TO MY WIFE

WHOSE MANY YEARS OF UNSELFISHNESS

HAVE MADE THIS BOOK POSSIBLE

BIRDS
IN COLOUR

WALTER E. HIGHAM

FELLOW AND MEDALLIST OF THE ROYAL PHOTOGRAPHIC SOCIETY
FELLOW OF THE INSTITUTE OF BRITISH PHOTOGRAPHERS
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WITH
89 COLOUR PHOTOGRAPHS
BY THE AUTHOR

COLLINS 14 ST. JAMES'S PLACE M C M X X X X V I LONDON

PRODUCED BY ADPRINT LIMITED LONDON

PRINTED IN GREAT BRITAIN BY W. S. COWELL LTD IPSWICH AND LONDON

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COLOUR PLATES

AUTHOR'S NOTE

The illustrations in this book have been made from three different sizes of Kodachrome film. Some are 16 mm. cuttings, taken from my films "British Featherland", "Featherland of the Farne Islands and the Bass Rock", and "Hungarian Featherland". Others are from 35 mm. originals, whilst the remainder are made from $4\frac{1}{4}$ by $3\frac{1}{4}$ in. cut film.

I would like to thank all those friends who have readily given information, advice or criticism. In particular, I would name the following:—Misses P. Barclay-Smith, E. P. Leach, Messrs. A. W. Boyd, R. A. Cronshaw, E. J. Hosking, H. Mortimer Batten, D. Seth-Smith, and A. Wilson.

My acknowledgment and thanks are due to Messrs. H. F. & G. Witherby Ltd., for permission to reproduce portions of their publication *How to Attract and Protect Wild Birds*, by Martin Hiesemann, and the free use of information from *The Handbook of British Birds*. I particularly thank Mr. B. W. Tucker for his assistance in connection with the latter.

In conclusion, I acknowledge with gratitude the valued help of all those naturalists who, over a long period of years, have assisted me so ably. Especially, I would mention my old friends, J. Hayhurst, T. Robinson, and I. M. Thomson, together with the late J. Vincent and R. H. Wrigley.

W. E. H.

October, 1945.

Chapter I

HOW IT BEGAN

The childhood shows the man
As morning shows the day.—MILTON

I began to take photographs when I was a schoolboy, living with my family forty years ago in St. Anne's-on-the-Sea. St. Anne's was then a quiet seaside resort. Even in midsummer, its sand and its front were never thronged, as were those of its big and popular neighbour, Blackpool, lying a little to the north.

When I was five my parents sent me to a school a short distance from home. At first, my nurse used to take me and bring me back. However, after a few months it was decided that I was capable of going by myself. I soon found that the walk along the main road was uninteresting, but I discovered that if I climbed a low wall I found I could take a short cut across some sandhills and rough ground, which to me was far more attractive. Here, in summer, the butterflies, caterpillars, birds and flowers were a source of delight. Many a time I was late for school or late home for lunch, having dawdled on the way in search of something new. Evening primroses grew in great profusion. It always puzzled me why their flowers closed in the daytime and opened in the evening. I would stand thrilled, watching a Sky-Lark, singing its joyful song, vertically ascend, or chase a butterfly as it flitted from flower to flower. Caterpillars particularly appealed to me, and here they existed in plenty. "Woolly bears" could be found amongst the nettles. Larvæ of the Poplar Hawk and Puss Moth frequented a group of poplars while Cinnabars, both caterpillar and moth, covered the ragwort. Of the many butterflies, Meadow Browns, Red Admirals, Tortoiseshells, Painted Ladies and Common Blues were regular members of the community. This little piece of ground held all sorts of wonderful creatures, which to me, even at that age, held considerable appeal.

I possessed many boxes and tins, some containing foliage on which there were unhatched moth or butterfly eggs, others holding various sorts of caterpillars together with suitable food. Many times I would put a favourite capture under my pillow at night, and my nurse, who did not relish these activities, did her best to curb my enthusiasm. As an act of vengeance, I put some unhatched moth eggs in her alarm clock, which in due course caused serious trouble to the works and myself as well.

It was about this time that I was given a little camera. I can still remember my excitement on receiving it. It was a small box-type instrument. You put the film in, pointed it at the subject, pressed the release button, and that was that. If my memory bears me right, I think it cost the sum of five shillings. However, had I been given something a hundredfold more valuable, it could not have given me greater pleasure, or, for that matter, made me a bigger nuisance. Most of us, sometime or other, must have met that exasperating

child, who, given a new toy, proceeds to inflict it on all and sundry. I strongly suspect that I came under that category, for I used to take the camera wherever I went. Often I got myself into trouble by producing it at the wrong moment, and at other times made myself unpopular by delaying people while I tried to take their portraits, or while they patiently watched my antics in attempting to photograph some impossible subject.

When I was about eight I went to a boys' preparatory school, a mile or so inland at the other end of the town. During my spare time, I still found opportunities to use the camera, and also to continue my butterfly and moth collecting. One of the masters was an expert entomologist, and, under his skilled guidance, I learnt not only how to rear caterpillars, but also how to hibernate the chrysalis, and humanely kill and "set" a butterfly or moth. I had also been shown how I could entice my victims by smearing a sweet sticky substance on to the bark of trees and other suitable places. This I would do at dusk, and, by the help of a light which would attract many moths, very soon the sticky bark would catch quite a number of insects, which I quickly took for addition to my collection.

During the nesting season, a lot of my schoolmates spent their leisure hours searching the hedgerows, trees, and all the likely bird haunts, for eggs. For a while, I joined in the hunt, but somehow or other it had little attraction for me, and I soon gave it up. Just before I left this school, my parents removed to an old house in the country. There was a large garden, part of which was wooded. The country and climate were very different from the seaside to which I had been accustomed. It was damper, and fine periods and sunshine were less frequent. One thing, however, was certain: there was a far greater variety of birds. Furthermore, in easy access there were moors, forests, and many other types of country, all holding different forms of bird-life. This change of surroundings eventually dimmed my enthusiasm for entomology, and for the first time I started to take a real interest in ornithology in general.

I now had two hobbies, my photography, which I had by no means neglected, and my growing interest in birds. Most of my pocket-money went in buying films, dishes, printing-frames, developing-powders, etc., and I spent many evenings dabbling and playing about with these articles.

On reaching fourteen, I went to a public school, and, once I had got settled down, I soon earned a name as a keen photographer. In due course I became the honorary curator of the Photographic Society's darkroom. This position, of which I was very proud, entitled me to the dubious privilege of keeping the darkroom clean, together with the job of seeing that the various solutions and chemicals were renewed when necessary. Although it may have seemed foolish to take on this task as a male charlady, it turned out to be a fine grounding in experience and knowledge on the technical side of photography.

I was soon to suffer a mishap which turned me to photography even more strongly. For several years I had wanted to shoot, but my father always insisted that no one should carry a gun who had not learned how to obey the unwritten rules of the sport. On many occasions I had been out at big shoots, but had always acted as a helpful onlooker. I had carried cartridges or looked after the dogs for one of the "guns", but had never actually shot. After I became seventeen, the day arrived when I was allowed to make up one of the shooting team. My father presented me with a gun to commemorate the event. In fact, it was to be quite a memorable occasion, but not in the way that I had expected. During one of the "drives", one of the "guns" accidentally shot me and my loader, who was by my side. We both received a number of pellets, but the only serious result was the loss of one of my eyes. This definitely affected my career, and turned my interest more and more towards photography and the cinema. Most of my friends and relatives were keen on games, and while my disability was in no way a handicap to most things I did, I found any fast-moving game presented difficulties which I could not surmount. This handicap turned me away from pleasures which I had been used to enjoy, and more and more of my spare time was given to my photography and study of birds.

I went into the cost of making and producing cinema pictures, and soon realised that, unless I had a certain outlet for my films, the cost would be far too high even to contemplate. What, then, was the alternative? After a great deal of thought, I came to the decision to specialise on one subject. I wanted something that would appeal to me, something that would be of general interest to the public, and, above all, something that I had a good prospect of doing successfully. I thought about it for a long time, and one night in bed I reached a decision. Whether it was some supernatural connection with the caterpillars under my pillow in the days of my youth, or just my general love of nature, I do not know; but it suddenly dawned on me that natural history films would meet all the essentials that I required. I gave the problem further thought for several weeks, and started making contact with various local naturalists. The outcome of it all was a decision to become a natural history photographer, specialising on birds.

It is over a quarter of a century since I made this decision. It was to give me endless happiness.

Chapter 2

THE TECHNIQUE OF BIRD PHOTOGRAPHY

He who was taught only by himself had a fool for a master.—BEN JONSON

Wild bird photography is a duel of wits, with the photographer on the one side and the wild creature on the other. The human being pits his brains, ingenuity, and skill against the instinct and intuition of the bird. To be successful, the photographer must have a sound working knowledge of his art. He must be a keen observer, and have considerable patience. He must be prepared for long vigils, and be able to accept failure and disappointment without being discouraged. A bird photographer is in a fortunate position today. Gone is the necessity for an individual to burden himself with large, cumbersome and heavy apparatus. Great strides have taken place in the perfection of photographic equipment of recent years. Suitable cameras are available that will slip into his pocket. With the advent of fine-grain films of high speed, developers constituted to keep the grain down, modern lenses of apertures unthought-of in the past, range-finders to calculate distances, and electric exposure-meters to provide the necessary data, intricate calculation and guesswork have been cut down to a minimum, and the cameraman's job has been greatly simplified.

This is not a technical book on bird photography, but it may be helpful to some readers if I devote this one chapter to a description of the equipment and methods that I have, in the end, found most useful. Let me, therefore, set down, in as non-technical language as possible, ideas and observations gleaned during the last twenty-five years. I commenced bird photography with a whole-plate camera; that is, one taking a picture size $8\frac{1}{2}$ by $6\frac{1}{2}$ ins. Ever since, as the efficiency of cameras, lenses and raw materials has improved, my apparatus has been becoming smaller and smaller and lighter and lighter, till today, for some purposes, I work with a miniature camera using a 35 mm. film giving a picture size of $1\frac{1}{2}$ by 1 in.

I have used field cameras, reflex cameras, cameras embodying the twin-lens reflex principle, press cameras, and cameras of the coupled range-finder variety, so, whatever my views on this subject may now be, I cannot be accused of bias.

Today, one thing is very certain; there is no necessity to carry large, heavy, cumbersome equipment. I can state with conviction that the choice should be nothing bigger than quarter-plate size, which gives a picture of $4\frac{1}{4}$ by $3\frac{1}{4}$ ins. At present I am using a Thornton Pickard field camera and a Soho reflex, both taking this size of plate. The optical equipment is interchangeable, and both cameras are equipped with focal plane and silent shutters, which are synchronised for flashlight. The silent shutters are of the "Luc" type, which has gained deserved popularity among natural history photographers for slow

exposures—not less than one-thirtieth of a second. The blades are operated by an antinous release, and having been fully opened, are closed quickly by a spring. This system enables the photographer to open the blades slowly, and allows him, if he notices his subject is about to move, to complete the pressure on the release, and close the shutter quickly. Another advantage is that the click does not occur till after the exposure has taken place.

My old friend Cecil Kershaw who, with his father, designed the Soho reflex, has so adapted my Soho camera that not only has it a focal plane shutter at the back for high speed work, and the "Luc" shutter on the front panel for silent slow speeds, but also a large Compound shutter mounted directly in front of the silent shutter, for accurate slow and medium speeds, so necessary when using present-day colour film.

A point worth mentioning about the field camera is that for focussing it will rack from the back. This is important, as when the photographer is making focussing adjustments in a "hide", the lens, which the bird can see, is kept stationary. The field camera has a swing back, which is very useful, among other things, for correcting out-of-focus foregrounds. On both these quarter-plate cameras I chiefly use a lens of $8\frac{1}{2}$ in. focus, together with a 16 in. telephoto lens. I also have a Contax 35 mm. miniature camera which I find useful for certain purposes. With this miniature I carry a supplementary lens of $5\frac{3}{8}$ in. focus, which is very useful. Whilst by no means an ideal instrument for general bird photography, the miniature has its place in a specialist's kit. I find these cameras ideal in cases of emergency, due to their light weight, size, portability and rapidity of operation. Furthermore, they can be carried slung round the neck, in the "ready" position, without discomfort. Many of the illustrations were taken with such an instrument. For flight photography the miniature in many ways is unsurpassed, and the range-finder method of focusing, especially the type that operates in the image of the view-finder, is particularly effective. My best results have been obtained by setting the focus of the lens at a pre-determined distance. Then, instead of trying to focus on the moving object, I have waited for the bird to fly into focus, which can be gauged by means of the range-finder.

Although not a necessity, I carry a range of light filters that will fit the various lenses I use.

A camera that is useful for the natural history photographer is a roll-film reflex that gives a square picture of $2\frac{1}{4}$ by $2\frac{1}{4}$ ins. and accommodates various types of lenses. I favour a camera in which it is possible to see the actual picture through the camera lens. This is an advantage when working close to your subject, as is often the case in bird photography. The nearer you are to your subject the more important the question of parallax becomes, and if it is possible to compose the picture on the ground glass of the camera, error is eliminated.

Any type of camera that will take interchangeable lenses can be used for bird photography; the choice of instrument and accessories must be governed by a person's particular object and the size of his purse. If funds will permit, a bird photographer should include an exposure-meter of the photo-electric cell type in his equipment. After a little experience an instrument of this sort will prove of inestimable worth. A good camera tripod is also important. It must be rigid, and if constructed of wood, it should be so made that when it becomes wet the adjustable legs do not bind and refuse to work properly. It is advisable also to have a tilting top which facilitates the positioning of the camera inside the "hide".

Another important accessory is a lens hood. Apart from keeping out extraneous light, it is recommended for two reasons, firstly, it prevents the cloth of the "hide", or rain, getting on to the lens, and secondly, it lessens the risk of the bird seeing its own reflection on the glass surface. Many times a photographer has seen a bird fearlessly approach its nest, and then, for no apparent reason, beat a hasty retreat. In all probability, the bird has been frightened away because its movements have been reflected on the lens surface.

Dealing with cinema cameras, my early films for the picture halls were all made with a 35 mm. hand-cranked studio model Pathé. This I dispensed with when another valued friend, the late Arthur Newman, with his inventive genius, perfected his Newman-Sinclair 35 mm. Automatic cine camera. I was one of the first privileged to use this instrument, and a model was specially constructed with fibre gears to minimise noise. Today these cameras have a world-wide reputation and have done yeoman service throughout the war.

At the present time, as my cinema activities are chiefly occupied with sub-standard film, I use a 16 mm. Cine-Kodak Special, with a special focusing device whereby I can focus from the back of the camera, and a special view-finder which can be altered for different focal lengths of lenses. When the alteration takes place, the aperture and image, by an optical arrangement, change in ratio to the focal length of the lens for which it is set. I prefer this camera to others, not only because I consider it at the moment to be the best of its class, but because it has a reflex focusing device which enables the lens image to be seen exactly as it is projected on the film. This obviates parallax, and assists considerably in composing the picture. I believe there is a real opening for a sub-standard cine-camera manufacturer to put on the market a medium-priced instrument that incorporates a reflex focusing device such as this. I use a battery of lenses with this camera, varying from a short-focus objective of 15 mm. to a lens of 6 in. focus. I use three cinema tripods, all of firm, rigid construction, which work on the friction principle. Two are alike, except that one of them has short legs, which allow it to be put up in a cramped space, or where a low viewpoint is required. The third is a standard Cine-

Kodak tripod which is of a lighter construction but reliable and which I often use as a stand for my still cameras.

Many times the question has been asked: "What will it cost me to get a suitable camera for bird photography?" The same thought will probably be passing through the minds of some of my readers. At the present time photographic apparatus for non-essential purposes is still being manufactured in very small quantities and consequently good second-hand equipment is in big demand, and it is fetching a very high price indeed.

Before the war a suitable still camera, together with a long-focus lens, could have been purchased for between twenty and thirty pounds, the exact figure being dependent upon the detailed nature of the apparatus. Until manufacturers of photographic goods get on to something like a normal post-war production, and the Government declares its taxation policy for photographic apparatus and materials, it is quite impossible to give any reliable idea as to post-war costs.

Over a period of twenty-five years my own equipment has cost well over a thousand pounds. It must be borne in mind, however, that during this period I have been working with over a dozen different types of still cameras, not to mention the expensive full-size cinema cameras and their equipment, and more recently the comprehensive 16 mm. equipment that I am now utilising.

Apart from the photographic apparatus, the bird photographer should be equipped with a notebook and pencil, a pair of binoculars, one or more "hides", and a comfortable collapsible seat.

To achieve success, I recommend that not only systematic records should be kept of what the photographer sees, but that he should also jot down details of his photographic activities. Many books dealing with natural history photography have been written, and while nearly every one stresses the necessity of accurate records from a natural history angle, I cannot bring to mind a single instance in which it is suggested that the same care should be taken from the photographic point of view. If systematic note is kept of lighting conditions, lenses used, exposure given, types of plate or films used, the careful study of these records will assist the photographer to improve the percentage of his successes, help him to analyse and correct his failings, and note the performance of the equipment and material he is using.

Choose a reasonably fast plate or film and get used to it. Find out its possibilities both under good and bad conditions, for the chances of success are far greater with a material that you know and understand. Having satisfied yourself that it meets your requirements stick to it, unless something obviously superior appears on the market. That is my advice.

I consider a good pair of binoculars a great asset to all types of field work, and although expensive, here is a case where "the best in the long run is the cheapest". Probably the most suitable type for general work is a pair with a

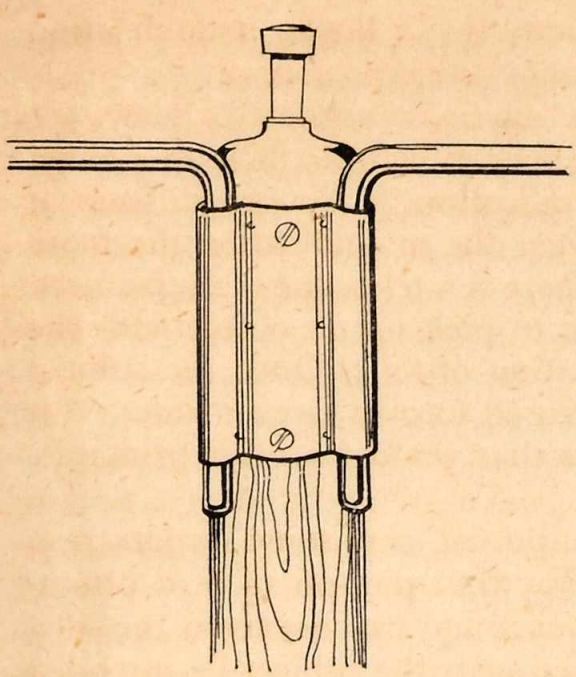
medium magnification and a large field of view, say a linear magnification of about seven or eight and an object lens diameter of 30 or 40 mm.

The faults of high-powered glasses, from a naturalist's point of view, are threefold. Firstly, with a big magnification, it is very difficult to pick up a given object quickly; secondly, the bigger the magnification, the more difficult it becomes to assess distance; and finally, the bigger the magnification the more difficult it becomes to hold the glasses steady. There is a telescope manufactured by Carl Zeiss of Jena, with which it is possible to pick up an object with the instrument operating at a low linear magnification of four. Once the subject has been located the magnification can be increased to over twelve times. If it were possible to make a pair of light binoculars that worked on this principle, they would be ideal for field work.

The "hide", which is third on my list of equipment, is of some importance. The first use of such a contrivance was started by that pioneer of bird photography, the late Richard Kearton. Some fifty years ago he conceived the idea of constructing an imitation cow, which he placed near the subject he intended to photograph and concealed himself inside it. Since that time all sorts and sizes of "hides" have been constructed. Many have been made of nothing more than old sacking and branches as a framework.

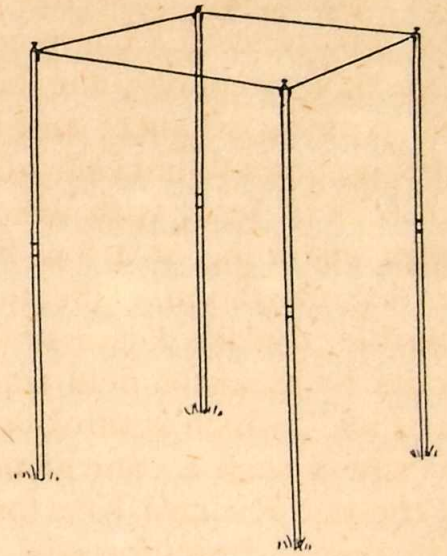
In an emergency, results have been obtained by a photographer covering himself and his camera with sacking or old tarpaulin. Nevertheless, anyone intending to take up wild bird photography should have at least one "hide" of a portable character. I have used a standard model for the best part of twenty years; one which I can adapt for most conditions, though in exceptional cases, such as tree-top photography and cliff work, special types are usually necessary. Whilst this "hide" has certain distinctive features, a great many well-known bird photographers use a framework of similar construction. Before I give a description, I must point out that some of the refinements that I have incorporated are not essential and therefore if the cost is an important factor, some of these may be eliminated. However, each detail has been designed to give a maximum efficiency, and for that reason they are worth careful consideration. It consists of four jointed poles. The bottom halves are pointed at the base; the upper poles have a fitting at the top which incorporates two sockets. Heavy-gauge wire cross-rods fit in these sockets, forming a skeleton on which a cloth cover fits. Several refinements have been added from time to time and all have proved of definite worth.

There are a number of spare pole bottoms of different lengths, with which the "hide" can be highered or lowered at will. As it is common to find uneven ground, legs of varying length are often necessary. I am a believer in comfort, and use "hides" larger than most people. My standard "hide" is 3 ft. 6 ins. square, and about 5 ft. in height. The fabric cover has an entrance flap at the

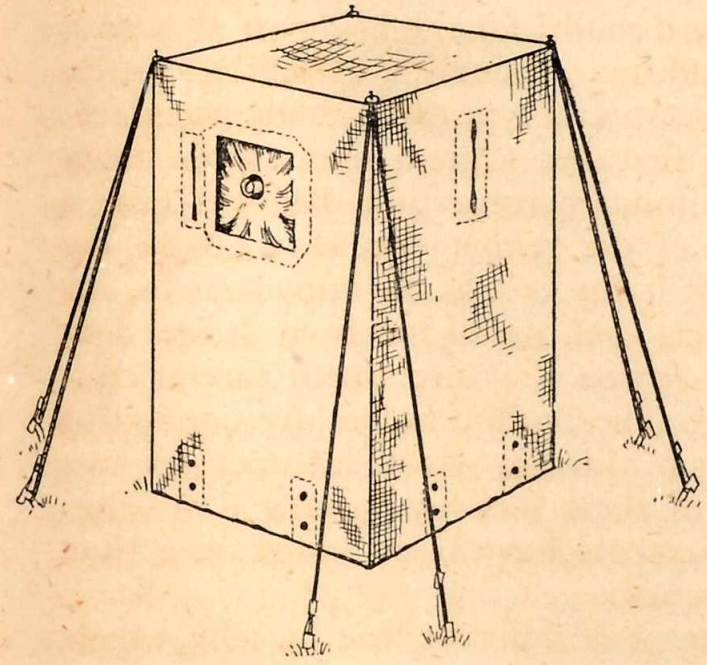


POLE TOP, SHOWING METHOD OF FIXING CROSS-RODS THERETO

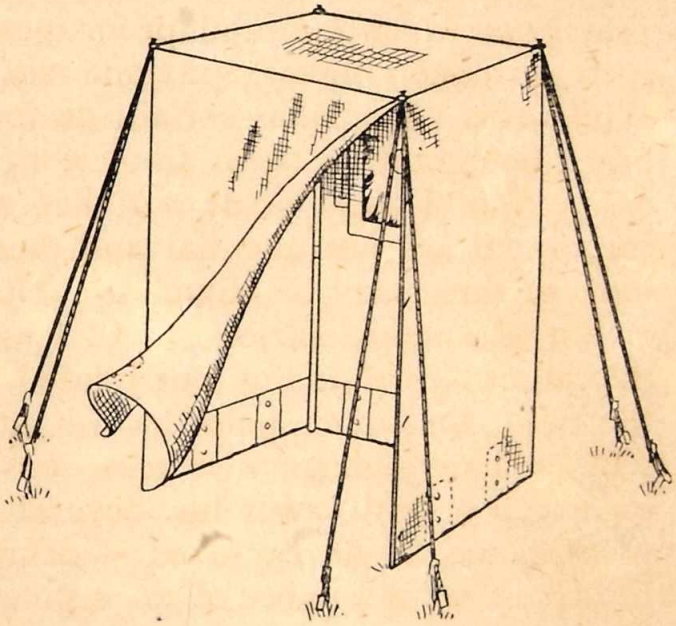
The pin on top projects through the cloth and is used, when necessary, for attaching the guy-ropes



POLES AND CROSS-RODS ERECTED WITHOUT COVER



FRONTAL VIEW OF ERECTED "HIDE" SHOWING LENS APERTURE AND PEEPHOLES



REAR VIEW OF ERECTED "HIDE", BACK FLAP OPEN TO SHOW INTERIOR

back, fastened to one of the rear poles by tapes or turn-buttons. It is important that the flap should overlap and thereby prevent extraneous light entering the inside and revealing the occupant. In my early days a "hide" was built round the camera, and a hole made in the front to allow the camera lenses to project. A peephole was also made for observation purposes. After the "hide" had been used several times, it was found that through having to make holes in the front at different places to meet special circumstances it was rapidly deteriorating. To overcome this handicap, I have adopted a different method. A large aperture, about one and a half feet wide and a foot in height, is cut out at the front. A piece of cloth, considerably larger than this aperture and with a small hole lined with elastic in the middle, is fitted over the erected camera, the lens-hood projecting through the hole. The corners of the cloth are fastened to the inside of the "hide" in such a way that there is no pull of any sort on the camera. If there is a wind blowing, it is possible for the movement of a "hide" to vibrate the camera lens, but with this system, the cloth can be slackened off to allow for the "hide" movement. Another benefit is that, when using a cinema camera, the cloth can be slackly fixed to allow for the lens to follow a moving object. By this method also it is much easier to erect a camera in its correct position, as the large hole in the "hide" front allows plenty of latitude. I use zip fasteners as a means of making peepholes, one on each side of the "hide". For use in places where the tent cloth cannot be pegged down, such as rocky surfaces, there are large pockets at the bottom of the "hide" in which stones can be put to weigh the cloth down and so stop any movement. It is of the utmost importance that the cloth should not flap about in the breeze. The fabric is thick enough to ensure that, when the sun is shining, the occupant of the "hide" cannot be silhouetted against the light. When not in use, the "hide" fabric, poles, and cross-bars, fit into a small carrying container. It must be pointed out that sometimes the cloth is only a basis for the camouflage of the finished article. I make use of two colours, both calculated to be as inconspicuous as possible; one is a drab green, the other a drab brown. I use the former where grass or foliage surround the subject; the brown shade is employed where earth, dead leaves or sand dunes are encountered. The perfect camouflage should exactly match the surroundings. For example, reeds should be tied round the "hide" in "reedy" country; on the moors heather entwined on bird netting, as used by gardeners to protect their fruit, is often useful. Once I made a "hide" out of peat. The top was constructed of wire netting, and filled in with heather and whinberry. After some days the interior dried up, and dust and insects of all sorts began to drop on to my valuable apparatus; so, if one resorts to a "hide" of this character, it is advisable to put the standard "hide" fabric underneath. Excellent results can be obtained by the use of a well coloured "hide", without external natural camouflage, but it must be borne in mind

that a contented and natural subject at the nest will make a far better picture, and will be photographed much more easily, than one which is timid or alarmed.

As already stated, I use a larger "hide" than most people. But I am satisfied that, in reason, the size is of little consequence, providing that the "hide" shows no movement and is properly camouflaged. It is of the utmost importance that the occupant should be comfortable, should not be cramped, and should be in a position to move without touching the sides of the "hide" or upsetting the photographic apparatus. Harm can be done if, after a number of hours inside a small "hide", you have to stretch your limbs and move the structure in doing so. Some years ago I was making a cinema film together with some still pictures at a heronry. As most of my readers are probably aware, the birds return year by year to the same heronry and often to the same nest. So another photographer and I decided to erect the framework of a "hide" near a suitable nest at the top of a tree, during the early winter, so that it would be ready for the return of the herons. Our task was difficult, as we had to take chains and spars forty feet up the tree in order to make a safe foundation. In due course the birds returned to their nesting-ground, and when the eggs were about due to hatch we went to the heronry to see how our luck had fared. To our dismay, our nest was not occupied, another having been built four or five yards away. We therefore extended our flooring, and by several stages built a "hide" which housed me and my friend, two still cameras, and a cinema camera. The whole erection was fully six feet wide, four feet deep and about five feet high. We regularly visited this "hide", but this huge structure in the tree-tops did not disturb the owners of the nest.

Your collapsible seat should be of light construction, and should enable you to reach your cameras without standing up inside the "hide". Before the war there were some metal-framed collapsible garden chairs which were admirable for the purpose. As one may have to sit on a seat for several hours at a stretch, it is well worth while using something that is comfortable.

I always have my equipment carefully arranged, so that it is easily accessible and can be handled without noise or without moving the "hide". If you need refreshment make sure that your food is wrapped in a cloth serviette, as most types of paper make a considerable noise when handled. Damp and dirt are enemies of photographic equipment. Do not put the apparatus on the ground unless you have something on which to lay it. If your tackle happens to get wet make it a rule to dry it on your return home if it is not possible to do so on the spot. Care of your apparatus can save many disappointments and failures. I use a waterproof cover for my camera cases, and on more than one occasion it has saved the contents from serious harm.

When a "hide" is unoccupied, it is advisable to leave a dummy in the place of the camera lens and lens-hood, so that when you re-occupy it the birds at

the nest will not be disturbed. In bad weather I often place a piece of mackintosh or ground-sheet over the "hide" to prevent water which collects on the top from dripping in. It is most disconcerting to be photographing a subject while drops of water are continually trickling down your neck.

The subject of rain brings to my mind very forcibly an experience I had some years ago in the Scottish Highlands when a friend and I were attempting to photograph the Golden Eagle. We made our headquarters at the village inn, and to reach the house of the deer-stalker who was helping us we had to motor along a private road, ten or twelve miles long, through the middle of a deer forest.

Then there was an eight-mile walk on rising ground to the foot of what the Scots term a "hill"; I would rather call it a mountain! The Eagle's eyrie had been built half-way up the "hill", on the edge of a cliff. A "hide" had been previously erected, and we decided that we would stay there for the day and return home when light began to fail. After an hour or so a mist developed, which later in the day changed into a heavy downpour. It rained so hard that after a couple of hours a deep pool had formed over the "hide". Unfortunately, I caught my head on the top and as there was no mackintosh cover the water started to trickle in. As it was impossible to stop it and the weather conditions continued to be appalling, we decided to return. In our morning trek we had crossed and re-crossed a couple of burns. As we made our way homewards, we found the first stream, which had been about four or five feet wide and eighteen inches deep in the morning, was now eight or nine feet wide and five or six feet deep. The water was racing through it in a raging torrent. As it was impossible to cross, we were forced to follow the course of the beck. Neither of us knew the district, and the light was rapidly failing. To add to our troubles, we were carrying our heavy photographic gear, and the going was most difficult. It was shortly before midnight when we arrived at the stalker's cottage, where we found my companion's wife in a state of collapse. She had walked up with us in the morning and knew the sort of country in which we were operating, and due to our continued absence imagined that some tragedy had occurred.

Whenever I am about to erect a "hide" at a nest, the first thing I do, if possible, is to put my hat over the eggs or young to keep them warm. A "hide" should be built as quickly as possible. In the case of timid subjects, it should be first erected some distance from the nest and moved up in stages. Before the "hide" is actually erected small branches or other suitable camouflage should be put up and when the photographer is satisfied that the birds are used to it the "hide" can be erected behind this and suitably camouflaged. If possible it should be placed so that the greatest advantage can be taken of the sun. South will probably be the best direction, unless you intend to work early or late. This question of the sun is particularly important when using colour film, as

the best results are obtained by using a flat lighting—that is, a light shining directly on the subject from behind the camera.

When my cameras are erected, to facilitate focusing, I put some object, such as a matchbox or anything with a definite pattern or lettering, beside the nest. My assistant then moves the matchbox or whatever object I am using, to the position where I expect the birds to be. Although the depth of focus of a certain lens at a predetermined aperture can be worked out theoretically, it is very simple to find out what part of your subject is in and out of focus by this means.

In order to make a nest and its contents suitable for photography, it is often necessary to remove projecting leaves, stalks or grasses, so that there is an uninterrupted view. Some people call this "gardening", and judging by what I have seen done by certain individuals the term is very applicable. This procedure is one of the most important that a photographer undertakes in recording a subject. Several main factors have to be taken into consideration, the most essential being that the nest must not be bared in such a way that the birds may desert it, or the heat of the sun endanger the contents. Then, it must be remembered that if it has been opened up so that it can be in full view of the camera lens, the nest can be seen by the bird's enemies. A thoughtful and experienced photographer will therefore cover up and camouflage the nest before leaving it. If a nest is badly trimmed or over-trimmed, not only will it be endangered, but it will look unnatural. In many cases the best results can be obtained by adjusting grass, reeds, etc., and often branches can be tied to one side without ruthlessly pruning a shrub or bush. If grass or stalks in the foreground have to be cut away, it is better to cut down to ground level than to have the stumps sticking up unnaturally.

The nearer the photographer is to his subject, the more important becomes the height of the camera. The most natural, and usually the best, viewpoint from a "hide" is one that does not include much out-of-focus foreground, and is just high enough to allow a good view of the nest. Do not attempt to get a high viewpoint to observe the contents of a cup-shaped nest, as this shows the subject at an unnatural angle, and your pictures will suffer accordingly. I should emphasise that these considerations refer to pictures taken from a "hide". If a record of eggs *in situ*, or small young, is required the pictures would probably be taken without a "hide", and the viewpoint would, of necessity, be near and high.

It is sound practice to erect a "hide" at least a day before it is utilised, so that the birds have a chance to settle down. Except in the case of colonies of birds and reputedly tame subjects, it is asking for trouble to enter a "hide" immediately it is erected. The birds may easily desert the eggs or the young suffer, and the photographer may have an unnecessary long and arduous wait.

Furthermore, the movements of the birds at the nest will be unnatural and consequently the photographic results are likely to be poor.

When photographing a bird on its return to the nest, allow it to warm its eggs or young before making any exposures. Not only does this minimise the risk to the contents of the nest, but it will allow the parent bird time to settle down and ensure that she will behave in a more natural manner. When photographing a subject for the first time with a cinema camera, which makes a slight noise, it is advisable to run the machine without any film in it. Set the machine running at its slowest, and then increase the speed, and consequently the noise. By this method the bird will gradually become used to the disturbance.

If at all possible, I prefer a companion to accompany me to a "hide". When everything is prepared and I am ready to commence, he departs with instructions to return at an agreed time. Although an assistant is helpful in carrying the apparatus to and from the nest his most important purpose is to allow the birds to see someone leave and return to the "hide". Apparently birds cannot count, and although two people may go to the "hide", they readily take it for granted that the coast is clear if one is seen to leave. Then, it is better that a companion should return and put the bird off the nest than that the photographer should suddenly emerge from the "hide".

There is a "knack" in being able to choose the best moment to take a photograph of a bird. It is usually easy enough to take it sitting dormant on the eggs, but a little experience and observation is required to make the best of the opportunities provided by the bird when she is not settled. I find the safest time to make the exposure is immediately after she has moved. If your subject is very much at ease, it is sometimes possible to make an audible tap, which will put the bird on the alert and cause her to remain motionless for a moment, during which an exposure can be made. Take particular notice of the movements of the birds approaching the nest. Very often there are favourite places, such as a stone or lump of earth, on which they will climb to get a better view of the surroundings. Note these points carefully, and if you have obtained all the records you need of the bird at the nest, focus your camera on this spot, and await events. It is nearly certain that, sooner or later, it will repeat its previous movements.

There appears to be a mistaken impression among the public that bird pictures are taken with a quick exposure. Actually, the majority of photographs taken at the nest, in order to allow the lens to be stopped down, are taken at a quarter of a second or longer. Even for pictures of birds standing, some of the most successful results have been obtained with exposures longer than one-twenty-fifth of a second. The photographer wishing to make an exhibition photograph will make a number of slow exposures with his lens well stopped down, risking movement in the hope that at least one of his pictures will turn

out to be perfect. There are times when it is advantageous to throw the background out of focus, so that all the critical definition is centred on the bird. In such cases a large aperture is used, and the exposure reduced in proportion.

Birds in motion and those with characteristic movement, such as the Wagtail family, must of necessity be taken with a short exposure. No fixed rule can be laid down, and experience and sound judgment must be your guide. Good pictures of birds feeding their young have been taken with exposures as slow as one-twenty-fifth of a second, but these have usually been obtained by taking a number in order to get one good one. If the exposure speed is raised the chances of movement diminish, but the depth of focus, owing to the lens aperture having to be increased, is proportionately lessened.

When photographing birds in flight, fast exposures are necessary. The speed is dependent on a number of considerations. If a bird is flying directly towards you, an exposure can be made at a slower speed than if it is flying across your line of vision. Secondly, the nearer you are to the subject, the quicker the image will cross the camera's field of view, and the exposure will need to be shortened accordingly. If, on the other hand, a short-focus lens which has a very large field of view is used, a much longer exposure can be given than when the photographer is using a lens of long focus (which has only a small field of view), for the bird, in the latter case, crosses a smaller field in a shorter space of time. To test my point, watch a person walk across a given spot with a low-powered pair of binoculars. Then observe the same movement through high-powered glasses and you will be in no doubt about the answer. Another speed factor that enters into the calculation is the type of bird being photographed. When it is realised that the wing strokes of the Humming-bird have been assessed at two hundred per second, those of the Sparrow at thirteen, and the Heron's as low as two, it is obvious that each subject must be treated differently. The actual flight speed of the different birds must also be taken into consideration, as it varies very considerably. While our Tits and Warblers have an average flying speed of about twenty-five miles an hour, various reliable authorities have put the speed of flight of the Swift as varying from one hundred to two hundred miles per hour.

The taking of close-up pictures of birds at the nest is by far the most popular form of bird photography. The reason is obvious, as nothing is more likely to induce a bird to walk in front of a camera lens than the attraction of its eggs or young. There are great opportunities in "wait-and-see" photography. This branch needs a high degree of ornithological knowledge, much patience, and considerable powers of endurance. "Hides" can be erected at coastal estuaries where excellent pictures may be obtained of residents and migrants at the water's edge. Cameras can be set up at certain reservoirs or sewage works, where uncommon photographs are sometimes obtained of some of our rarer

migrants. Excellent "wait-and-see" results have also been secured by photographers who have put up "hides" close to a dead animal. An admirable series of pictures of the Carrion-Crow have been obtained by this means. This side of the photographer's art has never become as popular as nest work. The reasons are not difficult to analyse. It is a difficult branch of photography, and the percentage of success is comparatively low. Parents naturally have to return to their eggs and young, but in this type of work there is no guarantee that birds will visit a certain mud flat, stream, or lake, let alone pose within camera range. Vigils are usually long and arduous, and as a great deal of this work offers its most tempting attractions in the autumn and winter the photographer must be able to withstand the effects of cold and damp. These conditions deter the average man, and so, many photographers are content to continue with stereotyped work that has been done many times before. The arguments in favour of this sort of photography are many. There is plenty of scope in this field and many subjects are available that have not yet been portrayed. There can be no objection that it entails a bird being disturbed or harmed at its nest. Valuable pictures can be taken of species that do not nest in Great Britain. Opportunity is offered to the photographer to secure pictures of the bird or birds with better views of the habitat and surroundings. Apart from the novice, the bird photographer should adopt the principle "every subject that I tackle I will try and record it better than it has been done already". The aspiration is, of course, easier than the realisation; anyhow, it is an ideal that is well worth while. Many good photographs of birds have been obtained without the use of a "hide". Certain birds can be stalked, and some will not leave their nest till one is almost on top of them, so confident are they that their protective colouration will prevent their discovery. Many sea birds in groups or colonies can be photographed without camouflage. I have successfully taken Guillemots, Puffins, Gannets, Shags, Fulmar Petrels, and various Gulls without the use of a "hide", though if intimate close-ups are required better results can be obtained by concealment. A beginner would be well advised to commence his bird photography near home. A Robin or any of the Tit family should prove an interesting and attractive subject. A nest box, with a perch near the entrance hole, and erected in a place where the lighting is good, will prove a handy and fascinating subject. Not only can some charming pictures be made of the parents entering the box, but practice in the use of the camera and the erection of the "hide" can be obtained in your own garden.

For some time big-game photographers and certain naturalists have used flashlight as a means of recording animals' activities at night. It is only of recent years that flashlight has become popular among bird photographers. In the past, opinion has been divided on the advisability of employing such methods where shy birds are concerned, especially if the flash was to be made at the

Yellow Wagtail and family

Turning the eggs

Alert

THE NESTING CURLE

Settling down

Sitting

OSE QUARTERS

Snipe settling down on its nest

Redshank sitting

nests. In fairness to those photographers who have specialised in this class of work, I must point out that they have established a strong argument in favour of the use of flashlight, as it would appear that it has caused very few birds, if any, to desert their nests. By this method excellent records have been made of birds with nocturnal habits, which could not have been obtained by any other means. Flashlight can also be employed to supplement daylight, and although few bird photographers have as yet adopted this system, it offers distinct advantages under certain working conditions.

In recent years natural history flashlight photography has made great strides. In the past, results were achieved by the photographer himself lighting the flash powder, or by the subject being photographed coming in contact with some hidden release, which caused the powder to ignite. The light thus served the double purpose of illuminating the subject and controlling the length of the photographic exposure, as in those days the photographer left the shutter of his camera open, and the length of the exposure corresponded to the duration of time that the flash powder was alight. This period was often long enough for the illuminated subject to move, and so spoiled many pictures. Today, various methods have been adopted whereby a short synchronised exposure can be made at the exact moment when the flash is at its peak. In addition, the old-fashioned flash powder has been replaced by a flash bulb, which is greatly superior from every point of view. With the powder it was possible for the operator as well as the surrounding foliage to be burned, whilst indoors unpleasant fumes and dust resulted from its ignition. From the natural history photographer's point of view, the greatest advance is that the flash bulb is not so susceptible to damp as the old-fashioned powder used to be. In the past many good opportunities have been missed because dampness has prevented the powder from igniting. Today the flashlight photographer can work with certainty and confidence. In America the latest flash bulbs are coated on the inside with varnish, so that if the glass breaks it will be held together and particles will not scatter. However, it is only on rare occasions that a bulb will burst. Great improvements have been made during the last few years, and midget bulbs of excellent performance that are no bigger than a motor-car headlamp bulb have been produced.

Many of my readers will probably not have the time at their disposal both to take photographs and to process them. This need not deter the beginner from taking up this interesting branch of photography as today there are many reliable firms who will complete his work for him. I knew one photographer of high repute who never developed his own plates or made his own enlargements. However, much pleasure can be obtained by carrying the job through to its successful conclusion, and a great deal of processing work can be carried out during the winter months, when field work is not practicable.

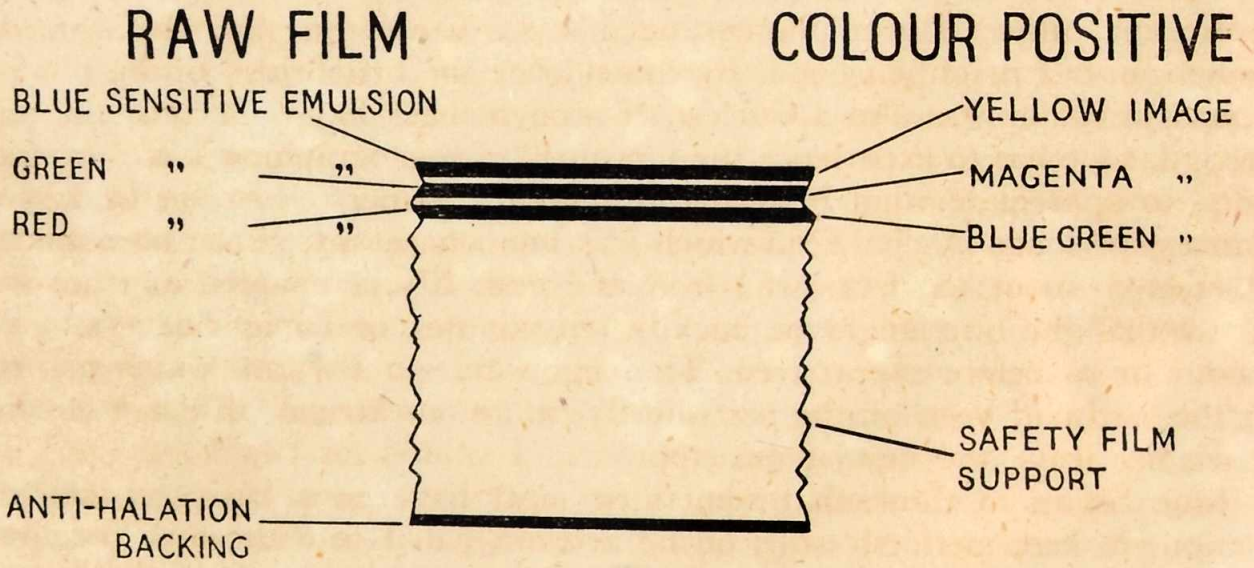
Chapter 3

BIRD PORTRAITS

A picture is an intermediate something between a thought and a thing.—COLERIDGE

Since I started wild bird photography, over twenty-five years ago, considerable improvements have been made in practically every branch. Faster sensitive materials allowing shorter exposure, lenses of wider aperture allowing more light to fall on the photographic emulsion, plates and films of fine grain together with developing formulas computed to keep grain down to a minimum, are but a few of the many innovations.

Although colour photography had existed for a considerable time, it was not until a few years before the commencement of the Second World War that systems were evolved which were to become universally popular. Several firms had their own patented processes, each having their merits and disadvantages. Amongst these, the Kodak organisation brought out a process which they named Kodachrome. Briefly it operates as follows: A film is used in which there are five coatings. Nearest the base is coated a red-sensitive emulsion, over which is an inter-layer of gelatine. Above this is a green-sensitive emulsion, which in turn is over-coated with an inter-layer of yellow dye to act as a filter. Finally, on top, there is a blue-sensitive emulsion. This film, therefore, contains several sensitive emulsions separated by filters. The film is exposed in a camera and



CROSS-SECTION OF KODACHROME FILM

is subjected to a special reversal processing treatment which leaves, instead of a positive image in black and metallic silver, positive images in dye deposits in the three layers of the film. This processing involves a much more complicated series of operations than the reversal processing of black-and-white film, and

cannot be here described in any detail. But its final result is to produce a blue-and-green image in the bottom layer, a magenta image in the middle layer, and a yellow image in the top layer. When projected on a screen or viewed as a transparency, these superimposed images produce a colour picture.

