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CAGE BIRDS



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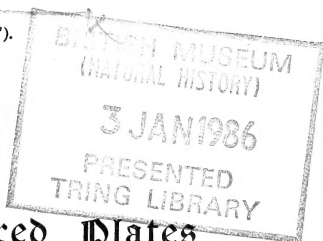
CONTAINING FULL DIRECTIONS FOR

SUCCESSFULLY BREEDING, REARING, AND MANAGING THE
VARIOUS BRITISH BIRDS THAT CAN BE KEPT IN
CONFINEMENT.

5 - MAY 1948
PRESENTED

BY R. L. WALLACE

Robert
(Author of "The Canary Book").



Illustrated with Coloured Plates

AND

NUMEROUS FINELY-CUT WOOD ENGRAVINGS.

[1875]

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P R E F A C E .

THERE is probably no subject connected with natural history more pleasing, instructive, or interesting than that of ornithology, for in it there is a wide field for study and contemplation. It is not, however, my intention to pursue in the following pages the scientific aspect of birds generally, but to confine myself strictly to giving minute descriptions of, and full information concerning, all such British birds as are suitable for cage or aviary pets, and capable of being kept in good health and spirits in confinement. By so doing I hope to awaken in those who have a latent love and partiality for these beautiful and delightful creatures—as many of the British birds assuredly are—a keener interest, by showing how easily they can pursue their hobby with pleasure to themselves and advantage to the birds.

Every species of British bird suitable for keeping in a cage or aviary will be found carefully and elaborately described, full information being given respecting the habitat of the birds; their nests, eggs, and mode of breeding; distinctive peculiarities of character; distinguishing marks of cock and hen; vocal powers of the male bird; points necessary in specimens intended for exhibition; the prevention, or treatment and cure, of the various diseases to which birds are liable when kept

in captivity; the methods to be pursued in training some birds to perform sundry tricks, and to improve the song of others; together with other matter of an instructive or amusing character.

The breeding and management of these birds in a state of domestication will be found amply set forth, with hints and instructions for successfully producing hybrids between varieties similar in species and character. This part of the subject I regard as most interesting and fascinating; and as there is still an extensive opening for speculation and experiments in this direction, I trust that those who are desirous of prosecuting their studies and researches may be stimulated by my remarks to extend their labours for the promotion and acquisition of increased knowledge in this delightful and refreshing science.

My object in writing this book has been more particularly to assist young beginners, and lovers of our wild birds generally, to rear, keep in health, and breed them in cages and aviaries as domestic pets; and if I succeed in the direction pointed out I shall feel that my labours have not been in vain.

To the vigilant and observant student of ornithology there will be found much that is instructive and useful. The deep and various passions of love, friendship, anger, jealousy, and hatred, are developed in the highest degree in these minor objects of created Nature, and a careful and watchful observer will find much to learn, admire, and even condemn, by studying and closely observing the various dispositions and propensities of his feathered pets.

THE AUTHOR.

BRITISH CAGE BIRDS.

CHAPTER I.

INTRODUCTORY.

THE birds which are found in a wild state in the United Kingdom of Great Britain are numerous and various. It is not, however, my intention to treat upon all the known varieties, but only on those which, from the beauty of their plumage, the variety of their song, the gracefulness of their contour, their intelligence and docility, or other attractive qualities, are rendered objects of admiration or curiosity, endearment or amusement, to those people who exhibit a warm interest in all or most of the birds that are indigenous to this country.

THE LANGUAGE AND SONGS OF BIRDS.—I believe that every species of bird has a language peculiar to its own race, and that birds can fully express to each other a knowledge of their wants and desires by this language, which is more or less understood by all the varieties of birds which inhabit our Islands; and that such is particularly the case with the notes or utterances that express fear, joy, or anger. In the spring, it will be noticed how all the male birds of the same species try to outdo each other in their song and attractive manners; how gay and sprightly they become at the pairing season, and how they strive to outvie each other in agreeableness of manner; how they gesticulate, and utter to the females soft notes of thrilling sweetness; how, when their jealousy is roused,

they chase each other, and utter angry cries and notes of warning and remonstrance; and how battles are fought, and the sides of each bird taken by friends, who appear to abet and succour them if undue advantage is taken by the foe. All these things are known to the watchful and observant ornithologist.

Again, it is well known that when a bird of domesticated habits descries a bird of prey, it utters a note of warning, which is understood by every species of bird in the neighbourhood; and whenever a small bird is attacked, and it utters its cry of impending danger or terror, there is a sudden rush of all the birds within hearing, of every kind and species—not being birds of prey—to its assistance. Indeed, cases have been known where a hawk has been completely beaten off its prey by this combined attack, and so thoroughly baffled, that it has had to make a rapid and ignominious retreat. A large number of ornithologists are of opinion that birds are governed by a code of laws and regulations, perfectly understood and acted upon by them, and that when any bird has the temerity to seriously transgress these laws, it is brought to account and punished according to its deserts.

SONGS OF CAGE BIRDS.—The songs of cage birds are considered, by the majority of people, to be their chief attraction. The natural songs of some of them, such as the Woodlark, Nightingale, Skylark, and Blackcap, are so rich, various, and melodious, that it would be a most difficult, if not an impossible, task to improve them; but there are other birds, such as the Bullfinch, Greenfinch, Chaffinch, Siskin, and Canary, whose songs can be greatly improved by artificial aid; and others, again, such as the Fauvettes and Shrike family, which imitate very skilfully the songs of any birds who may indulge in sweet rustic lays in the neighbourhood of their homes. Thus it will be seen that there are two classes of song birds—those that sing their natural “wood notes wild,” and those that acquire a song artificially taught them. The Finch tribe are most prone to imitate the songs of other birds. Linnets may be taught to imitate the song of the Skylark or Woodlark, Goldfinches and Siskins that of the Canary, and so on; but, in order to achieve success, the birds that are intended to be instructed in this way must be removed from their parents at an early age, and reared by hand, otherwise they are sure to

acquire some of the notes of their parents or congeners, which they rarely, if ever, forget. I have heard a Linnet sing the song of the Woodlark in a most astonishing manner, and have myself possessed a Goldfinch which sang the song of the Canary perfectly, and imitated all its call notes to perfection. In Mule breeding this is an immense acquisition. The bird referred to was hatched and reared by Canaries, and never heard the natural note of the Goldfinch. I could give many other instances of a similar character—all due, of course, to artificial training, as all birds, in a wild state, sing the song distinctive to their species, which are possessed of a distinct song, such as the Thrush, Robin, Blackbird, &c.; though I have known some of these which have been caged for a series of years, and kept constantly with other birds, occasionally utter a few artificial notes learnt from their companions in captivity.

Birds resemble human beings in their power of imitation and vocal acquirements, and some greatly excel others in their accomplishments. Very much depends on the formation and development of the larynx, a retentive memory, and the power of imitation; but even a well-taught bird that has acquired an artificial song may easily be spoiled by being hung for a time along with a bird that sings a different song, and more particularly if that bird happens to be one of its own species, and sings its natural melody. Hence, great care must be taken to keep a trained bird beyond the sound of others whose songs differ from its own.

WILD BIRDS BREEDING IN CAPTIVITY.—Very few of the various species of wild birds can be induced to breed in confinement, even under the most favourable conditions. Those that are disposed to do so must be accommodated with an abundance of room, and the conditions made to resemble, as far as possible, such as are to be found in their natural haunts. An outdoor aviary is best, and the occupants ought to be supplied liberally with such materials as are used by them, when in a wild state, to build their nests; and under no circumstances must they be interfered with during the process of incubation. Trees and bushes, erected in secluded corners, ought to be provided. If an aviary could be erected so as to inclose a few yards of a natural thorn hedge in the exercise ground attached to it, I think it would be one of the most successful methods of inducing birds to breed in confinement

The cost of making such an erection would not be very great, for it could be covered with half-inch wire netting, fastened to upright stakes, with cross-pieces to support them, and to secure the top covering.

Care must be taken that too many birds, and those of different species and habits, are not put together. Goldfinches and Linnets, Greenfinches and Bullfinches, and Siskins and Redpolls, will generally agree well together; but if Thrushes, Blackbirds, Redstarts, Starlings, Larks, Robins, and the like, are mixed up with them, they are sure to disagree; and any attempt at breeding, under such circumstances, may be forthwith abandoned, as it would be sure to result in an ignominious failure. Three or four pairs of birds are quite as many as would be likely to agree together in an aviary, say 14ft. by 7ft., and those should, if intended to propagate their species, be granivorous or omnivorous in their habits.

Care also must be taken, before the birds are introduced to the aviary, to see that they are properly paired or mated, and give signs of attachment to each other; otherwise, cases of infidelity, which will result in angry combats, are sure to take place; but if only one species of birds—such as Goldfinches or Bullfinches—are to be kept together, it is sufficient to turn an equal number of males and females together into the aviary in the autumn, and allow them to select their own partners. If, however, two males make choice of the same female, or two females of the same male, and they are unable speedily to settle their own differences, it will be advisable to remove one of them, or a conflict, ending in disaster, will probably be the result.

Fir and pine boughs, which should be cut in the early spring, ought to be used for making secluded haunts; but where it is possible to grow small trees, such as thorns, firs, and evergreens, it will be best to do so, as the birds will be found, in most cases, to prefer them to the cut boughs. A plentiful supply of sand, small gravel, and wholesome food, and water—both for drinking and bathing—must be provided; and remember that cleanliness is an essential requirement, which, under no pretence, and under no circumstances, must be neglected. A few cocoa-nut shells and nest baskets should be placed here and there in different parts of the aviary.

Sometimes the occupants of the aviary will use them; but, as a rule, they appear to be better pleased with a nest of their own construction, built in a spot of their own choice.

MIGRATION OF BIRDS.—At certain seasons of the year, usually in the autumn and spring months, large numbers of birds of various species migrate, for the purpose of finding a more genial climate and a greater abundance of such food as is necessary for their existence and well-being; but these birds invariably return to the country they prefer when the season for propagating their species arrives. A great deal of interesting information could be given on this subject; but it is not my intention to do more than to point out that birds of the genus *Sylva*—which are chiefly birds of passage—become exceedingly restless in confinement, when the seasons arrive for their periodical migration; and at times, more particularly towards evening, get so agitated and restless, that they will start up quite suddenly, flutter their wings rapidly, and attempt to fly away by making sudden darts upward; or they will run backwards and forwards, in a most restless and excited manner, along their perches, flapping their wings rapidly, and apparently oblivious to all around them. This feverish excitement, which lasts for a space of two hours or more at a time, continues for a period of ten or twelve days. It appears to affect them most in the spring of the year.

INSECT FOOD.—Where nightingales are kept, it is advantageous to obtain and preserve for their use in winter a quantity of wasp comb. This ought to be obtained when the young grubs are well matured, and should be preserved by being first placed in an oven, not too hot, but sufficiently heated to destroy the lives of the grubs, and also prevent them from decaying. After this process, the comb should be kept in a dry place, on shelves, or, what is better, on a piece of square-shaped canvas, secured with a string at each corner, and suspended from the kitchen ceiling, or the ceiling of a dry attic, which gets a daily share of sunlight. This will be found most convenient and useful when insect food is scarce and difficult to procure, and the birds greatly enjoy and thrive upon it.

Mealworms make a very good food for certain birds. To insure a constant supply, get a pint of them (or more if


needed) from a corn chandler or flour dealer, and put them into a gallon stone jar with some oatmeal or bran, a few pieces of old leather from a shoe sole, and two or three pieces of sugar paper; these should be occasionally moistened with a little beer. In a few months' time, the mealworms will become beetles and propagate their species, and, by this means, a constant supply of food for all birds that live on this diet can be secured.

House or other flies should be caught in the autumn and placed in glass bottles with wide necks. Old pickle bottles answer the purpose well, but those with glass stoppers are preferable. Earwigs should be gathered from dahlias, or African and French marigolds, or other flowers, and also placed in bottles of this kind; they must not be squeezed or injured, or they will not keep. After you get your bottles pretty well filled, cork them well down and place them in a hot oven for fifteen or twenty minutes, until all signs of life are extinguished. The insects can then be put into paper bags and suspended from the ceiling of any dry room, or placed in boxes and kept in a cool, dry place, or they will turn mouldy and spoil. Before giving them to the birds, they should be placed in an earthenware vessel of some sort, such as a saucer or basin, and a little boiling water, which has been previously sweetened with sugar poured over them, which will soften them, and render them palatable; but no more should be prepared than will last for two days together, as the birds like them best fresh done.

To obtain a supply of maggots, shoot a few crows, and hang them in the sun until they decay, when they will become literally alive with maggots. Where rooks or crows are not readily procurable, a sheep's pluck will answer the same purpose. When the maggots are well grown, put them in jars among dry mould and sand, and keep them in a cool, dry place. If you keep them in a warm room, they will get into the pupa state, and turn into flies and vanish, if not looked after.

SEED FOOD.—Wild birds, and more particularly those which have been newly caught, should be supplied with their natural food, in order to preserve them in health and good condition. When this cannot be procured, the best substitutes that can be obtained must be given. A constant or

frequent change of diet will be found most useful in preserving birds in a healthy condition; and a little careful attention and observation will enable anyone to discover what a bird prefers most, and upon which food it thrives best. I may, however, remark that birds greatly resemble human beings in frequently choosing things which are not always most conducive to their health and well-being; as, for instance, nearly all seed-eating birds will prefer hemp seed to all other kinds: and this seed has been repeatedly proved to be most injurious to birds of all sorts which have been allowed to use it *ad libitum*. Under the different headings, in treating of the varieties of birds, I will point out the description of food which has been found most suitable for them.



CHAPTER II.

BIRD CATCHING.

BIRD-CATCHERS, who make a trade of this calling, adopt a variety of methods for ensnaring birds, and among others, and by no means the least successful, is that of imitating their "call" notes, and the notes they utter expressive of joy and anger. By adopting this artifice, the bird-catchers succeed in alluring the birds to the spot where snares and other methods are provided for their capture. In some of the outlying districts in England and other parts of the United Kingdom, bird-catchers select a remote place that is densely wooded, and where large numbers of different species of birds are known to congregate; and here, in some well-chosen spot, they erect a temporary hut, and cover it with newly-cut boughs of trees and thorns. After leaving it for a few days, until the birds get accustomed to it, they return, and, having carefully and securely fixed some horsehair nooses, and a liberal distribution of well-limed twigs, commence their operations. They carry with them a stuffed owl or hawk, and sometimes a living bird, in which case it is securely fixed to some branch of a tree in close proximity to the hut. The fowler then begins to imitate, inside the hut, the cries of some bird in distress, and almost instantly and simultaneously a bevy of birds, of various species, will rush to the rescue, and, alighting on the top of the hut, a great many of them become ensnared, and the device proves a success.

THE CLAP-NET. — Professional bird-catchers employ a clap-net for taking Larks, Linnets, Finches, and other varieties of wild

birds. The best time for its use is between the months of August and November and March and April. It should be used, between daybreak and 9 a.m., in a plain open country, either on short stubble land, a patch of greensward, or a flat meadow, near to a cornfield, and in a remote situation.

The net is composed of two separate parts, precisely alike in all respects. When being employed, the parts should be placed parallel to each other, and at such a distance as will allow for one part to overlap the other about 6in. when they are drawn together. The nets are made of fine packthread, with a mesh of $\frac{1}{2}$ in. They should be 18ft. long, and 6ft. in width, and bordered round with a strong, but not too stout, cord. The ends of the net are attached to thin poles, a little longer than the width of the net. The poles are sharpened at the bottom, to hold to the ground, and at the top are fastened

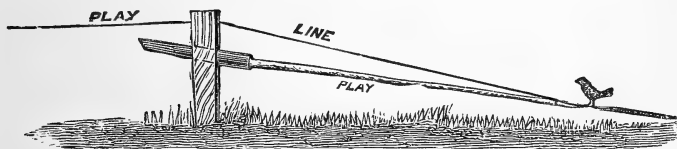


FIG. 1. "FLUR" OR "PLAY-STICK."

the fore and tail lines, and closing or draw cord. Four poles are required, and nine iron pegs, with hooped tops—four for the fore lines, four for the tail lines, and one for the pull-line—to peg into the ground.

In pitching the nets, set them so that the wind will catch them at the front or back, and not at the side. Open them fully, and, in erecting them, stake down the lower sides, so that they will only move up or down. The upper sides must stand extended on the long cord, which must be staked down with one of the iron pegs; and the tail and fore lines must also be firmly set in a direct line with the lower verges of the net. Then fasten to the upper end of the foremost poles the drawing-cord or hand-line, which should be at least 25yds. long; the supporting cords need not exceed 5yds. in length. The length of the draw-cord must be regulated by

the distance of the shelter occupied by the bird-catcher, which should be behind a thickset edge or bush, or among wins or trees. In the open space between the nets, fix in a piece of wood called a "stale," with a mortise hole made near the top of it, and through this hole pass a rough twig or stick, about 2ft. long, and pivot it at the end nearest the operator; a string should then be attached to the farthest end from the operator, to be used as required (see Fig. 1). At this end must be secured a decoy bird, properly trained and braced. If the operator fails to stimulate him to call vociferously, he stirs him up by pulling the cord attached to the cross stick in the stale. Another piece of wood, in the shape of a cross, should be fixed a few feet away from the stale, to prevent the nets, when they are drawn, doing any damage to the entrapped birds. If this operation is skilfully performed, many birds may be secured. The method of laying the clap-net is clearly shown at Fig. 2. A hatchet, a mallet, a stout pocket-knife, a needle and some packthread and twine, and boxes or cages, are among the further requirements of a bird-fowler.

DECOY BUSHES.—In the autumn, when large numbers of birds are flocking southward preparatory to migrating, or in the spring, when they again return, it has been found a good plan to put up, in suitable places, a few stout branches cut from trees such as the oak, elm, or birch, and set them in open plains, moors, or fens, or other desirable places where birds in flocks are known to congregate, or cross in their passage. These branches should be firmly planted in the ground, and the upper parts should be half cut through, and bent over to form a sort of roof or platform. Then notches should be made in the branches, or holes bored, and limed twigs securely placed in them. Decoy birds must be used, and the cages which contain them must be placed beneath the branches on the ground, so that, whilst they can observe birds flying over them, they themselves cannot be seen by their *confrères* when on the wing. The success of this plan greatly depends on the call birds. You want a bird that will call vociferously and almost incessantly. A newly-caught bird is generally best for this purpose, or, at least, one that has not been too long accustomed to domestic life, as such birds rarely make satisfactory decoys.

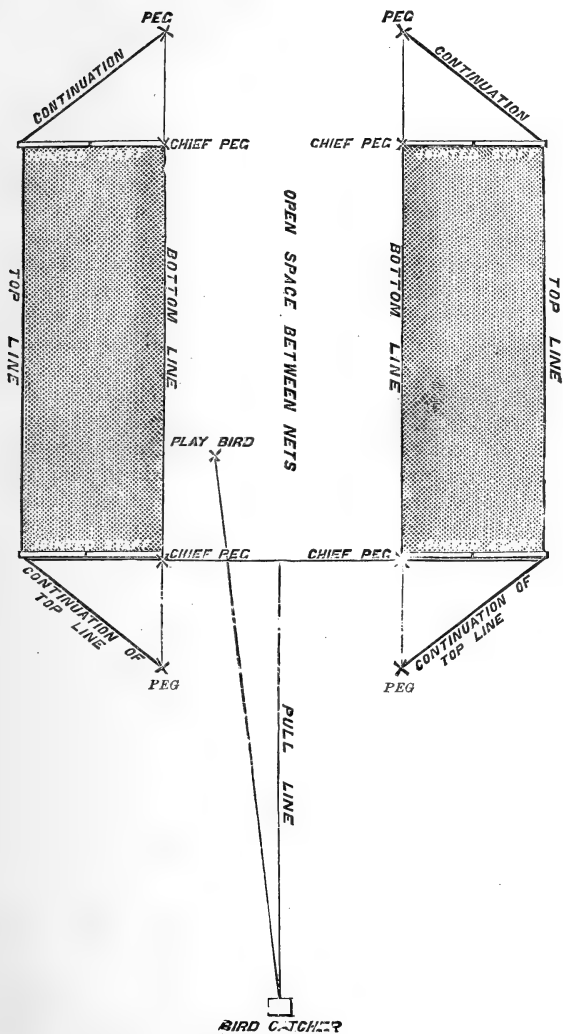


FIG. 2. PLAN AND METHOD OF SETTING CLAP-NET.

HOW TO TAKE SNIPE.—Procure two or three hundreds of birch twigs, and prepare them with water bird-lime (a recipe for making which is given at the end of this chapter). Then proceed to find out the usual haunts of the birds. It is best, and by far the easiest way, to apply this method when the weather is frosty and snow covers the ground; for, at this time, the birds generally congregate together at the side of a brook or rivulet where the water is not frozen over. Then search must be made for their feeding-place, which can generally be discovered by their feet marks or excrement. Having accomplished this, surround the place with limed twigs, set in a slanting position and about 3ft. apart, setting them at opposite angles to each other; then retire a few hundreds of paces from the place. Few birds will be missed if the twigs are properly arranged and well set, as snipe invariably spread out their wings, and sweep round close to the ground before they alight. If you observe some to have been ensnared, do not go near for a time, as they will feed whilst the twigs are attached to their wings, and they act as decoys to others. After satisfying yourself that a fair number have become victims to your device, and there is not much probability of obtaining more, you may proceed to take up the entrapped birds; but, if you think there is a prospect of securing more, leave one or two, with the twigs still fastened to them, as decoys, set up more twigs, and proceed in the same manner as at first. You should make a tour of inspection in the immediate locality, and visit any place where the birds are likely to lie, and by disturbing them and driving them from these haunts, they will most probably go in the direction of your hunting-ground; for snipe cannot feed on hard ground, and must of necessity visit open spaces.

HOW TO TAKE FIELDFARES.—When they migrate from place to place in the autumn, in search of food, shoot one or two of them, and, having previously obtained and prepared for use a few hundreds of limed twigs, get a large birch bough, and cut off all the small twigs; then make holes or notches, and place limed twigs where these have been. Next fix the dead birds near to the top of the bough, where they can be easily seen by any birds flying near. These dead or decoy birds must be so placed as to have the appearance of living

birds. The boughs should be set overnight near to some place where a number of the birds have been observed feeding; for Fieldfares frequent the same spot daily, so long as there is food to be found. As soon as a flight of these birds espy the decoys, they will descend rapidly, in large numbers, on to the bough or boughs, and a considerable quantity of them are sure to be limed.

HOW TO TAKE FINCHES AND OTHER SMALL BIRDS.—Prepare several hundreds of birch twigs, and wheat ears, with the straw attached to them to the extent of about 12in., exclusive of the ear itself; then lime the latter for about 6in. or 7in. below the ears. The lime should be used warm, in order that it may not be put on too thickly, and thereby frustrate the object in view; for birds are both observant and suspicious, and a small thing sometimes excites their caution. When ready, proceed to a field, or some well-known spot where birds have been observed to congregate in large numbers, and scatter over an open space for a breadth of 15yds. or 20yds., among the snow, a quantity of wheat chaff, and a little wheat amongst it. Then fix your limed twigs and wheat ears slanting in different directions, retire from the immediate locality, and perambulate the district all round within a moderate distance, in order to disturb the birds and drive them away, when they will be likely, in their flight, to observe the newly-sown chaff, and flock thither in search of food, thereby becoming entrapped; for, when they attempt to fly, the limed straws or twigs will get beneath their wings, and cause them to fall to the ground, when they can be easily secured.

If a flock of Larks should descend among your limed twigs or straws, do not disturb them too suddenly, but permit them to make the attempt to fly away at their leisure, as by this plan you are more likely to secure a greater number of birds than you would by being impetuous. Having completed your operations for one day, remove the limed twigs and wheat stalks, and throw down a few ears of wheat, or scatter a handful or two of the grains about, that the birds may come and feed without fear or molestation. Leave them until the following morning; then remove any ears that may remain, and replace them by limed wheat stalks as before. This process can be

repeated as frequently as it may be considered desirable; but the early morning is the best time to insure success.

There are other modes and means used for securing birds on a small scale, which will be referred to in treating of the varieties; but, excepting for pastime and amusement, it will be found cheaper to purchase birds from a professional bird-catcher than to go and capture them yourself.

BIRD-LIME.—Bird-lime is a viscid substance, which may be prepared in a variety of ways. The ordinary bird-lime, as sold in shops, is prepared from holly bark, which should be boiled for ten or twelve hours, until the outer or green coat is entirely separated from the wood. The bark should then be placed in earthenware pots or jars, and covered over with some light material, such as calico or brown paper, for a space of fourteen days; when it should be taken out and pounded in a mortar until it is formed into a rather tough paste. It should next be thoroughly washed, to remove all impurities, and placed, for four or five days, on the top of an oven, or even inside, if the heat is not too great—not over 70deg., or it will be spoilt. During the heating process it should be skimmed frequently, and when sufficiently cooked, it should be put into a jar and kept in a cool place, free from damp.

To prepare water-bird-lime, take a pound of good fresh bird-lime, wash it thoroughly in clear spring water, until it becomes pliable, and the hardness is entirely removed. Then beat it with a piece of clean flat wood, until the water is completely got out, and dry it over a moderate fire, taking care that it does not get overheated. When this has been done, place it in an earthen pot, or jar, and put this into a saucepan, three parts filled with water, leaving only the lower half of the jar immersed, or as high up as the lime; for the jar should not be much more than half filled with it. Next put in as much goose grease, or pure fat of any kind, without salt, as will cause it to run with tolerable freedom; and add two teaspoonfuls of white wine vinegar, also one of the best salad or olive oil, and a small quantity of Venice turpentine. Boil them all gently together upon a slow fire, constantly stirring the ingredients; when it is thoroughly compounded, it may be removed from the fire, and allowed to cool. If properly prepared, water

will not affect it or destroy its properties, and it will keep good, in a cool, dry place, for a long time.

Water-bird-lime is also sometimes made from boiled linseed oil; but, as it is very unsatisfactory in working, it is not worth while giving the recipe in full, more especially as that given in the previous paragraph makes one of the best bird-limes known. It is rather troublesome to prepare, but the result well repays the maker for the labour expended on it.



CHAPTER III.

AVIARIES AND CAGES.

AVIARIES, which are used for the purpose of keeping a collection of British and other varieties of birds together, including Canaries, hybrids, and foreign specimens, are both numerous and various, and comprise those used both indoors and out-of-doors.

For a collection of British birds only, one erected outside is to be preferred, as being more healthy, natural, and congenial to the occupants; but where a mixed variety are kept, including birds which are natives of warmer and more genial climates than ours, then, in the early spring, autumn, and winter, artificial heat becomes an essential and necessary factor, and quite indispensable.

OUTDOOR AVIARIES.—To those who have a superabundance of ground attached to their dwellings, and to whom expense is only a minor consideration, I should recommend a substantial and ornamental erection of the cottage pattern.

The building should consist of four or five compartments, according to the requirements of the owner. Each compartment should be 10ft. long, 8ft. wide, and 9ft. high, and be separated with $4\frac{1}{2}$ in. brick walls. A passage 3ft. in width should run through the centre of the structure, having two rooms on each side of it, with a door of communication leading to each division. The external walls of the building should be 9in. in thickness, and coated outside with Portland cement, to keep out the damp; the roof should be tiled, or slated, and each compartment should be furnished with a

ceiling; the inner walls need only be lime-washed. An ornamental window should be placed in the centre of each of the aviaries—perhaps French windows would be best—to open and close on hinges. There should likewise be a small aperture in a convenient part of each room, say, of 9in. by 6in. or 10in. by 7in., with an arched top and a frame fitted into it, with a framed slide covered with perforated zinc to act as a ventilator. This aperture will also be required to be used as a means of egress and ingress for the birds. It will be necessary to erect outside stout wire enclosures, equal to the entire length of each compartment, which should be about 6ft. or 7ft. wide, to form an exercise ground. Some perches should be kept as high as the tops of the windows outside, for the birds to take exercise upon, and to bask in the rays of the sun.

The slides over the ventilators should be constructed to work with pulleys and cords, so that they can be opened and closed from the passage. In each door communicating between the aviaries and passage should be fixed one or two glass panels, so that the movements of the birds can be observed without going inside. In some convenient place a small boiler, such as is used for heating a greenhouse, should be erected, with 4in. or 6in. hot-water pipes, which must be so arranged as to give heat to all parts of the building, in order that an equable temperature, say, of 60deg., be kept up during the most inclement seasons of the year; the birds would then thrive and continue in a healthy condition, if the apparatus were properly and carefully managed.

In smaller aviaries a combustion stove might be used in place of a boiler. The better plan would be to erect an ante-room at the end of the passage, to form a wing at the back of the building, and to place the boiler in this room. Here might also be fixed a few shelves and a cupboard, for the purpose of holding and keeping all the paraphernalia requisite for an establishment of this description, such as a bread-crumbing machine, a coffee mill for the purpose of bruising hemp seed, one or two sieves, a pestle and mortar, a water filter, a kettle, two or three saucepans, mugs, jars, and basins, and a few joiner's tools, a saw or two, hammers, planes, pincers, pliers, brad-awls, nails, screws, wood and wire, a small bench, and a vice, &c. The rooms, or aviaries, intended to be used for breeding

purposes should be fitted up with a few boxes or cages, wired in front to give light, and fitted inside with movable nests and perches; the fronts of these breeding compartments should open on hinges, and be secured with a brass button, so that they can be readily got at for the purpose of cleaning them out, or putting in clean nests. Perches, cocoanut shells, baskets, and box nests should likewise be hung about the walls, or suspended from the ceiling, as some birds will prefer this arrangement, and it will often act as a preventive to birds fighting for nesting places. The floors should be raised 9in. from the ground, or even more; in fact, where wood is used, it would be a good plan to place the hot-water pipes (with open metal gratings covering them) beneath the floors, in close proximity to the walls. Concrete or bricks, set in cement, make, however, a better flooring, as mice and rats cannot then get access to the rooms. The floors should be liberally strewn with sand and fine gravel, which, watered lightly with a strong solution of common salt, should be raked over every few days, and washed with water as occasion requires. Where a drain can be conveniently put in, to carry off the waste water, it will be advisable to have one.

The external architecture is simply a matter of taste and a consideration of expense. A Swiss cottage, with mullioned windows, ornamental cornices, and a trellised portico entrance, would form a nice design. The placing of a building of this kind is also a matter of taste and convenience. It would look well at the end of a lawn, or at the side of a large villa residence; a neat flower border could surround it. Trellis work could be fixed to the outer walls, to carry a few creepers, rose trees, or honeysuckles; or it could be so arranged as to have a gravel walk, a rockery, or shrubs and flowers round it, according to the situation. By having four separate compartments or aviaries, foreign birds could be kept in one, Canaries in a second, and British birds in a third; and the fourth could be reserved for the young birds, as, when able to feed themselves, they should be removed from the other aviaries, in order to prevent them interfering with their parents during the breeding season. This room, however, and the wired inclosure also, should be divided into separate compartments by means of wired divisions, in which case, more than one aperture for egress and ingress would be needed. There should also be

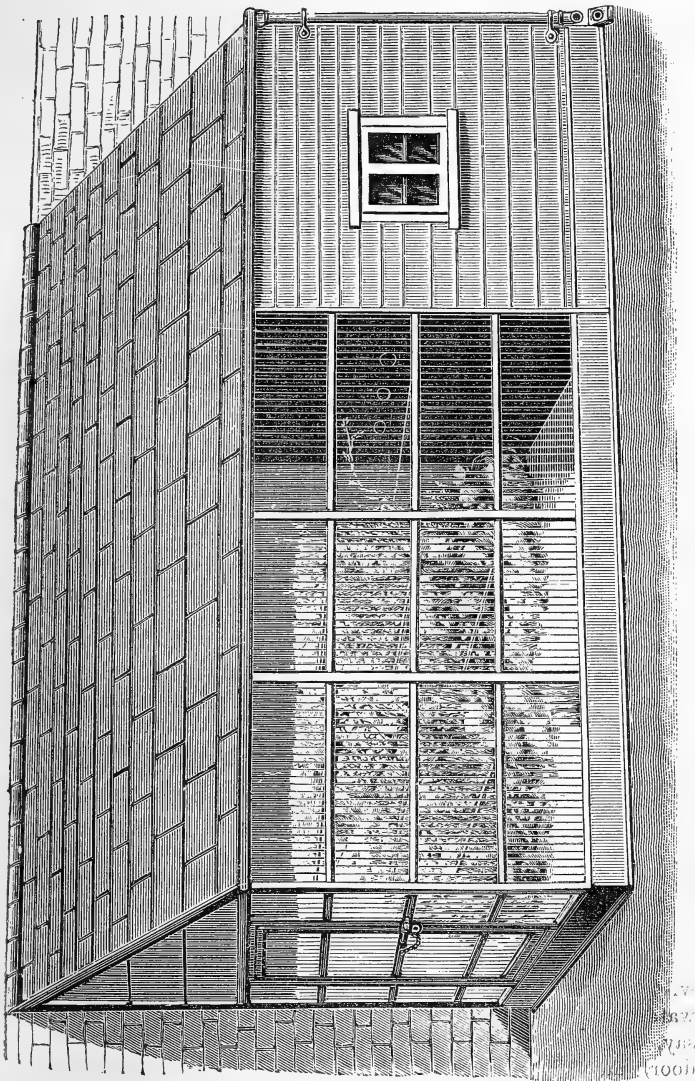


FIG. 3. OUTDOOR "LEAN-TO" AVIARY.

a small nursery or hospital for sick birds; and where an ante-room is used, it should be kept there; or cages could be used instead, and placed about the room or passage, as it is best to keep ailing birds apart from healthy ones. To those who do not desire to incur so great an expense in having an aviary of this kind, I can recommend a "lean-to," that is, one to be built against a wall already erected (see Fig. 3).

The size of the aviary must be regulated entirely by the requirements of the person desiring such a structure. The following are the dimensions of one sufficient to accommodate thirty small birds, such as Finches, Canaries, &c., but the size can be increased or diminished as desired: Length, 12ft.; width, 7ft.; height at back, 9ft. 6in.; in front, 7ft. The wall against which the aviary is to be erected should be built of stone, brick, or concrete, and should not be less than 9in. in thickness. At one end a shelter should be built, either of bricks or wood, for the birds to retire into at night and in stormy weather, or for breeding in. It should be 5ft. wide, the length being regulated by the width of the aviary; a small window should be placed at the side—say, 18in. square—framed, and to open on hinges outwardly, with a wire guard, which should be securely fixed inside, so that the window can be opened, during very hot weather, for ventilation. It is necessary also for lighting the apartment and watching the movements of the birds.

The shelter can be built of brick or wood; if of the former, it should be 9in. in thickness, as a $4\frac{1}{2}$ in. wall will not resist the weather; if of the latter, then 4in. spars should be used for uprights, and boarded on both sides, the outside hoarding being covered with felting, and should either be tarred, painted, or lathed and plastered on the inside, which would keep the birds much warmer; the roof also should be covered in with boards, or lathed and plastered. In either case the front should be boarded, and apertures, like pigeon-holes, made at suitable and convenient distances, with projecting shelves or perches for the birds to alight upon for ingress and egress. The roof should be either slated or covered with corrugated galvanised iron, with a spouting to run the water off. At the opposite end should be an entrance lobby of, say, 3ft., with a door to open outwardly, and inside another door, made of wire, to open inwardly, so that the aviary

could be entered without the chance of any birds making their escape. If it is desired to utilise this lobby, a small sliding aperture can be made in the inner door, to open and close with cords from the outside, so that the birds might be driven from the outer lobby to the inner aviary, and the communicator closed before the outer door is opened. The other portion should be framed with wood and wire, or all wire, similar to that used for birdcages, but made very strong.

The bottom of the aviary should be formed of a bed of small gravel and sand, about a foot in depth, and it should be raked over at least once a week, and the surface renewed, say, once in three months, to a depth of 4in. The excrement and refuse ought to be removed at least once a week, in order to keep the birds clean and healthy. The wall and inner dwelling or shelter should be lime-washed once a year at least, and the interior of the latter should be fitted up with breeding-boxes and perches. In the outer aviary, must be placed cocoa-nut nests; baskets, and wooden nest-boxes should be attached to the walls or ceiling at convenient distances. Water fountains and self-supplying seed hoppers, and feeding-tins or troughs for German paste or soft food of any kind, must also be provided. A stout earthenware jar or two, or pickle bottles, may be used for giving a supply of green food, such as lettuce or chickweed, daily to such birds as partake of this food. On the outside, to a height of about 18in. from the ground, a bordering of zinc or galvanised sheet iron should be nailed all round to keep out rats and mice, and to prevent cats getting an opportunity of snatching a bird that may fly against the wires.

A trench, 1ft. in width, and 18in. to 2ft. in depth, should be formed round the building, and it should be filled in with concrete, which should be formed of broken bricks, broken glass, and small pebbles or flint stones, and strong liquid lime. The latter, if poured over and thoroughly mixed with the stones, will form a substantial concrete, and prevent rats and mice from burrowing beneath it. The foregoing is an excellent form of aviary, and, if properly built, and good materials used, is really very ornamental. It would require to be painted only once in four years.

Another form of aviary, and one that I strongly recommend, can be made by erecting a small structure at the back

of the dwelling-house, when the house is so constructed as to admit of this being done, and it can be entered from the dining-room or library, as the case may be. One I saw, in the vicinity of London, was built in a recess where the kitchen was erected, at the side of the house, forming a wing in the rear of the dining-room; and the entrance to it was from the library (a room adjoining the dining-room), at the side, near the window, and was made by a semi-glass door. The structure was about 12ft. by 10ft.; the back part of it was used as an aviary, and the front part as a conservatory; the front end, and part of the top, was glass, framed in wood, like a greenhouse; the back part of the roof, forming the aviary, was slated and ceiled. It had also a door, and a few steps, leading on to a gravelled walk at the side of the lawn, and could, therefore, be entered from without as well as from within. It was most artistically arranged with small rockeries and ferns, and an aquarium round the outside of the aviary; and also had several cork covered boxes, filled with ornamental flowering and foliage plants, placed here and there on the floor; round the windows were shelves, on which were placed geraniums, fuchsias, and a variety of other plants. There were also several creeping plants hung from the roof in fancy wire baskets, formed to hold flower-pots; these assisted in keeping the scorching rays of the sun from the birds during the hottest season of the year. The general effect was very good, and it greatly improved the appearance of the house.

An aviary on a small scale can easily be formed by closing in a space of 3ft. outside a dining-room window, to be formed of wood and glass, similar to a fernery, and it could be so constructed as to be used for this purpose ultimately, if desired; the floor, which should be formed of wood, should be supported by stout iron brackets, made for the purpose, and fixed to the wall of the house, and the top and sides fastened in the same way with wrought iron straps. It should be made in sashes, and to open on hinges outwardly; the top should be covered with ground glass, to prevent it getting too hot in summer time. Inside, it should be arranged with fixed wirework, like the front of a breeding cage for Canaries. It should be made so that it can readily be cleaned out from the inside of the room, and the best way is to form a front, on the same principle as a bird-

cage, which can be got at simply by lifting up the window sash. Care must be taken to make it so that the upper part of the window can be lowered or raised at pleasure. It would require to be fitted with perches and feeding-hoppers, &c. These can easily be arranged to be fitted outside or inside, as may be desired.

Another form of aviary can be constructed at a trifling cost in the following manner:—Select a corner where there are two walls running at right angles to each other. To be substantial and useful, the lower part should be built with bricks, and so arranged as to form a dog-kennel—a good idea for keeping away rats, cats, and mice—or rabbit-house or poultry shelter, or for any other purpose for which it may be found convenient, such as a tool-house or stick-house, or to stow away a lot of flower-pots. It should be built with walls 9in. in thickness to a height of 3ft. 6in. from the ground level; and if required for a tool-house or stick-house, the floor should be sunk to the depth required, and entered by a couple of steps. It should be about 5ft. in length and from 2ft. 9in. to 3ft. 6in. in width. The lower part at one end would require a door and frame, and if required for a dog-kennel or poultry, a suitable aperture could be made in it for either purpose. On the top of this build the aviary. It should have a wooden floor, 1in. thick, tongued and grooved, and be wired in front and at one end, like a birdcage; but the entire end should first be framed to form a door to open on hinges, so as to admit anyone to limewash and thoroughly cleanse it out when needed.

A smaller door, made of wire, to slide, should be formed at the bottom part, and secured with a small rod, two eyes being made at the bottoms of the extreme upright wires used for the frame, or in such other way as may appear best adapted to please the owner. Round the floor should be a wooden border, say, 5in. in depth, to keep in the dirt, and to let the wires into, and either at the side or end a piece, say, 2in. deep, should be cut off this bordering, and again secured to it by hinges, made to fold back for the purpose of cleaning out the bottom part, which can be done with an iron rake or scraper, made for the purpose, with a long handle. This flap can be secured with thumbscrews,

brass hooks or buttons, or with small bolts. The chief entrance door should be kept locked for greater security. The main door would be best glazed first, in small divisions, and protected with wirework; and the front should also be made so that glazed frames or sliding shutters can be used in cold and stormy weather. If shutters be used, the roof should be slated, and a large piece of glass inserted to give light in winter time; fluted thick glass is best. If glazed frames are used in place of shutters, the top may be covered with corrugated galvanised iron, or wood and felting, tarred to keep out the wet and cold.

At the farthest end, opposite the door, a few shelves should be put up, and divided by wooden divisions like pigeon-holes, about 6in. square, and a lath nailed along the front for the birds to rest on. In these holes nests can be placed, or if the birds are supplied with proper material, they will build nests for themselves in these receptacles. Perches should likewise be fixed at convenient distances and in suitable places; stout half-round perches, made of hard wood, and fitted with small wood blocks, notched out, so that they can be readily fixed or removed, to be cleaned when required. A couple of seed-hoppers and two water vessels should be fitted on the front, so that they can be readily got at by the birds; a piece of wood, with wire hooks fixed to it, should be used to place over the apertures whilst the hoppers are removed to be replenished, so that the occupants cannot escape; the hoppers should be framed and glazed at the top and in front. The height of the aviary should not be less than 2ft. in front, with a 2ft. pitch. This would accommodate fifteen to twenty small birds of any sort. To put in more would overcrowd it.

Where there is a stable or other outdoor building that is not being used, an aviary can easily be formed by fitting a framework of stout galvanised wire on to a wooden bottom, and fixing over the window with iron brackets and straps, and, inside the building, making an inner aviary formed of wood, or wood and wire, to act as a shelter or retreat. This could be put up at a trifling cost. The lower sash of the window could be made to open and close by using pulleys and a cord, and attaching a large sash weight to it; or a square of glass could be removed and a small frame fixed

over the aperture, to work on a similar plan. It should be arranged internally similar to the one last described.

I have an aviary fixed in a small brick building, erected originally for a tool-house or potting-house. This building is 10ft. high at the back and 7ft. in front, 3ft. 6in. wide, and 5ft. deep; 4ft. 6in. from the ground is the floor of the aviary, made of lin. deal. It is lighted from the

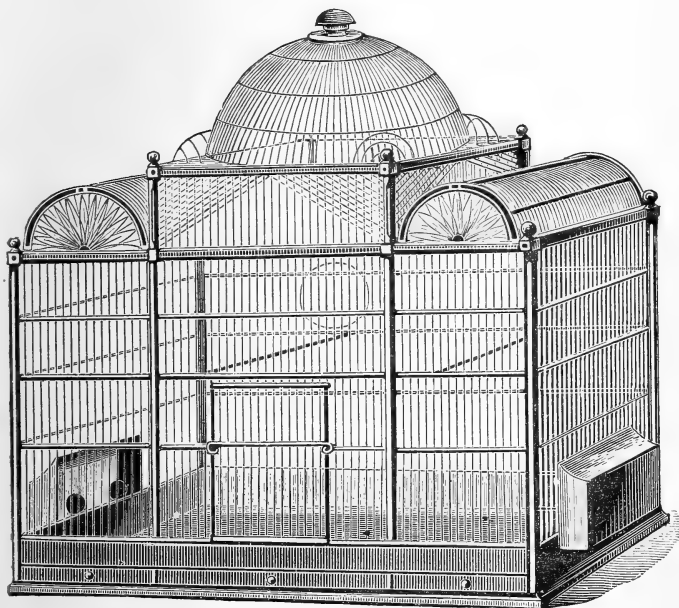


FIG. 4. THE CRYSTAL PALACE AVIARY.

roof; and I have a hole in the door fitted with a frame, to allow a piece of glass to be used as a slide for more light, and for ventilation. It is 2ft. 10in. wide, wired in front, and has a pair of folding doors, framed and wired, one secured with flush bolts, and the other locking to it; this forms a ready means to get at it, in order to thoroughly cleanse and whitewash when needed. In other respects,

it is framed and wired in the front like an ordinary breeding-cage. On the other parts of the walls I have a few cages hung up, in which I place any bird that I find quarrelsome and mischievous. This aviary accommodates from fifteen to twenty small birds admirably.

I could go on enumerating a great many more aviaries for out-of-door use; but I think those which I have already mentioned will be found sufficient to meet the wants and requirements of all classes of bird fanciers.

INDOOR AVIARIES.—There are a great variety of aviaries of this description, so much depending on taste and circumstances. Some are very elaborate and ornamental, but few such possess that essential requirement—utility. I prefer an indoor aviary made in three compartments, so contrived that they can at pleasure be made into two or one. The Crystal Palace pattern is both useful and ornamental when properly made and artistically executed, with a central transept and wings (shown at Fig. 4), and with sliding wired divisions. This pattern of aviary should be fitted up and arranged like an ordinary birdcage, with feeding-hoppers, perches, and water-troughs. Sliding wire doors should be made near the top at each end, so that nest-boxes can be hung on if required. The great desideratum in an aviary is space, combined with airiness, convenience, and comfort for the occupants.

These aviaries are made of various sizes to hold from ten to twenty birds, but it would require one of huge dimensions to properly accommodate the latter number, as overcrowding is not only detrimental to the health of birds, but it leads to bickerings and contentions, which are best avoided. Few indoor aviaries will accommodate more than ten, or at most twelve, birds; and these require to be of such proportions that they would occupy a considerable amount of space, and would therefore be most inconvenient if required for a small room.

Next to this style, a large, single compartment, waggon-shaped aviary is best, the dimensions to be regulated according to the number and kind of birds it is desired to keep in it. One to accommodate ten birds should be from 3ft. to 3ft. 6in. in length, 2ft. in width, and 3ft. in height to the top of roof.

For those Fanciers who desire to keep larger quantities, a spare room would be most suitable. If the entire room be used, a wired frame or wire netting ($\frac{1}{2}$ in. mesh) should be placed over the window, so that it can be opened to let in the air, and prevent the occupants from escaping. The window should be opened daily, except in very cold and inclement weather; and if an iron ventilator (one that opens and shuts with a slide) can be inserted into the outer wall, so much the better; if not, a square hole should be cut out of an inner wall, say, over the door leading to the staircase, and a wired frame, or a wooden frame covered with perforated zinc, fitted into it. At the entrance to the room there should be a lobby erected to fit round the door inside, about 3ft. square if the door opens outwardly, and a little larger if it opens inwardly. This framework can be made of stout laths, say, $1\frac{1}{2}$ in. by $\frac{3}{4}$ in., and fitted with an inner door to open into the room, and covered with $\frac{1}{2}$ in. wired netting, and secured with a stout hook and small iron staple, or with a bolt or lock, so that you can close the outer door before you enter your aviary or exhibit your birds to a friend when it is not convenient to take anyone inside; that is, when the birds are breeding, as they are generally alarmed at the presence of a stranger at these times.

The room can be fitted up to suit the taste and requirements of the owner, with breeding compartments, trees in tubs, or shrubs in large flower-pots. Nests of various kinds can be placed in different parts of the room—perches, feeding-hoppers, tins, and water vessels. The floor should be liberally strewed with sand or very fine gravel, or both, and cleaned out when necessary, as cleanliness is a condition that must be observed, not only for the sake of the birds, but for the sake of those who inhabit the other portions of the house. It is not desirable to place too many varieties together. All the Finch tribes will agree readily enough; but if you mix them up with Thrushes, Blackbirds, Starlings, and other large birds, the probability is that dissensions will occur, and ultimately terminate in some dire conflict and catastrophe. Bullfinches, Goldfinches, Greenfinches, Linnets, Siskins, Chaffinches, Redpolls, and Canaries generally agree well together.

Seed-eating birds should be kept apart from those which

are insectivorous, and foreign birds should, if possible, be kept in a separate place; so that, if all these varieties are to be confined in the same room, it should be divided into separate compartments by wired divisions. It would also be advisable, in cases where you wish to breed with several varieties, or with more than one pair of birds of the same species, to place them first in a cage until an attachment is formed, before putting them in the aviary; but this plan does not always insure safety, as birds display their taste in the choice of partners very much in the same way as human beings, but they rarely forsake one of their own species for one of a different kind. If a small aviary is required, one could be formed in the recess of a room, or in a portion of the room only. Everything depends, as before stated, on circumstances.

I could continue giving information in this direction almost *ad infinitum*, but I think I have said enough on the subject, as that which I have given is of a practical character; and experience has taught me that true fanciers have sufficient ingenuity, when an idea has been given them, to carry it out to their satisfaction; and this is all that can be desired. I may mention that it is a commendable plan to have aviaries which are intended for sitting or other rooms, and made in the form of cages, placed on movable stands, made in the form of tables on castors. The tops of the stands should be quite 1ft. longer and wider than the aviaries, so as to leave a clear space of 6in. all round them; and fitted round the top of the stand should be a frame, about $2\frac{1}{2}$ in. high, to prevent the seed and dirt from getting on to the carpets. One side or an end of the frame should be fitted with hinges to let down, so that the dirt can readily be swept off on to a dustpan. Glass borders placed round cages are not altogether satisfactory, as they do not entirely prevent dirt being scattered about the room, which is, of course, objectionable.

CAGES.—The cages and other fittings shown in the following pages will enable anyone to procure at the outset all that is needed, and with the certain knowledge and satisfaction that he will not be disappointed with his purchases, providing care is taken that they correspond in every particular with the drawing and dimensions laid down.

Bird cage manufacturers, even of long standing and of high repute, make many cages and aviaries that are exceedingly objectionable, and in some cases totally unsuited for the purpose for which they were designed.

Cage makers are not always bird fanciers; hence they themselves are ignorant of the faults that exist in many of their productions. Cages, as a rule, made by professional cage makers, are too small for the birds they are made to accommodate; and this is more particularly observable in cages for large birds, such as thrushes, starlings, &c. In some cages the doors are so circumscribed that it is with difficulty the hand can be introduced to clean them out; and as to getting in a suitable sized dish to enable the birds to partake of their morning bath, that is altogether out of the question. Others make the apertures so small that a bird cannot possibly get its head out, or so large that it escapes bodily. In some cages the seed and water vessels are most awkwardly placed, and in others they go inside entirely, in the form of two small glasses, evidently designed from salt servers. About an hour after a bird has been supplied with its usual viands in a cage of this kind, it will be found that it has scattered its seed all over the cage bottom, and, having bathed in the drinking glass, nothing is left but a few drops of dirty dregs for the rest of the day, or perhaps longer.

In some of these cages the perches are so awkwardly placed that the bird can only reach its food and water with the greatest difficulty, and in others they are placed so near to the ends of the cage that the birds damage their tail feathers by the action of turning round. Sometimes cages are constructed without a draw-board or opening to clean them out, whilst others are encumbered with so much timber about the parts that should be open, that sufficient light cannot penetrate to the interior of the cage. These and other faults of a similar character must be looked for and avoided.

A suitable cage should be so contrived as not to be too heavy to move about easily; and it ought to give plenty of light and air. The doorway should be roomy, and sufficiently wide to admit of a vessel large enough for bathing purposes, or a small whitening brush, to give the inside of the cage a coating of whitewash twice a year. The perches and seed and water

vessels should be placed in convenient positions, so that the birds will have no difficulty in making use of them. The wiring ought to be firm and uniform, and the apertures through which the birds feed should be carefully made, and of sufficient dimensions to allow the birds to get to their food and water quite easily, without damaging their plumage.

Some cages are made so high, that newly caught or partly domesticated birds placed in them frequently injure themselves by dashing violently against the tops. Others go to the opposite extreme, and are made so low that a bird can with difficulty stand erect, without bringing its head in contact with the roof. It is only by experience and observation that these irregularities can be discovered and remedied. The

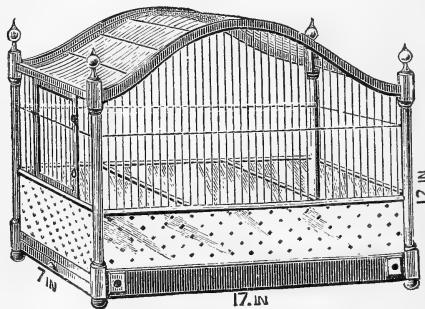


FIG. 5. DRAWING-ROOM CAGE.

illustrations given in this chapter, together with the explanations which are subjoined, will enable anyone to avoid the annoyances and difficulties so often met with by the uninitiated.

Fig. 5 represents a drawing-room cage, which should be made of mahogany, walnut, satin wood, or maple, and French polished. It should be wired with bright tinned iron wire. At the right hand bottom corner is a seed drawer or feeding trough; this ought to be made of tin, with a wooden front, matching the woodwork of the cage, or stained black and afterwards polished, fixed to it by small screws. In the centre of the drawer there should be a partition, so that seed

can be supplied in one part and soft food in the other, or two separate kinds of seed, as may be required, according to the description of bird kept in it. A similar trough for water is placed at the left-hand bottom corner. The door is placed in the end, at the upper part, so that a bird can be transferred to it either from a small store cage, or any other cage, by placing the open doors of the two cages together, and driving the bird with a piece of thin stick or folded paper towards the opening; this prevents the necessity of catching the bird, and will be found convenient to such persons as are not accustomed to handle them, and who not unfrequently injure the birds during the operation. To the first bar of the cage, from the basement, is a row of figured or ornamental

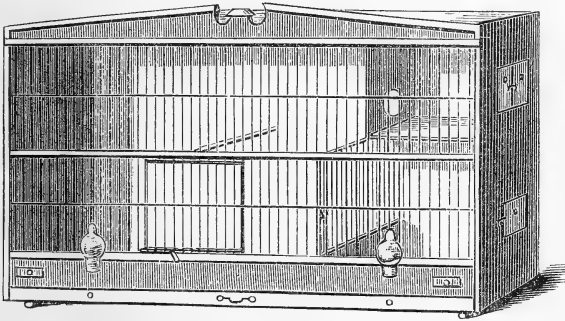


FIG. 6. CAGE FOR BREEDING CANARY AND FINCH HYBRIDS.

ground glass which is intended to answer two purposes: the first and principal one is to prevent the occupant scattering seed and dirt about the room, and secondly it is to act as a shelter or protection to a bird not fully reconciled to a state of domestication. The glass is secured to the front of the cage by wire fasteners, which are put through the cross bars or supports, and may be removed at any time if desired. Care should be taken to see that these wires are not left with sharp points inside, as they are liable to cause injury to the birds. The cage under consideration is suitable for canaries of all varieties, mules (hybrids) of any kind of the *Fringilla* cross, also Bullfinches, Goldfinches, Greenfinches, Siskins, Robins, and the

like. One of the same description, but of larger dimensions, would not be objectionable for a Nightingale; but it is not adapted for Larks or Linnets, nor for any of the larger singing birds, such as Thrushes, Blackbirds, or Starlings.

Fig. 6 illustrates a most convenient and handy cage, and well adapted for a Nightingale, as these birds require plenty of space and a little seclusion; it is, however, more particularly intended for a breeding cage, either for Canaries, or hybrids between these birds and some of the Finch tribes, such as the Goldfinch, Greenfinch, Linnet, &c. It may be made of any kind of wood, but it looks very well made in mahogany, French polished or varnished with fine furniture varnish outside, whitewashed inside, and wired with bright

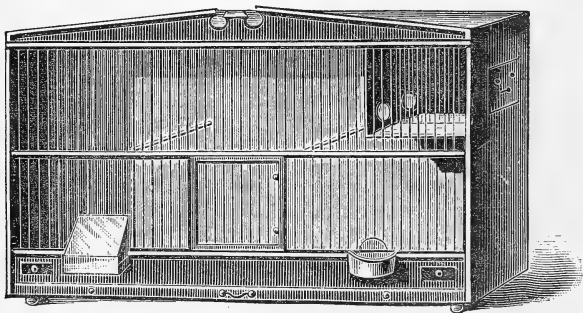


FIG. 7. BREEDING CAGE FOR FINCHES.

tinned iron wire. All good and satisfactory cages ought to be dovetailed. In other respects the engraving fully explains itself.

Fig. 7 is an illustration of a cage designed expressly for the purpose of breeding from wild birds in confinement, and more particularly with the view of obtaining hybrids, such as those produced between the Bullfinch and Goldfinch, Bullfinch and Linnet, Greenfinch and Siskin, and similar crosses. It requires to be roomy and convenient, and should not be of less dimensions than the following: length, 2ft. 2in.; height, 1ft. 8in.; width, 11in. At the right-hand top corner is a breeding chamber, which should be separated or divided into

two parts with a wired division, the wires being $\frac{5}{8}$ th of an inch apart, to permit the parents to feed their offspring from the opposite side, or compartment. This erection or chamber should be supported by two metal brackets, the same as those used for fixing a cornice to a window, and fitted tightly between them and the top of the cage. At the back of the cage should be a hinged door opposite that part where the breeding loft is to be placed, and sufficiently large to admit of its being got in and out without difficulty, as it is intended to be removed when not in use; the top, bottom, and front of this compartment should be made of $\frac{1}{4}$ in. planed deal. In front (facing inside of cage) it should have two round holes or apertures for ingress and egress of the birds, and two larger holes in the bottom into which to fit the nests, which should be formed of tin, with perforated zinc bottoms, or made of suitable leather having a rim round to prevent them falling through. This chamber can be secured firmly by passing two half inch brass screws through the top of the cage into the wood forming the top of the breeding gallery. It requires no back, as the end of the cage answers that purpose; at the side next the front of the cage should be fitted in grooves a piece of ground or figured glass to screen the birds from observation; nothing is needed at the other side next the back of the cage. In the end of the cage where this construction is fixed should be two small doors opening outward on hinges, to enable the breeder to take cognizance of what is going on inside.

The object in having the breeding chamber constructed to draw out, is to enable any one to thoroughly cleanse it as well as the cage after the expiration of the breeding season, and to more thoroughly exterminate any parasites that may have found lodgings therein. Its removal also gives more space in the cage, which can then be utilized as a flight cage for young birds. At each end is a tin drawer for soft food to be given to the birds during the period of nidification, and afterwards when needed. This arrangement will be found satisfactory, as it often prevents bickerings which are apt to arise between the parent birds and their offspring; for as soon as the fledglings are able to cater for themselves, and occasionally before they can do so in a satisfactory manner, they dispute the title of the old birds to the good things provided

for their daily wants. The cage can be made of any kind of wood to suit the taste and requirements of those who need them; but by all means use the bright tinned iron wire, which is much more durable and sightly than the common iron wire, which speedily rusts and decays.

Fig. 8 is intended as a double breeding cage to be used for obtaining hybrids between Finches and Canaries; the division in the centre of the cage is made to run in grooves, top and bottom, and can be removed at pleasure. If used for one pair of birds only, the young fledglings and the male parent can be shut off from the hen, when she has commenced a second brood; and this is the plan we prefer to all others. When the box nests (Fig. 13) are used in

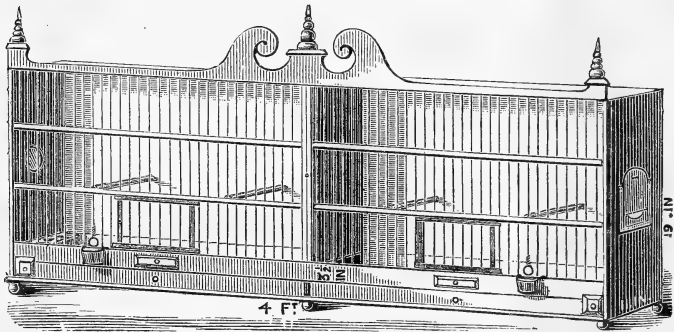


FIG. 8. DOUBLE BREEDING CAGE FOR FINCH AND CANARY HYBRIDS.

these cages it will be necessary to have part of the back or ends of the cage to open on hinges, as a door, to admit them. The small apertures (shown at the ends, in the drawing) are for transferring birds to or from this cage to another; by placing two or three of them together, and lifting the slides that cover the apertures, a roomy flight cage can be formed, and the birds can then get an abundance of exercise; this of course is only done after the breeding season is over, and the moulting process begun. In other respects the engraving is sufficiently explanatory as to the construction and character of the cage.

The cage illustrated at Fig. 9 is specially adapted

for Blackbirds, Thrushes, and Starlings, which require plenty of room, and when made in the same form, but of increased proportions, say 6in. longer, 4in. higher, and 3in. wider, and wired with stouter wires set farther apart, it is equally well adapted for such birds as Jays, Magpies, Jackdaws, Hawks, &c., as these birds, being much larger, require a proportionate amount of space. It may be constructed of any kind of wood, but hard wood is best. The wires should be very stout, and set wider apart in the larger cages.

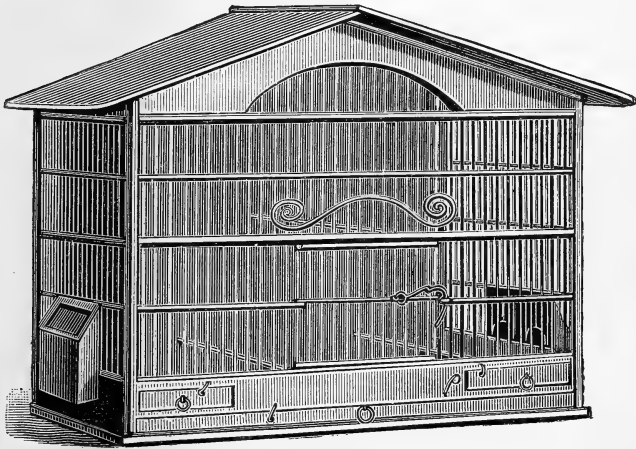


FIG. 9. BLACKBIRD'S CAGE.

When made for Blackbirds, Thrushes, &c., $\frac{3}{4}$ in. should be allowed between the wires, and for Jays, Magpies, &c., 1in. The wood should be light and strong, say $\frac{1}{4}$ in. dressed boards for the back and top, and $\frac{3}{8}$ in. for the frame, cross-bars, and bottom. No draw-board is required; these are clumsy contrivances, and harbour dirt and vermin. Cut a lath off the front board or frame, next the bottom of the cage, about 1in. in depth, and secure it at one end by driving a piece of stout wire, 2in. in length, through the cage bottom, and the lath, which is to take the place of a draw-board, into the upper frame, about 4in. from one end; it should be

first fitted to work easily. When it is shut into its place, it may be secured at the other end with a brass or bone button, or a piece of wire bent to answer the same purpose. This lath or dummy draw-board will work on the wire the same as on a pivot.

The apertures for the birds to get at their food and water must be made in proportion to the size of the birds for which the cage is intended; 1in. in width, and $1\frac{1}{2}$ in. in height, will suffice for Thrushes, &c., and $1\frac{1}{2}$ in. in width,

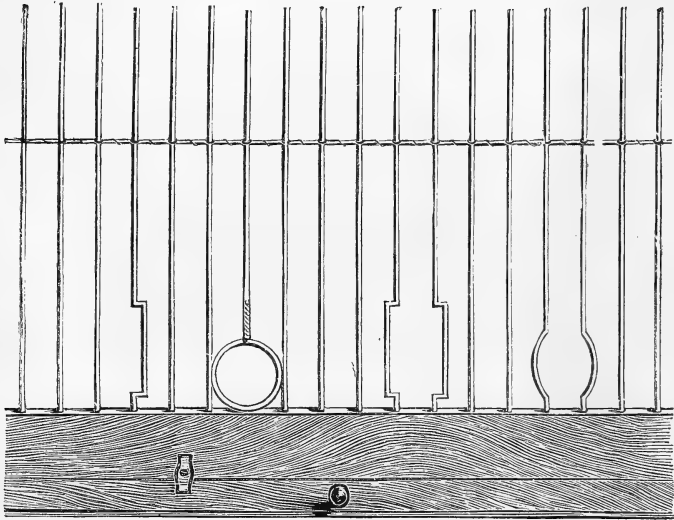


FIG. 10. WIRE OPENINGS FOR CAGES.

and $1\frac{3}{4}$ in. in height, will do quite well for the larger specimens. The apertures should be made square at the bottom and domed at the top, and the down wire of the cage soldered to it in the centre for a support; the bottom ends being driven $\frac{1}{2}$ in. or so into the woodwork. This gives ample room for the birds to get to their food when the supply gets low, or to get their heads out freely when they desire to give themselves a small shower bath. The

perches should be made of hard wood, such as oak or ash, half round at the upper side and square beneath; the birds can then get a firm grip at them. The top of the cage is constructed like the roof of a house, to run off the wet when the birds are hung outside. It is as well to give the wood roof an additional covering of zinc to render it watertight.

A cage, similar to the largest of those mentioned, would be well adapted for an Owl, providing that one end of it, to the extent of 12in., was boxed in, and a round hole facing the inside of the cage formed for the bird to pass through from one compartment to the other, as Owls cannot endure the

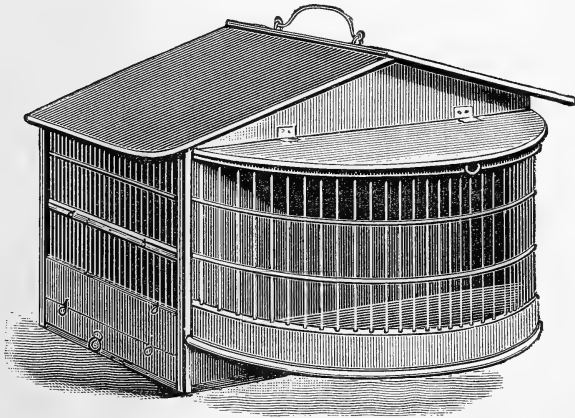


FIG. 11. LARK'S CAGE.

full glare of a mid-day sun. A door must likewise be constructed to open outwardly on hinges, at the end of the cage, to get easy access to this inclosure, in order to clean it out when necessary, and it must be made large, as it will be necessary to introduce a 7in. flower pot saucer, or some similar vessel, to afford the occupants a bath at such times as they need it, which will generally be once or twice a week during seasonable weather. The inside woodwork should be lined all round with thin sheet zinc, as the excrement from these birds is sometimes offensive, especially

when they are kept in a sitting room. It can then be cleansed more easily and thoroughly than it is possible to do when wood alone is used. The expense of doing this would only amount to about 1s. or 1s. 6d.

Fig. 10 gives specimens of wire openings, suitable for all kinds of cages and indoor aviaries.

The illustration given at Fig. 11 is a good representation of a suitable cage for a Skylark, and it is equally well adapted for a Woodlark or Titlark, in fact it is a proper Lark's cage. Cages for these birds must not be made high, or they will be

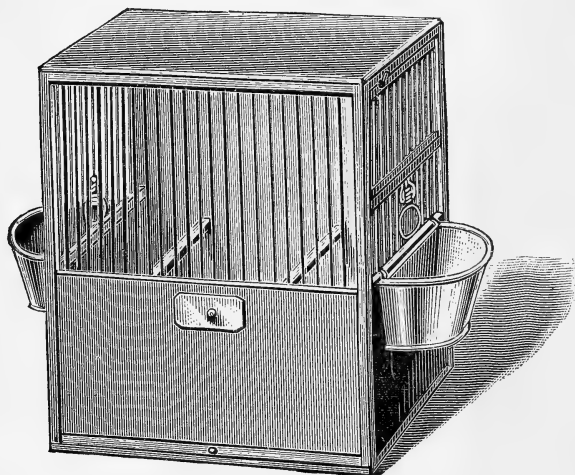


FIG. 12. LINNET'S CAGE.

certain to injure themselves against the tops of them, as it is natural for these birds to soar in the air whilst they sing. A good plan is to have the top of a Lark cage to open on hinges, like the lid of a box, and to secure it at the back with wire hooks. Four pieces of cork, about half an inch in thickness, should be secured to each corner with small screws; a thin narrow wooden frame should be made to fit on to these, and covered with baize or flannel, and fastened to the corks with small copper tacks. This affords the birds ample protection, and

it can easily be removed to be dusted or renewed, when required. The bow or bay front can be made to open on hinges to put in a fresh sod or a bath; but it is better that the top of the projection or bay only should be made to open, as it answers the same purpose, and the cage will be much stronger if the front be a permanent fixture. The ends may either be wired or made of wood. When wired, the bird gets more light and air; when of wood, it has more protection from cold winds. Some people wire one end, and construct the other of wood; this looks rather odd, and spoils its appearance. The cage may be made of any description of wood; some prefer mahogany French polished, others like fir painted green; it is all a matter of taste and consideration of cost.

