light we must be content with a smaller image to enable the use of f.8 or f.11, then the relevant portion can be enlarged.

Birds have a keen sense of hearing, even as chicks. How often, upon releasing the shutter, have I had a quiescent family suddenly become an ideal movie subject, with their writhing necks and gaping beaks. It was the shutter that caused this—or rather its sudden impact on the silence. I found a perfect remedy, in the form of a spare shutter. This is clicked at 1-second intervals, among which the exposure click is synchronised. If the dummy shutter be the noisier, so much the better. This simple device is an enormous asset in the case of adults on or at their nests, and young birds on branches. Regular sounds are ignored.

When a nest is found in a good photographic situation, it is worth seizing the opportunity and compiling a series showing the chicks at various stages. Such a series is more harmonious when provided by the same nest, but we can build one up by degrees over a period of years. A photograph of a young thrush, for example, taken fifty years ago, will blend perfectly with a series taken to-day, or several centuries hence, for that matter. Nature proceeds so slowly that thousands of years of evolution are needed to produce any noticeable change.

Nests in situations unsuitable for photography should not be disdained, for they provide broods for featuring on branches. I have never yet come across chicks sitting on branches where they could be photographed; those seen on branches in pictures were invariably put there. They certainly sit on branches, but not in the open. As soon as they leave the nest they seek cover in the deep recesses of bushes and undergrowth. Once they have left home their capture is difficult. Even though they cannot fly properly, they have a great capacity for eluding capture, exhibiting astonishing agility by hops and flutterings. The ideal age for branch studies is just before their departure, for they are then well fledged and able to perch in attractive natural attitudes. When removed prematurely they are neither fledged nor strong enough to perch, and will either squat down, looking unhappy and unnatural, or fall off.

Before they are taken from the nest the "studio" should be prepared, and this is well worth doing properly. On no account should the chicks be taken outside their home area, for they keep flying off the branch; and should they escape into another territory, there is a great risk that they will not be attended by their parents, whose attention will be concentrated on those still in the nest. I always take scrupulous care that the young birds do *not* escape, even in their own territory, by working in areas of short grass, when they can be found easily. When the whole brood leaves naturally they are tended wherever they go, whether in company or dispersed. People have often come to me with "a poor young bird that has lost his mother." He will indeed be lost if not taken back to the place where he was found; they rarely get lost if left to themselves. The parents know just where they are, however well hidden, for they soon voice their sentiments when hungry.

The background can make or mar the picture, and here we have plenty of choice. Nearby vegetation, particularly foliage, will register as a distracting mass of blobs, blurs and mottlings, so a distant background should be selected, with no conspicuous objects within twenty feet. It will then be so completely out of focus as to register almost as an even tone, suffused with broad, soft modulations against which the subject will stand in delightful, harmonious relief. Artificial backgrounds are incongruous.

A suitable setting having been found, we now look for a branch. Growing branches are shaded by the foliage above and offer no choice of background. We want plenty of light, so we must find some open spot and fix a branch there. The branch should be graded to the size of the bird, so that it will afford a comfortable perch. Thick branches should be avoided, for they are not only clumsy, but permit movement on their broad surfaces. A thin one restricts the bird to one position, as he cannot move forward or back and will seldom move sideways. For a young thrush, a branch of half-inch diameter is about right—less for smaller birds—and the surface should be rough to afford friction.

Two uprights are thrust firmly into the ground, then the selected branch is tied securely to these supports to form a horizontal perch some three feet above ground. To vary the lighting or background we simply lift one upright, swivel it round and re-set it. This extremely primitive arrangement is most effective and convenient and is naturally not included in the picture.

The camera is now set up on a level with the branch, which is focused, the background being carefully examined on the screen, at the aperture it is proposed to use. Any distant objects, such as flowers or patches of foliage which seem assertive, should be removed or the branch pivoted to avoid them. We are now ready for the birds.

One chick, or at the most two, will suffice for a beginning. Gently grasping the sides of his body, including the wings but not the legs, we hold our chick over the branch. As soon as his feet feel the branch he will try to grasp it, then he is carefully lowered and released. There will be a great scrambling, heaving and fluttering until he gets hold and finds his balance. He will probably flutter off in a few seconds, and we may have to repeat the performance several times before he settles down. No. 2 is then dealt with; his flutterings usually disturb No. 1 again, and so on for a few minutes until we get them both established. This operation demands a lot of patience and should be quiet and unhurried. Chicks though they are, they possess the instinct of fear and are reassured by gentle treatment.