The results that I obtained by using this process so impressed me that in a short space of time practically all my photographic activities were turned on to colour, using this film as my medium.

When one has consistently photographed wild birds for a long while it becomes increasingly difficult to find new varieties. I must admit the advent of colour gave me a real thrill, for here was an opportunity to re-photograph in colour all those subjects which in the past I had recorded in monochrome. Even the commonest of birds would be something new if done in colour.

Funnily enough, my first wild bird subject in colour was taken when I had little thought of bird photography. I was out at the time on a big-game fishing expedition off the coast of Palm Beach, Florida. I had noticed when setting out on several occasions that Brown Pelicans frequented the sea entrance to Lake Worth. Some, more daring than the rest, would come quite close to the Inlet Dock, where many of the sea-going fishing boats called. I watched one of these birds devour a large piece of shark flesh discarded from one of the boats. It was an amazing sight to see the neck of the bird expand fully two or three times to make room for the food to pass down. I got quite a nice length of cine film of all this, a portion of which illustrates this book.

The first subject I ever photographed was a Curlew, a bird which breeds profusely in our neighbourhood. By coincidence the first British bird I photographed in colour was also a Curlew. It brought back happy memories of my first vigil. One has to experience the first thrill of photographing a bird from a "hide" to appreciate what it means to a keen beginner. Never shall I forget my first experience. A "hide" in which I was to conceal myself had been made, and erected about ten feet away from the nest. My companion and adviser told me that the bird might be back in ten minutes, or I might have to wait an hour or so before she arrived. The eggs were quite warm, which proved that the bird had been on the nest shortly before our arrival, although we did not see her leave the nest at our approach. I waited for two hours, and by this time began to think that something must have gone wrong. I had instructions to keep perfectly still; on no account had I to cause the "hide" to move. More than once I wanted to sneeze: more than once I nearly choked myself repressing it. That was not the only discomfort. My legs were suffering from "pins and needles", and I had just decided to give it up when I caught a glimpse of one of the birds stealthily walking towards the nest. Readers who have had the privilege of seeing a wild bird at close quarters will readily appreciate my first reactions. As the bird came nearer my excitement grew

more intense, and when she eventually settled down on her eggs, apparently quite at home, a feeling of triumph came over me. I had been told not to risk disturbing the bird till I was sure she was quite at ease and had had an opportunity of warming her eggs. I rigorously complied with these instructions, and after the requisite time had elapsed, decided that the great moment had arrived when I should take my first picture. I quietly withdrew the safety sheath of my plate-holder, placed my hand over the rubber bulb which would operate the old-fashioned roller-blind shutter I was using, and was just about to take the picture when the bird raised herself from the nest and took to the wing. Why had I waited so long, what had I done to disturb her, could she see me through my small peephole? All sorts of questions were flashing through my mind when suddenly a voice from behind the "hide" said: "Well, any luck?" It was my assistant who had returned at the agreed time to help me pack up and carry the apparatus. I felt like saying all sorts of things to him for having frightened the bird off the nest, but when my disappointment gave way to common sense, I realised that it was my fault for having failed to keep my eye on the watch. Anyhow, however keen I may have been before my visit to the "hide", I was doubly determined now. I knew the possibilities that birds offered as subjects to the photographer. I realised also something that I had not expected, that I had a desire to see more of the bird at close quarters, not necessarily as the photographer, but because I was interested in the beauty and grace of the subject. Frankly, I was amazed at myself, as I had been approaching bird photography merely as a means to an end, and here I was not only in a position to get good photographs but fascinated in a way that I had not thought possible. Next day I was back again, determined to get a picture of the bird at the nest. On this occasion I had less than an hour to wait before she returned. Altogether, I made six or seven exposures, some of which, after development, were satisfactory, or satisfactory as far as my standards went in those days. That first thrill of over twenty-five years ago has been repeated again and again right up to the present day. The initial thrill may not be there, but the fascination is ever the same.

Like human beings, no two birds are alike. Certain varieties are notoriously timid whilst others are the reverse. Often two birds of the same variety differ considerably. The series of illustrations of the Curlew were taken this season at two different nests. On both occasions the eggs were hard sat. The "hides" were erected and camouflaged in a similar manner, at about the same distance from the nest. In the first case the parent bird did not return for the best part of two hours. Yet, on the other hand, the owner of the second nest was back on her eggs within ten minutes of my assistant leaving the "hide". Both nests were within a short distance of one another, situated in some rough pasture land on the Lancashire and Yorkshire boundary. This district proved to be

very good bird country and I found several different subjects in a very short time, all nesting in the same field. Lapwings were there in plenty; in fact, I found seven nests with eggs. This is quite an unusual occurrence for these days, as, due to egg shortage on account of the war, Lapwing nests have been even more systematically robbed than in peacetime. Farmers, who in normal times would leave the birds alone, have been offered such tempting prices that it has paid them methodically to search their ground. Some birds, to my knowledge, have had their third clutches taken. Those farmers show singular folly, for they are harming their best friends, and incidentally breaking the law.

Taking them as a whole, I have found Lapwings rather timid, and whilst I have eventually succeeded in obtaining the pictures that I required, I have had some long and arduous vigils. Photographs of three different nests are shown in the illustrations; two of the pictures were taken at the all-important moment when the young were hatching out. This necessitates very careful timing, for as soon as the youngsters are out of their shells and dry, the parents move them away from the nest, which means that if the photographer is not at the scene on the crucial day, he can easily find an empty nest, should his calculations be as much as a day out. The eggs are chipped at least a day before hatching, sometimes longer, and their careful examination is the only sure guide.

The third illustration depicts a very unusual white Lapwing, in all probability a relation of other freak Plovers that I had under observation for a number of years.

On the first occasion a Lapwing mottled with white was found nesting in the middle of May, 1924. When the young hatched out, two were dark-coloured and two were light. The white bird was the hen, and I learnt later that some gunman had shot it, some two miles away from where it had nested. Nothing more was seen or heard of these birds until April, 1930, when in the same district a piebald Plover was reported, whose nest we eventually found. I had some difficulty in getting a photograph, as the hen was doing all the maternal duty at the nest. She turned out to be a very fearless bird, and much to my annoyance would be back on the eggs within five minutes of my friend's departure from my "hide". I had nearly given up all hope of getting a picture of her mate, when, as a last resort, it was decided that as soon as the hen should arrive back on the nest I should stick out my handkerchief at the back of the "hide", which would be the sign for my companion to come along and put her off her eggs. Five times this was done without the desired result, but on the sixth occasion the hen called for the cock, who quickly appeared, and much to my excitement settled down on the nest, enabling me to get a good photograph of him. In the following season my companion of the previous year found a much whiter bird nesting in some rough ground about a mile away from the

scene of the previous year's activities. On this occasion it turned out to be a hen, but I did not get an opportunity to get a picture of her. In 1932, the year following, he again found her nest, and again I did not get a record. For several years after this, although he often saw her, he was not able to locate any nest. However, in April, 1938, he informed me that he had found her nest. This was indeed interesting, as the bird had frequented the same district during the breeding season for eight consecutive seasons. I decided to try and get a picture of the freak. This time I intended to get a record in colour. Just as the 1930 hen was fearless, this bird was every bit as shy. However, eventually I succeeded in getting some cinema pictures, and from these the illustration has been made. I was very interested to see what the young looked like, but unfortunately the nest was robbed. The bird appeared the following year, but the nest, if there was one, was not discovered, and since then it has not been seen.

The Redshank which is depicted in this book was photographed in a field close to the spot where I took my first record of a freak Lapwing. A photographer friend of mine had already photographed the bird, and, due to his "hide" having been previously up at the nest, my task was comparatively easy. The Redshank is both a wary and a noisy bird, one that quickly gives voice should some intruder approach the breeding site. The nest is usually well concealed in the middle of a tuft of grass. Often the tops of the long stems are twined together by the bird to conceal the eggs from above. To obtain a suitable picture, it is usually necessary to open out the grass at the front of the nest. On several occasions, at different nests, I have noticed these birds pull back the grass stems to help cover up the front. I have seen other birds do this, but none do it so frequently as a Redshank.

A neighbour of the Redshank was a Snipe, also pictured herein. The nest was some hundred yards away, and here again I was fortunate in finding a subject which was very easy to work. I had an interesting experience at this nest, for, whilst I was observing the Snipe's activities, I noticed a cock and hen Partridge working their way slowly towards my "hide". Just as they were about to draw level with the Snipe nest, they discovered the "hide". The hen turned off to the left, but the cock, obviously inquisitive, decided to reconnoitre, and advanced till he was just in vision of the cameras focused on the Snipe nest. I made an exposure, hoping for the best, but unfortunately it turned out that whilst the bird could be seen in the picture, it was not in correct focus.

In a nearby clump of reeds the farmer discovered a Reed-Bunting's nest. I erected a "hide" and spent a whole day trying to get a picture of the good-looking cock bird. Unfortunately the hen was doing all the maternal duties, and although the cock occasionally does his share of incubating eggs, on this occasion I was unlucky, as he never as much as visited the nest, and I merely got a record of the less glamorous female.

Sometimes when sitting in a "hide" waiting for a bird to return to its nest, interesting movements of other birds can be observed. I was photographing an Oyster-catcher one early May, and had a "field-day" in this respect. The situation of the nest was on a shingle at the side of a large stream which runs into the river Ribble. From my peephole I watched a Plover walk onto its nest, and later on in the day I observed a Sandpiper settle on its eggs in a little green patch amongst the pebbles. I also observed a pair of Yellow Wagtails busily moving to and fro. As I noticed they were frequenting one spot I marked down the exact place, some twenty yards away from my "hide", and when I had finished taking my pictures I went across to where they had been so busy, and there eventually discovered a half-built nest, which later I photographed.

I particularly wanted to get a picture of a cock Yellow Wagtail soon after its arrival in this country, when the yellow plumage is at its brightest, before the feathers become worn. I was unlucky in this respect, as the cock of the nest I have just mentioned turned out to be of a very poor colour. Unfortunately I was not successful in finding another nest till June. On this occasion the nest was discovered in a field where the grass was so short that the inmates could be observed at quite a distance. At this date, as was to be expected, much of the colour had disappeared from the bird's plumage; but as the cock was a better colour than the one previously mentioned, I include an illustration of him taken at the nest.

The Sky-Lark which is illustrated was photographed in a meadow some few yards from one of the Plover nests that are pictured herein. The nest was found accidentally, and it was fortunate that I did not unwittingly destroy it.

My "hide" was erected at the Plover, some eight feet away from its nest. I had been in the "hide" an hour or so, when I looked out of one of the peep-holes at the side, to see if there was anything of interest to observe. After a few minutes I noticed a small bird working its way towards the "hide". It turned out to be a Sky-Lark. It was obviously excited, and this was not to be surprised at, for eventually it settled on a nest in a tuft of grass not two feet from my "hide". I was amazed that the bird had the courage to occupy its nest with such an unnatural thing in close proximity. When I examined the nest there were four eggs, which by the bird's keenness I guessed were hard sat. This turned out to be the case, as they hatched some two days afterwards. I returned about a week later and secured this picture, which shows the large youngsters at feeding time.

A subject that has always intrigued me is that rogue of the bird world, the Cuckoo. Over a period of time I have obtained pictures of these birds at different stages of their early life, with various birds as foster-parents. Some years ago I was fortunate enough to obtain a cinema film of a Cuckoo laying its egg in a Meadow-Pipit's nest. It all happened this way.

For a considerable time I had wanted to make a cinema film of the early life of the Cuckoo. I always thought that it would make an interesting subject, for not only does the Cuckoo utilise another bird's nest for her egg, but deposits it in the nest at such a time that the young Cuckoo always hatches out soon enough to eject its foster-parent's eggs or the young from the nest before they are old enough to prevent it. I found that the difficulty was to know where the Cuckoo was likely to lay her egg, and if this problem was surmounted, when was she likely to lay. I had a friend who was very enthusiastic on this subject. More than once he had seen a Cuckoo lay her egg, and he was confident that he could arrange an opportunity for me to film the actual laying. His employment gave him access to a large quarry, which had many times been the scene of a Cuckoo's evil deed. He outlined to me the "plan of campaign". During the next week or ten days, he said, he would find all the nests in the quarry that the Cuckoo might use. By doing this, he said he could tell by the actions of the Cuckoo, when she arrived, which nest she had in mind for her egg-laying. "As soon as I know this I will get in touch with you", he said, "and keep her off the nest till you arrive." His theory was that if the bird did not get a chance of laying her egg on the day she was disturbed, she would not return the following day but the day after. With a feeling that he was being over-optimistic, I wished him the best of luck, and for the next week or so thought little about the matter. However, when I arrived at our village station on a certain Friday, I was greeted by the station-master saying that he had an urgent message for me: the Cuckoo was going to lay. It was nearly five p.m. I was over a mile from home. I had no apparatus ready, and I had no "hide" up at the nest ready for action. Anyhow, breaking every traffic law, I rushed home in the car, hastily grabbed my cine camera, "hide" and tripod, and tore off to the quarry. In the meantime my friend had not been idle, and I saw to my satisfaction that he had moved one of the quarry wagons close to the nest so that it would partly act as a "hide". With the wagon and my own "hide" cloth draped over me and the cine-camera, I was ready for action in under twenty minutes. I had been left alone for less than five minutes when the Cuckoo alighted some two or three feet in front of the nest. She immediately advanced to the nest, and in a matter of seconds laid her egg. Then, seizing one of the foster-parent's own eggs in her beak, she flew away. An ironical point about the whole affair was that the nest the Cuckoo chose—it belonged to a Meadow-Pipit—was not one of those my friend had found during his search for every nest in the quarry. Anyhow, he had been vigilant, and the Cuckoo's movements had shown him this extra nest. (Since this episode, my friend has seen another Cuckoo raid a nest.) I was fortunate to get this scene, and was successful also in recording the gruesome activities of the young Cuckoo when relentlessly ejecting the baby Pipits from the nest. The amazing thing about

the whole sordid story of the Cuckoo is how the foster-parents, undeterred by the young Cuckoo's behaviour, work themselves nearly to a standstill fetching more and more food for the hungry bird as she grows bigger and bigger.

The Cuckoo nest illustrated herein was discovered in rather an unusual manner. For many years the field where the nest was found has been a popular Cuckoo haunt. Every season young Cuckoos are discovered, either in, or shortly after they have left, the nest. The field, a very large one, nearly a mile in length, and over a quarter of a mile wide, takes a long time to search methodically. Actually, at the time, we were looking for a Meadow-Pipit's nest with a Cuckoo egg in it, as in all probability there would be several. After a long and arduous search we found six or seven normal Pipit's nests, together with many other varieties as well. We were just about to "call it a day" when some inquisitive cows, part of a herd, made their way towards us. I turned, and gave the leader a sharp tap with my stick, causing it to beat a hasty retreat. It had only gone a short distance, when a Pipit rose at its feet. Up we dashed, and there, well-concealed in a tuft of coarse grass, was a nest, with a hoof-mark barely three inches away. What was most important, it contained a Cuckoo egg.

The other Cuckoo illustration shows the young bird at the age when it has just left the nest and cannot fly. Every time the cuckoo decides to take to the wing, it is closely escorted by both the foster-parents, who at this stage of the Cuckoo's life seem to have a miserable existence, spending all their time bringing food to the greedy interloper. The young giant is now such a size that under certain conditions the foster-parents find it necessary to alight on its back so that they can feed it. To get a picture of this, the young Cuckoo was placed on a suitable post and a "hide" erected. Time after time the bird flew away, sometimes a distance of a quarter of a mile or more. With some difficulty it was retrieved and replaced, and eventually the Pipit, tired of calling its charge from its perch, alighted on the Cuckoo's back, and the record was obtained.

I obtained my Redstart picture a few seasons ago. It is part of a cinema film taken of a pair of birds that had made their nest in an old grass-covered boundary wall between two meadows. The bird is standing outside the hole wherein the nest lies. The majority of nests in the north are usually to be found in loose stone-walls, whereas in the south the general situation is a hole of a tree or stump.

The Linnet's nest which is reproduced was discovered at the edge of a grouse-moor. It was in bracken, built about three feet off the ground. Not many yards away heather was growing, and amongst this a grouse had made its nest. There were eight eggs, some of which were just showing signs of chipping. I erected a "hide" and returned the following day armed with my cinema camera, with the hopes of obtaining some interesting pictures of the actual

hatching. Whilst I was successful in obtaining some colour film of the hen incubating, I failed in my main purpose, as by the time the young had hatched out, the sun had moved from behind the camera, preventing any good colour photographs.

I always look upon the Golden Plover as a typical moorland-breeding bird, yet my two illustrations were taken of birds that had made their nest in a rough field, there being no heather or whinberry within at least half a mile. Whenever the words Golden Plover are mentioned it reminds me of an annoying occurrence that happened some years ago when my interests were centred on making a film of this bird. A suitable nest had been found, on a typical moorland site. A "hide" had been erected, well camouflaged with whinberry and heather, the natural materials around the nest. Our work completed, we retraced our steps, making for the nearest road, which was about a mile away. I pointed out to my companion that the "hide" was visible on the skyline from the point where we were standing on the road. In the distance it looked like one of several shooting butts that were to be seen dotted about at different parts of the moor. After some consideration we decided that though it might reveal the position of the nest, the odds were in our favour, and it was a fair risk, so we left it as it was. Two days later we returned to start filming the subject, but on arrival at the nest found that all the eggs had been smashed. On the ground nearby was a bead necklace, the only clue to the tragedy. This find gave me an idea, and I decided to put an advertisement in the local paper announcing the finding of the necklace, at the same time informing the owner where she could claim it. Rather to my surprise, I received a reply, and in due course a girl of about twenty came to collect the necklace. Her story was that she and her young man were having a walk over the moors when they saw a "peculiar erection" (my "hide") in the distance, and they had decided to examine it. I asked her what they had found. She replied, "Nothing, except a sort of tent." "What did you do then?" I asked with amusement. "We sat down for a bit, then moved on towards the road", she replied. The lovers, in examining my "hide", had trodden on the nest without even knowing it. The irony of it all!

Of all the moorland birds the Merlin is my favourite. These beautiful little Falcons breed regularly on the Lancashire and Yorkshire moors near where I live. Unfortunately their eggs are eagerly sought after by the egg collector, and in this district they and the Carrion-Crow are the biggest menace to the bird's existence.

Altogether I must have photographed a dozen different nests, and only on one occasion have I observed prey brought to the nest that was probably the remains of a game bird. I think that most intelligent keepers realise that these Falcons are harmless, as compared with certain of our other birds of prey. Though the incubation is undertaken by both birds, by far the largest share is

carried out by the hen. Usually the male provides the food. Having secured his prey, he flies to a plucking place, usually some hundred yards or so from the nest. Once the meal is ready he calls the female. If the young have hatched out she quickly returns to the nest, carrying the food in her feet. On other occasions, especially as the youngsters grow bigger, she will fly from the nest to a given point, and call on the male for food. As the young grow, the adults spend less and less time at the nest, returning merely to deposit prey, for now the youngsters are capable of dissecting the food without any assistance. I remember two exceptions to this procedure—once some years ago, and the other occasion quite recently. In both instances, the youngsters were of such an age that the feathers were appearing from under their down. In the first instance, during a thunderstorm, such a downpour developed that the hen returned to protect the young, whilst on the recent occasion, in the middle of July, there was a really heavy hailstorm; this again brought the hen bird back to brood the youngsters. The group of illustrations show the adults and youngsters in fine weather and also during the hailstorm. Normally during the daytime the adult birds do not brood the young at this age. The youngsters, however, are not old enough yet to dissect the prey for themselves, and mother can be seen undertaking this gruesome task. The top of my "hide" (well camouflaged with heather) was frequently used as an alighting post, prior to the parent birds' descent to the nest.

The picture of the Tawny Owl was taken on the outskirts of a very large wood. Some years previously a big tree had fallen, and the Owl has made its nest in a hole where the wood has rotted away. The first time I saw the nest it held three small young. As there was only one exit for the birds and there was a piece of dead trunk in front of the hole, I thought I should have a good chance of getting a photograph if I set up a "hide" so that my camera could cover the tree trunk. I treated the birds with great respect, and with good cause, for I had an unusual experience some years ago when making a silent cinema film of the Tawny Owl. In this case the bird had also built its nest in a dead tree, but in a hollow where a branch had once been, some nine or ten feet off the ground. I got a series of pictures of the mother at the nest, incubating the eggs and brooding her small young. At the time of the incident I had gone to the nest with the idea of getting some pictures of the youngsters, now nearly big enough to fend for themselves. Whilst I was adjusting my apparatus, my companion climbed up to the nest to examine the youngsters. Suddenly one of the parent birds swooped down and knocked his hat off. It came at him from behind, and not realising what was happening he shouted out to me to stop fooling. This was too good an opportunity to miss, so, not warning him what was in store, I waited events again, my cinema camera ready. A minute or two later the bird swooped down again and on this occasion flew right into the

back of his head. I did not realise at the time that my friend might have been seriously hurt; otherwise I should not have run any risks. But since those days, I have learnt to treat the Tawny Owl with great respect. One of my friends, a well-known bird photographer, lost his eye while examining a Tawny Owl's nest, and I have heard of several cases where these birds have attacked human beings who were interfering with their young. I was not to be blamed, therefore, in taking every precaution in this case. When first I looked down the entrance hole I protected my eyes with my fingers, and even though we had no occasion to handle the youngsters, both my companion and myself were on the lookout for a possible attack, whenever we were within the proximity of the nest. The actual pictures I obtained were very easy to secure. The parent bird was put off the nest, and once I was inside the "hide" and my companion had departed, it was very soon back, anxious to brood the small owlets. On the first occasion it alighted on the tree trunk, but before I had time to make an exposure, it disappeared quickly into the hole. I got out of the "hide", summoned my companion back, and once again the bird was put off the nest. I re-entered my "hide" and in due course back the Owl came. As soon as she alighted on the tree trunk I made a slight sound, which attracted the bird's attention, and gave me time to make an exposure. On another occasion the parent landed on the tree trunk and stopped there for a full minute before deciding to enter the nest hole.

A Woodcock is an interesting bird in more ways than one. My picture was taken of a nest made in a tuft of coarse grass, situated in some rough land about twenty-five yards from a wood. Most of the nests that I have found have been actually inside a wood, built amongst dead leaves. The natural protective colouring of the Woodcock harmonises amazingly with the surroundings, and usually the bird is very difficult to distinguish. So confident is the Woodcock of its protective coloration that it will sit so tight that a person can walk slowly up to the sitting bird and get within a few feet. I took a picture, many years ago, of a friend dangling his watch at the end of a chain, within three or four inches of the bird's head. A great deal of controversy has taken place as to how the parent birds move their young. I myself have been fortunate enough to watch the departure of the young from three different nests. In each case they have walked away escorted closely by the parent bird. However, the carrying of the young in the air by the parents has been definitely established as a regular though infrequent occurrence. Evidence collected in the Woodcock Enquiry, organised by the British Trust for Ornithology, records many cases of a chick being carried between the legs, or between the legs and the body, of the parent, whilst there are other reports of a chick being held in the feet or claws, and an odd record or two of a youngster even having been carried on the parent bird's back.

Sky-Lark and her hungry chicks

Linnet at the nest

Bullfinch, cock and hen, at their nest

Bullfinch hen on the alert

The hen Pheasant illustration was obtained without the use of a "hide". The nest was situated in the middle of some rough pasture land, some half-mile away from that of the Woodcock. She was a lightly marked bird, and on being flushed was found to be sitting twelve eggs. I pulled aside the reeds and grass in front of the nest, and a couple of hours later returned and photographed her without any trouble. Only did she leave her nest when I approached to move back the reeds and grass which I had previously disturbed.

The gorgeous plumage of the Kingfisher makes it an ideal subject for colour photography. Nests are usually built in the steep clay banks bordering on streams and rivers. They consist of a slightly rising tunnel bored two to three feet deep into the bank. At the end of this tunnel is a circular chamber, and it is in this that the eggs are laid. It is easy to tell when there are young in a nest, as slime is usually observed near the entrance-hole, and there is an unpleasant smell of decaying fishbone, the remains of various meals.

I was shown my first Kingfisher nest some twenty-five years ago, by the man who started my interest in bird photography. He was a well-known egg collector, who, for many years, had taken a heavy toll of most of the Kingfisher nests in the district. Whilst his collecting activities eventually caused us to go our separate ways, I must say—in all fairness—he did a great lot to stimulate my enthusiasm, and although the eggs were usually his primary object, he was always willing to stay his hand, should any subject present itself that was suitable for my purpose.

On the occasion in question, he informed me that he had found a Kingfisher nest containing large young. I went along with him to have a look at it. As there was nothing to see except an entrance-hole in the side of the bank, he asked me if I would like to see the youngsters. I, knowing no better, said the hole looked filthy, and enquired if it was short enough for one of us to put our arm in and reach the young. Smilingly, he summoned me to the top of the bank over the spot where the Kingfisher nest lay. It transpired he had previously examined the nest by the following method. Having calculated the length of the hole, he had dug in from the top of the bank. I was very concerned lest he had done some irreparable damage, but he assured me I had not the slightest need to worry, as he had done this dozens of times. "The only thing to be careful about", he said, "is that no soil drops into the nest when the hole is being excavated." I could not tell he had disturbed the nest, as with characteristic cunning a piece of cow-dung concealed his handiwork. However, removing this, he lifted up a small sod, and then carefully scooped out the soil till he came to a stone which he had previously wedged at the bottom of the hole he had dug just above the dome of the nest. This had been put there to prevent any soil from dropping into the nest itself. Once this stone was removed, the nest and young were exposed. Having shown me the young, he put back the

stone once again, filled in the soil, replaced the sod and camouflaged his operations with the cow-dung.

Whilst I am not one to advocate these methods, my past association with this expert egg collector was the means of avoiding a major tragedy quite recently, when I took a series of Kingfisher photographs, some of which are reproduced herein. Altogether, we had four Kingfisher nests under observation. One was robbed, another was not in a very good photographic position. The young were fledged and away before I could photograph the third, whilst the fourth was the scene of the incidents I am about to relate.

This nest was discovered quite late on in the season, on the bank of a small stream about a hundred yards from where it joined the river Ribble. From the photographic point of view, everything was against it. To start with, the situation was only about a quarter of a mile from a cotton-manufacturing town. Furthermore, a public footpath ran across the field bordering the stream, whilst a footbridge crossed the water within seven or eight feet of the nest. To make matters worse, the nest was surrounded by trees, which, when the sun was out, cast nasty shadows, and it was only between the hours of two and three in the afternoon that I could get a good light on the subject. When we found the nest, everything pointed to its being newly-made. There were certainly no signs of any slime at the entrance or any smell of rotted fishbones. It was decided that it would be quite safe to leave the nest at least three weeks before I attempted any photography. The incubation period would take about this time, and then the youngsters would be in the nest about a further three weeks, so there was no hurry. Against this argument, however, both my friends and myself were very concerned as to the safety of the nest, owing to the very public position that it was in. It was decided that at week-ends my friends would keep a watchful eye on it, as this was the time that the path and the field were most frequented.

Within three or four feet of the Kingfisher hole, in some grass half-way up the bank, was a Grey Wagtail nest containing half-grown young. How it had ever escaped the eyes of all the boys who search the district for eggs defeats me. As I did not know of a nest in a better position, I decided to take a picture of this, which is illustrated herein. Whilst I was in my "hide" I had a full view of the Kingfisher hole, and to my amazement I saw both birds busily at work boring a hole about six inches to the right of their original entrance hole. The explanation of this had me beaten, as I could swear that their nest hole was of recent construction, and I could not think what the point of this second hole could be. Furthermore, both birds seemed desperate to get on with the job. In fact my interest was far more centred on the Kingfishers than it was on the Wagtail nest. However, having obtained my Wagtail pictures I got out of my "hide" to investigate, and signalled for my companion, who was sitting at a

point of vantage some three or four hundred yards away. It was difficult to get to the hole of the Kingfisher nest, as the stream was about four feet deep at this point. It was obvious something unusual had taken place, otherwise the birds would not be re-boring. So, remembering the activities of the egg collector of many years ago, I decided at least no harm could be done by trying my hand at excavating down to the nest from the bank top. I calculated the distance from the edge of the bank, and dug down in exactly the same way as I had seen done over twenty years previously. I was just a bit out of centre, and broke into the edge of the dome instead of the top. There lay three perfect eggs, and still the puzzle was not solved. My companion, who had a longer arm, said, "Let me have a look", and inserting his hand as far as he could, felt past the dome into the natural tunnel. "Good gracious", he exclaimed, "what's this?" and pulling carefully he withdrew a number of twigs. The mystery was now solved. Someone, probably local children, had been probing the hole with a stick or branch. In all probability they did not know it was a Kingfisher's nest; maybe they had thought it a rat hole. At any rate, they had blocked the passage, and blocked it in such a way that it was not obvious from the outside. We eventually removed all the obstruction, and I found a suitable stone to put at the bottom of our excavation, and the soil was filled in, and the sod replaced, and a suitable piece of cow-dung secured and placed in position. The next problem was, how long had the birds been kept off the eggs? Would they return? Were the eggs ruined? We returned two or three days later to find out whether the birds had deserted. My friend crossed the bridge to examine the bank and see if our excavation had been disturbed, and to my pleasure and satisfaction a Kingfisher flew out of the original hole; the bird inside must have heard him. They had not deserted! We returned when the young were about three-quarters grown, and by placing a branch near the entrance hole and erecting a "hide" I had little difficulty in obtaining some pictures. Notwithstanding the disturbance and all the dangers of the situation I am glad to say that all the young were successfully reared.

The Dipper illustration depicts the bird standing on some moss-covered rocks at the top of a small waterfall, watching its mate take food to the nest, which was situated below at one side of the fall. There were large youngsters in the nest, and both birds were kept busy hunting for food, which consisted chiefly of the larvæ of aquatic insects. It is interesting to watch the birds at work, turning over small stones and pebbles in search of suitable food. Not only do they swim on the surface of the water, but submerge, moving about by the use of their wings. It has been irrefutably proved that they are capable of walking over the bottom of a stream with their heads stretched out—although this sounds impossible, bearing in mind the laws of gravity. However, the probable explanation that has been put forward is, that the bird, moving against

the stream with its head forward, uses the force of the current against its slanting back to keep it on the bottom.

The Oyster-catcher, of which I have two illustrations, nests in a variety of places, both inland and also on or near the seashore. I have already mentioned that one picture was photographed on the shingle verging a small stream running into the river Ribble. This would be at least twenty to twenty-five miles from the coast as the crow flies. Although they often nest inland, the majority are to be found close to the sea, on the shingle, amongst rocks, or amongst sand dunes. The second picture was taken on a Lancashire bird sanctuary, and the situation here was a green patch amongst some sand dunes a few hundred yards from the shore. I am at a loss to understand why the bird has been named Oyster-catcher. I have never seen an oyster shell in or around a nest. Furthermore, I have looked up the latest literature on their diet, and the oyster is not mentioned as a regular part of their menu. Actually, the birds live chiefly on such food as limpets, cockles, mussels, periwinkles, shrimps and crabs, etc., with occasional insects. They are noisy and wary birds, although I must say I have photographed individuals that have been far from timid.

Recently, during wartime, I paid a fleeting visit to a well-known bird sanctuary on Anglesey. Although the land on which the sanctuary exists is called an island, actually it is a peninsula, accessible from the mainland by a short connecting strip. This "island" is about half a mile in length and a quarter of a mile wide. The approach from the nearest village is a trek of some three or four miles over sand dunes, and country of such a character that the only means of locomotion is on foot or by horse and cart. There is a horse specially trained and delegated for this purpose. In normal times the island is one of the most secluded spots in this part of the country. However, even this little place had not been spared its share of wartime disturbance. Military manœuvres were taking place on a big stretch of barren land near the "island", gunnery practice was in progress every day that I was there, whilst an old wreck a quarter of a mile out from the mainland was being used for target practice by aircraft. One would have thought all this commotion would have disturbed the birds, who from times immemorial have looked upon the district as their home. This, however, was not the case, and all oblivious to what was going on around them the feathered inmates of the district were carrying on their mode of living on a peacetime basis.

I reached my destination early in the evening by means of the horse and cart. Apart from those who tended the beacon that was on the "island", and the bird watcher, a lady who has devoted her whole life to the well-being of her feathered friends, normally no one else lives there. This lady, it had been arranged, was my hostess and adviser.

Whilst there was plenty of bird life on the "island", the majority of the Terns, one of the chief subjects I was anxious to picture, were on the mainland

Golden Plover cock beside its nest

Golden Plover hen sitting

The cock arriving during a hail-storm to brood the chicks

After the storm has passed a wet and bedraggled parent brings food to the young Falcons

The hen visiting the nest with food held in her talons

A pause during the feed

E NEST

Grouse on its nest amongst the heather

Black - headed Gull nesting on the edge of a moorland tarn

some three miles away. On the following morning, with my hostess's son as guide and assistant, I set off to photograph these birds. There was a good colony of Little Tern on the shore, whilst several hundred yards away, just over a range of sand dunes, were big colonies of both Common and Arctic Tern. As a whole I have always found the sea-birds comparatively easy to photograph, especially those that colonise. Whether it is the fact that the number of birds congregated together give one another confidence, or whether the knowledge that their many companions are likely to give them a timely danger warning, I know not, but I somehow think that these facts, coupled with all the noise and activity, make the birds oblivious to that which, under other conditions, might disturb them.

I erected a "hide" at a Common Tern nest, and, without any difficulty, obtained the pictures I required, one being included herein. I did have trouble, however, getting my record of the Little Tern, but this was no fault of the bird. Unfortunately a strong breeze had sprung up. The nest was right out on the open shingle, and the sand was comparatively soft. Every time I erected my "hide" the wind proceeded to blow it down, and furthermore, sand was blowing about in a most unpleasant manner. I put my hat over the nest, to prevent the drifting sand from covering the eggs up completely. I then took my coat off and covered the camera cases to prevent sand from getting inside, for I know of nothing worse for photographic apparatus than this and salt sea spray. At length, I found four large stones, and once again got the "hide" up, and by fastening a guy-rope from each corner to one of these stones, I managed to make it secure. Five minutes after my entering the "hide" the bird was back at the nest, busily engaged in scooping away with its feet all the sand that had collected round the eggs after the removal of my hat. My day's work completed, I wended my way back to the "island", and spent the major part of the evening going over my apparatus, removing all the sand which had accumulated.

Standing out to sea, some two or three hundred yards from the island's beacon tower, is a rocky islet about a hundred yards in length and half that distance wide. Through my glasses I could see Cormorants and Herring-Gulls, both young and old. I learnt that it was only possible to land here during very calm weather, and as there is a very strong current running at certain stages of the tide, this also had to be taken into consideration. I was told that sometimes for days on end it was impossible to get on to this islet, but my good fortune was in, and the following day turned out to be ideal for my requirements. All my tackle safely on board the rowing-boat, my assistant rowed me across. There was quite a good swell on the water when we arrived close to the islet, and I could well imagine it would be disastrous to attempt such a landing in anything but favourable conditions. On account of the tide my companion told me that he would have to return in five hours, so I had better

plan my activities accordingly. On this glorified rock were a large number of nests, and as it was late June, there were many young, some of considerable size. My zeal and enthusiasm was quickly damped by the smell. The stench of decaying fish, the residue of past meals, together with the accumulated excreta, accentuated by the intense heat of the sun, was practically indescribable, especially on those parts of the rock where the Cormorants had made their headquarters. I found that I could obtain all the Cormorant pictures that I wanted without the use of a "hide"; in fact I do not mind admitting I didn't embarrass them with my company one minute longer than was necessary. The illustration shows a typical nesting site. The Cormorant is considerably larger than the Shag, the only British bird with which it is likely to be confused. The other chief differences between the adults of these two species are: the Cormorant is characterised by a white chin and sides of face, and bronze-brown and black plumage, whereas the Shag, of which I shall speak later, has a dark oily-green plumage.

I found that the young of all Herring-Gulls had hatched out. These youngsters of varying ages, noticing a stranger in their midst, had concealed themselves as best they could in crevices amongst the rocks. I quickly realised that if I was to obtain any natural pictures at all it would be necessary to erect a "hide". This turned out to be no easy job to tackle single-handed, as there was no soil into which I could fix the poles, and it was difficult to get the "hide" to stand up till such time as I could fix some guy-ropes to pieces of rock which I had collected. Eventually I succeeded in getting it erected, and, even though I had no companion to walk away, once I was inside the "hide" the young Gulls soon regained their courage, and started to move freely amongst the rocks. In most cases one of the parents stood in attendance close by, whilst the other adult member of the family was hunting for food. Having obtained what pictures I wanted of these birds on the rocks, I pulled down the "hide" and intentionally put as many birds in the air as I could, so that I could obtain some flight pictures. I then sat down and kept perfectly still. Soon the birds, gaining confidence, flew lower and lower, till at length they came close enough to the camera for my purpose, and I obtained several pictures, two of which are reproduced.

My companion returned at the appointed time, and after a stiff pull against an increasing current we arrived back safely.

I left the island early the following morning. The stay had been a short one, but other subjects were waiting my attention, in a different part of the country, which if neglected I should miss.

The two pictures of the Arctic Tern were taken during different seasons and at different places. The sitting bird was photographed on a Lancashire sanctuary, whilst the flying picture, which effectively shows the forked tail of

the Tern family, was obtained on an island off the north-east coast. Both these pictures are cuttings out of a cinema film, part of which deals with the breeding activities of this bird.

The Arctic Tern is at once recognisable by its dark blood-red bill, without any black tip. One of the most interesting scenes I recorded was of the feeding of the young as soon as they were able to fly.

The parent birds were busy flying backwards and forwards from their feeding ground. As far as I could observe the menu appeared to be chiefly sand-eels. Every time an adult bird would arrive with food at the colony, other birds, less industrious, would try and rob it. If fortunate enough still to possess its haul, the bird would fly seven or eight feet above the young, who would themselves fly up to meet the parent, and take the food in mid-air.

I obtained my two pictures of the Shag on one of my visits to the Bass Rock, a natural island bird sanctuary about a mile in circumference, which towers some four hundred feet above sea level at the entrance to the Firth of Forth; it lies about two and a half miles off the mainland, and about three miles from North Berwick, where I usually make my headquarters. During the season pleasure-boats make special trips from here both to and around the Rock. As I have always wanted to stop a full day it has been necessary to engage a fishing-boat, usually that of a lobster-catcher, who has landed me in the early morning and taken me back to the mainland in the evening. If one makes a circular tour around the Rock by boat, the full nature and grandeur of the island can be fully appreciated. Except on the south side the Rock is precipitous. As one approaches, hundreds of birds, mostly Gannets, can be seen circling around the cliff face, which in itself is a most inspiring sight.

Whenever I have visited the Rock I have been fortunate to find a lighthouse-keeper in charge who has been interested in the island's birds. With his assistance I have been able quickly to find the various subjects that I have been after, which has saved considerable time and labour. On the occasion in question it was decided that first of all we would set off by rowing-boat and land and explore the bottom of the Rock at a suitable point where some interesting bird life existed. This we did and alighted on the east side. About fifteen feet up from sea level I was shown a small colony of Shags. The nests, built on the flat rock, were roughly made of seaweed and various odds and ends, such as grass, straw, small sticks, etc. Except for one nest, in which there were three eggs, most of the others contained young of varying sizes. One of the illustrations shows an adult bird with a youngster, the largest that I could find. The pictures were obtained without having to resort to a "hide". As I neared the nests the parents adopted a most aggressive attitude. The tail was lifted up and spread out fanwise, whilst the head was thrust forward with the beak open. My first impression was that the birds were about to fly at me, but my companion

allayed my fears, and I soon realised that "their bark was worse than their bite" and that they were quite harmless. The other Shag picture gives a close-up view of a displeased parent. Note the characteristic tuft of feathers on the crown, which adorns these birds in breeding plumage.

Some fifty yards away, at the other side of a little gully, more Shags, together with some Guillemots, were nesting, whilst on ledges thirty or forty feet up, a small colony of Kittiwake Gulls could be observed. Though it was impossible in this case to get a good picture, I include two illustrations of this species, part of some cinema film taken on another occasion. In the second picture the two youngsters are waiting to be fed. To impress upon the parent bird their hunger, they have seized her beak in characteristic fashion, and are now waiting for her to regurgitate some food.

Having completed our investigation at the foot of the Rock, we rowed back to our starting-point, and climbed up to the Lighthouse at the top of the cliff. Close by, amongst the stones of some of the old fortifications, Puffins had made their nests. This was rather unusual, and something I had never seen before. Normally the nest is at the end of a shallow burrow, appropriated from a rabbit, or one excavated by themselves. The Puffin, or the Sea Parrot as it is sometimes called, is at once recognisable from other species by its triangular brightly-coloured bill and orange-coloured feet. The two pictures illustrate these points. The term "Sea Parrot" fully justifies itself in one direction. This I know to my cost.

Many years ago I was on the Island of Annet in the Scillies making a cinema film dealing amongst other things with the Puffin. As I required a close-up of a youngster, I decided to catch one in one of the many burrows on the island. The majority of the holes were too long to enable me to reach the inmates. Eventually, however, I found one which I thought would suit my purpose. So, rolling up my sleeve, I put my arm as far into the hole as I could to get hold of the bird. Unfortunately it got hold first. I didn't think it was possible for a bird to bite so hard or hurt so much. I do not know to this day whether it was the parent or youngster that had bitten me, and although I have handled a young Puffin since then, I have never thought fit to test its biting powers to satisfy my curiosity!

I had intended to get a series of pictures of the Fulmar Petrel, which nests on the Rock, but I was told I was too late as all the young had hatched out. However, it seemed there was one bird still nesting. It turned out that for over ten days she had been sitting on a large pebble. Whether this was the result of some broken romance I cannot say.

The main attraction of the Bass Rock, from an ornithological point of view, is the large Gannet colony. These large birds, some three feet long from beak-tip to tail, with a wing-span of fully six feet, breed in colonies. Large groups occupy

Tawny Owl near the entrance hole to its nest in a dead tree

Woodcock nesting in rough land by a wood

Hen Pheasant sitting

different portions of the cliff face, whilst a few have made their nests on the summit. I told my companion I wished to be taken to what he considered the best group for photographic purposes. Although there was no time left to take pictures, he said he would show me some sites. We examined several localities, all of which looked moderately good. Finally he said, "Of course if you want what I consider the best spot we must go to the east side." Without having seen the place, his description sounded ideal for my purpose, as amongst other things there would be a good morning light, and I should be able to start operations as soon as I arrived on the following day. We walked across the island, my companion leading the way. Arriving at the cliff edge he commenced to descend by what seemed to me a most perilous route, one which, at times, was practically sheer. We had descended about fifteen or twenty yards when I called a halt. I told him that nothing would induce me to go any further without the safety of a rope. I could see from where I then was that, once down on the ledge that he had in mind, conditions for photography would be ideal. He seemed rather amused when I insisted on this rope, but finally he agreed that when I returned the following day he would have one ready. Shortly after this the boat arrived, and I set off on the return journey to North Berwick. Later, as I lay in bed, my thoughts kept returning to the cliff face and the rope that I intended to use on the morrow. I was reminded of an unpleasant experience of some twenty years previous which is perhaps worth recounting. It was the occasion when I made one of my first cinema films, called "The Cliff Climbers of Bempton", which dealt with the organised collection of Guillemot eggs. One man of a team goes over the cliff top, suspended by a rope attached to a sort of belt round his waist, while at the cliff top is fixed a second rope, which he uses for steadying himself, for signalling, and as a means to help his colleagues haul him up to the cliff top. His comrades take his weight on the body rope, and lower or lift him according to his signals. Whenever he wishes to ascend, he pulls upon the thick signalling rope, using it as a means to help his partners haul him to safety. When I saw this performance for the first time, I was greatly amused to see that the climber was wearing a discarded policeman's helmet. This, I learned, was worn so as to protect his head from stones that might be dislodged by the ropes. If a stone the size of a golf ball hits a person a hundred feet below, it is capable of doing serious injury; in fact, I am told, the danger of dislodged stones is far greater than the chance of the rope breaking. When the cliff caves in the climber pushes on the cliff face with his feet and makes his body swing in and out in the manner of a clock's pendulum. On my first visit I stood for some time watching the climber, getting the hang of things, summing up the possibilities of a cinema film, and generally thinking out a suitable plan of campaign.

While I was filming the cliff climbers the next day, someone jokingly said: "Why not go down yourself and show the difference between an amateur and

an expert?" In those days I was of medium build, had plenty of strength and had no sense of fear (or common sense either). So I readily accepted the suggestion. The most effective scene for a picture, I suggested, would be where I went over the cliff at a part where it caved in, and that I should emulate the cliff climber and swing in and out like a pendulum. Eventually everything was ready, my assistant had been instructed what to do with the camera, I had donned the policeman's helmet, and my body rope was securely fastened. I went over the edge of the cliff and was lowered some hundred feet or so when I noticed that the cliff was starting to cave in. The rock climber of the team shouted down to me: "Start using your feet!" I attempted to follow his advice, but unfortunately, instead of pushing on the cliff face evenly with both feet, I put more pressure on one foot than the other, the result being that I went sailing outwards only to turn and spin in mid-air. When I swung backwards towards the cliff, instead of my feet being in a position to push off once again, I landed backwards, my body hitting the rock with a resounding thud. For a few seconds I thought things were serious, but as soon as I had got over the momentary shock, I began to think that I was all right.

However, I was not as well placed as I thought, for I was suspended, over a hundred feet down the cliff, and having lost my momentum I could not reach the rock to use my feet to start getting the pendulum motion going again. I signalled the hauling team that I was coming up, but on looking skywards discovered, to my horror, that the ropes had become twisted together while I was spinning round. Never had I felt more uncomfortable. Anyhow, to cut a long story short and draw a veil over what followed, I was ignominiously hauled up by both ropes, and to my great relief eventually found myself safe and sound on the cliff top. When the film was processed, it turned out that my assistant had made a good job of his camera work, and when the film reached the cinemas my cliff-climbing exploit was one of its highlights. Little did the audience know that the humorous touches were entirely unintended!