A Linnet requires a smaller cage than probably any other species of British bird, as it is of a restless disposition. In a small cage it sings with more freedom than in a large one, and, being a very active and energetic bird, it is, when well, constantly in motion, so that the limited space in which a Linnet is usually kept has no detrimental influence on its general health and spirits. The cage should have a seed trough at one end and the water tin placed at the other, and a small tin drawer in the centre for soft food (see Fig. 12). At the end where the seed trough is placed should be the door; only two perches are needed; these should be fixed about two inches behind the apertures provided for the bird to get to the water and seed troughs.

Linnet cages should not exceed the following dimensions: length 10in., height 9in., and width 5in.; the base, or bottom part of the cage, should be three or $3\frac{1}{2}$ in. in depth, and at one end of it a $\frac{3}{4}$ in. lath should be fitted to work on a wire pivot; this is to facilitate the cleaning out of the cage.

When the tin drawer is not being used for soft food it should be filled with sand, so that the bird can obtain a supply without having to descend to the bottom of the cage, and risk damaging its tail feathers. Instead of being made square, some Linnet cages are made with a waggon-shaped top.

Never have a cage or aviary made with brass wires, as the action of the gas and sometimes a damp atmosphere causes them to become coated with verdigris, or acetate of copper, which is very poisonous, consequently dangerous to the birds.

We ought to mention that where cages are used in numbers, in a room specially adapted for breeding birds, a skeleton wooden frame or stand made of two inch laths, is preferable to shelves for placing them on; as it affords less harbour for parasites. These frames can be put together with screw nails, and can be taken to pieces at pleasure, or for the purpose of removal. The laths should be 2in. in breadth and made of $\frac{1}{2}$ in. deal. The length, depth, and width of the frame must be regulated according to the size and number of cages it is intended to accommodate.

APPLIANCES.—A good nest, to be placed inside a breeding cage or aviary, and designed specially for the use of wild birds kept in confinement, is the box nest shown at Fig. 13;

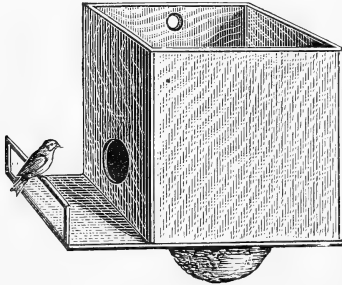


FIG. 13. BOX NEST.

for few of them care to breed in open exposed nests. The bottom and sides are made of wood, and likewise the ends; but it is an improvement to have one end glazed with ground glass, to give more light, or it can be fitted to slide in and out of grooves. At the other end is an aperture for ingress and egress; the bottom is extended forward to admit of a perch being fixed to it for the convenience of the birds when going to or from the nest. A large round hole is made in the bottom to admit a tin nest; the top is left uncovered for ventilation. At one side, near the top, a hole is made to hang it up to the back of a cage, or the wall of an outdoor aviary.

When used in cages they should be placed at one end,

within 2in. of the roof or ceiling; the tin nest should be lined with felt before being put in its place. It would be an improvement to have the nest fitted inside to a stout wire frame, and open wirework surrounding it, so that the refuse from the young birds would fall to the bottom of the cage instead of accumulating in the nest box. If made with a wood bottom, the nest should project from $\frac{1}{2}$ in. to $\frac{3}{4}$ in. above the floor, to allow sufficient space for the collection of excrement, and a nest box so constructed will require to be removed

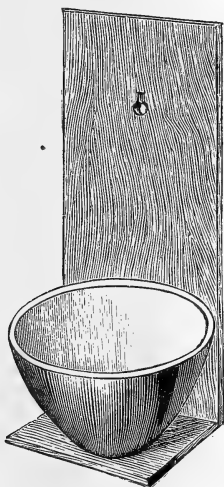


FIG. 14. COCOANUT NEST, on mahogany frame, fastened with screw through bottom.

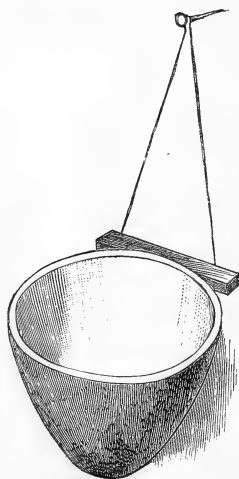


FIG. 15. COCOANUT NEST, fitted with piece of wood and wire.

after the young birds have left it, in order that it may be entirely freed from dirt. This description of nest is preferable to all others for the purpose for which it is intended, and it will be found by experience that, where several different kinds of nests are placed in an aviary along with it, the birds will almost invariably choose the one here represented. It can be contrived to hang on the outside of the end of a breeding cage if preferred.

Figs. 14 and 15 are sketches of coconut nests. These

are made by cutting a cocoanut in halves with a saw, removing the kernel, and screwing each half separately to a wooden frame, or to a piece of wood scooped out to fit the back of the nest, and left square on the other side; inserted in this is a piece of wire, formed in a triangular shape, and secured by bending the wire at the ends, and driving them into the wood attached to the shell. The wood can be fastened to the shell by means of small screws driven from the inside. They should be lined with felt, secured to the nest by thin glue size. The frame to hold one of these nests or shells consists of two pieces of wood, the one forming the back being from 7in.

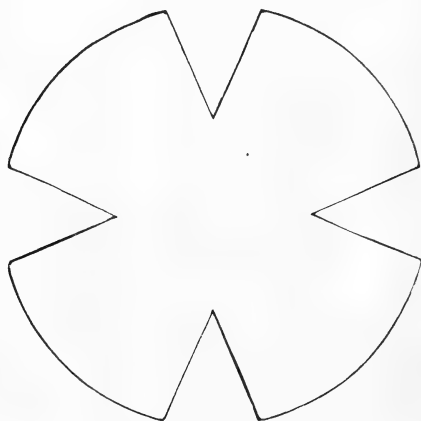


FIG. 16. PATTERN OF A FELT LINING FOR AN ARTIFICIAL NEST.

to 9in. long, and $2\frac{1}{4}$ in. wide; the bottom piece is the same width and nailed it it, and left sufficiently long to hold the nest securely. Cut the felt as shown in Fig. 16, and sew the openings together with a needle and thread.

Fig. 17 represents the form of a basket nest, which is to be used in an aviary, and secured to the roof by three pieces of stout string or wires. These nests may be procured from most bird dealers in large towns, or from a basket maker. They should be placed in situations where they are not likely to be interfered with or run up against by anyone who may have access to the aviary.

The bread and egg sieve shown at Fig. 18 is used for reducing hard-boiled eggs and soft bread into very fine pieces for food for the birds; it saves much labour in chopping eggs. It is easily constructed, and consists of four pieces of wood nailed together, 2in. in depth, 1ft. long, and 9in. wide, or smaller if desired. The top is covered with a piece of

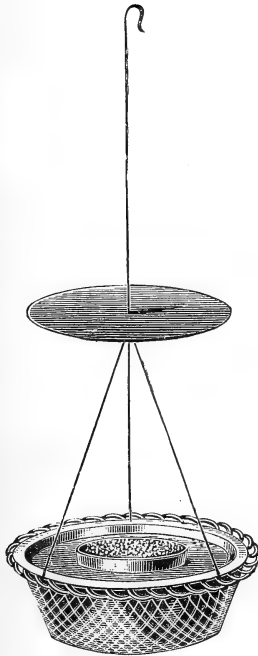


FIG. 17. BASKET NEST.

perforated zinc; and the egg and bread are forced through with a wooden spatula (Fig. 19) or a stout table knife. The spatula should be made of hard wood, oak, teak, elm, or ash, from 2in. to 3in. in width at the bottom, and wedge-shaped, with a round handle for use.

Figs. 20 and 21 are drawings of seed hoppers, which should be furnished with glass covers, and made to slide in or out in cut grooves.

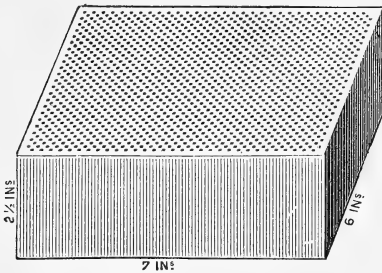


FIG. 18. BREAD AND EGG SIEVE.



FIG. 19. SPATULA OF WOOD OR IRON.

Fig. 22 is an illustration of a self-supplying seed hopper, suitable for either a cage or an aviary. The principle upon which it acts is shown in the section A annexed.

Fig. 23 illustrates a drinking tin, to hang on a cage. It should be made of the best tin, well soldered and Japan varnished outside.

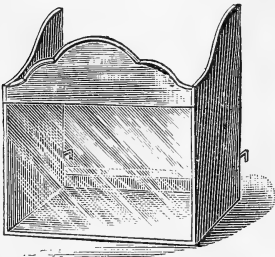


FIG. 20. SEED HOPPER FOR SINGLE BREEDING CAGE.

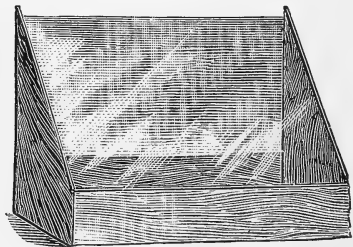


FIG. 21. SEED HOPPER FOR DOUBLE BREEDING CAGE.

Figs. 24 and 25 represent a glass drinking vessel and a wire holder to hang on the cage to hold it.

Fig. 26 shows a feeding drawer for supplying soft food, or egg and bread, to birds during the period of incubation, or

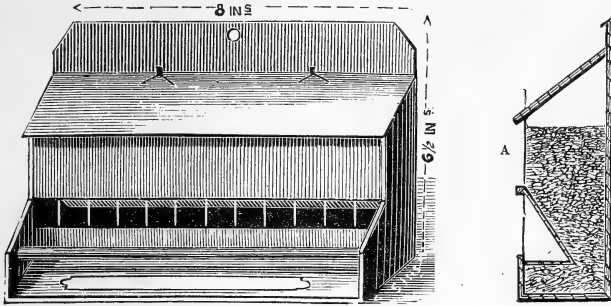


FIG. 22. SELF-SUPPLYING SEED HOPPER FOR AVIARY.

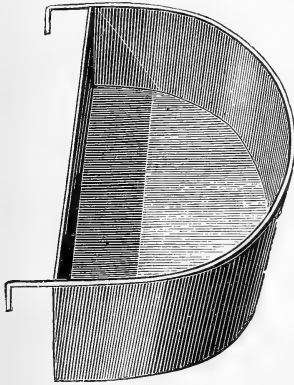


FIG. 23. DRINKING TIN.

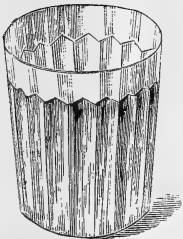


FIG. 24. DRINKING GLASS.

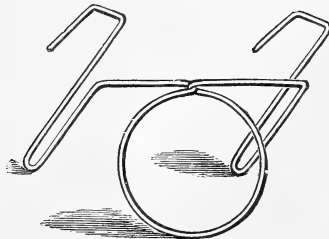


FIG. 25. WIRE HOLDER FOR DRINKING GLASS.

when a bird is out of sorts, or a change of diet is considered necessary. It should be made of tin, but when meant for a well finished cage, it is usual to put on a wood front, to match the woodwork of the cage, and a bone or brass knob is screwed into the centre of it, or a small brass picture ring to draw it out by. These tins must be kept scrupulously clean.

Vessels of this sort are also made of glazed porcelain, and they not only look well, but they can be kept clean with very little trouble; the greatest drawback which they possess is that they are easily broken if they slip out of your hand,

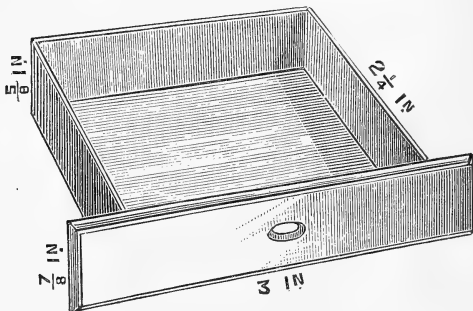


FIG. 26. FEEDING DRAWER FOR SOFT FOOD.

which happens now and again. They can be procured at any of the potteries in Staffordshire or Lancashire. Hanley is a good place to get them from. They are made in two sizes; the first size costs about 2s. 6d. per dozen and the larger size more, but the latter are only required for large birds, which subsist chiefly on soft food. It is a most essential thing to keep these vessels perfectly clean; hence those just referred to excel all others in so much that they can be easily scraped or washed out.

Fig. 27 is an illustration of a scraper made of wrought-iron. This is a most useful tool for cleaning out cage bottoms or indoor aviaries, and should find a place amongst the appliances of all bird keepers.

A small fine hair sieve for removing the dust from seed; a few grocer's tin canisters or stone jars with lids to keep

it in; a small medicine chest; one of Messrs. Hancock Bros.' Bread Crumbing Machines, sold at 15s. each; a self supplying water fountain or two; a few glass jars or wide-mouthed quart bottles; a few jelly glasses or small flower-pot saucers a small coffee mill for crushing hemp seed; a pestle and mortar; a pair of small sharp scissors, and a couple of clean calico dusters, are some of the further requirements needed by those who keep a goodly number of birds in confinement.

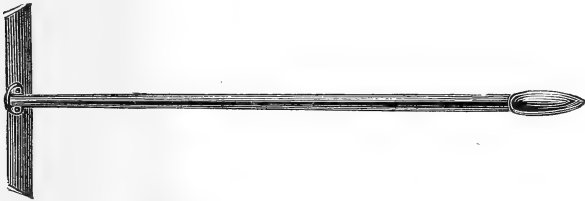


FIG. 27. SMALL IRON SCRAPER.

A number of other appliances are used by different fanciers, but those named here are all that are necessary, and for the most part have the advantage of combining simplicity of construction with general utility.



CHAPTER IV.

BREEDING AND MANAGEMENT.

VERY few of the different species of British birds breed in confinement, and those that do belong almost exclusively to the Finch family. Greenfinches, Goldfinches, Bullfinches, Linnets and Siskins will breed freely in properly constructed cages (see Fig. 6) in a room, if they have been hand-reared or obtained before their first moult. The nest box shown in Fig. 13, should in all cases be used, and will be found satisfactory.

The whole of the birds mentioned will rear their young on hard-boiled eggs mixed with an equal quantity of white bread, about two or three days old. Chop the egg fine, and rub the bread into fine crumbs between the hands, or pass it through the egg grater (see Fig. 18), which is more satisfactory and a great saving of time; the egg and bread crumbs must be well mixed together. The birds must be kept supplied with good canary and the best German rape seed, in the proportions of two parts of the former to one of the latter; and green food, such as watercress, dandelion leaves, groundsel, chickweed, or young lettuce, should be given to them fresh daily at each feeding, and twice a week about a tablespoonful to each pair of birds of the following mixture of other seeds, as a change of diet; Groats, three parts; linseed, two parts; hemp seed, inga seed, and maw seed, each one part. Mix these well together by shaking them up in a wide-mouthed bottle or tin canister.

Greenfinches and Bullfinches are the best feeders. Where possible, it is as well to make use of the first-named as nurses for any birds of the Finch tribe, and they will also

be found of great value, if used in this way, to fanciers who breed hybrids by crossing two of the different varieties of finches together, such as the Bullfinch and Goldfinch or Goldfinch and Siskin.

It must be borne in mind that neither Goldfinches nor Linnets will submit to be interfered with during incubation; and, in most cases, they will forsake their eggs or young if they are molested.

If it is preferred to breed the varieties named in an outdoor aviary, we recommend a "lean-to" similar to that shown at Fig. 3. Along the wall space compartments should be erected in all respects similar to the cages recommended, and each pair of birds furnished with one. It is a good plan to have a nursery made between two of these, with a door of communication at each side leading to both cages, so that when a hen commences a second brood, if the first appear troublesome to her, it is an easy matter to run the cock and young ones into it, and shut them off until they can feed themselves. It is best to keep all seed-eating birds in a separate aviary apart from soft-billed birds, and more particularly when they are flighted together.

Starlings, Blackbirds, Thrushes, Robins, Blackcaps, Hedge-warblers, Tits, Wrens, and Wagtails will most of them breed in outdoor aviaries under proper arrangements and good management. The surroundings should be made as much as possible like those to which they are accustomed when at liberty. In order to insure success, it is necessary to keep them in separate compartments or divisions, each pair of birds having plenty of space. This is not only advisable, but strictly necessary in the case of Blackbirds and Robins, as they would, if placed together in pairs in the same aviary, destroy each other. Two or three pairs of Starlings, or even Thrushes, that have been reared together in an aviary during the winter might agree, if care was taken to pair the birds properly in a cage before turning them into the breeding inclosure. As soon as birds kept together promiscuously (cocks and hens) begin to quarrel, which will take place in the early spring, separate the males and females, and put each kind together into a separate aviary.

Feed the males at stated times; say at 8 a.m., 1 p.m., and 5 p.m., and notice which of the males obtains the

mastery for the food. If it is desired that two or three pairs of the same variety are to be tried to breed together in one aviary, pick out the chief or master of the males, and turn him among the hens; as soon as he makes choice of one, remove these to a cage by themselves; then select the cock that usurps and holds the place of the one removed, and act similarly, for in this way only are they likely to agree. If turned all together, severe fighting, mutilation, and death in some cases will ensue, and reconciliation afterwards would be next to impossible; always obtain more females than males, and keep one of each by themselves away from the other birds, in the event of an accident or loss from unforeseen causes.

A few pairs of Tits, Wrens, or Wagtails might agree together, providing they are not mixed; that is, Tits together by themselves, Wrens by themselves, and Wagtails by themselves. In a mixed aviary, many birds, such as Greenfinches, Goldfinches, Bullfinches, &c., will select partners and endeavour to breed together; but no end of casualties occur through jealousies. They quarrel about breeding places, two or three wanting to occupy the same place or nest; others will break eggs that are laid, through mischief or ill-will. Sometimes they quarrel about building material and tear each others' nests to pieces. Some birds are so vicious as to kill the offspring of their neighbours. In fact, it is a system fraught with evils, and small success attends anyone who adopts it; hence, it is unwise to resort to such a method.

To arrange an outdoor aviary for Starlings and soft-billed birds, it should be placed in a garden, sheltered as much as possible from the east and north winds, and should be an open aviary. At the back of it have the shelter recommended in the chapter on aviaries. Under the eaves inside, small boxes with large apertures should be placed for Starlings; these should be deep and tolerably spacious, so that the birds can be entirely hidden from view. A few half-inch holes should be made with a brace and bit at the sides or ends of them, near the top, to let in air and light. In the open space in front of the aviary, where the birds take exercise, should be placed, in some secluded corner, one or two stumps of old trees, with holes in them. Should there be no holes in them, scoop one or two out near

the top on each side, and fix the clumps up firmly on a mound of earth; or, if you wish the erection to look well, make it into a rockery. In front of this place a young tree or shrub, grown in a tub or set in the earth, so that it will form a shelter from observation. On one side, or even both sides, of the aviary, form a flower border two feet in width, and sow marigolds therein, and put a few flowers, such as German stocks or asters, in them, to attract flies and insects, for which the birds will look out sharply and devour.

Make a gravel walk all round the exercise ground 2ft. 3in. in width, and have a bordering of deal painted, fancy tiles, or boxwood. In the centre of it divide the ground, and have one half as a grass plot and the other plain soil. In the latter part, before you commence breeding, gather and place a lot of worms, the larvæ of insects, and some ants. These will breed and supply the birds with food. A few artificial nests should be placed here and there, and some small boxes with wired fronts, containing moss, wool, hair, straw, &c., for the birds to build their nests with; these should be placed near the ends of the perches, where they can be easily seen and are readily accessible.

In the case of Bullfinches, Greenfinches, &c., whitethorn bushes, hollies, shrubs, &c., should be grown in the borders, as well as flowers; and outside the aviary, close to the wires, should be another border, in which should be grown French marigolds, dahlias, and such plants as insects are partial to, and a few gooseberry and currant bushes, so that those birds which peck buds can get access to them. It is well also to hang up inside the aviary a piece of uncooked meat in the full glare of the sun, so that the blue flies may strike it, when a supply of maggots will be the result; on which the birds will greedily feed themselves and their young. For Tits and small birds the wiring of the aviary must be much closer than for larger birds, or they would escape.

Many other birds, under circumstances such as these, might, and no doubt would, breed in confinement, but not many fanciers would care to take the trouble or incur the expense of rearing them, seeing that birds of these and most other descriptions are so readily procurable from professional

bird catchers and dealers at very moderate prices, during the autumn and spring months.

Breeding Hybrids is, on the other hand, a most fascinating pursuit, for, although it is attended by many difficulties and reverses at times, it is, to those who view all apparent obstacles as incentives to action instead of deterrents, a very pleasing and profitable pastime.

GOLDFINCH AND BULLFINCH MULES.—Of all the different hybrids obtained by crossing two distinct varieties of British birds, none afford more gratification than those produced between the Goldfinch and Bullfinch. The specimens are usually exceedingly pretty, and none of the hybrids are more readily obtained.

They may be bred either in a cage or aviary; if in the first-named, the dimensions should be as follows: Height, 2ft.; breadth, 1ft. 6in.; length, 3ft. The top, bottom, and back should be of wood, and the ends and front a combination of wood and wire, made in all respects similar to a breeding cage such as is used for canaries, only it should be so constructed that the upper part at each end of the cage either opens on hinges, or can be moved up and down in a wired frame, so that free access can be had to introduce without difficulty a small bush of furze, a shrub, or evergreen, or a few cuttings from trees; or for getting a nest-box in and out when required.

Where a cage is employed in preference to an aviary a wooden nest-box, made in the form of an ordinary box (see Fig. 13), without a lid, say 6in. in height, $4\frac{1}{2}$ in. in width, and 5in. or $5\frac{1}{2}$ in. in length, is necessary. The bottom of the box should be made to project forward, say $2\frac{1}{2}$ in. to 3in. beyond these dimensions, and on this projection a beading ought to be fastened, to serve as a perch for the birds, on which they can alight in going to and from the nest; in the front of the box a circular hole should be made, for ingress and egress, and another in the bottom of it; in the latter case, it should be 3in. or $3\frac{1}{4}$ in. in diameter. This hole is for the purpose of fitting in a nest-pan, which should be made of tin or zinc, with a perforated zinc bottom, and with a rim about $\frac{1}{2}$ in. in breadth, to keep it secure and in its proper place.

The nest-box should be placed almost close to the roof of the cage, and near the end of it; a small hole being bored,

about the centre of one side, but near the top of the box, with a gimlet, and a screw nail fixed to the back of the cage, will be the best means to adopt to insure its safety. The top of the box should be left open, for light and ventilation. The tin pan may be lined with felt or horse-cloth, fixed in with thin glue size; but the birds ought to be furnished with all the usual materials to build a nest. These boxes are preferable to all other arrangements for cages, as there is no necessity, where they are used, to supply furze or plants of any sort, unless the hens are known to be naturally timid, as wooden boxes afford as much privacy as is necessary.

The usual perches, vessels for seed and water, and drawers, or tin pans for the use of soft food, should be fitted to the front or end of the cage. At the extreme bottom of the front of the cage a lath should be fitted, to answer the purpose of a draw-board, so that it can be readily cleaned out; the lath should be $1\frac{1}{4}$ in. in depth, and a small iron scraper (see Fig. 27), made for the express purpose, should be used for removing the dirt off the bottom of the cage. This operation should be performed about once in ten days, or oftener if required, excepting when the birds are incubating; in the latter case, it would be well to omit the cleansing until the young brood are from seven to ten days old. If left to a later period, there would be a danger in startling them, as by any sudden fright they would be likely to bound from the nest to the bottom of the cage, and, if an untoward circumstance of this kind occurred, there would be some danger of their perishing for want of warmth and maternal attention; for it frequently happens that when a young bird leaves the nest at the age of twelve days, it is an all but impossible task to induce it to return and remain there afterwards.

In the selection of birds for the purpose already mentioned, a hand-reared Bullfinch hen, that has been bred the previous year, is a desirable acquisition; in any case, she must be several months indoors, and kept with other birds in a large cage or drawing-room aviary for some time, choice being given to those that are tame and tractable. The male bird should likewise be house-moulted, one that has been bred with canaries to be preferred. Both must be in robust

and vigorous health, and ought to be caged together during the winter or spring months. To insure success, the cage in which the birds are to be placed for breeding must be kept in a quiet corner of the room, and, if possible, where Canaries and Goldfinch and Canary mules are being bred. It will be found advantageous to have the cages so placed that the birds can see each other, as the example of their neighbours will be found to act as a powerful incentive to induce them to breed.

During the process of incubation the utmost caution is necessary, for on no account must the birds be disturbed. Remember, wild birds will not submit to be pushed about and treated with so much freedom and familiarity as Canaries, which are very shy; and this is more particularly the case with female Goldfinches and Linnets.

Greenfinch and Bullfinch hens are quite exceptional in this respect, and some of them will permit you to handle their eggs and progeny without showing the least suspicion or jealousy. This, however, is by no means the rule, and many mishaps have been caused by fanciers exhibiting too much eager curiosity and impatience during the process of breeding.

Two or three days before the chicks are due, the parents must be supplied with soft food. It is a good plan to commence to use it on the twelfth day; giving finely-chopped egg and bread in about equal proportions; sometimes substituting lunch-biscuits for the bread. It must be moistened with water, to form a rather stiffish paste, and given fresh twice a day. Green food, such as watercress, groundsel, chickweed, or young lettuce, must also be given, when obtainable. It is well to try all, and supply the birds with that which they appear to enjoy most. Give them, at the same time, a constant supply of mixed seeds as follows: Canary seed, 7 parts; German rape, 5 parts; linseed, 3 parts; millet seed, 2 parts; groats, 2 parts; maw seed, 1 part: put into a box and shaken well together. If it is observed that some of the seeds are invariably left, these may afterwards be omitted. Be sure to obtain good, sound, wholesome seed, free from dust and mildew, or they will reject it.

If an indoor aviary be used instead of a cage such as that described, for the purpose of breeding Hybrid Finches, then the same treatment and management must be observed as that already recommended, with this exception,

i.e., the wooden nest-boxes may be hung on the ends of the aviary outside, and secured with stout copper wire hooks; a place for ingress and egress being provided. In this case, the tops of the nest-boxes should be glazed with ground glass, or the glass could be fitted into grooves to slide in or out, but the first-mentioned plan is preferable. Ground glass will admit sufficient light, and prevent the birds being disturbed by inquisitive people. No other birds should be kept in the same compartment with those put up for breeding, if you desire to be quite successful in rearing young birds. The aviary, if used for only one pair of birds, need not exceed the dimensions of the cage previously mentioned, but if two pairs are put up, the aviary must be proportionately larger, and supplied with a sliding division to keep the birds separate. A smaller cage or aviary than those recommended might be found to answer the purpose required, but there is a better chance of success in using them of not less proportions than those indicated.

In an outdoor aviary the birds should be allowed to build their own nest in a furze or thorn bush, if they feel disposed to do so. Nest-boxes, or cocoanut husks may also be supplied, and the birds allowed to make their own choice. In all other respects, the treatment recommended must be adopted. If other birds are permitted to occupy the same aviary, it is extremely doubtful that fruitful results will be obtained. The birds selected for breeding may be moulted together in the same cage or aviary, and kept there until January, when they ought to be separated and placed in cages in pairs. Should any of them disagree and quarrel violently for any length of time, those that appear most pugnacious should be removed, and fresh mates tried. It is desirable to keep a few birds of each variety more than you intend to breed from, in case of a mishap or of those which you have selected not being able to agree. As soon as it is noticed that an attachment has been formed by two birds, these may be again separated, until it is considered that the weather is genial enough for successful breeding; but this precaution need not be taken unless the birds exhibit an inclination to commence to pair at too early a period of the year—the latter part of March, or the beginning of April, will be found to be the best

time. Much depends upon the season and surroundings. In a cold room they may show no inclination to commence operations before May.

Incubation generally lasts fourteen or fifteen days. When the young birds are twelve days old, a fresh nest and the customary building materials must be furnished at the opposite end of the cage or aviary; sometimes the parent birds decide to use the same nest over again, in which case the young birds should be carefully removed, the nest-boxes being transferred from one end of the cage or aviary to the other. If the young birds are tolerably well fledged, much caution and circumspection will be needed to prevent them bounding from the nest; the early morning, just as the day is breaking, or when the shadows of night are surrounding them, would be found the best time; before the hen has taken up her night watch and maternal cares through the hours of darkness.

When the young birds are able to cater for themselves, which will happen when they are about a month old, they must be removed to a cage by themselves, and placed for some time within sight of their parents, which will cause the latter to be contented and attentive to their second brood; otherwise they may become restless and fidgetty, and endanger the second nest of eggs. If the parent birds begin to prepare for a second brood before the first are fledged, or are of sufficient age to forage for themselves, put the young birds in a separate cage, and secure it at the front or end of the breeding cage or aviary, so that their parents may be able to feed them through the wires. Should either or both of the cages be so closely wired as not to allow the parents to easily feed the young, some of the wires must be bent so as to give the required space to admit of this being done.

In outdoor aviaries a good deal of Virginian cork is often used, as it gives an ornamental and artistic appearance to the structures; but, unfortunately, it is found to be a harbour of refuge for parasites; hence it is exceedingly objectionable for the purpose, as it is almost impossible to dislodge the vermin from it. Nevertheless, it gives a very finished and tasteful appearance to an erection of this kind, and where few birds are kept together, and expense is not an object, it may be used if it can be frequently renewed,

as it would cost more in time and chemicals to cleanse it thoroughly than it would do to pull it off and replace it with new.

After the breeding season is over, the cages or aviaries should be thoroughly cleansed out, in order to get rid of the little red insects that accumulate at this time, and which torment and annoy the birds so much. They should be scalded out with boiling water, in which two or three good handfuls of common washing soda has been previously dissolved; after they are dry, they should be brushed over inside and outside, where there are any joints or cracks, with a diluted solution of carbolic acid—one part acid to two of water; after this process they should stand for half an hour, and then be rinsed out with clean water, and ultimately whitewashed, adding about 1oz. of powdered alum to each pound of whiting; to make it adhere firmly to the cages, either skimmed milk, or a little thin glue size, should be mixed with it. A small piece of blue stone (sulphate of copper), dissolved in water and mixed with the whiting instead of the alum, is by far the best remedy and preventive of parasites; but, as it is very poisonous, it requires the utmost care in its use. A little charcoal mixed with the sand with which the floor of the cage or aviary is strewn, is not only a good thing for keeping the birds in health, but also acts as a preventive to parasites. If any insects are observed, the cages should be cleaned out again in the spring. The cleansing process should not, however, be necessary more than once a year.

GOLDFINCH AND LINNET MULES.—In breeding hybrids from this cross, either the Linnet or the Goldfinch may be the male—it is quite immaterial which. The same precautions and treatment must be observed as that pointed out in the former portion of this chapter, treating on “Goldfinch and Bullfinch Mules;” but even greater care must be taken to select a quiet and secluded place in which the birds can breed; for on no account must they be disturbed during the process of incubation, nor for several days after the young brood have made their appearance, or the hens will forsake their eggs, and also their newly-hatched progeny. In all other respects the same instructions must be observed as those previously referred to. The Hybrids resulting from this cross are by

no means attractive in appearance, but they are valued on account of their rarity, as they are both difficult to breed and rear.

SISKIN AND OTHER MULES.—Many other successful crosses might be mentioned, such as the Greenfinch and Siskin, the Goldfinch and Siskin, Redpoll and Siskin, Bullfinch and Linnet, and so on.

Indeed, most of the Finches which will breed in confinement will pair with other Finches of a different species under favourable conditions and circumstances; but it must not be expected that they can be bred and reared with the ease and readiness that Canaries and their Hybrids are: if they could, they would soon lose the great intrinsic value which is placed upon them in consequence of their rarity. Several of the Finch tribe, such as the Goldfinch, Greenfinch, Siskin, and Linnet, breed freely with Canaries, in which case the hen should always be the canary.

The Germans appear to prosecute the breeding of Hybrids much more than we Britons, and their success is consequently greater, and the result of their experiments more wonderful and astonishing. The principal rules to be observed and remembered in breeding Hybrids are—first, to use only such birds as have been house moulted; secondly, to choose those that are in robust and vigorous health and good condition; thirdly, to satisfy yourselves that the birds you select for the purpose display apparent affection for each other, and do not disagree and quarrel; and, lastly, to be sure that all are supplied with the requirements necessary in the shape of materials for making a nest, and proper food for rearing the progeny when hatched, and that they are not in any way disturbed during the time of incubation, nor afterwards unnecessarily.

CHAPTER V.

DISEASES.

GENERAL REMARKS.—All birds are more or less liable to disease, but more particularly so when kept in cages and aviaries. The want of sufficient exercise, fresh air, and change of diet are doubtless the chief causes. Birds in a wild state do not suffer from want of exercise or fresh air, but they frequently do from want of proper and nourishing food during the winter and early spring months; and it is at this time that they are most liable to disease, and more particularly to Rheum and Diarrhœa, to which complaints they not infrequently fall victims.

Over-feeding, neglect, and bad food, produce more than half the illnesses from which birds die; and it is well, therefore, to remember the quaint old saying, that “Prevention is better than cure,” and endeavour to keep the birds in health by supplying them with a plain, wholesome diet, taking care never to give either soft or green food unless perfectly fresh, and to always procure the best seed.

APOPLEXY.—This disease is very fatal in its effects; but wild birds are not so prone to it as birds bred and reared in confinement. Occasionally, however, birds which have been kept for a length of time in cages are attacked by it. The cause arises, in most cases, from a too long continuation of over-heating food, and want of a more frequent change of diet. Birds seized with this malady drop from the perch in a moment, sometimes in the middle of their song, and struggle violently at the bottom of the cage, as if in great

pain. When this is observed, remove the afflicted bird at once, carry it to an open window, or into the open air, and sprinkle cold water on its head. If there is any ammonia at hand, pour a little of it into a saucer, and, if very strong, dilute with a little water; hold the head of the bird over it. If a very severe case, heat a dinner plate, or other convenient vessel, drop a few drops of the liquid upon it, and hold the bird over it in such a position as will enable it to inhale the vapour which arises therefrom.

Should the bird revive, keep it cool and quiet for some time, and give a little opening medicine—a few grains of Epsom salts, or a little infusion of senna leaves in its drinking water. If the bird has been observed to be costive—straining at its stools—give it at once two or three drops of castor oil on the end of a knitting-needle, which has been moderately heated to make the oil run readily. In winter time, the oil should be heated before a fire, to thin it. Diet the patient as plainly as possible, according to the species of bird affected. There is likewise another kind of apoplexy, or sunstroke, brought on by hanging birds at a window in a scorching sunlight. This should be guarded against by either shading or removing the cage.

ASTHMA.—This malady can be readily distinguished from Consumption by the periodical character of its attacks, and the wheezing sound which always accompanies it is a characteristic symptom that can scarcely be mistaken. Asthma, like Phthisis, varies in its symptoms. An asthmatic bird “pants” very much (a heaving motion of the chest and sides), but a consumptive bird rarely does so. In damp or foggy weather this symptom is most observable, and the bird seems scarcely able to breathe; the mouth opens and closes involuntarily, and occasionally the bird ejects matter from its mouth with a “Chitt, chitt!” Birds suffering from this painful complaint should be kept in a dry atmosphere, and fed sparingly with light, nutritious food. A cake, made with a little ground rice, arrowroot, powdered loaf sugar, and the yolks of two eggs, mixed together, moderately well baked, and then broken in pieces, and soaked in warm milk, will be found most useful for all “soft-billed birds.”

The bowels of the patient should be carefully attended to, and a mild aperient given once or twice a week—a few

grains of magnesia, or even a little liquorice, placed in the drinking-water, will be found beneficial. A piece of dandelion root, previously dried and washed, should be scalded, and, when cool, the liquid may be drained off and given to the bird in place of its ordinary drinking-water; two or three senna leaves might be added when an alterative is needed. Warmth is indispensable to a bird suffering from this disease, and under no circumstances should birds afflicted with it be kept in damp rooms. To effect a cure, much depends upon the time the treatment is begun, for when constant dyspnoea (difficult breathing) is induced, depending upon organic disease, little more can be effected beyond the palliation of symptoms.

The best remedy for this distressing complaint is the following mixture: Ethereal tincture of lobelia, 10 drops; compound tincture of camphor, 1dr.; syrup of ginger, 3dr.; cinnamon water, 1oz.: mix, and add two teaspoonfuls of this mixture to 2oz. of filtered water, or to water that has been previously boiled and allowed to cool. This quantity should be given in the place of the bird's usual drinking-water during a severe paroxysm, with much wheezing and oppressive breathing. After the symptoms abate, reduce the quantity of the mixture to one-half. Another useful formula, and one which will be found of great use in chronic cases, is as follows: Antimonial wine and tincture of henbane, of each 10 drops, to 1oz. of weak gum water; to be given in the manner before mentioned. Instead of magnesia or senna leaves, a few grains of Epsom salts may be used for relieving the bowels. An infusion of gentian and chamomile flowers as a tonic, with a few drops of tincture of iron added, may often be given with commendable results.

BEAKS AND CLAWS.—*See* CLAWS AND BEAKS.

BOWELS, INFLAMMATION OF.—*See* ENTERITIS.

BROKEN LIMBS.—When a bird has the misfortune to break a limb, remove the perches from the cage, and supply a nice clean bed, made with hay or straw cut short, and freed from anything hard or prickly; tease it well out, and make it as comfortable for the bird as possible. Nothing further need be done excepting to place the food and water where the bird can get access to them without distressing itself. The fracture will heal of

itself, without any further attention, if the bird will rest quiet; but if it happens to be of a very restless disposition, it is as well to put the limb in splints. To do this, get a quill from a goose's wing, cut off the top, and split open the lower part; place a little fine cotton wadding in it, which has been dipped in compound tincture of myrrh; then place the two parts round the broken limb, and secure them first with adhesive paper—the margin that surrounds postage stamps is best—cut in thin strips, and finally bind the whole firmly with a piece of silk or cotton thread. The cage containing the patient should be kept in a warm, quiet place, but where there is sufficient light for the bird to feed.

CATARRH, OR BAD COLD.—This is a very prevalent complaint among birds, as it is with human beings, and is brought on through similar causes. When birds are in the moult, they are very susceptible to take cold, and hence it is necessary to keep them away from open windows and doors, where they are exposed to draughts of cold air; and on cold, sunless days they should not be allowed to bathe: neither should a window be opened, where birds are moulting, on damp, cold, and foggy days. A cold neglected will induce Rheum and Pip. In the latter case, the nostrils are stopped up, and the skin covering the tongue becomes inflamed and hardened, and it is a difficult matter, in the case of small birds, to get it to operate again properly, which is necessary in order that the saliva, which promotes digestion, may be properly secreted. Clear the nostrils with a fine feather; one of the secondary flights drawn from the wing of the patient will do. Mix thirty drops of sweet spirit of nitre and ten of tincture of henbane with a wineglassful of water, and give in place of the ordinary drinking-water—this will be found very beneficial—and about the fourth day give twenty drops of medicated glycerine in place of the above. This should cure it. Keep the bird in a warm, dry place, and give it a nourishing diet. A rusty nail placed in its drinking-water, after recovery, will be of service.

CLAWS AND BEAKS.—When these become very long or unduly overgrown, they should be cut. A pair of sharp scissors should be used, and the operator must be extremely

careful not to remove too much—in fact, nothing beyond the overgrowth—or permanent injury may be caused to the beak or feet of the bird operated upon. During the operation, the bird should be held gently but firmly; as, by an involuntary and sudden motion on its part, a claw might be entirely destroyed before the operator could prevent it.

COLD.—See CATARRH.

CONSTIPATION.—When a bird is observed to be straining frequently, and fails in its attempts to void its excrement, this is a sign of the complaint, or of a bad form of costiveness, which should be attended to without delay. Catch the bird, and administer three or four drops of castor oil. This should be done by pressing open the bird's mouth and dropping the oil into the gullet by means of a knitting-needle, which had better be warmed first, to cause the oil to flow with greater freedom, and to prevent too large a dose being given. If this does not act speedily, give a clyster of raw linseed oil—the same means being used at the proper part of the bird. Food which has a tendency to relieve the bowels should be given; green food, such as lettuce and chickweed, to birds that feed on it, and spiders and meal-worms to insect-devouring birds.

CONSUMPTION.—See PHTHISIS.

CORPULENCE.—Some birds that are well cared for, and pampered with dainties, get too fat, and consequently become inert and lazy. In such cases, plain diet should be resorted to, and a little cathartic medicine, such as the addition of a few senna leaves to their ordinary drinking-water, or a few grains of magnesia, or Epsom salts, according to the size and variety of birds. All those birds which partake of vegetable food should be supplied with a few leaves of the dandelion (which should be previously soaked in water, and well rinsed off, especially in frosty weather, as it is death to birds to feed them with dandelion when it has the effects of frost upon it), or a little watercress when procurable. Those birds which are insectivorous, and which do not partake of green food, should be supplied with other remedies, *vide* instructions under the different headings in treating on cage birds.

CRAMP.—This is a disease from which many cage birds suffer. It generally attacks the limbs, but sometimes the

stomach. It arises from a vitiated state of the bile, or from eating too much indigestible food, and want of exercise. When the attack is in the limbs and feet, it is best to immerse them in rather hot water, but not so hot that you cannot bear to keep your hand in it for a short time. Keep them immersed for ten or twelve minutes, and give the bird an aperient of any sort. When the complaint attacks the stomach, give 20 drops of antimonial wine and 10 drops of the tincture of opium to $1\frac{1}{2}$ oz. of water, which should be substituted for the ordinary drinking-water. In violent cases, a little warm turpentine may be applied to the affected parts with a camel's hair brush; and if a few drops of laudanum be added, the effect will be further enhanced.

DECLINE.—See PHTHISIS or CONSUMPTION.

DIARRHŒA.—This is a very common complaint among newly-caught birds, and no doubt originates from a variety of causes, such as a sudden change of diet, fear, and repining after their companions and their freedom. It is easily detected by observing the bird frequently going to stool, and voiding a white, chalky-looking substance, of a watery consistency, and which adheres in a disagreeable way to the feathers surrounding the vent, and to the tail and wing ends of the bird. It will furthermore be observed that there is swelling and inflammation in the neighbourhood of the rectum, according to the length and severity of the attack. The most efficacious remedy is to give first two or three drops of castor oil and the same quantity of brandy, mixed, to clear out the bowels and mitigate pain. To 20grs. of finely-powdered prepared chalk add 1oz. of mint or cinnamon water, and give this mixture in place of the usual drinking-water. A change of diet is very essential in all cases of this sort, and the more nearly it can be procured to the food eaten by the bird in its wild state the better. When the patient is sufficiently recovered to do without the chalk, &c., place a very rusty old nail in its drinking-water, as it will prove a useful tonic.

EGG-BOUND.—When a case of this sort is observed, catch the bird, and for a few minutes foment the vent and surrounding parts with a piece of sponge or flannel which has been previously immersed in warm water. Another, and perhaps a better, plan is to immerse the lower parts of the

bird in a teacup, containing warm water, for about eight or ten minutes; then dry it gently with a warm, dry rag. If the bird is much exhausted, it should be folded in warm flannel, and held in the hand for some time, until it gathers strength. Lastly, put a few drops of olive oil into the open part of the vent, roll the bird up in a piece of flannel or felt, and place it in a cage or other receptacle, near the fire, until it recovers. After the egg is deposited revival is rapid. When a hen is about to lay, a little laxative medicine is very serviceable; stimulating food is highly commendable at this time. Birds which partake of green food should be liberally supplied with that commodity, and insect-eating birds should have a spider daily at this time, as it acts as a purgative.

ENTERITIS, OR INFLAMMATION OF THE BOWELS.—A bird suffering from this disorder suddenly becomes dull and listless. It suffers acute pains in the abdomen, which may be discovered by observing it lie with its body tightly pressed down on the perch; its eyes are dull and heavy looking, and it sits with its feathers raised up, and itself drawn into a "heap," looking almost as round as a ball, and as miserable and disconsolate as possible. If you catch hold of the bird, and blow the feathers which cover the abdomen backwards, you will find there is tension of the belly, and that the skin is red and inflamed. At first the skin is pale, but, as the disease progresses, it becomes much redder, with a blackish hue beneath. The disease is invariably accompanied either with Constipation of the Bowels or Diarrhœa, depending upon whether it is situated in the upper or lower intestines.

Sometimes the tongue will be found covered with sores, and, in consequence, the bird refuses to partake of its food. In such a case, a piece of borax, finely powdered, and placed on the tongue, will give relief to the sufferer. As the inflammation increases, thirst becomes intense, and, as cold drinks increase the pain, add a few drops of sweet spirit of nitre to the drinking-water, which should be given warm.

The cause of this complaint is generally attributable to the bird eating indigestible food or decayed vegetables, or over-eating. The bowels must be acted upon first, and this is best done by giving a few drops of castor oil, say,

from three to five, according to the size and strength of the bird, and applying a little heated turpentine to the bowels with a camel-hair brush. After the bowels have been freely acted upon, give the bird, in place of its drinking-water, a solution, made by dissolving about a scruple of gum arabic (the elect gum) in two fluid ounces of mint or cinnamon water, to which has been added ten drops of laudanum. Keep the bird in a warm, even temperature, and give it a nutritious diet, but one easy of digestion. After the bird has recovered from the effects of the attack, give it some tonic medicine, such as a weak infusion of gentian, or a few drops of the tincture of quassia and iron—or even a rusty nail placed in the drinking trough will be sufficient, in place of the tincture of iron. These remedies do not succeed in effecting a cure in every case, but if given in the early stages of the disease they seldom fail to do so.

FAINTING.—*See* SYNCOPE.

FEET, SORE.—*See* SORE FEET.

FEVER, PAIRING.—*See* PAIRING FEVER.

FEVER, TYPHUS.—*See* TYPHUS FEVER.

FITS.—Some birds are subject to a species of vertigo, known in surgery as cerebral epilepsy. When the paroxysm begins, the bird drops from its perch, and commences to struggle, violently at times, and is unable to regain the use of its limbs so long as the fit continues. Sometimes the attacks are comparatively slight, and the bird gradually recovers; at other times, they are so severe that, unless relief can be given, death speedily ensues. These paroxysms generally increase in severity with each succeeding attack, and if a bird is subject to them, it becomes weaker, its constitution is undermined, and in the end it dies. This disease, which is of a painful nature, may result from a variety of causes, such as over-feeding, constipation, the constant use of rich, stimulating food, the want of sufficient fresh air or change of diet; or it may be, and no doubt sometimes is, hereditary. Sudden fright has been known to produce it, and more particularly in a case where a bird has had a narrow escape from the claws of a cat.

A bird seized with a fit of this kind should be removed from the cage at once, and held in the hand near a fire, or folded in flannel and placed inside the fender. When it

has recovered sufficiently, a warm bath should be administered, or a vapour bath, and a purgative of some kind, such as two or three drops of castor oil, dropped from the end of a knitting-needle that has been previously heated to make the oil run readily into the mouth of the bird; or a few senna leaves (three to six) may be immersed for ten minutes in boiling water, and given to the bird to drink in place of its ordinary drinking-water. The application of a weak solution of ammonia to the bird's nostrils is a very commendable remedy, as it will at times revive it. Birds subject to this complaint should be given a little of Parrish's Chemical Food in their drinking-water, and ten drops of tincture of lobelia as well.

HEPATITIS, OR INFLAMMATION OF THE LIVER.—This disease is the result of feeding too exclusively on a stimulating diet, such as hemp seed, inga seed, and other fat and blood-producing ingredients. Inflammation of the liver is of two kinds—the acute, and the chronic. The former is the type which carries off so many young birds. At the beginning of the disorder the bird droops, looks lumpy, fretful, and restless. There is a good deal of fever accompanying it; this may be ascertained by handling the bird, which will be found quite hot. There is also a considerable amount of moisture present, as if the bird had perspired greatly. Its movements are restless, it goes about the bottom of the cage and feeding trough in search of something to bring relief. In such cases, give first a preparation composed of mercury and chalk (to be obtained already prepared at most chemists), and James's Powder, in equal proportions. Give it in half-grain doses, every two hours; open the bird's beak as wide as possible, and hold its head well back, and blow the powder into the throat through a piece of quill; then wash it down with a little water. A piece of dandelion root, first washed and scraped, and afterwards roasted, should be placed in the drinking water; also a teaspoonful of compound infusion of senna, diluted to the usual strength. When the bird has had its bowels freely opened, the senna may be discontinued.

In all cases of inflammation of the liver the bowels must be acted upon promptly. Occasionally it is necessary, if the disease is somewhat advanced, to commence by giving two or three drops of castor oil. The diet must be low; a little

milk and bread, given warm, or an arrowroot biscuit, soaked in warm milk, will be found beneficial. This treatment may be continued for two or three days, until the biliary secretions are reinstated. If these remedies prove abortive, discontinue the dandelion and senna, and add from twenty to thirty drops of antimonial wine to every two ounces of water given to the bird to drink. Should these remedies prove unavailing, there is no hope of ultimate recovery.

HYSTERIA.—This is a nervous affection, and one to which many birds are liable. It is not a dangerous complaint, like Epilepsy, but the symptoms in a severe case might easily be mistaken by an amateur for a mild attack of that complaint. Birds subject to Hysteria very often go off in a fit if taken to the open air from a room, and invariably do so when caught by the hand for any purpose. They immediately swoon away, and utter a peculiar cry, as of fear. The best remedy is to dash some water over them, when they generally come round in a few minutes; but they have a dazed and bewildered look for some time afterwards. Birds suffering from this malady should be fed on nutritive but not stimulating diet, and should occasionally have a mild aperient; a few grains of magnesia added to their drinking-water is the best. They should likewise have half a teaspoonful of Parrish's Chemical Food in a wineglassful of water, to which ten to fifteen drops of tincture of henbane has been added, and stirred well together. This should be given once a week, and allowed to remain in the drinking-trough, which should be of glass, for two days, and in cold weather it might remain three days, but not longer.

INFLAMMATION OF THE BOWELS.—*See* ENTERITIS.

INFLAMMATION OF THE LIVER.—*See* HEPATITIS.

JOINTS, SWOLLEN.—*See* SWOLLEN JOINTS.

LIMBS, BROKEN.—*See* BROKEN LIMBS.

LIVER, INFLAMMATION OF THE.—*See* HEPATITIS.

LOSS OF VOICE.—If a bird gets a severe cold during the moult, or at any other time, and there is inflammation of the larynx or windpipe, it will probably lose its voice. This disorder may arise from various other causes. In such cases give a scruple of gum arabic (the elect gum) and twenty or thirty drops of paregoric, in a wineglassful of water, in the place of ordinary drinking water. The bird, when it has nearly

recovered from the attack, will attempt to sing, but without result, although it will go through all the usual movements exercised by birds when singing. It will open its mouth, distend its throat, and move its body, but no sound will be emitted. Those birds which partake of animal food should have a little suet given them, and seed-eating birds should have a supply of lettuce and linseed.

MOULTING.—One of the principal causes of complaints in birds is Moulting, a process in Nature to which all birds in health are liable at least once a year. During this period they need special care and attention, and a constant change of diet, plenty of fresh air, and as much room for exercise as possible; hence, it is best to moult them in a fly or flight cage, or an aviary when this can be conveniently done. They should be supplied daily with fresh water, and with fresh sand every week or ten days, as the latter aids the birds in digesting their food, and fresh sand or small gravel always has a power of attraction which they seem unable to resist. They should likewise be liberally supplied with water in which to bathe during warm, dry weather, but not in cold or foggy weather. A bath assists them very materially, both in shedding their feathers and in promoting the growth of the new ones; and most birds in sound health and of a robust constitution gladly avail themselves of this privilege, and those birds which bathe regularly during the process of the moult are invariably much handsomer, and more cheerful in disposition than those who do not make use of the bath.

In the moulting season the utmost vigilance is necessary, as the birds must be kept entirely free from draughts of cold air, as nothing can be more pernicious or prejudicial to their health than to expose them to sudden changes of temperature. Damp is likewise very objectionable, and a bird hung in a damp place will be liable to an attack of Asthma—one of the worst maladies to which birds are subject. An even temperature is best, and when the weather is cold a slight covering should be placed over the cages whilst the window of the bird-room is open for the purpose of letting in fresh air.

What is most to be dreaded is a check in the moulting process, and this is known among dealers and some fanciers by the not very euphonious term of "stuck in the moult." It is brought on by cold, or a sudden change in the

temperature, or by the bird bathing on a cold day, or, probably, by being exposed to the night air through neglecting to close the window of the room. Nothing will throw a bird out of health so soon as this, hence care must be taken to guard against it. When a bird is unfortunate enough to meet with a check to the moulting process, it should be fed on very nourishing diet, have a few shreds of saffron and a few drops of nitre added to its drinking-water, and be exposed to a very warm temperature for a few days. A steam or vapour bath will be found most useful in obstinate cases of this kind. Put the bird into a small wired cage, then fill a large basin two-thirds full of water almost up to boiling point, and place the bird and cage on top, covering the whole loosely with light flannel for ten minutes. When the cage is removed, a dry flannel cover should be put over it, and it should then be placed near the fire, and gradually removed further away until the bird in it has regained its normal temperature. If the bird does not begin to cast its feathers freely after this process, in the course of three or four days, renew it. It seldom requires a second application.

OBSTRUCTION OF THE RUMP GLAND.—This gland is situated at the root of the tail, and is what may be termed the bird's lubricator, as all birds use it more or less when they trim their feathers, and when in a wild state they will be observed to be frequently pluming themselves, as the application of the oil to the feathers protects them in a great measure from the effect of wet, and they instinctively know this and prepare themselves accordingly. Birds, however, that are being constantly kept in cages, and who are seldom supplied with a bath, do not need this protection; hence they sometimes neglect to use the gland, and the consequences are that, through disuse, it is apt to become enlarged and hardened. When a bird is suffering from this complaint, it will cease to sing, and sit in a melancholy and listless manner, with its tail bent downwards, and occasionally peck at the enlarged gland. A heaving motion in the chest and bowels will also be noticeable, as if the bird was suffering much pain. If the gland becomes enlarged and full of matter, it is best to let it out with a fine sewing-needle;

but great care must be exercised, so as not to probe it roughly. The matter should then be gently squeezed out, and the part afterwards anointed with marsh-mallow or spermaceti ointment.

PAIRING FEVER.—In the spring, or early summer, cage birds in vigorous health naturally desire to follow the instincts of their nature, and procure a mate. If they cannot do this, they are liable to become restless and melancholy, and cease to sing; or they may gradually grow negligent, inert, and spiritless and their feathers become rough. In some cases they have even been known to sit moping about the cage, till they literally pined away and died. The best and most effectual remedy in such cases is doubtless a mate, for then the sexual desire can be gratified; but, where this is inconvenient, it is best to hang the bird affected in some place where it will get the morning sun, and where there is bustle and commotion, so that its attention may be kept well occupied. At such times, feed rather sparingly, and refrain from giving the bird stimulating and exciting food. It is also a good plan to remove the food and water daily for a few hours at a time, as it causes the bird considerable anxiety, and is thus a means of preventing it pondering over its hard lot.

PARASITES.—The majority of birds are more or less troubled with these irksome insects; their presence can readily be detected by noticing the birds pecking themselves almost constantly, more particularly beneath the wings and about the vent, and by their restlessness at night time, when these bloodsuckers are at the height of their enjoyment. One of the best remedies known is to syringe the birds with a mild solution of alum and water, or, what is better than a syringe is a scent spray; or you may puff them well with Keating's Insect Powder. If the birds are kept in cages, the outsides should be coated over with a solution of sulphate of copper—say 1oz. of sulphate to each quart of boiling water—which is death to all insects, and an excellent disinfectant as well; but it is highly poisonous, and must not be used inside the cages. Lay the solution on with a paint-brush or piece of sponge, giving two or three coatings, and let it stand for, say forty-eight hours, when it may be washed off with hot water and common washing

soda, or washing powder. Paraffin is sometimes used in place of the solution of sulphate of copper; but, although it is beneficial, it is not nearly so efficacious. If the cages are very badly infested, the birds should be removed for a day or two, and the cages fumigated by burning a piece of tobacco or sulphur inside them, on a small tin plate or old tin lid of any sort, or a small flower-pot saucer—in fact, anything most handy will answer this purpose. After this process, the cages should be scalded out and whitewashed; if they have wooden backs and ends, a little powdered alum mixed in the white-wash is commendable.

PHTHISIS, OR CONSUMPTION.—This is one of the most difficult complaints to deal with to which cage birds are liable. It is known more commonly among fanciers as “Decline.” Birds suffering from this disease are usually very restless, and they look dull and listless in the eyes. When sitting quiet they raise their feathers, and so give themselves a rough, uncouth appearance. They are, when suffering from this malady, almost constantly at the feeding-trough; the seed-eating birds shelling and throwing their seed about, and others the food supplied to them. They eat voraciously, but, for all that, they waste away, and become so thin in condition that their breast-bones are like knives, and almost protrude through the flesh. This disease may result from a variety of causes, but more particularly from indigestion resulting from improper diet, and the want of a plentiful supply of proper sand and gravel; or a want of fresh air and exercise and nutritive diet may produce it. To resort to the natural food of the bird in a wild state is the best remedy. With insectivorous birds, a spider occasionally, and a few meal-worms, will be found beneficial, and, in the case of granivorous birds, dandelion leaves and watercress, and a few grains of linseed daily, will be found of great service. From twenty to thirty drops of Parrish’s Chemical Food should be added to the drinking-water once or twice a week for two or three weeks, and then a little gum arabic (the elect gum) should be substituted, with the addition of an equal quantity of sugar candy, say ten grains of each to two fluid ounces of water. A little white bread, soaked in warm milk, should be given occasionally as a change of diet.

SORE FEET.—Cage birds, when neglected, are very prone

to suffer from sore feet, and even those that are fairly well attended to occasionally suffer pain from this cause, getting their feet clogged up with excrement or other matter, which in a short time hardens, and gives them much pain. To prevent this, careful and frequent attention to their wants is essentially necessary. Their cages should be cleaned out at least once a week, and the perches taken out and scraped. These should be made of hard wood, such as mahogany, as dirt adheres much more readily and firmly to soft wood perches. The sand with which the cages are strewn, if damp, should be dried before being used. This can easily be done by placing it on an old worn-out tea-tray, and putting it on the top of an oven, or on a kitchen fender in front of a good fire.

Before an old bird has finished moulting, his legs should be "scaled." By this term, used by bird-dealers, is meant the removal of the thick scaly substance which grows on the front part of the leg; but it is necessary to exercise caution in performing this operation, so as not to break the skin. Before cleaning a bird's feet which have become clogged with dirt, they should be first immersed in water to soften the substance; for, if it is forced away without adopting this precaution, it will be likely to produce a sore, and thereby cause the bird a good deal of pain and discomfort, and might tear off a claw, and consequently cause a permanent injury. When the feet are sore, they should be steeped in warm water, and then a little Goulard's Extract should be applied with a camel's hair brush or a feather. After the soreness is removed, they may be anointed with a little olive oil, which will act as a protection to them.

SORES OR WOUNDS.—Cleanse the sore or wound by fomentation with warm water. If there is inflammation or irritation, add a teaspoonful of Goulard's Extract to the water, and continue as before. If the wound is angry, and suppuration is likely to ensue, apply Friar's Balsam or compound tincture of myrrh with a feather, and when there are signs of healing, dress with spermaceti ointment.

SURFEIT.—This complaint is caused in most cases by giving the bird too much rich and stimulating food, though it may be produced through feeding too exclusively with one description of food, without giving a change of diet, or by

over-feeding. During this disease, the perspiration is impeded, the skin becomes covered with an almost imperceptible eruption, and the feathers gradually disappear from the head and neck. An entire change of food, and a few drops of lime-juice added to the bird's drinking-water, will be found the best remedies. The food should be cooling but nutritious. The affected parts should be anointed with goose grease, olive oil, or spermaceti ointment, or a little Goulard's Extract may be applied with a camel-hair brush or a feather, and in a few weeks the new feathers will make their appearance. A little laxative medicine should be given once or twice a week, until the bird recovers. Magnesia or Epsom salts is best, given in the drinking-water.

SWEATING.—Hens, during the period of incubation, occasionally sit too closely, and thereby "sweat" their young, which greatly weakens them. To remedy this undesirable practice, try to induce the hen to bathe, and add a small piece of alum to the water. If she refuses or neglects to do this, you should squirt some water over her when you find her off her young; but the better plan will be to place some thin pieces of wood or stout wire across the nest, in such a way as to prevent her from getting down upon them too closely; at the same time, the wires, &c., must be so secured and situated as not to interfere with the young brood. This only need be resorted to for a period of eight or ten days, as after that time the young birds will be strong enough to protect themselves. Sweating not only weakens the chicks, but prevents them becoming fully and properly feathered.

SWOLLEN JOINTS.—If a bird, from any cause, injures a leg or foot, and it becomes swollen, immerse the damaged part in tolerably warm water for ten minutes; then dry with a soft rag or old silk handkerchief. If there is a wound, apply some compound tincture of myrrh with a feather until it heals. If the joint is swollen only, continue the warm water daily, and dress with olive oil or goose grease, or any healing cerate.

SYNCOPE, OR FAINTNESS.—This is caused by a diminution or interruption of the action of the heart, and of the function of respiration, and a temporary loss of sensation, &c. Birds of a nervous temperament, or of weak constitutions, are most liable to be attacked by this serious ailment. A sudden fright

will produce it—the unexpected appearance of a dog or cat, or similar cause. It arises from affections of the heart generally. If a bird is observed to be suddenly attacked by a fainting fit, remove it gently from the cage, so as not to excite it in any way. Sprinkle a few drops of strong liquid ammonia, diluted with water, or a little sal-volatile or Eau-de-Cologne, on a handkerchief, and place it lightly over the head of the bird, leaving plenty of space for fresh air. This will generally afford much relief to the little sufferer. An attack of this complaint is sometimes attended with fatal results, though such is seldom the case if the remedies here recommended are resorted to. A bird seized with this malady requires immediate and energetic attention.

TUMOURS OR WENS. — Birds are occasionally affected by these extraneous growths, which commence at the root of the beak, or at the back or side of the head. There are two classes, viz., solid and encysted. The principal forms of the solid Tumour, which is much longer in maturing than the encysted kind, are those termed adipose or fatty, the fibrous, exostosis, or bony.

The solid Tumour is enveloped in a dense cellular sheath, which separates the diseased from the healthy parts; whilst the encysted Tumour, on the contrary, must be considered as an integral part of the Tumour; for, should any part of the cyst be left, the disease is sure to be reproduced. Hence it is necessary, in performing an operation, to carefully remove the cyst as well as the extraneous growth.

The encysted Tumour is that known among medical men as encephaloid, melanoid, fungus, hæmatodes or bleeding cancer, &c.; and is known among fanciers as “cancer of the bill,” “yellow gall,” and “warts on the head.”

Discutients, such as iodine and mercury, are occasionally applied for the removal of these unsightly growths, but the knife or scissors is the only effectual remedy. Cut away the substance carefully but thoroughly as soon as it is mature, and, if it bleeds rather freely, apply a little burnt alum, or a few drops of the muriated tincture of iron. Should these remedies prove unavailing, cautery must be resorted to—*i.e.*, burn the part with an iron previously heated to whiteness; a fine soldering-iron, or, in some cases, a knitting needle, would suffice for the purpose. When the

bleeding has ceased, anoint the part with a little fatty matter of some sort—any kind will do, so long as it does not contain salt; a little spermaceti ointment or goose oil would answer quite well. The wound is not, as a rule, long in healing.

TYMPANY.—This is a complaint from which some birds occasionally suffer, and more particularly Larks. The air gathers beneath the skin, and inflates it like a balloon. The remedy is simple and effectual. The skin should be pricked lightly with a fine sharp sewing-needle, and the air pressed out; the affected part should then be anointed with a little spermaceti ointment or fine olive oil.

TYPHUS FEVER.—This direful malady, which is extremely fatal, may arise from want of cleanliness, ventilation, or pure water, or it may be caused by permitting an accumulation of decayed vegetable or other matter to remain in the cage or aviary in hot weather, or by overcrowding. All these things must be avoided, or disease and death will supervene. If any person should be so unfortunate as to experience a visitation of this dreadful scourge, remove the affected birds at once to a separate room. Keep them warm, and feed on light but nutritious diet. Their bowels must be freely discharged by the use of aperients, such as Epsom salts, or infusion of senna leaves, or a few grains of powdered rhubarb or magnesia, which should be mixed with their drinking-water. Two or three grains of James's Powder ought to be added likewise, and from fifteen to twenty drops of the tincture of opium or henbane. Condry's Fluid, or carbolic acid, should be sprinkled about the room or aviary, to act as a disinfectant (the acid must be diluted with water), or it may be placed in a vessel and covered over with a cullender where it cannot get upset; in the latter case, the acid may be used undiluted. The cages ought to be cleaned out, and Condry's Fluid freely sprinkled all over them, inside as well as out.

If the weather be mild, let in a plentiful supply of fresh air during the daytime, but exclude the night air, unless in very hot dry weather (say in June or July). Do not open the window on damp, wet, or foggy days, but light a fire, if there be a grate in the room. When the fever is exhausted and the birds are convalescent, every cage must be thoroughly cleaned out in order to stamp out the disease. First rinse

the cages with hot water, in which a quantity of soft soap and washing soda has been dissolved. When dry, give them a good coating of diluted carbolic acid—one part acid and two of water. Rub them all over with an old paint brush, inside and outside, and afterwards expose them in the open air for a few days; then rinse finally with clean hot water, and lime-wash out, putting a solution of camphor into the wash (dissolve two drams of camphor in one ounce of spirits of wine). This will not only disinfect them, but will destroy all germs of the disease.

The bird-room, or aviary, must undergo a similar process, or the labour spent on the cages will be fruitless.

VERMIN.—*See* PARASITES.

VOICE, LOSS OF.—*See* LOSS OF VOICE.

WARTS.—*See* TUMOURS.

WENS.—*See* TUMOURS.

WOUNDS.—*See* SORES.



CHAPTER VI.

THE GOLDFINCH.

Fringilla Carduelis, Lin.; *Chardonneret*, Buf.; *Der Steiglit-
oder Distelfink*, Bech.

DESCRIPTION AND CHARACTER.—This elegant and intellectual bird, which is a universal favourite with ornithologists and bird fanciers, is known by a variety of names. It is called by many the “Thistlefinch,” on account of its fondness for the seeds of that plant; it also bears the names of the “Peartree-finch,” “Proud Tailor,” “Red Linnet,” “Spink,” “Peckel Dick,” “Proud Tail”—from the manner it has of whisking round when pleased, and jerking its tail with a peculiar motion—“King Harry,” “Draw Water,” and “Goldie,” as it is almost universally termed in Scotland. Its beautiful plumage, so rich and varied in colour; its docility, its unobtrusive and engaging manners, added to the readiness with which it so easily and gracefully adapts itself to the sudden change from liberty to confinement, make it an object of endearment to those who keep and admire birds in a state of domestication.

It is 5in. in length, and, when in health and condition, weighs about 1oz. The beak is long, straight, and sharp at the point, and compressed slightly at the sides. In wild birds it is ashen-grey in colour, and in house-moulted birds a whitish flesh-colour. There is a black line running from the centre of the tip of the upper mandible to about two-thirds of its entire length, which gradually disappears as the spring advances. The eyes are dark hazel in colour.



GOLDFINCHES.
(Male and Female.)

The forehead, cheeks, and upper part of the throat are deep red; a narrow band of black feathers surrounds the base or root of the bill, and a stripe of black feathers runs from the junction of the upper mandible to the back of the eye, dividing the red. On the top of the head, or poll, is a broad black velvety spot, round in form in front, and penetrating a short way into the red which covers the forehead; it extends to the back of the head, where it is intercepted by a band of black feathers, which covers the back part of the skull on each side as far as the neck and throat, then tapers to a point in front, being almost semi-circular in form; at the back it is square or straight. On each cheek is a patch of creamy-white, placed between the black line over the back of the head and the red face, and this patch or band entirely encircles the throat; on the cheeks it is commingled with very pale chestnut-brown, which becomes whiter as the bird gets older; below this is a broader band of pale warm brown, also semicircular in form.