This preliminary activity is succeeded by a quiescent phase, during which they watch the proceedings with evident interest, following every movement. Now is the time to get busy, as this tranquillity may only last ten minutes or so, after which the chicks tend to become drowsy. We get under the focusing cloth, focus and compose, adjust shutter and aperture, and draw the sheath. A side view of the heads is required. The birds persist in facing the operator, so he goes to one side and, with shutter release in one hand and dummy shutter in the other, soon makes an exposure, with the delightful conviction that the set-up is perfect and nothing but movement will prevent a good result. All this painstaking

effort takes less time than the return visit necessitated by its neglect—and there may not be a second chance.

I can manage a family of six alone, but it is no easy job getting the last installed before the first is ready for a sleep! A helper is desirable, especially to recapture the truants which escape while one is under the focusing cloth. Restless members are best removed as they unsettle the others. They can usually be subdued by a short sojourn in the camera case. When the whole brood is out the parents may want to feed them, there being none in the nest to occupy their attention. In this event, it is essential to keep the family intact, for the adults will rarely visit the branch while any chicks are at large. About thirty feet of string or fishing cord should always be in readiness for such opportunities.

It is seldom necessary to give exposures shorter than $1/25$ th second, using f.16 if the light permits. Some young birds, such as thrushes, are slow and deliberate in their movements, like their parents, so that $1/10$ th or $1/5$ th second is frequently possible. By watching the subjects intently at the critical moment, one can be tolerably sure whether movement has occurred. To make certain, it is advisable to make several exposures, among which there is sure to be one that is outstanding. The movements of parents feeding chicks are often rapid, calling for exposures of $1/100$ th or $1/200$ th second. Willow warblers are particularly quick in their actions, so that even $1/300$ th is sometimes inadequate to arrest movement. In studies of young birds the best rendering of fluff and plumage arises from a side lighting of subdued sunshine, or no sun at all. Avoid direct sunshine unless the lighting effect is the chief motif.

As for development, I usually give 50 per cent. longer than normal at two-thirds strength. For warbler chicks, with their creamy white, fluffy breasts, normal time at two-thirds strength keeps the highlights printable. Soft prints not only give a better general rendering, but are kinder to the background. From a given negative, a background which appears delicate and subdued in a soft print becomes more assertive in a brighter rendering on more contrasty paper. There should be tone and gradation throughout the print, with no blank highlights and no large areas of black. The ideal print is a study in greys, ranging from near-white to near-black—the sort that tends to look rather degraded on a white mount.

PHOTOGRAPHING ADULTS

The photographer's task is greatly simplified when the subject has been tamed and permits photographic operations at point-blank range. The first advantage is that we can focus on the bird itself, instead of having to cover an approximate position. This asset is at once exploited in the form of images on an adequate scale. In the early phase of close acquaintance the photographer's movements, particularly the move-

ment of his hands, should be in slow motion. Later, this precaution can be relaxed, for some of the birds become incredibly tame and will perch on the camera and tripod legs.

When birds are nest-building or feeding chicks their actions are very purposeful. Nest-building is usually a very secretive affair, so we are unlikely to be on the scene at that stage. Growing chicks have enormous appetites, so the parents just cannot afford to linger. Their actions are thus rapid and resolute, and the photographer's only opportunity frequently consists of a fleeting back view at the nest.

The bird has, in fact, become so tame that she is not hesitant enough for the photographer's purpose. Some hesitancy can be induced by providing a branch near the nest, on the approach route, the observer moving nearer to the nest at the same time, as a mild deterrent. This branch will be used as an alighting post, on which the bird can be photographed with food. A few pictures can be secured before she starts short-circuiting to the nest. The dummy shutter is not needed for such tame birds, for the whole situation has been accepted—the photographer and all his movements, and the camera, including the noise of the shutter.

There is a certain excitement in stalking birds with the 11-inch lens and camera in hand, but with land birds I have not been particularly impressed with the results. I prefer more deliberate methods, which afford some choice of background and setting. For sitting birds I favour the tripod method, standing on one side to make the exposure, and generally using the dummy shutter. The maternal instinct increases as incubation proceeds, so it is advantageous to wait a few days when dealing with a light sitter. The camera and tripod should be advanced by degrees, with a rehearsal of the shutter, and withdrawal should be unhurried to avoid frightening the bird after she has been photographed or there may be trouble next time. Exposures are as for nest studies, f.22 being a useful average.