But I am digressing. After an early breakfast I again visited the Rock. It was a beautiful day with scarcely a cloud in the sky. On arrival at the lighthouse I found my friend ready and waiting. I myself was shod with nailed shoes, which I had put on to obtain a firm foothold on the rock. My companion, however, was wearing his gum-boots, and told me that I must be on my guard lest a bird should stab me in the leg. We immediately set off for our destination. The rope was tied to a jutting rock at the top of the cliff, and with this, together with the confidence it instilled in me, I found it comparatively easy to descend, especially as my companion insisted on carrying all the heavy apparatus. Once down on the ledge, I took careful stock of the situation. It really was ideal. A goodly number of nests could be watched from the one point; furthermore, most of these contained young of varying age. I noticed on the way down one

or two dead birds, and on mentioning this to my companion he said that in all probability these were the result of past combats. As can be seen in the illustrations, the large pointed beak is quite capable of inflicting a grievous blow.

The nest is roughly constructed of seaweed and grass. Some are so close together that they are nearly touching. One egg is normally laid, the incubation period taking about six weeks. The young are fed by both parents, and take the regurgitated food (which is almost entirely of fish) from the mouth of the old bird. After seven or eight weeks the parents leave their young to starve. About ten days later the young leave their ledge and fly out to sea, subsisting, it is said, upon their accumulated store of fat for two or three weeks. After this they commence to fish for themselves.

I found the breeding Gannet comparatively tame, and once the camera and tripods were erected, and we could both keep still, the birds in our immediate vicinity, which had previously left their nests, commenced to return. Soon the cinema camera was working, and I got some interesting "shots" of the birds alighting. They looked very awkward and clumsy, some appearing to have difficulty in landing exactly where they wished. One Gannet, landing too close to its neighbour nest, was immediately seized by the beak in a most unceremonious manner, which dispelled any doubts I might have had as to the cause of death of the birds I have previously mentioned.

Owing to the great wing span, a Gannet has difficulty in rising from level ground, and for this reason the bird usually chooses a nesting place where it is possible for it to launch itself into space. A typical example of this is shown in one illustration.

Except during the breeding season, or by accident, a Gannet does not come to land, resting on the water, or swimming with vigorous alternate strokes of the feet. It rises with some difficulty, flapping over the surface with its wings, and pushing on the water with its large webbed feet, to help raise itself. This last-mentioned movement is clearly shown in a slow-motion cinema film I took of these actions. When fishing, the bird usually dives from a height of from fifty to a hundred feet, or more. The wings, which are half open, close just before entering the water.

As I wanted to get some pictures of the birds in flight, it was agreed that I should next visit the Rock when there was a breeze. This would enable me to make some records of the birds soaring. Two days later I got the chance that I had been waiting for. Thanks to a light south-westerly wind, the Gannets could be seen soaring, practically motionless, off the west cliff. On this occasion it was quite easy to take up a point of vantage without running undue risk, and no rope was necessary. Although the movements of the Gannet are ungainly when alighting and taking off, in the air their flight is extremely graceful, as can be imagined by the help of the illustration. I obtained all the pictures I

required in the one day, and, my cinema film now complete, I returned home the following morning.

The Lesser Black-backed Gull nests in a variety of places, usually in colonies. I have seen nests both inland in moorland districts, and at the coast, amongst grass-covered rocks and sea-cliffs.

There is a grouse-moor some twenty-five miles away from where I live which holds, I am told, the record "bag" for this or any other country. In one day, August 12th, 1915, to be exact, eight guns shot down 1,464½ brace. For several years I have heard that a colony of Lesser Black-backed Gulls were using part of this moor for their breeding quarters. Recently I learnt from a reliable source that the colony had reached very large proportions. An opportunity to visit the moor did not arise till late on in the season, but eventually a friend and myself set off to investigate. We found the climb to the summit both long and arduous, for although there was a perfectly good track up to one of the shooting-boxes, a shepherd misdirected us, with the result that for several miles we had to wend our way through bracken mostly waist-high. The district had been used by the military for training purposes, and various types of relics such as shells, grenades and unexploded bombs (at which danger warnings had been posted) were to be seen. As the bracken had grown since this part of the moor had been used by the military, we were both rather apprehensive as to what we might be walking into at any moment. Anyhow, the danger may have only existed in our imagination, for we eventually came out of the bracken some half-mile below the summit without any untoward occurrence. The sight which met our eyes on reaching the moor proper was most impressive, for as far as we could see the whole of the ground was dotted with Gulls. I tried to form a rough calculation of how many there must be in that one area, but I gave it up eventually as hopeless. It must have run into several thousands. The year had been a notably bad one for Grouse, but even so we both expected to see a fair number. Actually we did not count a dozen between us and it would appear that the Black-backed Gulls had taken full possession of this part of the moor.

The food of these Gulls is very varied, consisting of fish, marine crustacea, dead mammals and birds, as well as birds' eggs, birds and their young, etc. In a breeding situation such as this they would most certainly destroy many Grouse eggs, and probably kill young birds. We found the remains of a number of crabs, which proved that they were not dependent on the food obtained in the locality, and must have flown to and from the coast, which at its nearest point would be some ten miles distant. It was so late in the season that it took us quite a while to discover a nest which still contained eggs. Due to the war-time egg shortage the nests had been severely robbed, and I am told that thousands of eggs had been taken for eating purposes. However, this seems to

have had little effect on the colony, except that young of very varying age were to be observed. I found it necessary to erect a "hide" so that I could get a reasonable close-up of one of the birds. On this occasion I turned out to be a bad weather-prophet, and before I entered my place of concealment not only was the sky overcast but a heavy downpour seemed imminent. Actually this did not materialise and a fine drizzle set in, making both the light and visibility very bad indeed. Nothing could have been much worse for colour photography. However, I did manage to get a result under these conditions, and my illustration shows the bird standing a short distance behind its nest.

The Black-headed Gull is another bird which regularly breeds on the moorlands. They nest in colonies in a variety of sites, both inland and at the coast, breeding amongst sand dunes and marshlands by the sea, and inland in boggy country at both high and low altitudes, and amongst the reedy edges of lochs and tarns, etc.

I well remember a nasty experience that occurred some years ago, when on a visit to a big colony of Black-headed Gulls on a moorland common in Yorkshire. The birds nested in a swamp, and it was necessary to walk a considerable distance through bogland, before reaching the nests. The ground had a reed and rough grass surface, but there was water underneath the turf. Every step I took I could feel the ground move. Suddenly both my feet went through, and if I had not instinctively left loose of my heavy tripod and thrown out my arms, I am certain I should have gone under. As it was, I sank up to my armpits, and lay there absolutely helpless. My companion, who had followed up close behind, shouted: "Stick it", and after a time—which seemed like an eternity—he returned with some pieces of wood, which he threw on the ground close to me. As this wood distributed his weight over a wide area, he was able to stand on it, and, after a struggle, extricate me from my sorry plight. Needless to say, that was the end of my activities for the day. The illustration, recently taken, shows a typical nest, situated in reeds at the edge of a moorland pool.

Mention is made in another chapter of the subject of bird photography away from the nest. As I speak in favour and encouragement of this class of work, it is only fitting that a picture of this type should be included.

Two or three years ago, I wished to obtain some coloured cine film of the Sheld-Duck. I thought the boldly contrasted plumage would look well in colour. I decided to visit a bird sanctuary on the Lancashire coast. It is a popular haunt of the Sheld-Duck and was ideal for my project. As the nest is usually in a rabbit-hole or burrow, there were two alternatives. I could set up a "hide" close to an entrance-hole and wait for the birds to enter or depart, or set up a "hide" at a point of vantage at some known feeding-ground. The matter was discussed with the keeper, and eventually it was agreed that a "hide" should be erected at the edge of a pool situated amongst the sand dunes

some three-quarters of a mile from the coast. Although the food of these birds is chiefly marine mollusca, crabs, shrimps and prawns, vegetable matter and aquatic plants are also consumed. I spent the first two days inside my "hide" without any success. On the third day a bird came down about thirty yards away from the pool and preened itself. I managed to get some cinema film of this, and had just finished taking it when, to my great excitement, another bird alighted at the edge of the pool. It quickly entered and commenced feeding, working its way right across the front of the "hide". This was a truly wonderful sight, the reflection of the bird and the sand dunes in the water making a most beautiful picture. The illustration shows the bird in the middle of the pool.

Chapter 4

BIRDS AND TRAVEL

A traveller without observation is a bird without wings.—SAADI

While I cannot claim to be a "globe-trotter", I have been fortunate enough to have had the opportunity of visiting ten countries during the last twenty-five years. The aims and objects of these journeys have been diverse. They range from business trips to holidays of recuperation after illness, photographic expeditions, and a honeymoon. I have been on none of them without a camera of some sort. Only once have I met with any photographic complications—on my honeymoon in Egypt, where my main cine camera broke down, and stopped my activities; not to my wife's sorrow, I suspect!

I cannot too strongly recommend those who are contemplating a journey, of whatever nature it may be, to take a camera of some sort along with them. One can never tell what opportunity may arise for a picture, and many times, when some interesting subject has cropped up, I have regretted that I have had no camera with me.

The average traveller can be divided into two groups—the observant and the non-observant. The non-observant person is to be pitied. He gets such little value for his money and efforts, by comparison with anyone who has cultivated the faculty of taking notice. But it is surprising how many people who think they are observant fail when they come to a test.

For some years now I have been connected with the voluntary side of the police force. One of the methods of training our motor-patrol staff is to instruct a driver to give a verbal description of everything he sees as he drives his car along the road. I have practised this test myself, and as a result have noticed things that I have never observed along roads I have covered hundreds of

times before. I have even carried the experiment a stage further, and from my home to our works some eight miles distant, I have tried to notice something fresh every journey. It is surprising how many objects I have discovered which, in years past, had slipped my observation.

My travelling experiences can also be divided into two categories, the planned trip and the wandering trip. Here I am on delicate ground, as I am fully aware that there are many who believe that an ideal holiday cannot be arranged in detail beforehand, that the main pleasure of a holiday is in sauntering at will from place to place without any thoughts of time-table or routine. During past holidays my friends have sometimes given me the nick-name "Thomas Cook"; they complain that I am "rushing" them, that my ideas of a plan for the day's activities are too precise. Perhaps, the ideal is to strike a happy medium, but as far as a trip in connection with the production of one of my bird pictures is concerned, the journey has not only to be planned, but very carefully organised.

Take, for instance, my photographic visit to Hungary, which came about in this way.

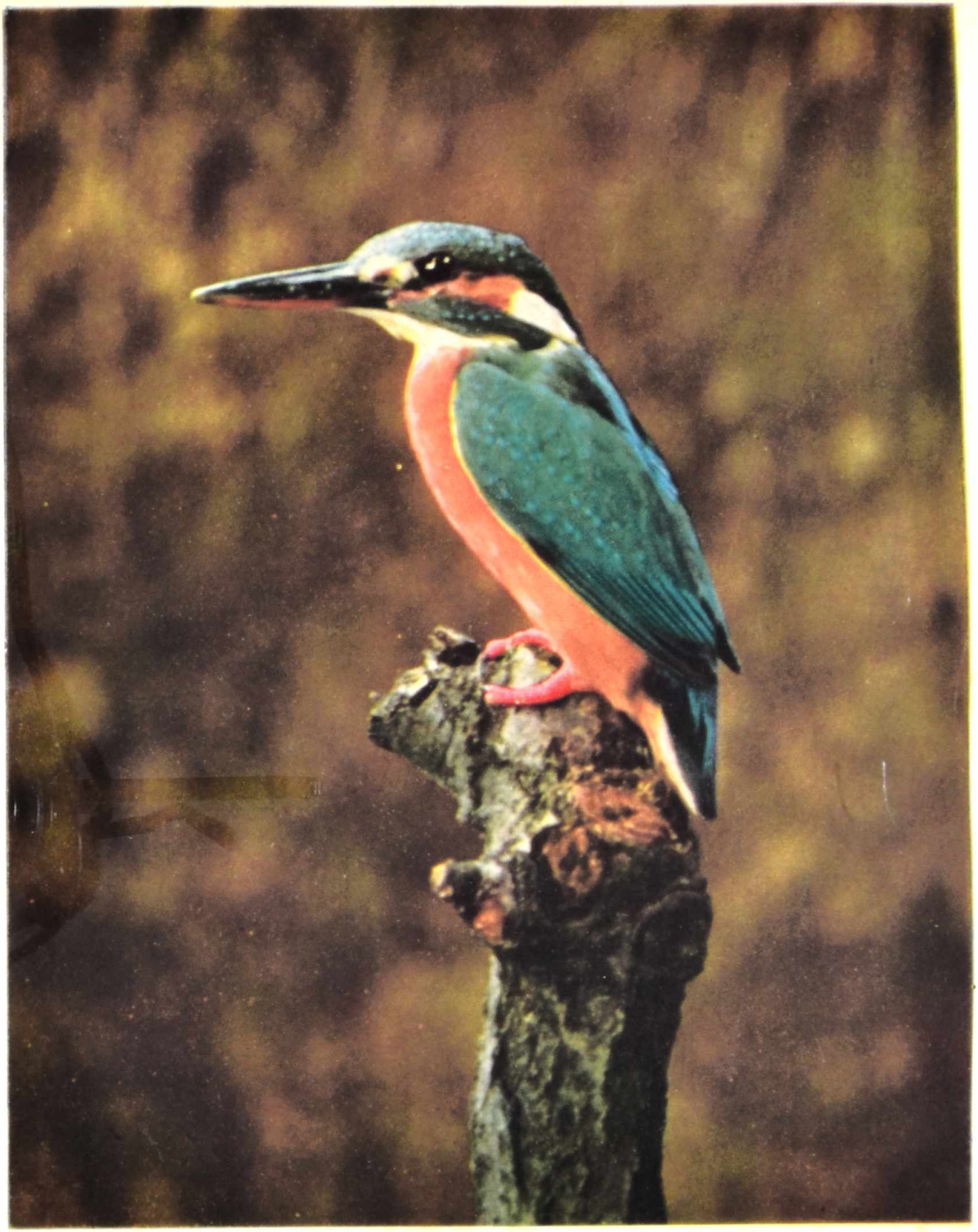
From time to time I had been honoured by an invitation to give a film show at the joint annual meeting of the British Ornithologists' Union and the British Ornithologists' Club. At these functions it was customary for the high-lights of the ornithological world to assemble. Replying to a vote of thanks on one of these occasions, I happened to mention that I was very gratified at the enthusiasm with which my pictures had been received, but would like to take the opportunity of pointing out that, although I had been coming up to London for some years to give these shows, I had not yet received any assistance in making my pictures from any of the influential audience. I pointed out that if a photographer of birds was forced to find all his subjects as well as photograph them, valuable time was wasted during the breeding season. Shortly afterwards I was approached by a member of the audience, Phyllis Barclay-Smith, the present secretary of the International Committee for Bird Preservation. She said that the Hungarian Government was disturbed to learn that, owing to the encouragement being given in that country to organised shooting of wild fowl, an impression seemed to be growing that its bird life was not being adequately protected. They were desirous that some impartial visitors should go to Hungary, and see for themselves that this was not the case. It was further suggested that a cinematographic record should be made with the object of proving that Hungary was not only fully aware of her responsibilities, but was making every effort to safeguard her rare birds. It was eventually arranged that Phyllis Barclay-Smith and I should go, she to get a first-hand impression of exactly what was taking place, I to make a photographic record. The Royal Hungarian Institute of Ornithology, under the management of Dr. Vonoszky-

Schenk, undertook to arrange an itinerary whereby we would be able to see the greatest possible number of important species during the three weeks that we planned to remain in Hungary.

The success or failure of a trip of this character depends to a great extent on planning and careful organisation. As I was taking much equipment, five cameras and a considerable quantity of unexposed cinema film, it was necessary to make prior arrangements to avoid trouble at the various frontiers. I also decided that it would be a wise policy to have the photographic equipment examined and certified prior to leaving this country; otherwise difficulties might have cropped up on my return home. I was more than a little concerned about travelling across Europe with so many cameras. In June, 1939, it was obvious that trouble was brewing, and the thought crossed my mind that a project such as ours could easily provide an excuse for espionage. Anyhow, my partner laughed at my fears, and in her usual businesslike manner proceeded to obtain the necessary permits. A *laissez-passer* was received from the Belgian and German Governments, and I felt very relieved when I actually saw the documents.

Clothing and footwear were also important considerations. We expected to wade through swamps and negotiate marshy ground. Therefore, we took rubber boots and fishing waders, in addition to some strong walking-gear. Our clothes were equally suitable for rain or sunshine, and our equipment ranged from a mosquito net to a flashlamp. All the film was in tins sealed with adhesive tape, so that it was less likely to suffer from any extremes of climate. Owing to the total weight of the luggage, we decided to travel by sea and land, rather than by air, although a 'plane journey would have saved a lot of time.

As soon as we arrived on foreign soil our planned arrangements started to prove their worth. At the Belgian customs, my companion handed our *laissez-passer* to the first official she saw. He summoned one of his superior officers, who not only guided us through the customs buildings, but helped us to obtain our reserved seats on the train. At the German frontier our *laissez-passer* again saved us from any trouble, and the journey was uneventful. The Press of Budapest had somehow or other got to know of our arrival, and we were confronted with an array of cameramen. All arrangements had been completed by our Hungarian friends, and we spent a day finalising details in the capital. We started off at dawn on the following day for our first objective—a little village called Dinnyes, situated on the Lake Balaton road, some eighty or ninety miles south of Budapest. From there we were to explore the reed beds which skirt the Lake of Velence. Our hosts, a family called Muller, had a nice farm about half a mile away from the edge of the lake. Juri and Stefan, the two sons, were excellent finders of nests; in fact the skill of Juri, the taller of the two,



The Kingfisher, Britain's most colourful bird

Kingfisher perched besides its nest-hole in the bank of a stream

Kingfisher on the alert

was quite uncanny. After we had had some lunch and unpacked our baggage, Juri and Stefan took us to the lake. Each brother had a duck punt, and my partner and I glided out in separate craft to inspect the inhabitants of the lake.

Soon we were moving through narrow waterways among the reeds, skilfully piloted by the brothers. The first subject that attracted our attention was a colony of Black Tern, which were nesting at the edge of some reeds in a large open sheet of water surrounded on all sides by reed beds. The nests were fairly easy to discover, as the parent birds were flying overhead, and gave away their nesting sites.

We spent several hours on the lake looking at various forms of bird life, and it was decided that I should start my bird photography early the following morning.

My room at the farm was next to the cowshed and opposite the pigsty, and had been selected by a hen for nesting purposes. She was not deterred by my presence, and we shared the room between us. There was a dried-mud floor, and the room was full of beds—there were at least five. The top of my bed was some six feet off the ground, and appeared to have three or four mattresses on it. On examination, I discovered half the family wardrobe under some of these mattresses! But the excellence of the Mullers' food compensated for any deficiencies in sleeping accommodation. I had been previously warned to be careful what I ate, as, probably through indiscretions in my youth, I have a weak digestion and must keep off highly-seasoned food. My companion did her best to explain this to Mrs. Muller, and it was arranged that we should feed chiefly on chicken cooked in various manners. She kept her word, and I have never tasted chicken so delicious.

As dusk set in, the drone of the mosquitoes and the creaking of the thousands of frogs made a weird noise; in fact the mosquitoes were so ubiquitous that we retired to our rooms once again to make sure that everything had been done to prevent them from entering. I found it a wise precaution never to show a light in the room when a door or window was open. I had some candles with me, and before getting into bed I used to go round the walls cremating any little visitors that I saw. Thanks to these precautions neither of us were badly bitten.

For the first time the language difficulty now confronted me. I had purchased a Magyar-English dictionary, ready to deal with my conversational problems. My companion could speak German fluently, and in Budapest she had been most successful in making herself understood. In a little village like Dinnyes it was hardly to be expected that the inhabitants would understand any language but their native tongue. I tried to make conversation by means of a dictionary, but my efforts were shortlived and I gave Magyar up as a bad job. However,

the Mullers knew a smattering of German, and my companion came to the rescue with the aid of her Hungarian dictionary.

It was while I was in Hungary that I realised for the first time the advantage of an international scientific nomenclature for birds. My difficulty was that there was a British name for a certain bird, a local nickname for the same bird, a correct Hungarian name, and, most important, the proper scientific name. Luckily, we had forestalled this problem and had been furnished with the Hungarian equivalents to our own British names. It is surprising how misleading names can be. Some years ago I was in Norfolk and was searching some reed beds for bird life. Suddenly something rushed through the reeds just in front of me, and I said to my companion who was a native of the district: "What was that?" "It's a pussy", he replied, "didn't you see it?" "What on earth's a cat doing out here?" I asked, whereupon he roared with laughter. In my ignorance I did not know that pussy was a name for hare.

To return to my Hungarian adventures. We had an early breakfast the following morning, and once more set out for the lake, this time armed with my photographic apparatus. We built a "hide" on one of the punts, which we moored four or five yards away from one of the Black Tern nests. This subject turned out to be an easy one, and after my assistants had left me alone inside the "hide" the parent birds were at the nests in under twenty minutes and gave me every opportunity to film them. I also got some slow-motion pictures of the birds in flight. I was not very concerned about the kind of birds I photographed as long as they were interesting subjects, but my companion was most insistent that I should get a photographic record of a Moustached Warbler, a very rare bird, which, as far as she knew, had never been photographed before. We told Juri Muller what we required, and after half an hour's journey in the punts, we pulled up half-way along a narrow waterway. There, in the reeds, about three feet above the water, was a nest which to the casual observer appeared to be that of a Reed-Warbler. We moored a punt into a suitable position, and once more set up the cameras. Here again I was fortunate, and made my records in under a couple of hours. As my companion had never seen the bird, she said she would like to stay in the punt, so I left her for a short time and went off with Juri Muller on a nest-hunting expedition. On my return my friend was very excited. Not only had she seen the Moustached Warbler but a snake had actually started climbing up the reeds towards the nest. Anyhow, before it could do any damage she had shown herself and frightened the reptile away.

We had no time to do anything further that day, and as we slowly made our way homewards I had an opportunity for the first time of watching a frog croak at close quarters. This is achieved by the creature filling two compartments with air and then letting the air blow out again. The two compartments are

situated at each side of the frog's neck, just below the cheek. I never knew before that there were so many types of frog. There were big ones, little ones, brown ones and green ones; the place seemed alive with them.

Next morning we set off again for the lake. This time I was to photograph the Little Bittern, a smaller relation of our British-breeding Bittern. This bird probably nested in Great Britain during the last century, but I can find no record of it having bred here since then, although it has been recorded as a vagrant not infrequently. Juri Muller had found a very nice nest in the reeds facing an open stretch of water, and it was an easy matter to cut a way through to the nest so that I could photograph it. When filming from a boat, it is my usual practice to stake it on each side, if at all possible, to stop any movement. On this occasion I could only use one stake—the punt pole. The water was about six or seven feet deep, but I managed to build a "hide" on the punt and camouflage it with some reeds from a near-by reed bed. As I went inside the "hide" to examine my viewpoint, I must have stepped too far to one side, for the punt capsized and the "hide" sank with me inside it. For several seconds I fought to free myself from the cloth which clung to me and hampered my movements. Eventually, I succeeded, and reached the surface. Juri Muller, in the other punt, was convulsed with laughter, but I could not see the joke at the time, as I had undoubtedly had a very narrow escape. Fortunately, my camera was not in the "hide" at the time; otherwise it would undoubtedly have been seriously damaged. We righted the punt, this time tethering one side to some reeds and the other to the punt pole. The Bittern made up for my misfortune and behaved very well indeed. Not only did I get the mother brooding her young and feeding them, but obtained a record of father and mother together at the nest.

It is nauseating to watch the larger birds regurgitate food for their young. The first time I ever had this experience was when I was filming the Bittern in Norfolk. I had just eaten my lunch when mother arrived at the nest, and immediately the youngsters seized her by the beak and pulled it down, which was their way of telling her that they were hungry. She then commenced to retch, and after a few seconds I could see her neck swell as the meal worked its way up from her crop. The mother then deposited on the nest a fish—about six inches long—which was eagerly devoured by one of the youngsters. I had to witness the performance several times before I became used to it. The Little Bittern I photographed in Hungary did exactly the same thing. The amazing part of it all was that the mother regurgitated a fish which appeared to be nearly half the size of any of the youngsters. On the first occasion none of them devoured the fish, so the mother proceeded to swallow it again. The family, disappointed, seized her once more by the beak, and forced her to disgorge the fish once

again. This time one of the youngsters made no mistake, and after three or four huge gulps the fish vanished.

The next subject that I attempted was the Spoonbill. It is a regular visitor to parts of Britain, although it is well over a hundred years since it was recorded here as a breeding species. I shall not easily forget our trek to the Spoonbill colony. After about an hour's journey in the punts, we landed on a boggy bit of ground close to some reeds. We had come prepared for rough going, and my companion and I had taken the precaution to wear waders. There were five of us in the party, our three assistants leading, carrying my heavy equipment. How they managed to do so was amazing, for we had only travelled twenty or thirty yards when, with every step, we started to sink above the knees in liquid mud. Sometimes our legs would sink in the slime right up to our waists. It required great effort to extricate ourselves, and on more than one occasion my companion and I had to receive assistance before our feet were free.

The Spoonbill colony was over a quarter of a mile from where we had left the punts, and by the time we arrived I felt that we had travelled far enough. However, our exertions proved to be well worth while. There were dozens of nests in a small area, and though the reeds hid one from another it was a wonderful experience to see all the birds flying above us. These beautiful white birds, with their long necks stretched out, and their feet streamlined to their bodies, made an amazing spectacle. I chose a nest which I considered ideal, and my assistants built a "hide" while I got out my cinema camera and started to make some slow-motion pictures of the birds in flight. This was a wise move, as five people among the nests at the same time had frightened most of the colony into the air. The birds circled round in a most obliging manner, giving me every opportunity to take the pictures I required. Eventually the "hide" was completed, and I was left by myself. The young in this nest were very small, and I was particularly interested to see how the parent birds fed these youngsters with their huge spoon-shaped beaks, from which they derive their name. Eventually my curiosity was satisfied, and I was able to see that the mother put her long beak down in such a manner that the baby Spoonbill could get its mouth right to the top of the beak, where the parent would regurgitate food in the approved manner.

Within fifty yards of the Spoonbill colony a group of Purple Herons were nesting. As these birds flew around, they looked so attractive that I determined to endure another day's exertion in order to photograph them at the nest. This I did, and was very glad that I had made the decision to do so. The effort was well worth while, as in the day I obtained a series of pictures of the birds feeding, and also one or two flight sequences. These birds are not unlike our Common Heron, but are smaller and more slender. The neck

is strongly striped and rufous in colour. When alarmed, the bird stands erect with its neck extended to the full, in the same manner as our breeding Bittern. This striped neck matches the surrounding reeds wonderfully, and is one of the best examples of protective coloration that I have seen. Here again the parents regurgitate food from their crop when their bill has been seized and drawn down by the youngsters.

During our stay at Dinnyes I was very interested to notice that two pairs of White Storks were nesting in the village; one nest was on top of a large Dutch barn, and the other bird had built its home on top of a chimney stack of a small farm house. Perhaps recollections of childhood stories of how the Stork dropped babies down chimneys were responsible for this interest. In Hungary, it is considered lucky for a Stork to nest in a village, and two Storks, presumably, must be doubly fortunate. At any rate, the villagers did not like the birds disturbed lest their luck should be driven away. Whether they bring good fortune or not, the Storks are very useful in eating up locusts and grasshoppers. It is very amusing to watch the change-over at the nest. When breeding, Storks take turns at maternal duties, and when one of the birds returns home both start to clap their beaks, making a loud clattering sound, and at the same time curve their necks backwards and forwards. These actions certainly express pleasure in most cases, but can also be used as a means of expressing excitement or annoyance on the approach of another Stork from outside the family circle. If disturbed, the birds usually circle round the nest and return a minute or two later.

This offered a great opportunity for slow-motion pictures of flight, and at Dinnyes I filmed the birds from practically every angle, "braking" with their wings, gliding; in fact, in all sorts of attitudes. To obtain some close-ups of the nest on the big Dutch barn, I had a perilous climb along the roof top, and finally fixed the camera on the ridge about twenty feet from the nest. The young were half grown, and the parents, returning to the nest with food, did the regurgitating performance, which by now I was getting used to. It was far more difficult to get level with the other nest, which was thirty feet off the ground, with no place available to set up my cameras. Eventually, by propping a long ladder against a short one, and roping the two together, I managed to climb practically level with the nest, and in this precarious position took a series of pictures.

We would like to have stayed at Dinnyes longer as there was plenty of interesting material to photograph, but owing to the demands of our time-table we were forced to say farewell to the Muller family, who had looked after us so well, and motor back to Budapest. For the next few days we made the city our headquarters. I am not sure that this was good for me, as I had accustomed myself to "roughing it". To be suddenly transplanted from primitive

conditions to the comfort of a luxury hotel, together with all the attractions of a beautiful and glamorous city, was not conducive to hard work. The first thing I needed on arriving at Budapest was a bath and a general clean-up—a necessity which immersion in the Lake of Velence, together with my experiences in the swamps, had made long overdue. An hour or so later I was clean once more, and, with a change of clothes, felt civilised again. However, we had come to Hungary for a specific purpose, and whatever the attractions of Budapest might be, our primary object had to be achieved. We were, therefore, called at six the following morning, and after a hasty breakfast set off for a small village situated on the banks of the Danube. Nearby was a nest of the Marsh-Harrier. Although it is a common bird in Hungary, for sentimental reasons I particularly wanted to get some pictures of it, for a few years previously—in Norfolk—I had been the first person to photograph a British-breeding Marsh-Harrier at the nest. Then I had found it extraordinarily shy, and I wished to discover if the Hungarian birds were the same. I put up a "hide" about twenty to twenty-five feet away from the nest in order to disturb the bird as little as possible. I soon found out that the Hungarian and Norfolk birds were equally shy; in fact, I had to spend an extra day to make sure that I had got a proper record. Unfortunately the young had grown to such a size that the Harrier had no need to feed them herself. When the young are "growing up" it is customary for the parent bird to bring prey to the nest and allow the youngsters to pull it to pieces. When they are small, the parents tear the prey in tiny particles and feed the youngsters themselves. In Hungary, I had only a fleeting glimpse of the Harriers as they arrived at the nest and, having deposited their prey, immediately flew off again.

Not far away from the Marsh-Harrier a Hoopoe was nesting in a hole in the stump of a tree on the banks of the Danube. This bird is a regular passage-migrant in small numbers in Great Britain, and has on rare occasions nested in our southern counties. The bird, with its long curved bill, and large crest, has a most striking appearance. Later on in the trip I was interested to find the Hoopoe occupying nest boxes put up by an enterprising farmer for the purpose.

Our next trip from Budapest was to a little-inhabited district, where my colleague had already made the necessary preparations. While I had been occupied a second day with the Harriers, my friend had already done the journey of several hours, and not only found an excellent nest of a Golden Oriole but also erected a first-class "hide", about seven or eight feet from the ground, in an adjacent tree. The Oriole's nest was situated in a dense wood, where the light was very bad. Fortunately, it had been built in a clearing, which allowed the sun to shine through at certain hours of the day. We were warned to be careful about our personal safety in this district, as it was frequented by gypsies

who could prove dangerous. Anyhow, the only form of protection I possessed was a penknife, and my companion, who was accompanied by a friend from the Hungarian Ornithological Institute, was no better prepared than myself. However, I climbed into the "hide" and settled down to photograph the Oriole while the others went off to search the district for interesting material. The Oriole proved to be a most interesting subject. The nest was built in an oak tree, and the birds amongst other things had used a piece of newspaper to make their home. The cock bird, with his brilliant yellow plumage, was a magnificent sight, and both birds regularly visited the nest with food, which was ravenously devoured by the youngsters. After three hours had passed there was no sign of my companions, and all sorts of possibilities as to what might have happened to them crossed my mind. Eventually my patience was exhausted, and I descended from the "hide" and made my way through the wood towards where we had left the car. As I neared the place I saw some stockings dangling from the top of the bonnet, and for a moment I imagined that some terrible crime had been committed, but, on arriving at the car, I found that my companions had got "wet to the skin". There had been a heavy downfall of rain while I had been in the "hide", and my friends had been in the open without any protection. As the sun was shining, they were doing their best to dry their wet garments, and that accounted for the dangling stockings.

No visitor to Hungary can claim to know the country unless he has seen the Hortobagy, the name given to the huge plains which stretch for miles and miles west of Debrecen. It was here that the legend of Fata Morgana originated. The story goes that a traveller, spent and weary, and parched with thirst, was struggling along when, in the distance, he saw what he thought was a beautiful woman. He made a supreme effort to reach her, but however far he went, the vision never grew nearer, and eventually he collapsed, exhausted, on the ground. As we passed through the Hortobagy I searched hard for the legendary beauty, staring fixedly into the distant mirage, but I am afraid that I did not see Fata Morgana, or, for that matter, a lady of any sort. The Hortobagy is used chiefly by owners of horse and cattle herds. The animals move about at random, and it is an unforgettable experience to see them roaming across the huge plain. A system exists in Hungary whereby the state owns all the stallions, and a very good income is derived from the stud fees. We visited a state-owned stable in the middle of the Hortobagy, and, novice that I was, I was able to appreciate what fine animals these stallions were, and the splendid condition in which they were kept. The stables were spotless, and the animals looked as if they had just come out of a circus, so beautifully were they groomed.

It is amazing to watch the horsemen, attired in their picturesque garments, round up the animals for watering at the wells. This is a very skilful job, and is a regular occurrence.

On our visit we stopped and examined a herd of three hundred cattle—all bulls. They had a terrifying appearance, as their horns were at least twice the size of those of our cattle. My partner was very loath to descend from our horse and cart; she said she hated bulls, and the sight of so many was frankly alarming. Anyhow, I had my pictures to get, so, without further delay, I started to walk among them. They were perfectly harmless, and took not the slightest notice. We learned that the herd was suffering from foot-and-mouth disease, and when I remarked that if they had been in Britain they would have been destroyed, I was told that if this system were adopted in Hungary, it would probably mean the extermination of all the cattle on the Hortobagy, owing to the fact that so many animals were in close contact with one another. On asking what would happen to this herd eventually, I was assured that after a few months the epidemic would die down.

At certain seasons of the year parties from all over the world come to the Hungarian plains for the duck shooting, which is reputed to be the best of its kind in Europe, if not in the world. There is a close season between the middle of April and the end of June for all Hungarian Duck, except the Mallard, whose close season is from the end of February till the end of June. The only exception to this rule is that the birds may be killed at any time when flying in skeins.

Situated in the middle of the Hortobagy is the Csarda, a famous inn, where we stayed for the night. It was a most romantic place, and was a popular resort of visitors and herdsmen. In the visitors' book people were not only expected to fill in their names but to add remarks as to the treatment they had received. All sorts of famous personalities had stopped at this hotel, from royalty downwards, and some of the criticisms in the book were most interesting. Over the bedroom doors were different signs, and on arriving at my own I noticed, to my consternation, that there was a heart pierced by an arrow, with a bottle of champagne underneath. I was in the betrothal room! My imagination ran riot with dreams of romance, but the only incident of note that happened during the night was that I was severely bitten by fleas from a huge sheepskin eiderdown which adorned my bed.

Outside the inn, on a beam about eight feet from the ground, a Swallow had made its home. Previously, I had rarely been able to photograph a nest of this bird, as it usually builds under the eaves of buildings or in some inaccessible place. By standing on a table it was very easy to get some pictures.

We returned to Budapest the following evening, and our schedule gave us a day's respite. My companion wished to go to the Zoo, to see a friend who was in charge there. I decided that I had earned a day's rest, and spent the time lolling about in one of the city's marvellous swimming-pools. The rest was useful, for we had still to tackle our biggest task—the filming of the Great White Heron. In 1939 only one nest had been recorded in Hungary,

Grey Wagtail at its nest on the bank of a stream

Dipper standing at the top of a waterfall below which lies its nest

Reed-Bunting about to settle on her eggs

Common S.D.
Tadorna Tadorna.

Sheld-Duck feeding in a pool among the sand dunes

(not Ruddy: whole upper parts / underparts are rufous, not giant a ring)
neck pale — rump green & blue)

and it was a great honour to be allowed to have access to such a rare subject. The breeding-ground was at the southern end of Lake Balaton, in the reed beds of Kisbalaton. It was a beautiful run from Budapest down to Keszthely, where we stayed for the night. To reach Kisbalaton from the main road was an experience in itself. First, we took our car along a very bad road as far as we could go. Then, we hired a horse and cart that took us a mile or so to a little village, where we met the representative of the Hungarian Institute of Ornithology, who was to escort us to the nest. He was accompanied by a companion who had been to the nest several times, and when he saw us changing into our salmon waders he ridiculed us so much that we decided that gum boots would be adequate. We set off from the village in a light four-wheeled truck. Considering the rough state of the ground, the speed at which we went was amazing, for it is no exaggeration to compare the journey to a ride on a fairground switchback. On reaching our destination—a narrow waterway—we embarked on a punt, which was taken as far as possible. We landed at a place where we were faced with reeds ten or twelve feet high. I soon discovered that Kisbalaton, which means Little Balaton, is not a lake, as I had supposed, but a huge, reedy fen. As it is fully protected by the Royal Hungarian Institute, it is absolutely unspoiled. We set off for the nest in single file, our guides leading the way. At my third stride, the water rose over my gum boots; soon they were full of water. Why had we been persuaded, against our better judgment, to leave our salmon waders behind? We knew that the water was infested with horse-leeches; in fact we had been told to carry salt as a protection against them. (We had also learned that the lighted end of a cigarette applied to the tail end of a leech would soon rid us of the nuisance.) Anyhow, it was too late to go back; the only thing to do was to grin and bear it. In all my experiences, I had never met reeds like these. I had explored the reed beds at Hickling in Norfolk many times, but in this case the reeds were so tall that often our view of the sky overhead was excluded. Still, the going was nothing like so bad as the trip to the Spoonbill colony at Dinnyes, although the journey was much further. On our arrival at the nest we had a great disappointment; the young were no longer there. However, our companions managed to find one some distance away, and when I was ready, they left it in position in the nest. My partner and assistants returned to the punt, and I waited, with great excitement, to see what would happen. The first occurrence was a thunderstorm, which broke out about half an hour after the departure of my companions. There was a terrific downpour, the water came through the cloth of my "hide" and I was drenched. With "live things" squirming about inside my gum boots, and now being wet to the skin, I was beginning to feel rather miserable. Suddenly, without any warning, one of the parent birds alighted on the nest. It was a wonderful sight, one that I shall not forget in a hurry. As this beautiful white Egret in its breeding plumage

carries the feathers known as ospreys, which some years ago used to be so popular in ladies' hats, it can be readily understood why it has been persecuted so much and why it is such a rarity in Europe to-day.

Almost at once the mother proceeded to feed the youngster, the food being passed across from beak to beak to the accompaniment of all sorts of weird antics. I took the pictures required, and then started to pack up my apparatus ready for the arrival of my assistants. I was bitterly cold, my teeth were chattering, and my main desire was to get back to civilisation and have a hot bath. Although, as the crow flies, I was not more than nine or ten miles from the hotel, it took me several hours to return from the nest. Half-way home, at the house of the bird watcher, we all had a glass of hot wine. Not for a long time had I appreciated anything so much. When we eventually got back to the hotel I had to go to bed to keep myself warm until the water had been heated for my bath—a proceeding that took several hours!

The whole of the next day was spent motoring to Szeged, a city in the extreme south of Hungary, close to the Jugoslavian border. Our main objective here was some salt flats situated a few miles outside the city, adjacent to the municipal fishponds. We were met by an eminent doctor who was the Hungarian Institute's representative for the district. He brought with him a Hungarian admiral, who since the loss of his country's own port—Fiume—at the end of the Great War, had earned his living by teaching English. It was a pleasant surprise to meet someone with whom I could converse without reference to dictionaries or interpreters. But I allowed my enthusiasm to carry me too far. I learnt that the admiral's wife, a lady of Russian origin, was considered to be one of the best bridge players in Hungary, and in a rash moment I suggested that the Hungarians had no better bridge players than we had in England, and expressed the wish to have a game with her. I do not know why I made the suggestion, as my contract bridge is well below the average. However, as a man of my word, I had to go through with it, and in due course my companion and I presented ourselves at the admiral's house. Imagine my distress, on partnering my hostess at the card table, on finding that the face cards were different in design from our own. I profusely apologised for my ignorance, and my host had to write on a piece of paper which cards represented the aces, kings, queens and jacks respectively. I may say, during the evening we cut out each rubber, and in every case my partner was the loser!

The following morning, we made an early start for the salt flats. On our arrival at the city's fish factory, we were met by the controller of the municipal fishponds, and set off with him on a railway car, pulled by a horse, which ran on a private line. On the way he told us something about the fishponds. Hundreds of thousands of fish were stocked there, he said. All the fish were coarse, and were sent to places all over Europe, delivery alive being guaranteed. In some

cases, they were despatched in special containers which kept the temperature of the water cool. The ponds covered many acres, and the undertaking was on a very big scale. For our benefit some food was thrown into one of the ponds and a net cast over it; when the catch was brought in, well over a hundred good-sized carp were counted. Running parallel with the fishponds, on the other side of the railway track, were the salt flats. To my amazement, I was told that the birds usually associated with the sandy flats of coastal areas were nesting there—in the centre of Europe! The first birds we noticed running about on some wet ground were a pair of Kentish Plovers. These birds still breed sparingly in England, but are rare today. The bird is smaller than, but not unlike, the Ringed Plover which is commonly seen on our low-lying sandy shores and estuaries.

I erected one "hide" for the Kentish Plovers, another at the nest of a Black-winged Stilt. I found the former rather shy, and it took me a whole day to obtain the record I wanted. Before leaving the salt flats, I built another "hide", this time at an Avocet's nest. On my return the following day the Stilt behaved very well. I found it to be a most amusing and attractive bird, with its enormous long legs, from which it gets its name, far out of proportion to the size of its body. I then changed over to the Avocet, a beautiful bird with white plumage boldly marked with black, and with a slender black bill upcurved towards the tip. An owner of the nest was standing some hundred yards away when my companions left me, and after about half an hour decided to make for her home. Suddenly, she saw several Ruffs and Reeves approaching. She allowed them to advance, but when they were about twenty-five yards away from the nest, she turned on them, diverting them from their course. As soon as they had moved away, she cautiously made her way towards her nest, which was built on ground just covered by water. After I had taken my final picture, one of the sun setting behind the salt flats, we returned to Szeged.

The following morning we set off in our car for Budapest. On the way north, we passed by a gypsy village, where we stopped for a short time, and by the aid of generous bribes persuaded some of the inhabitants to pose for their photographs. Conditions in the village were very primitive. The one-floored houses were of a most crude character, and in many cases grass was growing on the roofs. On enquiring how these people managed to exist, I was told that it was the ambition of the majority of the men to join the Hungarian gypsy orchestras, which are famous all over the world. We arrived at Budapest late in the afternoon, and on the following day started our return journey to England.

Chapter 5

BIRDS IN THE GARDEN

The ornaments of a home are the friends who frequent it.—EMERSON

Many people do not realise the pleasure that can be obtained by encouraging birds to one's garden. Feathered friends can easily be enticed to partake of your hospitality, whether the offer be a humble back yard or a vast estate.

The surest way to attract wild birds is to provide for their needs. Their primary requirements are food, water, suitable nests, and roosting quarters. If possible, suitable cover should also be provided.

Actually, it would be correct to place "cover" at the head of the list. However, most birds that habitually reside in the neighbourhood of buildings will take advantage of any hospitality one may care to offer, regardless as to whether foliage or undergrowth is in the immediate vicinity. I feel, therefore, that if I unduly stress this factor it might damp the enthusiasm of some of my readers who live in town or city and who have little or no chance of providing special cover in their small gardens or back yards.

I can assure such people, with some certainty, that if they will follow the advice given in this chapter they will in a very short time attract Tits and possibly other birds. Should a suitable nest box be provided, I am sure that it will not be long before it is occupied.

Anyone who lives in the suburbs or the country, who is fortunate enough to have even a small garden, can do something to attract birds, as any planting of shrubs, creepers, hedges, etc., will all help to provide cover, privacy and seclusion. The following are all specially appreciated by bird visitors. Some are not suitable for certain districts, and local advice should be taken before making any purchase.

ALMOND: *Amygdalus communis.* The fruit of this tree is in big demand, being specially popular with the Greater Spotted Woodpecker.

*BARBERRY: *Berberis vulgaris.* The small red berries of the shrub provide acceptable food for birds.

BAY TREE: *Laurus nobilis.* This true laurel is an evergreen that provides useful cover.

*BEECH: *Fagus sylvatica.* The beech-nuts, or beechmast as they are called, are very popular with a number of birds.

BILBERRY: *Vaccinium myrtillus.* A small shrub with nearly black berries, which are very good food value.

*BLACKBERRY: *Rubus fruticosus.* This bramble, together with other members of the Rubus group, provides a fruit that is popular. It also provides very good cover.

BLACKTHORN: *Prunus spinosa.* A shrub with a small, nearly black, fruit, with a bluish bloom. Another welcome food for the birds.

Oyster-catcher nesting in a coastal area

Oyster-catcher at its inland nest on a river shingle-bank

Little Tern nesting on the seashore

Common Tern at its nest among sand dunes

*Box: *Buxus sempervirens.* An evergreen shrub providing dense cover.

*Cotoneaster. Various species liked by the birds. The Fieldfare and Waxwing are particularly partial to the small reddish fruit.

*Crab-apple: *Pyrus malus.* The tree makes good cover, and the fruit is relished.

*Cypress: *Cupressus lawsoniana* and *macrocarpa.* Both these beautiful evergreens provide first-rate cover.

*Dogwood: *Cornus sanguinea.* An erect shrub, with a small red fruit that is a source of food.

Elder: *Sambucus nigra.* A shrub that provides good undergrowth and bears black fruit.

*Forget-me-not: *Myosotis.* Various species can be grown. Allow them to seed, as Finches relish this delicacy.

*Gorse: *Ulex europaeus* and *Ulex nanus.* These two furze bushes provide food, cover and nesting sites for certain birds. The former, the common variety, is fruiting when the much smaller dwarf, *nanus*, is in flower in the autumn.

*Hawthorn: *Cratægus oxyacantha.* The thorny tree provides good cover, whilst the red fruit is a welcome food.

Hazel: *Corylus avellana.* A bush, or tree, which flowers before the leaves are out, and later provides nuts which are in great demand.