The sides of the neck, breast, and belly, extending to the tail, are of pale reddish-brown colour; the belly and vent are dingy white, as also the under coverts of the tail, which are slightly tinged with brown; the under or flue feathers are black; a slight tinge of very pale yellow, almost imperceptible to the unaided eye, may be found on each side of the breast. The tail is black, and 2in. in length. Two, and sometimes three, of the extreme outside feathers on each side have a white spot, or bar, from $\frac{1}{2}$ in. to $\frac{3}{4}$ in. in length; the remaining feathers have white tips. The pen or flight feathers, eighteen in number, are black.

In the centre of the wing is a beautiful yellow band, or stripe, extending in almost parallel lines from side to side, with the exception of the first feather, which is black; this band is about 1in. in width, and is formed by each feather having a deep bright yellow margin on the upper side of the quill, and on the lower side a corresponding margin of a greyish-white, so that, when the wing is closed, it has the appearance of a double golden band; all the pen feathers, with the exception of the first five, have white tips. The rump and tail coverts are mixed with white feathers. The back, neck, and rump are of a dark slightly dusky brown colour; the legs are $1\frac{3}{8}$ in. in length, and brown in colour; at the

nape of the neck is a narrow rim of paler brown than the back; the thighs are grey.

It is found in all parts of Great Britain and Ireland. The largest and most handsome birds are those that are caught among the hills and mountains in Cumberland and Westmoreland. Those most valued by mule breeders are the "Cheverals," which are usually paler and brighter in colour, and are distinguished by a white patch extending through the middle of the red which surrounds the throat, and the broader and fuller this patch is, the more valuable is the bird on this account. The next in estimation for breeding purposes is the "Pea Throat," which is known through its having a round white spot, in form and size of a small pea, in the centre of the red band encompassing the lower mandible. The "Cheveral" is termed the "King of Goldfinches," and the "Pea Throat" the "Prince." Some bird-fanciers consider these a different breed, but as the white marks above mentioned are the only observable distinction, there is little doubt that it is merely a freak of Nature, though birds of the description mentioned bring a much higher price than the ordinary ones, as they are very scarce, and consequently much sought after.

The Goldfinch appears in its most perfect plumage after the third moult, and at each moult the red band, or, as it is more frequently termed, the "flourish," extends in circumference, the cheeks and belly become whiter; the brown clearer, lighter in colour, and altogether brighter and more pleasing to the eye; the legs grow paler, and more of a flesh-colour, though Goldfinches, when house-moulted, have white or flesh-coloured legs. Young birds, and those that are improperly moulted, are generally more dingy in colour than birds that have been newly caught. The wild birds that winter in this country are less beautiful in colour than those which winter in a warmer climate.

HABITS AND BREEDING.—Goldfinches are only partially migratory in their habits, as many of them—chiefly consisting of the last two broods and the parent birds—winter in this country. These travel in companies of from twelve to twenty, and keep closely together in search of food; but those which band together with the intention of migrating, travel in flocks, which sometimes consist of hundreds, and their instinct leads

them to keep along the coast, travelling southwards in the direction of Brighton and Dover, where they are much sought after by bird-catchers, who succeed in taking large numbers of them. Those which remain in this country are known as "homelings," or "harbour birds," and those which return in the spring as "flight birds." The last of the migratory birds leave England about the middle of October, cross the Channel for France, and then continue their journey southward, where the climate is more genial, and food more readily procurable. They arrive again on our coast in the early part of April, and commence their domestic arrangements with very little delay if the weather be mild and the fruit trees in blossom. They mostly frequent gardens, orchards, woods, and mountainous districts under cultivation.

Goldfinches build their nests in apple, pear, or plum trees in orchards or gardens, and in pine, elm, oak, or other coniferous trees in woods, and sometimes, but rarely, in thorn bushes and hedges in cultivated localities. The nest of the Goldfinch is a beautiful piece of workmanship, and shows that this bird is gifted with both architectural and mechanical skill in an eminent degree; in design and execution the nest is a masterpiece of art, which almost baffles description. It is semi-spherical in form, and is composed of a variety of materials. The outside, which is made to resemble the stem or branches of the tree in which it is built, with the evident intention of making it difficult to find by those who are interested in searching for it, is composed of very fine moss, lichens, root fibres, pieces of the dried bark of trees, and sometimes fine hay; the inside is lined with hair and the down of thistles, groundsel, and dandelion.

The hen, which lays from four to six eggs, of a pale greenish-white colour, speckled with brownish-red spots, and peculiarly formed zig-zag patches or stripes at the sides or thick ends of them, incubates fourteen days; and the young are fed from the crops of the parents until they leave the nest, when the male bird takes full charge of them, and entices them to some quiet place where there is an abundance of groundsel, plantain, burdock, or thistle seeds to be obtained. Goldfinches build a fresh nest for each separate brood, sometimes in a tree adjoining the one previously used;

but, if much disturbed, they will not infrequently leave the orchard or garden where their first brood was reared, and remove altogether out of the neighbourhood. They may be kept either in aviaries or cages; when in the former, they take up a position near the seed-boxes, and rarely permit other birds to approach when a fresh supply of seed has been given until their appetites are fully satisfied. They do not require a large cage when kept separately. The ordinary canary cage will be found sufficient to meet all their requirements.

Hen birds that have been born in confinement are of little use except as "call birds," to be used for catching others of the same species, or to place in an aviary with other birds for variety. They do not breed in cages with the freedom of male birds, and can seldom be induced to pair with aliens. A pair of Goldfinches will breed in confinement under favourable circumstances; but, to be successful, they ought in all cases to build their own nest. If a cage be used, it ought to be one of large dimensions, and the back or top should be so constructed as to open with hinges, so that one or two plants of young hawthorns, shrubs or furzes, could be introduced in large tree pots, to afford them shelter and a place in which to build their nests. The plants ought to be placed at one end of the cage, and close to the wires in front, leaving plenty of room for the birds to get to them from behind, and so thick that ample shelter will be provided, as hen Goldfinches are very timid when breeding, and do not like to be watched or disturbed during the process of incubation, or whilst rearing their young.

All the materials previously mentioned with which they construct their nests should be supplied to them, placed in an onion net, and hung against the wires of the cage, so that they can get readily at them. Where possible, a small garden aviary should be used in preference to a cage, and it should be so arranged as to include a small tree or some large plants for the purpose already mentioned, and made in all respects as like a miniature garden as possible. Only one pair of birds should be kept together, or they will in all probability disagree, and interfere with each other, to their detriment. The aviary should be so arranged that a division can be made, in which the young birds could be placed by

themselves when old enough to cater for their food ; for, if left with their parents, they are certain to become mischievous and troublesome, and prevent the propagation of future broods.

METHODS OF CAPTURE.—In a garden or orchard where these birds are known to frequent constantly, their nest will be found built on one of the topmost branches of an apple, pear, plum, or cherry tree ; the nest will be found, in most cases, built in the fork of a branch where the foliage is thickest. By close observation, the old birds, after a place has been selected, may be observed carrying the necessary material for its construction ; but they are cautious and cunning, and, if they find they are being watched, will desist from their labours until the observer has departed out of sight ; hence their nests are very difficult to discover. Young birds—that is, birds of the first season—are less cautious than older and more experienced ones, unless their first nest of eggs has been removed by someone ; but they equally readily forsake their nests if molested.

The birds are easily caught in stormy weather, when their food is difficult to obtain ; but they may also be taken at almost any time of the year, excepting the period which embraces the breeding season, when they are protected by Act of Parliament. The Act, however, is carried out in most places in such a lax manner that it has become little better than a bye-word among those men who rank as professional bird-catchers. Consequently, Goldfinches, and many other varieties of birds, also protected in the same way, are taken nearly all the year round.

Goldfinches are taken with limed twigs, or with trap-cages, and the clap-net, at the period of migration, when they travel in flocks, in large numbers. The young birds take flight in June, July, and August principally, and the migratory tendency continues into the month of October. The best time for catching them is about Michaelmas, after the moulting season, with the trap-cage and clap-nets chiefly, when they frequent fields and lanes in search of thistle, burdock, and plantain seeds.

When using the trap-cage, a good “call” or decoy bird, such as an old hen Goldfinch, or a Mule of either sex, bred between a Goldfinch and a Canary, and uttering the Goldfinch notes, is essential. Many old bird-catchers prefer a Mule to

a Goldfinch for this purpose, as they are much freer, and call vociferously, and almost incessantly. A few thistles should be placed in the trap, as they induce the wild birds to approach the cage more readily.

Newly caught birds soon accommodate themselves to their changed circumstances, rarely sulking or repining for their liberty, as a great many other species of wild birds are wont to do when first caught; and they adapt themselves with wonderful facility to a change of diet, which should be a mixture of the seeds such as is specified under the heading of "Food." If they become mopish, they should be provided with a little green food, which may be either watercress, dandelion, lettuce, groundsel, or ripe chickweed; and they should also have a little white bread sop made with milk and sweetened with moist sugar. With this diet, careful attention, and avoiding overcrowding, few, if any, will succumb.

FOOD AND TREATMENT.—In a wild state, Goldfinches feed upon a great variety of seeds, such as those of the runch or wild rape, button grass, plantain, burdock, thistle, cabbage, lettuce and turnip. Their favourite seeds, however, are those of the button grass and thistle. They likewise eat green food—lettuce, groundsel and chickweed. In confinement, they should be fed, when first caught, with crushed hemp-seed, maw, and linseed. After they are domesticated, gradually wean them from the hemp-seed, and give them canary and rape-seed only as their staple diet, and occasionally, as a change, linseed, maw, inga, or lettuce seed; no hemp, unless ailing.

During the moulting season they should be supplied with plantain, button or knob grass, inga, maw and linseed, and the tops of a few thistles, when ripe, of which they are passionately fond.

These birds may be fed and treated in all respects the same as Canaries, as they will eat hard-boiled egg and bread, crushed biscuits, and all sorts of green food, such as lettuce, watercress, groundsel, chickweed, &c. They are not in the least dainty, and expect a full share of all that is being given to their companions, when kept, as they mostly are, in a room with Canaries and other birds of the *Fringilla* species.

REARING THE YOUNG.—The young of the Goldfinch are rather difficult to rear by hand, and ought not to be taken from the nest too early. They should not be removed until they are pretty well feathered, and they will then readily take the food offered to them. Feed them on white bread, which has been first soaked in water and strained, and then boiled with fresh or new milk, until it becomes sop; add to it a little maw seed or ground linseed, and mix well together. The birds should be fed every two hours, or oftener. The food should be prepared fresh daily. They require to be fed early and late. As soon as they can peck for themselves, a lettuce leaf, a little groundsel or chickweed, should be placed between the wires of the cage, which will induce them to feed more readily, and will do them good; but it must be given sparingly. At the age of six weeks they will be able to break seed, and the soft food should be gradually discontinued. Give them a mixture of canary, rape, maw, and inga seed (the maw and inga sparingly), and occasionally a little linseed and hemp seed, but the latter seldom, and in small quantities. They will thrive and do well with this treatment.

THE DISTINGUISHING MARKS OF COCK AND HEN.—There are few varieties in which the male bird is so difficult to distinguish from the female as in Goldfinches, and this is more particularly the case with young cocks and old hens. The cock, as in most other breeds, is usually a trifle larger than the hen. In a cock, the feathers on the ridge of the wings or shoulders (the pinion coverts) are black, whereas, in a hen, though they appear black, they are more of a slaty-brown or dusky-ash colour when compared with those of the male bird. The brown colour on the back and sides of the breast of a cock is clearer and brighter, as are the feathers on the other parts of the body. The narrow margin of feathers which surrounds the base of the beak in a cock is black, but in a hen it is brown.

In a cock bird—and more particularly is this the case in a fully-matured bird—the red on the face extends beyond the eye, and on each side of the breast will be found (when blown back) a tinge of pale yellow. These two points are a sure indication of the sex, as they are never observed in a hen. The male bird is likewise more active and energetic in his

general movements; his carriage is more erect and commanding, and he is altogether bolder and more noble-looking than the hen. The bill, or, as it is more commonly called, the "spike," is longer and stouter in the male bird. Both cocks and hens improve in appearance with age, and this is the reason why a hen of two or three years of age is often taken for a young male bird by fanciers who have only had a limited experience in dealing with them. Young birds in their nest feathers are likewise difficult to distinguish in this respect, and none but thoroughly practical men can with certainty decide between the sexes in a nest of "grey pates."

SONG.—The song of this bird is somewhat peculiar, but pleasing. It utters a few low, twittering notes, and then rapidly pronounces the syllable, "Finck, Finck!" with a sharp, sonorous sound; then it utters an undulating string of notes, somewhat resembling the sound of a harp, and then comes the "Finck, Finck!" rapidly pronounced several times in succession; and so it runs on with its sharp, disjointed song at short intervals of time.

POINTS TO BE OBSERVED IN JUDGING.—The first point is size; a large bird to be preferred. The next is shape, or contour. A bird that gets well up, stands straight on his legs, and is bold and graceful in carriage, is decidedly superior to a squatty, skulking bird. The head should be long, sleek and well-formed; the bill long, massive, and straight, stout at the base, and tapering to a fine point; the red face broad, expansive, deep, rich, and brilliant in colour; the white on the cheeks and breast should be pure, and as free from brown tinge as possible; the black poll and collar should be intense in their blackness and brilliancy; the bars on wings should be of a deep rich golden-yellow; the black feathers in wings and tail should resemble polished ebony; the white marginal spots on the wings and tail should be pure white, and well defined; the back and sides of the breast should be of a deep rich bright brown, the breast and vent of a rich pale chestnut-brown, and the legs and beak white.

Some exhibitors moult these birds, when intended for show purposes, on the cayenne compound, to intensify the colours and enhance their appearance; and this is a point wherein, we think, judges should act with great circumspection, or

the best birds may easily be put out of court by inferior specimens. German and Russian Goldfinches are larger than our English specimens, and some of them are exceedingly handsome; but, in a class devoted to British birds, we fail to see that they are admissible for competition. Some judges pass by "Cheverals" in a class of this variety, but why they should do so is a mystery, as a "Cheveral" is not only a British bird, but, as a rule, the most handsome of all the Goldfinch tribe.

GENERAL REMARKS.—The Goldfinch is a very apt pupil, and can be taught a variety of amusing tricks, such as learning to draw its water from a trough or other vessel, placed some distance below the aperture from which it drinks. This is done by attaching a piece of string, gut, or light chain to a thimble or miniature bucket, and securing it to the cage. It may also be taught to draw a small, lightly-made wooden box on wheels up an inclined plane, and to lift up the lid of the box to obtain its food. Properly constructed cages to be used for this purpose may be obtained from any professional birdcage maker. A Goldfinch can be taught to feign death, to fire a toy cannon, to come and go at command (both in and out of doors), to feed from the hand or mouth, and many other tricks of a similar character.

The Goldfinch is much prized by bird-breeders, not only on account of its beauty and song, but also for the easy way it adapts itself to circumstances and domestication. It pairs without difficulty with the Canary, Bullfinch, and other kindred species. The handsomest and most valuable Mules are those bred between this bird and the Canary, when the features of both are thoroughly blended, or when they favour the Canary principally. Birds bred between the Goldfinch and the Bullfinch are likewise handsome and highly prized; but those between the Goldfinch and Linnet or Siskin are not particularly attractive. In breeding Mules, the male Goldfinch should be used, and, if possible, a three-year-old bird that has been hand-reared, or brought up under Canaries, or one twice moulted in the house, as they very rarely break the eggs when left beside the hen during incubation—a practice that newly-caught birds paired with hens of a different species are very guilty of doing; hence

vigilance and care are necessary, and, when it is discovered that a bird has this predilection, he should be removed to a separate cage, and only introduced at intervals of two or three hours during the daytime. Sometimes a device is resorted to by using a nest with a temporary inner lining, and a hole cut in the bottom of it for the egg to fall through. A piece of stout saddler's lining felt will be found suitable for this purpose.

DISEASES AND THEIR TREATMENT.—After a Goldfinch has become thoroughly accustomed to the change from its wild state to a life of domestication it rarely ails anything, if properly looked after and its food and water are good; excepting during the period of moulting, or in the spring, when it may become love-sick. The best cure for the last-mentioned complaint is a mate, which may be one of its own kind, or a Canary, Linnet or Bullfinch, or other bird of the Finch tribe, as it readily pairs with birds of a kindred species. It is subject to epilepsy, or, what the bird-dealers usually term "fits." The kind of epilepsy from which birds suffer is known in surgery as cerebral epilepsy (there are three kinds of this disease), or a species of vertigo. When the paroxysm comes on, the bird falls off its perch, and struggles until it frequently gets over on to its back, when it is unable again to regain its legs, as long as the fit lasts. It works its legs, wings, and body in a convulsed manner, for a length of time, varying according to the severity of the attack. If no attention be paid to the bird, death may possibly ensue; and, in any case, it will be a long time before it recovers, and will be weak and exhausted for a considerable time afterwards.

The disease is caused in some cases by internal parasites; in others by over-feeding with stimulating food, such as hemp and poppy seed; or by sudden fright, though in a few cases it is undoubtedly hereditary or constitutional. A bird seized with a fit of this description should at once be removed from the cage and placed near the fire, folded in a piece of flannel. When it has quite recovered, a warm bath for fifteen minutes will be of great service; after the bath, it should be dried, and again placed in the flannel, and kept as before stated. Then a purgative of some kind should be administered, such as a couple of

drops of castor oil dropped on the root of the tongue from the end of a knitting-needle, which has been previously heated, to prevent too large a dose being given; or a few senna leaves may be placed in its drinking-water, and a small sprinkling of Epsom salts, as much as will lie on a sixpence.

In giving the bath, water of the temperature of about 90deg. to 100deg. should be put into a small basin, and the bird placed in it, with its head only above the surface of the water. It should be held in the hand the whole time, and the head placed between the fore-finger and thumb. It may be necessary, before the time expires, to add a little more warm water. When the bird is taken out, it should be dried with an old silk handkerchief, or something soft and pliable, before being placed in the flannel. Sometimes a little of the liquor of ammonia, put into a wineglass, filled up with water, and the head of the bird held over it, will give considerable relief. Birds subject to this complaint should not be used for breeding purposes.

If a bird droops, and you cannot prognosticate its ailment, put a few shreds of saffron in its drinking-water; and if purged, which can be discovered by examining its excrement, a little prepared chalk should be mixed with a little white bread sopped in milk. Thistle seed is generally the best remedy for undefinable ailments, and next to this plantain and poppy seed. These birds are sometimes, but rarely, attacked with cramp—in which case, the remedy mentioned in the chapter on "Diseases" should be resorted to.



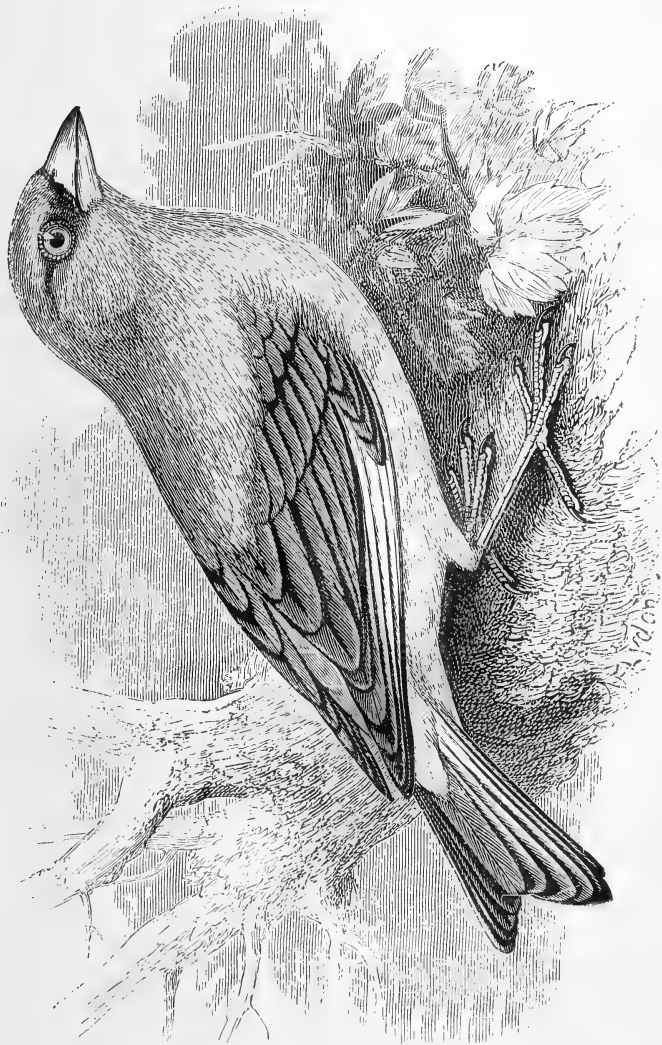
CHAPTER VII.

THE GREENFINCH.

Loxia chloris, Lin.; *Grosbec verdier*, Buf.; *Der Grünling*,
Bech.; *Fringilla chloris*.

DESCRIPTION AND CHARACTER. — The Greenfinch, or Green Linnet, as it is more commonly designated, is not a particularly attractive bird—that is, so far as its appearance is concerned—but it is very easily domesticated, and is particularly docile and tractable in confinement. It is capable of being taught a variety of amusing tricks, same as the Goldfinch and Bullfinch; and it may be fairly considered a more proficient performer than either after it has been properly schooled. It is, however, a very common bird, and may be found in all parts of the United Kingdom, and in most parts of Europe. A male bird can be bought at most bird-dealers' in the country for the small sum of one shilling, and a hen for sixpence.

A well-grown male specimen measures 6in. in length, the tail being 2in. long; the bill is a little over $\frac{1}{2}$ in. in length, and is stout and massive, especially near the base, and is flesh-coloured, the upper mandible being tinged with brown. The eyes are brown. The back part of the head, neck, back, and primary wing coverts, are of a dingy green colour, the forehead and over each eye being tinged with bright yellow; and a delicate shading of yellow pervades the feathers on the back and the wing coverts; the rump is paler and also brighter in colour than the back; the pen feathers of the wings are of a dusky blackish hue; the ridges of the wings or shoulder blades are of a rich vivid yellow; the primary



THE GREENFINCH.



flight feathers, excepting the first one, are margined with yellow; the secondary covert feathers of the wings are the same colour as the pen feathers. The tail is of a dull indefinite black colour, but the four outer feathers are yellow from the root to about three-fourths of their entire length. The throat, under part of neck, upper part of belly, and sides, are of a much brighter green, and strongly impregnated with yellow.

The lower part of the belly and the vent are of a dirty greyish white; the under tail coverts are yellowish green, intermixed with slate-coloured feathers. The legs are brown; the thighs slate colour. The under wing coverts are dingy white, margined with yellow. The forehead, cheeks, throat, breast, and belly, are of a pleasing colour, as the green is thoroughly surcharged and blended with a beautiful golden-yellow, creating a rich radiance of colour over the entire surface of these parts; the roots of the upper mandible are black, and a black spot or stripe, the entire width of the eye, runs from the base of the upper mandible to the corner of the eye; the roots of the under mandible likewise have a narrow border of black feathers. Over the head and cheeks is a shading of dark grey, like the bloom on a peach or plum. These birds, however, vary in the appearance of their plumage according to their respective ages, and also in size; as they get older they grow larger, and their colours become lighter and brighter, and show much more of the yellow, and less of the dull shade of green. It takes three moults before they obtain their most perfect appearance.

HABITS AND BREEDING.—In the spring, the male bird utters his notes as he is flying. The movements of his wings are then rapid and vigorous, his flight being somewhat similar to that of a swallow. When in search of a mate, he selects a tree, and from this he will, at intervals, rise to a considerable height, singing all the while, making rapid bounds, and closing his wings entirely; then he turns and descends in a similar manner. This the bird continues to do at intervals day by day, until he succeeds in obtaining a partner to share with him the pleasures of connubial felicity. This bird loves to dwell in a well-wooded locality, and is a frequent inhabitant of all places where the willow grows. He also frequents gardens and groves, thick hedgerows, and the sides of a river in close proximity to a town or village.

At the beginning of winter, Greenfinches congregate in large flocks, and about October take to flight. Some of them, principally the male birds, migrate, and return the following March; whilst some, and not a few, remain with us all the year round, and fraternise with Linnets, Chaffinches, and Goldfinches. This bird finds favour with most people who live in villages and outlying districts. In a wild state, it is rather shy, but not otherwise a timid bird, and is not easily scared by a gun. In confinement, it becomes very tame and cheerful, and is a useful accessory to anyone having a collection of performing birds. Greenfinches are best kept in cages; a box-shaped cage, 16in. by 14in. by 10in., with a wired front, and movable seed-hopper and drinking-tin. The apertures for seed and water should be rather large, say 1in. in diameter, as the birds have somewhat capacious heads.

The Greenfinch is not a suitable bird for an aviary where other birds are kept, as it chases them away from the feeding-troughs, and plucks and otherwise mutilates small birds without compunction. In the open air, they build their nest in a willow or thorn tree, and sometimes in a hedge, elder-bush, or evergreen, and make a large nest. The exterior consists of hay, grass, stubble, root-fibres, and moss, and the inside is well lined with wool, hair, or feathers. The hen lays twice, and sometimes three times, in a season, from four to six eggs, mostly four or five, of a faint greenish-grey colour, spotted with small reddish-brown spots, especially at the thickest end; and incubates in fourteen or fifteen days, according to the coldness or warmth of the season. She hatches her first brood about the end of May, although she has been known to do so a little earlier when the weather in the spring and winter has been unusually mild. The Greenfinch is at all times late in commencing its breeding operations.

METHODS OF CAPTURE.—The adult birds can be taken in the trap-cage with a decoy, which may be one of their own species or a Linnet; or with a braced bird, attached to a stake, near a hedge or bush, and some liced twigs. They come readily to call, and are not at all suspicious, and, consequently, easily allured. Their call is, “Yek, yek!” when on the wing.

It is not a difficult operation to find the nest of this bird,

as it can be accomplished by watching the parents and following them. A field-glass is of much utility in assisting naturalists to find birds' nests after this manner. As the seeker approaches the place where the nest is built, the birds become unwontedly excited, and commence to flutter, and utter cries of wailing and lamentation in the most frantic and melancholy fashion, and they follow the searcher so closely and ardently as almost to come within an arm's length. They never attempt to allure the seeker from the spot, but their cry is one of an unmistakably beseeching character. They are most affectionate birds, and their attachment to their offspring is so great that it seems to inspire them with heroism, cases having been known where the parent birds have literally attacked boys in the act of plundering their nests and removing their callow broods. They grieve terribly on losing their offspring, and wail and cry for days afterwards in the most heartrending fashion.

FOOD AND TREATMENT.—In a wild state the Greenfinch lives principally on seed and berries. It is also insectivorous, and will feed on green caterpillars and the larvæ of insects, with which it feeds its young. The seeds for which it shows a preference are those of the milk thistle, dandelion, groundsel, turnip radish, wild rape (runch seed), and lettuce, and, consequently, it is not a favourite with gardeners, as it is a very destructive bird in the spring and summer. It is fond of apples, and of the seed of the hop plant, both of which it attacks as soon as they are ripe. It will eat lettuce, chickweed, cabbage, and groundsel, unripe barley, and the early spring buds; in fact, it is not very choice as to its diet, and will eat almost anything. In winter it eats hip-berries (sometimes called dog-berries, on account of their being the fruit of the dog-rose, or sweet-briar), and it is also fond of haws (the fruit of the hawthorn).

In confinement it will eat seeds of all sorts, but appears to prefer summer rape, linseed, and hemp seed, to other kinds. It partakes of groats readily; also bread soaked in milk or water, and any of the compounds given to soft-billed birds—such as barley and pea meal—made into a soft paste; in fact, the Greenfinch is not at all fastidious in the choice of viands, and will eat and thrive on anything given to any birds of the finch tribe. In the summer time it should be plentifully

supplied with green food, for which it shows a strong predilection—groundsel, lettuce, chickweed, or watercress.

REARING THE YOUNG.—The young may be taken at the age of ten or twelve days; if left longer than this, they will, in all probability, dash out of the nest simultaneously when an attempt is made to touch them—as they invariably do when fully feathered. If left alone, they will not attempt to leave until fully fledged and able to fly clear away, as the parents are most bountiful providers of food, and feed their offspring to repletion. The best plan is to remove the nest with the young birds; they must be kept warm, and placed in a basket, box, or cage—one with a large door, or the top to open with hinges, to be easy of access. They should be fed every two hours at least, from six in the morning until six or seven o'clock at night. Prepare their food as follows: Scald a tablespoonful of German rape seed with boiling water; let it stand ten hours; pour off the liquid, and rinse it again, first with warm, and, finally, with clear cold spring water; then rub the seed in a dry cloth, and afterwards bruise it fine in a mortar, or crush it with a paste-pin or flat-iron; add to it a piece of fresh white bread that has been previously soaked in warm water and pressed almost dry; to this add a little new milk, boil all together, and stir to a thick consistency, like "crowdy" or porridge. Equivalent: One part of rape seed and two of bread, and milk sufficient to make it as described.

It should be made fresh every day, as the birds do not care for it when stale, and, if given sour, it will scour and probably kill them. Care, however, must be taken not to give it too dry, or this will be attended with results almost equally disastrous. When they can feed themselves, give them the scalded rape alone, as it is injurious to feed young birds too long on soft food, as it makes them tender and weak. At the age of five or six weeks they will be able to break seed, and when this is observed they may be gradually supplied with the food we recommend for adult birds. Between the age of a month and six weeks, a little bruised hemp seed, freed from the husks, may be given sparingly. Bruise it in a mortar, or pass it through a pepper mill, and blow away the husks. Some fanciers use other kinds of food, but there is none better than that recommended.

THE DISTINGUISHING MARKS OF COCK AND HEN.—The hen bird is smaller than the male, and measures $5\frac{1}{2}$ in. in length on an average. She is of a dingy greyish-brown or mouse-colour, tinged with a sort of indescribable green; she possesses none of the beautiful green and yellow on the head, breast, back, &c., which give such a distinguished appearance to the male bird. The yellow margins on the wings, too, are much narrower and less brilliant in tone, and she is entirely destitute of the bright golden spots on the ridge of the wings, and likewise of the yellow marking in the tail feathers. The throat of the hen is dirty-white, and the bright black spots in front of the eyes of the male bird are wanting, those in the hen being of a dusky-brown colour.

SONG.—The Greenfinch is not esteemed for the compass and quality of its song; in fact, its natural ditty is meagre and not over-pleasing; but naturalists differ in opinion on this point, as some think the notes uttered by this bird rather good than otherwise. If it be taken from the nest and hand-reared, and placed at an early age under a Canary or a Chaffinch, it will learn and sing the song of either of these birds fairly well; or if it is wished that it should learn the song of any particular bird, let it be placed near the variety selected when it is about three weeks old, as it learns at an early age, and rarely forgets what it has been taught.

POINTS TO BE OBSERVED IN JUDGING.—Choose a large lusty bird in good plumage; a three year old bird is best, as he is then much brighter in colour, showing more yellow. A young bird is too raw and green for the show bench, and a year old bird is much darker on the back than an older bird, although lighter on the under parts than a young bird. There is a great divergence in the colours of these birds, according to age. Next to size, shape, and compactness of feather, the colouring is essential. The head should be a rich olive-green, the back and shoulders a bright yellowish-green; the quills in the wings must be bright black, and the borders vivid yellow, as also the lower web of the outside tail feathers; the under parts should be of a clear, well-defined siskin green. The wings need to be well formed, and carried tight to the body, and the tail free from damaged feathers. A bird to be eligible for a show must be in good condition, and entirely free from dirt.

GENERAL REMARKS.—These birds will breed in an aviary, if placed by themselves, and provided with an evergreen in a tub, and supplied with all the materials used by them in building their nest. They can be taught to come and go in and out of a room or aviary, and when once they become accustomed to the place, and those who attend to their wants, they will not leave. Various methods are adopted for teaching them to do this; the old birds can be secured by bracing the male bird, or putting him in a cage inside the aviary, and by pulling a few of the flying feathers from the wings of the hen, so that she cannot go far away; then the young birds are allowed their liberty; but the place for egress and ingress must be made easily accessible. A perch should be placed inside and outside of the aperture; the male bird, if caged, should be hung near it, where he can be seen; a small window is probably the best. The hen, finding she cannot fly away, will not attempt to leave, and the young birds will return at the call of their parents, or to get food.

In trying an experiment of this kind, care must be taken that no cats or children are in the neighbourhood, as they might chase or frighten the birds; even a dog will cause them much apprehension. Success greatly depends on favourable circumstances and quiet. In the spring, however, it will be better not to give them their liberty, or some of them may be allured away by wild birds of their own species. After a few weeks they will go and return with as much confidence as Pigeons. They breed readily with Canaries or other birds of the finch tribe, but these hybrids are not by any means handsome birds. They make excellent foster-parents, and are most reliable in this respect. By some naturalists this bird is termed the Green Grosbeak. The males and females mostly separate in winter, and it will be found that the greater portion of those that migrate are male birds. They are very sociable, and will congregate with any birds of the finch tribe.

DISEASES AND THEIR TREATMENT.—The Greenfinch is a remarkably hardy bird, and is seldom on the sick list. Sometimes these birds are afflicted with purging, when a little prepared chalk should be given to them, mixed with a piece of white bread and scalded rape seed and milk, as previously described. When they are observed to be costive,

scald five or six senna leaves, using about a wineglassful of boiling water; when cold, pour off the liquid, add a table-spoonful to their ordinary drinking water, and leave it for two days; this should have the desired effect. But if a bird is ill, and suffering from a distended abdomen, give him at once three drops of castor oil, on the end of a knitting needle which has been previously warmed to cause the oil to flow freely; open his mouth, and drop the oil into his throat. During the moult Greenfinches should have a frequent change of diet, including hemp, turnip, and radish seed, a little green food, and a slice of sweet apple; place the birds in the sun, but not in a draught, as nothing is so pernicious to the health of birds as to place them in such a position at this time.



CHAPTER VIII.

THE HAWFINCH.

Loxia coccothraustes, Lin.; *Grosbec*, Buf.

DESCRIPTION AND CHARACTER.—The Hawfinch is not a likely bird to attract the attention of a casual observer, as its appearance is more peculiar than pleasing. It has a large head and an immense bill, as compared with the size of its body, and might be termed very appropriately the Parrot Finch, on account of its strong resemblance, in general conformation, to the African Grey Parrot.

The entire length of the bird is 7in. Of this, the tail measures 2in., and the bill, which is very massive, $\frac{7}{8}$ in. in length by $1\frac{3}{4}$ in. round the root at the base. The head, cheeks, and sides of throat of the male bird are of a rich deep brown, strongly tinged with chestnut, the forehead being a little paler. There is a black spot in front of each eye, and the throat, or gullet, is also black. The beak is of a peculiar bright, silvery leaden appearance, with a refulgent sheen, which resembles the silver grey ground colour of mother-of-pearl. The back part of the neck is grey; the back and shoulders, dark brown; the rump and tail coverts, chestnut brown. The tail is black, with a large white spot at the end of each feather. The wings are black, with bars of white in the centre, and shaded at the ends with purple and green. The smaller coverts are dark brown, the secondary, chestnut brown and grey, and those which cover the butts (scapulars) of the primary flight feathers, black. The lower part of the throat, breast, belly, and sides are

chestnut brown; the vent and under tail coverts are grey, slightly tinged with yellowish brown; the legs, feet, and claws, are brownish flesh colour.

Hawfinches are exceedingly shy, and difficult to approach, especially in an open country. They appear to delight in woodlands and dense thickets, in secluded situations; and as these are generally preserved lands, and, consequently, difficult of access, much mystery is attached to the habits of the birds that might otherwise be elucidated. The chief recommendation which the Hawfinch appears to possess is its extreme docility when once it becomes domesticated. It can be made so tame, by frequent handling and kind treatment, that it may be carried about perched on the finger, and, when thoroughly accustomed to its owner and its domicile, will not attempt to fly away, even when an opportunity is afforded it.

HABITS AND BREEDING.—The Hawfinch is partly migratory and partly indigenous. It is common in Germany and other European countries, where it breeds regularly. It likewise breeds in some parts of Essex, Kent, Surrey, and Buckinghamshire, but more particularly in the neighbourhood of Epping Forest. It has also been known to breed as far north as Worcestershire, and even Staffordshire. Hawfinches frequent beech-trees, holly and whitethorn bushes, and here they build their nests, which are composed of dried twigs, root fibres, and lichens, lined with fine grass and hair. The hen lays, twice a year, from three to five eggs, of a greenish grey colour, speckled and striped with brown and blackish blue spots and marks.

METHODS OF CAPTURE.—In the autumn and winter months, when the weather is severe and food scarce, these birds may be taken with the geldert (or gildert), baited with hemp seed or service berries; they may also be caught with the decoy bush and limed twigs, or with the day net. Hunger makes them bold, otherwise they are very shy birds, and difficult to capture.

FOOD AND TREATMENT.—In a wild state the Hawfinch lives principally on seeds and berries, such as those of the beech, ash, and hornbeam. It will eat the seed of lettuce, cabbage, charlock, and several other kinds; also service and laurel berries, haws and sloes (the fruit of the blackthorn), plums

and cherries. In confinement it may be fed on hemp, rape, canary, inga, and other kinds of seeds. It is also very partial to garden peas.

REARING THE YOUNG.—Young birds intended to be reared by hand may be taken, at ten or twelve days old, and fed on soaked rape seed, mixed with moistened bread; or they will thrive on a mixture of pea and barley meal, in equal proportions, made into a soft paste with boiling water, and stirred well together; to be given when cold. They should be fed at first every hour, until they are about eighteen days old, then every one and a half hours, until they can cater for themselves. As soon as they can peck, a little crushed hemp seed should be mixed with their food. When six weeks old, give them a few haws and berries, and continue this treatment until they have moulted, when the seeds already mentioned will suffice.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is paler and duller in the various colours of her plumage than the male bird, previously described. The head of the hen is olive brown, the neck brownish grey, the back pale sparrow brown, the wings brownish black, the breast and belly greyish slaty brown. When a male and female are seen together, the difference of the sexes is easily distinguishable.

SONG.—Hawfinches can hardly be said to have a song; they utter a few soft notes only, as if recording a song to themselves, not unlike the natural song of the Bullfinch, and occasionally they break out with a few louder notes; but it would require a strong imagination to exalt it into a song. They will, when taken young, and reared by hand, try to imitate the songs of other birds in whose company they are constantly kept, more especially those that whistle, such as the Song Thrush and Blackbird, but they never seem to attain proficiency. The hen as well as the cock attempts to whistle under similar circumstances.

POINTS TO BE OBSERVED IN JUDGING.—Hawfinches are scarcely handsome enough to make show birds of, but, as some of the judges at cage bird shows, when judging a mixed class, go for something out of the ordinary everyday show bird, they have a chance of obtaining honours. Select those birds which are most brilliant and decided in colour, smooth and compact in feather, with close-fitting wings, a

neat, well-carried tail, perfect toes and claws, a bright eye, and a cheerful and steady gait, as these are the points that will catch the judge's eye.

GENERAL REMARKS.—In some parts of Germany Hawfinches are very common, and oftentimes build their nests in gardens, the owners of which sometimes take the young, and rear them by hand. When so brought up, they will follow their masters about from place to place, and display much attachment and personal regard for them; they will, without hesitation, attack a dog or other animal from whom they apprehend their protectors to be in bodily danger, or likely to receive an injury. Hawfinches are very grateful birds, and exhibit considerable affection for those who supply their daily wants. They can be taught to come and go at command, to eat out of the hand and mouth, and to perch on the finger or shoulder, without exhibiting fear or trepidation. They may be allowed to go about the house without being caged.

Hawfinches are best kept in cages; for preference, a box cage with a wire front, 18in. by 16in., and 9in. wide. They thrive all right in an aviary, but the smaller birds seem to have a dread of them; this is probably owing to their powerful and formidable beaks, which would prove a terrible weapon in an encounter. They do not seem to be particularly quarrelsome either; in fact, when placed with other birds, they are rather reserved and sullen.

DISEASES AND THEIR TREATMENT.—Hawfinches are hardy, and seldom invalids. They suffer most during the process of the moult—when they suffer at all. At this time a few haws, sloes, or cherries, and plum stones, and a few lemon seeds, should be given to them, when they will soon revive.

If kept in small cages they become subject to sore feet, and should have them occasionally steeped in warm water, to which a teaspoonful of salt or a piece of alum has been added; immerse them for five or ten minutes, then dry them with a soft cotton rag, and afterwards anoint them with goose grease or olive oil. The floor of the cage should be well covered with sand, mixed with a few small gravelly pebbles; the birds swallow the stones, and they promote digestion and keep them in health.

These birds are sometimes subject to fits of epilepsy, for treatment of which see Chapter V., on "Diseases."

CHAPTER IX.

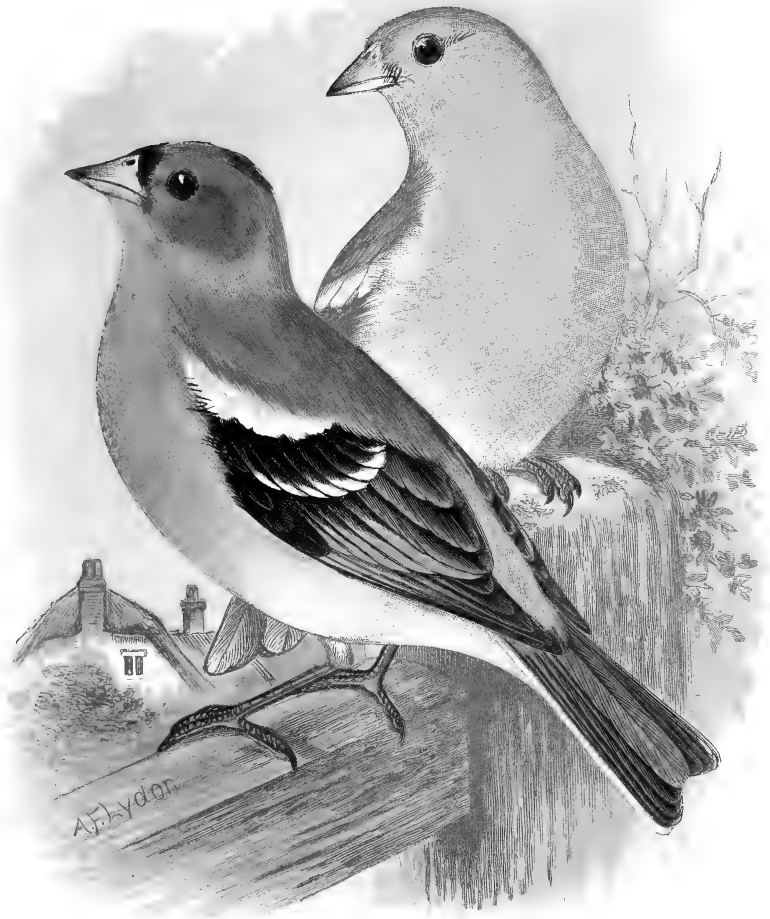
THE CHAFFINCH.

Fringilla cœlebs, Lin. ; *Pinson*, Buf.

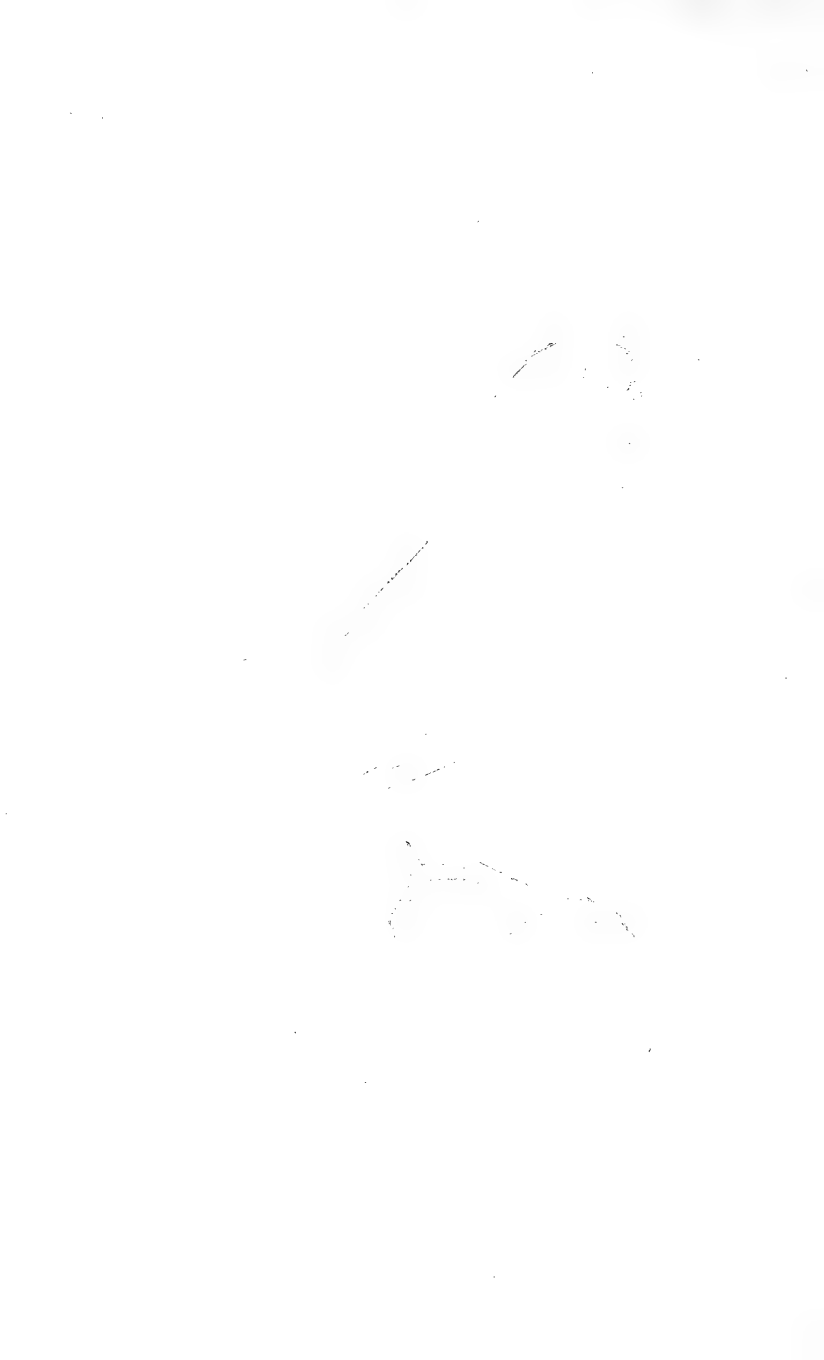
DESCRIPTION AND CHARACTER. — The Chaffinch, which is well-known in most European countries, is one of the very hardiest members of the Finch family. Although not considered so handsome in appearance as either the Goldfinch or Bullfinch, the male is by no means a despicable bird to look upon, and is considered by many of his admirers a very pretty fellow indeed, and is much prized on account of his vivacious disposition and song. The Chaffinch has a loud, musical voice, and may be heard at a considerable distance uttering his well-known cry, "Fink, Fink," or, as some people term it, "Pink, Pink," which he repeats a great number of times.

The male bird commences to sing in the spring, and continues throughout the breeding season. He is not so tractable and docile as some of his congeners, such as the Greenfinch and Bullfinch, and has frequently to be kept caged a long time before he becomes sufficiently tame and domesticated to delight his possessor with his merry song.

In consequence of this drawback, the Chaffinch is not so universally esteemed in this country as many of the other varieties of Finches, some of which are of a genial, and even affectionate, nature. When once, however, he becomes thoroughly naturalized, he sings freely enough ; but old birds, caught out of doors, are difficult to reconcile to



CHAFFINCHES.
(Male and Female.)



domesticity, and appear ever on the alert to make their escape from the thralldom of the cage.

The Chaffinch, which is also named the "Shell-apple," the "Bachelor Bird," and the "Beech Finch," is a stout, strong bird, about the size of a Robin, but rather fuller in the body. It is $5\frac{3}{4}$ in. in length, of which the tail measures $2\frac{1}{2}$ in. The bill is $\frac{1}{2}$ in. in length, of a dull flesh colour, tipped with dark brown, and, in spring and summer, pale dull blue. At the base of the upper mandible is a narrow black band; the remainder of the head and collar, or hood, extending to each side of the neck and shoulders, is greyish blue, the top of the head being spotted with reddish-brown. In winter, the head and collar are greenish grey.

The cheeks and face (extending over each eye), the front part of the neck, throat, breast, sides, and upper part of the belly, are of a reddish nut brown. The eyes are very dark brown, almost black. The lower part of the belly and vent are greyish white, with a little pale brown intermixed; the under tail coverts are pale yellowish brown. The back is of a rich intense chestnut brown, shaded with slate colour and green. The rump and upper tail coverts are Siskin green.

The larger quill feathers are dark brown, verging on black, the outer margins being bordered with a narrow streak of palish yellow, and the under margins of the smaller, or secondary, pen feathers, with white; the latter are white from the roots to about one-third of the length of the feathers, these forming narrow stripes across the wings, just beneath the lower wing coverts; the scapulas are white, showing a beautiful white spot on each shoulder; the larger coverts are black, tipped with white. The tail is a mixture of black and dark brown; the two feathers on the exterior side of the quills have broad white margins, half their length. The two central feathers are much paler than the remainder, and are of a pale greenish slate colour throughout. These birds vary in colour according to age; the description given is from a bird about a year old, taken in the spring. Older birds are a little more brilliant in plumage, but the one selected is a very fair average specimen.

After the moulting season the colours become paler, the black spot on the forehead changing to dark brown, the upper part of the head and neck to greyish green, and the breast, cheeks, and throat becoming considerably lighter in colour. Occasionally a bird is found with variegated colours, but specimens of this kind are rare and curious.

The Chaffinch has three changes of plumage before it dons its adult costume. The first is the nest suit, as a brancher; next it moults, and puts on its autumn and winter garb; and in the spring it again partly moults, and assumes its most elegant and perfect attire.

HABITS AND BREEDING.—The Chaffinch is migratory in its habits, but, as a rule, only the early hatched and the hen birds migrate, as is the case with some of the other varieties of the Finch family. These birds migrate in the months of October and November, although they usually assemble about the middle of August, and go in flocks in search of food; they visit stubble fields, farmyards, and gardens principally. Those that are reared and moult late, as well as a great many of the old birds, remain and rough it in this country.

The cocks separate themselves from the hens entirely after the moulting season, and keep together throughout the winter months. Most of the birds that cross the sea are believed to go to Spain and Africa. They return again in March, some being observed in the early part of that month, the others following at short intervals. They arrive in batches of about twenty or thirty birds to a flight, and distribute themselves pretty generally all over our Island. The males precede the females, and arrive about fourteen days in advance.

They begin to breed in April—about the latter part of the month—and have young ones early in May. Their favourite spot is a tree. If they build their nest in an orchard or garden, they will choose an apple or pear tree, but they are not over particular in this respect, and build in any tree which appears to afford them the greatest protection from the gaze of the curious. They almost invariably select a side branch on which to erect their nest, and frequently choose a fork formed by two branches shooting from the same stem, at an acute angle, or on a branch or clump where four or five twigs shoot in different direc-

tions upwards, forming a kind of cradle or hollow. Occasionally they build their nest in a high hedge or black-thorn bush, or in an evergreen, if situated in some secluded spot. The nest is made secure to the branch with root fibres, small twigs, and withered grass, interwoven and interlaced. The outer covering is formed principally of green moss, and lichens gathered from the surrounding trees, the latter evidently being a device to make it more difficult to be observed.

The nest is round in form, and tastefully and artistically finished, being most elaborately and skilfully lined with horse or cow hair, wool, feathers, and, at times, thistle down. It is only excelled in beauty and workmanship by the nest of the Goldfinch.

The hen lays four or five eggs, of a bluish white or French grey colour, marked all over with a few large spots and streaks, but with smaller specks and stripes at the largest, or thickest end, of a reddish brown or bright chocolate colour. They have two, and occasionally three, nests in a year, the first brood being composed chiefly of males, and the second of females. The hen incubates about fourteen days (from thirteen to fifteen); the young leave the nest before they are three weeks old, but the parents continue to feed them for several days afterwards, and whilst preparations are being made for a second brood. The hen is the chief builder, the cock supplying the greater part of the material. The male bird is assiduous in his attentions to his partner during the period of incubation, and warns her of any apparent or approaching danger. He selects a tree not far from the chosen spot, where his treasures are placed, from which he can make his observations, and, excepting to procure food, or grant his mate a little temporary respite from her arduous task, rarely moves away from his post. Chaffinches exhibit much affection for their young, and fret for days after being deprived of them. I have never known anyone succeed in breeding Chaffinches in cages, but they will breed in an aviary under favourable conditions.

METHODS OF CAPTURE.—To discover the nest is not, in a general way, a task of much difficulty to those who are possessed of a keen and observant eye, and are sufficiently

agile to climb a tree. The nest of these birds, although carefully secluded from the gaze of a casual observer, is not altogether beyond the reach of the vigilant and watchful bird-catcher, especially if he be acquainted with the habits and dispositions of the birds. Chaffinches are cute and jealous, and, during the breeding season, rarely go far away from the locality of their nesting place. Hence, it is only necessary to find out their usual haunts, which can be done by perambulating the lanes, fields, and woods in the neighbourhood which they have been seen to frequent, and, by the aid of a field glass, the chosen watch tower of the male bird may be discovered; but as he is, during this period of his existence, almost constantly uttering, in sharp, clear tones, his call note of "Fink, fink," he may be traced by this sign alone, for the nearer the seeker approaches the tree or bush in which the nest is built, the more excited will the bird become—that is, providing that he and his partner have entered upon the responsibilities of wedded life; but if they are merely in search of a nesting-place, they will fly away some distance, to return when the cause of alarm has subsided. When a nest and its occupants have been removed, the parents select some other spot in which to attempt to rear a second brood, taking care to choose a place some distance away, and one which promises more security.

Chaffinches can be taken by means of a decoy, and may be allured into the ordinary trap cage in the autumn and winter months. A great many of these birds are captured during March, when returning from their chosen exile. Open spaces are selected, the ground for several yards round is strewn liberally with canary or rape seed, groats or hempseed, and limed twigs or the day net employed as the means of capture.

Some fowlers use decoy birds, either placed in cages, or braced and secured to a hedge or bush, and well surrounded by limed twigs. These birds frequent any place where there is an abundance of trees, within an easy reach of stubble or ploughed fields, and the best time to ensnare them is the early morning, before they leave their haunts in search of food. Chaffinches should not be taken during the breeding season, for, if they have paired, and are taken away from

their partners or young brood, they not infrequently sulk, refuse their food, and die.

FOOD AND TREATMENT.—When young birds are old enough to break seed and cater for themselves, they may be fed on summer rape and canary seed alone, but it is more congenial to their health and well-being to give them a change of diet frequently, and this may consist of linseed, groats, hemp, grass, or plantain seed. A little green food is likewise necessary — lettuce, watercress, groundsel, or chickweed. The most dangerous period in the lives of these birds is the moulting season; then a change of diet becomes an absolute requirement. If a bird appears dull and out of sorts, it should be supplied with a few ants' eggs or mealworms. If neither eggs or worms can be procured, boil the heart of a rabbit or fowl, or even a little mutton, chop it fine, and give instead; but the insects and ants' eggs are preferable. If the birds are purged at this time, refrain from giving green food, but if the opposite extreme exists, then give it freely. In a wild state, Chaffinches feed on fruit, fruit buds, insects, and seeds of various kinds, as well as vegetables, and will eat almost anything. They are not very particular.

REARING THE YOUNG. — Those who desire to rear young Chaffinches by hand should take them at the age of ten or twelve days, and feed in the same way as young Goldfinches or Linnets, or on breadcrumbs and soaked rape seed. The parent birds feed their young largely on insects and larvæ for several days; so that it would be well, if ants' eggs are procurable, to mix some with their food; if not obtainable, a few mealworms or maggots, chopped fine, may be substituted. They are robust, hardy birds, and easily reared.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen bird is scarcely so large as the cock, and much less brilliant in the colours of her plumage. The head and neck of a female are greyish brown, the back a sort of dull olive green, shaded with grey; the rump is greenish white; the breast, throat, and sides pale reddish grey; the belly an indefinite smoky green; in fact, the plumage of a hen bird is altogether more dull and dingy looking, and she lacks that spruce and vivacious appearance, and dash and go, that is so marked a feature in all healthy male specimens.

In young birds the males are distinguishable from the hens at eleven or twelve days old. The male birds have a greater abundance of white feathers in the wings, and this is more particularly observable on the pinions; the sides of the breasts of the males, even at this early period, are tinged with red, and the whole of the plumage is altogether richer and more intense in colour. The circle round the eye is also of a brighter yellow. In other respects the young birds resemble the adult female.

SONG.—The song of the Chaffinch is greatly admired by many people who have a penchant for music. There is, however, a very marked difference in this variety with regard to vocalisation. Birds that have been reared in a wild state, and have reached the age of two or three years, rarely sing with freedom after being caught and confined indoors; but those that have been reared by hand, and brought up under a good tutor of the same species, or coached by a Nightingale, Woodlark, Linnet, or Hartz Mountain Canary, almost invariably make valuable and reliable singers. These birds, however, like human beings, vary considerably in their aptitude to acquire and retain vocal excellence, and it will be found that, even where two birds have been reared together, and the same opportunities for acquiring a particular song have been afforded each, in nine cases out of ten one will excel the other both in power, compass, and variety of notes.

A really high-class singer has been noticed to have as many as seven distinctive changes, or variations, in its song. The voice of a superior specimen is loud, clear, melodious, flute-like, and penetrating, and consists principally of trills of great beauty of expression and variety, which are repeated in rapid succession, and with an easy grace and modulation.

The Germans (as a nation) probably value the Chaffinch more than any other people, and set great store on really high-class, well-trained, and clever songsters. The varieties in the songs of these birds are known by a diversity of distinct names which have been applied to them. The best birds—those most highly trained—are to be found in Thuringia, Saxony, and Franconia, where they are held in the highest possible estimation, and bring long prices.

A really first-class, well-trained bird, will command a high

figure, but birds of much excellence may be obtained at prices varying from £1 to £5, whereas a commonplace, newly-caught specimen, may be bought from any dealer in the spring or autumn for 1s.

The Chaffinch possesses the power of imitation in an extraordinary degree; hence, it is difficult to find two birds that sing precisely the same song, as they often intersperse the artificial song which they have been taught with notes of their own, or others subsequently acquired. Hand-reared birds may be taught the song of almost any bird, providing they hear no other. They have been known to imitate the song of the Nightingale, Woodlark, Linnet, Goldfinch, Canary, and other birds, when kept in daily company with them. There is, however, a marked difference in this respect, as some birds learn very readily, and acquire a variety of notes, whilst others learn slowly, and never seem capable of mastering more than a few set phrases.

In confinement, and when properly acclimatised, the Chaffinch will sing for eight months in the year; but out of doors, three, or at most four, months is as much as can be reckoned upon.

They record or mutter, almost incoherently, their song for several weeks before giving full utterance to it, and the less time they occupy in these preliminary performances the more they are esteemed by their admirers, as this is considered a hopeful sign, for such birds are generally the possessors of superior merit.

POINTS TO BE OBSERVED IN JUDGING.—Chaffinches selected and kept for exhibition should be at least one year old. Choose those that are well-shaped, sprightly, well-conditioned and agile, brilliant in colour, smooth and tight in feather, of good carriage, and in full and perfect plumage. Newly-caught birds moulted in the open air are preferable to house, or even aviary moulted birds, for such purpose, but it requires much care and patience to get them sufficiently tame and steady, which can only be done by hunger and constant handling, and accustoming them to strangers. If convenient, they ought to be hung in a public place, or where people are constantly passing to and fro. Children, if not too rough, have a wonderful way of familiarising and taming them. Judges are very apt to pass by a good bird

if it is wild and intractable, and not much wonder at this need be expressed, when it is considered that their duties are frequently severe and onerous, and that time is often of great importance.

One point that buyers should recollect is that, though a bird is successful on the show bench one year, it may be of no use whatever afterwards, as so much depends on the moulting process; therefore, it is unwise of anyone to pay an exorbitant price for a bird of this variety with the expectation that it will follow up its previous successes. These remarks are equally applicable to many other varieties of British birds. A bird about three years of age is generally in its most perfect form as regards plumage and condition, and is seldom so handsome afterwards.

GENERAL REMARKS.—There are pied and other specimens of Chaffinches; but these are rarely met with, and are produced, as a rule, by disease and old age, or irregular moulting; probably, in some cases, these peculiarities may arise from hereditary causes. Anyone who is fortunate enough to procure a superior songster, with much variation of notes, and masterly execution, should purchase a few hand-reared young male birds, and place them where they can distinctly hear this bird sing, as some of them are sure, in the course of time, to imitate some, if not the greater part, or whole, of his song; but they must not be permitted to hear any other bird during the time they are being coached, or the expense and trouble will be wasted. By this means, and a continuation of the practice, a few choice singing birds may be secured.

When these birds are reared by hand they can be taught the songs of other birds, but not so well if removed after the age already stated. They are apt learners, and readily acquire the notes of their parents. Although Chaffinches reared and moulted in a wild state are rather difficult to domesticate, especially old birds, those that are hand-reared become very docile and tractable, and may, with patience and perseverance, be taught to sing at command. In order to teach them an artificial song, they must be kept in a dark, secluded place, the cage being partly covered, to make them more attentive to the instructions imparted by their preceptor; and they ought not to be brought to the light

until they have commenced to record at least some part of the song they are being taught.

Chaffinches should be kept in cages made of wood, with wired fronts, the dimensions being: Length, 14in.; height, 11in. or 12in.; and width, 7in., with two perches placed on the same level, and about 6in. or 7in. apart, as the birds like to hop backward and forward, from one perch to the other. They sing better in close than in open wired cages, and they are certainly less restless. A perch should extend along the front of the cage, to enable the birds to obtain their food and water, which should be secured to the front wires.

Where more than one bird is kept in the same room, it will be best to place them in such a position that they will not be able to see each other, as, by this arrangement, the birds will sing more freely. They never sing so well in an aviary as they do in cages, especially when birds of other species are mixed with them.

Chaffinches are the hardiest of birds, bathing in the most inclement weather, regardless alike of frost and snow, and appearing to enjoy their immersion exceedingly. They always look fresh and trim, and in the best of spirits, being naturally very vivacious.

DISEASES AND THEIR TREATMENT.—The moult is the most dangerous malady to which Chaffinches are liable. At this period they should be removed out of doors, and where they can get the benefit of a few hours' sunshine to revel in. If they do not cast their feathers freely, and appear dull and mopish, give them a few ants' eggs and mealworms, and a frequent change of diet, as that will generally revive them in a short time. They should be permitted to bathe freely at this time, and, if a bird refuses its bath, it may be accepted as a sign that it is not altogether well, as these birds delight in bathing.

After the moulting is over, the scales should be removed from their legs, to prevent them becoming gouty. The scales may be removed with the thumb-nail or a sharp penknife, but care and dexterity are needed to perform the operation in a satisfactory manner, more particularly when a knife is used. The nails will require frequent attention, as they grow rapidly, and prevent the birds from climbing along the wires of their cages, an exercise they evidently enjoy. For this

purpose use a pair of sharp scissors, but be careful not to cut into the quick. It is a simple operation, and one that any person may perform.

When birds are not regularly supplied with baths their rump glands are liable to close, and if this state of things is not speedily remedied death results. A drop of salad or olive oil, put on the gland, once a month, with a feather, is an excellent preventative.

These birds are likewise subject to the same complaints as other members of the Finch family, and must be treated in the same way. (*Vide* Chapter V., on "Diseases.")





BULLFINCHES.
(Male and Female.)

CHAPTER X.

THE BULLFINCH.

Loxia Pyrrhula, Lin.; *Bouvreuil*, Buf.; *Der Gimpel oder Dohmpfaffe*, Bech.; *Pyrrhula vulgaris*, Flem.

DESCRIPTION AND CHARACTER.—The Bullfinch, which is a great favourite with most fanciers, is a handsome and intelligent bird, very docile in its disposition, affectionate and tractable in its nature, and becomes warmly attached to those who administer to its daily wants, and treat it with kindness and consideration. It is capable of being taught to whistle distinctly and correctly a variety of tunes, and appears to take great pleasure in exhibiting its talents after its education has been completed.

The English Bullfinch measures 6in. in length, from the tip of the beak to the end of the tail, the tail being $2\frac{1}{2}$ in. long. When in health and condition it weighs about 13dr. The beak is $\frac{3}{8}$ in. long, black in colour, very strong, massive, and slightly hooked, the upper extending over the under mandible, like that of the hawk. The tongue is short, the eyes dark hazel, verging on black. The head is large, and the neck short, thick, and massive. It has a stout body, and a deep, broad chest. A black cap, elliptic in form, covers the head, and extends to the upper part of the neck. Around the under mandible and upper parts of the throat, reaching to the eye, and blending with the cap in front of the head, is another patch of rich velvety black. The lower part of the back of the neck, back, and shoulders, is of a dull greyish blue or pale slate colour. The rump is French white. The

first and secondary pen feathers are dark and light slate colour respectively on the upper side of the quill, and black on the under side, with black coverts; the first or primary coverts are of a light greyish slate colour. In each wing, close to the rump (the outer plume), is a red feather. The throat, cheeks, breast, belly, and sides, are of a rich, bright, salmon colour, strongly impregnated with crimson; the vent and under tail coverts are greyish white; the tail is black. The legs and feet are dusky brown; length of legs, $1\frac{1}{4}$ in. The thighs are bluish slate colour, and the under flue feathers black.

Pied Bullfinches are sometimes to be met with, but they are not worth purchasing, as the strange diversity of colour is attributable to some constitutional disorder, and the birds never live long; a pied bird mating with an ordinary Bullfinch may transmit the same complaint to its offspring, which may in time become possessed of the diversified plumage, but a young bird in its nest feathers never shows this peculiarity. There are plenty of black, or partly black, Bullfinches to be found, the change in colour resulting from a protracted moult in confinement, and feeding too exclusively on hemp seed; a bird so distinguished in all probability suffers from a diseased liver, the result of feeding on too stimulating food, or from not giving a frequent change of diet. Instances have been known of birds moulting black one year, and regaining their original plumage the succeeding year.

HABITS AND BREEDING. — Bullfinches inhabit nearly all parts of the United Kingdom of Great Britain and Ireland, and of most Continental countries. They are now, however, very much scarcer in England than they were thirty years ago.

The Bullfinch, which has from two to three nests a year, breeds late in the spring, seldom having young ones before the end of May or the beginning of June. It generally selects an orchard, wood, or park for a nesting-place, where there are plenty of trees and thick hedgerows, and an abundant supply of provender, near at hand. It selects fir trees chiefly, when in a plantation, and builds its nest in the lower branches, or in a blackthorn bush, near the top, so that, when the hedges are in full leaf, it is not readily seen. The nest is composed of small twigs and fine root fibres, and is lined

with moss, wool, feathers, or horsehair; it is only a mean-looking fabric, and badly constructed. The hen lays from three to five eggs, of a palish blue colour, speckled, spotted, and striped with pale reddish brown and violet spots at the largest end. She incubates from fourteen to fifteen days. Bullfinches are most affectionate birds; the male is most assiduous in his attentions, both to his mate and her broodlings, and seldom goes far away, or leaves them for any lengthened period.

Bullfinches will breed with Goldfinches, brown Linnets, Greenfinches, and Chaffinches. The produce of the latter cross are pretty birds, but not nearly so handsome as those bred between the Goldfinch and Bullfinch. Those bred between the Bullfinch and the Linnet are very commonplace-looking birds indeed.

METHODS OF CAPTURE.—Bullfinches are readily attracted by a decoy bird. A stake should be driven in the ground, beside a bush or hedge, with a decoy bird braced and attached to it, and limed twigs distributed about the bush or hedge in close proximity. They can likewise be taken by the trap-cage, but not so easily as the Goldfinch and Linnet. In winter time they can be caught by the "geldert," an instrument made with a small iron hoop taken from a cask or tub. Some thin, strong twine should be attached to this, placed crosswise to form squares of $1\frac{1}{2}$ in. or 2 in. in size, and secured to the sides; horsehair nooses should be made and fastened to the string, and arranged so as to cover the squares. This instrument should be placed on the snow, and baited with a few berries of any kind, or with hemp seed. The young birds may easily be taken in the nests by watching the old birds closely, as they seldom make any attempt at concealing where their nests are, for, unlike most other wild birds, they are in no degree suspicious or distrustful.