TREE-TOP SUBJECTS

Before the days of range-finders I had to employ the laborious process of fixing a tripod for recording the nests of sparrow-hawks, long-eared owls and other birds in trees. It was a slow and awkward business, as there were seldom facilities for fixing the camera, and few positions where I could see the focusing screen, despite the most amazing contortions! Wind was, surprisingly, of no great consequence, as there is little relative movement between camera and nest in gently swaying trees.

These situations do not require a longer focal length; on the contrary, the usual problem is to get far enough away from the nest without resorting to too vertical a viewpoint. Nowadays, for this decidedly tricky work I use exclusively an ordinary folding Kodak. Equally good results

are derived from the $3\frac{1}{4} \times 2\frac{1}{4}$, $2\frac{1}{2} \times 4\frac{1}{4}$ and $\frac{1}{4}$ -plate sizes, which are normally fitted with lenses ranging from 4 inches to $5\frac{1}{2}$ inches. The post-card size is not so suitable, owing to the depth of focus question.

There must be provision for focusing down to 3 feet or so. Most modern cameras have front-lens spiral-focusing, scaled to about $3\frac{1}{2}$ feet. The older models have baseboard scales, usually ending at 6 feet, which is too distant for this work. In almost every case the bellows and baseboard are long enough to allow extension beyond the 6 feet mark, so, by fixing a piece of ground glass in the film plane, the positions for 3 feet, 4 feet and 5 feet can be found and marked on the baseboard. At the front of the focusing scale there may be a stop-pin or other device, which will have to be filed or removed to allow the extra extension.

If this extension is not available, a "Portrait Attachment" will provide focusing to 2 feet 6 inches, the important 3-feet, 4-feet and 5-feet positions being found with the ground glass. These Kodak Portrait Attachments are "close-up" lenses in metal cells, which fit on the flanges of the existing lenses. They cost only a few shillings each, and are supplied in a big range of sizes for specific Kodaks, but are equally efficient with any make of camera. Their effect is the same with any focal length of lens.

Reflexes are useless for many nests, owing to their low, waist-level viewpoint, which also applies to finders of the ordinary reflector type. The nests which we want to photograph are often in the topmost branches, and we have to get at least three or four feet away from them and also well above, so an eye-level finder is essential. A range-finder is highly desirable—almost a necessity, in fact—as these near distances cannot be estimated with sufficient accuracy. When the nest is on a bough the task is simplified, for we can probably lean against the trunk, using both hands to support the camera, or the camera itself may be steadied against the trunk. Exposures as long as 1 second, at a medium aperture, are then possible without camera shake; $\frac{1}{5}$ th or $\frac{1}{2}$ second, with care, is practicable when holding the camera and resting one's body against the trunk. Long-eared owls', sparrow hawks' and wood pigeons' nests are frequently in such positions.

Nests in forks at the trunk are a more difficult proposition. We require a position along a bough, but at this height there is seldom one long enough or strong enough, so we must resort to mild gymnastics. A position two feet along the branch may represent the safety limit, so we stand at this point, with a firm hand-hold on the branch above. By bending the knees the viewpoint can often be lowered by two feet or more, while holding the upper branch. This enables the picture to be taken at the right height and distance, the camera being held and operated with one hand. Even in a strained position like this, $\frac{1}{10}$ th second can successfully be given, with a steady hand and a firm but not too rigid grip.

In the precarious situations from which rooks' nests have to be photographed, a hand-hold is a sheer necessity. For this one-hand technique, I find it best to hold the camera by the base of the lens strut with the thumb and two middle fingers, the little finger being underneath and pressed against the baseboard. The index finger plays no part in the support; it must be left free and flexible for the sole function of releasing the shutter. The brow affords a lot of support, and I never get camera shake with this hold, which will vary according to the camera and the individual and should be practised with an empty camera. Nests which are in the open tree tops or their near vicinity are well lighted, so exposures of $1/25$ th second are the rule, at f.11 or f.16.

In conclusion, I stress the need for care in these hazardous positions, in which avoidable risks are unjustifiable. Rubber-soled shoes afford a better grip on dry branches, but are dangerous in wet conditions. I dislike climbing irons, which never feel safe and are a thorough nuisance among branches. Never entrust a foothold to one thin fork, which may split. Both feet should play an equal part in the distribution of weight, and there should invariably be a hand-hold, against the sudden buffetings which may occur in these breezy heights.

When climbing trees I let my arms do most of the work, and take care that at least one hand has a firm hold to counteract the breaking of a branch beneath the feet. Dead stubs abound in the lower reaches of Scots firs and should be well tested, the hands and feet being kept well in the forks, against the trunk, for they are brittle and treacherous. These precautions may seem obvious and elementary, but I have seen nasty accidents occur through their neglect.