*Holly: *Ilex aquifolium.* The well-known evergreen that bears the red winter-berry that is liked by the birds.

*Honeysuckle: *Lonicera periclymenum.* A valuable asset to a sanctuary, providing excellent cover. It has a small red berry.

*Ivy: *Hedera helix.* An evergreen climber that provides cover and nesting sites for birds.

Juniper: *Juniperus communis.* A many-branched shrub or tree which gives excellent cover. The dark purplish-blue berries are much appreciated.

*Laurel: *Prunus laurocerasus* and *Prunus lusitanica.* Evergreen shrubs which provide good cover.

Mezereon: *Daphne mezereum.* A small early-flowering shrub. The red berries are a source of food.

*Mountain Ash: *Pyrus aucuparia.* This tree, together with the cultivated variety, the Service Tree, *Pyrus sorbus*, provide fruit eagerly sought after by birds. The former has a small bright red fruit. The last-named differs chiefly in the fruit, which is much larger, assuming the shape of a little pear.

Mulberry: *Morus nigra.* Another fruit-bearing shrub, which is of value to bird life.

*Rose: *Rosa.* All varieties provide useful food, their buds being much appreciated. The ramblers and climbing varieties form excellent cover.

*Snowberry: *Symphoricarpus racemosus.* An evergreen shrub, covered by white berries which the birds like.

Strawberry Tree: *Arbutus unedo.* An evergreen shrub or tree, with a red, globular, granulated, strawberry-like berry particularly popular with Bullfinches.

*Sunflower: *Helianthus annuus.* The seeds of this annual are most popular, especially with the Tits.

*Virginia Creeper: *Ampelopsis hederacea.* A large-leafed climber which is frequently used as a nesting site.

*Wild Cherry: *Prunus avium.* The tree provides cover, and the red fruit is a favourite with many birds.

*Yew: *Taxus baccata.* These dark, densely branched evergreen trees, with their bright red berries, provide both excellent cover and food.

* Those marked with an asterisk are suitable for most climates and are recommended as a good choice for a small garden.

I do not suggest or claim that this list is anything like complete, but everything that is mentioned is an inducement to birds, and would supplement the material that is already in the garden.

Many large trees, including the cone-bearing varieties, could be added to this list, as they provide first-rate feeding material, and excellent cover for certain species. I have not given their names in detail as they are scarcely suitable for the average garden.

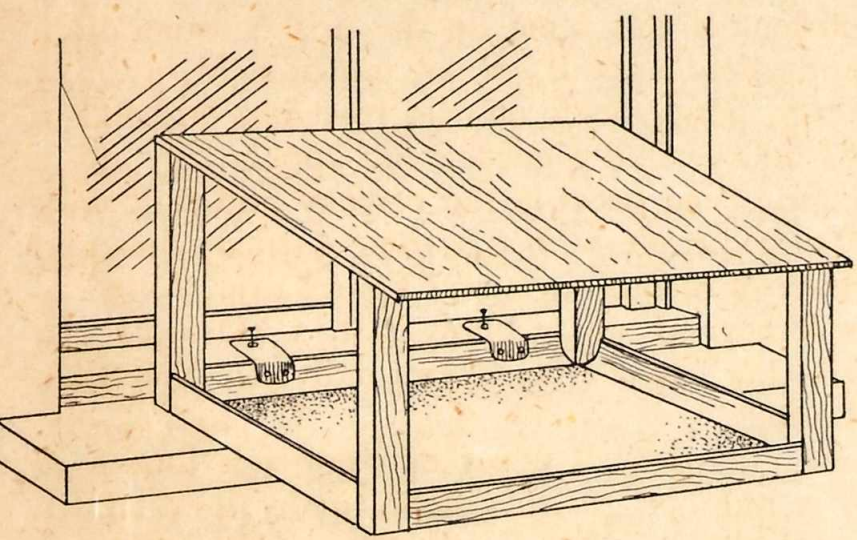
Birds dislike tidiness in a garden. If this must be the first consideration, you can, at least, compromise and allow a small corner, out of sight, to grow its own way. A tangle of blackberry, honeysuckle or wild roses is a godsend to Warblers and other small birds. I believe that a garden can appear tidy and a credit to its owner, and at the same time provide the privacy and sanctuary so necessary for certain birds. Those people who put their gardens first and foremost would do well to take note of certain facts and figures from America.

Records of the United States Biological Survey show that in Massachusetts birds destroy twenty-one thousand bushels of insect pests daily. In Nebraska, the yearly total is two million bushels.

Many people think that from a gardener's point of view it is foolish to encourage birds. Those who for a number of years have made their land a sanctuary have a different opinion. I quote H. Mortimer Batten, who has made a life-long study of this subject:—

"One would naturally conclude that the garden must suffer from such an invasion of bird life, but I can faithfully say that our garden suffers less from the activities of wild birds than other gardens surrounding us. Sparrows, of course, take newly sown seed, the Blackbirds and Thrushes help themselves to the currants, but this happens everywhere. We see the more interesting birds insect-hunting, but our carnations and primulas are never attacked, and we have never known the Tits to get into mischief by pecking fruit and buds. I hear of all these things from gardeners far and near, and obviously our own immunity is from artificial feeding. The birds visit our garden for the food we provide, whereas they visit other gardens to help themselves to whatever there is. This fact seems to be appreciated by the professional fruit-growers in many parts of the Continent, where one not uncommonly finds the orchards hung with feeding devices and nesting boxes to keep the beneficial insect-feeding birds permanently resident."

While certain birds undoubtedly harm the garden, statistical reports go to prove that the good they do to the crops and gardens more than compensates for the damage of which they are accused. Further to illustrate my point, I quote Henry W. Henshaw, formerly Chief of the United States Biological Survey:—"In satisfying their own hunger birds perform an important service to man; for, notwithstanding the fact that the acreage under cultivation in the United States is larger than ever before, and that the crops are greater, the cost of foodstuffs continually mounts upwards. Meanwhile the destruction of farm and orchard crops by insects and by rodents amounts to many hundreds of millions each year, and if any of this loss can be prevented it will be so much clear gain. The protection of insect- and rodent-destroying birds is one of the most effective means of preventing much of this unnecessary loss, and the public is rapidly awakening to the importance of this form of conservation."



WINDOW-SILL FEEDING TRAY

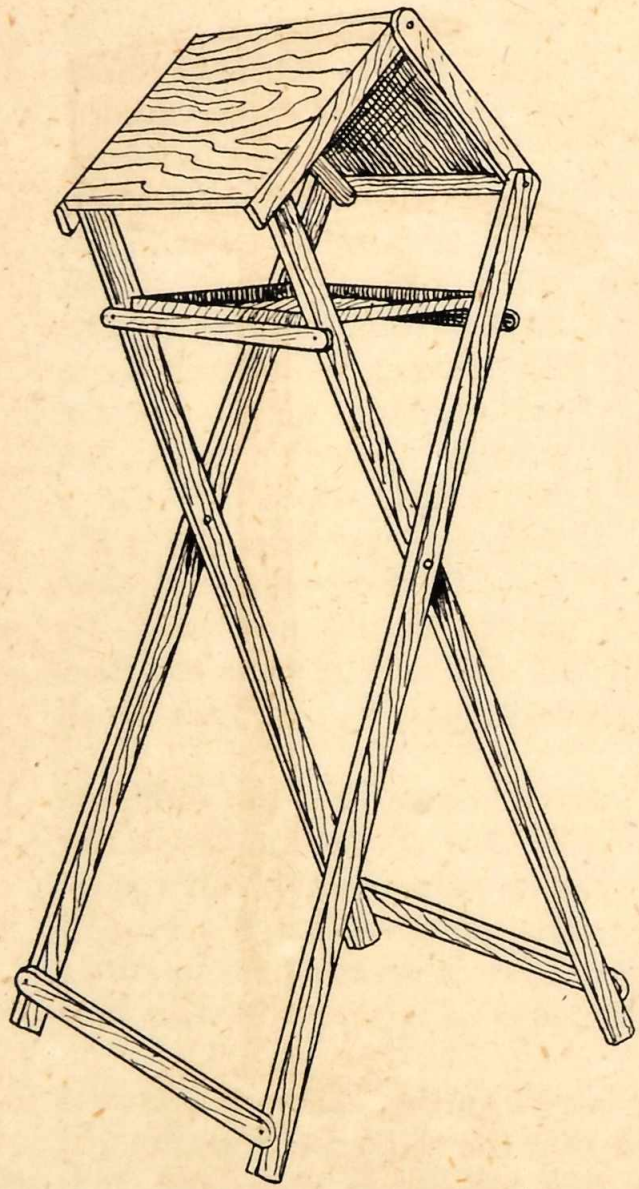
It would appear, therefore, that an enthusiastic gardener, if he tries to understand his birds, can use them as an ally. Certain varieties can be encouraged, whilst fruit trees, or anything subject to the ravages of certain birds, can be netted, which is what a thorough gardener normally does. By the inclusion of some of the shrubs and trees detailed in my list, their buds, berries, or fruit will not only provide excellent feeding material for the birds, but provide a good alternative to the fruit which you wish to protect.

Food can be provided for the birds by various means, and the elaborate and costly methods are not necessarily the best. One of the simplest is the erection of a food shelf or feeding tray. These can be permanently built against a wall, or, better still, so made that they rest on a window-sill and are easily removable. As can be seen by the illustration, there is no need for anything elaborate. The rim of wood fastened round the edge of the tray prevents food from rolling or blowing off.

A bird table is an essential part of a bird-lover's garden. All sorts and sizes can be made or purchased, but I do not think that the elaborate types are any more efficient than the simple constructions that are herein illustrated. It is not a very difficult task for anyone to make one himself at a very moderate

cost. Be sure to creosote the post or upright, and tar it at the bottom before it is put in ground, otherwise rot may set in prematurely. I do not recommend the use of creosote in any place where it comes in contact with food. Some foods will absorb it months after it has been applied, and as this tar product is dangerous to birds, no risks should be taken. A good method is to cover the feeding tray or table top with cheap zinc, which can easily be cleaned and does not absorb or sour the food.

It is sometimes an advantage to be able to move a bird table from place to place, and for that reason I include an illustration of one which is transportable. It is a good plan to secure the table to the ground, once it is in position, lest it should be blown over in stormy weather. This can easily be done by staking the cross-members with a long wire hook at each side. The United States' Department of Agriculture, in its "Farmers' Bulletin No. 621", recommended a pivoted food-house, which would swing with the wind like a weathercock, and would, therefore, afford protection for the birds as well as providing a platform for feeding materials. The illustration makes this method clear.



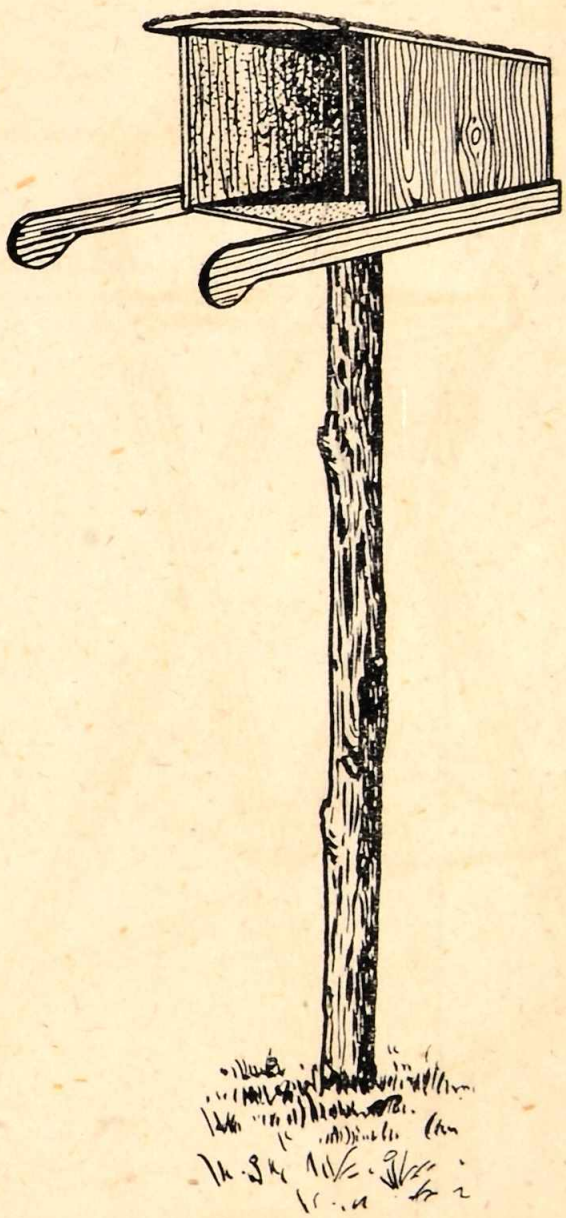
PORTABLE BIRD TABLE

It is strongly recommended that the bird table should have a roof. Not only does it keep the surface dry and sweet, and protect the food, but on wet days birds come to shelter as well as feed, often providing a very amusing and interesting spectacle. On the other hand, if there is no roof, on wet days there will be very few, if any, birds that visit the table.

It is often desirable and beneficial to provide seed or nuts for the birds by means of hoppers. By this system a fresh supply falls into position as the nuts or seed are consumed. If one happens to be away from home and there is no one to look after the birds, a regular supply of food will be automatic if the hopper is big enough and functions correctly. Small seed hoppers can be bought at a moderate cost, and there are also large ones to be

obtained, some fitted with a glass barrel, in which the contents can be seen. These are specially constructed to ensure that the food will last a long time. A word of warning: I have had considerable experience with seed hoppers and I find that they often choke up with the seed husk, which the birds discard whilst feeding. This should be removed at regular intervals, which can usually be done by blowing on it lightly, as the husk is lighter than the seed. Nut hoppers can be constructed on the same system as the seed hopper, but I know of nothing better than a special design invented by H. Mortimer Batten. His seed hoppers and nut feeders are excellent, and his "tit-bells", which are made to hold suet or fat, are in every way first-rate.

To give the maximum pleasure, a bird table should be erected where it can be seen, in view of the living-room window. If, on the other hand, it is intended to attract the greatest number of birds, including the shy ones, the most secluded and sheltered place in the garden will be the most successful.



PIVOTED FOOD-HOUSE

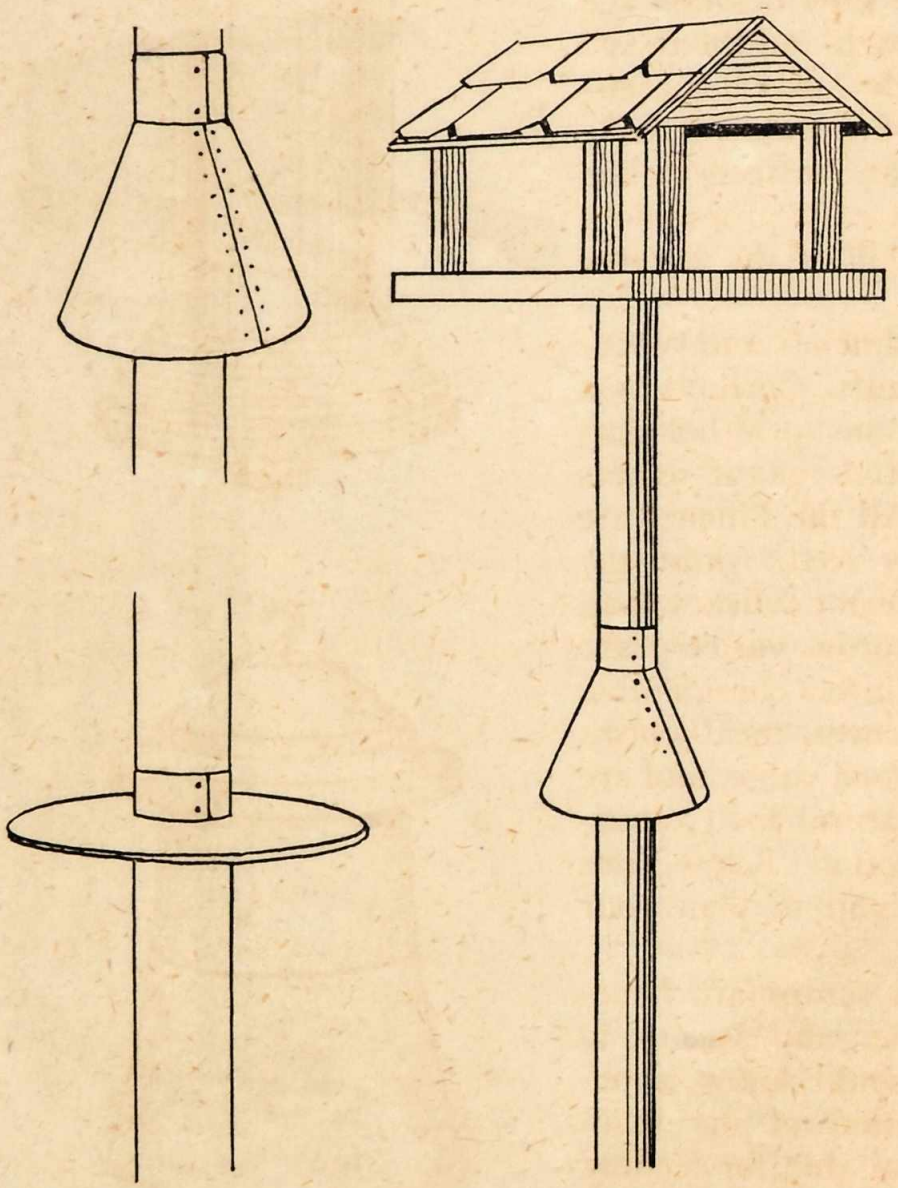
A great deal can be done to attract birds to a given spot. It is possible, once shy birds have become used to a feeding table, to move it by stages until it can be seen from the living-room. If similar food is also provided on a window-sill feeding tray, once the table and tray are in full view of one another, it is possible, by curtailing the food on the bird table, to induce the shy visitors on to the window-sill.

Many birds can be attracted to a window-sill if suitable food is regularly offered, and those people who are not prepared to erect a bird table can gain much pleasure by this simple means. For many years now, robins and thrushes have regularly visited our kitchen window, often entering the room itself. An ideal window for the feeding tray is one with the sunniest and most sheltered aspect. The food most commonly used for bird trays and bird tables is household scraps. Anything that is left over from a meal,

with the exception of highly-seasoned and salty foods, can be given. Most birds do not like fish, and, as it does not keep too well, it is better to omit it from the bird menu.

It is a good practice to keep a pie-dish in the kitchen and put all the scraps in it—bits of bread, cake, scones, cheese, pudding, porridge, and particularly any odd bits of fat. When filled, the contents should be thoroughly stirred, then put in the oven and baked to dry off the moisture, lest it might mould inside. The finished article can be turned out on to the bird table or, better still, served in the pie-dish.

Care should be taken to prevent mice, rats, and cats from climbing up on to a bird table for the food. A circular metal disc, or metal funnel similar to the illustration, about three-quarters way up the supporting post or posts, will usually overcome this danger.



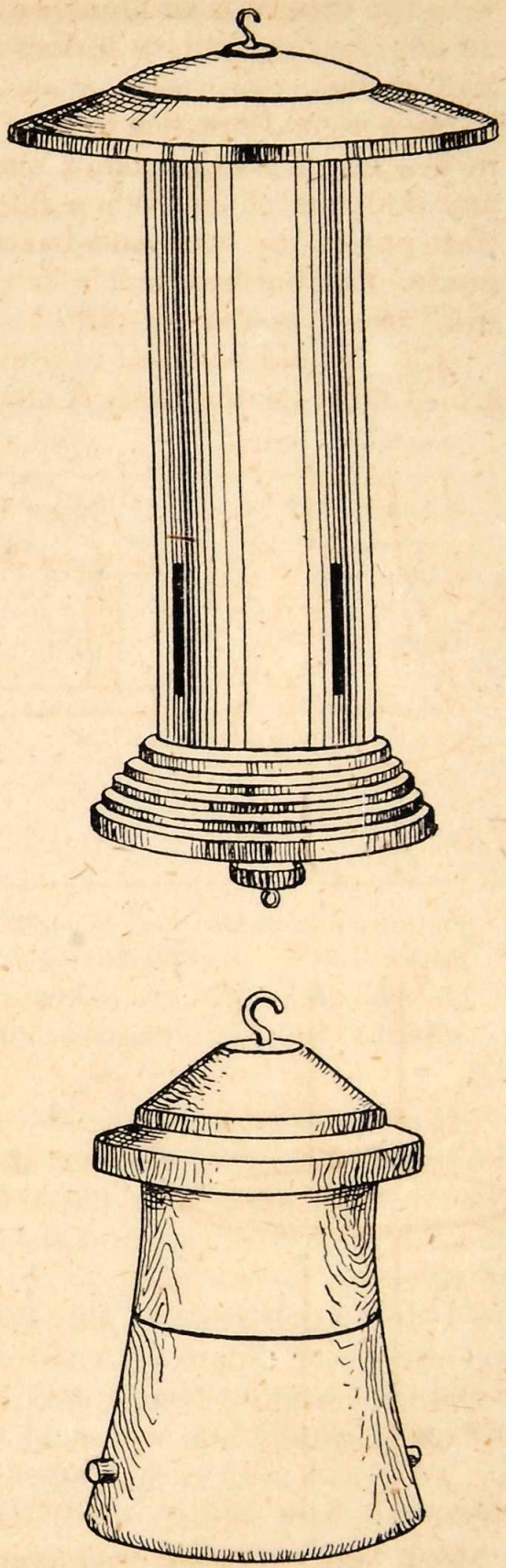
METAL DISCS OR FUNNELS TO PREVENT CATS, RATS, OR MICE CLIMBING UP POLES OR POSTS

A simple method of feeding birds is to hang up a piece of suet. Another popular plan is to string a number of unshelled peanuts on a cord. However, more modern methods are available to-day. The "tit-bell" and peanut feeder, though possibly not as spectacular, have considerable advantages. In the first case, melted fat or suet is poured into the bell and allowed to set. The bell is then hung in the desired position. The fat, being sheltered from the sun and weather, and housed in a porous container, does not go bad. True, it hardens eventually, but it is always wholesome.

Compare this system with the old-fashioned practice of hanging up chunks of suet on a string, when the food was open to the sun and rain and various forms of insects. The Mortimer Batten peanut feeder prevents the greedy Great Tit from breaking off a whole nut and flying away with it. It consists primarily of a metal barrel, which is filled with shelled peanuts. The only access the birds have to the nuts is through two vertical slits at either side, so that while perched on the base they have to peck away at the nuts through the slits. By this means the "snatch-and-fly-away" habit of some of the greedy birds is successfully countered. Though it is possible to make these devices oneself, as can be seen by the illustrations this is not an easy proposition, and may be beyond the skill of the average person.

Nuthatches, Tits, Greenfinches, and Woodpeckers cannot resist peanuts. Coconut is a popular food, though some ornithologists argue that it is too rich and that it tempts greedy birds to over eat. All the Finches are fond of hemp and canary seed, whilst the Robin cannot be given a greater delicacy than meal-worms. Most insectivorous varieties are difficult to feed, as they require a considerable supply of insect food. However, meal-worms and ants' eggs are of good food value, and are much appreciated. The natural food substitutes, as suggested in the section "Know Your Garden Birds", will help you to plan your feeding activities.

Whilst most household scraps are beneficial to bird life, anyone who wishes to obtain the best results should know something about the composition of the main types of seed and grain suitable for feeding garden birds, and for that purpose I include an analysis.



NUT FEEDER AND TIT-BELL

AN ANALYSIS OF THE COMPOSITION (IN %) OF CERTAIN GRAINS AND SEEDS OF FOOD VALUE TO WILD BIRDS

These figures are approximately correct, although allowances must be made due to the variation of the actual quality of the seed under analysis.

	Proteins (albuminoids)	Fats or Oils	Carbo-hydrates	Salts and Minerals
Maize	10·0	7·0	65·0	1·7
Hemp seed ...	10·0	21·0	45·0	2·0
Sunflower seed ...	16·0	21·5	21·4	2·6
Canary seed ...	13·5	4·9	51·6	2·1
Millet seed ...	11·3	4·0	60·0	3·0
Rape seed ...	19·4	40·5	10·2	3·9
Wheat	11·0	2·0	70·0	1·7
Oats	12·0	6·0	62·0	3·0
Barley	10·0	2·4	70·0	2·0

Proteins (albuminoids): Body-builders. They form tissue and repair wastage of body substance.
Fats: Provide heat and energy.
Carbohydrates: The main driving forces. They provide heat and vital energy.
Minerals: Necessary for the correct functioning of the internal organs of the body.

It must be pointed out, however, that whilst, theoretically, some seeds may possess an ideal food content, there is no guarantee that they will be popular. Nevertheless, experience has shown that certain seeds are both popular and of food value to birds, and those on my list have met with a varying degree of success.

It is not advisable to put food on the bird table without taking precautions against waste. Sparrows waste far more than they eat, besides being quite capable of keeping away any bird up to, and including, their own size. Starlings are also gluttons, and will make short work of all available food if allowed to do so. To guard against their predatory habits it is often necessary to cover with fine-mesh wire netting food that can be carried away. This precaution will prevent large chunks from being carried off. On the other hand, it is not difficult to make food baskets out of wire netting; these can be hung from the

edge of the bird table or suspended from the end of a bird tray. This method of protection serves its purpose for table scraps and the like, but seed and nuts need special containers. If the seed is put into pots, it will be wasted or blown away very quickly. The nuts will vanish in a very short space of time unless they are properly rationed. For these problems the seed hoppers and nut feeders to which I have already referred are the solution. Tit-bits such as berries, raisins, currants, meal-worms, ants' eggs, can be put in heavy pots which will not easily upset and which are not so shallow that the contents will quickly blow away. However, when these foods are given in this manner, wastage is very high, and often the birds for which the tit-bits are intended obtain very little. A solution to the problem is bird cake. Here are three varieties of cake all having their own particular merit.

Bird Cake Recipe A.

White bread (dried and ground)	4½ ozs.
Meat (dried and ground) ...	3 ,,
Hemp	6 ,,
Crushed hemp	3 ,,
Maw	3 ,,
Poppy flour	1½ ,,
Millet (white)	3 ,,
Oats	1½ ,,
Dried elder-berries	1½ ,,
Sunflower seeds	1½ ,,
Ants' eggs...	1½ ,,

To the total quantity of the dry food add about one-and-a-half times as much fat, beef or mutton suet. The mixture is made by melting the fat. When boiling, add the other contents, taking care to stir all the time. Put the mixture into a cloth, tie up tightly and let it dry.

Bird Cake Recipe B. Put a quantity of maize meal into a bowl, add chopped peanuts, millet, hemp, and canary seed, together with currants and raisins. Melt some fat, add the contents when it is boiling, stirring all the time. Put the mixture into a cloth, tie up tightly and let it dry.

Bird Cake Recipe C. Same mixture as B (without fat). Pour boiling water on the ingredients, stirring well at the same time, till the contents are well mixed. Compress, and tie up in a piece of mutton cloth, or similar fabric, to dry.

The first recipe is of German origin, and was described in a little book written in 1907 by Martin Hiesemann. The book was later translated into English and published in this country by Witherby's.

All three recipes can be altered to taste. There is no necessity to keep to the exact details. The preparations should keep throughout the winter, and slices can be cut off the "cakes" and given as required.

In hard weather, chicken meal and dog biscuit can be soaked. This will provide both food and moisture. If systematic feeding is adopted the birds know when to expect you, and after a time they will often meet you on the way to the food table.

Some of my readers will, no doubt, say to themselves, "This is all very well, but I live in a town. What is my chance of getting birds to behave like this?" My reply is that I know several friends living in the middle of a town who not only have the Great Tit and Blue Tit feeding on their window-sill but on more than one occasion have had them feeding from the palm of their hand.

There is a difference of opinion as to the advisability of feeding all the year round. One ornithologist has expressed the view that to supply artificial food to birds, except in winter, is unnecessary, and possibly harmful. It has been suggested that artificially provided food given during the nesting season has been the cause of egg-binding. I am not in a position to confirm or deny this theory, although I am rather sceptical about the matter. I suggest that a sound plan is to give the birds the advantage of suitable household scraps at all times of the year. Over and above this, extra feeding should commence in October and continue through the winter till the spring.

It is very essential that there should be a plentiful supply of water. Birds need water to drink all the year round, especially during a serious drought, or in frosty weather. They also love bathing, and a suitable bird-bath not only provides the means of quenching their thirst but gives them endless enjoyment and is a source of entertainment for the observer. Almost any shallow receptacle, placed in some quiet spot, will suffice, but it should not be too near shrubbery which could provide concealment for a skulking cat. Where cats are numerous, it is a good plan to place a bath on some form of pedestal.

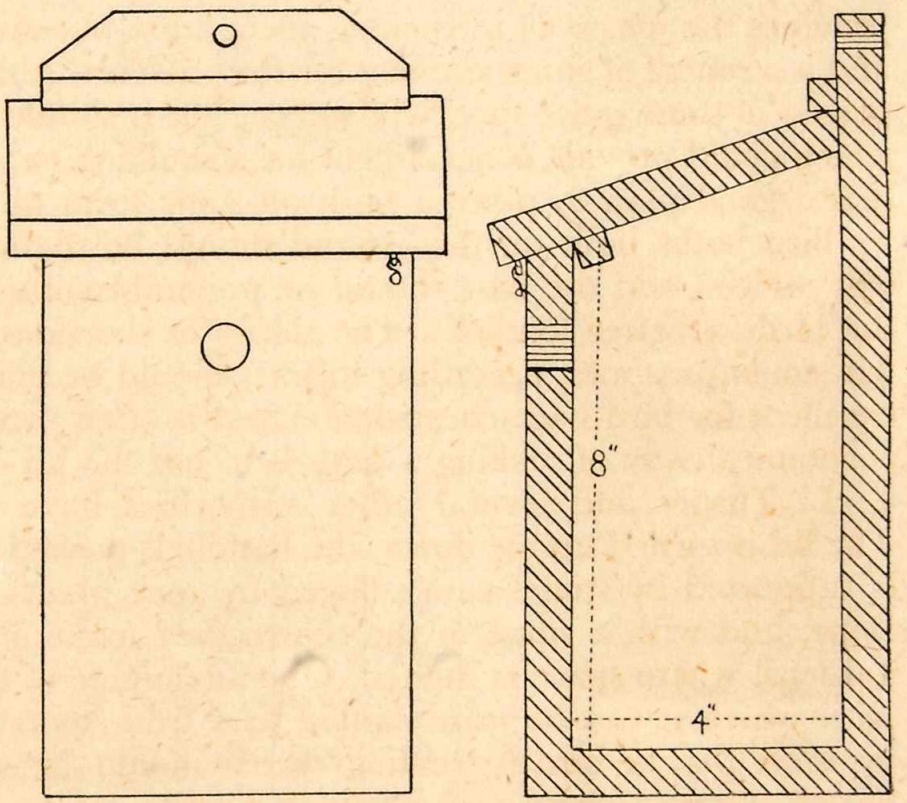
Bird baths built on the ground should be shallow—a depth of two inches will suffice—and the base should be preferably of a rough surface, which gives the birds a better foothold. The slopes of the sides should be gradual, and a flat stone (or stones, according to size) should be placed in the bath. Cement is excellent for bird-bath construction and is often used for this purpose. Another economical way of making a bath is to use the lid of a dustbin. The late Miss E. L. Turner and several other authorities have recommended this system. The lid is turned upside down, the handle is pushed into the earth, and the rim is supported by stones camouflaged by rock plants. The lids have the correct slope, and with a stone in the centre they make an ideal bird bath for small gardens, where space is limited. One advantage of this type of bath is the ease with which it can be transplanted to a fresh spot. Some people have the impression that a bird's drinking water should be scrupulously clean. I have heard of cases where well-meaning bird-lovers regularly clean out the baths every few days. This is quite unnecessary. The only time a bath should need

cleaning is when it has become silted up with mud, leaves or other debris. Elaborate and expensive bird baths are available. Some of the more costly have labour-saving devices whereby the baths are connected to the main water supply and the water level kept constant by means of a ball-tap. I have heard of one instance where the water could be electrically heated during hard weather. From a utility point of view these refinements are not necessities, though both ideas are excellent and highly efficient. During frosty weather it is very important to break the ice. Glycerine can be added to the water to stop it freezing rapidly, but birds as a rule do not seem to like the flavour.

Wild birds can be encouraged to frequent gardens by the provision of nesting and roosting accommodation. The most popular method of attracting them is that of erecting nesting boxes.

It is not difficult to make a nest box, but on the other hand, there are a number of excellent types on the market. The main essentials are, that it should be of good design, sound construction, and waterproof. If it is of a type suitable for the hole builders, the size of the entrance-hole is of importance. Furthermore, all nest boxes should be fixed at the proper angle, in a suitable locality, and should face the correct way, at the right height.

There are many designs of hole-type nest boxes. Some are machined out of the solid branch, whilst others are constructed on the lines of a box. The latter is simple and effective and can be easily home-made. I include an illustration and details of a box of this type designed and recommended by my friend David Seth-Smith, the "Zoo Man" of the B.B.C. The small-sized

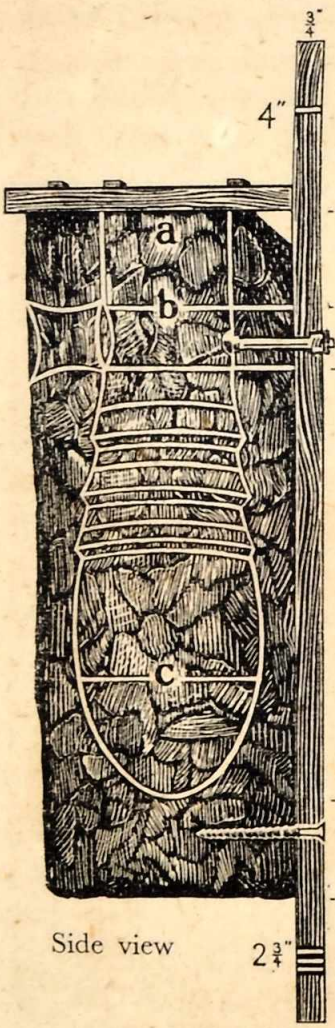


NEST BOX DESIGNED BY D. SETH-SMITH

This type of box is useful for all the Tits that naturally nest in the holes of trees, etc., also for Nuthatches and Redstarts, but the diameter of the entrance-hole is important. For Blue Tits, Coal-Tits and Marsh-Tits, a one-inch hole is considered sufficient, but for Great Tits the hole should be 1⅛ ins. or 1¼ ins. Boxes of the same type, but larger—say 6 ins. by 6 ins. by 12 ins., are made of ¾ in. or 1 in. wood, and suitable for Starlings, Spotted Woodpeckers, etc., but the entrance must be proportionately larger.

box is useful to hang up in a suitable position for Robins and Spotted Flycatchers. They will readily take to a box of this nature if the top third of the front is cut away. I myself have made and used similar boxes to these with success. The only alteration that I could suggest would be the position of the entrance-hole. I prefer this to be near the side rather than in the middle, so that should any of the young occupants drop from the entrance-hole back on to the rest of the family below, they are less likely to land in the centre of the brood.

One of the pioneers of the systematic use of nest boxes on a large scale was Baron von Berlepsch. Prior to 1907 he conducted a series of experiments on their construction, and also ran a large bird sanctuary at Seebach, in Germany, his native country. Martin Hiesemann, in his book to which I have already referred, gave full particulars of these nest boxes. I include illustrations and details, as they have undoubtedly been highly successful. Before the war a similar type of box was manufactured in this country, and was approved and recommended by the Royal Society for the Protection of Birds, but the manufacturer, I learn, has now gone out of business.



Side view

	A	A'	B	C	D	
	2"	2"	2 3/8"	2 3/8"	2 3/8"	
	1 1/4"	1 1/16"	2"	2 3/8"	3 3/8"	
	6"	6"	9 1/4"	12"	11"	
	2 3/8"	2 3/8"	2 3/4"	2 3/4"	2 3/4"	
	11 5/8"	11 7/16"	16 3/8"	19 1/2"	19 1/2"	Total heights in inches

Front view

BERLEPSCH NEST BOX DESIGN

The figures of the first division denote the space between the lid and the opening; those of the second the diameter of the opening; those of the third the depth of the boxes from the lower edge of the opening to the deepest point of the nest trough; and those of the fourth the thickness of the bottom.

The following are the measurements in inches of the diameters of the inside of the nesting-cavities at the various points as indicated in the diagram on the opposite page:—

Nesting Boxes

Size:—	A	A1	B	C	D
At "a"	$2\frac{3}{8}$–$2\frac{1}{2}$	$2\frac{3}{8}$–$2\frac{1}{2}$	$3\frac{1}{4}$–$3\frac{3}{8}$	—	—
At "b"	$2\frac{3}{4}$–$3\frac{1}{4}$	$2\frac{3}{4}$–$3\frac{1}{4}$	$3\frac{3}{8}$–$3\frac{7}{8}$	—	$6\frac{3}{8}$–$7\frac{1}{4}$
At "c"	$3\frac{3}{8}$–$3\frac{7}{8}$	$3\frac{3}{8}$–$3\frac{7}{8}$	$4\frac{5}{8}$–5	$6\frac{3}{8}$	—

These boxes were made of alder, birch, pine, and other woods which do not split easily.

Recommendations for Berlepsch Nest Boxes

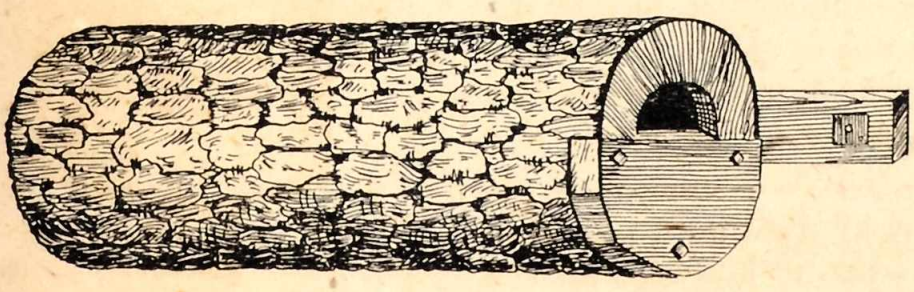
Box A is suitable for the Great Tit, Blue Tit, Marsh-Tit, Coal-Tit, Willow-Tit, Crested Tit, Nuthatch, Tree-Creeper, Wryneck, Pied Flycatcher, Redstart, Lesser Spotted Woodpecker. In accordance with the wish of many who are interested in the matter, and suffer greatly from the plague of Sparrows, a box called A1 has lately been made with a narrower opening—$1\frac{1}{16}$ inch. It is designed for Blue Tits, Marsh Tits, Coal Tits, and Crested Tits; Sparrows cannot enter it but neither can other birds, except the small Tits, not even the Great Tit.

Box B is for Starlings, Greater Spotted Woodpeckers, Wrynecks, Nuthatches, Pied Flycatchers, Redstarts, Great Tits. The last five species settle in box A as well as in B. The former suffices as a rule.

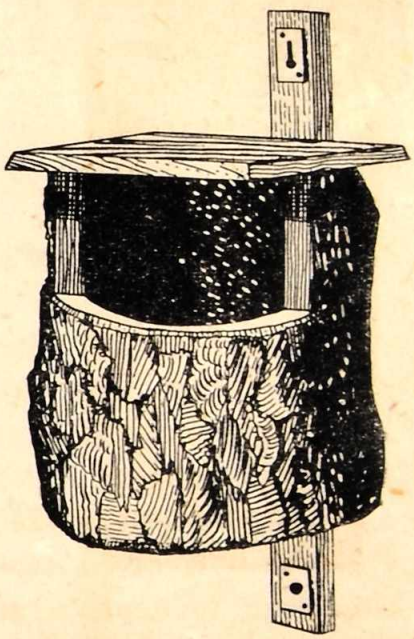
Box C is for Green Woodpeckers; and box D for Stock-Doves, Kestrels, Jackdaws, and Owls.

For the sake of completeness, we have box E for Swifts, with the boring of box B, and a semi-circular opening. (See illustration.)

The open box F has a diameter of about $4\frac{1}{2}$ inches and a depth of about $2\frac{1}{4}$ inches. It is made for such birds as Redstarts, Spotted Flycatchers and Pied Wagtails, and also for Robins.



Berlepsch Nest Box E



Berlepsch "Open-Type" Nest Box F

Whilst I am fully aware that these boxes have been very successful, I believe that there is still room for improvement. One of the features of this box is the manner in which the bottom is scooped out in a pointed oval form. This design was adopted by the Baron after he had examined several hundred natural holes of various types of Woodpeckers. Whilst it may be practical in the case of Woodpeckers, I am of the opinion that for Small Tits a vertical interior excavation of uniform diameter is preferable. Because of the shape of the hollowed-out bottom, I find that young birds which have succeeded in climbing up to the exit hole are apt to fall on the top of the rest of the family, possibly a brood of fully a dozen chicks.

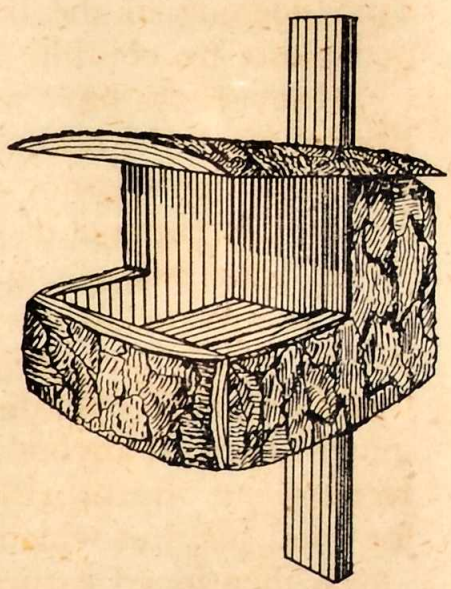
A really excellent design of nest box and one which can easily be made by anyone is a design which Mr. Mortimer Batten has thought out. It is a happy compromise between the "box" type and the "Berlepsch" design. The illustration and details explain exactly how it should be done. The thickness of the timber, the durability, the natural bark and the general appearance are all points in its favour and add to its attraction to the birds.

MORTIMER BATTEN NEST BOX

Details of a Nest Box recommended by H. Mortimer Batten

	Interior depth	Interior diameter	Size of entrance-hole
Tits	5 ins.	3 ins. by 3 ins.	1⅛ ins.
Starlings ...	8 ins.	4 ins. by 4 ins.	2 ins.
Woodpeckers ...	9 ins.	4 ins. by 4 ins.	2 ins.

Apart from the Berlepsch box F, I include a drawing of a similar design of open box. Whilst the Berlepsch pattern is made out of the solid branch, this type requires no boring tools in its construction and is easy to make. Spotted Flycatchers, and Robins will often occupy it. A triangular tray, the sides measuring about 4½ ins. in length and the outside ledge about 1½ ins. in height, makes a simple nest box for the Spotted Flycatcher.



A SUCCESSFUL OPEN-TYPE NEST BOX
Size in proportion to the Berlepsch nest box

All these various nest boxes have proved their worth in the past, and under suitable conditions should be equally successful in the future.

Mr. Seth-Smith tells me that the Greater Spotted Woodpeckers in the Zoological Gardens at Whipsnade have nested in a large model of the box he has designed. Furthermore, he informs me, Nuthatches readily take to these bigger boxes, and characteristically plaster mud all round the entrance hole and lid. Mr. Eric Parker, the well-known writer and late editor of *The Field*, uses boxes similar to the Berlepsch design. He reports several species, including Nuthatches, as occupying his boxes.

In nest-box construction the design of the lid is an important consideration. It should be so made that water running off it does not enter or run down the sides of the box. There are several ways of fixing the lid to a nest box. Firstly, it can be hinged to the support at the back. If this method is adopted, it is a wise precaution to use a non-rusting type of hinge, and it should be emphasised that I mean all the hinge, including the pin. Ordinary hinges rust quickly, and do not allow the lid to open and shut properly. The second system is to make a hinge of tar felt or leather, which should extend the complete width of the lid. This type acts as a protection against the weather, as well as functioning as a hinge, but is not very durable or efficient. A third type is the design as illustrated in connection with the box designed by Mr. Seth-Smith. Lastly, a system can be employed where a piece of wood is fastened to the under-part of the lid. This is made slightly smaller than the interior of the box, and fits loosely into the top like a plug. It holds the lid in position and only allows it to be moved in an upward direction. Some people fasten down the lid, only opening it in the autumn for cleaning purposes. This stops unauthorised people from peeping in the box, and deters the owner himself from disturbing the occupants by continual inspection.

Many boxes have an outside perch. Whilst this is of benefit to those who like to watch the occupants rest on it before entering or leaving the box, it has drawbacks and is not to be recommended. The inmates of small nest boxes are usually capable of flying to the box and entering it without the help of a perch. Sparrows, seeing a perch, will often alight on it. Their incessant chirping often annoys the owners of the box, and it is not uncommon for Sparrows to drive out those who are already in possession, often using the perch as a base for their aggressive operations. Where Sparrows are not prevalent, a small perch may be used. If anybody wishes to photograph birds at a nesting box, I strongly recommend the provision of a perch. Opportunities will present themselves for good pictures which would not occur were it not there.