FOOD AND TREATMENT.—In a wild state, Bullfinches feed on a variety of seeds, such as those of the fir, ash, pine, and beech; on most kinds of berries, and also on a variety of buds, such as those of the oak, red beech, pear, apple, plum, cherry, and currant. They likewise eat linseed, rape, nettle, grass, dock, and plantain seed. In confinement, they may be fed on canary, millet, rape, inga, and linseed, mixed. They

are particularly fond of hemp seed, which should only be given sparingly, and separate, or they will throw out all the other kinds in searching for it. Hemp seed given *ad libitum* is detrimental to their health, and by this means affects the beautiful plumage of the birds, in some instances causing it to become quite black. A little bread or biscuit, soaked in water, will be found beneficial as a change of diet; and in the spring, summer, and autumn, a little green food, such as watercress, groundsel, lettuce, or chickweed. In the winter, a piece of apple, placed between the wires of the cage, will be found very advantageous.

REARING THE YOUNG.—The young should not be taken from the nest too early, unless you intend to teach them to “pipe” or whistle tunes; in this case they should be removed at an early age—say, seven days. If you leave them longer, they learn the call notes of their parents, and never afterwards forget them—the memory of the Bullfinch being one of its chief characteristics. Their natural notes are neither musical nor attractive. If it be not intended to give them instruction of this kind, and they are merely required as cage pets or aviary birds, they should be left with their parents until twelve or fourteen days old.

It is best to remove the nest along with the birds, and place it in a shallow box, basket, cage, or other convenient receptacle, in a warm place. Feed them with bread and milk and rape seed, made into a paste in the following manner: First scald the bread with boiling water, and, when cold or lukewarm, press it nearly dry, and immerse it in warm new milk. Next scald some German rape seed, and, after it has stood for ten or fifteen minutes, pour off the water, and rinse it with pure cold water; then bruise and rub it well into the bread that has been soaked in the milk, until a pliable paste be made. The birds should be fed with this every two hours, from early morning until dusk. It must always be given fresh, and is best prepared daily, though some fanciers make it every alternate day.

As soon as the birds are able to break seed in sufficient quantity to support themselves the soft food may be gradually discontinued. They can generally accomplish this at the age of six weeks. The seeds mentioned for adult birds must then be supplied to them, and in the following proportions: Three

parts of rape, one part inga, one canary, and one linseed. They thrive well on this mixture.

DISTINGUISHING MARKS OF COCK AND HEN.—The breast, cheeks, neck, belly, and sides of the hen are pale chestnut brown; the back slaty blue, intermixed with brown and grey; the tail and wing feathers are paler and more dingy in appearance than those of the male bird. Her general demeanour is more reserved, and she is much quieter, and less active in manner and bearing. The head of the male bird is flatter on the crown than that of the female. There is, however, considerable difference, even in male birds, as young birds do not attain their full colour until the second moult, and improve in this respect up to four years old. As they get older the vent and rump become whiter. In young birds, the secondary pen feathers are grey on the outer shafts, but in older birds they are white, forming a bar across the wings. In rare specimens the outer shafts are of a reddish hue, but this is altogether exceptional.

If an adult male and female be seen together the sexes can easily be distinguished, as the male is much more resplendent in the colours of his plumage. Young nestlings differ materially from their parents in plumage, as they are of a dingy, dusky ash colour, with dark brown wings and tails, and yellowish brown breasts. The male birds have a slightly reddish tinge on their breasts, as compared with those of the hens, and are a little deeper in the general tone of their plumage throughout. They are likewise more pert, bolder in appearance, and more graceful in manner than the hens. The sexes, however, are not so easy to determine, but a simple method of settling the question is to pluck a few feathers from the breast of the birds when they are three or four weeks old. In twelve or fourteen days from the time of plucking, new feathers will be sufficiently grown to settle the point, as those in the male birds will appear a reddish salmon colour, whilst in the hens the colour will be pale brown.

SONG.—The natural song of the Bullfinch is a peculiar and miserable ditty, if, indeed, it can be called a song; the notes are harsh and unpleasant, and repugnant to anyone who possesses an ear for music. Bullfinches are, however, capable of

being taught to whistle a variety of tunes, in a soft and flute-like manner, which are most agreeable and pleasing, and with a correctness that is rather astonishing.

POINTS TO BE OBSERVED IN JUDGING.—Size, contour, condition, and the brilliancy and purity of colours throughout the plumage, are the chief features to be observed, though it is as well to see that the claws are perfect in form.

GENERAL REMARKS.—Bullfinches can be taught a variety of amusing tricks, as they are exceedingly intelligent, as well as tractable. They can be taught to eat from the hand or mouth, to come and perch on the finger, and to permit you to stroke or handle them, without showing the least fear or timidity. Before attempting to tame them and teach them tricks, it will be well to allow a newly-caught bird a few days to get familiar with a cage, and with the arrangements for the supply of food and water. They are birds that do not sulk and repine, but soon become reconciled to their new home.

When it is considered desirable to instruct Bullfinches to “pipe” tunes, they must be removed from the parent birds at an early age—say, seven days—and reared by hand. The instruction should be given immediately after meals, and begun when they are from two to three weeks old. When old enough to cater for themselves, they should be fed at intervals, and not allowed seed and water constantly. By this means they become familiar with their instructors, get tame and bold, and even attached to their mentors, which is most desirable to promote success. When they are six weeks old, they will be able to feed on seed; then both the seed and water ought always to be removed over-night, and early in the morning returned to them. After they have partaken of a hearty meal, and plumed their feathers (for which allow from thirty to forty minutes), partly cover their cages, to render the birds quiet and attentive to the instructions about to be imparted to them by the aid of some musical instrument.

All birds intended to be taught should be placed, separately, in small cages made for the purpose, with wooden backs, ends, tops and bottoms, and wire fronts, and a piece of cloth or calico to fold over from the top to the bottom of the centre perch. This can be tacked on the top, and folded back whenever it is deemed desirable to do so, at

feeding time, or when the bird is not receiving a lesson. By using small cages their attention is more readily gained, as then they have not too much room to disport themselves, which would be a means of distracting their attention. The birds under instruction must be kept in a room by themselves, and not allowed to hear another bird sing or whistle any other tune; neither should an air different from the one they are being taught be played in their hearing until they have acquired the first one perfectly, and practised it for several weeks. It takes a long time for some birds to learn a tune perfectly, and some never acquire one at all—only a part of it.

The first lesson should be given at breakfast time, if convenient, the second at mid-day, and the third between five and six in the evening. The lessons should be given as nearly as possible at the same time every day, and not one missed, if the little musicians are to attain proficiency quickly. In time the birds will get to know and understand what is required of them, especially if you applaud or scold them, according to their diligence, intelligence in learning, or *vice versa*, as the case may be. The best instrument for the purpose of teaching is the flute, and next to that a tin whistle; but unless the instructor be himself an adept at playing, a German bird-organ, costing only a few shillings, would be preferable. Each lesson should last at least half an hour. It will be found that some birds pick up the air much more readily than others, and perform it better. It will be necessary to play the tune frequently in their hearing, even after they have acquired it, for fear of their forgetting some of the notes.

A second air should not be taught until the first be perfectly learnt, and it would be advisable to repeat the first tune once or twice a day whilst the second is being acquired by the bird, lest some part of the first be forgotten, false notes introduced, or passages transposed. On no account must birds learning different tunes be placed within hearing of each other until they are perfectly instructed in those they are required to perform, for they are very fond of novelties, and readily acquire anything it is not desirable for them to learn. Three tunes are as many as it is prudent to attempt to teach any bird, and one

that can whistle three airs faultlessly is worth a good round sum. The notes of a bird that has been well taught should be soft and flute-like.

Those birds which cannot be induced to whistle at command can generally be tempted to do so by showing them a few grains of hemp seed, or by whistling the first few notes of the required air. Should the second plan succeed, be sure to give the bird the seeds as a reward. Birds that cannot by these devices be induced to whistle, can sometimes be tempted to do so by placing other birds, which have been instructed in the same song, within sight. Jealousy in this case excites them to display their vocal powers.

The instruction should extend over a period of eight or nine months, and, after a bird has finished moulting, the tunes he has learnt should be repeated to him for a few weeks, for instances have been known where a bird has lost some of the notes of a tune during this period; but this does not frequently happen, as Bullfinches have tenacious memories.

In Germany, where most of the best birds have received their instruction, teaching is made a regular trade, and the men who make their livelihood by it teach them in batches of six in a cage; the room is darkened, until some of the birds begin to utter a few notes correctly, when some teachers remove the covering, and give them light; others prefer to keep them in semi-darkness until they can repeat a good part of the tune. The latter plan is the best. Hens, as well as cocks, can be taught to whistle tunes, but never perform with the skill of male birds.

DISEASES AND THEIR TREATMENT.—The moulting of Bullfinches in confinement is frequently attended with baneful results. At this period of their existence they ought to be kept in a warm and quiet room that is well ventilated, yet free from a draught; they should have a frequent change of diet, and be placed in the sun, when possible. A rusty nail placed in the drinking-water is commendable, as it acts as a tonic.

A few ants' eggs will be relished at this season by a drooping bird, or a little hard-boiled egg, chopped fine, and mixed with stale bread, crumbled, and a sprinkling of maw seed. Give

this food dry. A little lettuce, groundsel, or ripe chickweed, should be given sparingly two or three times a week, but this should be quite fresh and sweet.

Bullfinches are subject to costiveness when fed too much on hemp seed, and, when this is observable, put half a dozen senna leaves in a teacup, pour a little boiling water over them, and, when cold, give the infusion thus made instead of water to drink. As soon as the birds are freely relieved this treatment must be discontinued. A little Spanish juice, or liquorice, placed in the drinking water, or a few drops of molasses, will generally prevent this very objectionable state of the body. They are, as most other wild birds appear to be, subject at times to attacks of diarrhœa and epilepsy, and the same treatment must be observed in such cases as that recommended in Chapter V., on "Diseases." Rape seed (German summer rape), soaked in water and well rinsed, is sometimes beneficial when a bird is a little out of sorts.

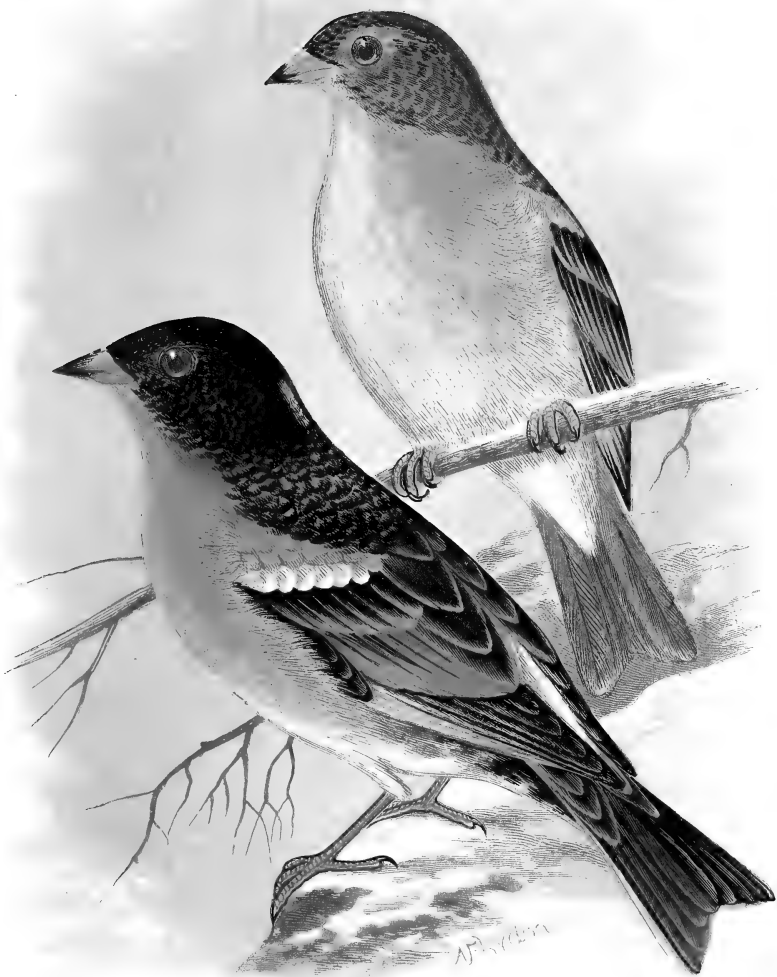
CHAPTER XI.

THE MOUNTAIN, OR BRAMBLE FINCH.

Fringilla montifringilla, Lin. ; *Pinson d'Ardennes*, Buf.

DESCRIPTION AND CHARACTER.—This very pretty and somewhat uncommon bird is only a winter visitant to this country, although it is common enough throughout Europe, and in some countries is very plentiful. It has been found in most, if not all, the counties of England, at one period or another, and has been frequently seen in different parts of Scotland and Ireland. An adult male measures, from tip of bill to end of tail, $6\frac{1}{2}$ in., the length of the tail being $2\frac{1}{4}$ in. The beak is straight, stout, and strong, and, as in most Finches, is thick at the base and tapers away to a point. In colour it is a dirty flesh tint, with a black mark at the tip.

The top of the head is covered with a well-formed, beautiful, dark cap, of a rich bluish black. A line of black surrounds the base of the bill. The face, or cheeks, and hinder part of neck and back, are of a lovely golden reddish brown colour, richly ornamented with black spots and short stripes of various shapes, forming a sort of pattern or device. At the back of the head is a white spot. The rump is white, the tail feathers black, some of those in the centre being edged with white on the outer margins; the tail coverts, golden rufous brown and black intermixed. The shoulders and small coverts are of a bright golden chestnut colour, and immediately below this is a deep black velvety band, then another rich golden chestnut stripe, followed by



MOUNTAIN FINCHES.

(Male and Female.)

another black velvety looking bar, forming a most powerful and pleasing contrast, and very fascinating to anyone possessing artistic taste in the arrangement of colours. The flight feathers are black, shaded with a sort of luminous, invisible green, and margined on each side of the shaft, near the outer edges, with golden chestnut and white; the primary flight feathers have white spots in the centre, forming a band or stripe when the wing is closed. The throat and chest are of a pretty chestnut brown; the belly and vent, greyish-white; the legs and feet, of a dirty brownish flesh tint. These birds, like most wild birds, vary in their appearance according to age and time of year. Old birds kept and moulted in cages for any length of time become less brilliant in hue, and, consequently, to some extent, lose their attractiveness.

HABITS AND BREEDING.—This bird breeds in Northern latitudes (such as Russia and Norway), and is very plentiful in France, where immense numbers are taken. It generally selects the tops of tall fir trees for breeding purposes, the nest being composed of moss and lichens, lined with hair, fur, or feathers. The eggs are creamy-white spotted with orange.

METHODS OF CAPTURE.—The call note of the Bramble Finch greatly resembles that of the Chaffinch; hence, a bird of the last-named species makes a good decoy bird wherewith to entrap them. These birds will enter the common trap-cage during very severe and inclement weather, when food is scarce; or they may be taken with limed twigs, or the day net, along with Chaffinches. But they are rarely met with, and in open weather are shy and cautious, and difficult to trap.

FOOD AND TREATMENT.—In a wild state these birds feed on grain and insects, and keep about the open fields, associating with Chaffinches and Buntings. They are fond of the seeds of the knot grass, devouring them greedily; they will eat pine and fir seeds, oats, linseed, wild mustard seed, and dock and plantain seed. They sometimes frequent gardens, and eat the cabbage and lettuce seed, and various kinds of berries. In confinement they should be fed on canary and rape seed, groats and linseed, and a little hemp occasionally as a change of diet. Green food, such as watercress, lettuce, groundsel, chickweed, or a bit of sweet apple, may also be given sparingly.

When first caught the birds are wild and intractable, and should be kept in small cages, singly, in a quiet place, where they can get sufficient light to see to feed. A piece of bread, soaked in milk, and mixed with a small quantity of crushed hemp seed, will generally induce them to eat, and it is an excellent plan to place a Chaffinch, Bullfinch, Greenfinch, or Goldfinch, that has been previously tamed, in close proximity to them, and in such a position as to enable the birds to see each other. By this means they become more reconciled, and are sooner tamed, than when left alone. If they dash about much, the cages should be partly covered for a few days, and the coverings removed gradually. The best place to hang the cages (when convenient) is at the side of a window looking on to a busy thoroughfare, or into the main street. The traffic and foot passengers, moving to and fro, divert their attention, and accustom them to domestic life.

When first caught, the food and water ought to be placed inside the cages. Bird-catchers usually "flight" all newly-caught birds, putting one or two tame birds of the same variety or species among them. When of the Finch family, they introduce a hen Chaffinch, or Greenfinch, or Linnet, to make them more reconciled, and to induce them to partake of food and water more readily by observing the tame birds feed. By "fighting the birds" is meant that they are turned loose in numbers into a large cage or aviary, where they can fly wildly about, and thereby thoroughly exhaust themselves. It is not, however, a commendable plan to adopt, as the birds frequently beat out a lot of their feathers and otherwise disfigure themselves.

REARING THE YOUNG.—Those who wish to rear the young of these birds should take them at the age of ten or twelve days. They should at first be placed, with the nest, in a small basket or box, and when about to leave it should be transferred to a box cage, made with the top to open as a lid, so that they can be got at conveniently; or the door may be arranged at the back or side of the box if preferred—it is not material. Keep them warm, especially during the night, and feed them every two hours from 6 a.m. to 7 p.m. Prepare the food for them in the same manner as recommended for Goldfinches, and treat them similarly; or they may be fed on soaked bread, scalded rape seed, and

hard-boiled egg, chopped fine or grated, or rubbed through a piece of perforated zinc, these ingredients being made into a moist paste. A quill cut in the form of a pen is as good as anything with which to administer it.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is not quite so large and bulky as the male bird, neither is she so beautiful in appearance. The colours of the plumage of a female specimen are not nearly so intense, neither are they so much diversified. The exquisite rich black markings, so conspicuous in the male, are brown in the female, and the bright rich golden chestnut, which is so charming an acquisition in the cock, is palish brown, tinged with grey and yellow, in the hen. When seen together, the sexes are readily distinguishable.

SONG.—The song of this bird is very circumscribed and desultory, and consists merely of a few twittering notes, with an occasional outburst of a loud call note. It is said that those which have been kept long in confinement, and in the company of birds of a similar character, such as the Chaffinch, Linnets, or Greenfinches, will in time utter and sing some of the notes they are accustomed to hear daily; but the varied and richly coloured plumage, and general appearance of the bird, which are rather seductive, form the chief qualities for which this bird is esteemed.

POINTS TO BE OBSERVED IN JUDGING.—Choose a well-shaped bird; a two or three-year-old bird is best, as it is then in its full plumage. Select a bird brilliant in colour, and well-defined in its markings, the feathers on the head, neck, and back bright black, and distinctly edged with broad margins of chestnut brown. The sides of the neck should be a pretty ashen blue; the throat, fore part of neck and breast, a rich orange yellow, and the belly quite white; this forms a pleasing contrast to the eye. The small wing coverts should be a pretty chestnut brown, edged with white, and the larger ones, black tipped with yellow. The carriage of the bird should be graceful, and it should be shown in good condition, and quite clean.

GENERAL REMARKS.—Although, as previously mentioned, the Mountain Finch is a scarce bird in these Islands, it is not by any means an expensive bird to purchase. They must be more plentiful in the South than they are in the North

of England, for I have frequently seen them advertised in *The Bazaar* newspaper, by fanciers living in Cambridgeshire and Devonshire, at so low a price as 3s. per pair. The birds are very pugnacious when kept with others in a cage or aviary, and appear to be of a quarrelsome disposition. Handsome male birds are sought after by fanciers who have a penchant for exhibiting British birds at shows; and as these opportunities increase yearly, we may expect to find the Mountain Finch become more valuable. In an open class a handsome Brambling stands a very good chance of obtaining a prize, for very few of the Finch tribe can be compared with it, so far as external appearance is concerned, and as singing is not a recognised feature in a show specimen, its chances of success are very great.

DISEASES AND THEIR TREATMENT.—Mountain Finches are liable to be attacked with the same diseases as affect other members of the Finch family, and the treatment and remedies advocated for the Goldfinch (*see* pp. 88 and 89) will be found equally applicable and efficacious in their case.



SISKINS.
(Male and Female.)

CHAPTER XII.

THE SISKIN.

Fringilla spinus, Lin. ; *Tarin*, Buf.

DESCRIPTION AND CHARACTER.—The Siskin, or Aberdevine, as it is sometimes designated, is well known in most European countries, but is not so plentiful in our Island as it is on the Continent. It is a vivacious and agreeable bird, easily tamed, and of a sociable disposition. It is not strikingly handsome, neither is it by any means despicable in appearance. The great charm of the Siskin is its coyness after it has become domesticated, and its apparent readiness to adapt itself to any exigency.

The Siskin is from $4\frac{1}{2}$ in. to 5in. in length ; the tail measures $1\frac{3}{4}$ in. ; the bill is conical in form, but very sharp at the point, and is pale whitish brown, with a dark brown tip. On the top of the head is an elliptic black cap ; in autumn, just after moulting, it is not so dark, and is fringed with brown ; the upper part of the throat, surrounding the front of the under mandible, is black also. The neck and back are pale olive green, pervaded with canary yellow ; the feathers of the back are intermixed with black, forming small black marks. The rump is yellowish green. The under part of the neck and breast are of a beautiful shade of green, strongly tintured with bright yellow ; a stripe of yellow crosses the eye, and runs to the back part of the head. The belly and vent are whitish yellow, the sides of each being tinged with pale indefinite green, intermixed with dark green spots, bordering on black. The pen

feathers of the wings are black, bordered with bright yellowish green on the outer web of the feathers, and, excepting the four on the extreme outside of each wing, have a yellow mark near the roots. The lesser wing coverts are green, as well as the larger coverts, the latter being edged with yellow, forming stripes across the wings. The two centre feathers in the tail are black, marked with yellow towards the root. The tail coverts are yellowish green, and the legs and feet brown. These birds mostly sit with their wings drooping.

HABITS AND BREEDING.—Although the Siskin is docile and tractable in confinement, it evidently, in its wild state, prefers secluded haunts, where there are dense masses of trees (a forest), and situated in places which are seldom visited by bipeds, and such places they, as a rule, select as breeding grounds. They also frequent commons and low-lying, marshy grounds, surrounded with woods and patches of water, and are sometimes seen travelling in flocks from place to place, no doubt in search of provender, as they are seldom observed excepting in very severe weather, and then generally in the company of Linnets, Goldfinches, and Redpolls. They build in pine and fir trees, the nest being composed of small, fine twigs, withered grass, moss, root fibres, and lichens, and lined with wool, feathers, hare or rabbit fur, and thistle down. It is not greatly unlike the nest of the Chaffinch, but not nearly so skilfully made or so artistically finished.

The hen lays four or five eggs. They are French white, with an almost imperceptible green tinge, and marked rather thickly, more particularly at the blunt end—as are the eggs of most of the Finches—with chocolate brown spots. They rear two broods in a year, seldom beginning to breed before the latter part of April, and ceasing in June. Siskins, except under very favourable conditions, do not propagate their own species in confinement, though the males will breed readily with the Canary and Greenfinch, and no doubt with other varieties of the Finch tribe. They are said to pair more freely with a green than a clear canary, but in either case there is little difficulty. Siskin and Canary mules should be more extensively cultivated, as the produce, when reared under Canaries, readily learn their song, but sing softer and sweeter, and with less harshness. A jonque cinnamon hen and a male

Siskin would probably produce mules that would be very attractive in appearance.

METHODS OF CAPTURE.—In the autumn and winter months Siskins congregate in flocks, migrating from place to place in search of food; and this is the best, and probably the only, opportunity bird-catchers have for ensnaring them. They can be taken with a decoy bird, which may be one of their own species, or a Goldfinch; the call note of the last-mentioned bird greatly resembles their own, and they answer to it without hesitation. The same plans and devices as recommended for ensnaring Goldfinches and Linnets should be resorted to. Siskins are by no means shy birds, particularly when prompted by hunger.

Limed twigs, placed in alder bushes where they are known to frequent, have been found a successful method of entrapping them. They keep near fish-ponds, brooks, and rivulets in winter time, and, in localities where such places exist, these spots are carefully watched, and traps placed for them. They will, when hungry, enter the common spring-trap cage, which can be baited with the heads of thistles or hemp seed, a decoy bird being placed in the lower flat of the cage. They are easily allured to the "decoy bush," and can likewise be taken in the day net. They readily answer to call when travelling in flocks, and sweep down in large numbers as soon as the "decoy" is espied.

FOOD AND TREATMENT.—Siskins may be fed and treated in the same manner as Linnets, Greenfinches, Goldfinches, and other members of the *Fringilla* family. They will eat, and thrive on, summer rape and canary seed alone, but are fond of maw and hemp seed. In a wild state, they eat the seeds of the burdock thistle, wild mustard (runch seed), pine and fir cones, and also alder and plantain seed. In confinement they will eat green food, and appear to prefer watercress and lettuce; they also show a partiality for chopped egg and bread, and other dainties.

REARING THE YOUNG.—The young may be taken, when twelve days old, and fed the same as Goldfinches. For particulars see page 85.

DISTINGUISHING MARKS OF COCK AND HEN.—The cap on the head of the hen is brown, whilst that of a mature male bird is black; the hinder part of neck and the back are

dingy in colour, and more interspersed with black spots, or marks; the throat, front part of neck, sides, and breast are of a dull grey greenish white, speckled with green and black; the legs are pale brown.

SONG.—The song of the Siskin is more peculiar than musical; in a sense, it slightly resembles that of the Goldfinch, but is less pleasing. It utters a few notes not unlike those of a Linnet, and others which resemble those of the female Canary. Its melody—if such a term be applicable—is little more than a continuous twitter, although it occasionally jerks out a few harsh notes, both keen and penetrating, but not particularly attractive. It is a merry little bird, almost continually uttering its song, and only ceases, when in health, during the season of the moult.

POINTS TO BE OBSERVED IN JUDGING.—It is not often that the Siskin is selected as an exhibition bird, but, when it is desired to make use of it in this capacity, choose a matured specimen, as these birds improve in appearance with age; their colours are then brighter and more attractive. Judges, however, generally pass them by, in an open class for British birds, for other varieties of a more striking and diversified character. Choose a well-shaped bird, with a distinct black cap and throat markings. The back should be of a beautiful soft yellowish olive green, nicely pencilled with dark streaks down the centre of the feathers; the rump clear yellow, and the breast a pretty yellowish green, delicately tinted; the yellow bars crossing the wings should be distinct and regular, and the wing coverts tipped with bright black. A three-year-old bird is best, being then in its most perfect plumage. A Siskin to make a good show bird must be close in feather, smart, lively, and active, in faultless condition in body, feathers, and cleanliness, and tame and affable when being handled.

GENERAL REMARKS.—The Siskin is a very restless bird, and is almost constantly in motion. It has peculiarities not common to most other birds. It rarely roosts on a perch, but clings to the wires of its cage with one foot, and sleeps in that position, head downwards. In descending from a height it travels head foremost.

It is possessed of much intelligence, and is easily taught several amusing tricks, such as opening the lid of a box to

obtain seed, to draw water to drink, to eat out of the hand or mouth, to come and go at call, and to feign death. It is also capable of being trained to go out of doors and return to its domicile. The same methods for teaching must be pursued as those enumerated in treating of the Goldfinch.

Siskins are hardy birds, and seem to care little for the cold; they are quite cheerful and content in a room without fire when the barometer is at zero.

DISEASES AND THEIR TREATMENT.—Siskins are healthy birds, and seldom suffer from ailments, the moult being probably the most precarious period of their existence; at this time warmth and quiet are desirable elements. They should be kept as free from draughts of cold air as possible, but on fine warm days should be allowed to bask in the sunshine, as the fresh air and sun appear to put new life and animation into them. At this period, water for bathing purposes should be supplied, but only when the weather is mild, and on dry, sunny days. If they are noticed to droop, and heave up their feathers, a few thistle heads and stalks of burdock, with ripe seeds on them, or a little hop and plantain seed, ought to be given, or some poppy seed, and a lettuce leaf; these will have a most beneficial and exhilarating effect.

Perhaps the maladies from which they suffer most are epilepsy, and disorders of the rump gland, for the treatment of which see Chapter V., on "Diseases." Siskins are also subject to the same complaints as Goldfinches, &c., but are much hardier birds, and less liable to derangement or organic diseases.

CHAPTER XIII.

THE BROWN LINNET.

Fringilla cannabina et linoto, Lin.; *Linotte*, Buf.; *Der Häufing*, Bech.; *Fringilla linota*, Lat.

DESCRIPTION AND CHARACTER.—The Brown Linnet, or, as it is more commonly termed, The Linnet, is a bird very widely known, and greatly esteemed for its song. It is not by any means a handsome bird, as its colours, when kept in confinement, are a sombre brown intermixed with grey; the plumage varies, however, in brightness and brilliancy, according to age of bird, season of the year, and other circumstances. Birds which have their liberty, and moult in the open air, are brighter and richer in hue than those which are constantly kept in cages.

The length of an ordinary male specimen is $5\frac{1}{2}$ in., the tail being 2 in.; and it weighs 10 dr. The head is slaty greyish brown, marked with small dark brown spots, bordering on black. The cheeks and neck are the same colour as the head. An elliptic ring of pale greyish brown surrounds the eyes, and below this, on the cheeks, is a spot of whitish brown. The back, rump, and wing coverts are of a deep warm brown, with paler coloured margins; the outer pen feathers are dusky black, and in the centre of them is a dingy white spot, formed by a greyish white margin on each side, on about seven feathers in the centre of the wings—on the first two of the secondary flights, and five of the primary pen feathers immediately adjoining them. The primary wing coverts are dusky black, with light-coloured edges, and

the secondaries are brown. The tail is dingy black, with a narrow edging of white on the sides of each feather. The inner wing coverts are white. The sides of the breast and belly are of a very warm russet brown. The belly and a narrow stripe up the centre of the breast are pale whitish brown, with a ring of bright brown dividing the throat from the breast.

The throat is brown, marked with two stripes of pale greyish brown striking downwards to the neck, and turning in a sort of semicircular form at the bottom, up each side, at the junction of the neck. The bill is dark brown, bordering on black, the under part of the mandible being much paler, and of a greyish brown colour; in summer time it changes to a dingy blue hue. The eyes are dark brown, almost black. The legs and feet are dark brown, and the thighs pale brown. The rump is pale brown, intermixed with whitish brown feathers, with black spots in the centre of them.

There is a variety of Linnet called by some fanciers the Rose Linnet, and by others, the "Stubble Bird." It is similar in its general plumage to the bird already described, but on the forehead are some deep red spots, commingled with the brown ones, and on each side of the breast a quantity of bright red spots. This plumage is attained at the age of three years. At two years, these spots are more of a deep yellow or pale orange colour, and they deepen and intensify as the bird grows older. When a Linnet possessing the red spots on the head and breast is moulted in confinement, the colour gradually disappears, the bird at each succeeding moult becoming browner.

Males of one year old have no red spots on the head, but the dark brown ones are more numerous, and the back is marked with blackish brown spots, and others of a chestnut white colour. Birds which are hand-reared, and kept in confinement, never have any red spots, either on the head or breast.

HABITS AND BREEDING.—The Brown Linnet is a bird common to most countries, and is to be found plentifully dispersed in all parts of Great Britain and Ireland. It is migratory in its tendencies and gregarious in its habits. As soon as the autumn arrives, these birds rove from place to

place, in flocks, in search of food, some crossing the Channel, whilst others remain with us during the winter. Those that cross the sea return again the following March, sometimes in small batches, and at others in larger numbers. They are fond of mountainous and rugged districts, and appear to enjoy the furze-clad hills and densely wooded spots. In the autumn and winter they rove from field to field to supply their daily wants, and, when they discover a place suited to them, where an abundance of provender is easily obtainable, remain there until the store is exhausted.

Brown Linnets are of an amorous nature, affectionate in their disposition, showing great attachment to each other, and considerable affection for their young until they leave the parental care. They build their nests chiefly on the sides of barren hills, where there is an abundance of furze, in woods where there is much undergrowth, sometimes in thorn hedges that separate fields, and in gardens in the neighbourhood of demesnes. They prefer quiet, secluded places. The nest is formed of root fibres, dried grass, and moss, and is lined with horsehair, wool, and the down of plants, such as groundsel and dandelion; it is small, but well made, artistically finished, and exceedingly compact.

The hen lays from four to six eggs, according to the season of the year. These are of a silvery whitish blue colour, densely marked with flesh-coloured and brownish red spots and short stripes, more particularly at the thickest end. The hen incubates fourteen or fifteen days, according to the period of year and temperature of the atmosphere, and has three, and occasionally four, nests in the year, though the number greatly depends on the mildness of the season, the duration of genial weather, and other circumstances.

The hen takes the sole charge of the nest during the period of incubation, and is very sedulous in the performance of her duties; so much so, that she will scarcely leave the nest until driven off, and in such case, she will alight at a short distance, and utter cries of defiance, in which the male bird invariably joins. The cock feeds the hen whilst she is sitting, so that she rarely leaves the nest for more than a few minutes in the morning and evening for a little exercise.

The parents feed the young ones from the crop, and, when the latter are sufficiently matured to leave the nest, the male

entices them to a secluded spot near by where there is a good supply of food. He soon teaches them how to cater for themselves, and when he is satisfied that they can fully accomplish this, he drives them away, and will not permit them to remain in the neighbourhood of the hen, who by this time has begun her preparations for another brood.

Brown Linnets are naturally timid birds, and easily alarmed; but they never fly far away, and, if disturbed in a fallow field, will rise *en masse*, and alight again on the opposite side, or in the field adjoining.

When they are first caged they are very wild, and dash about in a manner calculated to injure themselves, and it requires some time to get them tranquillised and made familiar with the change; but after they have been moulted in the house, they in a great measure lose their timidity, and appear to get reconciled to habits of domestication, in some cases becoming exceedingly tame and tractable, especially when kept constantly in the society of a number of grown-up people and children. They are best kept in small cages, like the one illustrated and described on pp. 38 and 39. The object in having a bird of this species in a small cage is, that it sings much better than in a large one, and likewise becomes tame much sooner. Brown Linnets are fond of sunshine and fresh air, and, if kept as song birds, should be caged separately, and hung outside in the open, in fine weather during the spring, summer, and autumn; but if kept for breeding purposes, they should be placed during the winter among Canaries, in a medium sized cage. House-moulted birds, and young birds which have never been mated with one of their own species in a wild state, are preferable for breeding purposes, as they do not sulk, and become melancholy and unattractive to a Canary hen, as adult wild birds frequently do.

METHODS OF CAPTURE.—The Brown Linnet is a difficult bird to ensnare, on account of its timidity. It may, however, be caught, in the spring, with the trap cage and a good decoy bird; and in the autumn, with a decoy bird and limed twigs and nooses. The decoy bird should be placed in a bush, or among furzes, where it can see and hear its *confrères*, but so situated as not to be readily observable by the wild birds, who, when they hear the call, will at once

come around, and alight on the bushes, near to where the decoy bird is concealed. Upon the bushes should be fixed limed twigs and horsehair nooses. A little experience will soon enlighten any person in the placing of the twigs.

Young Linnets (nestlings) are easily obtained, as the parent birds never wander far away from their nesting-places. The male bird invariably selects a bush or tree in close proximity to where his mate has her nest, and there sings unrestrainedly his bright and cheerful song, so that the nest is not at all difficult to find out. Search any furze or other bush near the spot where he pours forth his lays, and, failing that, the nearest hedge. The use of a field glass in excursions in search of birds' nests is most useful, as you can watch the birds at such a distance as not to attract their attention, or give them cause for alarm; and by its use the father can be seen carrying food to his progeny, or his wife.

FOOD AND TREATMENT.—The principal food of these birds in a wild state is wild mustard seed, known in the North of England and Scotland as "runch" seed. They also feed on burdock and plantain, turnip, flax, chickweed, dandelion, and groundsel; and, in fact, most kinds of seeds partaken of by wild birds. In confinement, give them the following mixture: Rape seed, four parts; linseed and canary seed, each two parts; millet or inga seed, one part; and occasionally, by way of a change, a little hemp or maw seed, and in summer a lettuce leaf or a sprig of watercress. A bath will be found of much use, especially during warm weather; and a little salt should be mixed with the sand which is strewed on the bottom of their cages. Brown Linnets are of a plethoric habit of body, hence, food of a stimulating and fattening character, such as hemp seed and linseed, should be given to them sparingly.

REARING THE YOUNG.—The first nest of young birds may be found at the latter part of April or the beginning of May, and may be taken at the age of ten days, or earlier. They should at first be placed, with the nest, in a small basket or box, and, when about to leave the nest, should be transferred to a box cage, made with the top to open as a lid, so that they can be got at conveniently; or the door may be arranged at the back or side of the box if preferred—it is not material. Keep them warm, especially during

the night, and feed them every two hours from 6 a.m. to 7 p.m. Prepare the food for them in the same manner as recommended for Greenfinches, and treat them similarly; or they may be fed on soaked bread, scalded rape seed, and hard-boiled egg, chopped fine or grated, or rubbed through a piece of perforated zinc, these ingredients being made into a moist paste. A quill cut in the form of a pen is as good as anything with which to administer it.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen bird strongly resembles the young male, and is nearly as large. The colours of the plumage, however, are not nearly so bright and vivid, and more particularly is this observable with the browns and whites. The back of a hen is much paler and greyer, and she may be distinguished from the male by the white margins of the wing feathers, as these markings are much narrower in the female, and only come half way to the quills on the outside; whereas, in a cock, the white markings go quite home to the quills. This is a certain and infallible distinction. The bill of the hen is much paler in colour than that of the male bird, and she is more profusely spotted on the breast and rump, resembling a Skylark in this respect. The young males may be distinguished by a grey collar which encircles the neck, and by their being brighter and more vivid in colour than the hens.

SONG.—The chief characteristic of the Brown Linnet is its song, which is much admired by the generality of bird fanciers. It sings somewhat loudly, and the notes it utters are various—sonorous, clear, and distinct. Old birds sing the best, and there is a much greater variety of notes in birds from four to five years of age and upwards than in younger ones. Some of the most admired of their notes are “weke, weke,” “wike, wike,” “wake, wake,” and the more frequently these are repeated, the more valuable the bird becomes. Brown Linnets are frequently trained by their owners to sing in matches, and can be taught to begin to sing by the holding up of a finger, and to cease as soon as the finger is put down again. Other persons cover the cage containing the bird with a piece of baize, or a handkerchief; as soon as this cover is removed, the bird will commence his song, and discontinue it the moment it is replaced. High

prices are given for famous songsters that are properly trained by men who use them for these matches.

The call note is "chuck-a," "chuck-a," and at pairing time they sing whilst on the wing, in search of a mate. After the moulting season is over, they will congregate together in some tree or hedge, in any neighbourhood where they frequent, on a fine clear autumn evening, and commence what has all the appearance of a concert, the old birds leading, and the young ones joining in chorus. Hen Linnets do not sing, and ought to be liberated, unless kept for an aviary, or for breeding purposes. Male birds are best kept in cages, which should not be too large, as they never sing fluently when placed in a cage or aviary with other birds. One of the best methods to excite them to sing is by making a noise, such as that produced by filing a piece of iron, or anything hard, by shaking a few seeds to and fro in a paper bag, by turning a coffee mill, or by playing on some musical instrument; but the most effectual method, where you have several birds, is to cover one or two over, in such a way as to exclude the daylight for a couple of hours, and then place them in close proximity to some other male birds on song. A rivalry will at once begin, and the birds will do their utmost to outvie each other. A little stimulating food given occasionally will likewise assist the birds materially in this respect.

If you wish Linnets to learn the song of some other bird, they should be placed, when very young, in close proximity to the bird whose song is desired, and should not be permitted to hear the song of any other bird. They are apt scholars, and soon learn the song of the Canary, Nightingale, Blackcap, Chaffinch, or Woodlark.

POINTS TO BE OBSERVED IN JUDGING.—Size, contour, colour, closeness and fineness of feather, condition, good health, vigour, and sprightliness, are the chief features to be observed.

GENERAL REMARKS.—This bird is sometimes called the Whin Linnet, on account of its partiality for whin bushes. It is also designated, by some naturalists, the Greater Redpoll. There are, occasionally, specimens to be met with of the albino variety, some being pied, and others altogether white; this abnormal plumage is believed to be the result of con-

stitutional derangement. Hybrids between the Goldfinch and Brown Linnet, and also the Bullfinch and Brown Linnet, have frequently been obtained; but the handsomest are those obtained from a cross between the Canary and Brown Linnet, which breed freely together.

DISEASES AND THEIR TREATMENT.—Brown Linnets are healthy, cheerful birds, and live from five to sixteen years in confinement, under ordinary circumstances; but, of course, much depends upon the attention and judicious treatment bestowed upon them by their owners. Overfeeding, and a too liberal diet, is as pernicious and baneful in its consequences as neglect, and the results are pretty nearly equal. Some people do not give their birds even an occasional bath, and, in such cases, there is a danger of the bird neglecting to use its lubricator, or oil gland—a provision in Nature for birds to protect themselves in wet weather. This gland is situated on the rump, immediately above the tail, and, if not used, it frequently becomes hard and swollen, and ulcerates. When this is found to be the case, it should be anointed with a little goose grease and moist sugar, or a little basilicon ointment; but if there be an accumulation of matter, it should be let out with a fine needle, and the place afterwards pressed very gently, and then dressed with a little spermaceti ointment or fine olive oil. Care must be taken not to probe the gland too much, for fear of injuring it. When a bird is known to be suffering from this complaint, give it a fresh lettuce leaf, or a few melon seeds, bruised or chopped in small pieces. When it has recovered, discontinue the latter.

Linnets are liable to “scouring,” mostly occasioned by giving them unwholesome seeds, or permitting the drinking-water to become turbid and foul. There are three different stages of this complaint. The first is when the excrement appears thin, with a blackish substance in the middle of it; this is not a dangerous form. The second stage is when it appears black and white mixed, and not so thin as the first, but more clammy and foetid. In either of the above cases, give melon seed, shred in small pieces, and lettuce seed, bruised, and place a little Spanish liquorice juice and a few shreds of saffron in the drinking-water. The third stage is generally induced by neglect or want of attention during the earlier stages of the complaint; in this case the

excrement is white, clammy, and watery, and there is then considerable danger. At this stage, give flax seed alone, or green plantain seed; but if not procurable, a little scalded rape seed and a few grains of linseed may be substituted. Put twenty drops of the tincture of cayenne pepper and a little sugar candy in the drinking-water, and, when the bird appears a little revived, give it a small quantity of ripe chickweed with the seeds upon it. If the bird is much purged, a little prepared chalk, mixed with white bread soaked in warm milk, will prove very beneficial. Scouring is a dangerous malady, and often attended with fatal consequences if relief is not speedily obtained.

Brown Linnets are also subject to surfeit, brought on by cold and exposure, or by being allowed to eat too much green food, especially unripe chickweed, or the variety with broad leaves, which is hurtful to birds of all kinds, old or young. This distemper may be discovered by observing the bird, which breathes heavily, constantly moving its abdomen with a heaving motion, and sitting in a listless and melancholy attitude, with its feathers upheaved or puffed out. When affected by this malady, the bird cracks a lot of seed, and, instead of eating it, scatters it about the bottom of the cage. If you catch the bird, and examine it, you will find its bowels distended, and presenting a somewhat transparent appearance, full of small red veins, and greatly distended towards the vent. When this complaint assumes an acute form, the bowels become black—gangrene has set in, and death soon follows. The best remedy is to keep the patient warm and quiet, and give it a little oatmeal, moistened with hot milk; a few grains of dry oatmeal should also be sprinkled among the seed supplied to it, for a few days, if costive; but if purged, substitute maw seed and crushed hemp seed, and put a little hay saffron and thirty drops of Parrish's Chemical Food in its drinking-water. Give also a little melon seed, chopped into small pieces, and a small quantity of bruised lettuce seed, as soon as the bird is observed to be getting well.

During the moulting sickness, most birds require a little special attention, and a frequent change of diet; a rusty nail, a little saffron, and a few aniseeds should be put into the water given them to drink, and they should be kept

entirely free from draughts of cold air, and in a dry room. If they take cold, and begin to wheeze, give a little liquorice, and a few drops of refined glycerine, in their drinking-water, in place of the saffron, &c., previously recommended.

Brown Linnets are liable to constipation of the bowels, epilepsy, &c., for which complaints see the remedies recommended in Chapter V., on "Diseases."



CHAPTER XIV.

THE MOUNTAIN, OR GREY LINNET.

Fringilla flaviostres, Lin. ; *Cannabina montium*, Lat.

DESCRIPTION AND CHARACTER. — The Mountain Linnet, or Twite—the latter being the name by which it is most familiarly known—greatly resembles the common Brown Linnet (*Fringilla linota*) in shape and general appearance, but is a much smaller bird, and in its plumage is very like a home-moulted Redpoll, minus the red spot on the head. In Scotland it is termed the Heather Lintie. In some parts of England it is called the Small Linnet, but this is, doubtless, a distinct variety, combining in its colour and conformation the characteristics of the Brown Linnet and the Lesser Redpoll. In Germany it is known by the names of the Yellow Linnet and Rock Linnet, and in France as the Lesser Linnet. The designation “Twite” has been derived from the call note of the bird, which greatly resembles that word.

The extreme length of a male specimen, from tip of bill to end of tail, is 5in., of which the tail measures $2\frac{1}{4}$ in. The bill is very short, and sharp at the point, and of a greenish white colour; the top of the head is pale cinnamon brown, spotted and striped with dark brown. The neck is greyer in colour, and more densely speckled with brown, than the head. The back is of a warmer brown, with a subdued tinge of red, and the brown stripes are larger and less profuse. The wings are dark brown, with narrow grey margins on the outer edges of the larger pen feathers, and on the inner edges of the secondaries; the

wing coverts are brown, the larger being bordered on the inner feathers with greyish brown. The tail is dark brown, shaded with lighter brown on the margins of the feathers. The face, throat, and upper part of breast, are a pretty, warm, cinnamon brown; the lower parts of the breast, belly, and vent are greyish white, tinged with pale brown; the sides of the breast and belly are light brown, striped with dark brown. The rump is of a peculiar purplish-red colour (a sort of magenta). The legs and feet are very dark brown; claws jet black.

HABITS AND BREEDING.—These birds are more tractable, and, consequently, easier tamed, than Brown Linnets, and soon become reconciled to captivity, when they exhibit a cheerful and contented disposition. They associate with Brown Linnets and Redpolls occasionally, but are much more scarce than either. They generally hang about hilly and mountainous districts, and, doubtless on this account, have acquired the name of Mountain Linnet.

This bird is not, so far as is known, indigenous to Great Britain, but is merely a winter visitant, arriving in the autumn, about September, and leaving again in March. It is said to breed in the south of France, Russia, and Poland. Their nests, which are usually built in fir trees, at a considerable height from the ground, are composed of moss and lichens, and lined with hair or feathers. The hen lays four or five small eggs, whitish, and spotted with fawn colour. In habits and other respects they resemble the Mountain Finch, or Brambling, and are regarded by most ornithologists as closely allied to these birds. They hold a similar relationship to Bramblings that Redpolls do to Brown Linnets. They are frequently termed French Linnets by birdcatchers and others.

METHODS OF CAPTURE.—These birds travel in the company of other Linnets, and the methods previously recommended for capturing those birds will succeed in ensnaring the Twites. They are more cautious than Redpolls, but not so shy and suspicious as Brown Linnets.

FOOD AND TREATMENT.—In a wild state, these birds feed on seeds and berries of various kinds, and are fond of charlock, linseed, button weed, and plantain seed. When domesticated, they eat canary, rape, poppy, millet, and linseed. They

are also partial to inga seed, bruised groats, and hemp seed.

REARING THE YOUNG.—In the event of any person being successful in breeding these birds in an aviary, the young should be fed and treated in the manner pointed out for the rearing of Brown Linnets, as Mountain Linnets not only associate with these birds in a wild state, but feed on the same food.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is paler in her colours than the cock, and rather smaller in size. The sex, however, is easily distinguished, as the hen bird never possesses the peculiar purple red rump found in male specimens.

SONG.—These birds differ greatly in their individual capacities as songsters, some far excelling others. The song is soft, sweet, and melodious, but of less compass and variety than that of the Brown Linnet. They have no harsh and unpleasant notes. They sing best when kept in a small cage, hung at the side of a window. A little hemp and maw seed, mixed with a little inga and linseed, given to them twice a week, keeps them in excellent condition, and stimulates them to sing more freely.

POINTS TO BE OBSERVED IN JUDGING.—Select a bird with a round head, and a short, neat bill, deep in the chest, of a rich deep brown, with a vivid reddish purple rump, neat and compact in feather, and of graceful demeanour.

GENERAL REMARKS.—These birds are only met with occasionally in England. In Scotland they are more plentiful, living among hills and mountains which abound in scrub wood, and on commons where plenty of provender is to be found, such places evidently being most congenial to their habits. They are not handsome or attractive in appearance, consequently, are not worth exhibiting at shows. They do not live to a great age when kept in confinement; five or six years may be reckoned upon as the average period of their existence. They will thrive in an aviary, but sing best in a cage.

DISEASES AND THEIR TREATMENT.—The Twite is a very healthy, vigorous bird, and seldom on the sick list. It is, however, subject to the same complaints as its congeners, the Brown Linnet and Redpoll, and requires the same treatment. During the moulting season it should be kept warm

and quiet, but ought to be placed out of doors for a few hours on warm, genial days, in the sunlight, in some spot free from draughts. A few varieties of wild seeds should be gathered, and given to it for a change of diet at this time, such as the seeds of the plantain, *Centaurea nigra*, burdock and lettuce. An occasional bath will also be found beneficial. If the bird refuses to bathe, put it out of doors about once a week, during a warm rain, for half an hour, unless it is out of sorts.



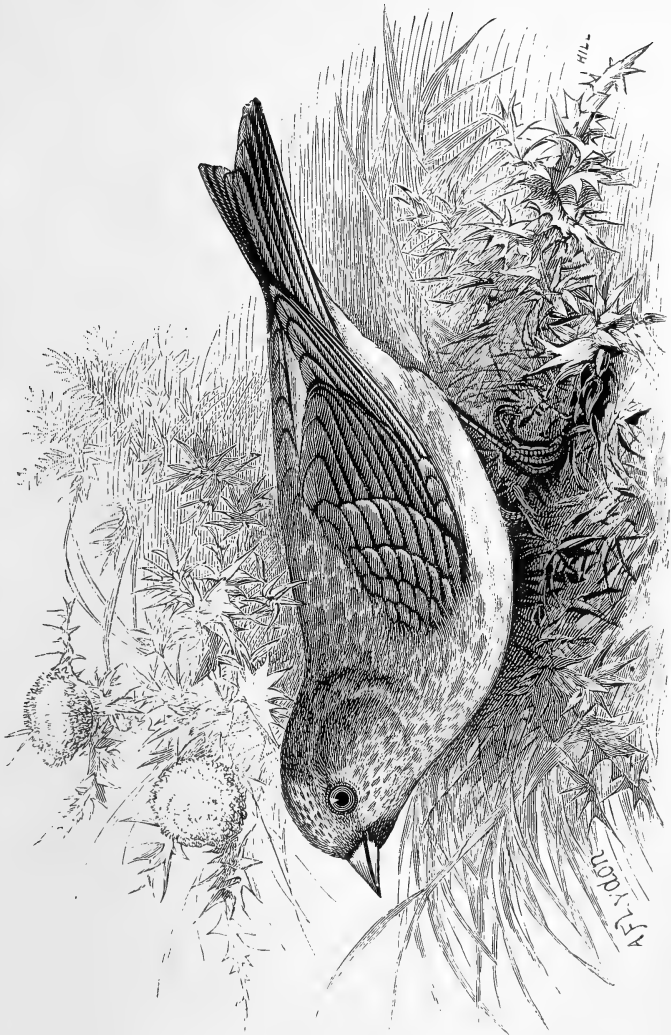
CHAPTER XV.

THE REDPOLL.

Fringilla linaria, Lin.; *Sizerin*, Buf.; *Der Flachsfinck*, Bech.

DESCRIPTION AND CHARACTER.—The Redpoll, more commonly called the Lesser Redpoll, is well known throughout Europe. It is a small, neat, compact bird, very active and hardy, of an exceedingly affectionate disposition, sociable and tractable; hence, it is a general favourite with lovers of British birds, and finds a home in most aviaries. The appearance of a newly-caught, fully-matured male bird is very attractive, as then the poll, or crown of the head, and likewise the breast, are of a rich deep red rose colour, bordering on crimson; the rump is also strongly impregnated with this colour. The female is much less conspicuous in this respect, the head being of a pale red or orange colour, and the breast grey and brown; but in very old birds it is slightly tinged with red. After being kept in confinement for some time, the bright red colours gradually disappear, excepting on the head of the male bird, and this colour, after moulting, is reduced to reddish orange, and becomes less and less vivid as the bird increases in years; but the green lustrous feathers which appear as a margin to the poll retain their colour.

An adult bird measures $4\frac{3}{4}$ in. from the tip of the bill to the extremity of the tail. At the root of the bill, and in front of each eye, is a narrow stripe of black; above this, on the poll, is a brilliant deep red spot, with little black specks dappled all over it; and beyond this, towards the back of the head, is a bordering of dark brown, shaded with lus-



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REDPOLL.

trous metallic green; the neck, back, and rump are pale yellowish brown, speckled with blackish brown spots or marks. The wings are dark brown, the coverts being a shade paler, and edged with pale yellowish brown; the tail is also brown, the outer edges having a narrow margin of paler brown. The throat is black; the cheeks and neck are bright red, as also the breast; the belly and vent are of a dingy greyish white; the sides of the belly are warm reddish brown, and slightly spotted the same as the back; the legs are brown, and feet black; the bill is yellowish brown, with a brown line down the centre of the upper mandible, and darkest towards the tip; eyes dark brown, with stripes of pale yellowish brown over them; rump of reddish brown. This description is that of a mature male in full colour.

HABITS AND BREEDING.—The Redpoll is an inhabitant of Norway and Sweden, and regions further north. It migrates to this country in the autumn, and returns in the spring, about March or April. Some birds of this species, however, remain in England all the year round, frequenting commons and moorland, especially where there are pools and scrub wood, and where elder and willow trees abound.

They are known to breed in Staffordshire, Worcestershire, and Shropshire. The nest is found in willow trees, elder bushes, or scrub wood, and is composed of small twigs of willow or elder, moss, and dried, withered grass, and lined with fur or down. The hen lays four or five eggs, of a pale bluish green, spotted with pale reddish brown, more particularly at the stouter end; she incubates fourteen days. The young leave the nest at about three weeks old.

The birds build in retired places, such as coppices that are preserved for breeding game; they also often build in willow trees at the sides of pools. The birds bred in this country are smaller and less brilliant in plumage than those which visit us from foreign lands. Redpolls in confinement will breed with Brown Linnets, and with their own species; house-moulted birds should be chosen for this purpose, as they are more likely to breed in confinement than newly-caught ones.

METHODS OF CAPTURE.—Redpolls, being gregarious in their habits, travel in flocks, and are more easily caught than any

of their kindred species. They may be taken by means of a decoy and limed twigs, with the day net, the decoy bush, or by finding out the places where they come to drink, and placing limed twigs about. These birds are not in the least suspicious or timid; they answer readily to a call bird, which may be either one of their own species or a Siskin. They soon become reconciled to a cage or aviary, and do not fret or repine after liberty, but cheerfully submit to the change, and adapt themselves to their altered circumstances.

FOOD AND TREATMENT.—Redpolls in a wild state feed on alder, birch, and elder berries, and charlock, thistle, and other seeds; they likewise eat button weed, groundsel, and plantain. In confinement they will eat lin, canary, rape, inga, hemp and maw seed; in fact, they are not in the least dainty in this respect. They will often eat seed which Canaries and Goldfinches refuse and despise.

REARING THE YOUNG.—Redpolls are of so little value commercially, that they may be bought in the autumn and winter months for 1s. 6d. per pair, and at a greatly reduced price by taking a dozen together; consequently, they are not worth rearing from the nest, as they cannot be taught to sing the songs of other birds. If, however, it is desired to bring up the young by hand, they must be reared and treated in all respects the same as Linnets.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is about the same size as the male bird, but much less vivid in colour, the poll being deep orange instead of red, and the breast and rump warm reddish brown, in place of a deep bright red. The brown feathers of the neck and back are greyer, and less pleasing to the eye; the black spot on the throat is smaller, much paler, and not nearly so well-defined in its outline; the brown on the neck is paler, and more dingy in colour; the breast is not so white, and is more spotted with brown marks; the stripes over the eyes are not so distinct, the green sheen, which is so noticeable in a cock, being scarcely observable in a hen. The black marks in front, and at the sides, of the upper mandible, are not so deep in colour and tone; in fact, the difference in the sexes may be known by the head markings alone. After moulting in the house, the hen birds lose all trace of red, the poll

being grey, with a faint tinge of pale yellow, only observable on close and careful examination.

SONG.—These birds are not held in any estimation whatever as singers, as their song is very circumscribed, and may be termed a mere chatter; but it is not at all unpleasant to the ear.


POINTS TO BE OBSERVED IN JUDGING.—The principal points are the poll (crown of head), breast, and rump; the brighter and more intense the red, bordering on crimson, the better; the brown colours should be clear and bright; the belly white; a nice green sheen at back of head; feathers close and compact; bird steady on perch, active, and full of vivacity; no broken feathers or damaged claws, good condition, and clean. Whenever Redpolls are selected for exhibition, they should always be in full mature colour; hence, house-moulted birds are useless for this purpose. It is very rare that these birds receive a prize, even under the most favourable circumstances, when shown in a mixed class of Goldfinches, Bullfinches, Mountain Finches, Buntings, &c.

GENERAL REMARKS.—Redpolls are great favourites with ladies and children, as they are very sociable and tractable, and are, perhaps, more easily taught to draw water, pull a little waggon, ring a miniature bell, fire a toy cannon, feed from the hand or mouth, come and go at command, feign death, and a variety of other amusing feats, than any other birds. They are best kept in similar cages to those recommended for Goldfinches, in Chapter III., on "Aviaries and Cages."

DISEASES AND THEIR TREATMENT.—Redpolls are liable to the same diseases as their kindred species, the Linnets, and require the same treatment. The moult is, perhaps, the chief ailment from which they suffer, and during this period of their existence the same precautionary measures should be taken as recommended for the Siskin, as their habits and mode of living greatly resemble each other.

They are very liable to sore feet, which, when neglected, ulcerate and canker, and the toes come off. To prevent this, their feet should be frequently bathed in about half a pint of warm water, in which a teaspoonful of salt has been previously dissolved; the feet should be immersed for five or seven minutes, then dried with a soft rag, and

anointed with goose grease or spermaceti ointment. The fact of a bird suffering from sore feet may easily be ascertained by watching it. If it is observed to be standing on one leg, and drawing the other up close to its body, pecking at it frequently, and evidently in pain, then it requires attention. If both feet are sore, it will sit, or rather lie, on its feet, on the perch, with its legs doubled under. Clean perches, often scraped and washed, are a good preventative.



CHAPTER XVI.

THE HOUSE SPARROW.

Fringilla domestica, Lin.; *La Moineau Franc*, Buf.; *Passer domesticus*, Sel.

DESCRIPTION AND CHARACTER.—The chief attraction of this bird is, undoubtedly, its social and domestic disposition, and its evident liking for the society of man, for, wherever there are human habitations, so surely will the Sparrow be found. It is remarkably quick both in seeing and hearing, very agile in its movements, continually on the alert, and apprehends at a glance when danger threatens. It is cautious as well as bold, and frequently displays an amount of intelligence and forethought which seems to leave animal instinct in the shade.

An adult bird measures 6in. long. The bill is massive, and very strong and powerful; the upper mandible is brown, bordering on slaty black, the lower one being brownish flesh colour, with a dark tip. The top of the head and back of neck are greyish brown, and reddish brown at the sides; the cheeks are light greyish brown. A black spot extends from the base of the bill to the eye; the throat or gullet is black; the sides of the throat are pale grey; the breast is dingy grey, mottled with black; the belly and sides are greyish white. The shoulders and back are a mixture of greenish grey, black, and chestnut brown, commingled in stripes; the rump and tail are of an indefinite greenish grey-brown. The wings are brown, shaded with black and golden chestnut brown; the small wing coverts are bright

chestnut, the next of the same colour, with broad white margins, forming, when the wing is closed, a pretty white band; the larger coverts are the same colour as the wings. The under side of the neck is greenish grey, spotted with black; the belly and sides are of a dull dingy grey, with a greenish tinge; the thighs are grey; the legs and feet pale brown. Sparrows vary somewhat in colour, according to age; occasionally they sport, and piebald, as well as white, and even black specimens, are met with. These deviations from the natural colours are generally the result of disease or old age, or both combined.

HABITS AND BREEDING.—The House Sparrow is a well-known bird throughout Europe, and may be said to resemble the Irish race, in this respect, that it finds a home in most parts of the habitable globe, and, wherever it takes up its abode, its presence is soon known. It is a bird that displays much intelligence, and a fondness for being warm. Wherever an untenanted building, or one seldom used, is to be met with, the fact soon becomes known to this inquisitive explorer, and thither it wends its way when a shelter from rain or cold is needed. As a rule, it prefers the outbuildings of a farmyard as a nesting-place, for there it finds plenty of materials for constructing its nest, and food to alleviate its hunger. In towns, it manages to get access to the roofs of churches and chapels, warehouses, and similar places, creeping through any crevice or fissure that will admit its body. Sometimes it selects homes on high walls covered with dense masses of ivy, and at other times fruit trees in gardens or orchards. It will even take possession of the nest of a swallow, built at the side of a window, driving off the rightful owners with beak and claw in the most ruthless fashion.

The nest of the House Sparrow is a rather rude and clumsily constructed affair, and of considerable dimensions for so small a bird. It is formed principally of straw and hay, and lined profusely with wool and feathers. The hen lays from four to six eggs—mostly five or six—of a greenish grey colour, streaked and speckled all over, but more profusely at the blunt end, with black and brown spots. All the eggs are not alike, and a great difference will be found among those in the same nest; sometimes they are of a

bluish tint, and only speckled at the thick end with a ring of small spots, and two or three small stripes at the sides. The hen has about four nests in the year. House Sparrows begin propagation early in the spring, and continue far into the summer. They are very affectionate birds, and display much love for their progeny.

METHODS OF CAPTURE.—House Sparrows are wary and suspicious, and, consequently, difficult to capture with traps and snares. They may, however, be taken easily, at night time, in a rick yard, by placing a net round a stack of wheat, oats, or barley; and then, on beating the stack with a stick, and making a loud noise at the same time, the birds will bound into the net. A moonlight night is the best time for this operation. They may also be taken by covering part of a house, or wall, that is ivy clad, and where they are known to roost, in the same way as that just described; they may be enticed into a granary, and the door closed from outside with a piece of string. But they are rarely caught, except for shooting matches, as few care to keep them in a cage.

FOOD AND TREATMENT.—Sparrows appear to be omnivorous; nothing comes amiss to them. They will eat bread, potatoes, rice, and seeds of all kinds, as well as most kinds of fruit and vegetables; poultry and pigs' food, horses' mash, and dogs' biscuits, are all comestibles, if not delicacies, to them.

REARING THE YOUNG.—Any person who may have a penchant for rearing young Sparrows by hand will find no difficulty in doing so. Take nestlings ten days old, and feed them with milk and bread sop, or with a soft paste, made of equal proportions of pea and barley meal, moistened with hot water, and stirred well together. Young birds so reared become very tame.

DISTINGUISHING MARKS OF COCK AND HEN.—The male bird is more decided in colour, larger, and more pert and swaggering in his gait than the female. The hen is dull reddish grey on the back and shoulders, and speckled with black marks; the under parts, breast, belly, and vent, are dirty looking greyish white. The female is deficient of the bright chestnut brown in the wings—a distinguishing mark in the male bird. The black on the throat, and the red stripe which extends along the side of the head, from the eye to the neck, are paler and

duller. The bill of the hen is slaty brown, and so are the legs and feet. The young males before moulting resemble matured females.

SONG.—The House Sparrow does not sing, but makes a disagreeable hubbub, which is termed chirruping; and when excited and quarrelling, a dozen Sparrows can create a noise well calculated to disturb the equilibrium of any nervous and sensitive person. It has been asserted by some ornithologists, that Sparrows can be taught to sing vigorously and well; but they evidently refer to the Hedge Sparrow, and not the House Sparrow, for, whilst the latter cannot utter a single musical note of any sort, the former is a good song bird.

POINTS TO BE OBSERVED IN JUDGING.—Select a large, bold bird, in full plumage—a three-year-old bird; one moulted out of doors, or in a large aviary, would be best for show purposes. Choose a bird compact in feather, stout, and of good contour and erect carriage. The top of the head and back part of the neck should be a nice ash colour, free from smudge or inkiness; the throat, fore part of the neck, and eye markings, a bright, deep, rich black; cheeks whitish grey; breast and belly pale ash colour; the back and wing coverts of a deep reddish brown, mixed with bright black, evenly spangled, and the wing bars distinct. The bird must be clean, free from broken feathers, in good health, and lively, but steady on the perch.

GENERAL REMARKS.—House Sparrows are thoughtful, provident, and industrious. They gather up a store of feathers and wool in readiness for building their nests, and hide it in places where it is not likely to be disturbed, and where it is easy of access. They likewise store up food against a rainy day, in places that are very difficult to reach, and resort to it in inclement weather, for they appear to have an aversion to getting wet, and during a heavy downpour of rain seek shelter, and remain there, only leaving it when hungry or thirsty, or when they are disturbed and frightened. They are great thieves, and frequently plunder their neighbours, robbing them of food or material to construct their nests whenever a favourable opportunity presents itself. If caught in the act by the rightful owners, a regular onslaught follows, and there is war to the knife, for they are resolute, pugnacious birds, and at times have the temerity to attack Starlings,

Blackbirds, and Thrushes; but when they do so, it is seldom singly, but in numbers.

The House Sparrow is among the first of the feathered race to rejoice and make merry at the approach of spring. The male bird goes in search of a partner to share his joys and tribulations, and, when he finds the object of his choice, forthwith proceeds to win her, if possible; but, as with human beings, so it is with birds, and the old adage holds equally true in both cases: "True love never did run smooth;" and the Sparrow, as well as many a disappointed biper, finds to his mortification that the female, as well as himself, has the right to select and choose, and resent the advances of any ardent admirer of whom she does not altogether approve. In such cases, it generally happens that the hen has already bestowed her affections on a more fortunate admirer; then a battle ensues. But a hen faithful to her love will not even accept the conqueror if it is not the bird of her choice. At other times, a hen seems to encourage a combat, and accepts the conqueror, when a wedding at once takes place, amid a din of voices, and a fluttering and chattering of a most excited kind. After the ceremony, the newly-wedded pair scamper off with their friends. Sometimes two females fall in love with the same male, and settle their differences in a similar fashion, the male bird looking on coolly, and with evident patience, as long as the fight lasts, and at its conclusion starts off with the heroine, leaving the vanquished combatant, sore and bleeding, to seek some quiet retreat until her bruises are healed.

DISEASES AND THEIR TREATMENT.—The House Sparrow is a robust, lusty bird, seldom out of order. It is, however, sometimes affected by skin disorders, through over-eating. When this is the case, wash the parts affected every day with a solution made of one part of Goulard's Extract to two of water, until the disease disappears. If the bird is found drooping at any time, give it a little white bread, soaked in warm milk, with a sprinkling of maw seed, and if the weather be warm, hang it out in the sun, and give it a bath. This treatment will soon cure the disease.

CHAPTER XVII.

THE HEDGE SPARROW.

Motacilla modularis, Lin. ; *Fauvette d'hiver*, Buffon.