Such are my methods with the camera. They do not represent the easy way, but I never find them irksome, everything being done as an accepted measure of routine. After all, there are very few activities which do not entail preparation, and it would be strange if this were an exception. When tired or working against time, there is the temptation to relax, but such backsliding will always bring regret and a resolve that the extra effort pays.

These charming creatures are worthy of the best, so humane treatment is their due all the time. The methods described can be practised indefinitely, without detriment or inconvenience to the subjects. Throughout my period of bird association none has ever suffered distress or disaster at my hands, and I cannot conceive any pleasure being found in a photograph obtained at their expense.

When you do begin you will have only one regret—that you did not start sooner.

PHOTOGRAPHIC DATA

Camera	{ S	denotes	Stand camera used with tripod.
	{ K	"	Folding Kodak held in hand.
	{ R	"	Reflex camera held in hand.
Exposure	*	"	abnormal exposure, arising from a dark situation.
Emulsion	{ O	"	Orthochromatic.
	{ P	"	Panchromatic.
Filter	F	"	use of filter (K1½, light yellow). This has a factor of about 2 with Panchromatic and about 5 with Orthochromatic emulsions.
Lighting	{ D	"	Dull.
	{ B	"	Bright.
	{ S	"	Sunshine (on subject).

Figure	Camera	Lens	Exposure	f. No.	Emulsion	Filter	Lighting
			(In Seconds)				
Frontispiece	S	7½"	1/25	16	O	—	B
1	S	7½"	1/25	16	O	—	S
2	S	7½"	1/25	16	O	—	S
3	S	7½"	1/25	16	O	—	B
4	S	7½"	1/25	13.5	O	—	S
5	S	7½"	1/25	16	O	—	B
6	S	7½"	1/25	13.5	O	—	S
7	K	4"	1/25	16	O	—	B
8	K	5"	1/25	16	P	—	B
9	S	7½"	8	44	O	—	D
10	S	7½"	1	16	O	—	B
11	R	6"	1/25	11	P	—	B
12	K	4½"	1/25	11	P	F	B
13	K	5"	1/25	11	P	F	B
14	K	5"	1/25	13.5	P	F	B
15	S	7½"	1	16	O	F	B
16	S	7½"	1	16	O	F	B
17	K	4"	1/25	16	O	—	B
18	K	5½"	1/25	16	P	—	B
19	K	5½"	1/25	13.5	P	—	B
20	K	5"	1/25	13.5	P	—	S
21	K	5½"	1/25	13.5	O	—	B
22	K	5½"	1/50	11	O	—	S
23	K	5½"	1/50	11	O	—	B
24	S	7½"	3	32	O	—	B
25	S	7½"	1/25	11	O	—	D
26	S	7½"	5	44	O	—	D
27	S	7½"	1/10	11	O	—	D
28	R	6"	1/50	11	O	—	B
29	K	5"	1/25	18.5	P	—	B
30	S	7½"	1/50	11	O	—	B
31	K	5"	1/25	16	P	—	S
32	K	5"	1/25	16	P	F	S
33	S	7½"	1/25	11	P	—	B
34	S	7½"	1/25	11	O	—	B
35	K	5"	1/25	11	P	—	B
36	S	7½"	1/25	10	P	—	B
37	S	7½"	1/25	8	P	—	D
38	S	7½"	1/25	8	P	—	D

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R " Reflex camera held in hand.

Exposure * " abnormal exposure, arising from a dark situation.

Emulsion { O " Orthochromatic.
P " Panchromatic.

Filter F " use of filter (K1½, light yellow). This has a factor of about 2 with Panchromatic and about 5 with Orthochromatic emulsions.

Lighting { D " Dull.
B " Bright.
S " Sunshine (on subject).