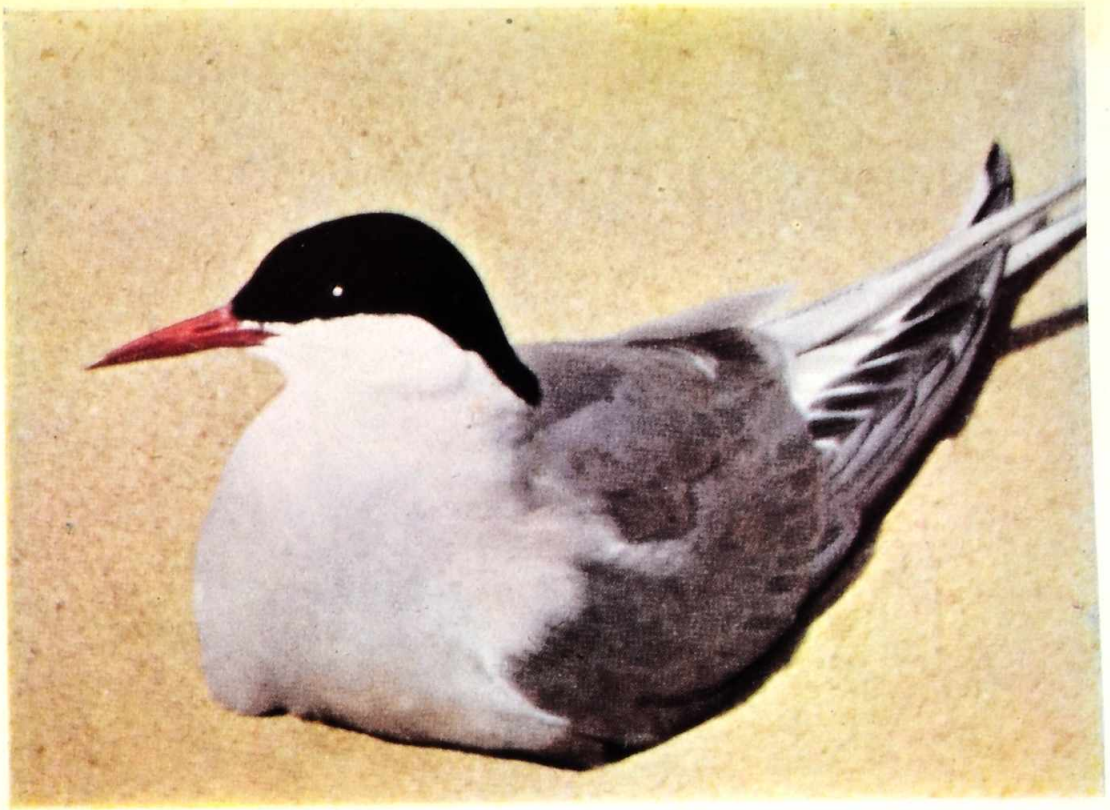
As mentioned earlier, the size of the hole of a nest box is most important. If it is of unlimited diameter, birds like Sparrows and Starlings will almost certainly take possession, and it is often advisable to make the hole of such

a size that these birds cannot enter. If it is desired to confine the use of a box to birds no larger than small Tits, the diameter of the hole should be an inch and one sixteenth. This size will even prevent the Great Tit from entering. However, probably the most popular size of hole is one of an inch and one eighth. Whilst a small Sparrow, such as a Tree-Sparrow, can enter a hole of this diameter, it rarely nests successfully in such a box. Mr. Mortimer Batten contends that if the hole is smaller than an inch and one eighth, it is unlikely that the Tits will occupy the box. I agree with Mr. Mortimer Batten—that is, unless Sparrows are very numerous indeed. An easy way to gauge this diameter is to use a two-shilling piece, which is exactly an inch and one eighth. An inch and a quarter (a half-crown is this diameter) is a good diameter of hole for Nuthatches. Starlings, which in some districts occupy many nest boxes, can enter a hole that is any larger than this.

Various sorts of wood are used in nest-box construction. There are different opinions as to which is the best, and, of course, the question of cost must be borne in mind. Baron von Berlepsch had most of his later boxes constructed out of alder and pine, woods which do not split easily. Early on, he used birch, but later condemned it because it did not prove very durable. The late Mr. H. F. Witherby built his boxes from elm. Teak, although expensive, is very satisfactory for making nest-box lids, as it does not warp.

It is important that the hole-type boxes should be hung at the correct angle. They should be fixed so that water or rain cannot enter the holes, and must be perfectly rigid. There seems to be a slight difference of opinion as to the direction a box should face. Baron von Berlepsch recommends that the opening should face east or south-east. Mr. Mortimer Batten advocates that, as a general rule, boxes ought to face somewhere between north-east and north-west. There is, he states, no need to follow this rule if the box is in a sheltered position. His main argument is that the sun must not shine in at the entrance. I agree with Mr. Batten in this respect, but I am also of the opinion that the entrance-hole should be fixed so that it avoids the prevailing wind. As a general rule, nest boxes should not be much lower than five feet, and there is rarely need to place them higher than twelve to fifteen feet. More important than the height is the choice of the locality. Whilst shade is important, shadow and gloom should be avoided. Many boxes built in dense woods are unoccupied. Birds like light and air, and a position should be chosen which provides a compromise between too much sunshine and too much shadow.

It can be cruel to place a nest box on an open wall where it is exposed to the glaring sun. At times chicks and their parents can be observed, panting due to the excessive heat of the nest. In warm districts I recommend that several quarter-inch holes should be bored in the sides of a box at the top. If this system is adopted, the sides of the lid should overlap the box, which, though



Arctic Tern; close-up

Arctic Tern in flight

Shag

Shag with large youngster

allowing the holes to ventilate the box, will prevent rain and much light from entering inside.

Nest boxes may be erected any time during the winter until March. Boxes that are put up later than this are rarely occupied the same year. As they are also used as roosting quarters, it is a good plan to erect the boxes in the autumn, so that the birds can become accustomed to them during the winter months. If this is done, they will more readily use them for nesting purposes in the spring.

Alterations and repairs to nest boxes are best carried out in August and September, as during this period the inhabitants will need them the least. It is wise to examine the boxes carefully, and repair any damage and deterioration that may have taken place. Baron von Berlepsch was in favour of all his nest boxes being cleaned out each season. The desirability of this procedure is debatable. One thing is certain. If the contents of the previous nest are to be left in the box, they should be sterilised, and some form of insect powder should be sprinkled over the lining of the nest. Rustic boxes machined out of the solid branch need not be treated in any way. If the bark should begin to come off, it should all be removed, the box thoroughly dried, and the outside given a good coating of boiled oil. Do not try to weatherproof the inside of any nesting box. It is not necessary, and all interiors should be left untreated. Never apply creosote to a nest box which is being occupied. If creosote is used, the box should be taken down for this purpose at the end of the breeding season, and not re-erected till it is thoroughly dry. I personally do not favour the use of it. If it is desired to weatherproof a nest box, boiled oil should be used. If necessary this treatment can be given without removing it.

Large nesting boxes erected in trees are sometimes occupied by the Tawny Owl. A small barrel open at one end is suitable for the purpose. In this a hole three or four inches in diameter should be bored, not more than four inches from the top. A piece of board should be fastened to the barrel top, of such dimension that it will act as a roof and overhang the opening in the front, and so provide a shadowy entrance. No perches of any sort are necessary, but the front should give good clawhold, and for this purpose a piece of rough bark suitably placed near the entrance hole should be fixed. I must point out, however, that it is doubtful whether it is desirable to attract any species of Owl to a garden sanctuary. The Tawny Owl includes in his diet some birds which you will be trying to encourage into the fold. As against this, however, the birds destroyed by the Tawny Owl are in the main Starlings and Sparrows, which are a nuisance in connection with the bird table and the nest boxes; so the decision must rest with the individual.

Pigeon boxes erected in the gable-ends of old barns, and dovecotes, are occupied by the Barn-Owl. Whilst these birds are of benefit to mankind, and rodent-hunters in the main, they are killers of various birds, a good proportion

being Starlings and Sparrows. Whether they should be encouraged as a garden bird must again be decided by the individual.

It is reasonable to assume that a bird-lover wishes to have as big a variety as possible in his garden. Furthermore, he will probably want some of his nest boxes occupied by the less common birds. If this is the case, Sparrows and Starlings must be discouraged. Sparrows as a whole are too numerous, and because of competition amongst themselves and with other birds, they become greedy. Then, if the hole is big enough, they will interfere with the nest boxes, often dislodging a more desirable resident. While I will admit that they help to some degree towards keeping down garden pests, they are not an asset to a garden or bird sanctuary. In olden days, the Sparrow-Hawk and other birds of prey helped to keep Sparrows in check. The persecution and thinning-out of Hawks has undoubtedly contributed to the tremendous Sparrow population that exists today.

Another nuisance to a garden bird sanctuary is the Starling. These very selfish birds suffer in the same way as the Sparrows, inasmuch as their numbers make their lives one long struggle for existence. Once a nest box has been invaded by these birds, and a clutch of young has been successfully reared, the box is left in such a state of filth that few birds are likely to enter it until it has been cleaned out. As both Starlings and Sparrows are so rapacious, food on the bird table is often consumed or wasted before others have an opportunity of getting their share.

The grey squirrel must be considered an enemy of any bird sanctuary, and should be kept in check.

Cats are a great danger to birds, and while some are less dangerous than others, I suggest that all should be treated as potential enemies. Let me quote once again the records of the United States Biological Survey:—"Cats in the State of New York destroy three million five hundred thousand birds every year; east of the Mississippi just short of a hundred million birds are annually exterminated by them. Furthermore, statistics have been worked out that if this menace were non-existent, it would mean a saving of a hundred million dollars every year." Whilst these startling figures have no individual bearing on our own garden birds, they show very forcibly that the cat and the wild bird are dire enemies.

I suggest, therefore, that any bird-lover who owns a cat, and at the same time provides attractions for wild birds, is luring them into an area of danger. Several precautions can be taken. Do not place nest boxes, food trays, or food tables where cats have easy access to them. The use of the metal discs and funnels suggested earlier can protect any contrivance standing on a pillar or post. Do not place anything for the birds on the ground close to cover, where a cat might conceal itself. Make sure that there is an opportunity for the birds

to see a cat before it pounces upon them. And lastly, for those whom I cannot persuade to do without a cat: Make a collar for the animal, and attach to it a number of small bells, some of them touching one another. If such a collar is properly made the cat will have some difficulty in concealing its approach.

Chapter 6

BIRD WELFARE AND THE PUBLIC

The way to gain a friend is to be one.—MICHELET

I have often heard it stated that certain people have a gift for gaining the confidence of wild birds. It is said that they have a personal magnetism that attracts birds, that there is some common, yet inexplicable, bond between them. There may be some truth in this, but I have every confidence that if a reader will carry out the following suggestions he will achieve results that will astonish him.

It is chiefly a matter of patience and perseverance. Above all do not make sudden jerky movements. Careless action of this sort can easily startle a bird, and undo all the hard work of previous days. Try to follow the example of one of my friends who lives in a northern industrial town. For many years he has fed the wild birds in a public park. So that he can be easily recognised, and to gain the birds' confidence, he makes a point of always wearing the same clothes. In addition, he goes through the same routine, and usually makes his visits about the same hour. He knows the food the birds like (you have the details yourselves in another chapter), and now he can do practically what he likes with them.

Originally he started by sprinkling some food on the ground where he knew his feathered friends were likely to frequent. Having so far gained their confidence, he threw the food closer to him, till eventually he proffered it in his hand. A Great Tit turned out to be the boldest bird; it made a fleeting visit to his hand, grabbed some food and flew away. This was a beginning and, within a few days, the battle was won. I have friends who can not only persuade wild birds to eat from their hands, but to take food from their mouths. One has even trained them to feed from his pocket.

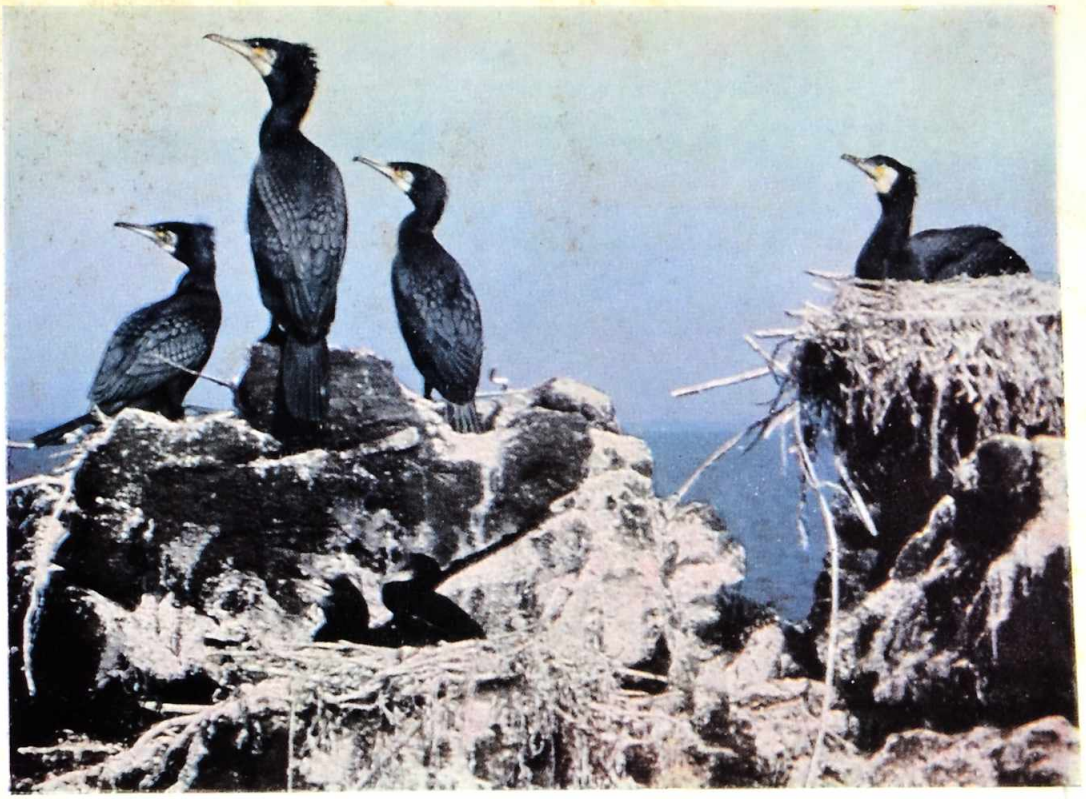
A few years ago I decided to obtain some cinema pictures of my friend feeding his birds. We set off for the park, and to my amazement, the birds flew to meet him several hundred yards before we reached the main gates. By the time we entered the park, he looked like a modern Pied Piper of Hamelin!

Almost any bird responds to a gesture of kindness. This is particularly noticeable in the case of captive birds, and wild birds to whom some special service had been rendered. As an example, there is the story of "Joss the Rook".

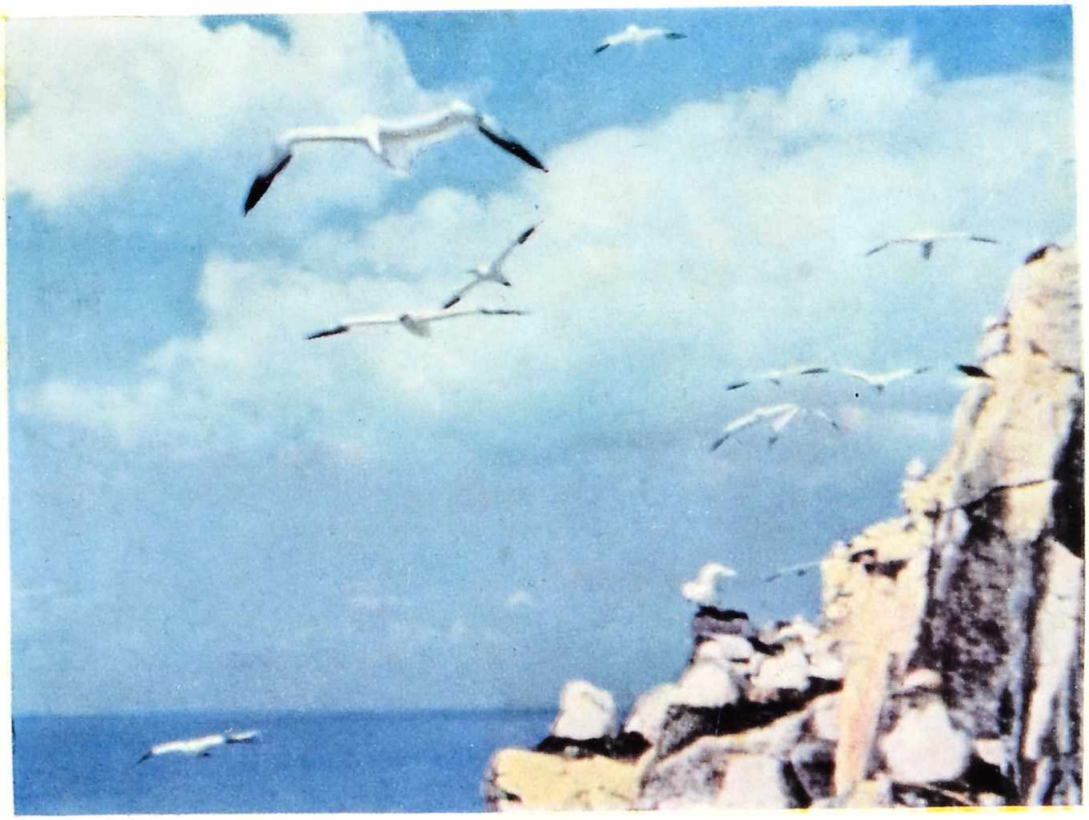
He was first observed in tragic circumstances. A large tomcat had seized him, and was playing with him prior to the kill. He had fallen out of his nest, one of two that had been constructed that season in some tall trees overlooking a garden situated in the centre of a big industrial town. Fortunately, the owner of the cat and the garden observed what was happening, and saved "Joss" from an untimely end. Attempts were made to climb one of the trees to restore him to his parents, but all the efforts were in vain; the tree was difficult to climb, and finally the attempt was abandoned. Although "Joss" was fully feathered, he could not fly. He was put in a garden shed, and after persuasion, was induced to eat some bread and milk. A search was made and slugs were found. The majority of these he would eat with relish, but nothing would induce him to touch the black ones.

After ten days, "Joss" accompanied his mistress into the garden, and refused to leave her, following her round and round the grounds. He was showing signs of wishing to fly, and appeared to like being lifted up so that he could make a short experimental flight to the ground. Soon, he had complete confidence in himself, and was able to take to the wing and fly round the district. But the most amazing surprise was the attitude of the cat who had so nearly destroyed the bird. Seeing his mistress take an interest in "Joss", he no longer attempted to harm him. The first sign of friendship was noticed when, probably out of curiosity, a kitten approached "Joss". Immediately the cat ran up to it and chased it away, and on several other occasions his former enemy was seen to guard "Joss" against other cats.

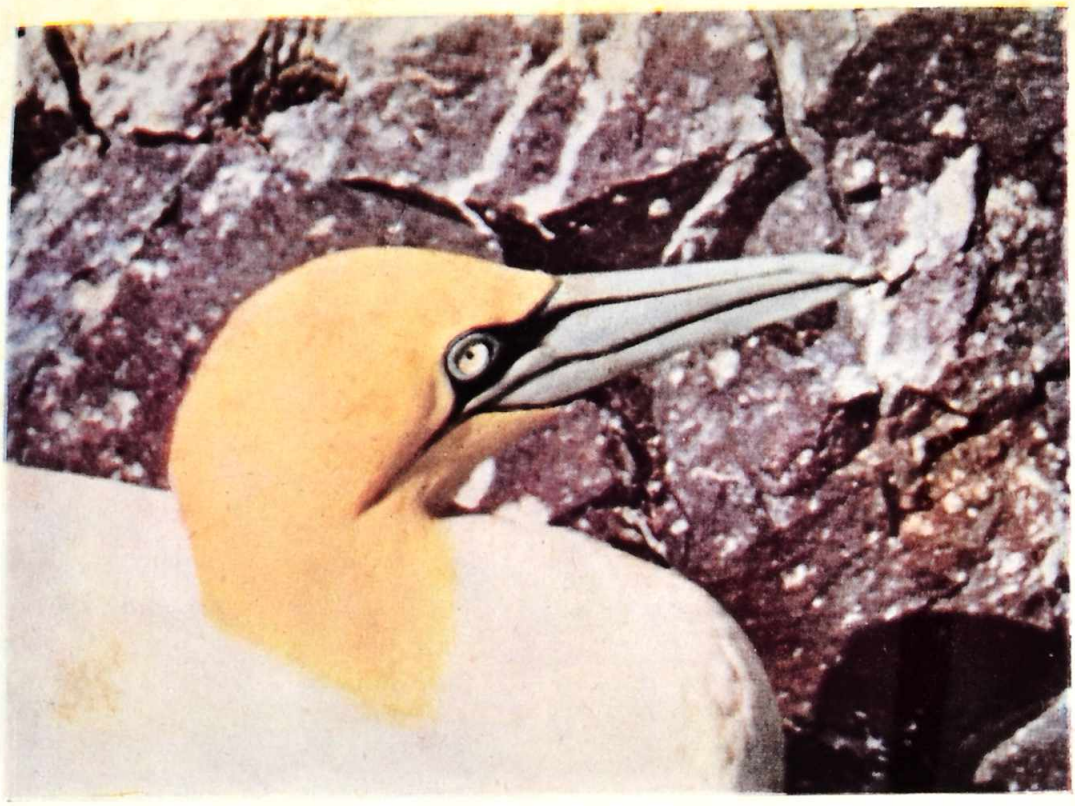
These activities on the part of its new friend gave the Rook confidence, and in time he became quite capable of dealing with cats himself, and chased away any that he disliked. His favourite method was to seize them by the tail, and give a sharp nip with his bill. Eventually the local cats gave up all idea of molesting the bird, and as time went on he was seen more than once in consort with several of them. By now "Joss" was very much at home. He considered himself to be one of the family, and insisted on entering the house with his mistress. Once inside, he used to perch himself on a vantage point and watch what was going on. It was soon noticed that "Joss" liked the wireless; in fact, he loved it. Often he would enter the living-room, and bang on the set with his beak, demanding that it should be put on. On one of his flights, "Joss" heard music from a wireless set in a house a short distance away. He flew down, and calmly entered the open door, to listen to the gay tune that was in progress. After this, he was a regular visitor, tapping on the wireless set whenever it was not operating.



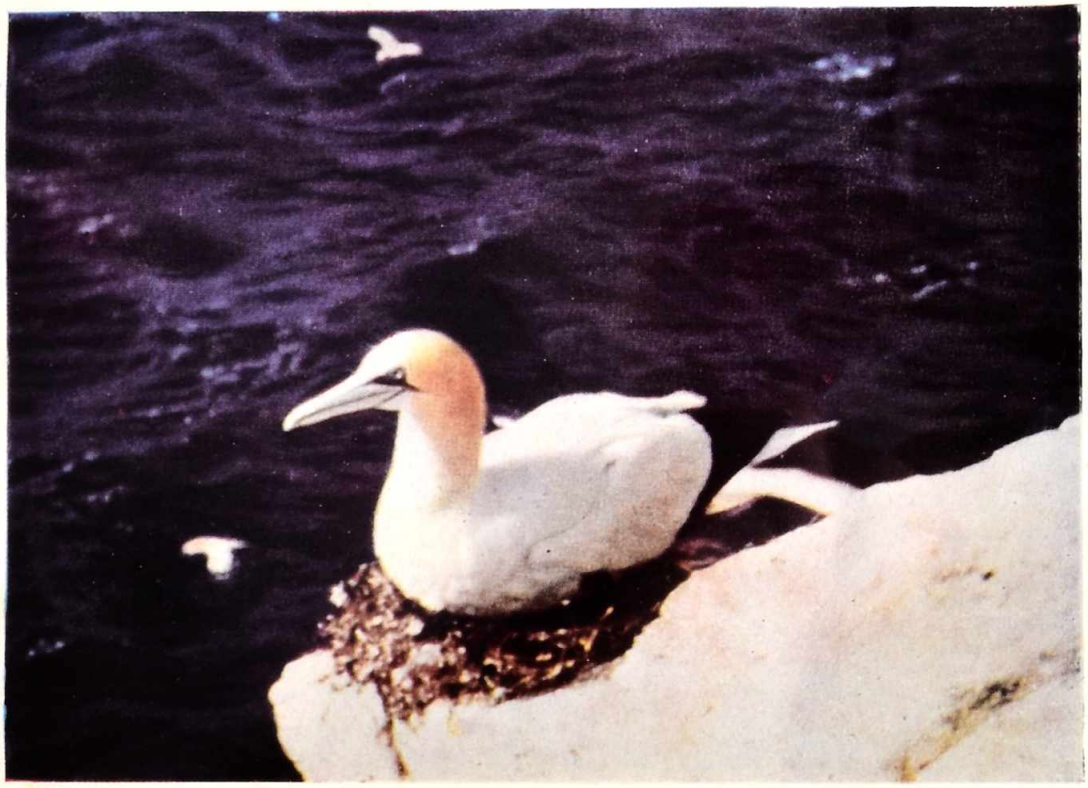
Cormorants nesting on a rocky coastal islet



Gannets in flight over their breeding ground



Gannet; close-up



Gannet's nest built at the edge of a cliff several hundred feet above the sea

One day there was a heavy thunder-shower. A big pool formed at the edge of one of the paths, and "Joss" started to bathe in it. He was amusing to watch. Never having had a bath before, he did not appear to know what to do at first. One thing, however, was certain: he enjoyed it. Afterwards, plenty of baths were provided for him, until at length he had one daily. As he grew more accustomed to bathing, the more he seemed to like it. He used to stand in a big metal dish, and allow his mistress to pour water from a watering-can over his wings and back, all the while showing every sign of enjoyment. An interesting incident occurred on the first occasion that "Joss" saw his master digging in the garden. He suddenly descended from a nearby tree, and started to dig with his bill as hard as he could. At first it was thought that he was searching for food, but it was soon noticed that his actions were quite different from anything that had been seen before. There was little doubt that he was aping his human friends and attempting to help. This explanation was confirmed later on when his mistress was uprooting some dead plants. As she pulled them out, he seized one himself with his beak, and tore it out.

"Joss" did not like worms. Of this there was no doubt. On many occasions worms of different sizes and colour were offered him, and nothing would induce him to eat them. It is interesting to note, however, that whenever he found a red worm, he would cover it up with soil, and would often return later, to dig up the earth and see if it were still there.

By this time "Joss" had made himself well known in the neighbourhood. He did not know the word fear and made friends with many households in the district. Unfortunately, he had some bad habits which at times brought him into disgrace. Anything new that appeared in his own or a neighbouring garden was at once spotted by him, and he would fly from his perch to give it careful examination. But curiosity, unhappily, was not his only fault. For children's small toys he had a passion. Nothing of this sort was safe from him, and he used to bring them onto the garden shed to play with. Another favourite pastime was that of stealing the clothes-pegs when the neighbours were hanging out their washing. At the start this was treated as a great joke, but when it became a regular occurrence, "Joss" started to make enemies for the first time and several threatened to "have his blood".

It was June when "Joss" fell out of his nest and was rescued from the cat's clutches. Until September he showed no sign of wanting to change his way of life. One day, however, he flew off with several mates, and for twenty-four hours was missing. Everybody thought that he had permanently departed, but he returned the following day and remained about the garden in his normal manner.

As soon as "Joss" learned to fly properly he spent his nights sleeping in a tree. Like a dog with a bone, he used to hide crusts, bacon rind, and various

other tit-bits in holes in a rockery, and sometimes even place small stones over them. When spring arrived, everyone expected him to find a mate and depart. But he did not do so. Whilst normal birds were busy constructing new nests in the tree tops (the rookery increased to seven nests in the second season), "Joss" occasionally flew up with sticks and placed them in a nest whilst the owners were away. Later, his mistress gave him some twigs, and he amused himself by building a small nest on the top of a bush.

Spring turned to summer, and the Rooks, having brought up their families, were ready to depart. Once again the question arose as to whether "Joss" would hear the call of nature, and leave with them. Eventually the Rooks departed, leaving "Joss" behind, to all intents and purposes happy and contented as ever. Autumn turned to winter, and it was then that I, for the first time, heard of "Joss's" existence. It all sounded so much like a fairy-tale that I had some difficulty in believing that the stories of his exploits were true, so I decided to verify them myself.

Several weeks before my arrival, "Joss" had been in the habit of flying away for several hours, returning in the afternoon for his bath, which was still a daily event. He was now on such good terms with his "hosts" that he began to take the liberty of entering the bedroom window and perching himself at the end of the bed. This, however, was going a little too far, especially as he insisted on knocking with his bill till he was satisfied that his presence had been noticed. Eventually, he had to be kept out, as his visit to the bedroom was becoming too regular an occurrence.

On my first visit to see "Joss" he ate out of his mistress' mouth, played with the cat, had his bath, together with an extra shower from the watering-can, and finally, to show his flying capabilities, he flew across the main road, and perched on the top of a tall church steeple. A few days later, I paid another visit, and he again went through most of the actions that he had performed on the previous occasion. This time I made a cinema film of "Joss" and his activities.

I listened carefully to the history of the Rook, and to satisfy myself that there was no exaggeration, I obtained independent confirmation about the accuracy of my information. During these visits, I expressed the view that sooner or later "Joss" would return to his wild state. I pointed out that already he had the full use of his wings, and that the periods when he was away from home were lengthening. Little did I know how near the truth I was, for less than a fortnight after my visit, "Joss" departed. Since then he has been back among the trees around the house, but nothing will tempt him to come down and rejoin his human friends—not even to enjoy his bath! This story is only one of many that can be told to illustrate the understanding and friendship that can exist between birds and human beings. I have heard many arguments

on the subject of instinct and intelligence in birds. To my mind "Joss" showed a high degree both of intelligence and instinct.

One thing birds do possess: they have a good memory, and any act, whether it be kind or otherwise, is not readily forgotten.

It is, for instance, a common trick for the owner of a bird-shop, in order to prove to the unsuspecting purchaser how tame is his African Grey Parrot, to put a piece of food in his mouth, whereupon "Pretty Polly" will proceed to eat it. The customer, greatly impressed, usually purchases the bird, and on arriving home will probably get a rude awakening as to the extent of the bird's tameness. There is a simple explanation of the trick. It is customary for African natives to climb trees and rob the Parrot nests of their young, when the youngsters are not old enough to fly. As the Parrot feeds its young by regurgitation, the natives chew up suitable food in their mouths, and feed the young Parrots by this means. The birds never forget this, and some unscrupulous bird-dealers use their knowledge of the custom to deceive gullible buyers.

Yes, birds, whether they be wild or captive, never forget a kind or unkind action. Unfortunately a wild bird that has been cared for by a human being often loses its powers of self-preservation, and apparently is satisfied to be artificially fed rather than to forage for itself. If a wild bird has been kept in captivity for any length of time, it is a questionable kindness to release it. Apart from the apparent loss of the instinct of self-preservation, they are apt, due to their tameness, to become easy prey to their enemies.

I have had considerable experience of looking after birds in distress—some have fallen out of their nests, like "Joss"; others have been injured or have been ill. With the one exception of Owls, all the birds that I have kept for any length of time have shown some sign of appreciation. In my younger days I took young Tawny Owls under my charge on several occasions. One came down the chimney, and damaged its wing. Once, part of a rotten tree fell down, and brought a Tawny's nest, containing four youngsters, with it. Whilst it was very easy to feed the birds till they were fully fledged and capable of flight, they never showed the slightest sign of tameness or appreciation.

Anyone who lives amongst wild birds will sooner or later be confronted with the problem of how to deal with one that is sick or injured. To be able to cope with such an emergency, an elementary knowledge of first aid is an advantage. By first aid, I mean first aid—and nothing more. It is beyond the ability of the ordinary layman to treat the injuries and ills of birds in a thorough and competent manner. There are, however, circumstances and occasions where a person of ordinary intelligence can relieve suffering providing he knows what to do, and equally important, what not to do.

One of the commonest emergencies with which you will have to deal, is when a bird has entered a house or building and is in danger of damaging

itself by flying against mirrors or windows. If the windows have blinds, pull them down over the top half of the windows, opening the bottom part. If this is not possible, and the bird cannot be easily caught, darken the room or wait till it is possible to get the room dark. Whilst the room is illuminated, manœuvre the bird into a position where it is easily accessible. Carefully note the exact spot, extinguish the lights, and it will then be possible to walk up to the bird and catch it.

Birds often suffer from the same complaints as human beings—a fact which has been impressed upon me during the long period of time that I have kept Budgerigars. In the years before the war, I had a stud of over two thousand of these birds. In a family as large as this there were always one or two "off colour"; such complaints or accidents as colds, enteritis, growths and damaged limbs were often dealt with successfully.

External warmth is most beneficial to ailing birds, and a recognised treatment for cases suffering from shock. How it should be applied depends entirely on circumstances. Generally a fire of some description is available. Keep the bird as near it as is comfortable, bearing in mind that a bird, being covered in feathers, can stand more heat than we can. The patient will soon indicate that it is too warm by starting to gape. If a camp fire is all that is available, make sure that the bird is kept away from the smoke fumes. The major problem that I have had to overcome in dealing with sick small birds is to administer the treatment with the minimum discomfort and shock to the patient. To try and force food down a bird's throat, or liquid down its gullet, is to be strongly deprecated, as the shock to a healthy bird is severe, and to an ailing bird is likely to prove fatal. All you should do is to place small quantities of prepared bread and milk between its beak, and dip the beak in water, taking care not to cover the nostrils. But this should only be done when the heat has revived it sufficiently to enable it to swallow. If the bird does not swallow naturally, there is nothing that you can do. Force will only result in choking the bird, and if its head is held back and water poured down its throat, the water will come back through the nostrils and reach the lungs, with fatal consequences. As a result of treating my Budgerigars, I have perfected a method of ensuring that seed-eaters consume medicines. Seed-eaters crack the seed, eat the contents, and discard the husk. In order to get the birds to take their medicine I impregnate the seed with cod-liver oil, which makes it sticky. The oil-impregnated seed is then dipped in the powder with which the bird is to be dosed. In this way, many cases of enteritis have been successfully cured by the administration of different forms of bismuth. If an aperient is considered necessary, castor oil should be avoided. Olive oil is all right, but Epsom salts is one of the best things to use. This can be administered in the drinking water, with soft food, or with seed. If it is to be given with seed or grain, dissolve the salts in water,

add the seed, and mix thoroughly. Spread the mixture out on a tray and dry in a cool oven. By this method the crystals cling to the seed.

An ailing bird should be kept in a small cage, or, failing this, in a small box. It should be kept warm and quiet, and be disturbed as little as possible. Warm bread and milk, with the addition of a few drops of cod-liver or olive oil, is an excellent food for most sick birds. A little of the mixture in a small pot, and some mixed bird seed containing canary and hemp (dependent on the species being treated) in another container, should be placed on the floor of the cage, together with some drinking water. It is advisable to keep the cage in semi-darkness, so that the bird will remain quiet and not struggle to escape, thereby exhausting itself. There is a "hospital" cage on the market specially designed for the treatment of ailing birds. The cage is electrically heated, and the temperature can be controlled. Furthermore, the inside can be easily cleaned, thereby reducing the risk of infection. Both wild and captive birds frequently become egg-bound, and are unable to pass the egg. In most cases heat will help them to overcome the trouble; I have been able to save the lives of many birds by this simple method.

One other point. Do not keep an ailing bird in a cage or box larger than one that will allow the patient to stand erect in its normal attitude. The larger the space, the more likely is it that the bird will dash about and harm itself.

Sores should be treated with iodine, but care should be taken not to liberate the bird till the iodine is absolutely dry. This is important, for if the bird, in preening the part of the body that has just been dressed, should get iodine in its eye, blindness will almost certainly result. Boracic powder is a sound and safe dressing for wounds. Chemical food, in the proportion of one part to two parts of water, is a splendid stimulant. Whisky and brandy should not be given to birds, as they cannot stand the fumes of either. Diluted "chemical food" should be substituted for drinking water until you are satisfied that some has been consumed. Do not attempt to give a bird liquid by artificial means, except as a last resort. If liquid has to be given artificially, an old-fashioned fountain-pen filler will be found useful.

Experiments with untried methods may inadvertently result in unnecessary pain and suffering, and sick birds are the last subjects on which to try anything out.

It is a common occurrence to find wild birds, particularly sea-birds, with their feathers contaminated by oil. Birds are often found with their feathers so badly saturated that they have lost all power of flight and are thus easy victims to dogs and cats. And being unable to hunt for food in a normal manner, they slowly die of starvation. The removal of this oil may at first appear to be a hopeless task, but if ordinary care is taken it is not so difficult a job as it would seem.

In the case of an average victim the body, wing-feathers and tail are usually contaminated. The head seldom has any oil on it, although there may be some on the neck and throat. The fact that oil has reached the head is of secondary importance, for if the body, wings and tail are clean the victim will be able to fly, and that is the main thing.

Experiments of various types have been carried out to remove oil from bird plumage, and the most successful method yet achieved is to loosen the thick sticky oil on the feathers by treatment with a thinner oil, such as salad oil, which is finally washed off with warm water and soap flakes.

Some people have successfully removed oil by treatment with a volatile spirit such as petrol, benzine or ether. A piece of cardboard or newspaper is folded into four. In the centre a round hole is cut, large enough for the bird's head to pass through. When in position, the cardboard or newspaper will rest on the neck of the bird, the head projecting through the hole. This collar prevents the noxious fumes from asphyxiating the patient. The treatment is best carried out in the open air, preferably where there is a breeze which will keep the fumes away from the bird's nostrils. The spirit is applied by means of a handkerchief or soft rag, care being taken to wipe away from the head.

Do not attempt to remove oil from the head. It cannot easily be done successfully, and gives the bird unnecessary discomfort. In time, sea water and the natural oil of the bird's plumage will eradicate it.

There is not the slightest doubt that this method removes the oil, but unfortunately there are complications. The spirit not only removes the foreign oil, but also the natural oil in the bird's plumage. When released or given access to water, birds so treated have become saturated like a sponge and have been in danger of drowning. In addition, the natural oil of the plumage helps to keep the bird warm, and deprived of this protection its ability to withstand the effects of cold weather may be seriously jeopardised. However, it is claimed that this method is effective. By applying olive oil mixed with french chalk after the oil has been removed (very little is sufficient), the disadvantages which I have mentioned are overcome. Personally, I prefer the first-mentioned treatment, which has been well tested and tried out and is recommended by the Royal Society for the Protection of Birds. The all-important consideration is to remove sufficient oil to allow the bird to fly, and to move about naturally in the water. If you succeed in this, you will allow the bird to reach its natural food and to avoid its enemies.

Gulls, in fact most sea-birds, can give nasty scratches with their claws. If possible, whilst first aid is being rendered, their legs should be lightly tied together with a handkerchief or soft rag. *String should not be used.*

Though expert skill and knowledge is a great help in successfully setting broken legs and wings, the application of reasonable first-aid measures is not

so difficult as it may appear. The use of adhesive plasters of the elastic type has considerably lessened the difficulties, and has made it possible for anyone to perform a first-rate job in an emergency.

In the first place, I must stress the danger of the old and still prevalent idea that wooden splints, feather quills, etc., are essential in the case of broken legs. The damage done by such treatment performed by unqualified persons usually results in sores, or injuries that are worse than the original fractures. Do not use quills under any conditions. Do not use wooden splints except on very large birds, and then only when they have been well covered with cotton wool. *On no account use thread.* There have been cases when thread has become embedded into the flesh, or between the pieces of the bones of the fractured limb. Should this occur the leg will probably have to be re-broken to get the thread out. Elastic-type adhesive tape is practically all that is needed in first aid for a broken leg or wing, and as these types of plasters are available containing zinc oxide, they can be applied to an open flesh wound with beneficial results. Adhesive plaster one inch wide and made up in a roll is the most suitable.

To treat a broken leg, first, with a sharp pair of scissors, cut away most of the feathers from the leg, tibia, and the part of the body immediately above the tibia. Lay out the leg to its full length and, starting from well up the tibia, wind adhesive plaster in semi-overlapping coils down to the foot. Then, spread out the toes to their natural position and place a single layer of plaster on the sole of the foot, carrying the two ends up the sides of the leg, sticking the plaster to that which has already been applied. Now, stick a further piece of plaster on the bare part of the body above the tibia and fasten the end to the plaster already on the leg, thus relieving the drag on the limb. All the adhesive tape should be squeezed together round the leg, making the binding into a compact mass. Untidy ends of the plaster can be cut away with sharp scissors. Whether the leg is broken or dislocated, this is the first-aid treatment.

It may be that you are fortunate enough to have at hand a veterinary surgeon who is interested in birds. But although an up-to-date qualified practitioner should be able to give valuable advice, the extent to which he can be of assistance is dependent upon his experience and interest in birds. Whilst there are veterinary surgeons in this country who have specialised in this class of work, do not expect the average practitioner to know too much. However, if professional advice is not available, the plaster should be left in place for fourteen days—the normal time it takes for a bird's broken leg to knit—after which the plaster should be removed by soaking it with any of the volatile spirits mentioned for removing oil.

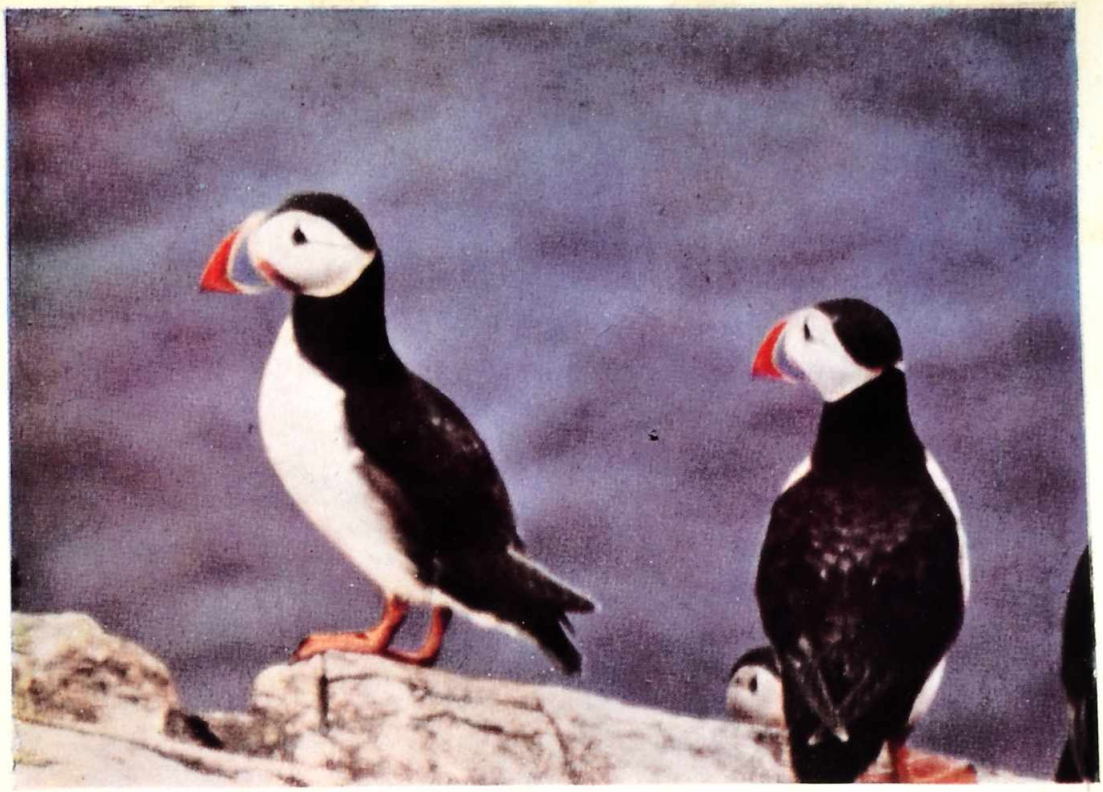
A bird with a bandaged broken leg is far from comfortable, as the stretched-out limb prevents it from standing in a natural position. This is an inconvenience that cannot be overcome. However, the provision of a box or cage, as previously

described, with a low spar and plenty of sawdust on the bottom, will mitigate the discomfort.

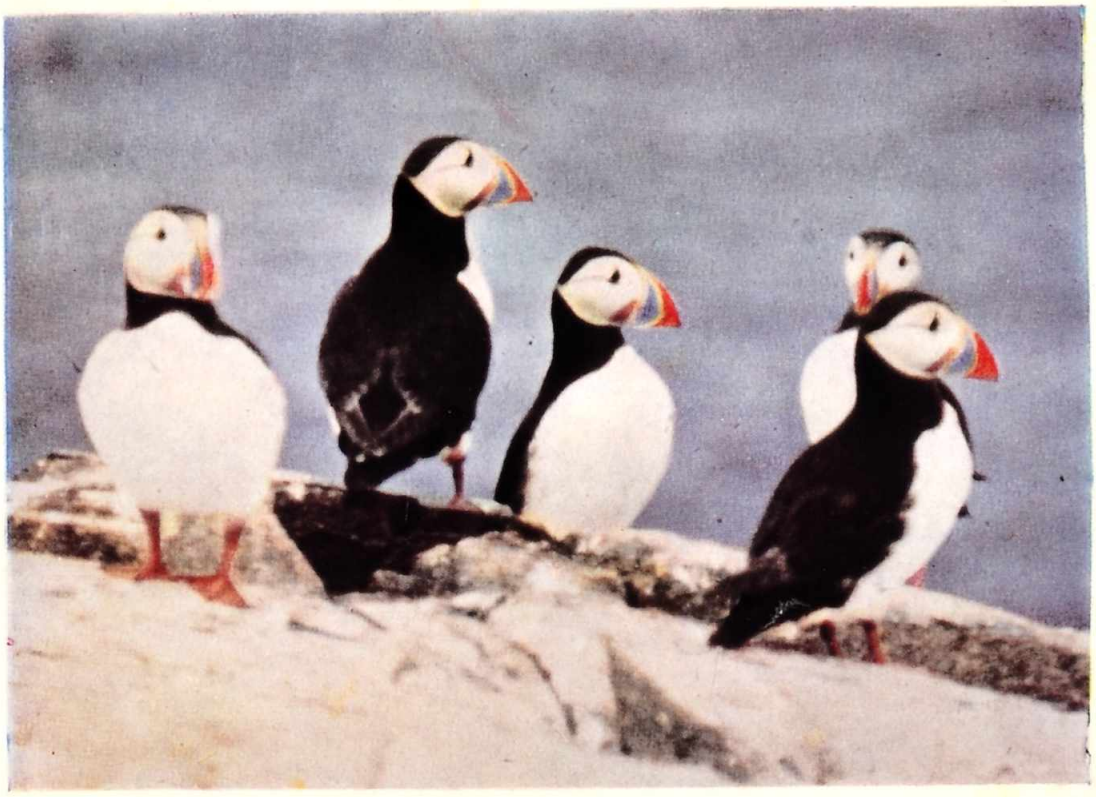
Broken or dislocated wings should be treated in very much the same way as fractured or dislocated legs. The wing, instead of being stretched out, should be bound up in its natural position, and fixed to a convenient part of the body, from which the feathers have been clipped off. Broken legs are easier to put right than broken wings. However, all one can do is to do one's best and live in hope. Whilst damaged legs can be treated with some certainty of cure, I do not favour the idea that anyone should attempt the setting of a broken wing of a fast-flying bird. Even a successful result will impair the bird's flight, and the most humane thing to do would be to put a swift conclusion to the bird's existence.

The administration of anæsthetics to birds is a very difficult task, and is outside the province of anyone who is not a fully qualified person. Local anæsthetics may be used in certain cases, but, again, this should be undertaken and performed by an expert.