DESCRIPTION AND CHARACTER. — This merry little bird is almost as common and plentiful as its first cousin, the House Sparrow, but bears a totally different character. It is gentle, modest, and unpretentious, and would be more esteemed if it were better known; for, although it is not attractive in its exterior appearance, it has several qualities of recommendation: It possesses an agreeable voice, and sings sweetly; it is bland and sprightly, and exhibits no fear after it becomes domesticated. It is known by a variety of names, the chief of which are the Hedge Warbler, Hedge Accentor, and Hedge Dunnock. It is likewise termed the Titling, and in the northern parts of Yorkshire, and the southern parts of the county of Durham, it is commonly and familiarly named the Hedge Cuddy. In some localities it is also named the Shufflewing. The Hedge Sparrow is associated and confounded with the House Sparrow by many people; and this is not to be wondered at, for the association is not by name alone, for there is considerable resemblance in the external appearance of the two varieties; hence, the casual observer has much trouble to separate them. This is the reason why it is held in such low repute, whilst many birds, with less pretensions to musical abilities, are kept and valued as song birds.

An adult bird measures from 5in. to 5½in. in length, the tail being 2¼in. The beak is long, slender, and pointed, and of a

blackish blue colour, but pale at the tip; the eyes are bluish black; the head is small, and the bird altogether is smaller than the House Sparrow. The head and neck are pale greyish brown, spotted with dark brown; the cheeks, throat, and breast are grey, with a bluish shade; the belly and vent dirty-looking greyish white; the back is light reddish brown, spotted and striped with brownish black spots and marks; the wings are brown, edged with reddish brown; the coverts are also brown, the larger ones being bordered with white; the tail is dark brown, fringed at the tips with pale yellowish brown. The young birds differ in appearance from their parents; the sides of the beak and nostrils are reddish flesh-colour; the breast is palish yellow and grey mixed, and the back and head are profusely speckled with dark blackish brown spots.

HABITS AND BREEDING.—The Hedge Sparrow is indigenous to Great Britain, and is, like its *confrère*, the House Sparrow, pretty generally known throughout the whole of Europe. It is a domestic bird, and rarely goes far away from inhabited localities. It generally builds its nest in the hedgerow, in fields and gardens not far from a farmstead, or in a high thorn bush, young tree, or shrub. Sometimes it chooses a plantation, and selects a tree; at other times a garden, orchard, or a gentleman's pleasure grounds, as a suitable place wherein to nest.

The Hedge Sparrow begins to breed early in the year. The nest is composed chiefly of moss, and lined with hair. The hen lays four or five eggs, varying in colour from pale blue to palish sea-green, but mostly blue. The hen incubates fourteen days, and the parents feed their young for some time after they leave the nest. These birds do not fret and repine after their eggs and progeny so much as many other species of wild birds, but, after two or three days, commence a fresh nest, which they usually build in a spot not far distant from the place where the first nest was erected.

METHODS OF CAPTURE.—In winter time these birds haunt farm buildings and rick yards in search of shelter, and are easily caught, as they are not shy; neither do they exhibit the cunning and suspicion inherent in the House Sparrow. Clear a piece of ground in the immediate neighbourhood of

a homestead, or rick yard, or just within a gate leading to a field, scatter a few meal or small worms about, or even breadcrumbs and hemp seed, and distribute freely a number of well-limed twigs all round, and in the adjacent neighbourhood, on some part of a hedge or bush, near by, for the place chosen must be in close proximity to a hedge which the birds frequent. Having completed these operations, proceed to the far side of the field, and drive the birds gently along in the direction of the bait. They seldom make long flights. The cracking of a whip is perhaps the best method to adopt when pursuing them, but it should be done in a quiet way, for, if they are eagerly chased, they will become wild and frightened. As soon as they approach the ground where the lure is laid, it is most discreet for the fowler to stroll away in an opposite direction, and return to the spot in the course of ten or fifteen minutes. The birds will fly down to the food as soon as they see it, and become ensnared instantly. In stormy weather, when provisions are scarce, these birds may be taken by the box or brick trap, or by the decoy bush or day net, in large quantities. The birds keep together in pairs, seldom separating, so that as many females as males are generally taken.

FOOD AND TREATMENT.—In a wild state, the Hedge Sparrow feeds largely on small insects, worms, maggots, caterpillars, flies, and spiders. When these are not obtainable, it has recourse to elder berries, haws, and wild seeds of various kinds. It is a bird that will eat almost anything, and, in the aviary, will partake of whatever is to be found there. If kept in a cage, one suitable for a Canary, Bullfinch, or Chaffinch will do equally well for it. When kept in an outdoor aviary, it prefers to perch as high as it can possibly get.

REARING THE YOUNG.—The young should be taken at the age of ten days—not later—and fed with soaked white bread and a little lean meat—beef or mutton, raw or cooked—chopped very fine, and mixed well together; or they may be fed with hard-boiled eggs, and bread chopped fine, mixed with a small morsel of bullock's or sheep's heart, chopped very fine. Do not cram them too much, or it will kill them. When they are sixteen days old, a little crushed hemp seed, freed from the husks, may be given as a substitute for the

flesh meat; it must be given moist. When able to feed themselves, they will eat almost anything—bread, boiled potatoes, vegetables, and seeds of all sorts; as well as the food provided for soft-billed birds, which they devour with avidity.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is half-an-inch shorter than the cock, as a rule, and is, throughout her plumage, much greyer and duller in colour, and more speckled, especially about the head, neck, and shoulders, the spots being smaller and more numerous than in the male bird. There is also a difference in the manner and carriage, which enables an expert to distinguish the sexes almost at a glance.

SONG.—The song of the Hedge Sparrow is soft and agreeable, and familiar to most people who have lived in the country, or who frequent lanes and fields for a ramble, for, in the spring and early summer, the bird is almost incessantly uttering its well-known "Tehude, hude, hude," as it sits perched on a topmost or side branch of a hedge or tree, moving its wings and tail in a lively and jocular fashion all the while. Its song is short, but not at all unpleasant. The bird commences to utter it as soon as it alights, and, when finished, generally bounds off to another branch fifty yards away, and repeats its performance. It is a lively, energetic bird. When reared by hand, Hedge Sparrows will imitate the song of other birds, such as the Canary, Linnet, and Goldfinch, and even attempt the song of the Lark; but they have not the compass of voice, nor the execution, that is attained by either the Canary or Lark, though they pick up and repeat many of their notes.

POINTS TO BE OBSERVED IN JUDGING.—The Hedge Sparrow is too sombre and mean looking to exhibit, hence it is unnecessary to enumerate the points required in an exhibition specimen.

GENERAL REMARKS.—These birds will breed readily in an outdoor aviary supplied with thorn bushes and shrubs. The females have been known to pair with the Siskin, Greenfinch, and Bullfinch, and there is, therefore, no reason to doubt that they would pair with other varieties of the Finch family. Mules have also been bred between the female Hedge Sparrow and a male green Canary.

The Hedge Sparrow has one peculiarity not common to many species—it invariably sings during an encounter with another bird, whether in a wild state or when in an aviary. It is, however, much more peaceably disposed than many of its congeners, being of a quiet and tractable disposition, and disposed to be on friendly terms with other occupants of the aviary. It is, for all that, quite capable of defending itself when an emergency arises, and can give great trouble to any bird its own size and weight, for it is very tenacious when once aroused to combat.

DISEASES AND THEIR TREATMENT.—As a rule, this bird may be considered healthy. It suffers most from a sort of dry scurvy, which causes the feathers to come off, especially about the head and neck, and if neglected, it spreads, and even ulcerates. It is a kind of surfeit, brought on through want of frequent change of diet. Supply green food plentifully when this disease appears, also ants' eggs and meal-worms daily, and occasionally a spider or two. A bath should be given frequently; a few grains of the milk, or flowers of sulphur, as it is commonly called, should be put in a basin, and boiling water put over it; when cold, the liquid should be strained off, and given to the bird in some convenient vessel for it to bathe in.



TREE SPARROW.

CHAPTER XVIII.

THE TREE SPARROW.

Fringilla montana, Lin.; *Le Friquet*, Buffon.

DESCRIPTION AND CHARACTER.—The Tree, or Mountain Sparrow, is a much prettier bird than the House Sparrow, and, unlike that well-known species, is very modest and retiring in its disposition, and dwells principally in fields, gardens, orchards, or small plantations not far removed from human habitations. It forms a pleasing variety in a large aviary of mixed birds, and is usually well behaved. Although shy by nature, it is a merry, active little bird, and, whenever it alights, commences to go through a variety of pleasing movements, whirling round, and raising and dropping its tail in a manner not much unlike a Wagtail. The locomotion of these birds, however, is by no means of a dignified character, owing to their having short legs. They have a noisy chirruping song, which is neither very musical or inspiriting, but among a variety of singing birds their discordant notes seem to increase the harmony of their companions by contrast. Occasionally, pied varieties of these birds are met with, some of which are very attractive and unique in appearance; but they are difficult to procure.

A fully-grown adult specimen measures $5\frac{1}{2}$ in. from the tip of the beak to the end of the tail, the latter being $2\frac{1}{2}$ in. long. The beak is dusky black, the irides greyish hazel; the head and hinder part of neck chestnut brown. The cheeks are white; at the back part of them, extending to the ears, is a good sized black spot. A ring of greyish white encircles the

neck, being broadest in front, and gradually narrowing at the nape. The back is rufous brown, spotted with black; the lower part of the back and rump greenish brown, shaded with grey. The chin and throat are black. The feathers, from the under mandible, down the sides of the neck and the breast, are greyish white; and the belly, sides, and vent, dusky white. The small wing coverts are reddish brown, edged with black. The larger ones are black, edged with rufous brown, and tipped with white, forming two transverse white bars across the wings. The pen feathers are blackish brown, edged with reddish brown. The tail is russet brown, and the legs of a willow colour.

HABITS AND BREEDING.—The Tree Sparrow, though not common throughout England, is plentiful in the counties of Lincolnshire, Lancashire, and Yorkshire, and is occasionally met with in other parts. It has been seen in some parts of Staffordshire, and is sometimes found as far north as Durham. It is indigenous in the three first-mentioned counties. It also inhabits France, Germany, Italy, and Russia, being more plentiful in the last-mentioned country than its *confrère*, the House Sparrow. It is likewise known in Asia and some parts of America.

These birds usually build their nests in old, decayed, hollow trees, or in the holes made in trees by Woodpeckers. They do not seem particular as to the kind of tree, so long as it affords them a suitable harbour of refuge, free from observation, and sufficiently large and convenient for their purpose. They have been known to build their nests in decayed fruit trees in an orchard, but mostly prefer a plantation, not far distant from some quiet village or hamlet. They sometimes make a nest in the thatched roof of an outbuilding attached to a farmstead, or in an old rotten willow tree by the side of a brook. At other times they take possession of a deserted nest, the former habitation of a Rook, Magpie, Jay, or Wood Pigeon. The nest is made of hay and straw, or dried grass and small fine twigs, lined with feathers or wool, and is similar to that of the House Sparrow. The hen lays from four to six dusky-grey eggs, spotted and marked with brown, and incubates fourteen days. Both parents are most assiduous in their attentions to their young; and so careful are they, that they watch and guard them long

after they have emerged from the parental roof. The young birds generally return, evidently at the instigation of their parents, to roost at nights in the tree wherein they were born. The Tree Sparrow has two broods in the year.

METHODS OF CAPTURE.—In the autumn, these birds may be taken with limed sticks; clear a piece of ground, and bait with wheat or groats. They can likewise be taken in the day net, in winter time, or with the sieve, in the neighbourhood of farm buildings, where they congregate, during boisterous and cold weather, for food and shelter.

FOOD AND TREATMENT.—In the wild state, these birds feed chiefly on insects and wild seeds of various kinds, grains, fruit, and berries. In confinement, they will eat almost anything, for they are exceedingly hardy, in this respect resembling the House Sparrow.

REARING THE YOUNG.—The young of this variety may be reared and treated in all respects the same as their congener, the House Sparrow.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is altogether paler in colour than the cock, and does not possess the black throat and spots on the face or ears, which are so conspicuous and pleasing a feature in the male.


SONG.—The song of the Tree Sparrow consists of a somewhat monotonous chirrup, intermixed with a few shrill, harsh notes, repeated in a low, unmusical voice, not very dissimilar in some respects to the excruciating chirp and yap of the House Sparrow. The song is continued for two or three minutes together; there are a few—perhaps four or five—not unpleasant notes in an overture, otherwise it would be execrable.

POINTS TO BE OBSERVED IN JUDGING.—The Tree Sparrow is scarcely handsome enough for a show bird. Select a well-formed male, close and compact in feather; the head rich and bright in colour, the throat and ear markings very black; the face, ring round neck, and breast, silvery greyish white; the body feathers clear and brilliant in hue; tail and wings well formed, and tight to the body; no broken or twisted feathers. Condition and cleanliness highly essential.

GENERAL REMARKS.—These birds are not valuable, although rare. They do well to give variety in an aviary of mixed birds. They will breed, under ordinary conditions,

in confinement, although they are not so prolific as the *Fringilla domesticus*. No one seems to esteem Sparrows highly, but these are the most pleasing in appearance of any of the British varieties, and have the advantage of being uncommon.

DISEASES AND THEIR TREATMENT.—Tree Sparrows are very hardy birds, and are seldom ill. In case of disease, see treatment recommended for House Sparrows, and Chapter V., on "Diseases."



CHAPTER XIX.

THE COMMON BUNTING.

Emberiza miliaria, Lin.; *Proyer*, Buf.

DESCRIPTION AND CHARACTER.—The Common, or Corn Bunting, has nothing special to recommend it to the notice of a lover of birds, as neither its plumage or song are attractive. The greatest charm it appears to possess to most people is its adaptability to the cuisine, as it is a good forager, and, consequently, in prime condition for the table at all seasons. It should, however, be included in all collections where other Buntings are kept.

These birds are the largest of the Bunting family, and strong on the wing, going off at a rapid pace, in a powerful whirring flight, for a considerable distance. When in a field, they will permit anyone to approach them pretty closely; then they spring up suddenly, and dart off in a straight line, with their legs and feet drooping and dangling in the air for a short time, until they get fairly on the wing. They are not inclined to be sociable, and keep away from the habitations of man, only approaching them when compelled to do so by cold and hunger.

The Common Bunting is $7\frac{1}{2}$ in. in length, of which the tail measures 3 in. The beak is short and thick, and something like that of the House Sparrow; colour palish brown. The entire upper part of the body is greyish pale chestnut brown, speckled over with blackish brown spots. The under part of the bird is a sort of pale cinnamon or yellowish grey colour, spotted with dark brown. The wings and tail are

brown, the outer tail feathers being embellished with greyish white spots. These birds somewhat resemble the Skylark in appearance, but are larger.

HABITS AND BREEDING.—The Common Bunting is found throughout Europe, and is indigenous to Great Britain. It frequents pastures, cornfields and bye lanes, and is very destructive to growing corn and ripening wheat. In summer it keeps to the fields, but in winter visits rick- and farm-yards in search of grain. It is very destructive to the thatching of corn stacks, and frequently damages the stack to a considerable extent, pulling out the straws in large quantities, in expectation of finding some full ears of corn.

Common Buntings build their nests at the bottom of small bushes, or undergrowth, in a hedge side, or on a bank, among tall grass. The structure is uncommonly large, and, in consequence, easily found. It is composed of dried stalks of grass and fine weeds, and is lined with hair. The hen lays from four to five eggs, of a pale cinnamon grey colour, marked and spotted with black and russet brown; she incubates fourteen days,

METHODS OF CAPTURE.—In the autumn and winter, these birds may be taken with a decoy and limed twigs, with the clap nets, or with a long piece of string, pegged down at each end, with hair nooses fastened to it on each side, and wheat or oats sprinkled freely beneath the snares. These traps should be fixed in some place where the birds are known to frequent.

FOOD AND TREATMENT.—In a wild state, Common Buntings live on various kinds of insects, and are partial to caterpillars. When insects are not obtainable, they turn their attention to wild seeds, and grain of various kinds. They are particularly fond of wheat and oats. In confinement, they may be fed on oats, canary and millet seed, or the Compound recommended for soft-billed birds (*vide* pp. 189, 190). The Common Bunting resembles the House Sparrow in this respect—it is not very scrupulous in the choice of viands.

REARING THE YOUNG.—Take them when ten or twelve days old, keep them warm, and feed with flesh meat of any kind, minced very fine, and mixed with breadcrumbs, grated small, and moistened with water; feed every two hours. They can also be reared the same as Linnets, on bread and

milk, and soaked rape seed, prepared in the manner described for the young of the Bullfinch. When six weeks old, they will be able to cater for themselves, and partake of the food recommended for matured birds.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is paler and greyer in colour than the male bird, smaller in body and head, and more effeminate looking.

SONG.—These birds usually select the topmost twig of a tree or bush from which to pour forth their song, or what may be more truthfully described as an apology for one. The so-called song consists of four or five notes of a peculiar description, the last one being prolonged, loud, and harsh, and not at all pleasant or edifying.

POINTS TO BE OBSERVED IN JUDGING.—Select a large, lusty bird, gay and sprightly, in prime condition, both as regards bodily health and its outward covering. The colour should be a nice warm olive brown, pencilled with black, the more evenly and distinctly the better. The under parts are generally a dirty white, but, the purer the colour, the more is the bird prized. The breast should be distinctly spotted with brown, and the sides streaked with the same colour. Size, contour, and sprightliness are distinguishing features, as also steadiness when being handled. Cleanliness is imperative in these, as in all other show birds.

GENERAL REMARKS.—Common Buntings may be kept in an aviary with other birds, or in larks' cages. They are delicate, and short-lived in confinement, dying usually of consumption, brought on by the loss of their liberty, and want of a frequent change of diet, such as they are accustomed to have when at liberty.

DISEASES AND THEIR TREATMENT.—These birds are, naturally, pretty hardy, but are liable, when kept in confinement, to cramp and diarrhœa, for treatment of which see Chapter V., on "Diseases."

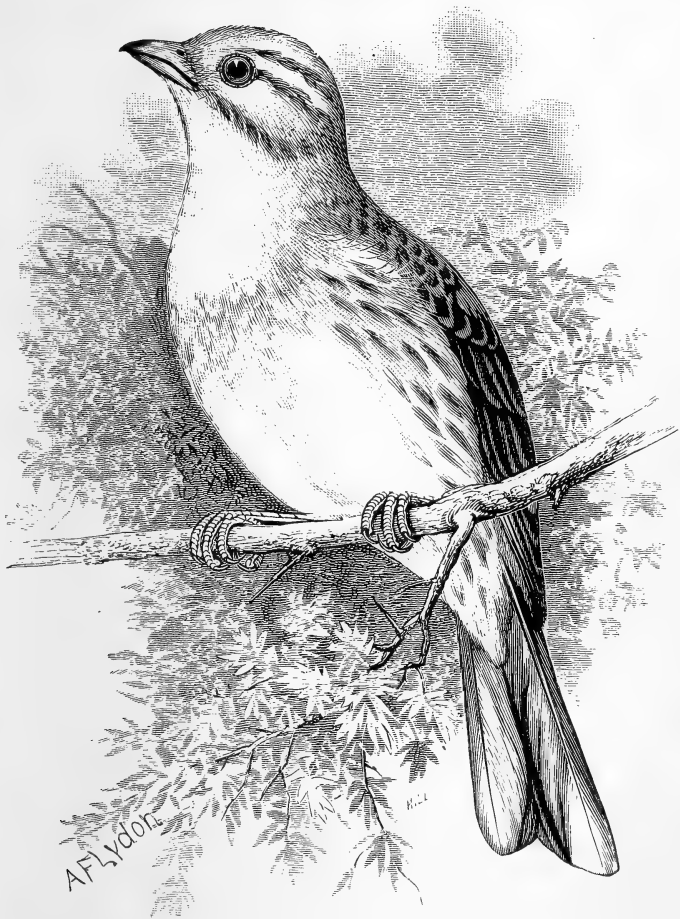
CHAPTER XX.

THE YELLOW BUNTING.

Emberiza citrinella, Lin.; *Le Bruant*, Buf.

DESCRIPTION AND CHARACTER.—The Yellow Bunting, which is, perhaps, more familiarly known as the Yellowhammer, is by no means a despicable bird, although rarely kept as a cage bird. It is very attractive in appearance, especially the male specimen; and although its natural song is not of much account, it is capable, when taken young, and reared by hand, of being much improved in this respect, as it will learn the notes of other birds, especially those of the Siskin and Goldfinch. These birds are quiet and peaceful in disposition, and very active in habit. When at liberty, they go flitting from bush to bush blithely and merrily, but seem out of their element when kept in a cage or aviary, and never live long in confinement—rarely more than three or four years, and not that unless well cared for.

An adult bird measures $6\frac{1}{4}$ in., of which the tail is $2\frac{3}{4}$ in. The beak is straight, and moderate in length. In summer, the bird is a dingy, indefinite blue colour, and in winter, greyish brown. The head, cheeks, under side of neck, breast, belly, sides, and vent are a beautiful canary yellow, the top of the head and cheeks being marked with greenish brown spots. The breast, belly, sides, and vent are spotted with orange. The back part of the head and neck is brownish green, and the back blackish brown, mixed with russet grey; the rump is marigold yellow. The large flight feathers in the wings are blackish brown, margined with yellowish green; the



YELLOW BUNTING.

secondary flights and the larger wing coverts are black, tinged with reddish brown; the smaller wing coverts are brownish green. The tail feathers are an indefinite greyish black, the two outer ones being adorned with a white spot on each; those in the middle of the tail are bordered with reddish brown. The feet and legs are pale fleshy brown. Old birds are less spotted than young ones, especially about the head and neck; and some which are at least four or five years old are quite free from spots on these parts. Young birds are darker, and more dingy in colour, the yellow being less bright and clear, and the spots more numerous than in older specimens; they become much paler when kept and moulted indoors.

HABITS AND BREEDING.—The Yellow Bunting is almost as common and well known as the Hedge Sparrow, and inhabits the whole of Europe. It is indigenous to Great Britain, and may be found in almost every wood and coppice in the United Kingdom. These birds are timid, and easily frightened, and crouch on the ground, or on a bush, as if in great terror, at the report of a gun, or if they perceive a bird of prey hovering near. They seem to have an aversion to wind, and sit on the top or side of a hedge, in an abject and forlorn way, whilst a gale is blowing.

During the breeding season, and whilst food is plentiful, they remain in the fields and plantations; when it becomes scarce, and they are unable to procure a sufficient supply, they resort to farmyards and corn ricks. They very rarely quarrel during the pairing season, being of a quiet and peaceable disposition.

Yellow Buntings do not appear to approve of rain, and squat beneath bushes, or in the bottoms of hedges, for shelter from it. They are very affectionate birds, and seem much attached to each other, as well as their offspring, mourning for days after their nest has been plundered, especially if it contained young birds. They seem very proud of their progeny, the male bird seldom leaving the neighbourhood in which the nest is situated for any length of time. As a consequence of his solicitude for their welfare, he invariably leads those who are searching for the nest to the spot, for he hops from twig to twig, uttering two or three notes, bobbing up his tail, and half opening it, like a lady's fan, and

looking most anxious and uncomfortable the while. This peculiarity seems natural to these birds, for they practise it whenever they are at all excited, either by pleasure or anger.

Yellow Buntings breed twice, and sometimes three times, in a year, between April and July. The nest is always built low, and frequently on the ground, at the side of a river, bourne, or brook, or at the bottom or side of a bank; a favourite place is the side of a railway embankment, in a quite secluded place, and near the bottom of it, where the grass is high and abundant. It is composed of hay, dried grass, weeds, and moss, and is very plentifully lined with horsehair, more so, perhaps, than that of any other bird. It is a rather large, flatish construction, tolerably well put together. The hen lays from four to seven eggs, greyish white in colour, and veined and spotted with blackish brown spots and marks. She incubates fourteen days. Both parents feed the young, principally with insects, until they are nearly fledged, when they sometimes give them seeds.

Yellow Buntings sometimes attempt to breed in confinement, and possibly might do so if reared by hand and moulted in cages or aviaries.

METHODS OF CAPTURE.—Yellow Buntings may be taken, in winter, with the clap net, or with the decoy bush. They may also be ensnared by the noose line—that is, a line made of a piece of stout twine, on which a lot of horsehair nooses have been securely tied on each side, about 6in. apart from each other, and pegged down close to the ground, with a few oats or grains of hemp seed sprinkled beneath and around them. These birds are not at all difficult to capture.

FOOD AND TREATMENT.—The principal food partaken of by Yellow Buntings, when in a wild state, is insects of various kinds, caterpillars, worms, &c. They are partial to ants' eggs, and are constantly on the hunt for them in summer time; and so eager are the birds to devour these, that quantities of earth are swallowed along with the eggs. When insect food becomes scarce, Yellow Buntings have recourse to various kinds of wild seeds, the same as are eaten by Finches. They will eat wheat and oats, and appear especially fond of the latter. In confinement, they eat canary, rape, millet, maw, hemp, and lin seed indiscriminately, and are passionately fond of groats. They will eat with avidity the

Compounds recommended for soft-billed birds (*vide* pp. 189 and 190).

They thrive best in confinement when kept in an out-of-door aviary, with Greenfinches, Chaffinches, Siskins, and any of the varieties of the Bunting family, as they associate with most of these birds when in a wild state.

When they are kept in confinement, whether in cages or aviaries, they need to be plentifully supplied with sand and small gravel. Yellow Buntings are among the first to be at work as soon as a fresh importation of sand and fine gravel is introduced into the aviary. They are likewise great bathers, and must have a bath given them frequently to preserve them in health; in fact, all the family of Buntings is prone to bathe.

REARING THE YOUNG.—Young Yellow Buntings should be taken at the age of twelve days, or sooner, and fed on the food recommended for rearing Hedge Sparrows. They are fond of worms cut up in small pieces, and given to them as soon as they are able to peck, and feed themselves.

DISTINGUISHING MARKS OF COCK AND HEN.—The adult hen differs materially from the adult cock in appearance, her plumage being of a greyish green, while the male bird is yellow; very little yellow is observable in the female—only a tinge on the head and cheeks. The hen is much more spotted than the cock, the spots on the breast of a hen being of a reddish brown colour. Before moulting—as is the case with a great many wild birds—the young males resemble their mothers. Young, unmoulted, cock Yellow Buntings may be distinguished by having yellow throats and a yellow mark on the top of the head and over the eyes, these colours being much paler than in moulted specimens; the breast and rump, too, are strongly impregnated with yellow, and they are not so profusely spotted as females.

SONG.—The song of the Yellow Bunting is not very effusive, and is rather a doleful ditty; it consists of a few notes, the chief of which are “chit, chit,” “chur,” “teil, teil,” and “tackee.” But when these birds are reared by hand, and placed beside a good Linnet, they will learn and repeat several of the notes of that bird very creditably. If kept constantly in the company of Goldfinches or Siskins, they will imitate the song of either species with wonderful fidelity.

POINTS TO BE OBSERVED IN JUDGING.—The best birds to select for the purpose of exhibiting are those of two or three years of age, as they are then in splendid plumage. Choose one that is brilliant in colour and well-defined in its markings. It must be in prime condition: the body feathers fine, and fitting to the body like a wax model; the wing and tail feathers must be in perfect order—none broken, chafed, or cramped. The specimen should be robust and vigorous, but withal steady and tractable whilst being handled, and free from dirt.

GENERAL REMARKS.—Yellow Buntings are so common as to be of very little intrinsic value, and may be bought from birdcatchers for 1s. a pair; hence, few people care to keep them in cages. They are more frequently kept as aviary birds, but are so shy that they endeavour to keep out of sight as much as possible, and get behind rockwork or bushes when strangers approach; it is a long time before they get over this propensity. As they get old they become yellower and paler in colour. White and pied specimens of this variety have occasionally been met with.

DISEASES AND THEIR TREATMENT.—When Yellow Buntings are suffering from the moulting sickness, a few worms cut in small pieces, or a piece of raw beef, freed from fat and sinew, chopped fine, and mixed with moistened oatmeal, or a few ants' eggs, will usually revive them. When delicate and ailing, nothing is more exhilarating than to hang them in the sun, out of doors, in a sheltered place, for a few hours; this, of course, refers to those birds which are kept in cages or indoor aviaries, but they moult best in large out-of-door aviaries. Like most of their tribe, they generally die of decline, for which there is no cure.

CHAPTER XXI.

THE CIRL BUNTING.

Bruant de Haye, Buf. ; *Emberiza elacathorax*, Bech. ;
Emberiza cirlus, Lin.

DESCRIPTION AND CHARACTER.—The Cirl Bunting, commonly known as the Green Bunting, is rather a scarce bird. It is smaller than the Yellow Bunting, although it is not infrequently mistaken for it. The long beak, and the black markings about the face and neck of the Cirl Bunting, are distinguishing points between the species. An adult specimen measures $5\frac{1}{2}$ in. in length, of which the tail is $2\frac{1}{2}$ in. The beak is rather short than long, and compressed. The upper mandible is a sort of dingy blue, and the lower one brownish flesh colour. The upper part of the head and neck is olive green, striped with black; a vivid yellow mark runs below the eye to the neck from the base of the upper mandible. There is likewise a streak of yellow running from the base of the under mandible, which is crossed by a black one, which passes beneath the yellow streak, and runs to the throat. The under part of the neck is black, and below this is a bright yellow spot; the breast is pale olive green, and at the sides and belly, green, tinged with brown; the lower part of belly, vent, and under tail coverts is yellow. The back and small wing coverts are pale greenish brown, mixed with black and brilliant yellow; the rump is dingy green and black mixed. The wings and larger wing coverts are dusky bluish grey; the smaller pen feathers and wing coverts are margined with brown, and the larger flight feathers with

yellowish green. The tail is black, but on the two exterior feathers are large white spots; all the tail feathers are bordered with yellowish green. The legs and feet are dark flesh colour. The young birds differ a little from the parents. The upper part of the body is green, spotted with brown and black; the under part is yellowish green, striped with black.

HABITS AND BREEDING.—The Cirl Bunting inhabits France, Italy, Austria, Spain, and Portugal, and migrates to other countries. With us it is partly migratory and partly indigenous, inhabiting the more southerly counties of England, particularly Devon, where it breeds, and is commonly known as the Green Bunting. It is a pretty bird, but somewhat scarce, and it is seldom that more than three or four are seen together at one time. They associate with Goldfinches, Chaffinches, and Yellow Buntings, and in the autumn and winter frequent stubbles and grass fields. They inhabit groves, thickets, and plantations chiefly.

They are easily tamed, and soon become accustomed to the cage or aviary. The males are more handsome than the females, and much more attractive in appearance. They sing a little; the song is soft and plaintive. They build their nests mostly in bushes by the roadside, in secluded country lanes, or in fields, and among the underwood in plantations or coppices. The nest is composed of dried grass and root fibres, and is lined with hair and fur. The hen lays from four to five bluish white eggs, marked with rust-coloured spots, and incubates fourteen days. The nests are seldom found, and only in warm, genial places, well-sheltered by trees.

METHODS OF CAPTURE.—Cirl Buntings are incautious birds, and, consequently, easy to entrap. They may be taken in the same manner as Goldfinches, either with limed twigs, the decoy bush, or day net. A Yellow Bunting may be used as a decoy.

FOOD AND TREATMENT.—In a wild state, Cirl Buntings feed on caterpillars, moths, flies, maggots, &c., and burdock, plantain, thistle, and other wild seeds; also wheat, oats, and barley. In confinement, they eat all kinds of seeds; canary, hemp, maw, and lin seed they appear to relish especially. They are also very partial to young fresh lettuce.

Cirl Buntings soon become domesticated, and, in the course of a few weeks, appear quite reconciled to the cage or aviary. If kept in a cage, one of the form of the Drawing-room Cage, described and illustrated on pp. 30 and 31, is as good as can be had.

REARING THE YOUNG.—The young can be reared on the same food as that recommended for the Hedge Sparrow, and should be treated in all respects the same.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is more sombre in hue than the male bird, and the colours are much paler. The head and neck of a hen is palish green, profusely marked with black; the back greenish brown; the rump feathers mixed with black; the tail is greyish black; a band of yellow passes above and below the eye, separated by a black stripe, which terminates in a black line bordering the cheeks; the breast is palish green, the sides brownish green, and the throat blackish brown. There is a straw-coloured or pale yellow spot between the neck and breast; the belly and vent are pale yellow.


SONG.—The song of the Cirl Bunting is not by any means attractive; it somewhat resembles that of the Yellow Bunting. It is neither loud nor long, but sweet, gentle, and plaintive. The bird does not appear to possess the gift of improving it, and may, therefore, be regarded merely as an aviary specimen for the sake of having variety.

POINTS TO BE OBSERVED IN JUDGING.—For a show bird, choose an adult male, one bright and clear in the various colours of its plumage, close and compact in its body feathering, and with no broken or cramped feathers in the wings or tail. It should be tame and steady when being viewed, and, withal, scrupulously clean, in good health and condition, and lively and spruce in all its movements.

GENERAL REMARKS.—Cirl Buntings may be obtained from birdcatchers, in the autumn, for about 4s. a pair; but, as before mentioned, they are rather scarce birds. They do not readily breed in confinement, but there is no reason why they should not do so if moulted in a garden aviary, kept by themselves, and furnished with a few small bushes, placed in tubs, and suitable building materials with which to make a nest. They would, of course, need a regular supply of insect food at this time, as they feed their young

almost exclusively on insects until they leave the nest. Cirl Buntings are not very choice in diet when they reach maturity, and will eat almost anything that is partaken of by other aviary birds. They are said to breed with the Canary, but this is doubtful, on account of their being partly insectivorous. As, however, they are seed-eating as well, it is possible that hybrids between them and the Canary are capable of being reared on egg and bread food and vegetable productions.

DISEASES AND THEIR TREATMENT.—The Cirl Bunting is liable to the same diseases and ailments as Goldfinches, Greenfinches, and Chaffinches, and should be treated in the same manner. *Vide* also Chapter V., on "Diseases."



CHAPTER XXII.

THE REED BUNTING.

Emberiza schænilus, Lin.; *Ortolan de roseaux*, Buf.

DESCRIPTION AND CHARACTER.—The Reed Bunting, or, as it is more commonly termed, the Reed Sparrow, is not so numerous as some of its congeners, and, consequently, of more value. It is regarded by some lovers and fanciers of wild birds as uncommon, and kept by them in aviaries, for it is comely to look upon. It is rarely kept as a cage bird, as its song is very short, and more peculiar than pleasing. It is not so shy, and, consequently, more tractable and sociable, than any other variety of the Bunting family.

The length of a fully-grown specimen is $5\frac{1}{2}$ in., the tail measuring $2\frac{3}{8}$ in. The upper mandible is bluish black, and the under one palish flesh colour, inclining to white; the head is black, slightly spotted with reddish brown. There is a white marking, forming a sort of ring, which runs from the base of the lower mandible, across the face, round the back of the head; it is broadest on the cheeks, and narrowest at the back of the head or neck; and from this peculiarity the bird is sometimes called the Ring Bunting, and by others, the Ring Sparrow.

The throat is black, spotted with white; the under part of the neck, belly, sides, and vent (ground colour) is dull greyish white; the breast and sides are spotted with brown. The back is dark blackish brown, spotted with reddish brown and white; the back of the neck is pale greyish brown, or brownish grey. The rump feathers are a mixture of russet

brown, yellow, and grey; the wings are dark brown, the pen feathers being bordered with reddish brown; the smaller wing coverts are also reddish brown, and the larger ones black, some of these being edged with chestnut brown, and the others with greyish white. The tail is black; the exterior feathers on each side have a large white spot near the ends, on the outside edge, and those in the centre have a margin of golden brown. The legs and feet are of a pale brownish flesh colour.

HABITS AND BREEDING.—The Reed Bunting is known throughout Europe. It is partly migratory, and partly indigenous. It does not appear to suffer from cold, and always looks pert and cheerful. Its favourite haunts are marshy places, where there are plenty of reeds (hence its name), rushes, tall grass, sedges, and willows. Water seems an indispensable requisite to the habit of the Reed Bunting, and, the more retired and less frequented the situation, the more these birds appear to appreciate and value it. They discover all the pools, ponds, and accumulations of water that there are in the neighbourhood of their location, and in such places they may be looked for and found. They seldom go far away from their accustomed haunts until driven, by frost and snow, in search of food; they then associate with the Yellow and Cirl Buntings, and get near farm buildings, stables, barns, and stackyards, seeking provender. During migration the males precede the females, generally by two or three weeks, and travel in small companies together; they return in the same manner. They leave this country about the middle of October, and return at the end of March, or beginning of April, according to the mildness of the season.

The Reed Bunting builds its nest near the water's edge, among reeds and rushes, or among young willows, near the ground. The nest is composed of small twigs of osiers, dried grass, and fine weeds, and is lined with hair. The hen lays from four to six eggs, of a greyish white colour, spotted and streaked with pale brown and black; she incubates fourteen days. Both parents seem much attached to their young, and are greatly agitated when anyone approaches the nest; they use every device which their ingenuity suggests to mislead anyone in search of it, and will not venture to go near it

so long as an intruder is in the vicinity, or so long as there is danger to be apprehended. Reed Buntings are cunning and stealthy birds. The number of broods they have in a year varies from one to three, according to the mildness or severity of the weather. The young, if sufficiently feathered, leave the nest at the least alarm, or approach of danger, being warned by their parents, and are then most difficult to capture, as they rush about, and hide themselves among sedges, rushes, or long grass, and often go to places where it would be imprudent, and at times dangerous, to pursue them.

Reed Buntings do not breed in confinement under any circumstances, and this is, probably, one of the causes of their brief existence in captivity.

METHODS OF CAPTURE.—Reed Buntings may be taken, in the autumn and winter, with clap nets, or with limed twigs, in the same manner as Yellow and Cirl Buntings. They are partial to grass seed, and this should be used as a bait to entice and allure them.

FOOD AND TREATMENT.—In a wild state, these birds feed largely on insects, and wild seeds of various kinds. In confinement, they will eat the same seeds as their congeners, but show a preference for maw, grass, and lettuce seed, and readily eat the Compound recommended soft-billed birds on pages 189 and 190. A change of diet is essential to preserve these birds in health.

REARING THE YOUNG.—Young Reed Buntings should be fed the same as the other varieties of the Bunting; but they are hardly worth rearing by hand, as, in the first place, their nests are difficult to find, and at times dangerous to approach; and, secondly, they are not of sufficient value to recompense any one for the time and trouble necessary to obtain and rear them.

DISTINGUISHING MARKS OF COCK AND HEN.—The head of the female, instead of being black, as in the male specimen, is reddish brown, spotted with blackish brown spots. The cheeks of the hen are brown, with pinkish white patches surrounding the eyes; on each side of the neck is a stripe of black; the under side of the neck, breast, sides, and vent, is white, strongly tinged with russet red, striped with dark brown on the breast and sides; the back is a blackish slate colour, much paler than that of the male, and spotted

with brown and greyish white. The hen is smaller than the cock, less robust in appearance, and easily distinguished.

SONG.—The song of the Reed Bunting is short, and somewhat shrill, and consists of a few notes, uttered in a slow, deliberate manner; it is not at all disagreeable, nor is it of such a nature as to call forth admiration or praise. The Reed Bunting is a bird that no one would be likely to keep for singing purposes, as, even when associated with Linnets, and other Finches and Canaries, in an out-of-door aviary, for two or three years together, it never changes its notes or improves in its singing.

POINTS TO BE OBSERVED IN JUDGING.—Reed Buntings intended for show purposes should be from two to four years old, as they are then in their most perfect plumage. Select those with the brightest and most vivid colours. The wings and tail must be perfect in form and quantity, the feathers being straight, and in thoroughly good order. Show specimens must likewise be robust in health, lively and active, and in the “pink” of condition. They should be perfectly clean, and steady and tractable whilst being handled by a judge.

GENERAL REMARKS.—As these birds advance in years, they get paler in colour, the head of the male turning reddish brown at the age of five or six years. Reed Buntings rarely, however, reach this age, even under the most favourable conditions, and seldom survive beyond three or four years, and not more than two unless carefully attended to, and supplied with insect food at least once a week during the summer months. They should at all times be fed with a little grass seed, in addition to their other food; and, to keep them in health, it is necessary that a good supply of fresh water should be given daily all the year round, for their delight in bathing.

DISEASES AND THEIR TREATMENT.—The periodical moulting sickness terminates the existence of most of the Buntings, when kept in a limited space, and not supplied with the food natural to them when in a state of freedom. No birds are more difficult to moult in a house than Buntings. They seem at this time to pine and waste away. When at liberty, Reed Buntings doubtless feed largely on aquatic insects and flies, and, for want of these essentials to their

well-being and good health, they languish and die. A few ants' or snails' eggs, and the larvæ of insects, have a wonderful effect in reviving those birds that are observed to be drooping and despondent.

They should have an abundance of sunshine and fresh air—two important elements at all times to the health and longevity of birds, but more particularly at this critical period of their existence. They are subject to gout, and, to prevent this, a few rusty iron nails should be placed in the drinking water, alternated with a few grains of bicarbonate of potash — say 30 grains to half a pint of water. They are liable to other ailments, for treatment of which see Chapter V., on "Diseases;" but those mentioned above are the principal maladies from which they suffer.



CHAPTER XXIII.

THE SNOW BUNTING.

Emberiza nivalis, Lin. ; *Ortolan de neige*, Buf.

DESCRIPTION AND CHARACTER. — This very pretty and uncommon looking bird is known under various appellations; it is called the Tawny and Mountain Bunting, Snowflake, Snow-fowl, and Oat-fowl; and MacGillivray names it the Snow Lark Bunting.

The full length of an adult bird is $6\frac{1}{2}$ in. The beak is straight, and compressed at the sides, yellow in colour, with a dark tip; but when kept in confinement it turns black. In old birds, the head is white; in a young male, it is spotted with plain golden brown. The neck, face, throat, belly, and sides are white; the vent greyish white. The shoulders and back are black, and the rump dark slate colour. The feathers on the shoulder and rump are margined with pale brown, and those on the back with greyish white. The first nine pen feathers of the wings are white at the base, or roots, and crossed with a narrow black band; beyond this is a narrow white band, and the outer portion (for nearly half their length) is black.

The inner, or secondary, pen feathers, are white, excepting the small covering feathers near the body; these are black, edged with pale brown. The tail is a mixture of black and white, the extreme outside feathers being white, pointed with black; the centre feathers are white, with pale yellow margins. The legs and feet are jet black. This bird frequently changes its plumage; when very old it becomes much whiter, and

is sometimes mistaken for a Pied Lark by amateur bird-catchers.

HABITS AND BREEDING.—The Snow Bunting principally inhabits the North of Europe, and breeds in Greenland, Norway, Iceland, Sweden, and Russia. It visits Germany during part of the year, and is common in Great Britain from October to April, but does not breed in England, so far as is known. It is very common in Scotland, and fond of being near the seashore.

The birds travel together in search of food, sometimes in large numbers, at other times in batches of twenty or thirty. They fly low, and only go a few hundreds of yards at a time, unless a gun is fired at them, when they hurry off in a scared manner. They utter a peculiar note when on the wing, and just before they alight they wheel suddenly round, and appear to drop all together, or in close proximity to each other. They eat ivy and yew berries and haws, and in severe weather feed on turnip tops. They resemble Larks in some respects, more particularly in their method of flying, and roosting on the ground, and in the way in which they run along the sand on the seashore. They are timid birds, but when driven by hunger will visit the rickyard, and even the farmyard and barn, in the hope of finding a few scattered grains of corn wherewith to appease their cravings; but they take to flight on the least alarm. Snow Buntings will not breed in confinement, and seldom live long; they are very restless, and appear ever on the alert to seize the first opportunity of regaining their liberty.

METHODS OF CAPTURE.—These birds are difficult to approach, excepting during severe weather, for they are very shy, and easily scared. A piece of ground should be cleared, where they are known to frequent, and strewed with oats and limed twigs; and a few may be placed near the water's edge of any pool, or ditch, or running brook, which they are known to visit for the purpose of drinking or bathing.

FOOD AND TREATMENT.—In a wild state, Snow Buntings feed on various kinds of berries and seeds, and are very partial to oats. In confinement, they are fond of groats and hemp seed, and will eat millet, canary, maw, and lin seed; they appear to enjoy green food, and eat lettuce, watercress, and the tops of young swede turnips. They

seem to enjoy a mixture of oatmeal and white bread-crumbs, in equal parts, with a little old cheese, grated, and the whole made into a soft paste. After they have been a while in captivity they become comparatively tractable, but seldom sufficiently tame to eat from the hand.

REARING THE YOUNG.—The Snow Bunting does not breed in Great Britain, and is, therefore, not likely to be hand-reared by anyone, especially as adult birds can be readily obtained if required. Should anyone, however, obtain a young bird, and be desirous of bringing it up by hand, the treatment recommended for rearing young Hedge Sparrows should be followed.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is not quite so large as the male bird. The head and back part of the neck are white, mixed with dark cinnamon coloured feathers. The breast is white, marked with pale yellowish brown spots. The young birds possess darker beaks than the older ones, and have brown feathers where the adult have black. The young hens, after moulting, are altogether paler in colour than the young males, and are marked on the side of the face and breast with pale cinnamon yellow spots.

SONG.—Snow Buntings cannot, by the most plausible impeachment, be classified as song birds. They utter a few low, twittering notes, and occasionally break forth with louder ones, like those emanating from an old, crushed whistle, piercing and distinct, not at all unpleasant, but not particularly musical. They do not attempt to imitate other birds, or to pick up stray notes from their companions of the aviary.

POINTS TO BE OBSERVED IN JUDGING.—The Snow Bunting, when in good feather and condition, is a very suitable bird for the show bench. An old male bird is the best to select for exhibition purposes, as its colours are more distinct, intense, and pure looking: the white is cleaner and more refined, and the black is brighter, richer, and more glossy. A show specimen should be scrupulously clean, in perfect feather, close and compact; the wings and tail should be free from broken feathers, and braced closely together. The bird should be steady and tractable. Snow Buntings should be shown in larks' cages, with a fresh turf provided for each, and the bottoms of the cages well sprinkled with oats and oat chaff.

GENERAL REMARKS.—The chief attraction of Snow Buntings is their plumage, for they are not valued on account of their musical capabilities; neither are they particularly attractive in other respects, for they display very little intelligence, and, consequently, are not capable of being taught amusing tricks, or the songs of other birds. They are mostly kept in large aviaries, by those fanciers who are fond of variety, and who keep together a great many different kinds of birds that will live together in harmony, and partake of the same food. These Buntings, however, must have no artificial heat; they live and thrive best in the cold. They do not perch, so that, when kept in an aviary, a little rockery should be formed in a quiet corner, to afford them a resting-place; or even a large stone, covered with soil and moss, or grass. If they are kept in cages, a lark's cage is the most appropriate, with a fresh turf two or three times a week.

DISEASES AND THEIR TREATMENT.—With these Buntings the moult is the most trying period of their existence. They should be liberally supplied with a bath at this time, and a change of diet frequently. Groats, maw seed, and a bread, oatmeal, and cheese compound—made of two parts each of white bread and cheese, to one part oatmeal, made into a thick paste with clean water—suits them best, together with a liberal supply of fresh young lettuce, or other green food.

These birds are subject to inflammation of the bowels, which may arise from bathing too often. Care should be taken not to allow the bath to remain more than an hour at a time in the aviary, and it should only be given to them on fine, dry days, for nothing is more prejudicial to the health of birds than to permit them to bathe in cold, wet, and inclement weather.

CHAPTER XXIV.

THE STARLING.

Sturnus vulgaris, Lin.; *Etourenau*, Buf.

DESCRIPTION AND CHARACTER.—The Starling is one of the most beautiful, intelligent, and social of all the various species of British birds. The elegance and diversity of its plumage, combining, as it does, nearly all the colours of the prismatic spectrum, renders it simply resplendent. It is a bold, majestic, handsome bird, grand in contour and graceful in mien, and, consequently, has many ardent admirers. Its natural song is meagre and peculiar, and certainly not what might be termed symphonious or exhilarating.

An adult Starling is from $8\frac{1}{2}$ in. to 9in. in length, the tail measuring from $2\frac{1}{4}$ in. to $2\frac{1}{2}$ in. When a bird is in good condition it weighs about 3oz. The beak is 1in. in length, straight, and compressed at the sides of both the upper and lower mandibles, tapering to a fine point; in summer it is yellow, tipped with blackish brown, and in winter slaty black. The iris is hazel brown. The head is black, shaded with purple, and covered with small palish golden brown spots. The neck, shoulders, back, saddle, rump, and upper wing coverts are much the same, but have the addition of large bright golden brown and emerald green spots. The tail is deep blackish brown, shaded with green, with light bright brown marginal shading of the feathers. The under side of the neck and throat is a beautiful lustrous purple, speckled profusely with silvery spots, which are very small at the throat, but increase in magnitude all the way down the



STARLINGS.
(Male and Female.)



the body. The belly and sides are velvety black, interspersed with a shading of bright emerald green, and spotted with white. The wings are blackish brown, and are elegantly lined or pencilled at the margins with rich deep golden brown. The lower wing coverts are deep bronze brown, shaded with lustrous green, and have broad margins of lovely golden partridge brown. The shanks and feet are brownish flesh colour, and the thighs greyish brown. The plumage of these birds is much more brilliant in summer than in winter, and they only attain their full rich beauty at the age of two years. At three they are in their most perfect garb.

As in other varieties of wild birds, there are pied and albino specimens to be met with; and some very old birds, kept long in confinement, without a proper change of diet, and necessary attention, lose much of their singular beauty, and become blackish grey.

HABITS AND BREEDING.—The Starling, like the House Sparrow, find a home in many lands, and may be said to be an inhabitant of the greater part of the Old World. It is partly indigenous and partly migratory, a great many remaining with us all the year round; and although pretty generally distributed throughout the length and breadth of Great Britain, it is to some extent localised. These birds are unquestionably valuable to farmers and gardeners, as they destroy all manner of grubs and insects, and are most assiduous in their labours; unfortunately, like Blackbirds, they have a penchant for ripe fruit when in season, but what they appropriate is meritoriously deserved. They will, likewise, when driven to it by hunger, attack corn, especially oats, but not to any alarming extent. They are most peaceable, well-disposed birds, and live on excellent terms with their neighbours. Large numbers of them migrate annually, and travel southwards; they leave in October, and, in mild, open seasons, as late as the early part of November; they return again, as a rule, early in March. They are gregarious in their habits, and travel together in large flocks, more particularly as the migratory season approaches. They have a strong, direct flight, moving rapidly, and making a peculiar oscillating movement with their wings as they fly. Those that remain in this country keep together in companies, varying in numbers, in search of food. They visit meadows and gardens chiefly,

and intermix with other birds, such as Greenfinches, Linnets, Buntings and Larks. They are remarkably social, quiet, and unobtrusive, and fraternise freely with their companions. They visit farmsteads in the early morning, and especially the "fauld yard," cow byre, and rick yard, in quest of provender. In the daytime they hang about pastures, especially those where there are plenty of cattle and sheep grazing, as they are fond of the flies that torment cattle, and assemble in clusters around their dung; they likewise devour the ticks that torment sheep, and may often be seen perched on the backs of these animals, diligently in quest of those pests. They also visit newly-ploughed fields.

They build their nests in tall trees, as near the tops as possible, in holes made by time, fungi, or the Woodpecker; or in some old, dilapidated tower, ruin, or fortress; in the belfries of church towers, the eaves of elevated roofs, a disused dovecot, or places similar, but invariably one not easy of access, and at a considerable elevation from the ground. They like to be entirely out of sight, and beyond reach, if possible. They breed in the month of May, and rarely have more than one nest in a season; but if robbed of their eggs, or callow young, usually have a second. The nest is composed of straw, hay, or dried grass stalks, dried leaves and feathers, and is carelessly and badly constructed. The hen lays from four to six eggs (five is the average number), of a very delicate pale blue, slightly tintured with green; some are as pale as French grey, with a delicate greenish shade. The hen incubates from fourteen to fifteen days.

The young birds are very sombre looking in their first, or nest feathers, being a dull greyish black; odd ones have been found of a dirty brownish creamy drab colour; these are almost invariably hens, and on moulting resume the natural colours of their species. Starlings will breed in a large out-of-door aviary under favourable conditions, and with a regular supply of insect food, and the usual materials for making a nest. The stump, or a very stout branch, of an old tree, with a good deep cavity in it, the result of decay, or the workmanship of a Woodpecker, should be placed in some quiet, secluded part of the aviary, and surrounded by a mound of earth or a rockery; the aperture should be so placed that the birds can readily discover it, whilst it should be so ar-

ranged as to be secure from the public gaze. A shrub or small tree could be planted, with a view of shielding the entrance from observation, as these birds are very conservative and reserved in this respect, and are jealous of their young being discovered. They should not be disturbed whilst breeding. The male bird provides the female with food during the period of incubation, but the hen undertakes the chief part in the rearing of the young. The male bird is active, and exceedingly industrious in bringing up the supplies, which he usually gives to the hen, and goes off in search of more; he only helps to feed the young after they are well-accustomed to the perches. Supply the young birds regularly, twice a week, with a shallow dish containing water for them to bathe in; this should be given as soon as they reach the age of four weeks. It is one of the best things they can have to keep them in health; they greatly delight in bathing.

METHODS OF CAPTURE.—Various plans are resorted to for entrapping these birds. They may be taken with limed twigs, when the ground is covered with snow, by clearing a space a few yards in extent, baiting with mealworms or groats, and arranging twigs in the manner pointed out in Chapter II., on “Bird Catching.” They can also be caught by nets, but it requires a practical birdcatcher to use these successfully.

FOOD AND TREATMENT.—The following special Compounds for Soft-billed Birds will be found of the utmost service to those who keep such birds as Starlings, Thrushes, Blackbirds, Skylarks, Woodlarks, Nightingales, Robins, Wrens, &c.

(1) Purchase a quart of the finest horsebean meal, which can be procured from a meal dealer, or corn chandler, and pass it through a fine sieve; blanch 1lb. of Jordan almonds, and mix with the meal in a mortar; then add $\frac{1}{4}$ lb. of fresh butter, which must be perfectly sweet. Put these ingredients into a tin lined or enamelled saucepan, which place on a bright clear fire, to prevent the mixture getting smoked in any way. Stir the ingredients well together, and add the yolks of four fresh laid fowl's eggs, which should be prepared previously, and placed in a cup or basin ready for use; keep constantly stirring. When the ingredients are well incorporated, add some pure honey, say about 4oz.; this must be added gradually, stirring steadily all the while. Then

reduce the whole to a thin batter, by the addition of a strong solution of infusion of meadow saffron, made as described below, and which ought to be warm when added. When the whole has been thoroughly mixed, strain through a cullender, or sieve, and when cool put in a stone or earthenware jar, provided with a lid; afterwards cover the paste with a thin layer of clarified honey, arrange the lid, and fasten down closely with a paper or calico covering. This composition will keep good for several months.

A portion of this Compound should be occasionally given, mixed with any other diet, and will be found most conducive to the health and spirits of all birds that partake of soft food.

During the process of the moult this paste will be found of the utmost service; the benefit to be derived from it is incalculable. Spanish nuts, walnuts, or Brazil nuts, may be substituted for the almonds, to save expense, but the last named are best.

To make the saffron solution, put 1 drachm (dram) of meadow saffron into a mug, and add $\frac{1}{2}$ a pint of boiling water; let this infuse for two hours in a hot place, and then strain through a piece of fine muslin, when it will be ready for use.

For daily use, the following Compounds will be found valuable:—

(2) Pea meal, 3 parts; barley meal, 3 parts; wholesome white bread, crumbed fine, 1 part. Add boiling water sufficient to make the mixture into a soft paste, and stir well.

(3) Good Scotch oatmeal, 2 parts; bean meal, 3 parts; sound, good figs, $\frac{1}{2}$ part. Mix, and form into a moist paste with boiling water.

(4) Pea meal, 3 parts; fine breadcrumbs, 2 parts; good old cheese, grated, $\frac{1}{2}$ part; ground hemp seed, freed from husks, $\frac{1}{2}$ part. Mix these ingredients well together, and make into a paste with boiling water.

Starlings in their natural state feed largely on worms, grasshoppers, snails, caterpillars, and ground insects of all sorts; they are likewise partial to cherries and strawberries, elder berries, and currants, and will eat seeds and grain, especially oats, when other food is not procurable—in fact, they are not at all dainty in their choice.

Starlings are birds of much appetite, and a large flock of them will consume an almost incredible quantity of edibles in a short space of time. In confinement, they will eat almost anything that other soft-billed birds will partake of. They should be fed in all respects the same as Blackbirds, but, to keep them in health, a few mealworms, spiders, and ants' eggs are very desirable. Some old birds, when first caught, sulk, and refuse whatever food is offered them, and will positively die of starvation if not liberated; many old birds will refuse to eat for the first twenty-four hours, and then take to eating ravenously. A few ants' eggs, mealworms, or caterpillars, will usually tempt them to partake of food; if not, nothing else will. This is the best food to give newly-caught birds until they become domesticated. The Starling can be kept in an aviary, but a cage, the same as that used for a Thrush or Blackbird, is preferable.

REARING THE YOUNG.—Young birds intended to be hand-reared, should be taken from the nest at the age of nine or ten days, or even younger—say eight days; if taken at a later period, they will probably have learnt some of the discordant notes of the parent, and, consequently, would be more difficult to teach to whistle an artificial tune. Place them in a basket having a lid, or in a properly constructed box, which is much better, with some straw or hay cut into short lengths, or a piece of moss litter, and feed and treat them in all respects the same as young Blackbirds. Feed every two hours at least, but do not cram them, excepting at the final meal, at the end of the day; and even then it must not be overdone. Many young birds are killed by overfeeding. Keep them perfectly warm and quiet. As soon as they can feed themselves, remove them to a cage, but be sure to put in it a piece of moss litter, and some fine gravel and sand, until they are able to perch; then the moss litter may be discontinued.

DISTINGUISHING MARKS OF COCK AND HEN.—Young males, before the moult, may be easily distinguished from females by opening their mouths, and examining the under side of the tongue. In the males will be found a streak of black, which can be plainly seen; the hens are destitute of this peculiarity, or have it so faintly indicated as to be barely observable. It disappears after the first moult; but then they

have obtained their adult plumage, and there is little difficulty in distinguishing them, the males being so much handsomer, and more brilliant in the colours of their feathers and markings. In adult birds, the bill of the female, in summer time, is dusky brown, whilst that of the male bird is yellow. The general colours of the hen are altogether paler, and less brilliant in sheen than those of the male, the head, neck, back, &c., being tintured with brown, and the spots on the head, neck, and breast larger, and not so vivid. The hen, too, as a rule, is more profusely spotted than the cock, and has an effeminate appearance in her general contour.

SONG.—The natural song of the Starling consists of a few notes uttered in a peculiar chattering sort of way, with an occasional loud note; it is rather harsh and unmusical, but by no means unpleasant as a whole. These birds, when well tutored, can be taught to whistle a tune perfectly, and in a loud, clear, and musical manner, far surpassing the Bullfinch, or even the Blackbird.

POINTS TO BE OBSERVED IN JUDGING.—For exhibition purposes, choose a two or three-year-old male—one rich, deep, and bright in his ground colour, with vivid markings. He should be smooth and close in feather (tight-fitting to the body), with well-braced wings and tail, a graceful carriage (the body held erect when standing), and with a bold, fearless, nonchalant aspect. A shy, timid bird, is not suitable for the show bench. The toes and claws must be well formed, and not crooked or twisted. All birds should be shown in good condition, and scrupulously clean. The Starling is one of the handsomest of British birds, and a choice specimen, shown in a class where several varieties of birds compete, ought to be difficult to displace for first honours. A newly-caught bird is almost invariably more brilliant in the colour and shading of its plumage than a house-moulted specimen; but, unless a bird has been caged for several weeks, and has become thoroughly accustomed to association with human beings, the advantage gained in this respect would be lost, for no man can properly judge a bird that is wild and unsteady in its cage; and as judges are limited to time in the performance of their duties, they cannot be expected to spend an undue share of it in examining any particular specimen that has not been domesticated. A house-moulted

bird, if kept in a room free from smoke and dust, can be shown in superb condition. The cage should be covered whenever the room is being swept, and also cleaned out every week at least, and supplied with clean sand and gravel. A bath should be supplied to the bird every alternate day—that is, if the weather will permit. Remember, a frequent change of diet is indispensable to insure good health and condition; a regular supply of insects, worms, and grubs, will best fulfil these requirements.

GENERAL REMARKS.—Starlings, although not gifted by Nature with a musical song, are, nevertheless, wonderful imitators and very apt pupils, and if taken young, and hand-reared, can, with ordinary patience and perseverance, be taught to whistle tunes perfectly, providing the instructor is an adept at music, and can whistle or play to his pupils the air he desires them to learn. They can also be taught to speak very plainly and well; indeed, many learn to speak quicker, and with greater fluency, than Parrots. In teaching, it is necessary to keep the pupils in a room apart from all other birds, and, at the time the lessons are given, to place them in the dark, to secure their attention. Great attention is required to be paid to the pupils. Those who essay to instruct these birds should first gain their confidence; this can be done by speaking to them in a kind, familiar way, and by dispensing dainties from the hand, such as mealworms, ripe cherries, or a little raw meat. When they become friendly with the instructor the lessons may be begun. Whistle at first a simple air, easy to acquire, and repeat it at least half-a-dozen times a day. At the commencement whistle in front of the cage, but as soon as the pupil attempts the air the lessons may be given from any part of the room most convenient. No other person should be present during the time of instruction, and it would be judicious to prevent, as far as possible, all other noise calculated to distract the attention of the bird. Never attempt to whistle a second tune until the first is thoroughly acquired and well remembered. At the same time a few select phrases, such as “Well done, old fellow!” “Jim is a clever boy!” “Jim is a beauty!” or any other short, emphatic sentences that may be fancied, should be frequently repeated in the pupil’s presence at the end of each musical lesson. These should be constantly uttered, until the bird has

made himself master of them. When once Starlings begin to whistle and speak they learn rapidly. But it is not well to overtask their memories; a prodigy is only met with occasionally. It is not, as is commonly supposed, necessary to cut the ligament beneath the tongue to enable the birds to articulate words. When one tune or one set of phrases has been thoroughly acquired, proceed with a second; but those first taught must not be allowed to fall out of use, or they will be forgotten in the course of a few months. The hens will learn as well as the cocks, but they are not so apt in acquiring, neither are they such adepts as performers, after they have been taught, as the male birds. After meals is the best time to give them instruction, and the lessons should be continued for not less than thirty minutes each time. No one need be disheartened if no response is made, or even attempted, by a pupil for several months, as some birds begin to whistle or speak quite unexpectedly, and may have acquired several notes, and probably two or more words, before they will make a venture at airing their acquirements; and it not infrequently happens, that those which remain longest mute turn out the most proficient performers. The more domesticated and familiar a bird becomes, the greater is the chance of its turning out well. Patience, however, is a virtue which requires to be fully exercised when birds are chosen for pupils.

DISEASES AND THEIR TREATMENT.—The Starling is a remarkably healthy, vigorous bird, and, with proper attention, will live in a suitable cage for ten or twelve years, or longer, and rarely ail anything. These birds moult freely, much more so than most species of wild birds when kept in confinement; but they should not be subjected to sudden changes from cold to heat, or the reverse, or hung in a draughty, cold place. Damp is injurious to all birds, and this should be especially guarded against. To hang Starlings, and birds of a similar character, outside, in the open air, during the summer months, is a wise and commendable practice, and they should be allowed to remain there altogether so long as the nights are not chilly, wet, or boisterous. If these birds are neglected, they become subject to cramp and epilepsy, the latter brought on, no doubt, from the want of a regular change of diet and a supply of animal food. When birds are seized with an epileptic fit, the attacks come on so

suddenly, that they drop from the perch as if shot, and if not at once attended to, beat furiously at the bottom of the cage, and sometimes kill themselves in their agony by their own violence. (*Vide* Chapter on "Diseases.") A spider or two, and a few mealworms, should be given to a patient as soon as it has so far recovered from a fit as to be able to eat; but it will probably remain in a languid, semi-torpid state, for some time after a severe attack. Continue to give this food, at short intervals, for some weeks afterwards, and then try other changes of diet.

When a bird is seized with the cramp, it should be immediately removed from the cage, and its legs immersed in a tolerably hot bath, to which half a teaspoonful of laudanum has been added; a breakfast cup is the best vessel to use. Keep the body of the bird out of the water. The legs should be kept in the bath for ten or twelve minutes; then take them out, dry, and afterwards rub gently with goose or capon grease; in the absence of these, use olive oil.

CHAPTER XXV.

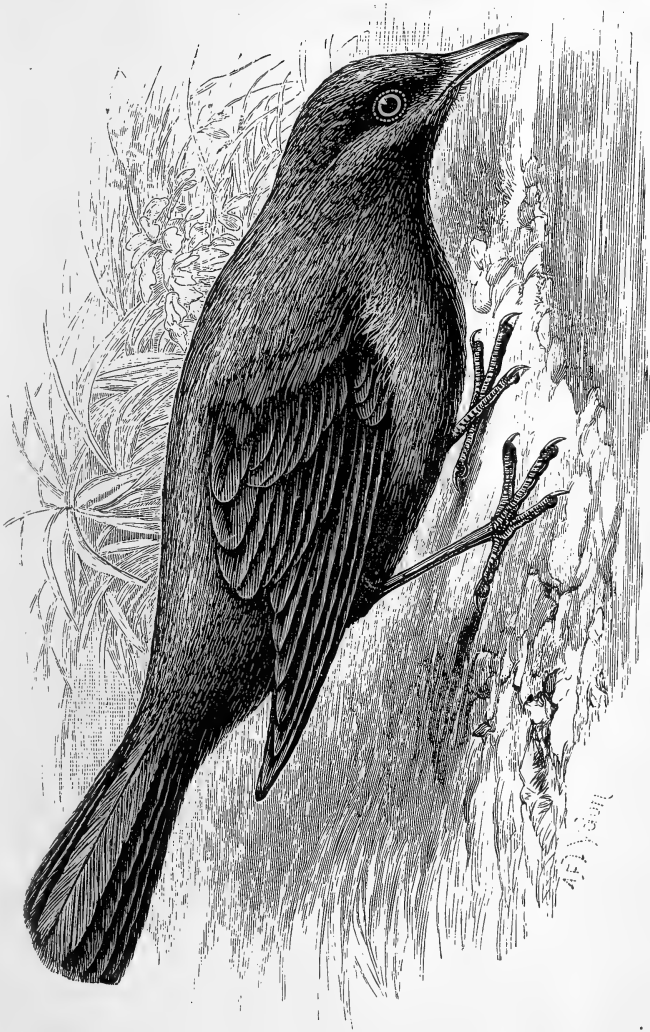
THE BLACKBIRD.

Turdus merula, Lin. ; *Merle*, Buf.