Figure	Camera	Lens	Exposure	f. No.	Emulsion	Filter	Lighting
			(In Seconds)				
Frontispiece	S	7½"	1/25	16	O	—	B
1	S	7½"	1/25	16	O	—	S
2	S	7½"	1/25	16	O	—	S
3	S	7½"	1/25	13.5	O	—	B
4	S	7½"	1/25	16	O	—	S
5	S	7½"	1/25	13.5	O	—	B
6	S	7½"	1/25	16	O	—	S
7	K	4"	1/25	16	O	—	B
8	K	5"	1/25	16	P	—	B
9	S	7½"	8	44	O	—	D
10	S	7½"	1	16	O	—	B
11	R	6"	1/25	11	P	—	B
12	K	4½"	1/25	11	P	F	B
13	K	5"	1/25	11	P	F	B
14	K	5"	1/25	13.5	P	F	B
15	S	7½"	1	16	O	F	B
16	S	7½"	1	16	O	F	B
17	K	4"	1/25	16	O	—	B
18	K	5½"	1/25	16	P	—	B
19	K	5½"	1/25	13.5	P	—	B
20	K	5"	1/25	13.5	P	—	S
21	K	5½"	1/25	13.5	O	—	B
22	K	5½"	1/50	11	O	—	S
23	K	5½"	1/50	11	O	—	B
24	S	7½"	3	32	O	—	B
25	S	7½"	1/25	11	O	—	D
26	S	7½"	5	44	O	—	D
27	S	7½"	1/10	11	O	—	D
28	R	6"	1/50	11	O	—	B
29	K	5"	1/25	18.5	P	—	B
30	S	7½"	1/50	11	O	—	B
31	K	5"	1/25	16	P	—	S
32	K	5"	1/25	16	P	F	S
33	S	7½"	1/25	11	P	—	B
34	S	7½"	1/25	11	O	—	B
35	K	5"	1/25	11	P	—	B
36	S	7½"	1/25	10	P	—	B
37	S	7½"	1/25	8	P	—	D
38	S	7½"	1/25	8	P	—	D

Figure	Camera	Lens	Exposure (In Seconds)	f. No.	Emulsion	Filter	Lighting
39	S	7½"	1/25	10	P	—	B
40	S	7½"	1/25	11	P	—	B
41	S	7½"	1/25	8	P	—	D
42	S	7½"	1/25	8	P	—	D
43	S	7½"	1/25	9	P	—	D
44	S	7½"	1/25	8	P	—	D
45	S	7½"	1/25	11	P	—	S
46	S	7½"	1/25	9	P	—	B
47	K	4"	1/10	16	O	—	B
48	R	6"	1/20	8	P	—	D
49	S	7½"	½	16	O	—	B
50	S	7½"	1/5	16	O	—	B
51	K	4"	1/25	16	P	—	S
52	K	4"	1/25	16	P	—	S
53	S	7½"	¼	16	O	—	S
54	K	4"	1/250	5-6	P	—	S
55	S	7½"	1	22	O	—	B
56	S	6"	7	44	O	—	D
57	S	6"	3	44	P	—	B
58	S	7½"	12	64	O	—	D
59	S	7½"	¾	22	P	—	B
60	S	7½"	1/5	16	O	—	B
61	S	7½"	1/50	16	O	—	B
62	S	7½"	1/50	16	O	—	B
63	S	7½"	1/50	16	O	—	D
64	S	7½"	1/50	16	O	—	D
65	S	7½"	1/50	16	O	—	S
66	S	7½"	12	64	O	—	S
67	S	7½"	1/10	16	O	—	D
68	S	7½"	1/10	16	O	—	D
69	K	5½"	1/25	16	O	—	B
70	S	7½"	1/10	16	O	—	B
71	S	7½"	1/25	16	P	—	B
72	K	5½"	1/25	16	P	—	B
73	K	5½"	1/25	13.5	O	—	B
74	K	5½"	1/25	16	P	—	S
75	K	5½"	1/25	16	P	—	B
76	S	7½"	6	44	O	—	B
77	S	7½"	5	44	O	—	B
78	S	7½"	2½	32	O	—	B
79	S	7½"	1/10	16	O	—	S
80	S	7½"	1/25	13.5	O	—	B
81	S	4½"	30"	64	O	—	D
82	S	7½"	1/5	22	O	—	S
83	S	7½"	¼	16	O	—	B
84	S	7½"	8	32	P	—	D
85	S	7½"	1	22	P	—	B
86	S	7½"	1/10	16	P	—	B
87	S	7½"	1/20	13.5	P	—	B
88	S	7½"	1/20	13.5	P	—	B
89	S	6"	1/10	8	P	—	D
90	S	6"	½	11	P	—	D
91	S	6"	1/10	8	P	—	D
92	S	6"	1/25	8	P	—	D
93	S	7½"	3	16	P	—	D
94	S	7½"	1/5	16	P	—	B
95	K	5½"	1/25	22	P	F ₂	S
96	K	5½"	1/10	16	P	—	B
97	K	4"	1/25	16	O	—	S
98	K	4"	1/25	16	O	—	S
99	K	5"	1/10	13.5	O	—	D
100	S	7½"	1/10	16	O	—	B
101	S	5½"	15	44	O	—	D