All the suggestions that have been outlined have been put to the test on many occasions, and a high percentage of cures have been effected. My advice has not been given with the intention of creating amateur veterinary surgeons, but with the hope that interested bird-lovers will have some knowledge of how they can help distressed birds, a laudable and humane object.

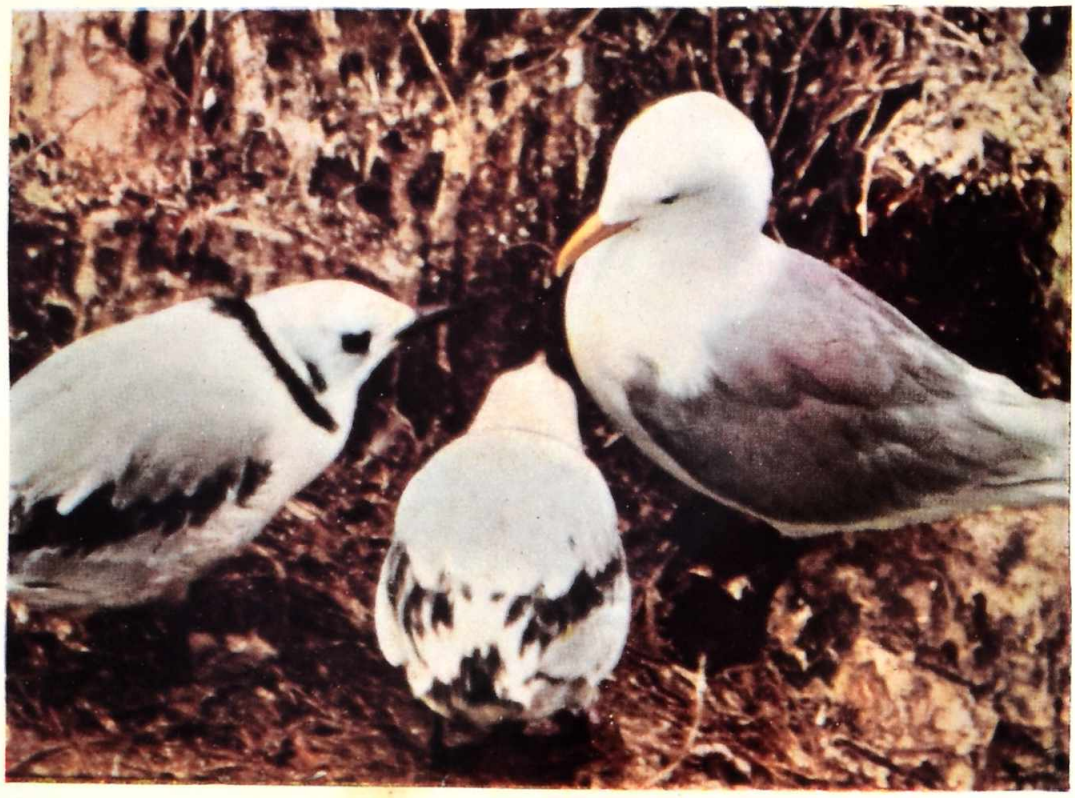


Puffins (note the highly coloured parrot-like beak)



A Puffin group

Kittiwake standing close to its nest



Kittiwake and family

Chapter 7

BIRDS AND YOU

In the ardour of pursuit men soon forget the goal from which they start.—SCHILLER

The question of bird protection will always be a vexed one. Who is the worst culprit: the oologist who takes the Tern's eggs; the photographer who keeps the parents off the eggs too long in his efforts to secure a good picture; the ringer who disturbs a half-fledged brood; or the well-meaning "protectionist" who in guarding the nests from the other dangers accidentally treads on the whole lot? Let us examine the problem a little closer.

Whatever may be said for or against bird photography, it has certainly given the study of birds and their habits widespread publicity through the publication of countless books illustrated with beautiful photographs. The approach to photography can usually be traced to a naturalist's wish to record what he sees, or a photographer in search of a means of expressing his art. The naturalist-photographer in all probability will have been interested in nature for many years before taking to the camera. Usually he is a first-rate ornithologist but looks upon photography as a side-line and of secondary consideration in comparison with the recording of accurate data. The photographer-naturalist usually commences his career as a bird photographer with little knowledge of wild life; in fact, some of them have no interest in ornithology and once their photographic records have been obtained consider that they have completed their task. Sometimes first-rate photographers are also outstanding naturalists, but such cases are few and far between. A naturalist born and bred will automatically think of the welfare of his subjects, and his experience in the field will tell him how to achieve his object in the quickest possible way and with the least possible danger to the birds. The photographer pure and simple, unless he has served his apprenticeship, can fail to obtain quick results, and endanger the subject because of a lack of ornithological experience.

Bird photographers can only be considered harmless if they use good judgment and take every precaution. Their greatest failing is over-keenness. Some are prepared to endanger the success of a brood of the rarest bird rather than refrain from photographing it. Novices should certainly not attempt to take a rare species. A beginner has no justification for such an act of vandalism when there are dozens of interesting subjects—probably far easier of access—on which he can perfect his technique. There are certain unwritten rules which an honest photographer should observe. In the first place he is expected to describe his pictures faithfully and accurately. There have been cases where photographers, some of them well-known, have fallen to the temptation of misleading the public. Tame or captured birds have been placed in their natural haunts and photographed, the pictures implying the subjects are wild.

One or two old publications are still to be seen which include illustrations of stuffed birds or animals which have been placed in natural surroundings to complete the deception that they are alive and free. Another practice is to take young birds out of their nests just before they are ready to depart and place them in picturesque attitudes. This is to be particularly deprecated, as once small birds of this age have been out of the nest they will not settle down again.

I have already described my methods of erecting a "hide" and the precautions I usually take to safeguard the birds. Accidents do happen, but they should be of rare occurrence. Bad judgment or over-enthusiasm by one bird photographer can bring others into disrepute. Discretion is another quality that a photographer should cultivate; for instance, if he is privileged to photograph a rare species he should not broadcast its whereabouts lest harm should befall it.

Some people seem to be under the impression that the taking of birds' photographs is the best introduction to the study of ornithology. Photographic achievement is facilitated by a sound knowledge of bird life. A photographer would be well advised to know something about his subject before he commences his camera work.

Many times I have wished that a knowledge of bird life was more general, for thoughtless and ignorant human beings can be a handicap to the bird photographer. Sometimes, while photographs are being taken actually from a "hide", birds are frightened from their nests by some inconsiderate person's approach.

A few years ago, while making a cinema film on some sand dunes, I could not understand why the bird would not return to its nest. Previously it had been a very easy subject and had returned shortly after the departure of my assistant. After a couple of hours, I left my "hide" to investigate, and saw sitting on a sand dune thirty yards away a fellow and a retriever. Scarcely controlling my temper, I asked him what he was doing—to receive the answer that he was watching me and was very much interested! He said he had seen the bird some hundred yards away, and noticing the "hide" had concluded that I must be a bird photographer! This experience only goes to prove that a "hide" can be an attraction for the inquisitive or the acquisitive, and therefore should be made as inconspicuous as possible.

One final word of advice to potential bird photographers—property must always be respected. Keepers and estate owners, once they are satisfied that their trust will not be misplaced, are usually very willing to assist; in return, it is up to the photographer to see that all gates that he has opened are shut, all cigarette ends or lighted matches carefully extinguished, and no litter left lying about.

The bird photographer is looked upon by other branches of the ornithological world sometimes with resentment, sometimes with approval. Bigoted "protectionists" insist that wild birds should be allowed to breed and exist without any interference whatever. They can probably quote definite instances where a photographer has caused birds to desert a nest. However, I have noticed that if these people wish to publish a book or arrange an illustrated lecture they do not hesitate to call upon the bird photographer or artist to provide them with suitable illustrations. There is not the slightest doubt that many photographers have helped considerably to further our knowledge of wild birds; in fact, as I have previously mentioned, all should keep notes of the habits of the birds they are photographing, for some small point which at the time may seem of little significance may prove important when coupled with somebody else's observations.

The egg collector is no asset to the bird photographer. As I have already stated, I served my apprenticeship under a well-known professional collector, and therefore had an opportunity of studying his methods. While I agree that the study of oology has in the past made some contribution to science, I have yet to be convinced that to-day collectors are doing work of any real value; all they are doing is to satisfy their collecting mania. It is obvious that if a photographer robs a nest of its eggs, he robs himself at the same time of his subject. Furthermore, if a photographer has a reputation of being an egg collector, who is going to allow him to enter bird sanctuaries and private estates? There are, however, "wolves in sheep's clothing". Some years ago I had been making a cinema film of some Terns with the co-operation of the custodian of the bird sanctuary where I was working. When on our way homewards across the sand dunes we came across a man carrying a camera and tripod. The bird watcher, not knowing him, asked him what he was doing, and the intruder replied that he was taking photographs. He was told that he had no business to be doing so without permission, and eventually the three of us set off again. It was obvious from his conversation that he knew nothing about photography and very little about birds. All of a sudden the watcher clapped his hand on the "photographer's" head, and flattened down his trilby in no uncertain manner. For a moment I thought he had taken leave of his senses, but then, to my astonishment, I saw something trickling under the hat. The keeper immediately pulled it off the fellow's head, and underneath was a most horrible conglomeration of broken Tern eggs. Afterwards, the bird watcher told me that he had been suspicious from the start, as he was not the first so-called "photographer" that he had dealt with.

A year or so ago I found a Merlin's nest in some bracken on a grouse-moor, in a very suitable position for photography. In order to deter egg collectors, I covered the eggs with indelible ink, thinking that no one would want to

take them in that condition; yet they disappeared during the week that the eggs were due to hatch! My partner on that occasion, a local protectionist, vowed that he could guess the culprit. He was so infuriated that a crime would have been committed if he could have got hold of the suspect at that moment. I had occasion to meet the collector some months later, and asked him outright if he had taken the eggs. He admitted the theft, and added that if I would only tell him about any nests that I wanted leaving alone, he would do so. How was he to know that I wanted to photograph the nest? he asked plaintively.

It is a wise precaution not only to mark the eggs with indelible ink or indelible pencil, but to refrain from erecting a "hide" at a nest until the eggs have hatched out. If the subject is one in which the young leave the nest shortly after they hatch, the latter procedure, of course, cannot be adopted.

The professional egg collector usually has a considerable knowledge of ornithology. He knows the exact time certain species are likely to commence laying, he knows how many eggs there are likely to be in a clutch, and, from past experience, he knows whether the parents are likely to build afresh if he robs a nest. He is also aware of how many nests he can rob in the district without endangering his activities in future seasons. In fact, there is a scientific method of robbing nests, from the egg collector's viewpoint.

Some years ago I set off for the Highlands to locate a suitable Golden Eagle's eyrie for photography. It was early in the year, just about the time when the eggs were likely to have been laid. I located fifteen different eyries, three of which were suitable for my purpose. To my knowledge nine of the fifteen became victims of the egg collector, the three which I had selected being included among those robbed, as they were easily accessible. I discussed the situation with both deerstalker and keeper, and they told me that they could do little about it. It was even suggested that I should get into touch with a certain well-known egg collector so that the following year he would leave me a suitable eyrie undisturbed.

On another occasion I was in Scotland in the Crested Tit district. A friend and I were searching for nests when we noticed two men obviously doing the same thing some hundred yards away. They were collectors. It was amusing to see how both parties did their best to conceal their movements from the other. Unfortunately, we were not successful in finding a solitary nest, and it transpired that the egg collectors' search was equally fruitless. The irony of the whole thing was that we learned a few days later that a famous egg collector had spent several days in the district and had "cleaned up" the small area where we had been hunting!

The demand for birds' eggs has made collecting a commercial proposition. A clutch of eggs of any bird has a definite market value. Unusually marked clutches are proportionately higher in price. At the moment of writing, the

market value of a well marked clutch of Eagle's eggs is about ten pounds for the two. It can be readily understood, therefore, that a deerstalker's temptations are considerable, and as a whole, these worthy fellows are to be admired for the way they have withstood the pecuniary blandishments of the collector.

Some years before the war, an egg collector acquaintance of mine went to Spain "on business". On his return he readily disposed of his haul, paid all his expenses, and was over a hundred pounds in pocket. Once or twice he had been among colonies of nesting birds, and had lifted every egg that was fit to take.

Egg collecting often starts with the schoolboy who is allowed by his parents to take only one egg "as this will do no harm". Once the hobby has taken hold of him the youth soon realises that a complete clutch is a better possession than an individual egg, and as boyhood changes to manhood, individual clutches give way to types of clutches, and so it goes on. Some of our best ornithologists have started as egg collectors, and there is no doubt that many collectors are among our most knowledgeable observers. But when the mania bites them, they are apt to become ruthless and unscrupulous, and are undoubtedly harmful. The collector must take some share of responsibility for the practical wiping-out of our native Dotterels, the extermination of the Osprey, and the destruction of local rarities like the Marsh-Warbler and the Crested Tit, both of which have suffered severely in recent years. The law should be so framed as to make it impossible for these scandals to happen. The egg collector learns little new, and in this country, at least, there is little more to be learned by him. And any knowledge that he gains is insignificant in comparison with the harm that the taking of rare birds' eggs can do. Egg collecting in a foreign country, where the avifauna have not been fully studied, is another matter. But there certainly is no room for it in Great Britain.

I suggest that the schoolboy egg collector is out of date. While it is true that the loss of an odd egg or two does no harm, little things lead to big things, and today teachers should instruct schoolchildren on the correct approach to our bird life. They should be taught that the camera has superseded the gun, that bird watching and ringing can take the place of egg collecting. As the children grow older, those who are interested in the subject will be well fitted by this tuition to further their ornithological activities, and the others, at least, will have been taught to respect our bird life.

At the end of last century ornithologists commenced systematically to put rings on birds' legs in order to find out more about their habits. They were able to obtain isolated reports of ringed birds that had been picked up, and it was soon realised that here was a means of accurately tracing a bird's movements.

In 1909 an organised ringing scheme was originated in Great Britain by the late H. F. Witherby, all records and reports obtained appearing in the publication *British Birds*. In the same year another scheme was started by Dr. Lansborough Thomson at Aberdeen University which proved very successful.

However, it was soon realised that co-ordinated effort was necessary in work of this kind, and a few years later the Aberdeen scheme was merged in the Witherby organisation. From these small beginnings the undertaking developed and increased every year until something like fifty thousand birds were being marked annually in the years preceding the outbreak of the recent war. In 1937 Mr. Witherby wished to be relieved of the responsibility of personal management, and arrangements were made whereby the undertaking was transferred to the British Trust for Ornithology, with headquarters at the Natural History Museum.

The ringing organisation is self-supporting, and manages its own finances. Funds are provided by small payments according to the number of rings used by the ringers, and also by voluntary subscriptions and donations. Ringers must satisfy the committee about their experience and knowledge of birds in the field, and are also required to be members of the British Trust for Ornithology, or subscribers to *British Birds*, with which the scheme remains in close co-operation, and which is the medium for publication of recoveries and other matters relating to the results of ringing. Every ring used is entered up by the ringer on a schedule form, issued by the committee, which gives the species, the date of ringing, the place where ringed, whether the bird is young or adult, and the name of the ringer. These schedules are sent to headquarters once a year, and are filed in series and numerical sequence. When a ring is reported found, it is only a matter of a moment to pick out the appropriate card, to learn all the required information in connection with its recovery.

Ringing stations existed before the war in most of the European countries, and the controllers of the scheme were in constant touch with them. Whenever a ring of foreign origin was found on a bird in the British Isles, the secretary of the British undertaking wrote to the organisation concerned and asked for details of the ringing of the particular bird, giving the ring number and the date and place of recovery. Conversely, enquiries were regularly received from abroad concerning British-ringed birds recovered in other countries. All the European stations periodically published lists of recoveries of their own birds and forwarded them to the British undertaking, which reciprocated by sending copies of its own lists as published from time to time in *British Birds*. As an illustration of the information that has been gleaned through systematic ringing, here are some proved records of long-distance flights:

Winter-visitors to Great Britain ringed here and recovered in their own countries where they breed.

Starling—West Russia, Finland, and Norway.
Mallard and Teal—Russia, Finland, and Iceland.
Pintail and Wigeon—Russia and Western Siberia.

Birds breeding in Great Britain recovered as winter-visitors in foreign countries.

Yellow Wagtail and Wheatear—Morocco.
Swallow—All parts of South Africa.
Heron—Central Spain.
Gannet—West Africa.
Sandwich Tern—The whole length of the West African coast and round the Cape to Natal.
Kittiwake Gull, Great Skua, and Puffin—Transatlantic flights.

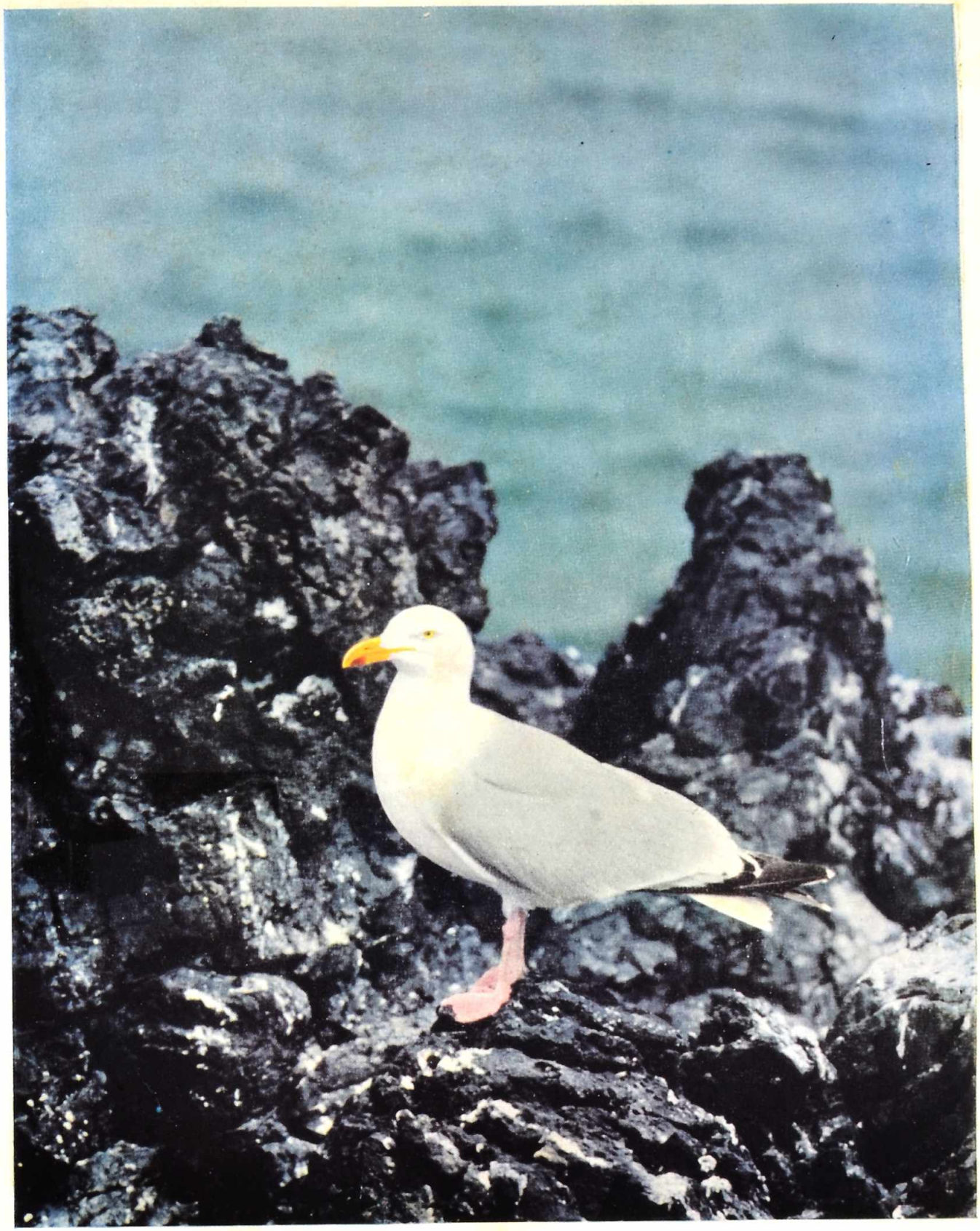
Some people are opposed to the ringing of birds. Firstly, there are the bigoted protectionists who contend that birds should be left absolutely alone. Secondly, there are those who complain that over-enthusiastic ringers will take half-fledged or full-fledged birds from their nests and ignore the fact that in many cases they will not settle down again in their homes. Certainly several species, if disturbed, are prone to jump out again before they can fly; the Chaffinch, Hedge-Sparrow, and Reed-Bunting for example. However, a rule is now laid down by the organisers of the scheme that birds must not be taken from the nest when fledged. If ringed when they are seven or eight days old, most Passeres will come to no harm. Certain ringers have aroused the ire of the bird world by the use of fixed traps, which catch birds automatically. If they are not visited frequently, the captive birds are apt to hurt themselves unless the trap is a very big one, and there is always a danger that they will be attacked by rats, cats, and even Hawks. The best traps are those which can be shut by the pulling of a string by the ringer. The birds are then captive for a few minutes only, and little harm can happen to them. Incidentally, these traps can have big openings, and are capable of catching many birds at the same time. I was told by an expert ringer that he captured seventeen Rooks at once by this method; in another trap he caught thirty-seven Starlings!

The collecting mania can creep into bird ringing; also there is a tendency among certain ringers to compete with others as to the number of birds which they can ring, and this often leads to the temptation to take the shortest cut to the goal. This competitive spirit is also apt to make ringers careless, inconsiderate, and of little assistance to the scheme. Fortunately, the offenders are very much in the minority. Ringing is proving a most valuable aid to ornithology. Apart from its obvious results, such as the discovery of migration routes, winter quarters, and the age of birds, it has made possible the discovery that, whereas the adult migrant will go back to its old nest site, the progeny

may not return to the scene of their birth but to somewhere fairly close. In addition, it has become possible to trace the dispersal of resident birds and has provided proof of many points which previously were only conjectures.

One has only to mention the subject of captive birds to make the protectionists see red. To a great extent my sympathies are with them, but this subject cannot be lightly dismissed without careful thought. I have always deplored the practice of keeping wild birds in cages or close confinement, and the use of bird-lime and traps of various sorts to catch wild birds for captivity cannot be too strongly condemned. Legislation, however, has gone a long way to stamp out the evil. Yet, there are many people whose main—and harmless—hobby is the keeping of domesticated birds, such as the Canary and the now more popular Budgerigar. The owners of these pets are not actuated merely by pride of possession; they have a genuine urge to tame and domesticate. This type of bird fancier continually attempts to improve upon the already established; he looks for, and cherishes, the unusual and the unexpected. The beauty of these birds, too, has brought colour and happiness into the lives of countless people.

The story of how I became a "bird fancier" is interesting. Some time ago I had a serious operation, and for the greater part of two years I was in a state of convalescence. My medical advisers said that my cliff- and tree-climbing exploits had finished; I must no longer sit in "hides" until I was frozen; my meals must be taken at regular intervals. Everything pointed to my field work being over. I was miserable—poor company for my friends and a source of worry to my wife. While at the seaside I sauntered one day to a local fairground, and, competing in a game of chance, I found myself the winner of the first prize—a "budgie", which was handed to me in a paper bag! Imagine my horror at such cruelty. Should I return the bird to its original owner, let it fly away to freedom, or get a suitable cage and take it home? I decided on the third course. If I could not keep up my field work, I thought, here was a form of ornithology which, together with the nest boxes and feeding appliances in the garden, would to some extent compensate me. I kept Budgerigars for over ten years, and during that period I had an excellent opportunity of studying the British bird "fancy" from every angle. The true "fancier" is to be admired. His care and consideration for the well-being of his pets is so great that, in many instances, the feathered members of the "family" take premier place. The aviaries are often the cleanest part of the household, the birds enjoy every advantage that modern methods can provide, and, in fact, his pets are the owner's pride and joy. As Canaries and Budgerigars are born in captivity, and if released in this country would not survive long, the keeping of these domesticated birds is a totally different proposition from the caging of captive wild birds. Although I can appreciate the pleasure and happiness that Canaries



The Herring-Gull

Herring-Gull

Lesser Black-backed Gull by its nest in the heather

and Budgerigars bring to their owners, especially to those who live in industrial districts and are not fortunate enough to have easy access to the countryside, I have never received the same pleasure from my domesticated birds as from my experiences in the field. Fortunately my doctors have proved to be wrong, and I have been able to resume my wild bird photography once again.

Science has benefited by information learned from the keeping of Budgerigars. To quote my friend, the eminent geneticist, Professor F. A. E. Crew: "The Budgerigar now claims the attention of the geneticist, not only because it is excellent material for studies on heredity now that there are a number of true-breeding varieties, but also because all these are known to have occurred within the last sixty-five years in a species which has never been crossed with any other, the evolution of the Budgerigar, the creation of new types out of an old, has proceeded and is still proceeding under our very eyes. It is kept by thousands of intelligent and interested breeders under satisfactory environmental conditions, pool records in great mass exist, and out of their analysis there can be constructed an entirely satisfactory interpretation of the mode of inheritance of all the varietal colours so far recorded."

When cruelty does occur, it is nearly always caused through the ignorance of the bird owner. Responsible societies exist for the different sections of canary breeders, and the Budgerigar Society caters for the needs of its members. Instruction and advice is available for all who wish to take advantage of it. Unfortunately, Canaries and Budgerigars are only part of the bird fancy. At different shows I have seen exhibited Bullfinches, Chaffinches, Goldfinches, Woodpeckers, Hawks—in fact, all sorts of British birds. Sometimes the cages have been so small that the poor things have been scarcely able to stand in their natural posture, and more than once I have sought out the owner of an exhibit and warned him of legal proceedings if the wrong was not righted immediately. I am glad to know that the keeping and exhibition of wild birds is on the decline; I for one shall be happy when the day arrives when it is a thing of the past.

Dealers in bird food cannot escape criticism, and I shall welcome the day when legislation makes it easier to prosecute the wrongdoer. The average person who purchases a packet of seed takes it for granted that the contents of the package are suitable for the bird named on the label. During the recent war Budgerigar owners have found their feathered friends dead at the bottom of the cage. On several occasions these facts have been brought to my notice, and more often than not I have found that the bird has died of starvation. Since 1939 millet and canary seed, the staple diet of the Budgerigar, have become scarcer and scarcer, and consequently dearer and dearer. Seed merchants of repute still market a reasonably good food. However, several unscrupulous people are selling seed much of which has absolutely no food value for the

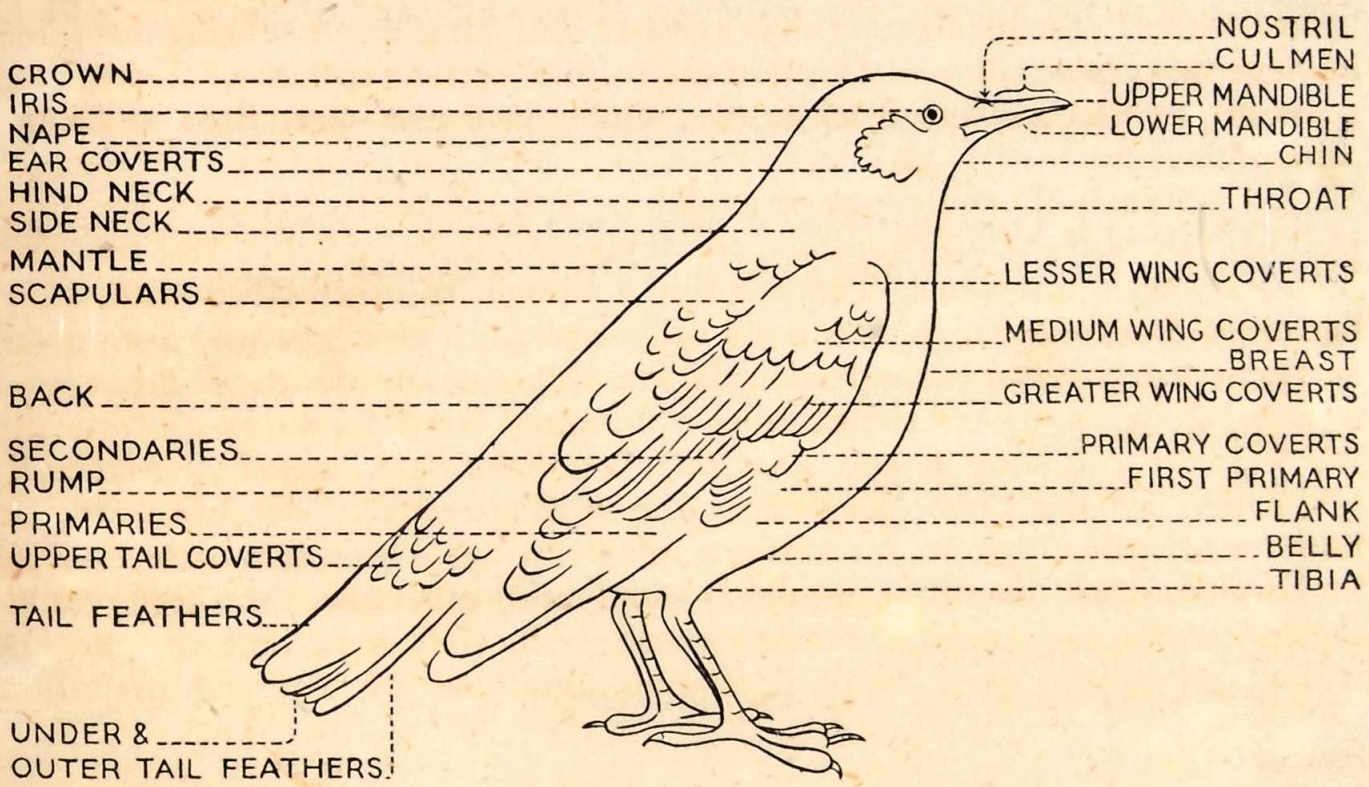
Budgerigar. What happens? The owner of the pet fills the pot with seed, and in the first hour or so the bird consumes what little food content there is. On the next day the unsuspecting owner looks at the food pot, which to all appearances is practically full, and naturally thinks there is enough seed in it. Actually, all that the pot contains is seed on which the bird cannot exist, and the pet quickly dies.

In conclusion may I make an appeal for unity among all branches of ornithology. To the out-and-out protectionist I would say that the argument that all birds should be left alone to breed how they want, where they want, and when they want is out of date, prejudiced, and thoughtless. Great Britain is no longer an undeveloped island, and birds, like other things, must be controlled. By the nature of things sanctuaries must be small in this country, and predatory birds and animals must be kept in check. At the moment of writing the Magpie provides an excellent illustration for this argument. Owing to recent wartime conditions, estate owners have not kept these birds down, with the result that in many parts of the country they are becoming so numerous that many other species of bird life are suffering. I can cite cases where biased protectionists in the past, rather than agree to bird life of any sort being disturbed or destroyed, have allowed Cormorants to oust certain species of Terns from some of our islets, whilst Black-headed Gulls have been permitted to do the same elsewhere.

Each branch of ornithology or aviculture contributes its quota to the study of birds; members of every section are doing something of value. But that fact is not always appreciated. There is not a branch of ornithology without its failings and drawbacks; there is not a branch without members who are sincere and honest. Jealousies, misunderstandings, and lack of knowledge of other angles of ornithology have been the cause of a disunited front in the past. Now the war is over ornithologists will start their activities again with renewed zeal. Legislation for the better protection and management of our birds will be introduced; already recommendations are in being. The different sections of the ornithological world, officially invited and otherwise, are formulating suggestions for parliamentary consideration. I sincerely hope that all branches will approach the question of legislation untainted by sectional prejudice.

KNOW YOUR GARDEN BIRDS

Recognisable characteristics and habits together with other information on those species most likely to visit a British garden



THE CARRION-CROW *Corvus corone* Length* 18½ ins.

Characteristics and General Habits

Differs from the adult Rook by not having a bare greyish-white face. Can usually be distinguished from the immature Rook by the stouter, more curved bill, though certain individuals are very similar. The plumage has a greener gloss and is more tightly feathered than the Rook's, whose plumage tends to hang loosely in comparison. Both sexes are alike, whilst the plumage of the young is similar to the adult's but less glossy. The flight is rather slow, with regular wing-beats. The voice is a hoarse croak rather than a caw. It feeds mainly on the ground in the open, where the movement is in the form of a walk with an occasionally clumsy hop if hurrying.

Distribution

Resident and common, but somewhat local throughout England and Wales. In Scotland more local, being most numerous in the south and east. In Ireland it is a rare vagrant.

Nest Situation

Usually nests high up in stout forks of trees, but in hilly country often in small bushes on the hillside. Also on ledges of sea cliffs, and occasionally inland.

Nesting Materials

Built of sticks and twigs, moss, etc., with a lining of wool, grass and hair.

Eggs

Usually 4 or 5. From light blue to deep green, blotched, splashed and spotted with varying shades of brown, and underlying ashy shell-marks.

Breeding Season

Begins early April.

Incubation Period

19 to 20 days. Single-brooded.

Natural Food

Carrion, small mammals, wounded and small birds, eggs, frogs and insects.

Natural Food Substitutes

These birds would not visit the bird table.

Remarks

Carrion-Crows will not occupy a nest box of any sort, and in any case the Carrion-Crow should not be encouraged into a garden sanctuary, as it would be a menace and a danger to the majority of the other birds and their eggs.

* Throughout this section, "length" should be understood to indicate the approximate overall length.

THE ROOK *Corvus frugilegus* Length 18 ins.

Characteristics and General Habits

The adult Rook is at once distinguishable from the Crow by the bare greyish-white face, noticeable both at rest or in flight. The plumage is black glossed with purple and blue. Both sexes are alike. The base of the bill of the young is feathered in place of the bare greyish-white patch. The Rook can further be distinguished from the Crow by its voice, a definite "Caw", as distinct from the Crow's more raucous croak. The birds are usually to be seen feeding in flocks. The movement on the ground is a sedate walk with an occasional hop.

Distribution

A resident and generally distributed throughout the British Isles wherever trees exist.

Nest Situation

In colonies, usually in the tops of tall trees.

Nesting Materials

Sticks and twigs, strengthened with earth, lined with grasses, roots, moss and leaves, etc.

Eggs

3 to 5, sometimes 6. Pale bluish-green to green, closely spotted and blotched with ashy-grey and brown.

Breeding Season

Begins the latter half of March and early April.

Incubation Period

16 to 18 days. Single-brooded, but autumn breeding recorded.

Natural Food

Grain, vegetable matter, insects, larvæ, worms, slugs, young birds and eggs.

Natural Food Substitutes

Should not be encouraged by this means.

Remarks

The Rook does a certain amount of harm due to its partiality for grain and roots. On the other hand it destroys such pests as wire worms and "leatherjackets", the larvæ of the crane fly. As inmates of a garden bird sanctuary Rooks are not to be encouraged, as eggs and young birds are frequently taken, and in hard weather they will even kill adult birds.

THE JACKDAW *Corvus monedula* Length 13 ins.

Characteristics and General Habits

The Jackdaw is mostly black in colour with a blue gloss on the upper-parts. It is quickly identified by the grey nape and back of the neck of the adults. It is also noticeably smaller and more alert in action than the Rook and Crow. At close quarters it can be noticed that the bill is shorter. On the wing it is distinguished from the other Crows by its smaller size and its quicker flight. Both sexes are similar. The young are browner than the adults and the characteristic grey neck is scarcely noticeable. The note is usually a short, high-pitched "Tchack", very different from the croak or "Caw" of the Crow and Rook. The movement on the ground is a quick jaunty walk.

Distribution

British Isles. Resident and generally distributed, except in north-west Scotland, where it is scarce, and some Scottish and Irish islands.

Nest Situation

In a hollow tree, in holes or crevices in cliffs, in church towers and chimney-pots. Sometimes builds an open nest in trees. Old Rooks' or Magpies' nests are sometimes occupied.

Nesting Materials

Vary according to site. Large quantities of sticks, lined with wool, hair, moss, grass and other soft materials. In the case of small holes, the nests are usually constructed without sticks.

Eggs

Usually 4 to 6, sometimes more. Pale greenish-blue, spotted, speckled and blotched with brownish-black and ashy-grey.

Breeding Season

Begins the second half of April.

Incubation Period

17 to 18 days. Single-brooded.

Natural Food

Insects, larvæ, worms, eggs and young birds, and to a less extent grain, fruit, berries.

Natural Food Substitutes

Should not be encouraged by this means.

Remarks

The Jackdaw, owing to the havoc it causes amongst young birds and eggs, is not to be encouraged. It will visit the bird table, especially in hard weather, and occupy an owl-type nest box.

THE MAGPIE *Pica pica* Length 18 ins. Tail 8 - 10 ins.

Characteristics and General Habits

The conspicuous black-and-white pied plumage together with a long wedge-shaped tail make the Magpie easily recognised. Both sexes are alike. The young are similar to the adults, but have less sheen on the plumage. The unmistakable harsh chattering often discloses the presence of the bird when concealed. Perches freely in trees, but usually feeds on the ground, where the normal mode of walking is often varied by quick hops when the bird is excited.

Distribution

Resident. Generally distributed, and due to recent wartime conditions greatly on the increase. In Scotland very scarce in the north, north-west, and south-east, and local elsewhere. In Ireland numerous, but scarcer in the extreme west.

Nest Situation

Usually breeds in trees, sometimes in thick hedges or thorn bushes.

Nesting Materials

The nest is a large one, built of sticks and twigs cemented together with a lining of earth. Over it is a layer of fine roots; sometimes dry grass and hair is in the lining. Usually surmounted with a dome of sticks.

Eggs

Usually 5 to 8. A bluish green to greyish- and yellowish-green, closely spotted and blotched with varying shades of brown and ash.

Breeding Season

Begins April, exceptionally late March.

Incubation Period

17 to 18 days. Single-brooded.

Natural Food

Mainly insects, also birds, eggs, small mammals, grain, fruit, acorns, etc.

Natural Food Substitutes

Should not be encouraged by this means.

Remarks

Whilst the Magpie does some good by exterminating harmful larvæ and mice, little else can be said in its favour, and it should not be encouraged. It lives by its wits, is shy and watchful and never off its guard, and retreats at the slightest sign of danger. These birds will take scraps from the bird table, usually in the early hours of the morning, before anyone is about.

THE JAY *Garrulus glandarius* Length 13½ ins.

Characteristics and General Habits

The Jay is a very shy and wary bird, much less often seen settled than in flight, when it is easily recognised by its white rump contrasted with the black tail. At close quarters the brownish-pink colouring of the body and the bright blue, black-barred patch on the wings will be noticed. The feathers on the crown of the head are whitish streaked with black, and can be raised when the bird is excited. A loud, very harsh screeching note, audible from a considerable distance, is distinctive. Both sexes are alike, the young birds being similar. The movement both amongst branches and on the ground is by rather heavy hops, the tail being frequently jerked up and down or from side to side.

Distribution

Resident, generally distributed throughout England and Wales. Very local in Scotland. Replaced in Ireland by a slightly different race.

Nest Situation

In the fork of a bush or tree, in woods, plantations, and orchards, or in thick hedgerows containing old thorn bushes. Generally from ten to twenty feet from the ground.

Nesting Materials

Built of small sticks and twigs, and a little earth. Thick internal layer with fine black roots.

Eggs

5 or 6, sometimes more. Brown to greyish-green, closely freckled all over with olive-brown spots, generally showing black hair lines at the larger end.

Breeding Season

Begins May or exceptionally late April in the south.

Incubation Period

About 16 days. Single-brooded.

Natural Food

Acorns, peas, corn, nuts, fruit, berries, young birds, eggs, mice and insects.

Natural Food Substitutes

Not to be encouraged by this means.

Remarks

Jays are a danger to young birds, inveterate egg-stealers, and are a questionable asset to a bird sanctuary.

Little Bittern chick seizing its parent's beak to persuade it to regurgitate food

Little Bittern cock and hen with their family

Spoonbill

Spoonbills nesting in a dense reed-bed

THE STARLING *Sturnus vulgaris* Length 8½ ins.

Characteristics and General Habits

The plumage varies considerably according to the time of the year. The feathering is black with iridescent colours of purple, green and blue. In winter the upper-parts are spotted with buff, and the feathers of the under-parts edged with white. In spring the spots disappear from the plumage. The buff and white tips of the feathers gradually wear off, making the whole bird darker and more glossy. The female is more spotted than the male in both winter and summer, but the metallic colouring is not so brilliant. The young birds are a mouse-brown colour, with whitish throat. The longish, pointed bill, which is bright yellow in the breeding season, short tail and plump form, coupled in flight with the short pointed wing, are salient features, both in the air and when settled. The flight is swift and direct, with a rapid wing movement, varied by glides with the wings extended. Usually feeds in groups or flocks on the ground, probing the surface with the bill. A quick jerky walk, coupled with a hurrying manner, is typical.

Distribution

Resident. Generally distributed throughout the British Isles. A slightly different race in the Shetlands.

Nest Situation

Usually placed in a hole. In holes in trees, under eaves, any hole in a building. Amongst ivy.

Nesting Materials

An untidy structure built of straw, hay, lined with feathers and sometimes hair, wool, leaves or moss.

Eggs

Usually 5 to 7. Glossy pale-blue, sometimes nearly white.

Breeding Season

About mid-April onwards.

Incubation Period

12 to 13 days. Usually single-brooded, some breed twice.

Natural Food

Varies considerably according to season and locality. Insects and their larvæ, snails, worms, cultivated fruit, cereals.

Natural Food Substitutes

Starlings will eat practically any form of food placed on the bird table.

Remarks

They will readily take possession of nesting boxes with a hole suitably large.

THE HAWFINCH *Coccothraustes coccothraustes* Length 6½ ins.

Characteristics and General Habits

The most noticeable feature about the Hawfinch is its very large, stout bill. It is larger than the other British Finches, with thick-set build and short tail. The general colour is a rich reddish-brown, the nape is grey; around the eye, around the bill and on the throat the feathers are black. The wings are black with a conspicuous white shoulder-patch. When flying low down the white wing-patches, rufous mantle, and the tail with the broad white border, are noticeable. The female resembles the male, but is paler in colour. The young birds have a yellow throat, with spotted and barred under-parts. Likes to frequent the topmost branches of tall trees. The flight is usually quick with rapid wing-beats and often high up. On the ground hops rather heavily, with an erect carriage. It is usually very secretive in the nesting season.

Distribution

Resident in the British Isles, Ireland excepted. Local but generally distributed in England and the eastern half of Wales. Breeds locally in south Scotland and occasionally elsewhere. In Ireland a rare vagrant.

Nest Situation

In old hawthorn bushes, fruit trees, in old wooded gardens or woods.

Nesting Materials

A layer of small twigs as foundation for roots, grass, lichens, lined with fine roots, hair and dry grass.

Eggs

4 to 6, usually 5. Pale bluish or greyish-green, sometimes pale slate, or faint reddish-brown, boldly streaked and spotted with blackish-brown and grey.

Breeding Season

Begins at the end of April in the south. Mostly early May, but a fortnight later in the north.

Incubation Period

9½ days. Single-brooded. Second broods have been observed.

Natural Food

Kernels and seeds, peas. The young are fed upon insects.

Natural Food Substitutes

Nuts and seeds.

Remarks

The Hawfinch is of a shy and retiring disposition and will not occupy a nest box.

THE GREENFINCH *Chloris chloris* Length 5¾ ins.

Characteristics and General Habits

The stout, conical bill, olive-green plumage, with a yellowish-green rump, throat and breast, together with the bright yellow patches which margin the wings and tail, are distinctive. The female is duller than the male, with less yellow, and tinged with green on the breast. The young are streaked above and below with brown, and have a brown rump. In flight, the rather short cleft tail, the plump short form, together with the yellow wings and tail-patches, are salient features. They perch mostly in trees, though also low down. The flight has a slightly undulating character, common in varying degrees to most Finches.

Distribution

Resident and common in most parts of the British Isles.

Nest Situation

Nests in hedges, gorse bushes, evergreens; sometimes builds amongst the ivy, and in large trees.

Nesting Materials

Built of twigs, grasses, moss, bits of wool and small roots, lined with fine roots and hair, whilst feathers are sometimes used.

Eggs

4 to 6. A dirty white or pale greenish-blue, with a few speckles and streaks of reddish-brown or pale violet.

Breeding Season

Begins late April, generally early May. Young sometimes in the nest till late September.

Incubation Period

13 to 14 days. Double-brooded, occasionally three.

Natural Food

Seeds of various kinds, berries, buds of fruit trees, and a few insects.

Natural Food Substitutes

Hemp seed, wheat, peanuts, bird cake.

Remarks

Given suitable food, the Greenfinch will be a regular visitor to the bird table or seed hopper. Sociable by nature. Groups of these birds, together with other Finches, can often be seen foraging for food during the autumn and winter.

THE GOLDFINCH *Carduelis carduelis* Length $4\frac{3}{4}$ ins.

Characteristics and General Habits

The Goldfinch is easily recognizable by the broad band of golden-yellow and the white-tipped primary feathers on the black wing, and the scarlet, white and black pattern of the head in the adults. Both sexes are similar. The young are streaked with dark brown, and the heads are plain, lacking the red, white and black of the adults. They feed chiefly near the ground, on thistles and other foods, flitting from plant to plant, and they are often seen hanging on to them in tit-like fashion. The movement on the ground is a hop.

Distribution

Resident and local, but fairly generally distributed, and on the increase in recent years. Rare in many parts of Scotland.

Nest Situation

In fruit trees, chestnuts, oaks, sycamores and other trees. Nest often built far out on long spreading branches. Occasionally in hedgerows and evergreens.

Nesting Materials

Neatly built of roots, moss, dry grass, lichens, and wool, lined with vegetable down and wool, and sometimes hair.

Eggs

Usually 5 or 6. Bluish- or greenish-white with a few spots and streaks of dark red-brown, and grey shell-marks.

Breeding Season

Exceptionally in April, usually begins early May. Most eggs laid from the middle of May onwards.

Incubation Period

12 to 13 days. Normally double-brooded; occasionally three.

Natural Food

Seeds and insects; thistle seeds are popular.

Natural Food Substitutes

Hemp and canary seed.

Remarks

This beautiful Finch was at one time practically exterminated. Due to bird preservation its numbers are on the increase. Occasionally a nest box of the open-fronted type is reported to have been occupied.

THE LESSER REDPOLL *Carduelis flammea* Length $4\frac{3}{4}$ ins.