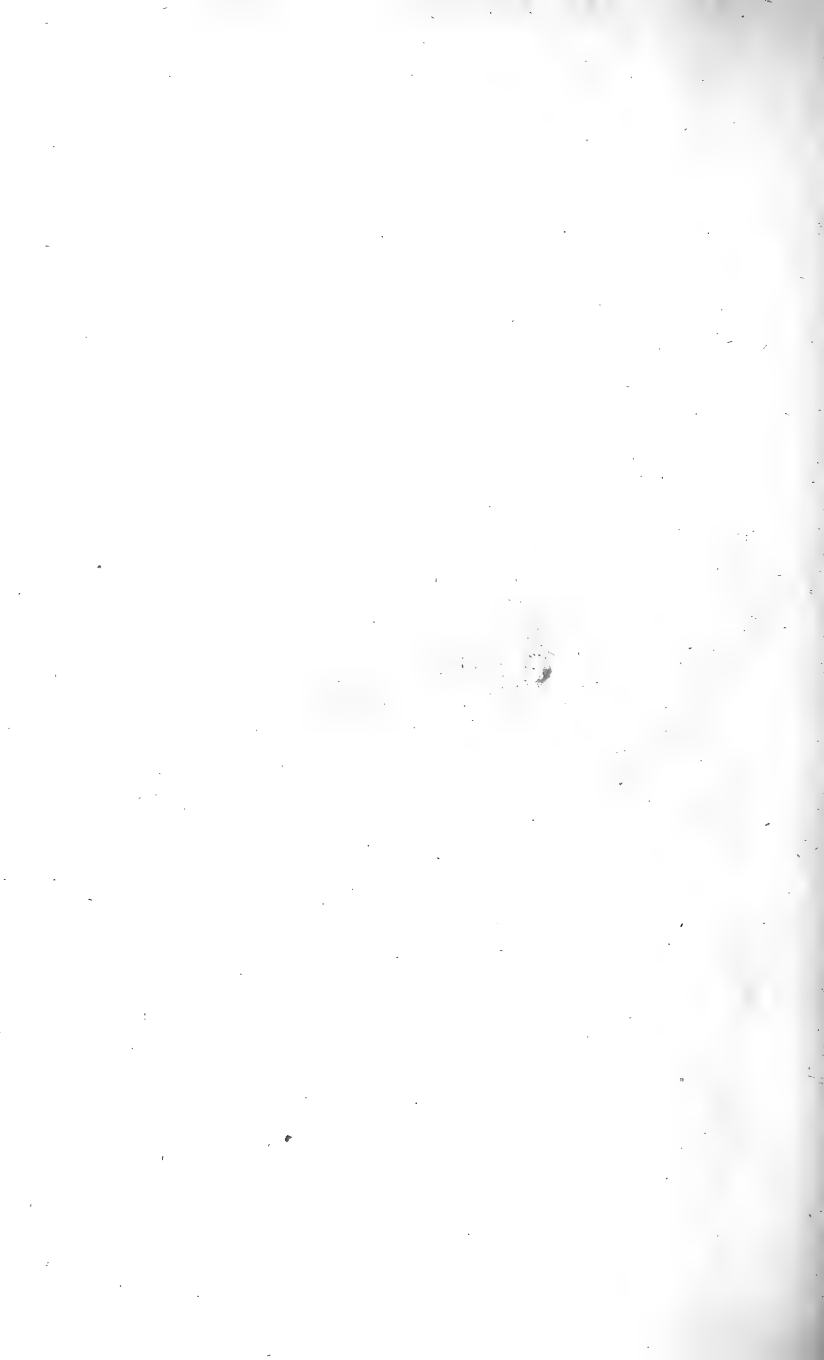
DESCRIPTION AND CHARACTER.—The Blackbird is one of the most popular and widely known of our British song birds, and is justly esteemed, not only on account of its fine song, but for its docility and cheerful disposition. When a bird of this species is reared by hand from the nest, treated with kindness, and petted, it frequently displays a disposition to be frolicsome, and a desire to be fondled. It is a most intelligent bird, and at times gives undoubted evidence of ingenuity and dexterity.

The male is 9½in. to 10in. long, the tail measuring 4in. The bill is ⅞in. long, and, in the spring and summer, of a yellowish orange colour. The eyes are bright rich brown, and are encircled by a rim of vivid yellow. The entire plumage of a mature bird is deep black, the wings being rather paler than the body feathers; the inner web of the flight feathers is tintured with brown; the legs and feet are dusky brown, which colour is paler in caged than newly-caught birds. Before moulting, the male is more like a mature female, being of a rusty brownish black; but he may be known by the rich colour of the ring that encircles the irides (the yellow circle surrounding the eyes). The beak of a young male is black, the rich orange hue not being attained until the bird is about a year old. There are pied, and even white, specimens of these birds to be met with, but they are rarely seen.

HABITS AND BREEDING.—The Blackbird inhabits the greater part of Europe. It is a species of Thrush, and is sometimes



BLACKBIRD.



called the Black Thrush. It is indigenous to Great Britain. It prefers to inhabit secluded places, and will never leave the neighbourhood of a wood or coppice so long as it can obtain food and water. Even in winter time, when most other species of birds leave their summer haunts, and retire to sheltered retreats, it clings with tenacity to its home and shelter beneath the dense underwood, or in the hollow parts of a tree; or it perches at the foot of a thick bush of holly, to protect itself from the inclemency of the weather. Some Blackbirds are so devoted to the locality in which they have been nurtured and reared, that they will sooner starve than forsake it.

Blackbirds commence to breed early. Should severe weather supervene when the female is about to begin the period of domesticity, and she perish in her first effort to become a mother, the male, in most cases, becomes grief-stricken, and his cheerful voice ceases to be heard for several weeks, unless, after a brief period of lamentation, he resolves to seek another partner, when he will resume his usual song. If, however, the male bird die from any cause, the hen is, in most cases, soon paired to some other ardent admirer.

These birds build their nests in a hedgerow, in a bush on the side of a hill or embankment, or at the foot of a tree surrounded by short undergrowth, but more often in a hedge, rather low down, and generally with very little pretension to disguise. The nest is composed of slender twigs, moss, and root fibres, strongly interwoven, cemented together with mud and clay, sometimes plastered inside with cows' dung, and finally lined with short straws, hair, or wool. The hens lay from four to six eggs—usually five—of a bluish green colour, covered with dusky brown spots and irregular markings. They have from three to four broods in a season, and may be considered prolific birds, as they seldom rear fewer than four, and not infrequently five, young ones in a nest. The cock feeds the hen during incubation, which lasts from thirteen to fifteen days, according to the time of year.

As soon as the breeding season is over, and the last brood are able to provide for themselves, the males and females usually separate until the next spring.

METHODS OF CAPTURE.—The Blackbird is rather difficult to approach, excepting in stormy weather, and when the fields,

trees, and hedges are clad in snow, and the water-pools are bound in ice, as it is both timid and cautious. At this time it may be taken with horse-hair nooses, or traps baited with berries (those of the mountain ash, or whitethorn) or meal-worms. It may also be snared with limed twigs, if the lime is fresh made and strong. Break the ice at the edge of a pool or brook which the birds are accustomed to visit to quench their thirst; about noon is a good time, or early in the morning. Brush away the snow, and distribute provender and some twigs about the opening you have made in the ice. Do not go far away from the spot, nor for any lengthened time, as these birds are strong, and will struggle and free themselves from some of the limed sticks, and go off with the one or two that remain attached to them. Blackbirds may also be caught in a box trap, constructed on the principle of an old-fashioned mouse trap, with a bridge inside, and a sliding door, weighted with lead, at the end, which falls suddenly when they ascend the bridge to partake of the food placed thereon. The trap should be placed in a garden, on a lawn, or near a hedge where the birds frequent. These birds are very wary, and will probably not enter the trap for a few days, until their suspicions become somewhat allayed, and probably not then unless driven by hunger.

FOOD AND TREATMENT.—In a wild state, these birds feed principally on insects of various kinds, worms, and fruit. When these foods are scarce, they resort to berries, such as those of the mistletoe and hawthorn; and when very hungry, they will eat the seeds of some of the wild plants, and oats. In confinement, they may be fed on scraped carrot, soaked white bread, and barley meal, made into a paste; a little fresh raw meat, such as beef or mutton, chopped very fine, and mixed with bread rubbed into fine crumbs; cheese grated, bruised hemp seed, and bread crumbs, mixed together, and slightly moistened, or the Compounds recommended in the Chapter on "The Starling." To keep these birds in robust health and song, a few worms or grubs should be given occasionally as well.

REARING THE YOUNG.—The young birds should be taken at ten or twelve days old, the latter date for preference. Remove the birds with the nest, and keep them in a small covered basket or hamper, or, what is better, a properly constructed box, made for the purpose, wired in front, and

arranged with feeding and drinking tins, and a perch, so that, when the young birds are able to leave the nest, they may be kept in it until ready to be removed to a cage; the top should be made to fold back on hinges, and to fasten in front with a brass or wire hook. The nest should be placed in a wooden bowl, or basin, the proper size to keep it steady. The nestlings must be kept scrupulously clean if they are to thrive. At this age their mother will have taught them to cast their excrement over the side of the nest; this she does by placing her head beneath their bodies, and gently pushing them, "hindermost first," to the edge of the nest, when she observes that they require to obey the behest of Nature. Up to the age of six or seven days—rarely longer—the hens swallow the refuse of their offspring; this is the case with all hen birds of this and similar species, and I have found, by close observation, that a mother who objects to do this, or does it imperfectly, rarely ever rears her young. The nestlings must be kept warm, and at an even temperature. The practice of taking young birds in cold weather is not particularly commendable, as they are much more difficult to bring up successfully; but if taken then, they should be well covered at night, leaving them only breathing space. The first nest of the season usually contains three males out of four birds, if not all males, and in the second nest the reverse is the case. Feed the young with boiled bread and milk, which make fresh at least twice a day; be sure that the milk is new, and the bread quite sweet and wholesome. As soon as the young birds can pick, they should be weaned gradually from this food, and given sheep's heart, or a piece of raw lean meat, chopped as fine as possible, and mixed well with one and a half parts more of bread, finely crumbed, and moistened by water, to form a soft paste. The food must never be allowed to become stale or sour, or it will scour the birds, and thereby weaken their constitutions. When they are fully fledged, the latter mixture should be given without being moistened by water, and they should also be fed at intervals with the food of the aviary, until they become accustomed to use it entirely.

DISTINGUISHING MARKS OF COCK AND HEN.—In adult birds the male is entirely black, and the hen brownish black, with russet black on the breast; the belly and vent of the females

are strongly tinged with ashen grey. The hens are larger than the cocks, and measure as much as 10in. and $10\frac{1}{2}$ in. in length; the beak of the hen is never so vivid in colour as that of the male bird, neither are the bands of yellow that encircle the eyes. Young males are brighter and deeper in colour than young females, and have black beaks, the bills of the hens being brown, tipped with black. The males may be distinguished by the circle of yellow that surrounds the eye. In the male it is a distinct yellow, whilst in the hen it is much paler, and not a definite yellow. The mouths of both are rich yellow inside.

SONG.—The song of the Blackbird is agreeable and harmonious; in fact, this bird is considered by many good judges to be one of the very finest of our British song birds, as few can compare with it for power and compass. The song is much varied in tone and expression; sometimes it is loud, clear, and sonorous, at other times sweetly modulated and flute-like; occasionally a few harsh, grating notes are heard, and then it falls off to a soft, pleasant muttering, and again increases to rich round notes. The song is a peculiar mixture, and varies at different times of the day; it is generally finest about noon, or in the twilight. In a wild state, the Blackbird sings from February or March to the middle or end of July, and often later. When kept in a cage, and in good health and condition, the cock bird sings all the year round, except during the time he is moulting. Some birds are very much better singers than others, and those from two to four years old are preferable as songsters to younger birds. They have good memories, and remember what they have learnt, and pick up fresh notes from other birds of their own species in a wild state.

In confinement, a young hand-reared bird may be greatly improved by being placed constantly beside a Woodlark or a Nightingale, when the latter is in song. Young Blackbirds may be taught, with much patience and perseverance, to whistle tunes, but they are not equal to Starlings, which are very quick in picking up the airs of songs.

POINTS TO BE OBSERVED IN JUDGING.—Blackbirds, as well as Thrushes, are much fancied as show birds. Choose a well-shaped male bird for this purpose, one with an intense, rich, black coat, with a fine bright gloss pervading it throughout.

The body feathers should sit to the bird as close as wax ; the wings must be even, well-shaped, and tightly braced up to the body ; the tail full, but compact and well-carried, and free from damaged feathers. The beak should be orange, rich and deep in colour ; the irides, or skin that encircles the iris of the eye, a bright yellow. The legs and feet must be clean, and the claws perfect. If a bird that is frequently shown injures his tail or wing feathers, withdraw them ; they will be reproduced and fully grown in six weeks. A bird with damaged plumage, or in a dirty condition, is not likely to obtain a prize. Those fanciers who live in the country can keep birds in the finest feather and show trim.

GENERAL REMARKS.—The Blackbird is regarded by most people as the true harbinger of spring, as he often begins to utter his song as early as January, at which time no other wild bird is heard in its native element, excepting, perhaps, the Robin ; but the latter commences to sing in the late autumn, or early winter months, and continues his thrilling, doleful melody, far into spring. In the early bright spring mornings, the voice of the Merle may be heard, clear and resonant, long before any other birds commence to sing ; and on still, calm nights, his sonorous melody is to be heard for hours after most of the feathered tribe have gone to roost.

The Blackbird is, naturally, of a shy and retiring disposition, and loves to be alone. It is seldom one sees more than two in company, excepting during the pairing season, or when a garden or grass plot has been newly turned over ; then they occasionally gather together, in search of cockchafer and worms. They are fond of a little ripe fruit occasionally, such as cherries and currants, but they rarely attack fruit trees if there are plenty of cockchafers, worms, and grubs to be found.

It can truthfully be asserted, that these birds well earn the few stray berries with which they sometimes regale themselves, for they are most industrious in the pursuit of grubs and insects ; and, what is more, they often drive away from gardens that unblushing marauder, the House Sparrow, whose pilfering propensities, and love of fruit, are as widely known as the bird itself.

Blackbirds are best kept in cages, as they are inclined to

become quarrelsome when placed in an aviary with other birds. They are great eaters, and appear greedy over food; they are, also, combative, and easily provoked to anger, and have been known, not only to assail small birds violently, but to kill them outright; hence they are dangerous to keep with them. Blackbirds would, no doubt, breed in confinement, if not more than a pair were kept in a large garden aviary, no other birds being present in company with them. A portion of a thorn hedge, part of a grass plot, and a gravel walk, would be great acquisitions, and a constant supply of insect food is indispensable. The only question at issue is, whether the experiment would be worth the expense and trouble, seeing that these birds are plentiful, and easily obtained, as their nests are very easy to find. Young birds, hand-reared, and cage or aviary-moulted, should be selected, as best calculated to prove a success. Blackbirds and Thrushes sometimes pair together, the result of the cross being hybrids that inherit in a marked degree the characteristics of both parents.

DISEASES AND THEIR TREATMENT.—The Blackbird, in a general way, is robust and healthy, and will, on an average, live in confinement, if well cared for and properly attended to, from ten to twelve years. They sometimes take a severe cold from being placed out of doors in the spring, on bright sunny days, when the wind has a snatch of east or north in its composition—*i.e.*, south-east or north-west. When a bird is observed to have a kind of cough, and its nostrils are stuffed up, give it thirty drops of pure glycerine in its drinking-water daily, for a week or ten days, and afterwards a little bruised cochineal, or a few shreds of meadow saffron, may be substituted. If the cold is neglected, and the bird is further exposed to these sudden changes of temperature, it will probably result in diphtheria. It will then be observed to breathe with difficulty, and make a peculiar noise in its throat. (These birds breathe through their tongues). Get 20 grains of the hyposulphite of soda, put it in a 4oz. glass bottle, and fill up with pure water; after the soda is dissolved, catch the bird, open its mouth, and get someone to dip a small feather (which may be drawn from its wing or tail) in the solution, and pass it freely about its mouth and throat five or six times in succession; then return the bird to its cage, and put

twenty drops of the following mixture in its drinking-water, fresh every day :

R.—Tr. Opii Camph., ʒj.
Vin. Ipecac., ʒss.
Sp. Nit. (Dulcet) ʒiij.
Tr. Lobelia, ʒj.

Shake well together before using. If the bird does not recover in two or three weeks, use, instead of the first gargle, the following: Cupri sulph., 10grs.; water, 6oz. Dissolve, apply as before, and continue the mixture. If a bird droops at any time, and you do not know its ailment, give it a spider, or a few insects or small worms. If it is loose in its stools, give it some old cheese, shred fine, and mixed with bread-crumbs. If the opposite state of things exists, mix together, into a mash, with hot water, equal quantities of peameal and oatmeal, and give it to the bird; and also put a few drops of molasses in its drinking-water. Blackbirds are fond of bathing, and, to keep them in health and proper plumage, they should be furnished with a bath about twice a week; but do not leave the vessel inside after they have had a good plunge, as they are so fond of bathing that they will continue the process, to their injury, so long as there is any water left.

If the use of the bath is neglected, these birds will be liable to obstruction of the rump gland, a rather serious complaint, for treatment of which see Chapter V., on "Diseases."

Great attention and a frequent change of diet are necessary to keep these birds in health, and they must have a fresh supply of sand, or small gravel, once a week. During the process of the moult they should not be exposed to cold air or draughts.



CHAPTER XXVI.

THE RING OUZEL.

Turdus torquatus, Lin.; *Merle à plastron blanc*, Buf.

DESCRIPTION AND CHARACTER.—THE Ring Ouzel, which is known by a variety of names, such as the White-breasted Blackbird, the Ring Thrush, the Rock Ouzel, the Moor Blackbird, &c., very much resembles the Blackbird when seen at a distance, but is a larger and handsomer bird. It appears to delight in hilly places, and the immediate neighbourhood of well-wooded country, which is secluded, and seldom frequented by human beings. It is to be met with in Wales, and at Dartmoor, in Devonshire, but most frequently in Scotland. In other parts it never seems to settle down.

The Ring Ouzel is a most shy and suspicious bird, and never becomes so tame and familiar as its prototype, the Blackbird. The length of the bird is 11in.; the tail measures 4in. The beak is $\frac{7}{8}$ in. in length, and horn black in colour, excepting at the root of the under part of the lower mandible, and the margin of the mouth, or lips, which are yellow. The irides are hazel. At a distance this bird appears a dullish black all over, excepting the breast; but in closer proximity, it will be observed that the feathers on the body are margined with greyish white, more particularly about the breast and wing coverts; the older the bird, the broader and more distinct are these markings. The pen and outer tail feathers are edged with ashen grey; across the breast, passing towards the back part of the neck, like a collar, is a patch of pale chestnut white, or faint reddish white, about $\frac{5}{8}$ in. in width, and from which

peculiarity it derives the name of Ring Ouzel, or Ring Thrush. In old birds this mark becomes creamy, or almost pure white; in young males it is greyish chestnut, or russet grey. The legs are brown, and the feet a few shades darker of the same colour. Pied as well as albino specimens of this bird have been occasionally met with.

HABITS AND BREEDING.—The Ring Ouzel is decidedly a British bird, though it is met with in many parts of the Continent, both in warm and cold regions. It is found in France and Germany, and has also been observed in both Africa and Asia. It is a migratory bird, arriving in this country in April, and leaving again at the latter part of September, or early in October, according to the season. It is shy and unsocial, and exhibits much fear of man when in a wild state. It rarely ventures near human habitations, hence is seldom met with by casual observers. It betakes itself to wild, mountainous, well-wooded districts, far away from everyday life, and revels among juniper bushes, heather, and furze, or dense untracked thickets, where it can hide itself from the rude gaze of passing humanity. It is watchful and suspicious, and rarely permits anyone to make a near approach, taking to flight at the least symptom of alarm, and uttering rapidly a few clear, loud notes, as of warning and remonstrance. It is strong on the wing, has a very direct flight, and goes a considerable distance before it ventures to alight again.

The Ring Ouzel resembles the Blackbird in several respects, but is not so docile and tractable as that philosophic bird. It sometimes builds its nest on a rugged bank, at the side of a stream, or among broken or scattered fragments of rock, but more generally at the foot of a juniper or furze bush, on the side of a hill, or among dense masses of underwood, at the margin of a running brook. The nest is composed of bent grass and root fibre, plastered on the inside with mud or clay, and very much resembles that of the Blackbird. The hen lays from four to six eggs—mostly four or five—of a pale bluish green, oval in shape, and speckled with small pale yellowish brown spots, in appearance resembling “bran.” She generally has two nests in the year. If a Ring Ouzel, on being disturbed, makes a terrible clamorous noise, and only flies a short distance before again alighting, whilst still

continuing its cry of wailing, it is a sign that its nest is not far distant; and, the nearer it is approached, the more loud and pitiful will become the agonizing entreaties of the bird.

METHODS OF CAPTURE.—Ring Ouzels may be captured, after the close of the breeding season, by placing nooses and springs, baited with mealworms, or limed twigs, about their usual haunts.

FOOD AND TREATMENT.—These birds, in a wild state, feed on insects, snails, and berries of various sorts, such as those of the ivy, juniper, Butcher's Broom (gorse), and hawthorn. In confinement, they should be treated in all respects the same as their congener, the Blackbird.

REARING THE YOUNG.—Follow in every particular the directions given for rearing young Blackbirds.

DISTINGUISHING MARKS OF COCK AND HEN.—In the female, the crescent on the breast is russet greyish brown, and is not so full and perfect as in the male. The body colour of the hen, as is the case with the female Blackbird, is of a dingy brownish black. Young hens are sometimes destitute of the breast marking. Young unmoulted males resemble adult females in colour, but may be distinguished from them by the breast marking, which is, with them, more distinct, and broader.


SONG.—The song of the Ring Ouzel is short, but exceedingly sweet and pleasing, and very clear, distinct and melodious, especially during the breeding season. It consists of few notes, but these are full of harmony, and some of them are equal to those of the finest songsters, not excepting the Nightingale and Blackcap.

POINTS TO BE OBSERVED IN JUDGING.—These birds are of such a timid and untractable nature, that it would be difficult to sufficiently domesticate a caught bird to allow of its exhibition; those that are hand-reared and house-moulted are alone suitable. Choose a large, well-formed bird, fine in plumage, rich in colour, with a well-defined gorget, the purer and whiter in colour the better. The tail and wing feathers should be perfect, and tightly braced together. The bird should be scrupulously clean, in sound health and prime condition, and should have been accustomed to be handled, so that it will not exhibit fear and alarm at the presence of strangers, or when being minutely examined by a judge.

GENERAL REMARKS.—Ring Ouzels are unquestionably deserv-

ing of attention; they are, however, scarce, and difficult to obtain, otherwise they would be much more popular than at present. It would well repay Scotch birdcatchers to devote more attention to this bird, as its song might be greatly improved were some hand-reared specimens tutored by a Nightingale, Blackcap, or Woodlark. The Blackcap would make the best schoolmaster, as the Ring Ouzel would learn the song of that bird much more readily than it would that of either of the others referred to. Ring Ouzels might also, with advantage, be trained under a good Song Thrush or Blackbird, for they whistle much more clearly and sweetly than either of those birds. The defects observable in them are a want of sustentation and variety, not of richness, or cadence, or even compass; these latter faculties are inherited by nature, and only require to be more fully developed to place their owners among the most valued of our British song birds.

DISEASES AND THEIR TREATMENT.—*See* Chapters on “Blackbird” and “Thrushes.” Ring Ouzels being congenerous with the birds just named, are subject to the same ailments, and require the same treatment.



CHAPTER XXVII.

THE WATER OUZEL.

Sturnus cinclus, Lin.; *Le Merle d'Eau*, Buf.; *Motacilla cinclus*, Kram.

DESCRIPTION AND CHARACTER.—The Water Ouzel, or Water Crake, is a very interesting, and not particularly shy, bird. It is solitary in character, and retired and quiet in disposition, and seems to be endowed with a fair share of observation and discretion. It is $7\frac{1}{2}$ in. in length, of which the tail measures $1\frac{3}{4}$ in. The bill is straight, but points upward, and is slightly curved downwards at the tip; it is thin, compressed at the sides, sharp at the point, and black in hue. The irides are hazel, and the eyelids white. The upper parts of the head and neck are deep brown; the shoulders, back, rump, wings, and tail are black, but the feathers on the back and wings are edged with greyish brown. The chin, gullet, fore part of neck, and upper part of breast, are white; the lower part of breast, and upper portion of the belly and sides, ferruginous brown; the lower part of belly and vent, dusky black. The legs and feet are blackish brown. Water Ouzels are curious looking birds, with their little stout bodies, and upturned beaks and tails, which give them an ancient and knowing appearance. They have very intelligent and observant looking eyes.

HABITS AND BREEDING.—The Water Ouzel not only inhabits Great Britain, but is found in most parts of Europe, and as far north as Norway and Russia. It is a solitary bird in its habits, but does not appear unsocial with mankind,

as it will permit anyone, in a quiet, undemonstrative way, to approach it pretty closely. It frequents places where there are lofty hills or cliffs, and shallow streams of pure rippling water; or the banks of rivers, with rocky margins and dense underwood, the branches of which overshadow the water. In such places it is frequently to be met with, more particularly in Derbyshire, Yorkshire, Cumberland, Westmoreland, and Scotland, where the greater part of the country is admirably adapted to its wants.

It makes its nest beneath a tree at the edge of a river, where the water has washed the soil away, exposing the upper portion of the roots, and forming a hollow beneath; or under a projecting stone or rock abutting on the margin of a stream; or on the ground by the side of a piece of brushwood; but always in close proximity to the water. The nest is large, broad, but somewhat flattish, and domed, having an aperture in the front or side for ingress and egress. It is composed of moss, bent grass, and root fibre, and is lined with fine grass and leaves. The hen lays from five to seven eggs, of a long, oval shape, rose tinted with white, and sits fifteen days. The young will leave the nest at the age of eighteen days, or earlier if they are interfered with, and run into holes, or beneath projecting rocks, or other places difficult of access.

Each pair of Water Ouzels has a particular haunt or location, to which they adhere with almost unvarying fidelity. When the water is frozen over at the spot which they have selected as their abode, they remove, *pro tempora*, to some more congenial place, but return again when the weather moderates, and a thaw sets in. They frequent hilly country, such as is met with in Cumberland and Westmoreland, where small cascades are found tumbling and bounding over old grey, moss-clad rocks; and are especially fond of places which are steep and rugged, or where some crude embankment, which has been lacerated by impetuous torrents, has been cut asunder.

METHODS OF CAPTURE.—When their haunts have been discovered, watch carefully the habits of the birds, and place a few well-limed twigs on some of the stones or branches overhanging a shallow part of the stream. Bait at this spot with living mealworms, or ants' eggs. These birds are

easily caught, but the greatest difficulty will be experienced in reconciling old birds to a cage or aviary, and keeping them alive.

FOOD AND TREATMENT.—When in a wild state, Water Ouzels live principally on small fishes and aquatic insects, mollusca, and worms. In confinement, they will eat mealworms, flies, ants' eggs, the roe and milt of fishes, and the Compounds recommended in the Chapter on "The Starling," mixed.

REARING THE YOUNG.—The young should be taken at twelve or thirteen days old, and fed on bread soaked in milk, mixed with ants' eggs. Flies and mealworms, cut in small pieces, may likewise be given. When the birds are able to pick for themselves, discontinue the bread and milk, and feed on ants' eggs, flies, mollusca, small garden worms and snails, and insects of almost any kind. At the age of six weeks they may be turned into the aviary. They ought to have a constant supply of water as soon as they are a month old. A few flies, with cut wings, placed on the water occasionally, will prove a great treat.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is not so large as the male, and paler in colour, especially on the head and neck. The white does not extend so far down the breast, and is dingy or greyish in hue. The bordering on the wing feathers is broader, and greyer than in the male bird.

SONG.—The voice is loud, clear, sonorous, and melodious, with much variation, considerable compass, and of long duration. The thrilling notes uttered by this bird make the immediate locality echo with the sound.

POINTS TO BE OBSERVED IN JUDGING.—The Water Ouzel is not a fitting bird to show; hence, it is unnecessary to enumerate the points it would require to possess to enable it to compete, with a fair chance of success, at an open all England show, in a mixed class of British birds.

GENERAL REMARKS.—The Water Ouzel is known in some localities by the name of the Water Crow, and in others by that of the Blackwater Bird. The Dipper is a very common appellation; and it is also called, by some birdcatchers, the Black Diver. It is an interesting bird, and, but for the difficulty of keeping it in health in confinement, owing to its peculiar habits, and its fondness for water, would doubtless become

a great favourite, for it has some attractions to recommend it, being peaceable, and not afraid of the presence of mankind, and is, likewise, an admirable songster.

When these birds are kept in confinement, it would be well to place the aviary on a piece of waste ground, where there is a shallow stream, or brook running through it—say on the outskirts of private pleasure grounds; or over a piece of artificial water, in such a manner that the birds cannot effect their escape; the water must be so arranged as to permit of a continuous flow. A supply of mollusca and small fish could be obtained, and placed in the water from time to time. A rockery might be formed on the margin of the stream, or miniature lake, a few tall ferns planted among the stones (the common Bracken, which will grow in any shady spot), and a few reeds and willows at the water's edge. Under such conditions, and with a constant supply of natural food, there is no reason why these birds should not thrive and breed.

DISEASES AND THEIR TREATMENT.—Water Ouzels generally die of atrophy, as do most wild birds that are not frequently supplied with the same food as they eat when in a state of freedom. For treatment of this, and other complaints, see Chapter V., on "Diseases."

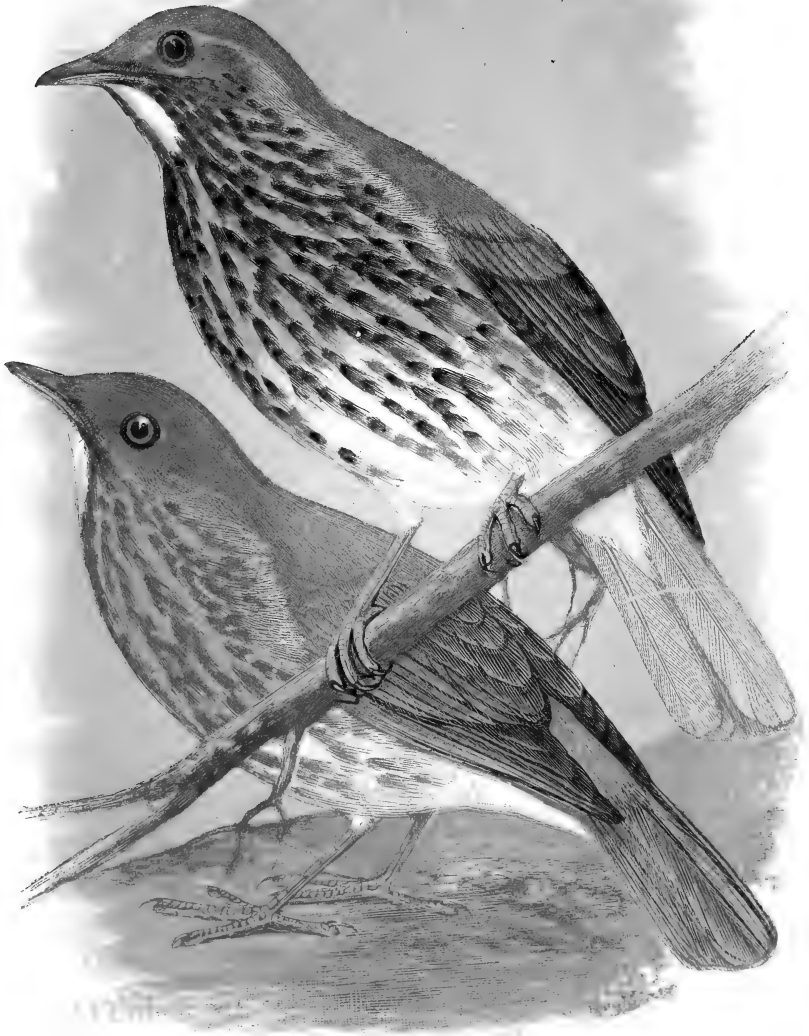
CHAPTER XXVIII.

THE SONG THRUSH.

Turdus musicus, Lin.; *Le Grive*, Buf.

DESCRIPTION AND CHARACTER.—The Song Thrush is justly considered one of the finest of our British song birds. By the majority of those people who are entitled to form an opinion as to its merits, it is considered superior, in this respect, to the Blackbird, and, being bolder, and more sociable in its habits, is more generally known. It is not strikingly handsome in the diversity of the colours of its plumage, but is, nevertheless, very far from common-place looking, being a bold, sprightly, and majestic bird in its contour and carriage. In addition to these recommendations, it is intellectual, and agreeable in manner when kept in confinement, and especially so when reared by hand. It exhibits none of that suspicious temerity, so common to many of the species of wild birds, is easily reconciled to a cage or aviary, and, when kept clean, and well fed, seems perfectly contented. One great feature in a Song Thrush is, that it will sing in a cage with almost as much gusto and delight as it does when at liberty. It matters little where the cage is hung, whether in a close, confined room, or outside a house, in a busy thoroughfare; nothing of this sort deters it from pouring forth its rich, deep, melodious notes, when in a humour to display its vocal talents.

The Song Thrush is a bird that loves cleanliness, and appears much pleased when its cage is cleaned out, and fresh sanded. It does not, as a rule, cast its food about, and be-



THRUSHES.
(Male and Female.)

spatter itself and the cage all over, as many wild birds do when kept in a circumscribed space. If given a dish of water twice a week, in which it can bathe freely, and placed in a room free from smoke and dust, it will keep itself as trim and neat as a well-bred gentleman of the "masher" type.

The Mavis is a bird devoid of malice, and is exceedingly tractable, and even affable, if unmolested by other birds of a quarrelsome disposition; but it will resent unbecoming liberties with its personal convenience. It never tyrannises over its companions in an aviary, as a Blackbird will do, not even over fresh provender, which is usually a bone of contention.

A fully-grown adult bird weighs about 3oz., and measures from 8in. to 8½in. in length; the tail measures 3½in., and the beak, ¾in. The upper mandible is bluish black, the under one flesh colour, tipped with black; the lips show a fine, narrow, yellow line. The iris is usually purplish brown; some are hazel brown, of a rich hue. The head, back, cheeks, neck, wings and rump, are olive brown, the cheeks and wings being tinged with grey; the cheeks are mottled with small brown spots; the head and neck are a little darker brown than the back. The throat is yellowish white; the breast, upper part of belly and sides, orange buff in old birds, and yellowish white in younger ones; a dark brown stripe extends down the throat, from each side of the root of the lower mandible. The sides of the neck and breast are marked with triangular brown spots, these being much more profuse in some specimens than others. The lower part of the belly is greyish white, marked with brown elliptic and oblong spots. The first wing coverts are tipped with bright yellowish brown spots, in the centre of the feathers, on the outer margins; on the larger coverts the spots are larger, and more distinct. The pen feathers are bordered with pale chestnut brown on the inner plume. The tail is greenish brown, with a greyish shade. The under flue feathers are black. The legs and feet are brownish flesh colour.

HABITS AND BREEDING.—The Song Thrush is partly indigenous and partly migratory in its habits; a goodly number remain with us during the winter. These birds gather in companies in the autumn, about September, or early in October, and migrate from place to place, where the climate

is most congenial and summer-like. The Isle of Wight is one of their favourite retreats, and also many parts of Hampshire, and the southern parts of Devon. The Song Thrush is common throughout Europe, and is of a robust constitution and lively disposition. Its commences its brilliant and sonorous song almost as early in the year as the Blackbird, and has, on rare occasions, been heard in January; like that bird, it sings early in the morning and late in the evening, but, unlike him, sings at all hours of the day, and with the greatest zest during the pairing season. These birds are seldom seen together in numbers, excepting in the migratory season, but keep together in couples, or in small companies of three or four. They inhabit gardens, orchards, plantations, and coppices, as well as hedgerows in fields and lanes, and the sides of hills where furze is plentiful, or dense undergrowth. They, as well as their congeners, the Blackbirds, appear to have the bump of locality rather largely developed, and usually find their way back to the place of their birth, or in close proximity thereto; and it will be noticed, that a Song Thrush will sing from the same spot year by year, not only selecting the same tree, but mostly the identical branch, from which to pour forth its flood of music.

The Song Thrush usually commences to breed very early, sometimes as soon as the latter end of February, and generally builds its nest in hedgerows, in gardens, in plantations, among dense underwood, in bramble bushes, in orchards, in gentlemen's pleasure grounds, or similar places. Sometimes it selects an apple or cherry tree, in an orchard attached to a farmstead, or a bush or shrub at the edge of a lawn, or running brook. Some birds select well-sheltered places, whilst others build their nests quite openly, and with no attempt at concealment.

The Song Thrush usually builds its nest rather low down, and never very far from the ground. It has three, and sometimes, but very rarely, four nests in a season. The nest is large, and composed of fine, soft, green moss, interwoven with withered grass; sometimes with fine small twigs, or root fibre and leaves. The inside of the nest is plastered out with loam and clay, or cows' dung, when more readily procurable. The hen lays from four to six eggs—mostly four or five—of a slightly greenish blue colour, speckled with a few small black spots,

principally at the larger end; these vary in colour and markings—as do the eggs of all other wild birds—but not to any great extent. The hen incubates from thirteen to fifteen days, according to the temperature of the atmosphere, and other causes. Some hens commence to set after they have laid a second egg, others after the third (this is the general rule), and a few, not until the fourth has been deposited. Thrushes are very attentive to their young, but do not clamour and wail, like Blackbirds, when deprived of them.

METHODS OF CAPTURE.—The Song Thrush may be taken in the same manner as the Blackbird; it is, however, less cautious than that bird, and, consequently, more easily ensnared. A few well-limed twigs, placed near the spot they are known to frequent to obtain water, or beneath trees where they daily visit, will, in most cases, prove successful. Dig up a piece of earth near the foot of a tree, and place upon it a square frame, made from the branches of that tree, or a similar one, without removing the bark; fasten this frame together with a piece of wire, or small wire nails, and fix some horsehair nooses to it. Bait with small worms, or berries. Limed twigs would answer equally as well as this frame, if preferred. These birds can also be taken with the day net, suitably placed on a garden lawn where they are accustomed to visit. They are most easily captured during stormy weather, when there is a scarcity of food.

FOOD AND TREATMENT.—In a wild state, Song Thrushes feed on worms, insects of various kinds, and snails. In the autumn and winter months, they feed on different kinds of berries, such as those of the mistletoe, hawthorn, juniper, and mountain ash. In confinement, they will live on barley meal, made into a soft paste with water; but a change of diet is highly essential in order to keep them in health and song. They are partial to oatmeal and skimmed milk, made like a "Hasty pudding," but require a few worms and snails occasionally; the white snails, in their shells, they prefer to all others; they will not eat black snails. They must also be provided with a good round, small cobble, or paving stone, on which they can smash the shells, which they do in the most deliberate manner, and in a dexterous fashion. They should, likewise, have a little fresh lean meat, finely shredded, and mixed with breadcrumbs, say once a week; and at other

times a little grated cheese, breadcrumbs, and crushed hemp seed, which makes them hearty and cheerful, and induces them to sing with greater freedom.

REARING THE YOUNG.—Young birds intended to be hand-reared, should be taken at the age of twelve days, certainly before fourteen, and fed on bread and milk, given warm, like children's "sop"; they should be fed every two hours, or oftener. When three weeks old, they should have a little raw, lean, fresh meat, free from sinew—beef is best, but mutton will do quite well, or even sheep's heart, or bullock's liver. This should be finely shredded, mixed with an equal quantity of breadcrumbs, and made into a soft paste with water. This diet should be alternated with milk and bread, and bruised hemp seed, freed from husks. When the birds are able to pick for themselves, they may have, alternately, the No. 2 and No. 3 Compounds recommended in the Chapter on "The Starling." Treat them in all other respects the same as young Blackbirds. When the nest becomes fouled with their excrement, remove it, and substitute some nice clean straw or hay, cut short, or a piece of nice well-dried moss; these materials should be placed in the bottom of the box or cage, and their use should be continued until the birds are able to perch properly, which will be when they are from three weeks to a month old.

DISTINGUISHING MARKS OF COCK AND HEN.—The sex of the Song Thrush is rather difficult to distinguish, excepting by an experienced person, as the male and female resemble each other so much in colour, size, and shape. The back of a male bird is darker and more glossy than that of the female; the dark markings on the throat are also better, and more clearly, defined. The breast of the hen is much paler in colour, and the spots on the throat and breast are not nearly so bright and rich in hue as those on birds of the opposite sex. The male is whiter on the belly and vent. The tips on the wing coverts are smaller, and not so deep in colour, in a hen as in a cock. The male bird stands more erect, and is bolder and more defiant in his bearing and general demeanour. In young Thrushes, select the sleekest bird, with the brightest plumage. When the nestlings begin to sing, the hen will record as well as the cock; but, whilst the male bird continues his song evenly and continuously,

the hen utters her notes by jerks, in a broken fashion, pausing after each short effort. After the moult is over, the males are not long in discovering themselves by their song alone, for they sing out boldly and fearlessly as they recover their strength and spirits, and improve every week until they reach the period of full song.

SONG.—The song of the Mavis is loud and melodious, ringing out with round, sonorous notes, repeated with great distinctness, and much varied; sometimes these notes are clear and flute-like, again short and shrill, then elongated and depressed, and full of mellowness and thrilling sweetness. The Song Thrush repeats some notes or phrases with great distinctness, so that they frequently resemble words. Some birds utter their notes more distinctly, and with greater emphasis, than others, and with more gusto, and evident appreciation of their own merits; others (young birds mostly) are more gushing and verbose, but not so fluent and refined in expression. For singing purposes, a bird not less than three years old should be selected, as the Thrush never attains proficiency before that age.

POINTS TO BE OBSERVED IN JUDGING.—For show purposes, choose a sleek, well-shaped bird, with a small, compact head, a full chest, close and fine body feathers, of a rich, clear, soft olive brown (they differ greatly in colour, according to age, &c.), with a bright, richly coloured neck and breast, and white belly. The spots or markings should be clearly defined. The wings and tail must be well formed, closely and tightly braced together (not loose or drooping), and perfect—that is, not twisted, broken, or frayed at the edges. The whole of the feathers should be smooth and bright, the legs and feet well formed, and the nails straight. The bird should be in good condition, bright in the eye, with a bold, majestic attitude, and, above all, scrupulously clean in every part. Such a bird would be sure to attract the eye of a good judge. Some birds are more profusely spotted than others. The great thing is to have the markings distinct and uniform.

GENERAL REMARKS.—A Song Thrush is preferable to a Missel Thrush, or Redwing, as a show bird, for it will bear a considerable amount of hardship. A bird intended for exhibition should be liberally fed, and kept in a room where

there is no gas, and very little, if any, artificial heat. For exhibition purposes, it is much better policy to purchase a properly domesticated bird, hand-reared, over the moult, and in full plumage, for 5s. or 10s., than to give 1s. for a recently-caught wild bird. A handsome, well-mottled bird, one or two years of age, in full and perfect plumage and song, and in fine condition and vigorous health, is not dear at 15s.; and for an exceptional specimen, one fit to show and obtain a prize, 20s. is not by any means an exorbitant sum to pay.

A wicker cage is best for sending birds in to shows, as then the occupants get the benefit of such air as is procurable whilst kept in the close, unhealthy atmosphere usually experienced at public exhibitions, owing to want of sufficient ventilation. The cage should be inclosed in a properly constructed box, provided with air holes, covered with perforated zinc, made near the top, at the ends or sides. A small piece of stout plate glass, inserted at each end, or in the front, will give light, and so enable the bird to feed when sent on a long journey, and prevent its being exhausted or fatigued. A drinking-tin, made on the principle of a pocket ink-bottle, to prevent the water running out during transit, would be a desirable acquisition.

The Song Thrush is most commonly known as the Thristle; it is also called the Mavis, a poetical designation; and in some parts of the country it is termed the Garden Thrush, not only on account of its habit of frequenting gardens, but to distinguish it from the Missel and Heath Thrushes. There are pied, and even albino specimens, but these are extremely rare. The Song Thrush would probably breed in an aviary, under the same conditions as those mentioned in the Chapter on the "Blackbird."

DISEASES AND THEIR TREATMENT.—If a bird droops at any time, and its ailment cannot be diagnosed, give it a spider or two, or a caterpillar, and a few mealworms or ants' eggs, and put a little well-bruised cochineal, or a few shreds of meadow saffron, in its drinking-water. These birds are subject to fits, when kept long in confinement, without a proper change of diet, and especially so during the period of the moult (*see* Chapter V., on "Diseases").

These birds are, especially when neglected, liable to be seized with cramp. In such cases, keep them warm and quiet,

and rub their legs well with goose or capon grease. If they are observed to scour, give them some good old cheese, rubbed or grated fine, mixed with a few breadcrumbs, and add a piece of prepared chalk, and a teaspoonful of cinnamon water, to its ordinary drinking-water. Thrushes are liable to an obstruction of the rump gland if not regularly supplied with a bath—say twice a week. If a Song Thrush refuses to bathe, it is a sign that it is not well, as these birds take great delight in their ablutions. If sand and small gravel is not supplied to them regularly, their digestive organs become impaired, and they die of atrophy. Bread—good sweet, home-made preferred—is beneficial to the health of birds, as it contains a small portion of salt, and this is necessary to their well-being. Song Thrushes, when well cared for, and supplied with suitable food, will live in confinement for periods varying from six to ten years.

CHAPTER XXIX.

THE MISSEL THRUSH.

Turdus viscivorus, Lin.; *Le Draine*, Buf.

DESCRIPTION AND CHARACTER.—The Missel Thrush, or, as it is frequently named, the Storm Cock, probably on account of its singing during gusty, wet weather, with more vehemence and spirit than it does on fine, calm, bright days, is, naturally, a solitary bird, and inhabits those places where the mistletoe abounds, which is its favourite food, and from which fact it has doubtless derived its name. It is a restless, unhappy-looking bird in a cage, and seldom seems to get thoroughly domesticated, being neither so tractable or docile as the Song Thrush; neither is its song worthy of comparison with that of the latter bird. When hand-reared, however, or taken before it has moulted the first time, it becomes very tame, and in some cases quite familiar with its owner. It is exceedingly pugnacious when interfered with; so much so, that it is not safe to place a newly-caught specimen in an aviary with other birds, for it is easily aroused to anger, and very savage in attacks, and, when excited, makes a general onslaught in all directions.

The Missel Thrush is much larger than the Song Thrush, measuring 11in. in length, the tail being $3\frac{1}{2}$ in. Its beak is 1in. long, and shaped rather differently to that of its congeners; the upper mandible is dark blackish brown, and curved downwards at the tip; the base of the lower mandible, and the gullet, are yellow. The iris encircling the pupil of the eye is hazel brown. The head, back part of neck, and

greater part of the back, are greyish brown; the lower part of the back and rump is reddish chestnut colour. The sides of the head, throat, breast, belly, and vent, are yellowish white, profusely dappled with triangular and elliptic blackish brown spots, these being well-defined, and evenly distributed, as far down as the thighs. The wings are greyish brown, with pale brown margins on the outer plume of the flight feathers. The small coverlets are tipped with pale orange. The tail is light brown, the three exterior feathers on each side being tipped with greyish white; the legs and feet are willow coloured.

HABITS AND BREEDING.—The Missel Thrush seems to delight mostly in woods, groves, and thickets, and, although it is occasionally met with in all parts of the United Kingdom, may be considered to be chiefly localised. These birds select districts that are not much frequented. They are more abundant in Wales, and the Southern counties of England, than in the Northern or Midland counties, and are found in most parts of Devon, Buckinghamshire, Oxfordshire, Hampshire, and Sussex, and in some of the adjoining counties. They are known in most, if not all, European countries.

They build in thickets, in deserted stone quarries in which trees grow, and in old orchards in quiet, retired localities, make nests as large as those of the Jay, and lay eggs equal in size to those of that bird. In the construction of the nest they use dried dead twigs, moss, root fibre, and withered grass. The hen usually lays three to four eggs, of a pale pinkish green, bordering on white, and slightly speckled with small reddish brown spots. The eggs, however, vary a good deal in colour, some, at times, being almost reddish white. Missel Thrushes breed twice a year, and leave their first nest from the middle to the latter part of April. They feed their young principally on the berries of the mistletoe. They are very assiduous in their duties, and apparently much attached to their offspring; and during the period of nidification will not permit a bird of any kind to come near them. They will attack Magpies, Rooks, Jays, Blackbirds, other birds, and all predatory animals, indiscriminately, at this time, both parents joining in the attack, fighting with much ferocity, exhibiting both pluck and determination to conquer, and almost invariably come

off victorious in all their encounters. These birds can be reared in the same manner as Song Thrushes.

METHODS OF CAPTURE.—Missel Thrushes are sometimes caught by nooses, attached to the branches of trees on which the mistletoe grows, or by judiciously placing limed wands, or sticks, beneath the trees. They may also be taken in a spring trap, made on the same principle as a rabbit trap, but much smaller, and with a weaker spring; the top side pieces should be made of hard wood, and covered with cloth, to prevent injury to the legs of the birds; the cloth may be secured with strong glue or small tacks. These traps may be set beneath the trees they are known to frequent. Bait with mistletoe, service, or juniper berries. The best time of the year to take these birds is between the middle of November and the first week in March. They are at times taken with the decoy bush and day net, but, being exceedingly shy, require to be hungry before they will venture near; use the same bait as mentioned previously.

FOOD AND TREATMENT.—Although the Missel Thrush feeds principally upon the berries that grow on the mistletoe, it will, when these are scarce, or not procurable, eat other kinds, such as those of the juniper and mountain ash. It is very fond of garden fruit, especially cherries, raspberries, and red and white currants. It also feeds on worms, slugs, and aquatic flies. In confinement, these birds may be treated in all respects, so far as diet is concerned, the same as Blackbirds and Song Thrushes.

REARING THE YOUNG.—The young should be taken when twelve days old, and treated in precisely the same manner as that recommended for rearing young Blackbirds.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is paler in colour than the male bird, more particularly on the neck, breast, and cheeks. The cock is much yellower on these parts, the hen being more of a dirty greyish white, and slightly tinged with yellow on all the under parts of her body.

SONG.—The song of the Missel Thrush can scarcely be termed harmonious, and is by no means exhilarating. It consists of a few sharp, clear notes, uttered very loudly, but in a melancholy sort of manner. These notes appear to be jerked out in a slow, monotonous way, similar to those of the Robin, but entirely unconnected.

POINTS TO BE OBSERVED IN JUDGING.—These birds are occasionally exhibited, and, although they are handsome in appearance when in good condition and clean, are not likely to be placed in the prize list when competing against grand specimens of the Song Thrush. The same points must be looked for as in the Song Thrush, which will be found fully enumerated in the chapter treating of that variety.

GENERAL REMARKS.—The Missel Thrush is known by a variety of names in different parts of the country, such as the Storm Cock, the Grey Thrush, the Holm Thrush, the Big Throstle, and—an appropriate name—Mistle Thrush. It is not a favourite with bird keepers, generally speaking, as, in addition to the bad qualities already mentioned, it is a dirty bird, and, to keep in anything like good order, it requires a cage as large as that used for a Magpie or Jay, which is not always convenient. It is rather difficult to procure in some parts, but, being so much inferior in its song, and other attractive qualities, to its congener, the Song Thrush, very few lovers of birds care to take the trouble to rear them by hand. When first caught, most of the older birds sulk, and decline to partake of food, many of them dying in consequence.

DISEASES AND THEIR TREATMENT.—These birds are very liable to the cramp, constipation of the bowels, consumption, and affections of the rump gland. Regular bathing is the best preventative of the last-mentioned complaint. See Chapters on the “Blackbird” and “Song Thrush,” and Chapter V., on “Diseases.”

CHAPTER XXX.

THE REDWING.

Turdus iliacus, Lin. ; *Mauvis*, Buf.

DESCRIPTION AND CHARACTER.—The Redwing, or Wind Thrush, is rarely kept as a cage bird, but may occasionally be found in an aviary. It is a peaceably disposed, sociable bird, and soon becomes very tame and familiar with its owner if kept in a cage or aviary.

The Redwing is about 8in. in length, the tail measuring 3in. The beak is bluish black, margined with yellow ; the under mandible, likewise, is yellow at the base. The irides are dark brown. The head, neck, and back, as well as the small wing coverts, are pale olive-brown ; the rump is the same colour, but paler in hue. A stripe of rusty yellowish white extends from the base of the bill beyond the eyes. The cheeks are pale brown, striped with yellow, and are surrounded by a faint yellowish line, which terminates in a small orange-buff patch at the side of the head. The throat and breast are greyish white, tinged with yellow, and freely mottled with a number of small, triangular, brown spots. The belly, sides, and vent are greyish white, the belly and vent being sparsely marked with faint greenish brown spots, and the sides with russet brown. The wings are brown, the flights, or pen feathers, and large wing coverts, being mottled with russet or reddish brown ; the two lateral pen feathers have white tips, and the larger wing coverts are tipped with reddish yellow. The tail is pale brown, shaded with grey, and is margined with a lighter hue of the same colour. The legs are whitish flesh-colour, and the feet willow.

HABITS AND BREEDING.—The Redwing is a “bird of passage,” being a native of Norway and Sweden, where it breeds. The birds arrive in this country about the middle of October, and leave again, if not prevented by adverse winds, early in May. They are gregarious, and travel in flocks. Like the Fieldfares, with whom they associate, they frequent pastures and stubble fields. In stormy weather, they betake themselves to hedges and thickets for shelter, as they are unable to make the least headway in a high wind. They do not appear to suffer from cold, so long as they can procure the means of subsistence; but as soon as the ground is covered with snow, and the pools are frozen over, they commence to travel southward in search of open country where they are more likely to obtain the means of supplying their daily wants.

METHODS OF CAPTURE.—Shoot one or two birds, and, having previously prepared two or three hundred limed twigs, cut a good stout branch from a birch tree, lop off the twigs, and make holes where these have been with a bradawl, or small pocket gimlet. Set the bough firmly, in an upright position, in the ground, at some place where the birds come to feed; then place the twigs in the holes made. Lastly, fix the dead birds near the top of the branch, in such an attitude as to give them the appearance of being alive; so that, when a flock of Redwings approaches, they may espy these decoy birds readily, when they will hasten in large numbers down to the branch, and become ensnared. The best time of the year to practise this method of decoying them is about Michaelmas. After a successful take, the process may be repeated in a few days’ time.

FOOD AND TREATMENT.—In a state of freedom, these birds live principally on worms, and insects of various kinds. When these are not obtainable, they resort to berries of various sorts, such as those of the holly, juniper, hawthorn, and mountain ash. In confinement, they should be fed and treated in the same manner as the Song Thrush or Missel Thrush. They must not be kept in a room heated by artificial means—that is, one heated by an open fire or stove in the day time, and by gas and fire at night—as this treatment will speedily terminate their existence. Cold suits them best; and they never show any signs of suffering from that cause, however

severe the weather may be. They thrive best in an outdoor aviary, with other soft-billed birds.

REARING THE YOUNG.—Redwings do not breed in England; but should any one visiting Norway or Sweden, where they do, obtain a nest of young, he should treat them in all respects the same as Thrushes or Blackbirds.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is paler in colour throughout than the cock. The stripe running parallel with the eyes, across the cheeks, is dingy greyish white. The neck of the hen is tintured with yellow, and the spots on the sides of the head are palish yellow. The belly, sides, vent, and breast are dingy white, with a very faint tinge of yellow, almost unnoticeable. The spots on the under part of the female bird are paler, and not so clearly defined as those on the male; neither do they extend to the vent.

SONG.—The song of the Redwing is never properly heard in this country. The bird simply utters or records a few twittering notes, apparently to itself, and no doubt preparatory to resuming its full song on reaching Sweden, in which country it is said to sing freely and well.

POINTS TO BE OBSERVED IN JUDGING.—For exhibition purposes, select an active, docile bird, thoroughly domesticated, and in perfect, unsullied plumage, which latter should be brilliant in colour, and clearly defined in its marking. The body feathers should be smooth and tight-fitting, and the wings and tail well formed, and closely braced together. The bird should also have a well formed body, and good carriage, and be sprightly and energetic in its movements.

GENERAL REMARKS.—In consequence of Redwings showing no disposition to favour their possessors with music—not even a few short passages—there is little inclination evinced on the part of bird-keepers to procure them. A few—but very few—of these birds find a home in the aviary; but those persons who elect to keep them are generally bird lovers, who seek to secure such birds as are not usually to be met with in a collection of British birds kept in confinement.

DISEASES AND THEIR TREATMENT.—These birds, as a rule, are healthy. Some of them are subject to epilepsy. In such a case, catch the bird, and sprinkle cold water on its head. When it recovers, return it to the cage, and give it a spider, or

two or three mealworms. A few drops of the tincture of the muriate of iron, put in its drinking-water once a week, will be found beneficial. Redwings are sometimes troubled with cramp. In case of a bird being so attacked, immerse its limbs for a few minutes in rather warm water, and afterwards dry, and anoint with goose grease or olive oil. Redwings are also at times troubled with diarrhœa, for the treatment of which disorder see Chapter V., on "Diseases."

CHAPTER XXXI.

THE FIELDFARE.

Turdus pilaris, Lin. ; *Litorne ou Tourdelle*, Buf.

DESCRIPTION AND CHARACTER. — The Fieldfare, like the Redwing, is only a visitant to this country. It appears to hold a similar relationship to the latter bird as the Missel Thrush does to the Song Thrush.

A fully-grown adult specimen measures 10in. from beak to tail, the latter measuring 4in. The beak is $\frac{7}{8}$ in. in length, of a yellowish horn colour, tipped at the point with brownish black; the upper mandible is slightly curved towards the end, or tip. The irides are dark brown. The top of the head, and back part of the neck, are greyish brown, dappled with small black spots. The back and wing coverts are russet brown; the rump, pale greyish brown. A stripe of greyish white runs from the base of the bill, beyond the eyes. The cheeks are brownish grey, with a few dark spots below the eyes. The throat and upper part of the breast are pale reddish yellow, speckled with heart and pear-shaped blackish brown spots. The belly, sides of body, and vent, are greyish white, spotted and marked in a similar manner. The wings are blackish brown, shaded with grey, the coverts being reddish brown, and the larger coverts mottled with pale greyish brown. The tail feathers are a sort of indefinite black, the outside ones being white on the outer portion of the shaft. The legs are brown, and the feet blackish brown.

The Fieldfare is rather an elegant member of the Turdus family, but so uncongenial in its nature and habits as to destroy

all admiration for it. There are pied and albino specimens to be found, though the latter are very rare.

HABITS AND BREEDING.—The Fieldfare inhabits all parts of Europe, but Norway, Sweden, and the northern parts of Russia, are the countries where it chiefly breeds. It is, as already stated, merely a visitant to this country, and principally frequents Scotland (where it is very common) and the Northern counties of England. It only goes southward preparatory to migration, or when compelled, by stress of weather, to search for food. It is of a gregarious nature, and, in some of its habits, strikingly resembles the Redwing, with which it fraternises very freely. The Redwing differs in this respect—it roosts in hedges, bushes, and thickets, whereas the Fieldfare roosts, like the Lark, on the ground, in the open fields.

In wet and stormy weather Fieldfares resort for shelter to hillsides which are covered with furze or underwood. They likewise roost on the banks of running streams—a somewhat favourite spot—and occasionally, but very rarely, in trees, and then only when the ground covering is sparse, or, probably, when they are aware of predatory animals prowling in the neighbourhood. When scared by the sudden report of a gun, they frequently alight upon a tall tree. Pine trees appear to be their choice, and to these they resort to preen their feathers, or bask in the sunshine in the early morning. Fieldfares reach our island about the latter part of October, or beginning of November, according to the mildness or otherwise of the season, and leave again at the end of March, or early in April, if the winds are favourable. They, like their congeners, the Redwings, are bad fliers in boisterous weather, and appear to be entirely at the mercy of the storm. If pursued during a gale of wind, they will not attempt to fly unless very closely pressed, and even then will only fly two or three yards, and again alight, and hide among the thick grass, under a bush or furze, or among nettles or thistles. In fine weather it requires some stratagem to get within gunshot of them, especially if you have fired once or twice at a flock, and shot one or two. In fact, they generally fly right away in such cases, though they return again to the same spot in a short time, as they never leave a place where food is easily obtainable until the supply is exhausted.

METHODS OF CAPTURE.—The same as recommended for the Redwing and Skylark. See also a special reference to this subject in Chapter II., on "Bird Catching."

FOOD AND TREATMENT.—In a wild state, the Fieldfare lives on worms, insects and their larvæ, seeds, and various kinds of berries, such as those of the juniper, holly, and hawthorn. In a state of domestication, these birds should be fed and treated in the same manner as recommended for the Missel Thrush.

REARING THE YOUNG.—The remarks already made on rearing young Blackbirds and Thrushes are equally applicable in the case of Fieldfares. They are all members of the Thrush tribe.

DISTINGUISHING MARKS OF COCK AND HEN.—The head and rump of the hen are paler in colour than those of the male bird. The beak is darker, and the back and wings of a dusky brown colour. The throat of the hen is greyish white.

SONG.—The Fieldfare's song is very meagre, and scarcely deserving of the name. When a flock alights, after satisfying their internal cravings, they frequently commence to make a peculiar twittering noise, which can only by a stretch of the imagination be regarded as a song. It is somewhat shrill and unmusical, and grates painfully on a sensitive and refined ear.

POINTS TO BE OBSERVED IN JUDGING.—The Fieldfare, although a stout, well-formed, noble-looking bird, is not adapted for the show bench, on account of its wild and intractable disposition. If, however, any one should succeed in thoroughly taming a fine specimen, there is no reason why it should not be exhibited in a class set apart for British birds. Similar points would be required in a Fieldfare as are necessary in a Song Thrush or Missel Thrush.

GENERAL REMARKS.—Fieldfares are not held in high estimation by the bird-loving portion of the community, as they are neither song birds, in the common acceptation of the term, nor are they attractive as aviary birds, being so difficult to reconcile to a state of domestication. Fanciers who venture to put newly-caught birds of this species in their aviaries, are generally glad to release them before many days have passed by, for the birds dash about in a most frantic and terrified manner, and, as often as not, refuse to partake of the

food supplied to them, and, if not liberated, die of starvation.

DISEASES AND THEIR TREATMENT.—These birds are liable to the same complaints as the other members of the Thrush family. For treatment, see Chapter on the "Song Thrush," and Chapter V., on "Diseases."



CHAPTER XXXII.

THE SKYLARK.

Alauda arvensis, Lin. ; *L'Alouette*, Buf.

DESCRIPTION AND CHARACTER.—Among the numerous species and varieties of British song birds, there is none so widely known, and so justly and highly esteemed, as the Skylark. In addition to its qualifications as an exponent of music, the Skylark is a bold, free, elegant, and majestic bird, full of confidence, spirit, and pluck, and is decidedly more aristocratic in contour and general appearance than the much-vaunted Nightingale. The hues of its plumage, however, are not so gay and dazzling as those of many of our native birds. Other points in favour of the Skylark are, that it readily suits itself to circumstances, is easy of domestication, is open and confiding, and sings with as much freedom as a house-bred Canary, either in an occupied room, or in a crowded thoroughfare. Nothing seems to deter it, or daunt its courage, or even cause it the least fear or trepidation. It has the pluck of a Game cock, and the gentleness of a Dove; and these characteristics are as prominent and observable as are the freedom of its manner and the eloquence of its song. Such a combination of rare and admirable qualities are seldom found in any bird; and as the Skylark possesses, in addition, a robust constitution, and a social and tractable disposition, it is rendered at once an object of almost universal admiration.

An adult specimen measures from $6\frac{1}{2}$ in. to 7in. long; the tail is $2\frac{3}{4}$ in. The bill, $\frac{5}{8}$ in. long, is straight, and rather



SKYLARK.

thin; the upper mandible is brown, and the under one yellowish flesh colour. The head and upper parts of the body are pale rufous, or yellowish brown, marked over with dark brown spots and stripes. The iris is hazel, and around each eye is a sort of spectacle eye-marking, of pale, indistinct yellow. The cheeks are greyish brown. The wings are partridge brown, margined with pale yellowish brown on the outer web; the first wing coverts are dark brown, fringed with pale brown. The throat is dirty yellowish white. The tail is dark brown, the two middle feathers being dusky brown, and the two exterior feathers, on each side, more or less margined with white on both sides of the quill. The under part of the neck and upper part of the breast are pale brown, marked with small dark brown spots; the lower portion of the breast, belly, and vent, is dirty greyish white. The legs and feet are brown; there are three toes and a spur, the latter being considerably longer than the claws.

HABITS AND BREEDING. — The Skylark is indigenous to Great Britain, and is gregarious, and locally migratory in habit. The birds go together in flocks, in the winter months, in quest of provender, from one place to another, visiting stubble and turnip fields, rick-yards, and, when near the sea, the seashore, keeping mostly in the vicinity of lowlands in sheltered situations. They are plentiful throughout the Continent, inhabiting Russia, Norway, Sweden, Denmark, Germany, France, Italy, and Greece; and they have also been observed in some parts of Africa. In fact, they seem almost ubiquitous; go where you will—east, west, north, or south, inland or seaward, it matters not whither—these birds are never far away. In winter, when the earth is clad with snow, they congregate in large flocks, sometimes composed of several hundreds. They may be seen on the seashore, when the tide is low, searching for worms which live in the sand; they are likewise fond of dusting themselves among the dry sand. The Skylark is inclined to be pugnacious, especially when among his own “kith and kin,” and more particularly so during the pairing season. The birds are very amatory, and are demonstrative in the display of their affections, and, in consequence, many determined battles are fought at this time, the successful bird generally claiming the envied Venus of song.

Skylarks build their nests in pastures, meadows, fallow or corn fields, amidst a tuft of grass, in a small hollow in the ground, or, frequently, in an indentation made by the hoof of a horse. The nest is composed of dried weeds or grass, is lined with hair, and is put together in a loose, slovenly fashion. The males render very little assistance in its construction. The hen lays four or five eggs, of a greyish brown colour, thickly spotted with pale and dark brown, and has two broods in the year. She incubates fourteen days, and the first brood is able to leave the nest by the early part of May. Sometimes the young birds leave before they are properly fledged, especially during wet weather. If two young birds, belonging to different parents, meet, they will run at each other, and have a fight, the same as game chickens, although they may not exceed three weeks of age.

Skylarks are very hardy birds, and roost on the ground in the most inclement weather. If a severe storm of wind and rain occurs during the night, it does not disturb them; they remain where they are until daylight. If a snowstorm commences during the night, they rise on the wing, keep moving to and fro until daybreak, and then betake themselves to a place of shelter. When driven from the ground, by deep-lying snow, in search of food, they will eat turnip tops, mangel-wurzel, cabbage, broccoli, or winter lettuce. If near the sea at this time, they congregate in large flocks, and haunt the seashore, getting beneath the rocks or projecting cliffs for shelter and protection.

The Skylark sings from February to August, and in mild, open winters, will sometimes sing in October, after the moulting season is over, and continue to do so at intervals for weeks afterwards, until a severe frost, or cold, and snow, puts a stop to its ardour. In confinement, these birds sing ten months in the year, if in good health and condition. They sing best after they have paired, and during the propagation of the first brood. They are peculiar birds in their habits. The cock does not roost near his spouse when she is sitting, but goes away a considerable distance; though he is very careful to fix a landmark—which may be a bush, a stone, a mound of earth, or a tree—whereby he can at once discover her. In May and June, when the sun

rises early, he will begin his song as soon as the day fairly breaks, and will continue until the full light of day. He generally goes first to see that his little wife is safe and all right, and then commences his ascent immediately above her, and pours forth a torrent of passionate love. When the mornings are bright, and the atmosphere pellucid, he will ascend out of sight, carolling the whole time his flight lasts—which is generally from ten to twelve minutes—if he be an accomplished songster. He will then descend within 20yds. or 30yds. of the nest, and go and exchange greetings with his loved one. If the weather be dull, and the atmosphere thick and muggy, he returns suddenly, drops as if he had been shot, and ceases to sing.

The male does not supply the hen with food during nidification, but takes his turn with her in sitting upon the eggs, and, when he thinks she has been absent long enough, commences to sing on the nest—an evident sign for her to return forthwith. If she prove dilatory in this respect, he will often “set about her,” and chastise her for the dereliction of duty. Skylarks are very affectionate birds, and exhibit much love for their offspring; some hens will not leave their eggs, or callow brood, even when mowers are working in close proximity to the nest. The male is most assiduous in supplying the wants of his offspring, but sings very little during the time he is so engaged. When he brings the nestlings a supply of food, he never alights close to the nest, but at a distance of from 20yds. to 30yds. away, and approaches them by a series of circles, with much caution, so as not to betray their whereabouts.

Skylarks feed their young in a peculiar manner; having made choice of the bird they intend to feed, they run right at it. The other portion of the brood seem to understand this proceeding, for they remain quiescent spectators during the operation, and display no symptoms of impatience on their own account. The male takes full charge of the young when the hen commences to brood again. In turbulent weather, the nests of these birds are frequently destroyed, and the eggs or tender chicks perish. The young birds are naturally very wild, and easily scared; and if any person approaches a nest containing such, the parents have a means of signalling to them, which they fully understand, and at once cower

down, and lie as flat and still as possible. If they are discovered, and the intruder approaches them, they gaze at him with intent astonishment; and if he handle any of them, they forsake the nest as soon as he has retreated a short distance from the spot, even though they are little more than half fledged. They then utter a mournful, wailing cry, which soon attracts the parents, who lead them to a place of safety; but the cock, even under these circumstances, will not remain with them, but retires to roost in his chosen quarters. As soon as the young are enabled to provide for their own wants, the male parent drives them right away, and will not permit them to remain in the same field as himself or his partner. The male bird will not permit other Larks, or small birds, to prowl about within the precincts of his domain during the period of nidification, and he is very solicitous for the welfare of his offspring whilst under his charge.

METHODS OF CAPTURE.—Skylarks can be taken, at the latter end of June, or in July, by means of a hand net and a tame Hawk. Secure the Hawk with a leather brace beneath the wings, fasten a piece of cord to the brace, and carry the bird on your hand, waving the latter frequently to make him hover his wings, as if he was about to fly. When the Skylarks perceive the Hawk, they will crouch close to the ground, and lie motionless, so that you may easily, with ordinary dexterity, place your net over them.

In winter time, when the ground is covered with snow, and food is scarce, they may be taken in large numbers, by the seashore, in the following manner: Make a tolerably stout line, 30yds. or 40yds. in length, with pack thread, and secure it at each end by tying it to two stakes; drive these firmly into the sand until the line is close to it. Attach to this line several gins, or nooses, each made by twisting two horsehairs together; fasten these on each side of the line alternately, from 4in. to 5in. apart. The line should be pegged down in several places, to keep it firm and steady; hooked sticks, or staples made of wire, can be used for this purpose. Lastly, scatter along the entire length of the line a few handfuls of oats; and, if the device is skilfully managed, you ought to be well rewarded for your time and trouble.

These birds can also be taken with the day and night nets—the plan usually pursued by professional birdcatchers.

In the spring of the year, when the birds have just mated, the following device is sometimes resorted to for the purpose of ensnaring an exceptionally good songster: Take a tame Lark, tie its wings, and attach to it a forked limed twig. When the bird you desire to capture is descending, after one of his aerial musical tours, put down this decoy in the vicinity from which the songster arose. As soon as the decoy is observed, it will be instantly pounced upon, as a presumed rival, and you will secure your prize, as Larks are easily excited to jealousy at this time.

Old Larks are very wild when first ensnared, and, to prevent them fluttering, and beating themselves against the wires of the cage, it is a good plan to tie the tips of their wings securely, and strew a few oats at the bottom of the cage. Another excellent plan is to place a large number of them together, in a moderate sized cage, which will prevent their becoming sullen, and damaging their plumage, &c., to the extent that they would do if caged singly or in pairs. In about a week or ten days their wings may be unfastened; but leave the cage in the same place.

FOOD AND TREATMENT.—In a natural state, Skylarks feed on ants' eggs, worms, flies, and other insects and their larvæ; they also eat several kinds of seeds, and, in the autumn and spring, oats, turnip tops, mangel-wurzel, &c. In confinement, they may be fed on crushed hemp seed, and cheese and bread, finely grated, and given dry. It is well, however, to change their food frequently, and give them a little raw lean meat, finely shredded, and mixed with breadcrumbs; a few meal-worms, flies, and ants' eggs; also green food—lettuce, cabbage, watercress, or chickweed—and sometimes a few groats and a little maw seed. A fresh clover or grass turf once a week is an absolute necessity if it be desired to keep the birds in health and song. They also thrive well on the following compound: Pea meal (fresh) 3 parts, oatmeal 2 parts, crushed hemp seed (freed from husks) 1 part, maw seed 1 part, crushed linseed 1 part, moistened with water, and given fresh every day.

REARING THE YOUNG.—Skylarks are very difficult to rear by hand, as they are so subject to cramp. The young must not be handled, as the warmth imparted by the hand will often induce an attack of this serious complaint; and it is

rare that a young bird ever recovers from it. The best plan to adopt when feeding, is to place the meat on the end of a penholder, cut flat at the thickest end, and hold it in front of the bird you desire to feed, when it will run at it in the same way as the parent birds run at their young ones during the feeding process. Give them sheep's heart, or other lean meat, shredded very fine, and mixed with the yolk of a hard-boiled egg, and breadcrumbs, moistened with clean spring water. When they are about three weeks old, a little finely crushed hemp seed, freed from the husks, may be added; feed every two hours, and both early and late. Be careful not to overload their stomachs, or give them stale food. Neither must it be too dry, or they will get diarrhœa, which will speedily terminate their existence.

They should be kept in a basket or cage, among short-cut hay or straw—which must be frequently renewed—until they can run about freely, and pick for themselves. They ought then to be removed to a moderately large cage, without perches, having the bottom liberally strewn with hay seeds and fine gravel (not sand), or with the husks of barley, or oats, and gravel; otherwise they will be sure to get their feet clogged with dirt, which in time hardens, and causes injury. Let them have two feeding-tins, one for moist, and the other for dry food—such as cheese, bread, and hemp seed; also a vessel for drinking-water. When they are fully competent to feed themselves, the feeding-troughs should be placed outside, or the food given in drawers, if such are used; the viands recommended for adult birds may then be supplied.

The cage should be cleaned out regularly once a week, as Larks are rather dirty birds, throwing their food about indiscriminately, and messing themselves all over. It is an excellent plan to let these birds have a sand bath frequently; there is nothing they enjoy better, and it is necessary to keep them from being tormented with parasites. Put a dishful of fine sand into the cage; the best kind is that known as "Silver sand." If put in immediately after the cage has been cleaned out, it can be gathered up as soon as the birds have had their plunge and revel amongst it, and saved for another time.

DISTINGUISHING MARKS OF COCK AND HEN.—To distinguish the male from the female in a nest of young birds is rather a

difficult matter. Choose the straightest and most erect bird, as the male Lark generally carries himself in a dignified manner, and frequently raises the feathers on his head. The breast of the cock bird is brighter in colour than that of the hen, and the spots that adorn his plumage are larger and brighter. There is more white in the outer feathers of the tail of a male bird, and the spur is much longer. In matured birds, the hen is less in size, and more profusely spotted on the back and breast; the colours of her plumage are paler, her breast is whiter, and her gait quieter. Her manner and general demeanour are altogether more effeminate; there is not the bold, defiant, and self-satisfied air about a hen that is observable in a male bird; the difference in this respect is very palpable to an experienced eye.

SONG.—As a vocalist, the Skylark has, probably, only one superior, and that is the Nightingale. He sings with the greatest possible freedom and gusto, and his song is simply bewitching, as he towers heavenward on a bright, delicious summer's morning, fluttering rapidly with his wings, and struggling upward and onward, circling his way through the silvery mist, which has risen with the approach of the sun, and pouring forth, as he ascends, in the most luscious and enrapturing manner, a flood of delightful melody, which, for compass and variety, is perfectly amazing. A caged bird never sings with the same joyous animation as the free rover.


POINTS TO BE OBSERVED IN JUDGING.—Choose a well-formed, long, sleek, sprightly bird, with a gay and majestic carriage; a straight, thin beak; a full eye; clear yellowish brown plumage, with spots and markings clearly defined, and deep in tone; the throat creamy white; the belly and vent clear greyish white; the wings and tail perfect in form, with the full complement of feathers, and well carried. The claws and spurs must be properly formed, and in good order, and the exhibit free from dirt.

GENERAL REMARKS.—Skylarks newly caught may be bought for 9d. or 1s. each, male birds; and hens, from 4d. to 6d.; these may turn out desirable birds or otherwise. Much depends on circumstances. Hand-reared birds, house-moulted, and thoroughly domesticated, and which sing with freedom, may be bought at prices ranging from 5s. to 20s. each, according to appearance and musical capabilities. A little hemp seed,

a few mealworms and groats, and an occasional sprinkling of maw seed, with a sand bath given regularly, will be found the best incentives to song.

Skylarks might be bred in confinement, if a special aviary, which should be large and spacious, were erected for them, with the outside part left all grass, and allowed to grow as in a meadow. Only one pair should be kept in it. It is doubtful whether these birds would breed among others; they might pair, and even lay eggs, but they would probably neither sit, nor rear their young, under such conditions.

DISEASES AND THEIR TREATMENT.—Skylarks are, as a rule, robust, healthy birds, and, if properly cared for after being reared, do not suffer much from disease. It is customary, and an excellent practice, to hang them in the open air during fine weather; this doubtless conduces to health and longevity. Gas is pernicious and injurious to all birds, and they ought not to be kept in a room where it is in daily use. Cramp is the complaint from which these birds suffer most, and next to this looseness in the bowels, for treatment of which see Chapter V., on "Diseases."



CHAPTER XXXIII.

THE WOODLARK.

Alauda arborea, Lin.; *Alouette des Bois au Cujelier*, Buf.

DESCRIPTION AND CHARACTER.—The Woodlark is a smart, attractive bird, and possesses a clear and resonant voice, very flute-like in tone, and with great variation and modulation. It sings at night, as well as by day, and has, on this account, frequently been mistaken for the Nightingale. It is, however, a very timid, shy bird, and, as it does not sing, in captivity, with the same freedom and generosity as its congener, the Skylark, is not such a universal favourite.

The Woodlark is not so sleek and genteel-looking as the Skylark, but otherwise resembles it in form. It is 6in. in length; the tail is short, measuring only 2in. The bill is straight, slender, and pointed, and about $\frac{5}{8}$ in. in length; the upper mandible is black, and the lower one brown, both being paler (inclining to flesh colour) at the tips. The head is reddish brown, marked with longitudinal blackish brown streaks. The feathers are rather long, and, when the bird is excited, he raises them, and so forms a sort of crest. Behind the head is a conspicuous whitish grey mark, or wreath, extending backward from eye to eye. The back part of the neck is ashen brown; the temples are brown; the nape, or lower portion, of the neck, and the upper part of the back, are reddish brown, with dusky blackish spots in the centre of the feathers; the lower portion of the back is greyish brown, and the rump and tail coverts pale yellowish brown, tinged with red. The ground surrounding the cheeks,

throat, under side of the neck, and upper part of the breast, is creamy white, tintured with yellowish brown, and marked with dusky spots, which latter are a little larger and more distinct than those adorning the Skylark; the lower part of the belly and vent is slightly darker in hue.

The wings are dark brown, and the first quill is shorter than the second; some of the pen feathers are margined with palish yellow, and others with greyish white. The coverts of the wings are dark brown, with a pale dullish orange margin on the outer web. At the butt of the wing (the scapulars) is a whitish grey spot. The tail is dusky reddish brown, some of the feathers being tipped with white; the first and second have a reddish white spot, and white tips; the central ones are greyish brown. The legs and feet are whitish flesh colour; the spur at the heel is long, and incurvated; the claws are dusky in hue.

HABITS AND BREEDING.—The Woodlark is indigenous to Great Britain, and is also found pretty generally distributed throughout Europe, and in some parts of Asia. These birds are not nearly so plentiful as Skylarks; in fact, they appear to be getting scarcer every year. The best specimens in this country are said to be obtained in Devonshire. The Woodlark begins to sing very early in the season, sometimes, but rarely, in January, if the weather be open and temperate. It commences its breeding operations in the latter part of March or beginning of April.

Woodlarks are somewhat eccentric, and do not associate with birds of other species. In winter time they keep together in small flocks, or groups, of ten or a dozen, presumably all members of the same family; but as soon as the pairing season approaches they separate, and keep aloof from each other.

When a male bird desires to obtain a spouse, he selects the tallest tree he can find—preferably an elm, when these trees are to be found in the neighbourhood; from this spot he offers up his matins, and afterwards ascends in like manner to the Skylark, pouring forth his tale of love and adoration, in melodious accents, as he circles through the air, continuing his song, if the weather be propitious, for a considerable time, and ultimately returning to the spot from which he started.

The Woodlark prefers a retired, secluded place, on the out-

skirts of a wood, and seldom lives in the open fields. It does not stray far away from the locality it selects, and only forsakes it when pressed by severe weather and want. It builds its nest on heaths, beneath juniper and furze bushes; on the side of a hill, or in the sides of hedges bounding a plantation: hence the common appellation of "Woodlark." The nest is constructed of dry grass, root fibres, and moss, scantily lined with horse-hair or wool, but is small, and indifferently made. The hen lays from four to six eggs, of a palish dusky hue, beautifully mottled, and marked with reddish brown and yellowish grey spots; she incubates fourteen days. The young do not leave the nest as soon as the young of the Skylark, unless they are disturbed, or interfered with.

Woodlarks are not pugnacious birds, and seldom quarrel. They are of a very affectionate disposition, and seem much attached to their progeny. The male bird mostly roosts in a tree in close proximity to his family, and pays them the most assiduous attentions. His call note is "Lu-lu."

These birds will not, under the most favourable conditions, breed in confinement, as they are naturally very timid and retiring in disposition.

METHODS OF CAPTURE.—The young birds may be taken, in June, July, and August, with a tame Hawk and a net (*vide* Chapter XXXII., on the "Skylark"). Birds taken at this time begin to sing almost immediately, but cease again during the moulting season. They may also be taken in the month of September, when they begin to associate, after the period of the moult. At this time it is difficult to distinguish the parent birds from the young ones, all being so much alike; the shanks and spurs are the best guides. At this season of the year they fly high in the air, and therefore it is best to choose hilly ground whereon to place the nets; a newly-ploughed field, or where the earth has been recently turned over, is best. It may be necessary to dig up a patch for the express purpose. The next acknowledged period for catching Woodlarks is in January. Those obtained at this time are generally in fine condition, soon commence to sing, and often prove the best songsters. These birds resort to places where the soil is light and gravelly, and in the vicinity of woods with a southerly aspect, so that they may revel in sunshine.

FOOD AND TREATMENT.—The Woodlark in a wild state feeds on a variety of insects, seeds, and green food. It eats flies, the “money spider,” which weaves its web in the furze bushes, ants and their eggs, small worms, caterpillars, hay beetles, &c. In confinement, they will eat the food recommended for Skylarks, and must have a frequent supply of animal food, wasp comb, mealworms, ants’ eggs, &c. ; and occasionally, as a change, a little soft white bread, well soaked in warm milk, and squeezed almost dry, with a sprinkling of poppy seed dashed over it.

When Woodlarks are first taken, feed them with egg and bread, chopped very fine, mixed with hemp seed, bruised and freed from the husks, and a few mealworms or ants’ eggs. They are exceedingly shy for some time after being caught. A good plan to induce them to eat, is to strew the bottom of the cage over liberally with fine gravel, and scatter some of the food amongst it. When they become familiarised and tame, give the same diet, in the ordinary way, as that recommended for Skylarks ; but insect food is an indispensable requisite, and must be given more frequently and abundantly than in the case of Skylarks.

REARING THE YOUNG.—Take the young at twelve days old, and treat them in the manner recommended for young Skylarks, only, when they are ready to be placed in a cage, provide one with perches for their use. They are best caged separately.

DISTINGUISHING MARKS OF COCK AND HEN.—There are various methods of distinguishing the male from the female. In young and newly-caught birds, select the longest-bodied one, and notice the call—that of the male is longer and louder. His manner of walking also is different ; he holds himself more upright, and has a more pert and saucy appearance. The heel, or spur, of the male is longer ; the wings, too, are longer, and he often raises the feathers on his head like a crest. In mature birds, the females are handsomer than the males, which is an exception to the rule prevalent among other species. The ground colour of the plumage of the hen is paler, but the markings are more distinct, and better defined, and their breasts are more profusely spotted ; the coronet, or wreath extending round the base of the skull, is clearer, and more readily observable.

SONG.—The song of the Woodlark may be described as exceedingly refined and exquisitely sweet. It is pure in tone,

and particularly mellow; in this respect it is about equal to that of the Nightingale. It is very plaintive and thrilling, and of good compass. In volume and execution it is inferior to that of both the Nightingale and Skylark. When kept in captivity, Woodlarks are so timid and sensitive that they will refuse to utter a note in the presence of a stranger, unless excited to do so by the introduction of a rival. This is a great drawback, and seriously affects the bird so far as public favouritism is concerned. In the open air, the Woodlark will sing either on a tree, or whilst flying, in a similar manner to the Skylark. Its song under these circumstances is well-sustained, and of considerable duration, the bird warbling for thirty to forty minutes, or even longer, almost without a break. The Woodlark sings more after the fashion of the Nightingale, and so strongly resembles that bird in many passages of its song, and the way in which it intones its voice, that numbers of people have been completely deceived by it. It will occasionally "throw down the gauntlet" to the Nightingale, and many severe conflicts have been witnessed between these ardent rivals of song; but "Philomel" almost invariably proves the conqueror.

POINTS TO BE OBSERVED IN JUDGING.—Select a bird of graceful contour and noble carriage; it should be bright and clear in hue, distinctly spotted, and have a well-defined wreath, from eye to eye, extending backward round the base of the skull. The plumage should be close and smooth, the wings and tail well carried, the eyes full and bright, the head-feathering long and plentiful, and the legs and feet free from scales or corns. A specimen intended for show purposes should be scrupulously clean, in prime condition, docile, and tractable. A hen is best for exhibition purposes.

GENERAL REMARKS.—The Woodlark is not so robust as the Skylark, and requires more attention. If not well cared for, it will speedily lose condition, and cease to sing. Nothing is so conducive to the health of these birds as cleanliness, and a frequent change of diet. An occasional sand bath, say once or twice a week, is necessary to preserve these birds in health. They become fretful and anxious if not well cared for; otherwise, they thrive fairly well in a state of domestication; though they are shorter lived than either Skylarks or Titlarks. They may be bought for sums varying from 5s. to 30s., and are fre-

quently advertised in *The Bazaar, Exchange and Mart*, an excellent medium for the purchase and sale of live stock. It is best to purchase a bird that has been house-moulted, and has become thoroughly domesticated. To any person who is capable of fully appreciating a superb and refined singing bird, a Woodlark is well-calculated to afford unqualified satisfaction. As a rule, this bird will sing with more freedom in an aviary out of doors than in a cage.

DISEASES AND THEIR TREATMENT.—Woodlarks are subject to cramp and vertigo, and are much troubled with parasites, so that a sand bath must be supplied once or twice a week at least, as these pests have a depressing influence on the birds' spirits. When kept in an out-of-door aviary they suffer less from these maladies than when confined within the narrow limits of a cage.

When a bird is observed to be out of sorts, and its ailment cannot be accurately diagnosed, give it a few mealworms, or hogs' lice—say from two to three—daily, until it recovers. If it be observed to scour, put a pinch of prepared chalk in its drinking-water, or sprinkle a small quantity thinly amongst its food, and about the bottom of the cage. A piece of mould, containing ants and other insects, will be found of great service, and will frequently revive a bird.

With cleanliness and a frequent change of diet, Woodlarks may be kept in health and song for four or five years, or even longer. The time specified is about the average period of their existence in captivity. The moulting season is always the most trying, and this is the time when the greatest care and caution are necessary. Woodlarks are, naturally, very delicate birds, and, like Nightingales, must have some of their natural food to keep them in a healthy condition. When insect food is difficult to procure, the best substitutes are the Compounds recommended for soft-billed birds, in Chapter XXIV., on "The Starling."

CHAPTER XXXIV.

THE TITLARK.

Alauda trivialis, Lin. ; *Alouette pipi*, Buf.

DESCRIPTION AND CHARACTER.—This very pretty bird is called by various names in different parts of the country. It is known as the Titling, the Moss-Cheeper, and the Meadow Pipit, and is familiar to most bird fanciers. Although a free singer, it is far inferior, as an exponent of music, to the two first-mentioned varieties of the *Alauda* family (the Skylark and the Woodlark). In contour and beauty, or fineness of feather, the Titlark has few equals, and is regarded by many fanciers as a great acquisition to any aviary of wild birds. Titlarks are not very shy, but exhibit caution, and are suspicious and wary; hence, it is difficult to get within 30yds. or 40yds. of them. They have a wavering and desultory method of flying, and on this account are not difficult to shoot.

The length of a fully-grown specimen is $5\frac{1}{2}$ in. only, of which the tail measures $2\frac{1}{2}$ in. The beak is $\frac{1}{2}$ in. in length, and is thin, sharp, and pointed; the upper mandible is blackish brown, and the under one whitish brown. The iris is hazel. The head is somewhat elongated, and, together with the hinder part of the neck, back, rump, and sides, of a greenish brown colour, the middle of each feather having a black spot. Over each eye is a pale coloured streak. The throat, under part of neck, belly, and vent, are creamy white, and the breast yellowish white. The throat, neck, and breast, are profusely marked with longitudinal black spots. The wings are dark brown, edged with greenish grey outside,

and grey on the under side. The smaller wing coverts are greenish brown, and the larger ones dusky brown, the former being margined with greyish white, and the latter with reddish white, forming white bars across the wings. The tail is dusky or blackish brown, the outer feather being white on the external plume, as also on the inner plume, halfway from the end; the outermost feather but one, on each side, has a wedge-shaped white spot near the tip. The legs are yellowish or willow colour, and the claws brown; the spur is rather long, and bent. There are white specimens of the Titlark to be met with occasionally, but they are extremely rare.

HABITS AND BREEDING.—The Titlark is a migratory bird, and arrives in this country in the early part of April. It inhabits the greater part of Europe. The males precede the females, generally by about a fortnight. Each male bird selects for himself a particular locality, which is usually in the neighbourhood of a small plantation, or damp meadow, common, or pasture, and in the vicinity of large gardens. Sometimes these birds will venture into a village or town, and alight on the tops of houses. Like Woodlarks, they will sing perched on a tree, although they more frequently perch on the ground. When in search of a partner, the male Titlark utters a peculiar cry—"Geike, Geike"—which he repeats loudly and rapidly, hopping from branch to branch in a lively and excited manner. At other times the call is "Zip, Zip." He sings best when he has entered into the bonds of matrimony, and makes short ascents, flying head foremost for 20yds. or 30yds., and descending in a similar manner, singing to the utmost of his ability until he alights.

In winter, Titlarks visit low lying grounds, or the sea-shore, and frequent marshes and pools that are not frozen over, as also rickyards, to pick up the scattered grain, and the neighbourhood of farmsteads. They are partial to the insects, known as "Ticks," which infest sheep, and may be frequently seen on the backs of these animals, both in the fields and in folds, in search of them. They sometimes perch on trees, bushes, walls, or rocks, but mostly on the ground, where they roost among the tall grass, or beneath furze or juniper bushes.

The Titlark commences to breed about the latter end of

April, or the beginning of May, and has two nests in a year. It builds on the ground, by the side of a pond or ditch, and also in gardens, orchards, or meadows, among the tall grass. The nest is composed of dry grass and root fibres, is lined with horse or cow-hair, and is very indifferently constructed. The hen lays, usually, four or five eggs, of a darkish brown colour, mottled with darker brown; she incubates fourteen days. The young leave the nest, if not previously disturbed, when about nineteen or twenty days old. Titlarks might, possibly, be bred in confinement, under favourable and exceptional conditions. See remarks under this head in Chapter XXXII., on "The Skylark."

METHODS OF CAPTURE.—Titlarks may be taken in the same way as Goldfinches and Linnets, with the day net and limed twigs. They are easily captured by a decoy, with a forked, limed twig, attached to it. They should be treated, when caught, the same as other Larks, or Nightingales.

FOOD AND TREATMENT.—Titlarks feed principally in the open fields, on insects and their larvæ; and in winter, on a number of different kinds of seeds. They are very fond of flies, sheep ticks, small beetles, hog lice, ants, caterpillars, &c. In confinement, they may be fed the same as Nightingales or Woodlarks. When first caught, they require to be crammed, as, like other Larks, they appear to have no notion of feeding themselves. The same food should be given to them as to newly-caught Nightingales, and in the same way; afterwards it should be distributed about the floor of the cage, to induce them to eat. When once they become domesticated, they get tame rapidly, and eat with freedom, as they are robust, vigorous birds, and possessed of powerful appetites.

REARING THE YOUNG.—Young Titlarks should be taken, when twelve days old, and reared in the same manner as Skylarks or Woodlarks. They can also be brought up on white bread, sopped in milk, and sprinkled with maw seed and ants' eggs. They soon become very tame. They are hardy, and not subject to colds, and the cramp, as are their congeners, the Woodlark and Skylark; hence they are easily reared.

DISTINGUISHING MARKS OF COCK AND HEN.—The male bird is much brighter in the ground colour of his plumage than the female, this being more particularly noticeable on the throat, fore part of neck and breast; the legs and feet, too,

are richer in colour. In fact, the cocks may be described as jonque, the hens as mealy, a distinction which all true bird fanciers will understand. The bands on the wings, and the white markings on the tail, are paler in the hen bird. The sex of young nestlings is most difficult to distinguish before the moult; the largest and boldest birds generally prove males. But the song is the most certain test with these birds. As is the case with most of our wild birds, Titlarks do not attain their full adult plumage until they are two years old.

SONG.—The Titlark only sings in the open air during four or five months—from March to July. In confinement, it sings a little longer. The song is rather short, but very agreeable, and contains some of the notes of the Skylark, Thrush, Linnet, and Nightingale. It repeats the notes “Weet, weet, weet,” “Chew, chew, chew,” and “Feu-u, feu-u,” which are considered some of the choicest notes of the Linnet. It also frequently repeats the “Tzid, Tzid,” of the Thrush. It sings much after the manner of the Canary. When singing, the tail is moved up and down like that of a Wagtail.

POINTS TO BE OBSERVED IN JUDGING.—The male Titlark is well adapted for show purposes, as he is a sleek, finely-feathered bird, very cleanly in his habits, and perhaps the handsomest representative of the Lark family. Choose a frank, lively, well-shaped bird, one bright and clear in colours, distinctly mottled, and with wings and tail perfect in feathers, and well carried. A show specimen must have well-formed feet and claws, and should be sent to the exhibition entirely free from dirt.

GENERAL REMARKS.—Titlarks thrive well in an aviary, but, when kept for song purposes, are best placed in cages. They will learn the song of the Canary or Linnet if reared with, and kept in the presence of, either of these birds. They are very restless at the regular periods of migration, and fly about the cage or aviary in an excited, almost frantic, manner, repeating their call notes lustily, night and day, for ten or twelve days. At this time, if possible, they should be transferred to an out-of-door aviary. Titlarks moult twice a year, as most migratory birds do.

DISEASES AND THEIR TREATMENT.—The Titlark is not a

tender bird; the moult is probably the most trying period of its existence. For treatment necessary at this time, see the observations on this subject in the Chapters on the "Skylark" and the "Woodlark." A frequent change of food, and cleanliness, are the best preventatives of disease at all times. These birds, unlike Skylarks and Woodlarks, bathe in water.



CHAPTER XXXV.

THE MEADOW LARK.

Alauda pratensis, Lin.; *Alouette des pres ou Farlouse*, Buf.

DESCRIPTION AND CHARACTER.—The Meadow Lark, which is also known by the names of the Tree Pipit and Short-heeled Lark, greatly resembles the Titlark, both in appearance and the manner of its song, and, in consequence, is frequently mistaken for it. It is, however, as a songster, much superior to that bird.

A fully-grown Meadow Lark measures $5\frac{1}{2}$ in., the tail being $2\frac{1}{2}$ in. The upper mandible is blackish, the lower flesh-coloured. The eyes are hazel. The upper parts of the plumage are greyish olive brown, spotted with blackish brown; the rump is rufous greenish grey. Over the eyes is a stripe of pale yellowish white, and one of a similar colour encircles the cheeks. The under parts are dirty yellowish white, the breast being deeper in hue, and more of a brownish yellow. The sides, under the wings, are greenish yellow; the lower part of the neck and breast is marked with blackish brown spots, some of which are angular, and others oval, in form. The wings are dark brown, with a double white stripe or bar. The tail feathers are blackish, the two centre ones being greyish brown; the exterior one is white on the outer plume, and midway on the inner web from the tip; the next has a white spot near the tip. The legs and claws are reddish brown; the spur is much straighter than that of the Titlark.

HABITS AND BREEDING.—The Meadow Lark is a migratory bird, arriving in the spring, and departing again in the autumn. It frequents the sides of lakes, pools, and marshes, and also

damp, undrained meadows, and woods bordering on rivers. After the breeding season, these birds gather together preparatory to their departure, and travel in small flocks. Their call note at this time is "Bis, bis," which they utter vociferously, and in a shrill tone. They build their nests, on the ground, in swamps, meadows, or plantations by the side of a river. The hen lays four or five eggs, of a pale purplish brown colour, blotched and spotted with reddish purple; she incubates fourteen days, and the young leave the nest when about three weeks old. These birds are not so plentiful in this country as Titlarks.

METHODS OF CAPTURE.—Meadow Larks may be caught with the day or night net; with a decoy and limed twigs; or by clearing a piece of ground, on a marshy place, where they frequent, baiting it with mealworms, and setting limed twigs.

FOOD AND TREATMENT.—The Meadow Lark feeds principally on aquatic insects, ants, small beetles, and a few kinds of small seeds. It is rather difficult to keep in health in confinement, unless constantly supplied with insect food, or the best substitutes. It may be fed the same as the Titlark. These birds rarely live more than four years in a cage.

REARING THE YOUNG.—The young of this variety may be reared in the same manner, and with the same food, as the young of Titlarks, Skylarks, or Woodlarks.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is slightly smaller in size than the cock, and paler in the various colours of her plumage; in other respects the difference between them is not striking. The male bird, as is the case with all species of Larks, is bolder, and smarter looking than the hen, walking and bearing himself more majestically, and having a commanding and dignified carriage.


SONG.—This bird possesses a more powerful and more refined song than the Titlark, but it is of much shorter duration than that of either the Skylark or Woodlark. Nevertheless, it is sweet, clear, lively, and mellifluous; it is fuller of variation and modulation, and better executed, than that of the Titlark, and also more continuous. This bird will sing in a tree, but sings best during short flights in the air. It never ascends high, and sings best when descending, expanding its wings, and fluttering energetically all the time, until it alights on the ground.

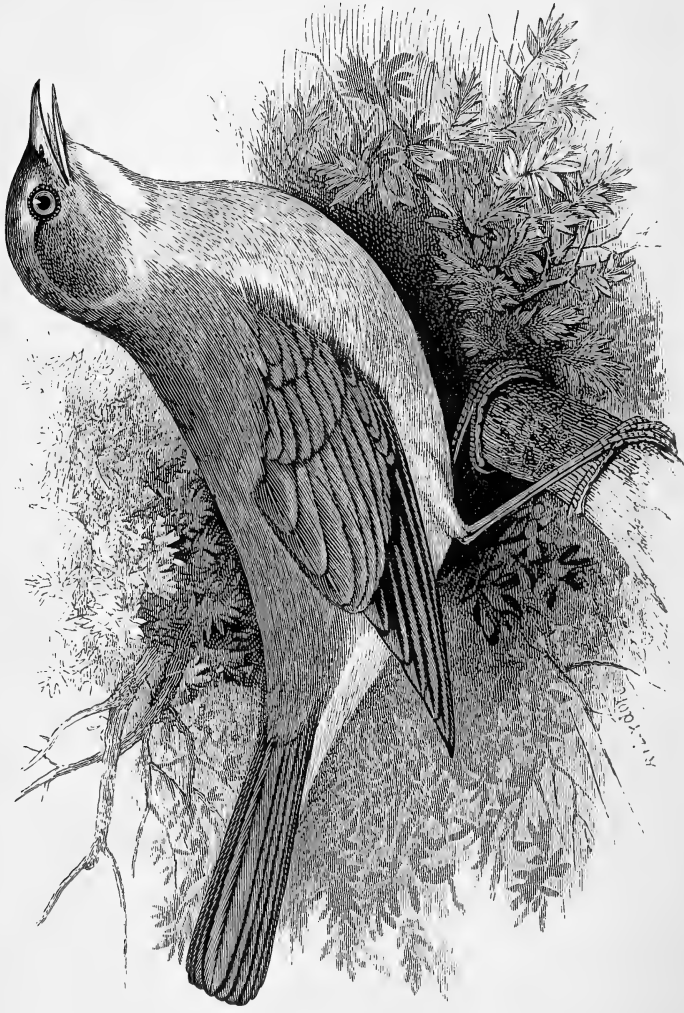
POINTS TO BE OBSERVED IN JUDGING.—The remarks on this subject given with reference to the Titlark are equally applicable to this bird. The clearer the face and wing markings, and the purer and brighter the various colours of the plumage, the more valuable may the specimen be considered as a competitor on the show bench.

GENERAL REMARKS.—The Meadow Lark is best kept in a cage, as it does not thrive well in an aviary. It requires a good deal of attention to keep in fine condition, as it subsists, when in a wild state, almost exclusively on insects. It makes a nice cage bird, and, being a free singer, is worth while spending some trouble to keep in order. It will not, under the most favourable conditions, breed in confinement. Newly-caught male birds may be purchased of dealers, or birdcatchers, for 9d. or 1s. each; but thoroughly domesticated specimens are more valuable, and are worth from 2s. 6d. up to 15s. each, according to their vocal powers and appearance combined.

DISEASES AND THEIR TREATMENT.—These birds are subject to the same diseases as are the other varieties of the *Alauda* family; but this is, probably, the most delicate bird of the entire genus, and the most difficult to keep in health and condition. The same precautions must be observed as laid down in treating of the other members of the family.

Diarrhoea is the complaint from which these birds suffer most, though they generally die of consumption or atrophy.





NIGHTINGALE.

CHAPTER XXXVI.

THE NIGHTINGALE.

Sylvia luscinia, *Motacilla luscinia*, Lin. ; *Rossignol*, Buf. ;
Die Nachtigall, Bech.

DESCRIPTION AND CHARACTER.—The Nightingale is considered, by the majority of poets and musicians, to be the most sublime and eloquent exponent of natural music to be found among the entire tribe of feathered choristers. In size, this bird is from 5in. to 6in. in length, individual specimens in this respect differing, as do most other varieties of birds. It is very sombre in the colours of its plumage, but, when in robust health, and young, is sprightly and vivacious, and rather pleasing than otherwise in its contour. Its chief recommendation, however, consists in its wonderful power of vocalisation.

In form and action the Nightingale resembles the Robin, but has a longer and neater head, and smaller eyes. The beak is straight, rather thin, and pointed, the lower mandible being slightly longer than the upper. The head, back part of the neck, back, and wings, are of a dull greyish russet brown colour, being greyest about the head and neck. The tail is russet brown, with a decided red tinge. The pinion and covert feathers are rather darker in shade than the back, and edged with a dull, indistinct, greenish yellow margin, the under part of the wings being of a dingy pale green. The throat and neck, from the under mandible, circling round the under part of the eye, to the shoulders, or pinions, and the belly and vent, are of a dull dirty greyish white, or ashen grey colour, interspersed with a shading of brown, more particularly towards the sides of the

breast. The throat, however, is much whiter than the other parts, particularly in the case of male birds. The legs are of a dingy drabby flesh colour. In fully matured birds, the colours are usually darker and brighter.

Birds confined in cages for long periods of time frequently become duller, and more dingy and smoky-looking in hue, than those which have their liberty. This is more particularly the case with birds kept in large towns, and in rooms where fires are constantly burning.

Young Nightingales, before moulting, are of a russet grey colour on the upper part of their bodies; their heads and wing coverts are speckled with dull yellowish white spots. The under part of their bodies is of a pale reddish yellow colour, with brown spots on the breast; their tails are reddish brown. After moulting, they acquire the plumage of adult birds.

HABITS AND BREEDING.—The Nightingale is a well-known bird in many of the southern counties of England—Kent and Surrey especially—but is rarely found north of Staffordshire or Derbyshire. It is also located pretty generally throughout Europe. Nightingales frequent low woodland dells, and marshes, where there is a good thick undergrowth of bushes or long grass, and prefer a quiet, secluded spot, with a rippling brook running near by. They likewise locate themselves in the neighbourhood of high, thick, untrimmed hedges, where safe shelter is obtainable. The Nightingale is a bird of passage; it arrives in England in the month of April, and departs in August. Birds found after this month are either very late hatched or sickly specimens. These birds always return to the place of their birth, or its immediate neighbourhood, and in the spring severe battles are frequently fought, among the male birds, for the possession of a nesting-place. Father and son, brother and brother, regardless of all the ties of Nature and affection, enter into severe and desperate combat to secure the place which has been selected by their spouses for breeding; for it is believed, by the most watchful and observant of ornithologists, that the site of the proposed nest is chosen by the female.

Nightingales build their nests in thick bushes by the side of a plantation or garden that is in an isolated position, in a grove of bushes, amidst a heap of sticks, or on the ground,

among the dense masses of brushwood. The nest is carelessly built, and badly constructed, of small twigs, oak leaves, root fibre, or grass and straw, the latter being used as a lining; sometimes hair is used. The hen lays from four to six eggs, of a greenish nutmeg-brown colour, which are hatched after fourteen days' incubation. The first brood appears about the middle of May.

METHODS OF CAPTURE.—Nightingales are best taken at the beginning of April, as soon as they reach this country. The male birds precede the females by about a fortnight, and these should be secured, for those caught after they become mated rarely do any good, but sulk and repine. They can be taken with the ordinary trap cage, which must be placed near to where they have been observed to sing constantly. Dig up the ground around, so as to attract the bird's attention, and bait the trap with a live mealworm. These birds may also be captured by making a shallow trench, say 2in. in depth, and distributing within it a few mealworms, or ants' eggs, whilst around and about should be placed limed twigs. They are very artless, and are readily caught, provided they have not been previously ensnared and liberated. Other methods can be used, such as the drop net, or horse-hair nooses; but the trap cage is best, and, next to that, the limed twigs.

As soon as you succeed in trapping a bird, you should tie its wings with a piece of thread, to prevent it beating itself against the wires of the cage; but these bonds should be removed as soon as the bird gets familiar with its habitation, and takes to its food kindly.

Nestlings may be taken by carefully observing where the cock sings, as his mate and young brood are certain to be near. The best plan to adopt in order to find the nest, is to place a few mealworms upon the bushes near the spot where the cock has been observed to sing. You should then lie concealed in some place where you can observe him when he comes for the worms, which he will be sure to carry straight to the nest; get as near as you can to the bush, or other place where he goes, by crouching, and you will, possibly, hear the chirruping of the young as they are being fed; you will then have no difficulty in discovering the nest. You must not molest the young if they are not ready for

removal; if you do, they will not remain in the nest, as the old birds will be certain to entice them away to secure their safety.

FOOD AND TREATMENT.—The Nightingale feeds principally on insects—small green caterpillars, moths, flies, beetles, and larvæ, which latter it searches for beneath the surface of the soil; hence, it frequents gardens attached to the residences of gentlemen living in secluded country places, as this permits of the quest for food being carried on in a quiet and unobtrusive manner.

Newly-caught birds should be fed on fresh ants' eggs and mealworms, or on wasp comb, when procurable. The latter should be obtained when the young grubs are well-matured, and should be preserved by placing it in an oven—not too hot, but sufficiently heated to destroy life and preserve the grub. This is excellent food for Nightingales, who enjoy it, and thrive upon it. But a change of diet is essential to preserving in health all cage birds, and therefore a supply of insect food, such as spiders, flies, ants, beetles, &c., should occasionally be given. Nightingales will likewise eat a compound of hard-boiled eggs and breadcrumbs, with a sprinkling of maw seed over it. Several other forms of food are given to Nightingales. Some people make a cake of peameal and eggs, grated, and mixed with ants' eggs; they appear to enjoy this as a change of diet. Others mix sheep's or bullock's heart, boiled, dried and grated, with fresh swede turnips, prepared in the same manner.

The Nightingale does not thrive so well when kept in an aviary as it does in a cage, for it is very particular about its diet. The most suitable cage for a bird of this variety is a box-shaped one, with a wire front. It should be from 18in. to 20in. in length, 10in. in width, and from 16in. to 18in. high—the more room the better. The back, bottom, and ends, should be made of wood, and the top of some soft material, such as wash leather, or green baize. A space of about 4in. can be cut out at each end, if desired, and wired, for the food and water vessels; these should be made like the seed hoppers in a Canary breeding-cage. Have loose tin troughs made to fit in, and move in and out; or a tin drawer can be used in front, for the food, and a water vessel placed outside, with an aperture made of sufficient size for the bird to get its head out. This is all a matter of taste. The

door should be made of sufficient size either to admit of a suitable vessel being placed inside, or to permit of one of the usual tin baths being hung on outside, so that the bird may get an occasional bath, which will greatly conduce to its health and comfort. The cage should either be made with a draw-board bottom, or should have a piece of wood, say 1in. deep, cut off the lowermost part of the front board, and re-fastened, by means of a piece of wire driven up about 3in. from one end, to act as a hinge, or pivot, so as to allow of the cage being cleaned out; the other end can be secured with a small brass button, or a piece of wire bent for the purpose. The bottom of the cage should be liberally strewed with small gravel and sand. Sea or river sand is to be preferred. If the common sand be used, a little salt ought to be mixed with it, as chloride of sodium is most beneficial in keeping all birds in health. A perch should be placed at each end, or along the front of the cage, as the case may be, for the bird to get at its food and water; and it, or they, should be about $2\frac{1}{2}$ in. from the bottom of the cage. Other perches should be arranged so that the bird may keep itself in motion by hopping to and fro. These perches should all be made of hard wood, about $\frac{3}{4}$ in. in thickness. Round ones are best, or those that are rounded on the top side and square below. They should be frequently cleaned.

The cage should be hung in a quiet corner of the room, most birds (but not all) preferring to be in a secluded spot. When a bird has become quite domesticated, it would be well to change the position of the cage occasionally; and, by quiet observation, it will soon be discovered which place is most preferred. As a rule, Nightingales sing best in a shaded spot, and when alone; but there are exceptions to this, as there are to all, rules. If newly-caught birds be placed in a wired cage, the latter should be pretty closely covered for a time, and put in a warm and quiet corner of the room, so that it may not be unduly disturbed.

Newly-caught birds will very seldom eat the prepared food usually given to them; hence, a few mealworms and ants' eggs, flies or caterpillars, must be mixed with it, to entice them to eat, when, in picking out the ants' eggs, &c., they will be sure to partake of the prepared food. When you observe them eat this freely, gradually lessen the insect food;

but should you find a bird drooping, again renew it, until the artificial food is partaken of with relish and freedom. These birds will likewise eat red, black, and white currants, and black elder berries; some bird dealers dry ripe elder berries like raisins, mix them with ants' eggs, and feed on this compound alone. They also readily eat the larvæ of the cockchafer, or May-bug, which are to be found in grass fields; these larvæ, kept in pots of turfy earth, will be found useful for winter feed.

The following is a device used by old birdcatchers to get newly-caught birds to partake of artificial food almost as soon as they are caught. A piece of fresh raw beef or mutton, divested of fat and all fibrous substances, is scraped fine, and mixed with hard-boiled egg (the yolk only being used) and water. This is put into a saucer, or on a plate, or other similar vessel. In the centre of this vessel is placed the upper portion of a wine glass (with the stem broken off), inverted, and beneath the glass a few lively meal-worms, whose strugglings and wriggings for liberty at once attract the attention of the birds, who instinctively peck at them, and, in doing so, take the artificial food, some of which is rubbed on the sides of the glass; and as they find it pleasant to eat, and of a satisfying nature, they gradually become accustomed to it, and devour it readily. The keeping of these birds alive, and in a healthy condition, depends greatly on the attention shown to them; with care, cleanliness, fresh water and air, and a frequent change of diet, they may be preserved in cages for many years. They have been known to live in confinement, under favourable conditions, for periods ranging from eight to fifteen years, and more; but if neglected they will not live long. Young birds improve in their song up to the age of seven or eight years, after which time they gradually decline.

REARING THE YOUNG.—The young may be taken at the age of seventeen or eighteen days, or a little earlier if they are to be reared by hand. Care, however, must be taken that the birds are removed at the age mentioned, for, if taken too young, they are very subject to cramp and diarrhœa; and if too old, they sulk, and refuse all food, in which case it is necessary to open their mouths, and force it into them, until such time as they are old enough to feed themselves.

They should be kept in a small basket, or a box with a wire front, lined with a piece of old carpet (teazed out), or similar material, to keep them warm, as they are extremely delicate, and most difficult to rear, and the exposure to cold would speedily kill them.

Feed them with sheep's heart, raw (chopped very fine, and free from skin, sinews, and fat), mixed with a small quantity of the yolk of a hard-boiled egg and fine breadcrumbs, rubbed into a paste with clean, pure water; or with a paste made of white bread, first soaked, then dried, and afterwards grated, and mixed up with ants' eggs. Feed every two hours, or oftener. As soon as the birds are able to feed themselves, separate them, place in cages, and give a supply of straw or barley husks, dry moss, fine gravel, and sand; also give them a few handfuls of mould, containing ants' eggs, which will not only cause them to become docile, but will materially assist in keeping them in a healthy condition. When they have attained the age of six weeks, the usual food for adult birds should be given.

DISTINGUISHING MARKS OF COCK AND HEN.—The male bird is distinguishable from the female by his form, colour, gait, and general appearance. He is longer in the leg, holds his body more erect; is paler, though brighter, in his plumage; is bolder and more majestic in his carriage, and altogether more sprightly and vivacious in his manner and bearing. The male bird is flatter on the crown of the head than the female, and longer in the neck, whiter on the throat and breast, and redder in the tail. The cock is altogether fuller in the body, and more masculine and daring in his *tout ensemble*. In a brood of young birds, the palest-coloured ones are the males, who are much whiter on the throat than the females. The hens are redder, or browner, in colour.

The males commence to record their song before their tails are fully-grown. When able to feed themselves, the hens, as well as the cocks, record. Therefore, when you observe a young bird beginning to record, catch it, and notch a piece out of the web of its wing feathers, whereby you will, when he is fully-grown, be able to identify him. If you obtain young branchers, or fledgelings, note that the males record much louder than the females, and continue to do so for a much longer period of time, and with more vivacity and

spirit. After a cock has partaken of a meal, he will mount his perch, and record his song in an almost inaudible voice, and mostly standing upon one leg only. You will observe that he heaves and works his throat and breast in quite a different manner from a hen. The hens generally keep moving about from perch to perch, or in some other way, whilst they are singing—which cocks rarely do. The song of the hen is short and disjointed.

SONG.—The Nightingale invariably sings best in the spring-time of the year, when in search of a mate. The voice is shrill and long-sustained, with wonderful variation and modulation, and trills of exquisite sweetness and variety. When all Nature is hushed in the still quietude of eventide, the Nightingale is wont to pour forth his melody in its greatest perfection; or if challenged by a Woodlark—which sometimes happens—he will vociferate with all his energy and skill, for these birds will not yield the palm of victory to any foreign compeer, and will strive for mastery even unto death. Sometimes the song is solemn, and full of deep pathos, pensive and plaintive; at other times, sprightly and vociferous; again, his warblings are of sudden transition, from the sedate to the sportive, and from the sportive to the plaintive, and with such marvellous freedom, power, and compass as to fairly enthrall and entrance his listeners. Sometimes the Nightingale sings with such vehemence that the woods and dells around resound with his incomparable melody.

To tempt these birds to sing in winter time, procure a few pine kernels, which make into a paste with the usual food, and place a few shreds of saffron in the drinking-water; and, as these birds are greatly excited by the effect of an exquisite perfume, place a grain or two of musk in a piece of cotton or wool, and insert it into the end of a reed, which should be used as a perch.

POINTS TO BE OBSERVED IN JUDGING.—Choose a large, sprightly, well-proportioned, house-moulted bird—one about three years old, as then the colours are softer and brighter. The upper covering of the body should be a nice reddish ashen grey, the throat, vent, and belly, decidedly white—not dingy white—and the breast and sides whitish grey. The specimen should be close and fine in feather, with well-formed wings and tail, in good condition, and free from

dirt. The legs, feet, and claws, should be without blemish or deformity. The bird should be affable and sprightly in manner, thoroughly domesticated, and accustomed to strangers.

GENERAL REMARKS.—There is a striking resemblance between the female Redstart and the male Nightingale, and bird dealers not unfrequently impose upon those who are ignorant of this fact, by selling birds of the former species for the latter. There are, however, characteristic distinctions between them. The female Redstart is smaller than the Nightingale, and the colour of its plumage is altogether darker; the bill and feet, also, are black, whereas in a Nightingale the upper mandible is dark brown, the under one much lighter, and greyer in colour, and flesh coloured at the base; the legs and feet, too, are of a dingy greyish brown flesh colour. The tail of the female Redstart is paler in colour than that of the Nightingale, and in the centre of it are two blackish brown feathers, whilst the tail of a Nightingale is deep russet brown, inclining to be red all through. Again, the tail of the Redstart is more slender than that of the Nightingale, and is kept in almost continuous motion; whereas the latter bird only moves his when in the act of hopping about, and then almost invariably carries it above the tips of his wings. In addition to these distinctive marks, the gait and manner of the Nightingale are more aristocratic, and his bearing is one denoting self-importance. The Nightingale moves rapidly from perch to perch, and, after a series of hoppings, stops for a moment, flaps his wings, elevates his tail, partly opening it like a fan, nods his head two or three times, and then starts off on another hopping excursion; and if anything particular attracts his attention, he looks at it with only one eye, turning his head into a position for this purpose; this is a peculiarity which is not found in a Redstart.

Young birds taken from the first nest make the best singers, but should be kept apart from other birds, as they readily acquire their notes, and rarely sing their natural song afterwards. There is a marked difference between individual specimens of Nightingales, as in other birds, some being greatly superior to others in the variety and melody of their song. When practicable, young birds should be placed under a competent instructor; an old bird, who sings with freedom and vigour his wild, woodland notes, is to be preferred before all others.

DISEASES AND THEIR TREATMENT.—After moulting these birds have a tendency to obesity and drowsiness, and at such times do not partake of their food with any relish. When this is found to be the case, give them each two or three mealworms, or worms found in pigeon lofts, and two or three spiders, twice a day; this will purge and cleanse them. During this time they should be kept warm, and a few shreds of meadow saffron should be placed in the drinking-trough. When lean, and poor in condition, give them fresh figs, chopped fine, mixed with their regular food, until they recover their lost flesh. After being kept in confinement for two or three years some birds become gouty, for which disease anoint their feet with fresh butter or goose grease as often as occasion may require; this will invariably cure them. These birds are likewise subject to eruptions about their eyes and beaks; the remedy recommended for gout is equally applicable for this complaint. Should a bird become phlegmatic or melancholy, put a piece of white sugar candy in its drinking-water, and resort to insect food, strewing the bottom of its cage with fresh mould, containing a plentiful supply of ants' eggs; also add about fifteen drops of the tincture of lobelia, and ten of whisky or brandy, to their ordinary drinking-water.

Nightingales generally mope a little at the moulting season; the best remedy is a few spiders and mealworms. When suffering from indigestion, or a disordered state of the stomach and bowels, they sit with their eyes partly closed, and not infrequently sleep in the daytime for an hour or two together. Insect food should then be given daily, if procurable, and a little of the infusion of gentian, tincture of rhubarb, and a few grains of magnesia, or carbonate of soda, put into their drinking-water, which will soon revive them. At this period of their lives they must be kept warm, partly covered, and free from draughts of cold air. If at any time a bird be found to be costive, give it a spider or two, which will relieve it. If, on the contrary, it is observed to be purged, put a little prepared chalk in its drinking-vessel.

When a bird appears a little out of sorts, and you cannot diagnose its ailment, twenty to thirty drops of Parrish's Chemical Food may be added to its drinking-water, which latter should be changed daily. Scales on the legs and claws should be frequently removed.

CHAPTER XXXVII.

THE REDSTART.

Sylvia, or *Motacilla phænicurus*, Lin.; *Rossignol de muraille*, Buf.

DESCRIPTION AND CHARACTER.—This elegant and somewhat Oriental-looking bird is called by some people the Shaker, in consequence of its peculiar movements of the body; and in some localities it is designated the Fire Tail, owing to the colour of its caudal appendage. The Redstart is not by any means common in Great Britain, and, consequently, is seldom met with. It is a great acquisition to an aviary of mixed birds, and much admired on account of the beauty and diversity of its plumage, and valued for its docile and social qualities.

It is a very apt pupil, and readily learns the song, or parts of the song, of such birds as the Blackcap, Nightingale, Woodlark, Chaffinch, Canary, and Linnet, and imitates them frequently with considerable accuracy, though its voice is wanting in power and compass to execute the more subtle and difficult passages in the songs of the three first-named. The natural song of this bird is not by any means to be despised. Like the Canary, the Redstart will sing at all hours in confinement. It is a peculiar bird, and almost incessantly in motion, jerking its tail from side to side, bowing its head in a pleasant and graceful way, and moving its body to-and-fro—creating considerable amusement to those unacquainted with its antics. In a cage it becomes exceedingly tame, and shows trust in, and even attachment to, those who attend to its

daily wants, and make a pet of it. But, in order to obtain so desirable a result, it is necessary to procure a young bird, as some of the old ones, when first captured, prove sullen, ill-natured, and almost vicious, and many of them stedfastly refuse to partake of food of any kind for days together, and, in some instances, die of starvation.

A fully-grown specimen measures $5\frac{1}{4}$ in. long, the tail being $2\frac{1}{4}$ in.; the beak is straight and pointed, and black in colour, with a margin of yellow at the sides, or lips; the iris is deep purplish black. Across the upper mandible is a narrow band of black, which is broader in old birds than in young ones; from this line, beginning at the base of the upper mandible, surrounding the eyes, cheeks, chin, and throat, and fringing the upper part of the breast, is a deep black patch or frontal, circular—or, perhaps, more elliptic—in form, the feathers on the throat being tinged or mottled with greyish white. The forehead, from the black line, or band, which surrounds the upper mandible, to beyond the eye, is white; the back part of the head and neck, as well as the back and small wing coverts, are bluish leaden grey, shaded with red; the rump and tail are dusky red; the two middle feathers of the tail are brown; the breast and sides are dull brownish red; the belly and vent are clouded orange or reddish yellow, shaded on the belly and sides with grey. The pen feathers of the wings, and the larger wing coverts, are dark brown, with yellowish brown borders. The shanks are brown, and the feet black.

This is the summer garb. In winter the colours vary, and are not so vivid; the white on the poll disappears after moulting, but is reproduced in the spring.

There is another variety of this bird, known as the Black Redstart, or Black-breasted Redstart, but it is very rarely seen in this country, being only an occasional visitant.

HABITS AND BREEDING.—The Redstart, although pretty generally known throughout Great Britain, is much localised in its haunts, and is more common—though by no means abundant—in the South of England than elsewhere. It inhabits the greater part of Europe and Asia, and is migratory in its habits. It generally reaches our shores about the last week in March, or the first in April, according to the season, and leaves again at the latter end of September

or beginning of October. It is believed to accompany the Nightingale.

On its arrival in this country it takes up its abode in the loftiest trees, and from these pours out its amorous strains; but when a partner has been obtained, it retires at once to some quiet bye-lane or gentleman's pleasure grounds, where there is an abundance of shelter and not much traffic. The Redstart is a solitary bird when at liberty, and in this respect strongly resembles the Nightingale, which is very shy and retiring in its disposition.

It builds its nest mostly in holes in trees, in some broad, deep clump, secure from observation; in a hole, or deep crevice, or fissure in an old wall or building; or beneath the eaves of some uninhabited or little used dwelling-house or other building. The nest is rudely constructed, of a variety of materials—dried stalks of grass, small herbaceous roots, and leaves; wool, horse-hair, and sometimes feathers, are used as a lining. Great caution is needed to prevent the parent birds from discovering that their nest has been observed, and no signs of curiosity or anxiety should be evinced when watching them, or the probabilities are that they will at once forsake their eggs or progeny. They are excessively suspicious and jealous, and take alarm at what, to most wild birds, would be considered trifles.

The hen lays from four to six eggs, of a pale bluish green colour, not unlike those of the Hedge Accentor, but paler in colour, and smaller in size. The young birds leave the nest at the early age of seventeen days, but return to it every night until they are about a month old. The male bird is most attentive in supplying their wants. The hen rarely feeds them after they leave the nest. These birds have two broods in the year.

METHODS OF CAPTURE.—The Redstart may be caught in the same manner as the Nightingale. In hedges which they are accustomed to visit they may be taken, after the termination of the breeding season, with nooses baited with elder berries or ripe currants; or they may be ensnared in spring traps, in the same way as Thrushes and Blackbirds.

FOOD AND TREATMENT.—In a wild state, the Redstart feeds much after the manner of the Robin and Nightingale, and seems to be of a nature partaking of, or, rather, combining

that of both species. It feeds on insects and their larvæ, worms, beetles, slugs, and ripe fruit, and shows a preference for elder berries and currants. In confinement, it will eat the same food as Robins and Nightingales. It shows much liking for sheep's heart and hard-boiled egg, chopped fine, and mixed together, and is also partial to mealworms, maggots, and ants and their eggs. It partakes freely of the prepared foods given to other soft-billed birds, and exhibits a fondness for Compounds No. 1 and No. 2 (see pages 189 and 190), mixed in equal proportions.

REARING THE YOUNG.—The young should be taken at the age of ten or eleven days at most; if left longer, they are liable to become sullen, and refuse to be fed by hand. Feed them with sheep's heart and hard-boiled eggs, minced very fine, and mixed with half the quantity of white bread, finely crumbed, and made into a soft paste. This mixture should be freshly prepared every day, or it will scour them. Do not cram them, for they are very delicate birds, and, if overfed, will eject their food. As soon as they can pick a little, place each one in a cage by itself; but it will be well to give them a little food three or four times a day from the feeding stick, as they cannot eat sufficient at first to sustain themselves. This may be continued for five or six days, and then the Compounds should be gradually substituted. A few mealworms or ants' eggs should be given occasionally for a change, as these are essential to keep the birds in health, as they are not too hardy, and are as difficult to rear and moult as Nightingales. After their first moult there will be less trouble with them, and, when they become acclimatised, they will get more robust and less liable to ailments. They must be kept quite warm until they are fully fledged, as they cannot endure cold.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is not nearly so handsome as the cock; it is not much unlike the Nightingale in its body plumage, but has the red tail of its species, only not so vivid in hue as that of the male bird. On the upper part of the body the female is ashen grey, or greyish brown tinged with russet red. The gullet and throat are greyish white; the breast is dull reddish brown, mixed with pale grey; the belly dirty white. The wings and tail of the female are paler than those of the male

bird, and it is destitute of the beautiful black frontlet which is so conspicuous in, and gives such a singular charm to, the appearance of the cock.

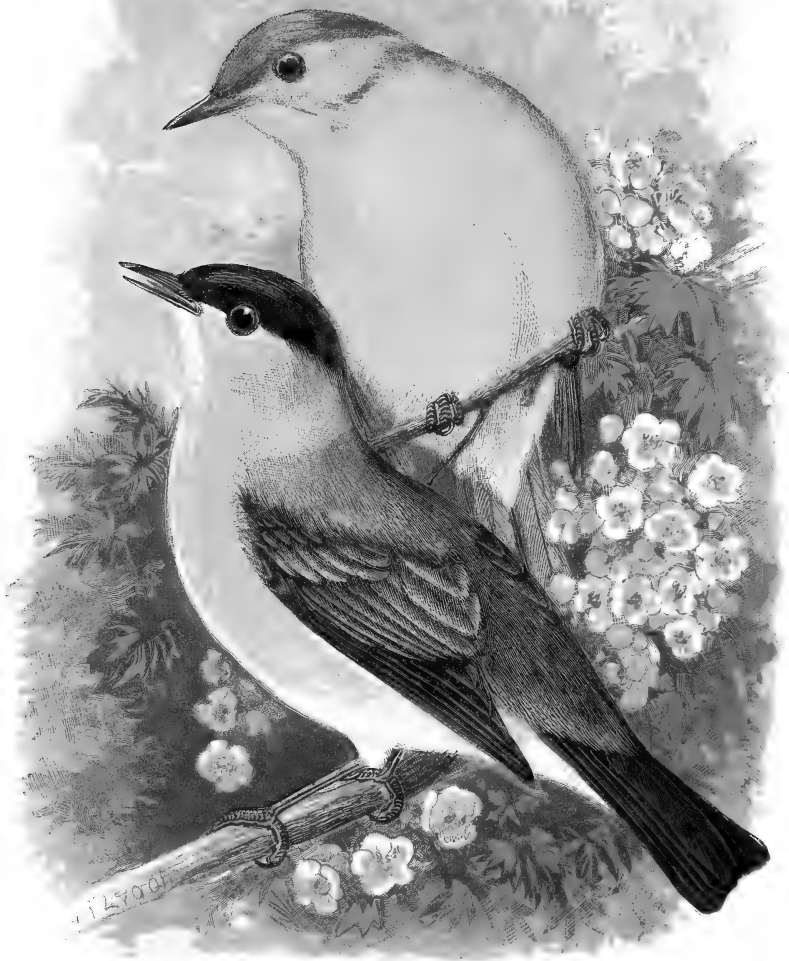
SONG.—The song of this bird is not voluminous, but sweet and clear; to use the expression of an old and experienced birdcatcher, it is “a sort of whistling song.” The Redstart is a mimic, but not to the same extent as that remarkable individual, the American Mocking Bird, its pretensions, as an imitator, being very much more humble. Nevertheless, it is not lacking in this quality, for in a state of nature it picks up, and mixes with its own song, the notes of various other birds. These birds can imitate the Robin’s plaintive melody very accurately, and frequently utter the notes of some of the Warbler species. When taken from the nest, hand-reared, and placed under a good tutor, Redstarts prove very fair, and, in some cases, estimable songsters. Like all other birds, they vary in their vocal powers, some birds far excelling others.

POINTS TO BE OBSERVED IN JUDGING.—Select a bird bright in colour, and well-defined in its markings—a male bird, as hens are of no use for show purposes. Choose one with a rich deep black frontlet and a vividly coloured tail. It should be fine and close in body feathering. The wings and tail must be well formed, free from damage, and closely braced together. The bird should be in the “pink” of condition, bright and healthy looking, robust and active, steady on the perch, tame and tractable, and scrupulously clean. To give it a fair chance of success, it should possess all the points of excellence which have been enumerated.

GENERAL REMARKS.—The Redstart (so named from its having a red tail), although a very beautiful bird, has several drawbacks. It is shy, very peculiar and uncertain in its temper, and exceedingly “huffish.” When offended it is not readily reconciled. It is, likewise, rather delicate, and requires much care and attention to keep in health. It rarely lives more than four or five years in confinement, and almost invariably dies of consumption. These birds may be kept in a cage such as is used for Chaffinches, or in an aviary. It is a rare occurrence for old birds to become reconciled to domestication; whereas young birds not only become tame, but even familiar. Redstarts are most restless birds when in confinement, especially during the period of migration. At this time they

go about the cage or aviary in a most excited and absurd way, as if suddenly demented. In an aviary, when allowed to mix with other birds, they usually keep themselves in good plumage and health. They are difficult to inure to cold, and in winter require artificial heat to keep them in health.

DISEASES AND THEIR TREATMENT. — Redstarts, although somewhat tender naturally, when well cared for remain tolerably free from disease—that is, if a constant change of food is given to them. If fed too exclusively on a meat diet, or if the food given is in the least degree sour, diarrhœa results. These birds appear to be predisposed to this complaint. They are likewise prone to consumption; but this is, in most cases, attributable to their being fed too much on some particular diet, without a change. A few mealworms, or wasp grubs, and ants' eggs, are very conducive to their health and well-being. An occasional bath, when the weather is genial, likewise adds to their comfort and enjoyment, but must on no account be given to them during cold or inclement weather. The longest time I have known a bird of this species to live in a cage is eight years; this, however, may be considered quite exceptional. Fresh sand, or very fine gravel, should be given to them, as this is necessary to promote digestion; a little crushed old lime is also beneficial. They must at all times be kept away from the poisonous influence of gas, which is most detrimental to their health.



BLACKCAPS.
(Male and Female.)

CHAPTER XXXVIII.

THE BLACKCAP.

Motacilla atricapilla, Lin. ; *Fauvette à tête noir*, Buf.

DESCRIPTION AND CHARACTER.—The Blackcap, or, as it is frequently designated, the Mock Nightingale, owing to its ability to imitate the song of that bird with remarkable fidelity and astonishing exactness, is a distinguished and highly-prized bird, not only on account of its fine singing, but also because of its mild and gentle disposition, its sociability, and the ready manner with which it settles down to habits of domestication—almost as cheerfully and confidently as that delightful bird, the Canary. It frequently becomes so tame, after being domesticated, that it will readily take food from the hand of the person who attends to its wants, and this confident disposition endears these birds to their fortunate possessors.

A well-grown adult bird measures $5\frac{1}{4}$ in. in length, the tail being $2\frac{1}{2}$ in. The beak is straight, oval in form, thin and pointed, and is bluish brown in colour. The irides are reddish brown. On the top of the head is a velvety, black, elliptic cap, which descends below the eyebrows, and runs far back towards the neck. The upper parts of the body, and wing coverts, are greenish ash-colour, shaded with grey; the sides of the head, and under parts of the body, are grey, the throat, lower part of the belly, and vent, being almost white. The sides and thighs are similar in colour to the back, but paler. The pen feathers and tail are dark ferruginous brown, margined with the same colour as that on the back. The two feathers in the centre of the tail are rather shorter than the others. The legs and feet

are leaden grey, and the claws black. The plumage of this bird is very silky in appearance, soft, and of rare quality.

HABITS AND BREEDING.—The Blackcap is a true British bird, but is evidently averse to cold, for it rarely ventures as far north as the Midlands. It is, however, pretty generally distributed about the Southern counties of England, and inhabits all the warmer parts of Europe, where it breeds. It is said to be plentiful in Italy. In Germany it is called the Monk, on account of its head-dress. It is migratory in its habits, arriving in this country in April, and leaving again in September, or the early part of October, according to the season. It is known in some localities as the Weather Bird, as it sings most vociferously just before a shower. These birds build their nests in orchards, gardens, gentlemen's pleasure grounds, or in a copse or thicket not far removed from human habitations. The nests are generally built at the foot of a low bush, or thorn edge, and are composed of various materials, according to the locality in which they are found. Some birds use short stubble, grass, dried leaves, and horse-hair; others use dried grass stalks, hay, fine dried twigs, and line with hair or down; others, again, build with dried twigs and root fibre, and, round the top, use moss and wool, lining the inside sparsely with horse-hair (mostly black). The hen lays from four to six eggs (usually five), which vary in colour and markings; some of them are yellowish white, spotted with brown, and mottled with pale orange, while others are pale reddish brown, freckled with a deeper brown, and blotched with a few dark, blackish brown spots. Some eggs are much paler in colour than others, and less freckled and spotted; but this is also the case with those of many other varieties of birds.

Latham, in his remarks on this bird, asserts: "With us it makes but one nest in the year." Olinia says: "In Italy they build twice in the year." They have been known to have two nests in the year in this country; but, as a rule, they only have one. The nest is fixed securely to the bough or branch on which it is built; it is hemispherical in form, firmly put together, and neatly finished. The hen incubates fourteen days. The male takes his turn in sitting. The young birds leave the nest when about twenty-one or twenty-two days old, and do not return to it. The male sings whilst on the nest when he desires the hen to come and relieve him of his charge. The parents feed the young birds chiefly on winged insects, such as moths and flies,

and also on caterpillars. When surprised in the act of feeding the nestlings, they bound off to a tree not far away, and utter, in a loud and rapid manner, their usual call note, "tack, tack." The Blackcap is a gentle, harmless bird, but appears to be much attached to its young, and exhibits considerable fear on its nest being approached.

METHODS OF CAPTURE.—The old birds are exceedingly wary, and difficult to ensnare. After the breeding season, they may be taken in spring traps, baited with ripe currants, elder berries, ripe cherries, or caterpillars; or mealworms may be used when any of the before-mentioned are not readily procurable. The sides of the trap should be well covered with thick cloth, or saddler's felt, so that no injury may be done to the birds. Old birds will not take the bait unless driven to do so by hunger; they are very suspicious, and will hover about the trap for a considerable time before they venture near it. The young birds are not nearly so suspicious or cautious, and, consequently, are more easily caught. Blackcaps may also be taken with limed twigs, and this plan often proves more successful than the spring trap. The place selected should be cleared of grass, &c., and the earth dug up; a few mealworms or berries should then be strewed about, and the twigs carefully placed. In the spring, on their arrival in this country, these birds are occasionally taken with the day net.

When newly-caught, the best foods to tempt them to eat are elder berries and mealworms, placed in a small glass vessel inside the cage. If the birds are very young, they will probably need to be hand-fed for several days. The same method of treatment as recommended for Nightingales should be resorted to with these birds. When once they begin to feed, they will soon become settled and cheerful.

FOOD AND TREATMENT.—The natural food of Blackcaps is insects and their larvæ; they likewise feed on fruit and berries. They eat cherries and ripe currants greedily, as well as strawberries, raspberries, and elder berries, and, when these are not procurable, spurge (a species of laured), laurel, service, and ivy berries.

In confinement, they may have bread and milk (scalded, not boiled), mealworms, and ants' eggs. In the summer time, they should have a plentiful supply of ripe fruit, especially during the period of the moult; and a spider or two, given

once or twice a week, varied with ants' eggs, flies, and mealworms, will revive and cheer the birds wonderfully. Blackcaps are rather voracious, and in the aviary usually partake of the different kinds of food given to other soft-billed birds. It is advisable to gather some of the various sorts of berries that these birds enjoy, and to preserve them in covered jars, or tins, for winter use. A few of these, steeped for a few minutes in warm water sweetened with sugar, and placed in the feeding trough, with a supply of live mealworms, will be greatly enjoyed. Some fanciers give their birds crushed hemp seed, and bread soaked in milk, and they appear fond of it; but it is not good, as hemp seed is too fattening, and, unless the husks be removed, indigestible, and consequently injurious.