Characteristics and General Habits

The crimson crown and black chin of this streaky-brown bird are salient features of the adult Redpoll. The male, especially in summer, has a pink tint on under-parts and rump, which the female lacks; otherwise they are similar. The young are like the female, without any crimson on the crown. In flight they have the usual Finch undulation, and often fly fairly high. They are very active and fearless; their actions, when feeding, are very like the Tits', frequently hanging head downwards. The flight-note, a twittering, metallic "Chuch-uch-uch-uch", is distinctive. Their movement on the ground is a hop.

Distribution

Resident. Breeds in most counties in England and Wales, but locally in south England and Wales, getting rarer to the south-west. Common in Scotland, except parts of the far north, and in Ireland.

Nest Situation

Usually at no great height from the ground. In high hedges, isolated bushes or small trees, young conifers, etc., and sometimes at considerable heights in forest trees.

Nesting Materials

Fine twigs and stalks, roots, moss and wool, lined with white down, sometimes hair and feathers.

Eggs

4 or 5, sometimes 6. Deepish blue with speckles and spots of light brown.

Breeding Season

A few in April, but usually the latter half of May or early June.

Incubation Period

10 to 11 days. Occasionally double-brooded.

Natural Food

Various kinds of seeds but also minute insects.

Natural Food Substitutes

Hemp seed, canary seed, bird cake.

Remarks

This active little Finch is remarkably fearless. Its general manners are not unlike those of the Tits.

THE LINNET *Carduelis cannabina* Length 5¼ ins.

Characteristics and General Habits

The male has a greyish head. The upper-parts are rich chestnut-brown, the blackish tail is edged with white. Chin and throat buff, streaked with greyish-black. In spring and summer the male shows crimson on the crown and breast. The female is browner and more streaked and lacks the crimson colouring, and other features are less strongly marked. The young resemble the female but the streaking is more pronounced. These birds perch more in bushes and shrubs than on tall trees. The flight is rapid and undulating, similar to other Finches'. On the ground the movement is a hop.

Distribution

Resident. Common and widely distributed, but local in the Highlands.

Nest Situation

Frequently in a gorse bush, brambles or thorns, also in hedgerows, gardens and plantations.

Nesting Materials

Composed of small twigs, grass stems, moss and fibrous roots, lined with hair, wool, and sometimes down or feathers.

Eggs

4 to 6, occasionally 7. Pale bluish- to greenish-white, spotted and streaked with purplish-red.

Breeding Season

From the middle of April onwards.

Incubation Period

10 to 12 days. Two or even three broods.

Natural Food

Seeds of various weeds, and some insects. The young are fed upon larvæ, spiders and insects.

Natural Food Substitutes

Canary seed and household scraps. Bird cake.

Remarks

During cold spells these birds, in areas where they are numerous, come to the bird table.

THE BULLFINCH *Pyrrhula pyrrhula* Length 5¾ ins.

Characteristics and General Habits

The stout black bill, blue-grey back, black head, wings, and tail, and rose-red under-parts in the male, and dull-pink in the female, are distinctive. In flight, the white rump identifies it. The black parts are not so intense in the female, and the nape and the back greyish-brown. The young birds have no black on the head, and are browner than the female. The flight is undulating. They perch mostly under the cover of bushes, chiefly low down. Rarely seen far from cover. The movement when on the ground, which is not often, is a heavy hop.

Distribution

Resident and generally distributed, but rather local in Scotland.

Nest Situation

Breeds in thick hedges, clumps of evergreens, gardens and plantations.

Nesting Materials

Usually about four to seven feet from the ground. Outer rim built of fine twigs and some moss or lichens, lined with a thick layer of interlacing fine roots, nearly always black. At some times extremely lightly, and at others very stoutly constructed.

Eggs

Usually 4 or 5, occasionally 6 or 7. Pale greenish-blue, with spots and streaks of dark purplish-brown, often forming a belt round the big end.

Breeding Season

Commences the end of April or the beginning of May.

Incubation Period

12 to 14 days. Double-brooded, three occasionally.

Natural Food

Fruit buds, seeds and berries.

Natural Food Substitutes

Seed and bird cake.

Remarks

The Bullfinch is seldom seen far from cover. It has a passion for fruit buds, attacking them at times apparently without any reason, as far more are destroyed than are eaten. It is, therefore, most unpopular with any gardener.

THE CROSSBILL *Loxia curvirostra* Length 6½ ins.

Characteristics and General Habits

Owing to its tameness, the crossed mandibles, varying plumages, and parrot-like stance, is easily recognisable. In flight, its note, a loud "Chup chup" or "Jip jip", together with its short deeply forked tail identify it. The adult male is of a brick-red varying considerably in intensity, whilst the younger males are more or less orange and the female is yellowish-green, the wings and tail of both sexes being dark. The young birds of the year are greenish-grey with dark streaks. The flight is rapid and undulating, normally above tree-top level. When feeding the birds sidle along branches in parrot-like fashion, occasionally aided by their bill.

Distribution

A late summer-immigrant in Great Britain, arriving between the middle of June and August. Regular, but fluctuating in numbers, in some districts, but irregular in most. (The Scottish race is resident and breeds in the north of Scotland. This form has a stouter bill than the Common Crossbill.) In Ireland it is now resident but fluctuating considerably in numbers.

Nest Situation

In Scots pines, usually at the edge of a clump, or on the outskirts of a wood. It nests at varying heights, occasionally not more than six feet from the ground.

Nesting Materials

A foundation of strong twigs, with a superstructure of dry grass, roots, moss and wool, the lining consisting of grass, fur, hair and feathers.

Eggs

Usually 4. The ground-colour is greenish-white, sparingly spotted and streaked with purple-red, sometimes blackish, generally at the big end.

Breeding Season

Irregular. Some lay in January and February, chiefly March and early April, sometimes also June and July.

Incubation Period

12 to 13 days. Possibly double-brooded.

Natural Food

Seeds of the cones of Scots pine, larch, spruce and other conifers, but also berries, buds and insects.

Natural Food Substitutes

It is not likely to visit the bird table.

Remarks

The Crossbill will not occupy any type of nest box.

Black Tern alighting near its nest in swampy ground near the reeds

Great White Heron and large youngster at their nest among tall reeds

Purple Heron regurgitating food

Purple Heron chicks

THE CHAFFINCH *Fringilla cœlebs* Length 6 ins.

Characteristics and General Habits

The broad white shoulder-patch, with the less conspicuous white wing-bar, and the two white outer tail-feathers, are distinctive in flight. When settled, the plumage is unmistakable. The male has a blue-grey nape and crown, together with a chestnut mantle, yellowish-green rump, and pinkish-brown under-parts, as well as blackish wings and tail with the white feathers mentioned above. The female is of a rather pale yellow-brown, with brownish-white under-parts. The head of the male is more peaked. The young birds resemble the female, but are paler with less green on the rump. The flight is undulating, typical of the Finches. On the ground the birds both hop or walk with short, quick steps.

Distribution

Resident. Abundant and widely distributed.

Nest Situation

In the forks of small trees, hedgerows, bushes; in fact, anywhere where there are trees or shrubs.

Nesting Materials

Moss, grasses, roots, wool, often externally decorated with lichens. Lined with hair and sometimes an occasional feather or two. Compactly and beautifully built.

Eggs

Usually 4 or 5, occasionally more. Greenish-blue or stone colour with spots and streaks of dark purplish-brown.

Breeding Season

Begins mid-April, most eggs laid in May. Some nests in June, but not general.

Incubation Period

11 to 13 days. Usually single-brooded.

Natural Food

Seeds of weeds or garden plants, grain, fruit, and insects.

Natural Food Substitutes

Bird cake, shelled peanuts, canary seed.

Remarks

A regular visitor to the bird table. Sometimes occupies an open-fronted type nest box.

THE BRAMBLING *Fringilla montifringilla* Length 5¾ ins.

Characteristics and General Habits

The shape is like the Chaffinch, but with a white rump, which is conspicuous in flight, whilst the orange-buff shoulder-patch of the male, and the breast of both sexes, together with the brown or blackish heads, readily distinguish them amongst Chaffinches on the ground. The breeding male has a head and mantle of glossy black (this breeding plumage is sometimes almost fully assumed before the birds leave this country), but in winter it is mottled brown. The female and young are dull brown above. The wings are similar to the Chaffinch, only the white band is less extensive, especially in the hen. In winter it moves about in flocks, feeding often with Chaffinches under trees, or with various Finches in the fields, flying up into trees if disturbed. It roosts chiefly in coverts and shrubberies. The flight and movements are the same as those of the Chaffinch.

Distribution

A winter-visitor and irregular passage-migrant in varying numbers throughout England and Wales. In Scotland the numbers are greatly influenced by the weather conditions, being most regular and abundant as a migrant in the south-east, though sometimes occurring in large numbers in the south-west and north-east. In Ireland it appears in varying numbers, except in the west, where it is rare.

Natural Food

In winter: seeds of knot-grass and other weeds; beechmast, wheat and berries. In the spring, the larvæ of insects.

Natural Food Substitutes

It will not visit the bird table.

Remarks

The Brambling commences to arrive in this country at the end of September, most birds leaving in March and April, making for their breeding-grounds in northern Europe.

THE HOUSE-SPARROW *Passer domesticus* Length 5¾ ins.

Characteristics and General Habits

Only the Tree-Sparrow is likely to be confused with this familiar bird. The reddish-brown, black-streaked upper-parts; the slate-grey crown with chocolate-brown sides; the whitish cheeks and side of neck, together with the black throat and chin, are salient features. In flight the grey rump and a short white wing-bar are noticeable. The female and young are of a duller brown, lacking the black on the chin and throat, the grey on the head and rump, and the noticeable wing-bar. They are of a greedy and bold disposition, feeding chiefly on the ground, though often to be seen on buildings or trees. The movement on the ground is a perky hop.

Distribution

Resident. Widely distributed, but local in many parts of Ireland. Common in town and country alike, but seldom seen far from cultivation.

Nest Situation

In almost any kind of hole or crevice. In ivy, in drain spouts, under eaves, and so forth, but sometimes in the open in hedgerows or a good height up amongst the branches of trees.

Nesting Materials

An untidy structure, domed when in the open, but merely a lining when under cover, composed of straw, grass, well lined with feathers, and sometimes a little hair or wool.

Eggs

3 to 5, sometimes more. Greyish-white, mottled and thickly spotted with varying shades of ash-grey and brown.

Breeding Season

Usually begins May. Fresh eggs may be found till July or August.

Incubation Period

12 to 14 days. Two or three broods usually reared.

Natural Food

Seeds, grain, buds, insects and their larvæ.

Natural Food Substitutes

The House-Sparrow should not be encouraged by this means.

Remarks

Unless the hole of a nest box is made very small, Sparrows may take possession. Apart from any consideration as to their numbers or the damage they do to a garden, they are not an asset to a bird sanctuary, and should be kept in check.

THE TREE-SPARROW *Passer montanus* Length 5½ ins.

Characteristics and General Habits

Compared with the male House-Sparrow, the black patch on the cheeks, and the chocolate, not slate, crown, are distinctive features. A double white wing-bar is another difference. Both sexes are alike, the young birds resembling the adults.

Distribution

Resident England and Wales. Widely distributed, but local, especially in the extreme south-west, and the Lake District, and in the south and west of Wales. Occurs chiefly on the east side of Scotland. Very local in Ireland.

Nest Situation

In a hole in a tree, holes in walls or buildings, sea cliffs, quarries, old nests of Rooks and Magpies.

Nesting Materials

Straw, dry grass and roots, warmly lined with feathers and hair or wool. Usually in a hole.

Eggs

4 to 6, sometimes more. Similar to those of the House-Sparrow, but considerably smaller and more glossy. The colour is browner and darker, whilst the markings are of a more finely stippled character.

Breeding Season

The end of April onwards.

Incubation Period

12 to 14 days. Double-brooded, sometimes three.

Natural Food

Seeds, corn, insects and their larvæ, and spiders.

Natural Food Substitutes

Table scraps, seed, grain and bird cake.

Remarks

The Tree-Sparrow is a much shyer and more gentle bird than its relative the House-Sparrow. It is purely a rural bird; being smaller than the House-Sparrow, it can occupy and breed in nest boxes of the hole type, where its bigger relation cannot enter.

THE PIED WAGTAIL *Motacilla alba yarrellii* Length 7 ins.

Characteristics and General Habits

The ground action of these graceful slim birds is a quick walk or a swift run, and a constant up-and-down movement of the tail, from which they get their name. On the male bird the crown and all the upper-parts are black, except the forehead, sides of face and neck, which are white. The wings are blackish margined with white, forming a double wing-bar. The outer feathers of the tail are edged with white. In winter plumage the throat is white bounded by a crescent-shaped black bib. The female has not so much black on the head and breast, and has a greyer back. The young birds are similar to the females. The grey contains more brown, the wings are browner, the sides of the face and throat are a dirty white, the crescent-shaped breast-band is blackish, and the breast and under-parts are greyish-buff. In the air Wagtails are easily recognised by their long tails and bounding flight; they rise and fall in long curves.

Distribution

Resident and generally distributed throughout the British Isles. Many breeding birds migrate southwards in the autumn and return in the early spring.

Nest Situation

In holes of walls, steep banks, amongst a heap of boulders, in ivy growing against walls or trees, etc.

Nesting Materials

Moss, dry grass, roots, dead leaves, twigs, etc., with a lining of hair, wool, feathers and fine grass.

Eggs

Generally 5 or 6. Greyish-blue or white, thickly freckled with light brown and grey.

Breeding Season

From April onwards.

Incubation Period

13 to 14 days. Two broods usually, sometimes three.

Natural Food

Chiefly insects and their larvæ.

Natural Food Substitutes

Household scraps, soaked bread, etc.

Remarks

They occasionally occupy an open-fronted nest box, and will feed on food that has been thrown on the ground.

THE TREE-CREEPER *Certhia familiaris* Length 5 ins.

Characteristics and General Habits

The Tree-Creeper is a little brown bird which is easily identified by its curious habit of ascending trunks or limbs of trees in a succession of little jerks, a running mouse-like action, all the time the tail-feathers being pressed closely against the bark as an extra means of support. The brown upper-parts are mottled and streaked pale buff, the rump being of a more reddish tint. The under-parts are white. There is a buffish-brown bar edged with black across the wing. The beak is slender, curved and pointed. Both sexes are alike. The young birds are similar to the adults, but have a more reddish-yellow tinge and a more mottled appearance than the adult, the beak being shorter and straighter. The flight is rarely for more than a short distance, of an undulating character, not unlike a Tit's. It climbs and creeps with its feet wide apart, and is rarely to be seen on the ground.

Distribution

It is resident and generally distributed in suitable localities throughout the British Isles.

Nest Situation

The nests are usually to be found behind a loose piece of bark on tree-trunks, behind stems or roots of ivy, and sometimes under eaves, in crevices in buildings, or in loose stone-walls.

Nesting Materials

Twigs, moss and grass, with a lining of feathers, wool, and strips of bark.

Eggs

Usually 6. White marked with red-brown spots, varying in intensity, forming a zone round the larger end, with underlying reddish-violet markings.

Breeding Season

Late April onwards.

Incubation Period

14 to 15 days. Double-brooded, sometimes using the same nest.

Natural Food

Chiefly insects and their larvæ.

Natural Food Substitutes

Due to its being mainly insectivorous this bird is not likely to visit the bird table.

Remarks

Tree-Creepers are not likely to occupy a nest box. They are often seen in deciduous trees in most well-timbered country gardens.

THE NUTHATCH *Sitta europæa* Length 5½ ins.

Characteristics and General Habits

The pointed, woodpecker-like bill, short tail, and plump shape, together with the coloration make the Nuthatch easily recognised. The bluish slate-grey upper-parts, the buff under-parts, together with the rich chestnut flanks, are distinctive. A black stripe runs from the base of the bill to the eye, extending down the side of the neck. The sides of the head, chin, and throat are white, whilst the lateral tail-feathers are black tipped with grey and edged with white. Both sexes are similar, but the female has less chestnut on the under-parts. The young birds are similar to the adults, but colours are duller, and there is dull rusty-red, rather than chestnut, on the flanks. They move on tree trunks with short, jerky leaps, quickly climbing up or down in search of insect food. They do not use their tail in climbing like the Creeper. The bill is frequently used for penetrating nuts. When this operation is taking place a woodpecker-like tapping noise is often heard. When feeding on the ground, which they sometimes do, they move by hops.

Distribution

Resident. Fairly numerous in southern and central counties of England. Rarer in Wales, and absent or very local in the north of England; north of the Border only a straggler. In Ireland unknown except for isolated instances.

Nest Situation

Usually in a hole of a tree or wall. Occasionally in holes in walls, sand-banks, and old Magpies' nests, etc.

Nesting Materials

Lined with flakes of bark, dried leaves, or dry grass. The entrance is nearly always plastered round the edge with mud.

Eggs

6 to 11. White, boldly spotted and marked with reddish-brown.

Breeding Season

From the end of April onwards.

Incubation Period

14 to 15 days. Single-brooded usually.

Natural Food

Insects and their larvæ. In the autumn chiefly hazel-nuts. Also acorns, beechmast, etc. Young fed on small insects, spiders and caterpillars.

Natural Food Substitutes

Nuts and bird cake.

Remarks

They will occupy a hole-type nest box. A peanut hopper is an attraction.

THE GREAT TIT *Parus major* Length 5½ ins.

Characteristics and General Habits

The largest of the Tits. The crown of the head is glossy blue-black, the cheeks white, the sides of the neck, throat and a band down the middle of the greenish-yellow under-parts are black, and the mantle olive-green. The rump, tail and wing-coverts bluish-grey, with the outer tail-feathers margined with white and a distinct white bar on the wings. The female is like the male but a trifle duller. The young birds are duller and paler than the adults. The cheeks are yellowish; the black is replaced by dark brown. All Tits are similar in their actions and behaviour. They are active and agile little birds, adopting all sorts of acrobatic postures, often swinging head downwards in search of food. A gentle flick of the wings and tail is a common action as they move about.

Distribution

Resident: generally distributed throughout England, Wales, Ireland, and in south and central Scotland, becoming scarce in the north of Scotland.

Nest Situation

Usually nests in holes in trees, walls, or exceptionally in old nests of other birds. Almost any kind of hole may be used in the absence of natural sites.

Nesting Materials

Chiefly moss, mixed with grass or roots. The lining is made of hair or down, sometimes feathers, with which the eggs are covered when the nest is unoccupied, before incubation begins.

Eggs

5 to 11 usually. White, spotted with pale red or reddish-brown.

Breeding Season

Begins towards the end of April, or early May.

Incubation Period

13 to 14 days. Usually single-brooded.

Natural Food

Insects and their larvæ, fruit, buds, peas.

Natural Food Substitutes

Nuts, seeds, household scraps, bird cake.

Remarks

A regular attender at the bird table. Will readily occupy a hole-type nest box. These birds do considerable damage in their destruction of buds in the spring and fruit in the autumn, but such damage is more than balanced by the great quantities of insects that they destroy.

Marsh-Harrier hen alighting at its nest in the reeds

Hoopoe at the entrance hole of a nesting-box. (Note how it uses its tail to steady itself)

Tawny Pipit approaching its nest

Tawny Pipit at the nest

THE BLUE TIT *Parus cæruleus* Length 4½ ins.

Characteristics and General Habits

This is the only common British Tit except the Long-tailed Tit (whose tail distinguishes it at once) which has not got a black cap. Furthermore it is the only one with bright blue in the plumage. The crown is cobalt-blue bordered with white. The cheeks are white with a dark border extending from the chin which meets a dark line which passes from the base of the beak through the eye. There is a white patch on the blue nape. The mantle is yellowish-green and the under-parts sulphur-yellow. The wings and tail are blue, the former being barred with white. The young are duller and more yellowish than the adults. For flight and habits, see under Great Tit.

Distribution

Resident England, Wales and Ireland, and generally distributed. Scotland, resident, generally distributed, but becomes scarce and very local in the north-west.

Nest Situation

Nests in a hole in a tree or wall; in the foundations of large nests, in holes of banks. Also in inverted flower-pots, letter-boxes, old cans, etc.

Nesting Materials

Foundation of moss and dead grass, with a thick lining of hair or wool, with feathers. Prior to incubation eggs covered up by the lining.

Eggs

7 to 14. White in colour, finely spotted, freckled with light chestnut. Often in the form of a zone round the larger end.

Breeding Season

End of April in the south, beginning of May in the north.

Incubation Period

13 to 14 days. Normally single-brooded.

Natural Food

Insects, buds, fruit, seeds.

Natural Food Substitutes

Fats, nuts, bird cake, scraps.

Remarks

As in the case of the Great Tit, the good done by consuming injurious insects outweighs the damage done to fruit in the autumn and to buds in the spring. No bird more readily occupies the nest box than this. Practically any type with a hole just over an inch in diameter may be utilised. A decorative, bold and interesting bird. Can be attracted to the feeding table very easily.

THE COAL-TIT *Parus ater* Length 4¼ ins.

Characteristics and General Habits

The large white patch on the nape distinguishes it from other black-capped and white-cheeked Tits. The head, apart from the above, is like the Great Tit, though it is a smaller bird with duller plumage, the under-parts being buff, not yellow. The double white wing-bar, and the olive-grey shade of the upper-parts and shorter tail are further distinctions from the Marsh- and Willow-Tits. The general habits are similar to other small Tits as described under Great Tit, but it has a special liking for pine and fir trees.

Distribution

In England, Scotland and Wales, resident and generally distributed, especially in the wooded parts. In Ireland the Irish form of Coal-Tit is also resident and generally distributed, chiefly in wooded districts.

Nest Situation

In holes in decayed tree stumps, a hole in the ground, sometimes a hole in a wall, or, more frequently, in a bank. Occasionally in large disused nests.

Nesting Materials

Moss and grass, thickly lined with hair, down, wool and feathers.

Eggs

7 to 11. Colour white, spotted with reddish-brown. Sometimes heavily marked in the form of a zone.

Breeding Season

End of April in the south, early May in the north.

Incubation Period

17 to 18 days. Single-brooded, occasionally a second brood taken.

Natural Food

Insects, nuts, seeds, etc.

Natural Food Substitutes

Fats, nuts, bird cake, scraps.

Remarks

In woodland areas these birds should be regular visitors to the bird table. They will occupy nest boxes, although they do not take readily to boxes, as does the Blue Tit.

THE MARSH-TIT *Parus palustris* Length 4½ ins.

Characteristics and General Habits

It is distinguished from the Coal-Tit by the following features. The upper-parts are brown not olive-grey; there is no white patch on the nape, and there are no wing-bars. It is very like the Willow-Tit, the chief and safest distinction being the voice. The well recognisable "Pitchuu" immediately identifies it. The harsh scolding note which has been described as "Chickabee-bee-bee-bee" is also different from the Willow-Tit's. The crown and nape are glossy black, the cheeks white, the chin and throat black, whilst the mantle, wings and tail are brown. The under-parts are greyish-white with a touch of buff in the flanks. Both sexes are alike. The young are similar to the adults but duller. The flight and habits are similar to other small Tits, as detailed under the Great Tit.

Distribution

Resident and widespread in England and Wales, but local, and rare in west Cornwall, north-west Wales, and Cumberland. It is replaced by the Willow-Tit in Scotland, and is non-existent in Ireland.

Nest Situation

Usually in a natural hole in a tree, though it may enlarge or alter the existing opening.

Nesting Materials

Foundation of moss thickly lined with hair, rabbits' down or fur.

Eggs

Usually 7 to 8. Colour white, lightly spotted with reddish-brown.

Breeding Season

The end of April in the south, the beginning of May in the north.

Incubation Period

16 to 17 days. Single-brooded, occasionally two nests.

Natural Food

Chiefly insects. In the autumn and winter seeds, berries and nuts; beech-mast is very popular.

Natural Food Substitutes

Table scraps, bird cake, grain and nuts.

Remarks

The Marsh-Tit occasionally breeds in a tit-type nesting box. It will feed at the bird table or from hoppers. The name is somewhat misleading, as this bird inhabits both damp and dry ground, showing no particular preference for either.

THE WILLOW-TIT *Parus atricapillus* Length 4½ ins.

Characteristics and General Habits

Very similar to the Marsh-Tit, the safest distinction being the difference in notes. It has no note like the characteristic "Pitchuu" of the Marsh-Tit, and its distinctive call is a very grating, nasal-sounding "Tchay-tchay-tchay", very easy to recognize when once known. The crown is dull black, not glossy black like the Marsh-Tit's, the cheeks white, and the mantle, wings and tail brown, whilst the under-parts are greyish-white, with the flanks buff. Both sexes are alike, the young being similar to the adults but duller. The flight and habits are similar to other small Tits', except that it shows a distinct preference in the breeding season for more or less marshy spots, or the vicinity of water, often frequenting damp woods and copses where plenty of soft, rotten stumps exist. Will occasionally visit gardens.

Distribution

Widely distributed, but rather local. Recorded in many parts of England, especially in the southern counties. It has been identified in most parts of Wales but appears to be sparsely distributed. In Scotland it is local and thinly distributed, whilst in Ireland it is unknown.

Nest Situation

It excavates a spherical chamber, varying in size, in soft, rotten wood, usually in birches, willows, or alders, with a circular entrance-hole leading into it, made by the birds. Exceptionally a natural hole is used.

Nesting Materials

At the bottom there is usually a thin pad of rabbit-down mixed with wood fibre, and often a few feathers as well.

Eggs

Usually 8 or 9. White, spotted either lightly or heavily with dark or light brown-red, often forming a zone.

Breeding Season

Commences late in April.

Incubation Period

About 13 days. Apparently single-brooded.

Natural Food

Chiefly insects, also seeds of weeds, beechmast and berries. Probably very similar to that of the Marsh-Tit.

Natural Food Substitutes

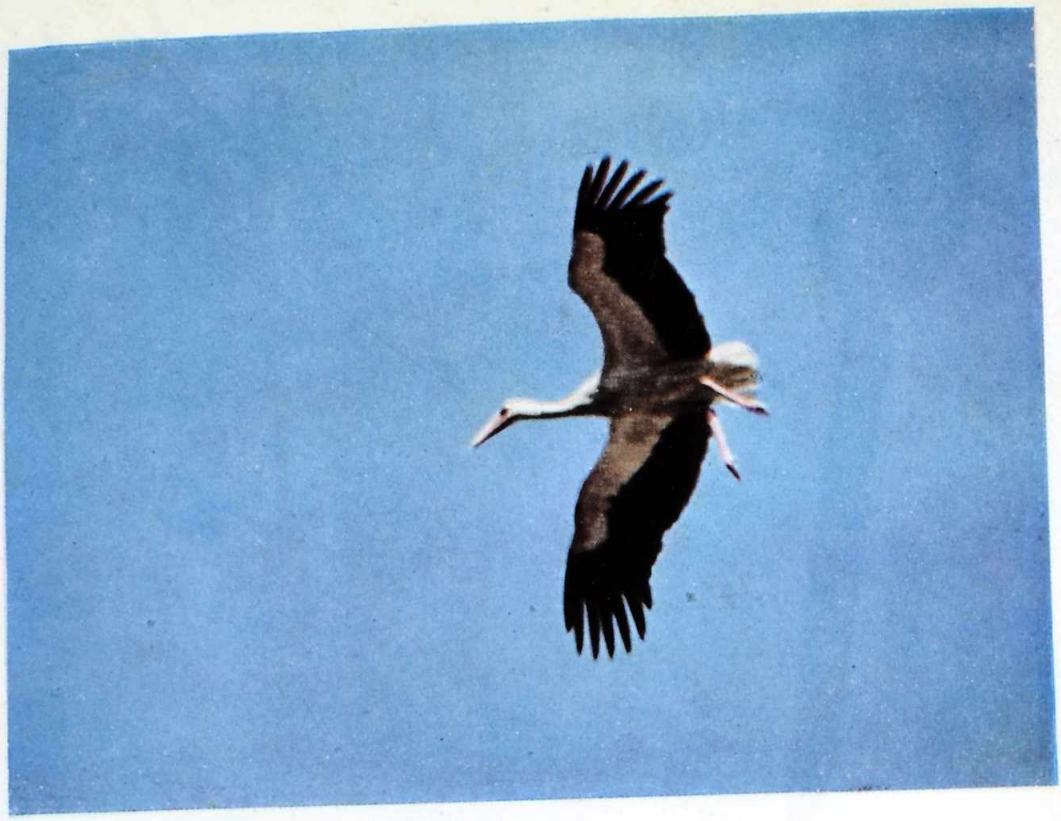
It is not likely to visit the bird table.

Remarks

The Willow-Tit has not been known to occupy a nest box.

Golden Oriole cock at the nest. (Note the piece of newspaper used in the construction)

Golden Oriole cock and hen at their nest, 20 feet up in an oak tree



In flight

Alighting at the nest,
on top of a chimney

Close-up at the nest

The author getting pictures of the Stork

LAGE STORK

Kentish Plover nesting on a salt flat in Southern Hungary

Immature Brown Pelicans at the tidal entrance to Lake Worth, Florida

THE SPOTTED FLYCATCHER *Muscicapa striata* Length $5\frac{1}{2}$ ins.

Characteristics and General Habits

The birds lack any striking features, having a brownish-grey plumage, whitish underneath, with dark brown streaks on the head and breast. They are most easily recognised by their pose and habits. They sit with their heads sunk between their shoulders, in a rather upright attitude. When after food, they generally take up a position on a bare branch, post or other exposed spot. They make short flights after winged insects, which are seized with an audible snap, and often return again to the same vantage point or another one close by. Both sexes are alike. The young birds have a paler ground-colour, with dark edges of the feathers of the upper-parts giving a mottled and spotted appearance. The flight when feeding is erratic and fluttering, with twists and turns as they follow an intended victim. The birds are not very often seen on the ground. When this is the case, their movement is a hop.

Distribution

Summer-resident and passage-migrant throughout the British Isles. Generally distributed except in the extreme north of Scotland.

Nest Situation

Amongst creepers or ivy on a wall. On horizontal branches of fruit trees growing against walls. Behind ivy growing on trees. In an old nest of other birds. Resting on a beam.

Nesting Materials

Loosely constructed of moss, hair and wool, roots, joined together by cobwebs.

Eggs

4 or 5. Greenish-grey, closely freckled and spotted with reddish-brown of varying shade, mostly round the big end, sometimes in the form of a cap.

Breeding Season

The end of May onwards.

Incubation Period

12 to 13 days. Single-brooded, occasionally two nests.

Natural Food

Chiefly insects.

Natural Food Substitutes

Being practically entirely insectivorous, these birds are not attracted by the normal fare on the bird table.

Remarks

Spotted Flycatchers will occupy nest boxes of the open-fronted variety.

THE PIED FLYCATCHER *Muscicapa hypoleuca* Length 5 ins.

Characteristics and General Habits

The conspicuous and distinctive pied plumage of the male in the breeding season, black above and white below, with the white forehead and the broad white wing-bar, stand out distinctly. The female is not strikingly coloured. The feathers which are black in the male are olive-brown. In a poor light it can easily be confused with the Spotted Flycatcher, but the buffish-white wing-bar (narrower than in the male) and the whitish outer tail-feathers distinguish it. In autumn the male resembles the female. The young are similar to the adult female, but the upper-parts have a buffish spotted appearance. Unlike the Spotted Flycatcher it rarely returns to the same twig after darting out to catch an insect. It often feeds on the ground.

Distribution

Summer-resident and passage-migrant. Breeds in considerable numbers in certain parts of England and Wales; a regular breeder in northern England. Breeds locally in small numbers in many other counties. Breeds fairly profusely in north and central Wales. In Scotland it is a very local species, nesting in certain parts of the south. In Ireland, vagrant only.

Nest Situation

In holes in trees, walls, buildings.

Nesting Materials

The nest is loosely constructed. Dead leaves and grass, moss and roots, lined with hair, dry grass, bits of wool and feathers.

Eggs

4 to 8. Pale blue.

Breeding Season

Commencing about the middle of May.

Incubation Period

12 to 13 days. Single-brooded.

Natural Food

Chiefly insects.

Natural Food Substitutes

Being practically insectivorous, these birds are not attracted by the normal fare on the bird table.

Remarks

The Pied Flycatcher will take possession of, and rear its family in, a tit- or open-type nest box. A chosen nesting site is often occupied year after year. Nests are very often built near water.

THE GOLDCREST *Regulus regulus* Length 3½ ins.

Characteristics and General Habits

Small size, dull greenish upper-parts and flanks, and orange-yellow crest, bordered black, are characteristic, but the plump, compact form together with the shorter tail and slenderer bill than the Tits' are easily recognisable even if the colours are not distinguished. The under-parts are a greyish white, shading to dull greenish on the sides. The crest is orange in the centre in the male, lemon-yellow in the female. There are two white bars and a dark band on the wings. The under-parts of the female are dull buff. Apart from this, and the colour of the crest, it closely resembles the male. The young are similar to the female, but are duller and darker, and lack the yellow on the crest. The Goldcrest is active and restless, flitting from twig to twig examining foliage for insects, or hanging suspended in tit-like fashion, but the actions are less acrobatic than those of the Tit. The flicking movement of the wings and also the flight is similar to that of the Tit. It is generally well up in trees, much less frequently to be seen in low foliage or bushes, and rarely on the ground.

Distribution

Resident and partial migrant. Generally distributed throughout the British Isles, except in the extreme north-west of Scotland, where it is local.

Nest Situation

Usually suspended under thick foliage towards the end of a branch of some coniferous tree. In some districts, nests are frequently built amongst the ivy on a tree-trunk, and sometimes in furze or among boughs of evergreens.

Nesting Materials

Built of green moss, lichens, and spiders' webs. The lining is made of feathers.

Eggs

Usually 7 to 10. The ground-colour varies from white to faint brown, with fine spots of brown at the larger end.

Breeding Season

Commences usually towards the end of April.

Incubation Period

Usually about 16 days. Double-brooded.

Natural Food

Chiefly spiders and insects and their larvæ.

Natural Food Substitutes

Is not likely to visit the bird table.

Remarks

The Goldcrest, the smallest British wild bird, will not occupy a nest box.

THE CHIFFCHAFF *Phylloscopus collybita* Length 4¼ ins.

Characteristics and General Habits

The Chiffchaff very closely resembles its relative the Willow-Warbler, and is best distinguished by its entirely different song. The nesting habits and eggs are also rather different. The song of the Chiffchaff is unmistakable, a repetition of two notes, one higher than the other, generally described as "Chiff-chaff-chiff-chaff", etc., but usually in a more irregular sequence. Both the Chiffchaff and the Willow-Warbler are slim, dainty and active little birds with a dull greenish or greenish-brown plumage, paler below. If the bird is not singing the best test is the colour of the legs, which is blackish in the Chiffchaff, and more brown in the Willow-Warbler; but to see this difference satisfactorily requires the use of field-glasses at rather close range and in a good light. The flight is jerky and flitting, and the gait a hop.

Distribution

England, Wales and Ireland. Summer-resident and passage-migrant. Usually a few winter in the south of England, south Wales, and in Ireland. Well distributed, but local in parts of north-west England and in Norfolk. A local summer-resident in parts of southern Scotland. Otherwise a scarce passage-migrant.

Nest Situation

Usually a little above the ground. Often built amongst brambles, bracken or low bushes. Sometimes amongst creepers or ivy on walls.

Nesting Materials

The nest is globular in shape, and has the entrance on the side. The foundation is usually constructed of withered leaves, and built of moss, grass, stalks, etc., with a thick lining of feathers and hair.

Eggs

Usually 6. White, with dark purple-brown spots, which are usually darker and less frequent than those on the eggs of the Willow-Warbler.

Breeding Season

Commences towards the end of April.

Incubation Period

13 days. Single-brooded in the north, two nests quite frequent in the south.

Natural Food

Chiefly insects and their larvæ.

Natural Food Substitutes

Insect foods will be necessary.

Remarks

The Chiffchaff will not occupy a nest box of any sort.

THE WILLOW-WARBLER *Phylloscopus trochilus* Length $4\frac{1}{4}$ ins.

Characteristics and General Habits

The song of the Willow-Warbler is unmistakable. It consists of a pure, very sweet rippling warble of very similar notes; usually a faint murmur at first but gaining in intensity and volume, fading away to a quiet ending. The appearance is very similar to the Chiffchaff, except the legs, which are light brown and not blackish. Both sexes are alike and the young are very similar to the adults. The general habits and flight are similar to those of the Chiffchaff.

Distribution

An abundant and widely distributed summer-resident throughout the British Isles. Also an abundant passage-migrant on the south-west and east coasts of England and the east coast of Scotland.

Nest Situation

Generally placed amongst grass, in hedge bottoms, by roadsides, on a bank, or in woods. Infrequently in low bushes or in ivy on a wall, but normally nesting on the ground.

Nesting Materials

Built of moss, grasses, interlined with stalks, with a lining of feathers. Globular, with the entrance at the side.

Eggs

Usually 6 or 7. Markings are variable. White, freckled or spotted with light red or rust colour.

Breeding Season

Commences early May.

Incubation Period

13 to 14 days. Occasionally double-brooded.

Natural Food

Chiefly insects and their larvæ. Young are fed on larvæ.

Natural Food Substitutes

Being chiefly insectivorous, these birds will not partake of the normal food of the bird table.

Remarks

The Willow-Warbler is not likely to occupy a nest box of any sort.

THE GARDEN-WARBLER *Sylvia borin* Length 5½ ins.

Characteristics and General Habits

The upper-parts are a uniform olive-brown, whilst below the colour is a soft shade of pale buff. There are no prominent features. Both sexes are alike and the young birds are similar. The song is a sweet subdued warble, more sustained and more uniform than the Blackcap's. These active birds are of a skulking disposition, spending most of their time amongst the cover of foliage of trees, bushes, or dense undergrowth. When on the ground, which is rare, the form of movement is a hop, with the legs much flexed.

Distribution

A generally distributed summer-resident throughout England and Wales, but somewhat local, especially in the extreme west. In Scotland, common in parts of the south and central region, absent further north. In Ireland, it is very local and absent from most districts.

Nest Situation

Though the bird nests in shrubberies and gardens, it frequently builds in brambles, bushes, and sometimes in trees.

Nesting Materials

Grass stalks and grass, occasionally moss, lined with finer grass and hair.

Eggs

Usually 4 or 5. Closely resemble those of the Blackcap; yellowish- or greenish-white, spotted and blotched with varying shades of light olive and brown, and a few dark brown "brand-marks". They vary considerably.

Breeding Season

Commences late in May.

Incubation Period

12 days. Generally single-brooded. Two nests have been reported.

Natural Food

In spring and early summer it is chiefly formed of insects and larvæ. Later various fruits and berries are taken. The young are fed chiefly on flies and small caterpillars.

Natural Food Substitutes

Being chiefly insectivorous and of a secretive nature, these birds are unlikely to visit the bird table.

Remarks

Garden-Warblers will not occupy a nest box of any sort. Although they frequent gardens providing sufficient cover, the name is rather misleading, the bird being a lover of woodland and copses, with abundant undergrowth.

THE BLACKCAP *Sylvia atricapilla* Length $5\frac{1}{2}$ ins.

Characteristics and General Habits

The general colour of the upper-parts is greyish-brown, being darker on the wings and tail. The sides of the head, neck and under-parts are ash-grey in the male, but more of a general brown colour in the female. The glossy black crown of the male, from which the bird gets its name, together with the reddish-brown, though less noticeable, crown of the female are distinctive. The young are similar to the female. These birds are active and lively, often using the cover of bushes, trees and undergrowth. They are less retiring than the Garden-Warbler. Though seldom on the ground, both have a similar gait. The Blackcap has a fine, rich, warbling song.

Distribution

A somewhat local, though fairly well distributed, summer-resident throughout England and Wales, but rare in Scotland. In Ireland it is scarce, but widely distributed, breeding in many counties. Occasionally remains in winter.

Nest Situation

Builds in bushes, brambles, any height up to ten or twelve feet, occasionally higher, though often low down.

Nesting Materials

Flimsily built of fibrous roots, bents and grasses, lined with fine materials, sometimes horsehair.

Eggs

Usually 5. Light buff or stone, spotted, blotched and clouded with brown, and grey shell-marks.

Breeding Season

Commences the latter half of May.

Incubation Period

10 to 11 days. They are often double-brooded in the south.

Natural Food

Insects, fruit and berries.

Natural Food Substitutes

They are not likely to visit the bird table regularly, though wintering birds will come for currants and sultanas.

Remarks

Though visitors to large country gardens and wooded places, they are more often heard than seen. They will not occupy any nest box.

THE WHITETHROAT *Sylvia communis* Length 5½ ins.

Characteristics and General Habits

The grey cap descending below the eye and contrasted with the white throat at once identify the male in the breeding season. The reddish-brown edgings to the secondaries and wing-coverts are noticeable at all ages, giving a warm reddish appearance to the closed wing, contrasting with the duller brown of the mantle. This feature as well as the slimmer build, longer tail, and white outer tail-feathers easily distinguish the brown-capped female, young, and male in the autumn, from the plumper and more compact-looking Garden-Warbler. The flight is usually short, flitting and rather jerky, often ending with a dive into cover. The Whitethroat frequents principally hedgerows and low vegetation. It sometimes visits gardens, chiefly in late summer.

Distribution

A generally distributed summer-resident throughout England, Wales and Ireland, and in the south and centre of Scotland, but scarcer in the north.

Nest Situation

Near the ground, in low bushes, gorse or brambles, long grass and nettles; but at times it nests at some height from the ground.

Nest Materials

Usually well-concealed but substantial, with a deep cup, made of coarse grass, roots, etc., well lined with hair, together with bits of down or wool.

Eggs

Usually 4 or 5. Very variable. Greenish or stone ground, finely speckled with greenish-brown and lead-grey spots, but the markings vary from big blotches, caps or zones of spots to fine stipplings, and the colour from darkish-green to yellowish-brown or blackish.

Breeding Season

Commences early May.

Incubation Period

11 to 13 days. Usually double-brooded.

Natural Food

Chiefly insects and their larvæ. Wild berries and soft fruits consumed in the autumn.

Natural Food Substitutes

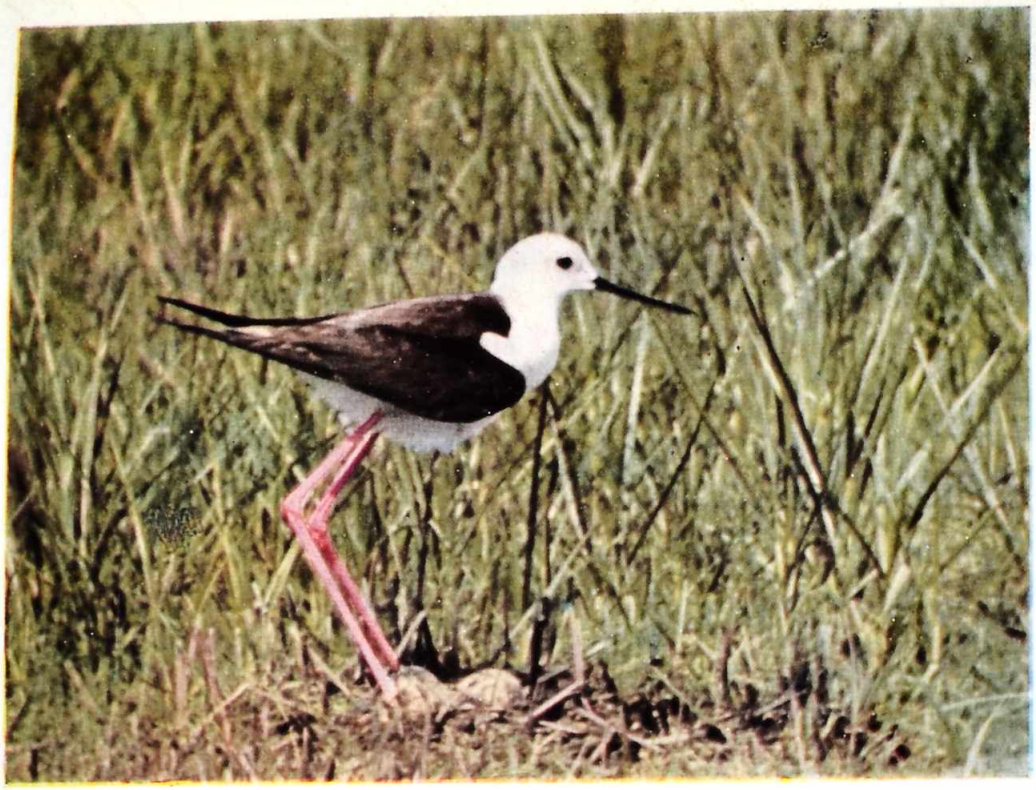
It is not likely to visit the bird table.

Remarks

The Whitethroat will not occupy a nest box of any sort.

Avocet approaching its nest on a Hungarian salt flat

Avocet sitting



Standing by its nest

Removing a piece of grass

Settling down

Sitting

K-WINGED STILT

Great Tit feeding from the hand

Blue Tit perched outside a nest box which it has occupied

THE LESSER WHITETHROAT *Sylvia curruca* Length 5¼ ins.

Characteristics and General Habits

The upper-parts are greyish-brown, except the head, which is ashy-grey, with ear-coverts distinctly darker than the rest. The tail is fringed with white. The under-parts are whitish, the chin, throat, sides of neck and breast being the purest. These birds are similar to the Whitethroat, but are somewhat smaller, the upper-parts greyer, and the under-parts more whitish, and the closed wing does not show the reddish-brown colour which is noticeable in the Whitethroat. This fact coupled with the distinctive ear-coverts are distinguishing features. Both sexes are similar. The young birds are similar to the adults. These birds are more secretive than the Whitethroat. They frequent hedgerows and low vegetation, moving in and out of tangled undergrowth. They are rarely seen on the ground. On the wing the flight is similar to other Warblers'—rather jerky flights from bush to bush or along the hedge-side, usually terminating with a dive into cover.

Distribution

A generally-distributed summer-resident throughout England, except in the extreme south-west and some of the northern counties. Well distributed in the east of Wales but rare in the west. Though it has nested in Scotland, it is chiefly known there as a passage-migrant. It has rarely been recorded in Ireland.

Nest Situation

Nests in hedges, gorse, bramble, and other bushes, also shrubs.

Nesting Materials

Roots, dry stalks and coarse grass, decorated with spiders' cocoons, lined sometimes with roots only, and sometimes with horsehair.

Eggs

4 to 6. Creamy-white, spotted and speckled with sepia-brown and ashy-grey.

Breeding Season

From the beginning of May onwards.

Incubation Period

10 to 11 days. Occasionally double-brooded.

Natural Food

Mainly composed of larvæ and the eggs of insects, but fruit and berries of many kinds are taken in the summer and autumn.

Natural Food Substitutes

These birds are unlikely to visit the bird table.

Remarks

The Lesser Whitethroat will not occupy any type of nest box.

THE FIELDFARE *Turdus pilaris* Length 10 ins.

Characteristics and General Habits

The slate-grey head, nape and rump, contrasted with the chestnut back and blackish tail, are distinctive, as is the characteristic flight-note, a harsh "Cha-cha-cha-chack". In flight, the white under-wing is conspicuous, as in the Mistle-Thrush. The crown is streaked black, a whitish stripe above the eye-brow, the throat and breast are golden-brown streaked with black; the rest of the under-parts are white, the flanks being boldly marked black, and the wings blackish-brown. Both sexes are similar. The young, after the autumn moult, are much like the old birds, except that the greys are browner. In winter it leads a wandering existence, moving in flocks up to several hundred, feeding chiefly in the open, and sometimes visiting large gardens. It often frequents hawthorn hedges, berry-bearing bushes or trees, feeding on the fruit. In woodland, it never skulks in the undergrowth like the Song-Thrush or Blackbird, perching always in the open, on bushes or branches of trees. It roosts socially, largely amongst ground vegetation, but also in thick hedges, shrubberies and trees. The carriage and behaviour on the ground are the same as those of the Mistle-Thrush.

Distribution

A generally distributed winter-visitor and passage-migrant throughout the British Isles.

Natural Food

In winter: very varied. Slugs, insects, spiders, many kinds of berries. In severe weather swedes and turnips are eaten.

Natural Food Substitutes

Will not visit the bird table.

Remarks

Fieldfares begin to arrive about the middle of September, leaving between the end of April and the middle of May, returning to their breeding-grounds in northern and parts of central Europe.

THE MISTLE-THRUSH *Turdus viscivorus* Length 10½ ins.

Characteristics and General Habits

It is easily distinguishable from the Song-Thrush by its larger size, greyer upper-parts, and the whitish tips of its outer tail-feathers, also by the under-parts, which are more boldly marked with larger, fan-shaped spots. The note is also different, being a harsh, churring chatter, and the song is louder and more penetrating. Both sexes are alike. The young have head, nape, back and rump of buffish-brown, each feather being darker at the tip, with a centre of creamy-white. These features, together with the broad whitish marks on the wing-coverts, give a much more spotted and variegated effect than in the case of the adult. The flight is recognised by the unusually prolonged closure of the wings, at fairly regular intervals. They rarely move about in the undergrowth. The ground movement consists of a short run or series of hops, followed by a pause, and then repeated.

Distribution

Except in tree-less districts it is a resident and partial migrant throughout the British Isles, though sparsely distributed in the north-west of Scotland.

Nest Situation

Usually in the fork of a tree, close to the trunk, or out on a bough, often at a considerable height, but sometimes low down, in bushes and hedgerows.

Nesting Materials

Twigs, roots, moss, and grass solidified with mud, lined with dry grass.

Eggs

Usually 4. Tawny-grey to greenish-blue, blotched and spotted with reddish-brown, and greyish-violet shell-markings.

Breeding Season

February onwards.

Incubation Period

13 to 14 days. Frequently double-brooded, occasionally in the same nest.

Natural Food

Snails, worms, insects, fruit and berries.

Natural Food Substitutes

Fruit, table scraps, bird cake.

Remarks

Mistle-Thrushes will visit the bird table, and will eat most things available. They are not, however, likely to occupy a nest box of any type.

THE SONG-THRUSH *Turdus ericetorum* Length 9 ins.

Characteristics and General Habits

The Song-Thrush is a smaller bird than the Mistle-Thrush, with the upper-parts a warmer brown, not so greyish, and the breast and sides of the neck a richer buff. The spots on the under-parts are smaller and narrower. Both sexes are alike. The young birds have buff streaks on their upper-parts. In flight they differ from the Mistle-Thrush in their faster wing movement, and the scarcely noticeable periodical closure of the wings. The loud, clear, vigorous song is characteristic inasmuch as each musical phrase is usually repeated several times in succession. The notes are varied and very clear. In ordinary conditions the song can be heard a quarter of a mile away, and with a favourable wind at a much greater distance. Though often foraging in the open, unlike the Mistle-Thrush they frequently move about in the undergrowth. When standing, the body-position is often upright. The movement on the ground is similar to that of the Mistle-Thrush.

Distribution

A general resident and partial migrant throughout the British Isles.

Nest Situation

In bushes, trees, hedgerows, occasionally on banks or in buildings.

Nesting Materials

Grasses, stalks, twigs, roots, solidified with mud, and lined with a smooth coating of rotten wood or dung, mixed with saliva.

Eggs

Usually 4 or 5. Bluish-green, sparsely spotted with black, or occasionally reddish-brown.

Breeding Season

March onwards.

Incubation Period

13 to 14 days. Two or three broods.

Natural Food

Earthworms, snails, insects, soft fruits and berries.

Natural Food Substitutes

Table scraps and bird cake.

Remarks

A regular visitor to the bird table. It will occasionally occupy an open-fronted nest box.

THE REDWING *Turdus musicus* Length 8¼ ins.

Characteristics and General Habits

The size and colouring are not unlike the Song-Thrush's, except for the broad buffish-white stripe above the eyebrow, and the chestnut-red flanks and axillary underwing feathers, which at once identify it. The breast and flanks are streaked. Both sexes are alike. The young have much less chestnut on the flanks and are very similar to the young Song-Thrush, except for a prominent eye-stripe. The gait, flight and behaviour when feeding are like those of the Song-Thrush, but the Redwing associates in flocks in the winter, usually feeding in open fields, and sometimes amongst dead leaves in the woods. It will sometimes visit large gardens. In the winter it roosts also in flocks amongst shrubs, plantations and in hedges.

Distribution

A generally distributed winter-visitor and passage-migrant throughout the British Isles.

Natural Food

In winter worms, snails, insects, and berries of hawthorn, yew, rowan and holly.

Natural Food Substitutes

It will not visit the bird table.

Remarks

The Redwing arrives in this country about the middle of September, stopping till mid-April, then returning to its breeding-grounds in northern Europe.

THE BLACKBIRD *Turdus merula* Length 10 ins.

Characteristics and General Habits

The uniform glossy black plumage, and the orange-yellow bill of the male are obvious features. The female is an umber-brown above, with a lighter rusty-brown below, and paler on the throat and breast, which are darkly mottled. The bill is dark brown. The young birds are similar to the female, but lighter and more reddish-brown. The mottling of the under-parts is more pronounced. The upper-parts have rufous shaft-streaks. The loud, clear, mellow flute-like song is deeper than that of the Song-Thrush, and not so varied, nor does it repeat the phrases as the Song-Thrush does. It is undoubtedly the most accomplished musical performer of any member of the Thrush family found in the British Isles. The movement on the ground is a mixture of running and quick hops, often advancing a few yards and then pausing, similar to the movement of the Song-Thrush.

Distribution

Resident and generally distributed throughout the British Isles.

Nest Situation

Usually a few feet from the ground, in hedges, bushes, evergreens, and ivy. Occasionally in trees, on the ground, and in sheds.

Nesting Materials

Coarse grass, fine twigs, bents, moss, solidified and lined with mud, with an inner layer of dry grass.

Eggs

4 or 5. Bluish-green, marked all over with reddish-brown freckles or blotches, and greyish shell-marks.

Breeding Season

Begins March.

Incubation Period

13 to 14 days. Normally two or three broods.

Natural Food

Worms, insects, fruit, berries and seeds.

Natural Food Substitutes

Table scraps, bird cake.

Remarks

Blackbirds regularly visit the bird table and will eat nearly anything that is offered. They are not likely to occupy any nest box.

THE REDSTART *Phœnicurus phœnicurus* Length 5½ ins.

Characteristics and General Habits

Redstarts are distinguished at all ages from all other British birds by the orange-chestnut tail with its constantly quivering up-and-down motion. The male has a black face and throat, the breast, flanks, rump and tail orange, french-grey upper-parts, and white forehead. The female lacks the black and white on the head. The upper-parts are lighter greyish-brown, and the under-parts are pale orange-buff instead of orange. The young have mottled plumage rather like young Robins. They are active and restless birds, constantly flitting from branch to branch, or making short hovering excursions into the air after insects. The general flight, carriage and movement on the ground are similar to those of the Robin. Owing to their nesting habits they are found especially where there is old timber or pollard willows.

Distribution

A summer-resident. Local but widely distributed. Rare as a breeding bird in the extreme south-west of England; Scotland, widely distributed but local, a rare breeder in the extreme north. A scarce migrant in Ireland.

Nest Situation

In holes in walls, banks or trees, sometimes almost on the ground, or at a good height.

Nesting Materials

Grass, moss, roots and strips of bark, lined with hair and feathers.

Eggs

Normally 6. A delicate pale blue.

Breeding Season

Commences about the middle of May.

Incubation Period

14 days. Often double-brooded.

Natural Food

Mainly insects and their larvæ. Berries are also eaten. The young are fed chiefly on caterpillars.

Natural Food Substitutes

Being chiefly insectivorous, dried insects and meal-worms might attract it to the bird table.

Remarks

The Redstart occupies nest boxes of the hole type erected in a suitable position.

THE ROBIN *Erithacus rubecula* Length $5\frac{1}{2}$ ins.

Characteristics and General Habits

The upper-parts of the adults are olive-brown, with a bright orange forehead, throat and breast, margined with pale grey. The lower breast and abdomen is greyish-white. Both sexes are alike. The young birds lack the orange breast and have a marked spotted appearance. Robins are most pugnacious towards their own species and other kinds; but towards man, their fearlessness and engaging ways have made them general favourites. The song is loud, melodious and varied, but rather melancholy. Their flight as a rule is low, and for short distances only, rather flitting and jerky, with the tail often distinctly elevated. Their movement on the ground is a quick succession of long hops in a stooping position, then a pause in a more erect attitude, accompanied with frequent flicks of the wings and tail.

Distribution

Resident and generally distributed throughout the British Isles but rare in the extreme north of Scotland.

Nest Situation

In a hollow on a bank-side, or a hole in a wall or tree. Amongst ivy, in old tins or kettles, shoes or hats, and other man-made sites.

Nesting Material

Dead leaves, grasses and moss, deeply lined with hair and occasionally a few feathers.

Eggs

Usually 5 or 6. White with fine speckles and spots of sandy red.

Breeding Season

Commences the end of March.

Incubation Period

13 to 14 days. Double-brooded, sometimes has three nests.

Natural Food

Chiefly insects, also seeds, berries and grain.

Natural Food Substitutes

Bird cake, table scraps. Meal-worms a special delicacy.

Remarks

The Robin will readily occupy an open-fronted nest box erected in a suitable position.

Blackbird cock at the nest

Robin at the edge of its nest in a grass bank

Robin feeding from the hand

THE HEDGE-SPARROW *Prunella modularis* Length 5¾ ins.

Characteristics and General Habits

The adults have a general colour of warm brown, broadly streaked with blackish-brown. The chin, throat, head and breast are grey, the ear-coverts and crown are brownish-grey, the latter being darkly streaked with brown. The lower breast and belly are greyish-white. The slender bill and the combination of brown and grey help to distinguish the species. Both sexes are alike. The young birds lack the grey on the head, and are browner and more spotted than the adults. They usually perch low down. In search of food they have a curious and typical habit of jerking the wings. On the ground the movement is a leisurely short hop, with the body held almost horizontal, the legs much flexed, and the body near the ground.

Distribution

Resident and generally distributed throughout the British Isles, but rarer in the extreme north of Scotland.

Nest Situation

In hedgerows, shrubberies, on banks, and in ivy.

Nesting Materials

Twigs, moss, roots, neatly lined with hair, wool, moss, and occasionally with feathers.

Eggs

Usually 4 or 5. Deep blue without any markings.

Breeding Season

Commences April.

Incubation Period

About 12 days. Two broods, occasionally three.

Natural Food

Mostly seeds in the winter; but insects, spiders and worms also, in the summer.

Natural Food Substitutes

Bird cake, crumbs and seed.

Remarks

Hedge-Sparrows come to the bird table but often prefer the crumbs thrown on the ground by other, more greedy, visitors.

THE WREN *Troglodytes troglodytes* Length 3¾ ins.

Characteristics and General Habits

The small size, russet-brown colouring of the upper-parts (faintly barred on the back and rump with light and dark brown) together with the plump stumpy build with short tail (usually cocked up) are distinctive. The wings, tail, and flanks are barred with rufous-brown and blackish-brown. A pale buff line passes above the eye and ear-coverts. Both sexes are alike, the young birds being similar to the adults, but with more mottling below, and less strongly barred. These active little birds are constantly on the move, whether in cover or in the open. When searching for food amongst ivy or on trees, their actions are mouse-like. For the most part they keep low down. The song is remarkably loud for the size of the bird. On the ground, though they can also run, the usual movement is a hop, with the legs well bent and the tail cocked.

Distribution

Generally distributed throughout the British Isles.

Nest Situation

In hedges, haystacks, and ivy, holes in trees, rocks, etc.

Nesting Materials

Moss, dead leaves, roots, neatly lined with feathers and hair. Spherical in shape, with a rounded entrance at the side. More nests are built by the cock than are used for breeding purposes but they are easily recognised by the absence of any lining, which is put in the main nest by the hen.

Eggs

Usually 5 or 6. White, spotted with brownish-red of varying shades, chiefly at the big end. The markings are sometimes absent.

Breeding Season

From the latter half of April onwards.

Incubation Period

14 to 15 days. Usually two broods.

Natural Food

Chiefly insects.

Natural Food Substitutes

Bird cake and crumbs.

Remarks

Wrens, once acquainted with it, regularly visit the bird table. They have been known to occupy nest boxes.

THE SWALLOW *Hirundo rustica* Length 7½ ins.

Characteristics and General Habits

Swallows and Martins are active, graceful birds which spend most of their time on the wing. The Swallow has the upper-parts steel-black, with a metallic sheen. The wings are long, and the deeply forked tail is tipped with oval white spots. The forehead, chin and throat are chestnut-red. The throat is bordered by a dark blue collar. The under-parts are whitish-buff. The chestnut-red throat and forehead, together with the long outer tail-feathers, are distinctive. Both sexes are similar, the female being rather duller in colour, having a shorter tail. The young are considerably duller and the tail much shorter. They are remarkable for their speed and skill in flight. Not only can they catch insects on the wing, but they can even sip water as they skim the surface. Except when collecting nesting material, they are seldom on the ground, where their movement is a clumsy waddling walk, aided by movements of the wings. They usually settle on telegraph wires, buildings, bare branches, etc.

Distribution

A summer-resident throughout the British Isles.

Nest Situation

On the rafters of barns, sheds, stables or outhouses. Inside chimneys, and sometimes against a wall inside a building.

Nesting Materials

Built of mud with straw and dry grass worked in to hold the materials together. Lined with dry grass and feathers.

Eggs

Usually 4 or 5. White, spotted and speckled in varying degree with red-brown or purplish-brown, with ashy shell-marks.

Breeding Season

From mid-May onwards.

Incubation Period

14 to 15 days. Usually two broods, occasionally three.

Natural Food

Insects taken on the wing.

Natural Food Substitutes

They do not visit the bird table.

Remarks

Swallows have been known to occupy open-type nest boxes placed in a suitable position.

THE HOUSE-MARTIN *Delichon urbica* Length 5 ins.

Characteristics and General Habits

The upper-parts are metallic blue, with the exception of the white rump. All the under-parts are white, the legs are covered with white feathers, which are conspicuous when the bird is on the ground or clinging to the nest. The white rump, which contrasts strongly with the blue-black back and wings, is distinctive. The tail is not as deeply forked as that of the Swallow. Much of its time is spent on the wing. Both sexes are alike. The young are of a browner tinge on the upper-parts and some of the wing-coverts have white tips and edgings. It settles chiefly on buildings, telegraph wires, branches, etc. The flight is similar in general character to the Swallow's, but not so twisting and rapid, and it is inclined to fly higher. When (rarely) on the ground, its movement is similar to that of the Swallow.

Distribution

A generally distributed summer-resident throughout the British Isles, but more local, especially in Ireland, than the Swallow.

Nest Situation

Under the eaves of buildings, often in considerable numbers. Occasionally inside the roofs of sheds. Also on projecting pieces of rock on sea or inland cliffs.

Nesting Materials

The cup-shaped nest is made of mud mixed with dry grass, lined with feathers, and its walls are built right up to the eaves or ledge to which the nest is attached, a narrow entrance being left at the top.

Eggs

Usually 4 or 5. White with a slight gloss.

Breeding Season

From the latter part of May onwards.

Incubation Period

14 to 15 days. Double-brooded, often three nests.

Natural Food

Insects taken on the wing.

Natural Food Substitutes

They do not visit the bird table.

Remarks

House-Martins have been known to occupy open-type nest boxes placed in a suitable position.

THE SWIFT *Apus apus* Length 6½ ins.

Characteristics and General Habits

With the exception of the small patch of brownish-white on the throat, the plumage is a uniform sooty-brown, which at once distinguishes this bird. The long and narrow, scythe-like wings and short, moderately forked tail are other distinctive features. Both sexes are alike. The young are similar to the adults but with more white on the throat, and a narrow white border to their wing-feathers. The flight is very rapid, only that of the Swallow family being at all like it. On fine summer evenings a number will mount in circles till they are out of sight. The birds are primarily aerial, and do not voluntarily settle on the ground, their short legs being only suitable for clinging to rocks and stone-work, etc.

Distribution

A summer-resident generally distributed throughout the British Isles, except in north-west Scotland, where it does not breed.

Nest Situation

Generally nests in colonies, under the eaves of houses, barns and other buildings. In holes of thatch, in crevices in cliffs and quarries.

Nesting Materials

Composed of straw, grass, and feathers glued together with the bird's saliva, and formed into a low cup.

Eggs

2 or 3. Dull white.

Breeding Season

Commences the end of May.

Incubation Period

18 to 19 days. Single-brooded.

Natural Food

Insects taken on the wing.

Natural Food Substitutes

They do not visit the bird table.

Remarks

Swifts have been known to occupy open-fronted nest boxes placed in a suitable position.

THE GREEN WOODPECKER *Picus viridis* Length 12½ ins.

Characteristics and General Habits

Woodpeckers are sturdily-built birds with strong, pointed bills and rather short tails. They ascend tree-trunks in a series of jerky hops, with the short, stiff tail pressed against the trunk. In their search for insects, they frequently make a loud tapping noise with their bills against the tree-trunks and branches. The flight is characteristic: a succession of marked undulations, with the wings closed to the sides for appreciable intervals, every three or four beats. The Green Woodpecker is the largest of the British species. The green plumage, together with the crimson crown, is distinctive, as is its note. This is a loud, clear laughing sound, fairly rapidly repeated. The region round the eyes is black. There is a moustache-like crimson stripe bordered with black, and the rump is bright greenish-yellow. The female is slightly duller, the moustache-like streak being entirely black. The young birds are slightly spotted and marked above; the sides of the head and the under-parts are streaked and barred blackish. It feeds much more on the ground than the other species, especially on ants.

Distribution

Resident throughout England and Wales, but local or rare in the north of England. A rare vagrant in Scotland, and absent from Ireland.

Nest Situation

In holes in trees, excavated by the bird, sometimes only a few feet from the ground, but usually considerably higher, even as high as thirty or forty feet.

Nesting Materials

There are no nesting materials except a few chips at the bottom of the hole.

Eggs

Usually 5 to 7. Whitish, sometimes stained by the damp wood.

Breeding Season

From the end of April onwards.

Incubation Period

18 to 19 days. Single-brooded.

Natural Food

Chiefly larvæ of wood-boring insects, and ants. Also acorns, pine seeds, berries.

Natural Food Substitutes

Peanuts, bird cake, and seed.

Remarks

Green Woodpeckers will visit the bird table and utilise nut hoppers.

THE GREAT SPOTTED WOODPECKER *Dryobates major* Length 9 ins.

Characteristics and General Habits

It is distinguishable from the Green Woodpecker by the boldly pied plumage and its smaller size, from the Lesser Spotted Woodpecker by its larger size, black back, large white shoulder-patches, and the crimson under tail-coverts. The sides of the face are white, separated by a black mark from the white throat, and a large white mark on the sides of the neck. The crown, back and rump are black. The wings and tail are black, the former barred with white, the latter margined with white. There is a crimson patch on the nape in the male. Both sexes are similar, except that this crimson patch is absent in the female. The young of both sexes have a crimson crown. For general behaviour, flight, etc., see under Green Woodpecker; but it does not frequent the ground as much.

Distribution

A resident, and fairly distributed in wooded parts throughout England and Wales. In Scotland it is established in the south-east and is recorded breeding in varying numbers as far north as Loch Ness. It does not breed in Ireland.

Nest Situation

The nest hole is rarely less than ten to twelve feet from the ground, and usually considerably higher. It is usually bored in the trunk of a tree. Often excavated entirely by the bird, but on the other hand a natural hole in a decayed portion of a tree is sometimes enlarged.

Nesting Materials

Nothing except chips of wood produced in making the hole.

Eggs

Usually 4 to 7. Whitish, of a transparent nature.

Breeding Season

Commences in the south about the middle of May. About a fortnight later in the north.

Incubation Period

18 to 21 days. Single-brooded.

Natural Food

Mainly larvæ of wood-boring insects. Fruits, ants, beechmast, acorns, berries. Recorded occasionally taking young of other birds.

Natural Food Substitutes

Nuts.

Remarks

Great Spotted Woodpeckers will visit the bird table and feed on nuts.

THE LESSER SPOTTED WOODPECKER *Dryobates minor* Length 5¾ ins.

This tiny black-and-white Woodpecker, scarcely larger than a Sparrow, is distinguished from the Great Spotted Woodpecker, apart from its much smaller size, by the entire wings and lower back being barred black and white, with no red. The forehead of the male is brownish-white, the crown dull crimson. The upper back, nape, stripes over the eye and from the base of the bill to the neck, are black. The rest of the head and the under-parts are white. The tail is similar to the Great Spotted Woodpecker's. The female is similar, but the crown is whitish, and the under-parts darker. Both sexes of the young have some red on the crown, and the black parts are duller. The habits and characteristic flight action are similar to those of the other Woodpeckers, except that the flight is rather slow and hesitant. A rather elusive little bird, keeping chiefly to the upper branches of trees; and its presence is more likely to be noticed by its loud, shrill note, rather than by observing the bird itself.

Distribution

A resident in England and Wales. Local, and even common in some places in south England and the Midlands, becoming rare in Lancashire, local in Yorkshire, and only a vagrant northwards. It is fairly distributed in scattered pairs throughout Wales except in the extreme west. Non-existent in Ireland.

Nest Situation

The nest hole is bored in the decayed wood of a branch or trunk of a tree, at varying heights from a few feet up to seventy feet from the ground.

Nesting Materials

None, except chips of wood at the bottom of the excavation.

Eggs

Usually 4 to 6. A glossy white of a translucent character.

Breeding Season

Commencing about the second week in May.

Incubation Period

14 days. Single-brooded.

Natural Food

Chiefly the larvæ of wood-boring insects.

Natural Food Substitutes

Nuts.

Remarks

I have very little proof of these birds making use of feeders and bird tables, although it is stated to be the case by one authority. Nesting boxes of the hole type are said to have been occupied.

THE WRYNECK *Jynx torquilla* Length 6½ ins.

Characteristics and General Habits

A rather slim, grey-brown bird, with the upper-parts showing varying shades of brown and grey, delicately mottled, streaked and barred with black, brown and greyish-white. The under-parts are barred and spotted. The young birds are much like the adults. The Wryneck is closely related to the Woodpeckers, but looks more like an ordinary perching bird. It is rather secretive and elusive, and could easily be missed but for its often repeated call-note, a shrill "Quee-quee-quee . . ." rather like that of the Lesser Spotted Woodpecker. It usually perches on boughs and branches. It also clings to tree-trunks in woodpecker-like fashion, usually without the support of its tail. It does not bore for food like the Woodpeckers, but picks up insects from bark, foliage, or the ground, with a long worm-like tongue. Though spending much time in the tree-tops it feeds largely on the ground, where its movement is a series of short hops with an elevated tail.

Distribution

A summer-resident in England and Wales. It has decreased of recent years, and is to be found chiefly in the south-east of England, but scarce in the south-west. It is found in the Midlands, but is very rare and local in the north. It has bred at rare intervals in most counties in the southern half of Wales, but in the north it is very scarce. In Scotland it is a scarce passage-migrant, and has only very occasionally been recorded in Ireland.

Nest Situation

In a natural hole in a tree, a hole in a bank, on a thatch, or wall.

Nesting Materials

No nesting material is used, the eggs being laid at the bottom of the hole.

Eggs

Usually 7 to 10. Dull white.

Breeding Season

From the last week of May onwards.

Incubation Period

Usually 12 days. Single-brooded, occasionally two nests.

Natural Food

Largely ants, but also a variety of other insects.

Natural Food Substitutes

These birds are not likely to visit the bird table.

Remarks

Wrynecks occasionally occupy nest boxes of the hole type.

THE CUCKOO *Cuculus canorus* Length 13 ins.

Characteristics and General Habits

The upper-parts and breast are bluish-grey, the rest of the under-parts being whitish with dark bars; the tail is rather long. Chiefly observed when in flight, when the general appearance is not unlike the male Sparrow-Hawk, though the pointed wings and graduated tail with feathers marked and tipped with white at once distinguish it. The "song" is distinctive. Both sexes are alike. The upper-parts of the young are either grey-brown, little marked, or reddish-brown strongly barred, whilst the under-parts in both types are buffish-white barred black, and there is a noticeable white patch on the nape. It perches in trees, bushes, walls, rocks, etc. The flight is direct, hurried, with rapidly moving wings, often terminating with a long glide on extended wings. On the ground it moves with a waddling walk, or a succession of awkward hops.

Distribution

Summer-resident. Generally distributed throughout the British Isles.

Nest Situation

Deposits its eggs in the nests of other birds.

Nesting Materials

Eggs

Usually lays one egg in one nest, removing one of the foster-parent's eggs at the same time. The colour is variable. As a rule the eggs bear a resemblance to those amongst which they are deposited. The normal number of eggs laid by one bird in a season is probably about twelve.

Breeding Season

Usually commences the middle of May.

Incubation Period

12½ days.

Natural Food

Chiefly insects and their larvæ.

Natural Food Substitutes

They will not visit the bird table.

Remarks

Over fifty species of foster-parents have been recorded. In the British Isles the commonest are the Meadow-Pipit and the Hedge-Sparrow. The Reed-Warbler, Pied Wagtail, Robin and Sedge-Warbler are all frequently victimised. The Cuckoo might possibly lay in an open-type nest box.

THE LITTLE OWL *Athene noctua* Length 9 ins.

Characteristics and General Habits

Owls are birds that live on prey. They have broad rounded heads, flattened faces and large prominent eyes, usually surrounded by a more or less distinct disk of feathers round the face. The flight is generally slow and noiseless, with regular slow wing-beats. On the ground, though many are seldom seen there, the normal movement is a walk. The small size of the Little Owl together with the very compact plump form, with a flat head and short tail, and the greyish-brown plumage, spotted, barred and mottled with greyish-white, are distinctive. The flight is also quite different from that of other Owls, with a bounding action rather like a Woodpecker's. The under-parts are greyish-white streaked with brown. Both sexes are alike, and the young are similar to the adults. The Little Owl hunts chiefly at dusk or in the early morning, but also during the daytime, and is less nocturnal than most Owls. It perches on posts, fences, walls and branches, as well as on rocks or the ground, on which it can run very quickly, though it rarely hops.

Distribution

Resident throughout most of England and Wales. It is fairly well distributed, except in the north, where it is local or rare. Isolated cases have been reported in Scotland, and it has only been met with once in Ireland.

Nest Situation

In holes in trees, walls or buildings. In holes in the ground, in quarries, or sand-pits.

Nesting Materials

None.

Eggs

Usually 3 to 5. White and without gloss.

Breeding Season

Commences the end of April.

Incubation Period

28 to 29 days. Usually single-brooded.

Natural Food

Mice, voles, shrews, small rabbits, birds.

Natural Food Substitutes

I do not recommend that these birds be encouraged to a garden sanctuary, even though the harm they do may not be as bad as some people state.

Remarks

The Little Owl has been known to occupy a small owl-type nest box.

THE TAWNY OWL *Strix aluco* Length 15 ins.

Characteristics and General Habits

This is the common Owl. If disturbed during the daytime or seen in flight at dusk, it appears as a moderately large, mottled brown bird, with a disproportionately large head, broad, rounded wings, and typical, slow, owl flight. At rest, the black eyes, absence of ear tufts, and stouter build, distinguish it from the much rarer Long-eared Owl. The upper-parts are generally rufous-brown, mottled and streaked with dark brown, with whitish patches on portions of the wings. The under-parts are buff, streaked on the breast and streaked and barred elsewhere in dark brown. The wings and tail are barred. Both sexes are alike. The young birds are similar to the adults. During the daytime the bird is usually in concealment, being one of the most nocturnal of the species. It usually hunts for food in or near wooded areas, but also forages in the open. The call-note is a sharp "Kewick", and the "song" or "hoot" is a prolonged "Hoo-hoo" followed after a pause of several seconds by a faint, low "Oo", which can only be heard at rather close quarters, and then a long-drawn quavering "Hooooooooo".

Distribution

Found throughout Great Britain, and generally distributed but scarce in the extreme north of Scotland, and non-existent in a wild state in Ireland.

Nest Situation

A hole in a tree. Old nests of Crow, Rook, Sparrow-Hawk, Heron, etc. Sometimes in barns or ledges of rocks, and at times on the ground, in a rabbit-hole, by the roots of a tree.

Nesting Materials

None.

Eggs

Normally 2 to 4. Dull white.

Breeding Season

Commences the end of March.

Incubation Period

28 to 30 days. Single-brooded.

Natural Food

Field-mice, voles, shrews, rats, young rabbits and small birds.

Natural Food Substitutes

They are not likely to visit the bird table.

Remarks

The Tawny Owl sometimes occupies a large owl-type nest box.

THE BARN-OWL *Tyto alba* Length 13½ ins.

Characteristics and General Habits

The pale appearance, with the orange-buff upper-parts, pure white face and under-parts are at once distinctive. The upper-parts are finely mottled and spotted with grey and white. The white facial disk changes to rust-colour round the eyes. Sometimes there are a few fine spots on the white under-parts. Both sexes are similar, but the grey is more pronounced in the female. The young are similar to the adults. During the daytime it roosts in barns, ruins, church towers, and clefts in cliffs, etc. The prey is usually taken on the ground, though birds are also captured at roost. The flight is graceful and noiseless, with a regular slow motion of the wings.

Distribution

Resident and generally distributed, though not abundant, throughout the British Isles. Scarcer in Scotland, rarely breeding in the north-west, and only a rare vagrant to the north-east.

Nest Situation

In barns, ruins, church towers, gable-ends of buildings, hollow trees, crevices amongst rocks.

Nesting Materials

None, the eggs being laid amongst a collection of castings, composed of the undigested portions of the birds' food.

Eggs

Usually 4 to 8. Dull white.

Breeding Season

Usually April, occasionally earlier.

Incubation Period

32 to 34 days. Double-brooded in many cases.

Natural Food

Chiefly mice, rats, voles, shrews, etc., and not infrequently small birds.

Natural Food Substitutes

They are not likely to visit the bird table, and are a doubtful asset to a garden sanctuary.

Remarks

Large pigeon-type nest boxes erected in the gable-ends of old barns or empty buildings are often occupied.

THE WOOD-PIGEON *Columba palumbus* Length 16 ins.

Characteristics and General Habits

A large, rather heavily-built, bluish-grey pigeon, recognisable by the broad white band across the wing, and the white patch on the sides of the neck. The head and rump are a bluer-grey than the rest, the flanks and belly are paler; the breast has a purplish tinge, the sides of the neck are glossed with metallic green and purple; the tail is mainly blackish. Both sexes are alike. The young are duller, with no white on the neck. The flight is strong and rapid, with quick regular wing-beats. When disturbed, it dashes off with a loud clatter of the wings. It perches on trees and on buildings, and occasionally on fences. It feeds mostly on the ground, but in spring also often in trees, on buds, young leaves, etc. The movement on the ground is a walk with the body erect, and the head moving backwards and forwards. It is shy and wary in the country, but in gardens and town parks it becomes quite tame.

Distribution

A resident and winter-visitor throughout the British Isles. Generally distributed and common, but the numbers are very much less in the extreme north of Scotland.

Nest Situation

In trees, tall hedgerows or thickets, in ivy, on forest trees, in various kinds of trees, on the top of old nests of the Crow, Magpie, Jay or Sparrow-Hawk.

Nesting Materials

Very slight. Composed of dead sticks and twigs.

Eggs

Usually 2. Of blunt oval shape, white, and slightly glossy.

Breeding Season

Usually commencing April.

Incubation Period

17 days. Three broods usually.

Natural Food

Grain, fruit, seeds and leaves of plants, acorns, beechmast and berries.

Natural Food Substitutes

Monkey nuts and cereals.

Remarks

Though country birds rarely visit the bird table or nut hopper, the semi-domesticated London variety is very tame, often feeding from the hand. They are not likely to occupy a nest box of any sort.

THE STOCK-DOVE *Columba œnas* Length 13 ins.

Characteristics and General Habits

A somewhat smaller and more compact-looking bird than the Wood-Pigeon, easily distinguished not only by the absence of the white on the wings and neck, but by the darker and bluer grey colouring. The fringe of the tail is black. The sides of the neck show a patch of metallic green at close quarters. The throat and breast have a purplish tinge. Both sexes are alike, whilst the young are duller in colouring. It not only frequents woods, plantations and parkland or large gardens with old timber, but the vicinity of both maritime and inland cliffs and other rocky places, as well as sand dunes, etc.; and sometimes the neighbourhood of old buildings and ruins. The general habits and behaviour are very similar to the Wood-Pigeon's. It feeds largely on fields and other open ground; parties of half a dozen to a dozen birds or so are common, and it frequently mingles with Wood-Pigeons.

Distribution

Resident and probably partial migrant and winter-visitor throughout the British Isles. It is local in England and Wales, but widely distributed. It breeds throughout Scotland except in the north-west. It breeds in many parts of Ireland and is on the increase.

Nest Situation

It breeds at times socially, several pairs close together, in old timber with suitable holes, in rabbit-burrows or crevices in rocks, in sand dunes both near the sea and inland.

Nesting Materials

Sometimes the eggs are laid on the bottom of the hole without any material being added. Other times a few twigs, roots or straws, or grass are used.

Eggs

Normally 2. Much like Wood-Pigeon's, but smaller and less glossy.

Breeding Season

Commences the end of March.

Incubation Period

16 to 18 days. Double-brooded, sometimes three.

Natural Food

Grain chiefly, as well as clover, seeds of weeds, acorns, nuts, snails, slugs and earthworms.

Natural Food Substitutes

This bird will not visit the bird table.

Remarks

The Stock-Dove will not occupy a nest box of any type.

THE TURTLE-DOVE *Streptopelia turtur* Length 10¾ ins.

Characteristics and General Habits

It is the smallest British Pigeon, and is distinguishable not only by the smaller size and slighter build, but by its chequered-brown back and long graduated tail, brown in the centre, the rest black with broad white tips to the feathers. The top of the head, neck, and lower parts of the wings, are ashy-grey. The mantle, back and rump are brown, with dark centres to the feathers. The throat and under-parts are pale purplish, whilst the belly is white. There is a patch of black-and-white feathers on the sides of the neck. Both sexes are similar. The young are duller and browner, and are without the black-and-white patch on the neck. The flight is rather rapid, and with more flicking wing-beats than the other pigeons. It perches chiefly on low or medium-sized trees, in preference to tall ones, also on telegraph wires, and bushes, but rarely on buildings. Its general habits and behaviour are similar to those of the Wood-Pigeon, except that it has a preference for more open country.

Distribution

A summer-resident and passage-migrant in England and Wales, breeding chiefly in the southern, midland and eastern counties, becoming rarer in the north. It is rare in Cornwall and scarce in parts of western Wales. It is a summer- and autumn-visitor to Scotland and Ireland, appearing during migration in most parts of Scotland, though it does not breed. In Ireland it is a scarce but regular visitor to the south coast on migration but a vagrant elsewhere.

Nest Situation

In tall bushes, high hedges, and in a tree, usually at no great height from the ground.

Nesting Materials

A flimsy structure of fine twigs, occasionally with roots in the lining.

Eggs

Usually 2. White with some gloss.

Breeding Season

Usually commences mid-May.

Incubation Period

13 to 14 days. Usually double-brooded.

Natural Food

Grain, seeds of weeds.

Natural Food Substitutes

It is not likely to visit the bird table.

Remarks

No nest box of any type is likely to be occupied.

Thrushes at their nest built on the ground in a meadow

Chaffinch hen chooses a picturesque site for her nest

Spotted Flycatcher makes her nest among the ivy on a country cottage

'Joss' the Rook awaits a meal

THE BLACK-HEADED GULL *Larus ridibundus* Length 14 - 15 ins.

Characteristics and General Habits

In breeding plumage it is easily picked out from other gulls by the chocolate-brown head. In flight it is recognizable at all ages by the broad white margin to the front of the narrow black-tipped wings and by the red legs and bill. The upper-parts are grey, the under-parts white. In winter plumage the head is white, with a dark patch behind and a smaller one in front of the eye. Both sexes are alike. Young first-winter birds differ from the adult winter plumage by the mottled-brown wing-coverts and a black band at the extremity of the tail. It is the most frequent British Gull inland. As well as perching in usual Gull situations, it sometimes perches in trees. It is very fond of hunting for flying insects. The movement on the ground is a walk, quickened to almost a run if the bird is hurried, with a nearly horizontal body carriage.

Distribution

Resident, partial migrant and a winter-visitor throughout the British Isles.

Nest Situation

In colonies, on sandhills near the sea, on islands in lochs or meres, moor-land marshes.

Nesting Materials

Carelessly built of available vegetable matter, or on vegetation (rushes, coarse grass, marram-grass, etc.) or directly on the ground.

Eggs

Normally 3. Light buffish-stone to deep umber-brown, with spots and blotches of blackish-brown, and purple shell-marks.

Breeding Season

Commences mid-April.

Incubation Period

22 to 24 days. Single-brooded.

Natural Food

Very varied. Fish, crustaceans, molluscs, insects, earthworms, seeds.

Natural Food Substitutes

Table scraps, bread, meat, etc.

Remarks

In certain districts these birds are regular visitors to gardens, sometimes visiting the bird table, and often consuming scraps on the ground. They will not occupy any type of nest box.

THE MOORHEN *Gallinula chloropus* Length 13 ins.

Characteristics and General Habits

A well-known water-bird easily recognisable by the brownish-black plumage, with a line of white stripes on the flanks, and the red at the base of the bill. The flanks and under-parts are greyer and more slate-coloured than the back. Both sexes are alike. The young are much browner than the adults, the base of the bill only turning red during the winter. The flight is laboured and ungainly: the bird rises with an effort, the legs at the start dangling. When rising from the water it usually half flies, half runs over the surface of the water for several yards. When disturbed on the water it will sometimes dive and remain almost submerged under cover of plants, reeds, or surface debris. It swims freely, with a backward and forward movement of its erect head. It often roosts in low trees and bushes. It is also quite at home on land, where it has a jaunty high-stepping walk with the head somewhat raised.

Distribution

A generally distributed resident, winter-visitor, throughout the British Isles.

Nest Situation

Nests on or near still or slow-running waters of every type and character; placed amongst rushes, flags, sedge and other plants in water or near the water's edge, also in thorn bushes near water, sometimes in a tree.

Nesting Materials

Usually built of dead flags, reeds and rushes.

Eggs

Usually 5 to 11. Whitish-grey to buff, unevenly spotted and speckled with red-brown, with bluish-ash shell-marks.

Breeding Season

Usually commences early April.

Incubation Period

19 to 22 days. Double-brooded, often three nests.

Natural Food

Seeds and fruits of weeds, insects, aquatic plants, berries.

Natural Food Substitutes

Household scraps, soaked bread and grain.

Remarks

The Moorhen may be met with in gardens where there is a suitable pond, but as it is fond of feeding on lawns it will also visit gardens where there is no water. It will not occupy any sort of nest box but will readily take food from the ground and become quite tame.

SCIENTIFIC NAMES OF BIRDS MENTIONED IN THE TEXT

African Grey Parrot	*Psittacus erithacus*
Arctic Tern	*Sterna macrura*
Avocet	*Recurvirostra avosetta*
Barn-Owl	*Tyto alba*
Bittern	*Botaurus stellaris*
Blackbird	*Turdus merula*
Blackcap	*Sylvia atricapilla*
Black-headed Gull	*Larus ridibundus*
Black Tern	*Chlidonias niger*
Black-winged Stilt	*Himantopus himantopus*
Blue Tit	*Parus cæruleus*
Brambling	*Fringilla montifringilla*
Brown Pelican	*Pelecanus occidentalis*
Budgerigar	*Melopsittacus undulatus*
Bullfinch	*Pyrrhula pyrrhula*
Canary	*Serinus canarius*
Carrion-Crow	*Corvus corone*
Chaffinch	*Fringilla cœlebs*
Chiffchaff	*Phylloscopus collybita*
Coal-Tit	*Parus ater*
Common Heron	*Ardea cinerea*
Common Sandpiper	*Actitis hypoleucos*
Common Snipe	*Capella gallinago*
Common Tern	*Sterna hirundo*
Cormorant	*Phalacrocorax carbo*
Crested Tit	*Parus cristatus*
Crossbill	*Loxia curvirostra*
Cuckoo	*Cuculus canorus*
Curlew	*Numenius arquata*
Dipper	*Cinclus cinclus*
Dotterel	*Eudromias morinellus*
Egret	*Egretta alba*
Fieldfare	*Turdus pilaris*
Fulmar Petrel	*Fulmarus glacialis*
Gannet	*Sula bassana*
Garden-Warbler	*Sylvia borin*
Goldcrest	*Regulus regulus*
Golden Eagle	*Aquila chrysaëtus*
Golden Oriole	*Oriolus oriolus*
Golden Plover	*Pluvialis apricaria*
Goldfinch	*Carduelis carduelis*
Great Skua	*Stercorarius skua*
Great Spotted Woodpecker	*Dryobates major*
Great Tit	*Parus major*
Great White Heron	*Egretta alba*
Greenfinch	*Chloris chloris*
Green Woodpecker	*Picus viridis*

Grey Wagtail	*Motacilla cinerea*
Grouse	*Lagopus scoticus*
Guillemot	*Uria aalge*
Hawfinch	*Coccothraustes coccothraustes*
Hedge-Sparrow	*Prunella modularis*
Herring-Gull	*Larus argentatus*
Hoopoe	*Upupa epops*
House-Martin	*Delichon urbica*
House-Sparrow	*Passer domesticus*
Humming-bird	*Archilochus colubris*
Jackdaw	*Corvus monedula*
Jay	*Garrulus glandarius*
Kentish Plover	*Leucopolius alexandrinus*
Kestrel	*Falco tinnunculus*
Kingfisher	*Alcedo atthis*
Kittiwake Gull	*Rissa tridactyla*
Lapwing	*Vanellus vanellus*
Lesser Black-backed Gull	*Larus fuscus*
Lesser Redpoll	*Carduelis flammea*
Lesser Spotted Woodpecker	*Dryobates minor*
Lesser Whitethroat	*Sylvia curruca*
Linnet	*Carduelis cannabina*
Little Bittern	*Ixobrychus minutus*
Little Owl	*Athene noctua*
Little Tern	*Sterna albifrons*
Long-eared Owl	*Asio otus*
Long-tailed Tit	*Ægithalos caudatus*
Magpie	*Pica pica*
Mallard	*Anas platyrhyncha*
Marsh-Harrier	*Circus æruginosus*
Marsh-Tit	*Parus palustris*
Marsh-Warbler	*Acrocephalus palustris*
Meadow-Pipit	*Anthus pratensis*
Merlin	*Falco columbarius*
Mistle-Thrush	*Turdus viscivorus*
Moorhen	*Gallinula chloropus*
Moustached Warbler	*Lusciniola melanopogon*
Nuthatch	*Sitta europæa*
Osprey	*Pandion haliætus*
Oyster-catcher	*Hæmatopus ostralegus*
Partridge	*Perdix perdix*
Pheasant	*Phasianus colchicus*
Pied Flycatcher	*Muscicapa hypoleuca*
Pied Wagtail	*Motacilla alba yarrellii*
Pintail	*Anas acuta*
Puffin	*Fratercula arctica*
Purple Heron	*Ardea purpurea*
Redshank	*Tringa totanus*

Redstart	*Phœnicurus phœnicurus*
Redwing	*Turdus musicus*
Reed-Bunting	*Emberiza schœniclus*
Reed-Warbler	*Acrocephalus scirpaceus*
Reeve	*Philomachus pugnax*
Ringed Plover	*Charadrius hiaticula*
Robin	*Erithacus rubecula*
Rook	*Corvus frugilegus*
Ruff	*Philomachus pugnax*
Sandwich Tern	*Sterna sandvicensis*
Sedge-Warbler	*Acrocephalus schœnobœnus*
Shag	*Phalacrocorax aristotelis*
Sheld-Duck	*Tadorna tadorna*
Sky-Lark	*Alauda arvensis*
Song-Thrush	*Turdus ericetorum*
Sparrow-Hawk	*Accipiter nisus*
Spoonbill	*Platalea leucorodia*
Spotted Flycatcher	*Muscicapa striata*
Starling	*Sturnus vulgaris*
Stock-Dove	*Columba œnas*
Swallow	*Hirundo rustica*
Swift	*Apus apus*
Tawny Owl	*Strix aluco*
Tawny Pipit	*Anthus campestris*
Teal	*Anas crecca*
Tree-Creeper	*Certhia familiaris*
Tree-Sparrow	*Passer montanus*
Turtle-Dove	*Streptopelia turtur*
Waxwing	*Bombycilla garrulus*
Wheatear	*Œnanthe œnanthe*
White Stork	*Ciconia ciconia*
Whitethroat	*Sylvia communis*
Wigeon	*Anas penelope*
Willow-Tit	*Parus atricapillus*
Willow-Warbler	*Phylloscopus trochilus*
Woodcock	*Scolopax rusticola*
Wood-Pigeon	*Columba palambus*
Wren	*Troglodytes troglodytes*
Wryneck	*Jynx torquilla*
Yellow Wagtail	*Motacilla flava flavissima*

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