These birds will eat most kinds of fruit, and enjoy a roast apple sweetened with honey. Boiled carrot, mixed with wheat meal and milk, makes a change of diet for them in winter. If the carrot be placed in a basin of pure cold water it can be kept fresh for several days; the water should be changed every night or morning. Blackcaps will partake of boiled vegetables, such as cauliflower, curly greens, or young cabbage.

The following preparation will be found beneficial and useful when insects and fruit are scarce, or not procurable, and forms an excellent substitute: Take two newly-laid eggs, a breakfast-cupful of fresh new milk, two tablespoonfuls of moist sugar, and a tiny pinch of salt. Whip the eggs well, with a wire egg whisk, in a basin, then add the milk, and lastly the sugar and salt; beat the whole well together with a tablespoon, put it in a pie-dish, and bake in an oven until it is nicely browned (not burnt) and well stiffened. This compound will keep good for a few days, and the birds will enjoy it. If they are moulting, dissolve two pennyworth of saffron in a wineglassful of water, and afterwards evaporate as much of the water as possible; then add a teaspoonful of brandy or rum to the mixture. This quantity is sufficient for ten or twelve birds for three or four days.

The Blackcap is a tolerably hardy bird, and will live in confinement, with good attention and a frequent change of diet, for a period varying from six to sixteen years, or even longer in exceptional cases. One drawback to this bird

is that it frequently damages its plumage, and we consider it unsuitable for an aviary of mixed birds. Its movements, although active, are very undignified—nay, I might almost say clumsy, for when it hops along its belly almost touches the ground, and hence the bird is apt to get its plumage soiled. It seems aware of its awkward method of locomotion, and rarely leaves the branch or perch which it has selected (usually in a retired corner), excepting for food and water.

It should be kept in a boxed cage, wired in front only, and with the perches placed low. One about 16in. long, 13in. or 14in. high, and 9in. deep, will be most suitable. The top should be made to open back on hinges, and secured by small brass or wire hooks and eyes. The cage should be padded in the same manner as the back of a railway carriage or an easy chair, to prevent the bird injuring itself. This is especially desirable in the case of newly caught birds, and during the period of migration, as they are very restless at this time, and dash about the cage in an alarming manner, particularly towards evening, darting upward and forward, regardless of all consequences, often continuing in this state of excitement for hours together, and thereby injuring themselves. The cage should be cleaned out once a week, and an abundant supply of sand or gravel provided, as this is most essential to the health of the birds. Blackcaps are very fond of a bath, and should be supplied with one at least every week during mild and genial weather. They endure cold fairly well, but in the winter artificial heat will add greatly to their comfort and well-being, though they must be kept away from the pernicious influence of gas, which will cause them to moult out of season, and do them a lasting injury. The Blackcap is cheerful in confinement, and soon becomes accustomed to a state of domestication.

REARING THE YOUNG.—Take the young when ten days old; certainly not later than twelve days, or they will, most probably, refuse the food offered to them. Feed on bread soaked in warm milk (it must not boil), and give some of the custard meat recommended for older birds; when they reach the age of three weeks, give a few ants' eggs. As soon as they can pick for themselves, give them the yolk of a hard-boiled egg, mixed with a few chopped mealworms, or

a piece of roast lean meat, sliced very fine; and as they get older (six weeks and upwards), gradually accustom them to the food recommended for adult birds kept in confinement. Keep them warm and snug, and provide a constant supply of fresh sand as soon as they can pick. When six weeks old, separate them, and place the males in cages by themselves.

DISTINGUISHING MARKS OF COCK AND HEN.—The hens may be readily distinguished from the cocks by their reddish chestnut caps; they are in most cases larger than the males. The wings, back, and tail, are paler in colour than in the adult male. The belly of the hen is reddish grey.

The young males, however, are difficult to distinguish from the females, except by an experienced person. They will be found, on close examination, to be darker in the cap, and slightly deeper in shade in the colour of the body and other feathers. To be quite certain, pull out a few feathers from the top of the head, when, in the case of males, the new feathers will be produced quite black.

SONG.—The Blackcap is a superb songster, and by some people considered equal to the Nightingale. It is not so, however, as its voice is less voluminous in sound. The bird does not enunciate its notes so perfectly or so tenderly; neither is its voice so mellow or plaintive, or of such compass, as that of a prime specimen of the *Motacilla lusciniæ*, and never displays the same amount of execution. The voice of the Blackcap is, however, purer in tone than that of the Nightingale, being exceedingly flute-like. Its song is well connected, and the notes varied and pleasing. The Blackcap is a great imitator, and frequently blends with its song the notes of other birds, more especially those of the Song Thrush, Blackbird, and Titlark. Young Blackcaps, reared by hand, and trained under a good singing Nightingale, would probably sing the song of that bird perfectly, as they are apt pupils, and appear to possess retentive memories. The natural song of a superior specimen of the Blackcap is very beautiful.

The Blackcap possesses one important advantage over the Nightingale, in that it will sing at all hours of the day, and until the shadows of twilight are fast merging into darkness. Again, it commences its song with the first soft rays of flickering morning light, long before Sol has shone forth his glistening

crescent of luminous gold on the far distant horizon. Yet another advantage may be claimed for this bird: it will, if caught in the spring, commence to sing before it has been caged many days, especially if put into a room occupied by other birds, will continue to sing until the moulting season, and when freed from that malady will recommence its song. In a wild state, it sings from its arrival in this country, in April, until the end of June or beginning of July.

POINTS TO BE OBSERVED IN JUDGING.—Good shape; close, compact, unbroken feathering; a well-defined, broad, glossy black cap; body colouring clear, distinct, and bright. The tail and wings should be perfect in feather—none being broken or twisted; toes and nails straight; eyes bright and clear; bird steady on perch, and tractable. Good condition and cleanliness are essential.

GENERAL REMARKS.—The Blackcap is a somewhat rare bird, and much valued by the cognoscenti of the bird-loving world. Newly-caught males may be obtained at from 7s. 6d. upwards, according to their merits, the length of time they have been caged, and the prowess they display as musicians; but a hand-reared bird, highly trained, and an exquisite songster, will often bring several pounds. The female, as well as the male bird sings, but the song of the hen is very inferior to that of the cock. The Blackcap sings all the year round in confinement, excepting during the period of moulting.

Although having a penchant for a little ripe fruit, this bird is, nevertheless, a most useful helpmate to the gardener, as it is industrious in the destruction of flies and insects injurious to fruit blossoms. These birds would probably breed in confinement, under suitable conditions.

If kept in an aviary, a small border of earth, turned over frequently, with a few maggots or small worms sprinkled over it, will be greatly enjoyed. A good feeding-trough for an aviary containing several different species of wild birds is one 12in. in length, 2in. or 2½in. broad, and ¾in. in depth. This should be made of glazed white earthenware, and divided into four or six compartments, in each of which a different kind of food can be placed. It is then easily ascertainable which food the different birds prefer. The trough should be carefully washed out every day, and only one day's supply of soft food given at a time. If glazed earthenware feeding vessels are not procurable, use small glass dishes.

Blackcaps are very sensitive and susceptible birds, and at times lose their feathers on the slightest change of temperature; for instance, if a bird of this species, which has been kept in a warm room, be suddenly placed in the open air, even in the direct rays of the sun, before the weather is quite warm, and where the temperature is a few degrees lower than what it has been accustomed to, it will commence to moult, and probably keep on losing feathers until the period arrives at which it would cast its coat according to the law of Nature.

DISEASES AND THEIR TREATMENT.—Blackcaps are prone to the same ailments as their congeners, the Nightingales, Whitethroats, Fauvettes, &c., but, with the exception of the Whitethroats and Robins, are probably the hardiest of their tribe. They live to a good age when properly looked after and cared for.

The moult is, perhaps, the most trying period of their existence, if they are neglected. Give insect food liberally at this time, and a frequent change of diet; ants' eggs, mealworms, flies, and occasionally a spider, have a very salutary effect in cheering and invigorating them. Keep them quite warm during this period, and moult them in a box cage partly covered with baize. Put a rusty nail and a few shreds of saffron in their ordinary drinking-water.

Consumption is caused by neglecting to give them a constant change of diet, a frequent bath, an abundance of river sand or fine gravel, and a liberal supply of fresh air; also by depriving them of the direct rays of the sun at seasonable times.

CHAPTER XXXIX.

THE WHITETHROAT.

Motacilla cinerea, Lin. ; *Le Fauvette grise ou grisette*, Buf. ;
Motacilla sylvia.

DESCRIPTION AND CHARACTER.—The Whitethroat is a neat, delicate, and refined-looking bird, and has a pleasant, attractive song. It is very cheerful and lively, and seems quite at home in an aviary among other soft-billed birds of the Sylvidæ tribe, though it is best to keep it in a cage, and treat it in all respects the same as the Nightingale.

Like some others of the species, such as the Redbreast, it is of a pugnacious disposition, especially during the breeding season ; at this time it will attack birds twice its own size, if they approach its nest too closely, and drive them away. When the male bird is excited by anger, he erects the feathers on his head, in the same manner as the Skylark does, and puts himself in an attitude of defiance, ready to assail such birds as venture too near his chosen habitation.

In an aviary, they do not show so much pugnacity, but can take their own part if attacked by other birds.

An adult specimen measures $5\frac{1}{2}$ in., the tail being $2\frac{3}{4}$ in. The beak is brownish black ; the base of it is grey, and the lips yellow. The irides are yellowish hazel. The head, neck, and cheeks, are pale brownish grey, this colour being darkest on the forehead. The back, lesser wing coverts, and tail, are reddish brown, shaded with grey ; the rump is the same colour, but paler and brighter. The throat is white ; the breast, upper part of belly, and sides, reddish white ; and the vent, and lower

parts of the belly, white. The wings and tail are dark brown, edged with pale reddish brown. The exterior tail feathers are white on the outer edge; the inner web is also white midway from the base; the adjoining feathers on each side have a white spot near the tips. The larger wing coverts are dark brown, with a broadish border of russet or reddish brown. The legs and feet are pale fleshy brown.

HABITS AND BREEDING.—The Whitethroat is a bird of passage, and is pretty generally distributed throughout Europe. It is well-known in some parts of France, where it is named *Le Passerine*. It arrives in this country about the middle of April, and leaves again at the latter part of September, or beginning of October, according to the mildness or otherwise of the season, and the direction of the prevailing wind, for these birds do not attempt to leave so long as contrary winds prevail; their instinct never appears to mislead them in this matter. As in the case of the other varieties of the *Motacilla* family, the males precede the females by about a fortnight in their migration.

These birds greatly resemble Nightingales and Robins in their mode of living, as they are of a retiring and solitary disposition, each pair selecting for themselves some particular place or location; and, when once settled, they defend their circumscribed boundary with all their strength and vigour. In selecting a mate, they act in a manner very similar to the Nightingale; but, unlike that bird, sing best after they have found one. After mating, these birds retire either to a garden, grove, thicket, common, some secluded bye-lane, or to a well-grown hedge or bush, situated on the outskirts of a plantation; to a shrubbery, or other part of a gentleman's pleasure ground; or to the side of a hill thickly clothed with brambles and underwood, or wild plants. They build their nests near the river's edge, on the side of the bank, and sometimes in a low bush almost obscured by tall grass. Others build in bulky, overgrown hedges, always near the bottom; or just inside woods, among underwood or brambles, or in a briar or wild rose bush. The nest is composed of dry grass, hay, herbs, or moss, and is lined thinly with hair or feathers; it is somewhat deep, but rather loosely put together. The hen lays from four to six (usually four or five) greenish grey eggs, which are spotted with olive grey and reddish brown; she incubates fourteen days.

When the female is startled from the nest, she affects lameness, and flies, like a bird with a maimed wing, a few yards at a time, in order to allure anyone to pursue her, and thus entice them away from the locality of her domicile. If either of the parent birds, when catering for their young, should find, on returning to them with a supply of food, an intruder in the vicinity of their offspring, they will not betray them by approaching the nest, but will remain at a distance for a very considerable time, waiting until the interloper has retired. The Whitethroat is naturally bashful and timid, and seldom comes near human habitations, especially during the breeding season. During the period of incubation the male makes short aerial flights, singing as he flies, and invariably returns to the same bush or tree from which he ascended. The call notes of these birds vary considerably.

In the spring, Whitethroats are useful to horticulturists, as they live at that time almost exclusively on insects; but as the summer advances, and the fruit ripens, they become mischievous and destructive, as they eat strawberries, raspberries, currants, &c., and appear to live almost exclusively on these delicacies while they last. Whitethroats do not show any disposition to breed in confinement when in company with other birds; but if they were kept by themselves, and under very favourable conditions, it is not improbable that they might be induced to try, though only those which have been hand-reared and aviary-moulted would be likely to do so.

METHODS OF CAPTURE.—Whitethroats may be taken, in the spring, in an ordinary trap cage, baited with a caterpillar; or with limed twigs, either placed about bushes which they frequent, or on a sand bed, by a river or brook, which latter spot is a favourite one with these birds, who visit such places several times a day to pick up the fine gravel intermixed with the sand, or to give chase to flies, which accumulate there in the hot weather. Birdcatchers frequently place limed twigs about their nests; but this is a cruel practice, and no right-thinking person would have recourse to such a plan. In fact, the birds should only be caught prior to, or after, the breeding season.

FOOD AND TREATMENT.—The Whitethroat, when in a state of nature, lives on small insects—aphides, flies, moths, caterpillars, garden beetles—and berries of various kinds. In con-

finement, it will eat bread and milk, and is fond of bread and figs, or bread and dates. A few house flies (*Musca domestica*) should be gathered in the summer, when they are plentiful, and kept, in glass-stoppered bottles, or paper bags, in a dry place. In the winter time, a few of these should be occasionally moistened in warm water sweetened with sugar, and given to the birds. Small green caterpillars, meal-worms, and butterflies, are favourite morsels, and should be given freely during the moulting season. Whitethroats will eat Compounds No. 1 and No. 2, mixed (*vide* pages 189 and 190), and should also be given, about once a week, a little yolk of hard-boiled egg, and a small piece of finely-chopped lean beef (raw or cooked). They should have a bath frequently, and a plentiful supply of sand and gravel. The birds can be trained to eat from the hand when reared from the nest.

REARING THE YOUNG.—The young should be taken at the age of ten days, and treated in all respects the same as young Nightingales. Before moulting they have brown heads, and the males are then minus the rose hue on the breast.

DISTINGUISHING MARKS OF COCK AND HEN.—The females may be known from their breasts and bellies being entirely white; they are not possessed of the delicate white throat which is such a prominent feature in the male.

SONG.—The Whitethroat sings in a lively and jocund manner; the first part of the song is pleasant, the latter somewhat shrill, but very distinct. The song may, however, be greatly improved if the bird be brought up under the tutorage of a Blackcap or Nightingale. It possesses a good memory, and shows considerable courage and determination when challenged by a Linnet, Chaffinch, or other bird, to sing; in fact it is difficult to silence when once its combativeness is aroused. In the aviary, it frequently makes a short, circuitous tour on the wing, singing the while. When it sings on the perch, its wings will be seen to be moving up and down rapidly, and its body to be jerked forward, as if it were about to fly away.

POINTS TO BE OBSERVED IN JUDGING.—Select a well-formed specimen, with a graceful carriage. The body-feathering should be close and tight-fitting, and the markings clearly defined. A pure white throat and belly are essential points in this variety.

The back, wings, and tail ought to be deep, rich, pure, and bright in colour, with a fine luminous grey pervading the head, neck, and back, and a bright pink or rose tint the breast. The wings and tail must be perfect, well-carried, and braced closely together. Good condition and cleanliness are indispensable. The toes and claws should be perfect in form, and the bird steady on the perch and tractable.

GENERAL REMARKS.—The Whitethroat, although much esteemed by a great many people, is not so popular as some of its *confrères*, owing, no doubt, to its extreme shyness, and somewhat delicate constitution; still, it is probably as hardy as any of the *Motacilla* tribe, the Robin excepted. It will not winter out of doors without the aid of artificial heat, unless during an exceptionally mild winter; for this reason, few people, excepting those who may appropriately be termed true fanciers, care to bestow the trouble necessary to keep birds of this species in health and vigour—viz., giving them a constant change of diet, a bath frequently, and regularly cleaning out their domicile at least once a week. Without these precautions and attentions they are short lived; but with care, and a due regard being paid to their wants, they may be kept in health for periods varying from eight to twelve years.

DISEASES AND THEIR TREATMENT.—The moult, as a rule, is the most dangerous complaint to which the Whitethroat is liable. It requires much attention at this period of its existence, a constant change of diet being indispensable. Feed these birds as nearly as possible on the same food as they are accustomed to eat when at liberty. Place them in the sun, on warm, genial days, for an hour at a time, and keep them very clean, and well supplied with sand and a bath. Whitethroats are liable to the same diseases as Nightingales, Blackcaps, Fauvettes, and other birds of the same species. *Vide* also Chapter V., on "Diseases."

CHAPTER XL.

THE FAUVETTE.

Motacilla hortensis, Lin.; *Fauvette*, Buf.

DESCRIPTION AND CHARACTER.—The Fauvette, or Pettichaps, is rather a scarce bird in this country, and would seem to be nearly allied to the Whitethroat. It is considerably localized, and is probably most plentiful in some parts of Lancashire, Cumberland, and Westmoreland. It is an excessively timid bird, and seldom seen by the casual observer, as it hides itself in thick hedges and dense masses of underwood. It has a lovely voice, and is otherwise a pleasing bird, but of sombre appearance.

A fully-grown specimen measures 6in., of which the tail is 2½in. The beak is brownish black, the base of the under mandible being somewhat paler. The upper part of the body is greyish brown, the head being a few shades deeper in colour than the back. The pen feathers are brownish ash colour, with a tinge of russet, and edged with grey; the wing coverts are of the same colour. The tail is greyish brown, edged with a paler brown, the two exterior feathers being greyish white on the outer web, and also near the tip on the inner web; the adjacent feather on each side has a white tip. From the base of the bill, passing over the eye, is a streak of pale grey. The breast and belly are white, tinged with pale red. The sides and thighs are greyish white, and the legs dark brown.

HABITS AND BREEDING.—The Fauvette, though somewhat rare in England, is plentiful in France and Italy, where it frequents gardens and fields. It has been known to build its nest among rods put up to support the peas, but generally does so in a bush

near the ground. In England it frequents thickets, and is seldom seen out of covert, making its nest near the ground, among brambles or thorns. The nest is composed of dried grass, root fibre, herbs, and moss, and is lined with hair or down. The hen lays from four to six eggs, of a greyish white colour, irregularly marked with brown and black spots; she incubates fourteen days, and the young leave the nest when about nineteen days old. The Fauvette is a bird of passage, and arrives in this country about the latter part of April, leaving again about the end of August, or early in September.

METHODS OF CAPTURE.—These birds, being naturally wild and suspicious, are difficult to capture. In the spring, however, they may be taken in gentlemen's gardens or pleasure grounds which they frequent, by clearing a piece of ground in a quiet, secluded spot, and baiting it with ants' eggs or caterpillars, first placing limed twigs round about, and using a Whitethroat in a cage as a decoy.

FOOD AND TREATMENT.—In the spring, the Fauvette feeds on the small insects to be found on trees, plants, and shrubs. It is very partial to strawberries, raspberries, and cherries, but will eat ripe sweet fruit of any kind. In confinement, it may be fed in the same manner as the Whitethroat.

REARING THE YOUNG.—The young ought to be secured at the age of nine or ten days, and fed and treated the same as young Nightingales.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is rather smaller than the male, and paler in the various colours of the plumage. The brown on the upper parts of the body of the hen is greyer, and more dingy in appearance, than that on the cock.

The throat and belly of the male bird are almost silvery white, slightly tinged with pale red. In the female, the under parts of the body are paler and duller, and the tinge of red is scarcely perceptible.

SONG.—The Fauvette, though not naturally a good songster, is a great imitator, and will learn and repeat the notes of various other birds, including those of the Hedge Accentor, the Song Thrush, the Swallow, the Blackbird, &c. It usually sings in a thick bush, obscured from view, and ceases on hearing anyone approach. When a male Fauvette is obtained young, and reared under a Nightingale or a Blackcap, it makes a good

singer. If kept in a room with a number of birds of different sorts, it will sing a medley composed of the various notes of their songs.

POINTS TO BE OBSERVED IN JUDGING.—This bird is not fitted by Nature for a show bird, as it is clad in a garment of a grave and solemn character. Its musical capability is its greatest attraction. If, however, a bird be required for exhibition, choose one with the following points: Good shape, erect carriage, clear and distinct colours of plumage; close, compact feathering of the body; well-formed wings and tail, closely braced, and well carried; claws perfect. Condition and cleanliness are imperative.

GENERAL REMARKS.—Owing to the difficulty of obtaining Fauvettes, and to the fact of their being somewhat tender, and difficult to keep in health and song, they are not so much sought after as they would otherwise be, considering how capable they are of being made into fine musicians. They thrive well in an aviary, but do not sing so fluently there as when kept in a cage; and, as they are prized chiefly on account of their song, the latter place is to be preferred.

DISEASES AND THEIR TREATMENT.—Fauvettes are subject to the same ailments as the Blackcap, Whitethroat, and Nightingale, and the treatment and remedies recommended for these varieties should be resorted to in their case likewise. See also Chapter V., on "Diseases."



CHAPTER XLI.

THE LESSER FAUVETTE.

Motacilla hippolais, Lin.; *Lesser Pettychaps*, or *Beccasigo*, Will.

DESCRIPTION AND CHARACTER.—The Lesser Fauvette, or Arbour Bird, is more often met with than the species treated of in the preceding chapter, and differs from it a little in plumage and in size; its song, also, is less powerful; but in other respects the two varieties greatly resemble each other.

A fully-grown bird measures $5\frac{1}{2}$ in. in length, the tail being $2\frac{1}{2}$ in. The upper mandible is blackish brown, and the under one bluish. The iris is pale brown. The head, neck, and upper parts of the body are greyish brown, tinged with olive green. Above and below the eye runs a pale yellowish line. The wings and tail are greyish brown, bordered with pale greyish green; the shafts of the feathers are black. The under wing coverts are pale yellow. The belly, sides, and vent are white; the breast is darker in hue, being tinged with pale yellowish brown. The legs are greyish brown.

HABITS AND BREEDING.—The Lesser Fauvette is a bird of passage." It is to be met with in several parts of England, but is more plentiful in the South than in the North. The nest of this bird is made of dried grass stalks, root fibres, moss, and feathers, is arched in shape, and placed near the ground, at the bottom of a bush—generally a whitethorn, wild rose, or bramble. The hen lays four or five greyish white eggs, which are irregularly spotted and marked with reddish and dusky brown.

METHODS OF CAPTURE.—The Lesser Fauvette, like its bigger

brother, is best taken by placing a Whitethroat, in a cage, on a piece of cleared ground, in a quiet spot where the birds frequent, and scattering limed twigs and mealworms round about. The Whitethroat calls these birds to the spot, when they see the mealworms, and, in attempting to make a meal of them, get attached to the limed twigs.

FOOD AND TREATMENT.—These birds, in a wild state, eat the same foods as the Greater Fauvette. In confinement, they should be fed on the same diet as recommended for that bird. The treatment in all respects should be the same.

REARING THE YOUNG.—The young should be taken at the age of nine or ten days, and treated and fed in the same manner as young Nightingales (*vide* Chapter XXXVI., p. 261).

DISTINGUISHING MARKS OF COCK AND HEN.—The female is smaller than the male, and the hues of her plumage are paler and duller; the markings above and below the eye are also paler, and less conspicuous.

SONG.—The song of this bird is less powerful, and not so well executed, as that of the larger variety, but is, nevertheless, pleasing, and capable of great variation, as this species copies the notes of the various birds whose songs it is accustomed to hear.

POINTS TO BE OBSERVED IN JUDGING.—Size, contour, carriage; clearness and intensity in the colours of the plumage; close body feathering; well-formed wings, tail, and claws; condition and cleanliness. One great point to be observed is a silvery white breast; and another, well-formed and distinct markings.

GENERAL REMARKS.—The Lesser Fauvette is not an attractive bird so far as its external appearance is concerned. Like the Nightingale, its beauty consists in its fine song. The male birds sing very freely, and soon become docile and tractable. These birds should be kept in cages, as they then sing much better than when in aviaries.

DISEASES AND THEIR TREATMENT.—See the remarks under this heading in the preceding chapter, as they are equally applicable to this variety.

CHAPTER XLII.

THE REED FAUVETTE.

Motacilla salicaria, Lin.; *Le Fauvette de roseaux*, Buf.

DESCRIPTION AND CHARACTER.—The Reed Fauvette, Sedge Bird, Sedge Warbler, or Sedge Wren, as it is variously named, is a lively, pert bird, and is often kept in an aviary with birds whose habits are analogous to its own. Those persons who have been accustomed to visit the sides of rivers, on angling excursions, or on boating expeditions, can scarcely have failed to notice the familiar and almost ceaseless song of this bird, in which occur the frequently-repeated notes, “Chit, Chit,” “Chiddy, Chiddy, Chiddy,” the latter being pronounced as plainly and distinctly as possible. The Reed Fauvette is much bolder, and more familiar, than the generality of its tribe, and will alight and commence its song within a few feet of an angler busily engaged in the exercise of his fascinating pursuit.

A fully-grown bird measures 5in. in length, of which the tail is $2\frac{5}{8}$ in. The bill is blackish brown. The iris is hazel. The head, hinder part of neck, and back, are brown, streaked with blackish brown, the neck and back having a rufous tinge. The cheeks are brown. Over each eye is a streak of straw colour, and above these others of blackish brown. The wings, wing coverts, and tail, are dusky brown, edged with pale yellowish brown; the rump is yellowish brown. The throat, breast, and belly, are dirty white, the latter being tinged with pale yellow. The thighs are yellow; the legs are brownish black, and the hind claws long, and much hooked.

HABITS AND BREEDING. — Reed Fauvettes are birds of

passage, arriving in this country in April, and leaving again in September or October. They are pretty generally distributed throughout England, but somewhat rare in the greater part of Scotland. They are to be found mostly about marshy places, or at the sides of lakes, rivers, streams, and pools, as they live chiefly on aquatic insects.

The Reed Fauvette builds its nest in reeds and sedges at the sides of pools, ponds, lakes, rivers, or tributaries of rivers, and sometimes in a low bush on the margin of a stream. The nest is formed chiefly of dried grass or straw and the fibres of plants, and is lined with hair; it is a huge construction, indifferently put together. The hen lays from four to six eggs (usually five), of a dirty greenish white colour, marked irregularly with brown and dusky grey. The male assists in the process of incubation. The young birds, if disturbed, leave the nest at an early age, as is the case with all the species of the Fauvette, they being naturally of a nervous and timid nature.

METHODS OF CAPTURE.—These are essentially the same as pursued in the case of Whitethroats.

FOOD AND TREATMENT.—In a state of Nature, these birds live principally on flies, moths, and aquatic insects. In confinement, they should be fed on bread and milk, mealworms, flies, and caterpillars. They will eat the Compounds No. 1 and No. 2 (*vide* pp. 189, 190), mixed together, but require a supply of insect food frequently, or they will die of decline.

REARING THE YOUNG.—These birds should be reared in the same manner as recommended for young Whitethroats.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is paler in colour throughout her entire plumage than the cock; the top of her head, however, is browner, and the rump and tail coverts duller, than those of the male, being of a whitish brown.

SONG.—The Reed Fauvette imitates the notes of several distinct species of birds, and on this account has been called by some the “English Mocking Bird.” It sings pretty well all day long, and in the breeding season until late at night. The song is a lively one, but generally short and hurried, and not well sustained, though the voice is soft and mellow, and nicely modulated.

POINTS TO BE OBSERVED IN JUDGING.—This bird is not adapted for the show bench, and consequently is not used for exhibition purposes.

GENERAL REMARKS.—The Reed Fauvette is best kept in an aviary. It thrives well when placed with the Whitethroat and its kindred species, and seems contented and happy so long as it gets a plentiful supply of insect food. In winter, when insects are difficult to procure, it will eat preserved flies readily; and if these are given with a few mealworms and a little chopped egg, breadcrumbs, and bruised hemp seed, or a little chopped sheep's heart, it gets along fairly well.

DISEASES AND THEIR TREATMENT.—The Reed Fauvette is subject to the same disorders as the other birds of this species, which includes the Motacillas generally, and the treatment, therefore, must be the same. *Vide* also Chapter V., on "Diseases."



CHAPTER XLIII.

THE BABILLARD.

Motacilla curruca, Lin.; *Motacilla curruca*, or *La Fauvette Babillarde*, Buf.

DESCRIPTION AND CHARACTER.—The Babillard, or White-breasted Warbler, is a neat, lively little bird, and greatly resembles the Whitethroat in appearance. It is not, however, considered by some to be such a pleasing songster as that bird, although greatly esteemed by some fanciers on account of its vocal accomplishments. It is a docile, tractable bird, when hand reared, and becomes much attached to those who attend to its wants. It soon becomes reconciled to domestication, and, with a little attention, can be rendered free and familiar. In a wild state, however, it is very shy, and difficult to approach.

A fully-grown specimen is 5in. in length, of which the tail measures $2\frac{1}{4}$ in. The beak is long, thin, and pointed, the upper mandible being black, and the lower bluish black. The iris has two rings, the outer one yellowish white, and the inner yellowish brown. The head is rufous grey; the cheeks are the same colour, but darker. The rest of the upper part of the body is grey, with a tinge of red; the rump is a few shades darker, and redder. The throat, breast, belly, and vent, are white, the sides of the breast being tinged with red. The wings are dark brown, edged with reddish grey; the smaller coverts are pale brown, and the larger ones dark brown, margined with rufous grey. The tail is dark brown, the exterior feathers having a white spot near the tip; the others are bordered with russet grey. The legs are dingy coloured, and the feet blackish blue.

HABITS AND BREEDING.—The Babillard is a migratory bird, arriving in England in April, and leaving again in September. It is found in most parts of Europe, and is common in France and Germany. It frequents gardens, orchards, and woods, in the latter case living among the low dense underwood. It builds in gooseberry or whitethorn bushes. The nest is composed of stalks of grass and root fibres, and is lined with hair, or the bristles of swine. The hen lays five or six whitish eggs, which are spotted profusely at the larger end with grey and yellowish brown; she incubates fourteen days. The parent birds are much attached to their offspring. If anyone approaches the nest during the period of nidification, the hen becomes paralyzed with fear, utters a wild cry, dashes out of the nest to the ground, and flutters about helplessly, screaming with terror. The young birds of this variety will spring from the nest, if disturbed, when only ten or twelve days old, when they have scarcely any feathers to cover them, and will run into any place they can find, to obtain shelter.

METHODS OF CAPTURE.—The same means must be resorted to as recommended for capturing Fauvettes.

FOOD AND TREATMENT.—The Babillard is an insectivorous and fruit-eating bird. It feeds on small insects of all kinds, and also their larvæ, and appears partial to the small green caterpillars found on gooseberry bushes and cabbages. It eats currants, elder berries, cherries, plums, pears, apples, apricots, and ripe gooseberries. In confinement, it may be fed in the same manner as the Nightingale, Whitethroat, or Fauvette, but must have an abundant supply of mealworms, ants' eggs, preserved flies, &c., or it will soon get out of condition, and cease to sing. It may have a little bread and milk, and bruised hemp seed, or a sprinkling of maw seed, as a change of diet, and will soon get accustomed to the Compounds No. 1 and No. 2, recommended for the Starling (*vide* pp. 189, 190). Although a delicate bird, it bears the cold fairly well. With care and attention it may be kept in confinement three or four years, or even longer.

REARING THE YOUNG.—The young of this variety should be taken when eight or nine days old, and reared in the same way as recommended in the cases of the Nightingale and the Whitethroat.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is rather smaller in size than the cock, and less vivid in the hues of

her plumage, this being more particularly observable about the head.

SONG.—This bird sings rather like the Fauvette. The song is scarcely so agreeable, though it improves with age, or if the bird be hand reared, and trained under a Blackcap or Nightingale.

POINTS TO BE OBSERVED IN JUDGING.—The Babillard is not considered sufficiently attractive for the show bench, and would have a very poor chance of obtaining a prize in a mixed class of British birds. Shape, colour, compactness of feathering, and well-defined markings, are among the chief points to be looked for.

GENERAL REMARKS.—The Babillard is a pleasing and attractive little bird, and makes a nice variety for an aviary, though, on account of its delicacy, it never lives long when kept with other birds. Its life may be considerably prolonged by keeping it in a cage, and feeding and treating it in the same manner as the Nightingale.

DISEASES AND THEIR TREATMENT.—These birds, being of the same species as the Fauvettes, are liable to the same ailments, and require the same treatment in all respects. They generally die, at the moulting time, of consumption.

CHAPTER XLIV.

THE ROBIN.

Sylvia rubecula, Lin.; *Rouge Gorge*, Buf.; *Das Rothkelchen*,
Bech.; *Erythaca rubecula*; *Motacilla rubecula*.

DESCRIPTION AND CHARACTER.—This familiar bird, so much endeared to everyone who delights in our feathered choristers, is somewhat comely to look upon, and has a very sweet and plaintive song, although, from the dolorous way in which it is uttered, it is somewhat tinctured with melancholy. The Robin is very social in his disposition, visiting frequently those houses in country places to which a garden is attached; and he also comes hopping around the doors of those people who supply him with food in the winter time, when the frost and snow prevent him obtaining his usual food in the fields and gardens. He will frequently, if the door of a house be left open, venture inside, for he is a bold fellow, and as courageous as any bird living. He is faithful to those who befriend him, and quite capable of appreciating any acts of kindness shown to him, and will generally reward his benefactors with a degree of confidence rarely found in other birds. The Robin averages $5\frac{1}{2}$ in. in length, from the tip of the bill to the end of the tail, and is inclined to be chubby, being full in the head and breast, with large, penetrating eyes. The forehead, or brow, extending to the back part of the eye, and the throat and breast, are, in an adult male, of a deep orange red; the upper part of the head, back, and wing coverts, are of a neutral olive brown; the belly is greyish white; the vent, rump, and sides of the breast, are of a pale grey, tinctured with a light brown shade; the neck

is bordered with pale bluish grey. The flight and tail feathers are brown, edged with olive green; the first wing coverts are tipped with small yellow spots. The legs and feet are dusky black, and the bill is brown. Old birds, when in good health and plumage, are richer and deeper in colour than their younger brethren.

White and white pied varieties of the Robin are also to be met with. This albino colour is supposed to be the result of some disease. It will be found that the feathers of such specimens are badly developed, and brittle, possibly arising from old age and grief, for the Robin is known to be as affectionate as he is combative.

HABITS AND BREEDING.—During the winter Robins desert the plantations and fields for gardens and farmyards; they hang about the outbuildings, and resort to hay and straw lofts, or take shelter in the cowhouses, stables, cart sheds, or in any uninhabited dwelling to which they find ready access. They commence their breeding operations in the spring time, and mostly have three nests—in April, May, and June. They build their nests at the side of a ditch, on a bank, or amongst thorns and briars; and also in hedgerows and woods. But the Robin is a very singular bird in this respect, and not very particular in the selection of a site, as its nest is sometimes found in outhouses attached to farm buildings, in holes or fissures in some old and dilapidated wall, or in bushes in gardens. It also, at times, builds in very queer places; for instance, a Robin has been known to build its nest, and rear its young, in an old kettle hung on the lower branch of a tree in a garden. In another case, a Robin built its nest, and reared its young, in an old boot that had been accidentally thrown into a disused garth attached to a farmstead, among weeds and nettles.

The nest is formed of coarse materials. The outside is composed of dry, green moss, intermixed with coarse wool, dried twigs, straw, leaves, the bark of trees, and similar materials; this is lined with a few horse or cow hairs, or feathers. The hen lays from four to seven eggs, of a creamy whitish colour, speckled over with orange and red spots, more particularly at the thickest end, where they not unfrequently form a dense band, or ring, of a brownish red colour. The markings, however, vary, and specimens have been found almost entirely destitute of any spots,

being of a creamy white, with a few very small orange freckles here and there. The period of incubation is from fourteen to fifteen days.

The young birds, when first hatched, are covered with yellow down, like young ducks or chickens; but when feathered they appear greyish brown, the feathers being margined with dirty yellow. These birds do not acquire the full red breast until they are two years old; after the first moult the breast is of a pale orange colour, which becomes more intense year by year, until at three years of age the bird appears in its most perfect plumage.

METHODS OF CAPTURE.—The spring of the year, or autumn, is the best time for capturing these birds. They may be taken with limed twigs, or with the trap cage. They generally alight on any projecting bough near the ground, a habit they acquire when searching for worms; hence, the limed twigs should be placed about these projections, or on rails, stakes, or stumps where they are known to frequent; or a piece of ground may be cleared of grass, and a few mealworms or earthworms placed upon it, and surrounded with limed twigs. After one has been caught, you may tie him, by one of his legs, to the inside of a cage, and leave the door open; his fluttering will soon attract some of his *confrères*, who will hop, in an excited manner, a few times round the cage, and ultimately rush in and commence hostilities, for these birds have a deadly antipathy towards each other, and fight like young tigers. As soon as the conflict has fairly begun you will have no difficulty in securing your prey, as, when once two Robins enter into a combat, they are so thoroughly bent on their purpose that they are not easily disturbed or frightened. Those who desire to catch these birds with the ordinary trap cage should first discover a place which they frequent regularly, and then place the cage on the ground, as near as possible to where they are observed to sing, taking care to previously turn up the earth to the extent of a couple of feet of the surface soil, for these birds are most inquisitive, and will soon be there in search of worms. The trap cage should be baited with a few mealworms.

Old birds, when first caught, invariably sulk, and refuse the food offered them. When such is the case, obtain a little fresh earth, and, having put a few live mealworms, or an earthworm cut in pieces, amongst it, place it in the

bottom of the cage, as this will in most cases induce them to eat. Leave the other food in the vessel, or trough, so that they may find their way to it. Repeat this treatment if needed, and in a very few days the birds will become quite reconciled to their changed position and new home.

FOOD AND TREATMENT.—Robins feed on ants, spiders, caterpillars, woodlice, and other insects, and also on worms and berries of various kinds. They will not, however, touch a caterpillar that is hairy. In confinement, they will partake readily of the food recommended for the Nightingale. They are very fond of cheese and bread crumbed together, and like the cheese new and soft.

REARING THE YOUNG.—The best time to take the young birds is when they are from ten to twelve days old; if older, they become sullen, and very difficult to rear. They leave the nest when from fourteen to seventeen days old, and are able to feed themselves at the end of a month.

They should be fed with sheep's heart, or other lean meat, and egg, made into a paste and prepared in the manner recommended for young Nightingales. Care must be taken not to give them too much food at a time, as they possess very delicate stomachs, which are easily deranged. They should be placed in a small box or basket lined with some warm material, and kept in a warm place, especially at night time. As soon as they are able to feed themselves, put them in cages, singly, for they are very quarrelsome.

Young Robins are very tender birds, and most difficult to rear; therefore, those who wish to keep one should obtain a newly-caught fledgling, or a young bird after its first moult, as it will soon become tame, and, if in health, and thoroughly over the moult, will sing after it has been caged for a short time.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is smaller in size than the cock, measuring only about 5in. in length; in her case the orange colour is paler, and does not extend so far back on the forehead and face, the yellow spots are generally wanting in the wings, and the colours throughout are paler and duller, the legs and feet being much more so, and more of a dirty yellowish brown colour.

The young males of one year old are sometimes mistaken for hens, as they do not attain their full colour until two

years old or more; and at the age mentioned they are also, at times, destitute of the yellow spots on their wings; they are, however, much darker coloured in their legs and feet than hens.

In the male birds there are some thin feathers, resembling hairs, growing on each side of the root of the beak. The male birds are, likewise, more sprightly, pert, bolder in appearance, and more majestic in carriage, than the females.

SONG.—The Robin sings during the greater part of the year, commencing almost immediately he has finished moulting, as early as August; the song is shrill and plaintive, and uttered in short, disjointed phrases. Robins sing best in cages, but two male birds must not be put together, or they will fight until the weaker one be destroyed. They are not suitable birds to put in an aviary of mixed birds, on account of their combative disposition, they being as pugnacious as game fowls.

POINTS TO BE OBSERVED IN JUDGING.—The Robin is a handsome bird, and, being of a tractable nature, is well adapted for showing in an Any Other Variety class of British Birds. A good specimen should be sleek and sprightly; the hind part of the head and neck, the back, wings, and wing coverts, should be a rich greenish olive brown; the forehead, cheeks, under side of neck and breast, a rich, bright, orange-red, and the more extended and intense in depth and sheen this colour is, the more valuable the bird becomes; the sides of the neck and breast should be nearly grey, and the belly white; the body feathers should fit closely, and the wing and tail feathers must be tightly braced, and carried with freedom and grace; the feet and claws must be perfect in form, and the exhibit in good condition, and free from dirt. A two or three-year-old bird is best for exhibition purposes, as young birds are only orange colour on the breast the first year, and most intense in hue at the age of three years and upwards.

GENERAL REMARKS.—Robins are best kept in cages similar to those recommended for the Nightingale, as, the more room they have, the more likely they are to remain in health. They are easily tamed, and may be allowed to fly about the house, which (in the summer time) they will speedily clear of flies and insects; but they must

be provided with a perch on which to roost. A wooden hat peg, fixed in a corner of a room, or by the side of a window, will answer the purpose quite well. Robins are fond of bathing, and, when the weather is not too cold, a bath should be supplied to them about three times a week, as it is conducive to their health. A few shreds of saffron, or a bit of liquorice (Spanish juice), placed in their drinking-water occasionally, will be found a good incentive to singing.

DISEASES AND THEIR TREATMENT.—Robins, when confined in cages, if not kept warm, and given a frequent change of food, are very subject to the cramp. Should a bird be attacked, place its legs and feet in a bath of rather warm water—say a teacupful—to which should be added a teaspoonful of the spirit of ammonia, and twenty drops of laudanum. Keep them immersed for fifteen or twenty minutes, then dry them with a silk handkerchief, and afterwards warm at the fire. The first week or ten days following the attack a slight sprinkling of cayenne pepper should be mixed with the bird's food.

The Robin is very subject to vertigo, or giddiness in the head; the best remedy for this is an occasional earwig. If at any time a bird be found sickly and drooping, or its appetite fails, a few woodlice (to be found in any old, rotten piece of wood), or a few mealworms or spiders, will speedily put it right. For treatment in diarrhœa, or constipation of the bowels, see directions given in the chapter on "The Nightingale."

CHAPTER XLV.

THE COMMON WREN.

Motacilla troglodytes, Lin.; *Le Troglodyte*, Buf.; *Sylvia troglodytes*, Pennant.

DESCRIPTION AND CHARACTER.—The Common Wren is one of the best known of our British birds, and familiar to all people whose peregrinations lead them among our country lanes and into the interior of woods. It is pleasing to note its fussy actions, as it hops and jerks from spray to spray, or climbs, creeper-like, from branch to branch, in eager pursuit of insects. It is a most industrious and indefatigable bird, ever on the move, and in the spring works with great assiduity, and displays much shrewdness, in fabricating its nest. It is wily and suspicious, and, if it be observed when constructing a domicile for its future offspring, and much curiosity is evinced by the discoverer, will immediately leave off, forsake the selected spot, and commence operations anew in a different locality.

The Common Wren is a most ingenious, industrious, and amusing little bird, genial in its nature, and a general favourite among all classes where it is known and understood. A fully-grown specimen measures $3\frac{3}{4}$ in. from beak to tail, the latter being $1\frac{1}{4}$ in. long. The beak is very slender, and is dusky brown at the upper part and yellowish white at the lower. The iris is brown or hazel. The head, neck, and back, are russet brown, crossed with obscure blackish brown lines. The cheeks are dirty white, tinged with red; over each eye is a pale reddish white streak. The wings are dark brown, barred

with rufous and black alternately. The throat is palish yellow, and the breast whitish grey, slightly tinged with red. The belly and sides are dusky red, crossed with transverse brown lines. The tail is russet brown, striped with black bars. The legs are palish brown.

HABITS AND BREEDING.—The Common Wren is indigenous to Great Britain; it is also an inhabitant of all wooded and mountainous parts of Europe, and some parts of Asia. It is not migratory. It is one of the smallest of British birds. It is docile and sociable in disposition, and frequents detached houses and farmsteads, searching for the flies and insects found about the excrement of animals.

In the selection of a nesting-place, the Common Wren frequently chooses extraordinary and improbable places. An instance is known of one of these birds having built its nest inside a pump, in the box through which the piston worked, its only means of ingress and egress being the space allotted to the handle working the piston rod. Although the pump was in daily use, and the piston worked up and down through the nest several times a day during the process of incubation, neither the mother nor her progeny appear to have been alarmed, as the young birds were successfully reared and fledged without molestation, except from a gardener who used the pump, and who had the curiosity to take off the top to see the nest and its contents. In another instance, a pair of these birds chose, as a nesting-place, the inside of a postal pillar box in a country district. The outside flap, covering the aperture, having got broken off, permitted of the birds getting ready access to the box, and they reared a brood there successfully, a fact known to few people besides the rural postman.

Common Wrens frequently build their nests beneath the eaves of cart sheds, in holes in walls, or in trees. A favourite place is the branch of a tree overhanging a running stream; and another, a ruin, where the rents in the walls are barely discernible by reason of the weeds of various kinds growing over them. Again, they build in the eaves of thatched buildings, but more commonly in woods, in the stump of a tree, in a bush among the underwood, on rare occasions on the ground, and very often in hedges.

The nest is egg-shaped, and generally of prodigious dimen-

sions, with an aperture at the side for ingress and egress. The outside is chiefly made of moss, and is strengthened by small dried twigs and root fibres; occasionally dried grass and short pieces of straw or hay are used. The inside is comfortably lined with hair, wool, and feathers. The hen lays from seven to sixteen eggs, which are very diminutive in size, and in colour white, sparsely spotted with red. There are seldom more than eight or nine young ones, however many the eggs may be. The hen incubates from ten to twelve days. The male bird supplies her with food during the process of nidification.

The young birds, when feathered, are reddish brown, speckled with black and white spots. The parents do not, as a rule, express fear or timidity at their offspring being viewed, but make a fuss if any attempt is made to touch them. These birds never fly far, but hop and climb about bushes and low trees, exhibiting considerable activity, bobbing up their little tails as high as possible, and sometimes drooping their wings. Whilst thus engaged, they continue to repeat rapidly their peculiar cry of "Chit, chit."

Common Wrens are hardy birds, and appear not to suffer from cold. Like House Sparrows, they are wonderfully ingenious in finding out snug, cosy places, in which to shelter during turbulent weather and cold, bleak nights. Being very small, they require to be kept in closely-wired cages or aviaries. They would probably breed in a state of captivity, if kept in an aviary specially constructed to meet their requirements.

METHODS OF CAPTURE.—These birds may be taken in traps baited with mealworms or elder berries, or with limed twigs judiciously placed about farmyards which they are known to frequent. They may also be caught with the "Geldart" trap.

FOOD AND TREATMENT.—Common Wrens feed on insects all the year round, searching for them carefully in every place where there is the least likelihood of their being found. They hunt after spiders and flies of all sorts, and in the autumn regale themselves on elder berries. In confinement, they must be fed, when newly caught, on mealworms, flies, spiders, &c., and in a little time they will partake of the Compounds recommended for soft-billed birds (*vide* pp. 189, 190); but a little insect food occasionally is necessary to keep them in health and condition.

They are hardy, and will live in confinement for a number of years, if properly cared for and their wants regularly attended to.

REARING THE YOUNG.—Do not take them until they are well-feathered. Feed them in all respects the same as young Robins or Nightingales. They require very little food at a time, but must be fed frequently. They must be kept warm. Rear them in a basket with a lid, in the original nest. Cut the top, to make it open and close like a lid, so that you may feed the broodlings the more easily. When they can perch, put them into a large cage, closely wired; one made of wood, with a wire front, is preferable to any other kind. Strew the bottom of the cage with fine gravel and sand, and, until such time as the birds can feed themselves, put in some dry moss and hay, cut very short, as the birds will cluster together among this at night time and keep each other warm.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is smaller in size than the cock, and is of a reddish brown colour throughout, excepting the lines or stripes on the wings, tail, and abdomen. The legs and feet of the hen bird incline to yellow.

SONG.—The Common Wren sings during ten months of the year, and its song is much admired by a great many people, as, though it is short, it is agreeable, and very sonorous.

POINTS TO BE OBSERVED IN JUDGING.—The Common Wren is not a show bird in the common acceptation of the term. The chief points to be observed are shape, purity and vividness of colour, distinctness of markings, a full, bright eye, closeness and compactness of feather, condition, and cleanliness.

GENERAL REMARKS.—Common Wrens may be kept either in cages or aviaries, but the wires must be very close; and, as they are such “wee mites,” and so keen sighted, it will be necessary to see that no aperture is left sufficiently large to admit of their escape. They make splendid aviary birds, being active and lively, energetic in their movements, tractable, of prettily variegated plumage, easily reconciled to domesticity, and quite contented so long as they are freely and plentifully supplied with the various kinds of provender necessary for sustaining life.

DISEASES AND THEIR TREATMENT.—The Common Wren does not seem particularly liable to disease, being of a contented

and happy disposition. The moult is probably the most distressing malady with which it has to contend, so that at this time it is necessary to bestow upon it more than the ordinary share of attention. A frequent change of diet, a few glimpses of sunshine, plenty of fresh air and clean water, a frequent cleaning out of the cage, and renewal of sand and gravel, are then of the utmost benefit, and attended with the best results.



CHAPTER XLVI.

THE WILLOW WREN.

Motacilla accredula, Lin.

DESCRIPTION AND CHARACTER.—This bird, which is also known as the Yellow Wren, is larger than the Common Wren, and of a different colour. It is a charming little creature, easily domesticated, and can be rendered so tame as to follow its owner about the room, eat from his hand, and exhibit other signs of attachment. It has a pleasant song, and makes an interesting addition to any collection of cage or aviary birds.

An adult bird is $4\frac{1}{2}$ in. long, the tail measuring $1\frac{3}{4}$ in. The beak is thin and pointed; the upper mandible is brown, and the lower yellow. The eyes are brown. The upper parts of the body are pale olive green. The wings and tail are dark brown, edged with yellowish green. A streak of pale yellow passes over the eyes. The cheeks are indistinct yellow, and there is a reddish grey spot near the ear. The whole of the under parts is pale yellow, the throat and breast being spotted with brighter yellow. The legs are light willow or pale yellowish flesh colour.

HABITS AND BREEDING.—The Willow Wren is a migratory bird, arriving in this country in April, and leaving again in September, or early in October. It inhabits the greater part of Europe, and frequents marshy ground, and all places where willows grow. It makes its nest in hollows on dry banks, often in holes at the roots of trees, and also at the sides of streams and pools, beneath a bush. The nest is round, but otherwise not unlike that of the Common Wren. It is formed with moss, and lined with wool, hair, and feathers. The hen

lays five or six dusky white eggs, marked with reddish spots, and incubates about twelve days. If not molested, the young remain in the nest until fully fledged.

METHODS OF CAPTURE—After the moulting season these birds may be taken in a trap baited with caterpillars or mealworms; or they may be secured by the use of limed twigs attached to the willows where they are known to frequent, a piece of ground having first been cleared and baited, to entice them to the spot. They are artless birds, and easily ensnared.

FOOD AND TREATMENT.—In a wild state, the Willow Wren lives almost exclusively on the different kinds of aphid, flies, small caterpillars, and moths. In confinement, it may be fed the same as the Common Wren.

REARING THE YOUNG.—The young of this species should be treated in all respects the same as those of the Common Wren.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is paler in her plumage throughout than the cock, inclining to white at the lower part of the abdomen and vent. The birds, however, vary in colour considerably, according to age, as most wild birds do.

SONG.—The song of the Willow Wren is soft and pleasant; in some respects it greatly resembles that of the Robin, but is not so loud, mellow, or so full of pathos.

POINTS TO BE OBSERVED IN JUDGING.—See observations on this point respecting the Common Wren, as the same remarks are equally applicable to this variety.

GENERAL REMARKS.—The Willow Wren is a friend to the gardener, as it feeds greatly on aphid, and searches for them in the plants and trees which they infest; hence, it may often be seen threading its way along the branches of rose and other trees, greedily devouring these pests, and sometimes fighting with other birds of its own, or a different species, over them.

DISEASES AND THEIR TREATMENT.—The Willow Wren is of a hardy nature, and seldom upon the sick list, unless it be in the moulting season. For treatment in case of illness, see remarks in preceding chapter (Common Wren) under this head, and also Chapter V., on "Diseases."

CHAPTER XLVII.

THE GOLD-CRESTED WREN.

Motacilla regulus, Lin. ; *Roitelet souci ou poul*, Buf.

DESCRIPTION AND CHARACTER.—The Gold-Crested Wren is the most diminutive of all the species of birds inhabiting Great Britain, and is probably the smallest bird to be found in Europe. It is most docile and attractive, and a great favourite with the majority of bird fanciers, though by no means so innocent as its appearance would lead one to suppose, and at times, especially when hungry, shows an amount of pugnacity scarcely to be credited. It is by no means bashful, allowing anyone to approach it very closely without showing fear, and taking little heed so long as no effort is made to disturb it.

A fully-grown specimen measures $3\frac{1}{2}$ in., of which the tail is $1\frac{1}{2}$ in. The bill is slender and sharp, and black in colour. The iris is dark brown. From the root of the bill, extending over each eye, is a broad stripe of dark brown; in the centre of this, and continuing over the top part of the head, is a brilliant deep burnished gold or orange spot, edged with yellow. The cheeks, sides of throat, neck, and back, are of a beautiful golden green; the rump is paler in hue. The breast, sides, belly, and vent, are of a greenish grey, darkest at the sides, and whitest in the centre. The wings and tail are dusky brown, edged with golden-green; the wing coverts are black, with broad white circular margins on the larger ones, and a few white spots on the smaller; the three inner flight, or secondary quills, are tipped with white at the extremities. The legs and

feet are pale brown. The bird weighs only 1dr. 16gr. when in condition.

HABITS AND BREEDING.—The Gold-Crested Wren is indigenous to Great Britain, though a partial migration of these birds takes place, about October, to the more southerly counties of England. At this time they become to some extent gregarious; but the number of birds to a flock is comparatively small. These birds are tolerably plentiful, throughout the entire year, in most of the warmer and sheltered counties of England. They also inhabit France, Austria, Italy, Norway, Sweden, Russia, the Cape of Good Hope, and some parts of Northern America. They appear able to endure the cold tolerably well. They chiefly inhabit woods, especially those in which oak, fir, and pine trees grow, or where there is a dense undergrowth; in such places they seem to revel. They hop about hither and thither, and climb and scramble along branches and twigs with the greatest zest and activity, twittering whilst hunting industriously among the leaves and branches for food, and moving forward in the most alert and dexterous fashion, so as almost to elude the gaze of those who are trying to follow their movements, by their fairy-like actions.

The birds commence to breed as early as March, unless the weather at that time be very inclement. They usually select an oak, fir, pine, or yew tree, in which to erect their nests. The nest is round, and is skilfully woven to the end of a branch; the entrance is at the side, the top being domed over. It is erected at various distances from the ground, sometimes being placed high, and at other times not more than a few feet from the ground. It is composed of moss, tufts of thistle-down, feathers, &c., and is very pliable to the touch. The hen lays from seven to ten very small eggs, in colour pinkish white, thickly spotted with brownish red; but she seldom has more than six or eight young ones. If the parent birds be disturbed or interfered with at the time of building their nest, they will forsake the partially-erected structure, and retire to some other locality. They are very attentive to their offspring, and labour most assiduously to supply their wants, a task which, as they have such extensive families, is no mean one to accomplish. The hen incubates twelve days. The young birds resemble their parents in general appearance, but are much paler in the

hues of their plumage, and, until they pass the ordeal of the moult, are destitute of the golden crown which adorns the heads of the adult birds; they do not leave the nest until fully fledged.

METHODS OF CAPTURE.—Gold-Crested Wrens may be caught in winter with limed twigs. For this purpose, clear a piece of ground, and bait with mealworms. They are very tame when hungry, and will allow anyone to approach them pretty closely. It is not at all unusual for these birds to visit gardens in the autumn and winter. In such a case, they may, with a little judicious management, be doused by means of the hose used to water the plants, and are then easily caught. In severe weather, when the snow is on the ground, they may be taken with the "Geldart" trap.

FOOD AND TREATMENT.—Gold-Crested Wrens feed on aphids and other insects; they catch flies, moths, and other winged insects, and delight in ants and their eggs. In confinement, they should be treated in the same manner as recommended for the Common Wren. With care and attention, and a frequent change of diet, these birds will live and thrive, either in a cage or aviary, for a considerable time. In an outdoor aviary, by judicious management, they can be kept in a healthy condition for several years.

In winter, they should be provided with a nice cosy shelter, into which they may retreat—one free from cold winds and draughts. An old cage, lined with felt or flannel, and hung in a quiet corner of the inner aviary, would do; all the tribe would use this, and sit closely packed together, so as to keep each other warm and comfortable. Newly-cut branches should be hung about in different parts of the aviary; but if large plants, or small trees, can be grown inside, these are to be preferred.

REARING THE YOUNG.—The young may be reared in the same way as those of the Common Wren.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is paler in colour throughout than the cock, and the deep, rich, burnished golden coronet on the head of the latter is, in the case of the hen, replaced by an ordinary yellow one.

SONG.—The song of this bird is agreeable, and even harmonious, and much resembles that of the Common Wren, but is softer, and not so loud.

POINTS TO BE OBSERVED IN JUDGING.—Select a lively, well-formed bird, bright in plumage, and more especially so on the crown of the head—the golden coronet. The streak over the eyes should be clear and well-defined, and the throat, breast, and vent, of a silvery grey, shaded with a sort of evanescent green. The wing coverts must be clearly and distinctly margined with white, the body feathering close and compact, and the wings, tail, legs, and feet, in good order. The bird should be absolutely free from dirt, in good health and condition, and steady on the perch.

GENERAL REMARKS.—Gold-Crested Wrens may be kept either in cages or in aviaries, though the latter are to be preferred. When hand reared, these birds are very tame and tractable, and, under favourable circumstances, will breed in confinement; an out-of-door aviary is best for this purpose. Roses, and currant or raspberry bushes, should be grown round a border made inside the exercise ground attached to it, as they are generally much infested with insects, which afford a rare treat to the birds. When breeding, the birds should have an almost unlimited supply of insect food, as they feed their young on this alone. Ants and their eggs should be placed in the border inside the aviary. A plentiful supply of very fine gravel and loam will be found of great value in keeping the birds in health and condition.

DISEASES AND THEIR TREATMENT. — Gold-Crested Wrens, although of such minute proportions, are, nevertheless, hardy birds, and, when properly cared for and attended to, are seldom attacked by disease. They require, however, some extra attention during the period of the moult, this being the most critical period of their existence. For treatment in case of illness, see Chapter V., on “Diseases.”

CHAPTER XLVIII.

THE FURZE WREN.

Sylvia Dartfordiensis, Pen.; *Melizophilus provincialis*, McGil.;
Motacilla provincialis, Montague.

DESCRIPTION AND CHARACTER.—The Furze Wren, or Dartford Warbler, as it is more commonly termed, is a bird of somewhat local distinction, and, so far as is known, is indigenous to this country; but, on account of its retiring disposition, and its habit of concealing itself when approached by human beings, very little is known of its true character and manners. The more correct name for this bird is the Furze Wren, or Furzeling, the common appellation, "Dartford Warbler," having only been derived from the fact of its having been first observed in the neighbourhood of Dartford, in Kent, about the year 1773.

It is 5in. in length, of which the tail measures $1\frac{1}{2}$ in. The bill is long and slender, slightly curved towards the point, and black in colour; the base of the under mandible is yellowish white. The irides are reddish yellow, and the eyelids crimson. The upper parts of the body, head, neck, and back, are deep dusky brown, tinged with reddish yellow. The wings are blackish brown, edged with greyish white; the bastard wing is of the same colour. The tail is blackish brown. The outer web of the exterior feathers is white. The breast, fore part of the neck, sides, and lower portion of the abdomen, are bright reddish brown; the upper portion of the belly is white. The legs are of a dark willow colour or yellowish brown.

HABITS AND BREEDING.—The Furze Wren is quite common

in France, and appears indigenous to that country. In England, it is found in Surrey, Kent, and some of the adjoining counties; it is also well-known in several parts of Devonshire, where it is termed the Furze Chat, but is unknown in the Northern and Midland counties. It builds its nest amongst furze bushes, choosing the highest and thickest for this purpose, as it is exceedingly shy and retiring, as well as cunning and secretive, in its habits. The nest is very similar to that of the Common Wren, and is built in a fork near the top of a bush. The hen lays from four to five eggs, of a dirty white colour, speckled with reddish brown or chocolate, more particularly at the thickest end.

METHODS OF CAPTURE.—These birds may be taken, in winter time, in a Tit, or Nightingale trap, baited with mealworms; or by placing limed twigs among the furze bushes they are known to frequent.

FOOD AND TREATMENT.—In a wild state, Furze Wrens subsist on caterpillars, grasshoppers, moths, butterflies, beetles, and grubs of all sorts. In confinement, they ought to be fed the same as Whitethroats or Robins. They will eat bread and milk and bruised hemp seed; also ants' eggs and mealworms, or pieces of raw or cooked meat, chopped fine, and mixed with breadcrumbs. They are not particularly attractive birds, and are kept more from curiosity, and the love of something rare, than for any good qualities they possess.

REARING THE YOUNG.—Remove them from their parents at the age of ten or twelve days, and feed in the way recommended for young Robins or Whitethroats.

DISTINGUISHING MARKS OF COCK AND HEN.—The male is a little larger than the female, and the colours of his plumage are more intense and decided. The hen is more dusky on the back, wings, and tail, than the male, and her breast and belly paler and duller in colour.

SONG.—The song of the Furze Wren is only a miserable ditty, when compared with that of the Blackcap or Nightingale. The bird appears to exercise much corporeal strength in its delivery, as it jumps and frisks about, with its tail tilted high in the air, its head erect, and its throat stretched to the utmost. As soon as it espies anyone approaching, it ceases singing, and darts suddenly and rapidly into the thickest of the furze.

POINTS TO BE OBSERVED IN JUDGING.—The Furze Wren is

not sufficiently attractive in appearance for the show bench. Should anyone, however, think otherwise, and determine to exhibit, he should select a well-developed, brightly-plumaged bird, one close and compact in feathering, of good contour, and with well-formed and well-carried wings and tail, and perfectly shaped feet and toes. It should be steady on the perch, in good bodily condition, and scrupulously clean.

GENERAL REMARKS.—The Furze Wren cannot be recommended to the notice of amateurs, as nothing can be said in its favour. Indeed, only those fanciers who take a pride in possessing rare birds will take the trouble to obtain and keep it.

DISEASES AND THEIR TREATMENT.—These birds are hardy, and, if kept in an outdoor aviary, supplied freely with insect food, and given a frequent change of diet, are not usually prone to disease. They suffer most during the moulting period; at this time give them a little hard-boiled fowls' egg, grated fine, a few mealworms, and occasionally a spider; this treatment will generally revive them, and restore them to health. If fed too exclusively on artificial food, such as the various Compounds prescribed for soft-billed birds, they are apt to pine, and ultimately fall into a consumption—a complaint that is difficult to cure.





WHEATEAR.

CHAPTER XLIX.

THE WHEATEAR.

Motacilla ananthe, Lin. ; *Cul Blanc*, Buf.

DESCRIPTION AND CHARACTER.—The Wheatear is a pretty bird, and, being of a lively and cheerful disposition, is a desirable acquisition to an aviary. It seems to be an especial favourite with many fanciers, who greatly admire it on account of the diversity of its plumage and its peculiar markings.

The length of the Wheatear is $5\frac{1}{2}$ in., the tail being $1\frac{5}{8}$ in. long. The bill is black. The irides are dark brown. The top of the head, hind part of the neck, and back, are of a pale bluish grey; in old birds the forehead is nearly white. From the base of the bill to the hind part of the cheeks is a streak of black, which surrounds the eyes, and widens as it extends backwards; above this is a narrow streak of white. The cheeks and part of the sides of the neck are grey. The wings are black; the larger wing coverts, and the secondary pen feathers, are edged with brownish yellow. The rump, upper tail coverts, and base of the tail, are white, the ends being black; the two feathers in the middle are black almost to the base. The gullet and chin are reddish white; the throat and breast are yellowish brown, or pale russet; the belly and vent are white; the sides of the breast and belly, extending to the vent, are tinged with brownish yellow. The legs and feet are black.

HABITS AND BREEDING.—The Wheatear is a bird of passage, arriving in England in March or April, and leaving again in September or October; in mild seasons it remains later. It

is well known throughout Europe. The birds are most plentiful in the more southerly counties of England, where they are caught in vast numbers, and sold to poulterers and others as an article of food, being considered very delicious eating by epicures, who hold them in much the same estimation for gastronomic purposes as the Italians do Ortolans. The females reach our shores about a fortnight before the males. Wheatears abound most where there is a large quantity of wild thyme, as they feed largely, in summer, on a species of fly which infests that plant. Their principal places of resort are commons, and the sides of hills not under cultivation, and where the herbage is rank. They also frequent parks, quarries, and wild, rocky, mountainous country. They build their nests in holes on a bank side, or between the interstices or fissures in the rocks in old, disused stone quarries. Sometimes they select a pile of stones surrounded with wild, overgrown vegetation, or a deserted rabbit burrow, for that purpose.

The nest is composed of hay and dry grass, or moss, and is lined with wool and feathers, or hair and rabbit's fur, according to the locality frequented. These birds make neat nests. Those made in the burrows of rabbits are generally inaccessible. The hen has two nests in the year, and lays from four to eight bluish white eggs, with a circle of deeper blue at the larger end; she incubates about thirteen days. The first brood of young ones is hatched in May, and remain in the nest until they are about three weeks of age, when they are fully fledged. Wheatears are not timid birds, and do not exhibit much alarm when approached, but, like all wild birds, are more cautious and suspicious during the breeding season than at other times.

They are seldom seen on bushes or trees; they alight on rocks, posts, gates, palings, and the like, and sometimes perch on a wall or mound; they may also be seen on the banks of a river or stream.

METHODS OF CAPTURE.—These birds may be taken, with bird-lime or horsehair nooses, in September and October. Clear a piece of ground, in some locality where there are a few boulders or large stones, and where the birds are known to frequent; then place your limed twigs on the stones, and about the ground, baiting the latter with mealworms. If at the place selected there are no stones, drive in a few stakes, and cover these with

the lime. When your arrangements are completed, gently drive the birds towards the spot where the limed twigs or nooses are arranged. After removing any entrapped birds, you may repeat the process as often as considered desirable.

FOOD AND TREATMENT.—In a wild state, the Wheatear feeds on insects of various kinds—beetles, flies, moths, and small worms. In confinement, it must be fed, when first taken, with mealworms, cockroaches, house crickets, flies, beetles, or small worms. It will thrive on the diet recommended for White-throats and Fauvettes. After it becomes domesticated, it will eat bread and milk and crushed hemp seed, as also the Compounds No. 1 and No. 2 recommended for soft-billed birds (*vide* pp. 189, 190). It is fond of chopped hard-boiled egg and bread.

REARING THE YOUNG.—The young may be taken, when fourteen days old, and reared on bread and milk, mixed with ants' eggs, or a few mealworms, chopped small. When they are three weeks old, give them a few flies and crickets; afterwards, treat them the same as Whitethroats.

DISTINGUISHING MARKS OF COCK AND HEN.—In the hen, the white line over the eye is rather obscure. She is pale greyish russet on the head and hind part of neck and back, and her wings and the extremity of her tail are brown instead of black. All the under parts are darker in colour than in the male; in fact, she is altogether much less attractive in appearance.

SONG.—The song of this bird is peculiar, but not at all unpleasing, it has a variety of changes, and is continuous and well-sustained. Wheatears sing freely in confinement, and when the gas is burning at nights.

POINTS TO BE OBSERVED IN JUDGING.—Choose a bird that is bold and sprightly, with a soft blue tinge on the head and back, and well-defined eye markings; one with the white and black feathers composing the tail intense in colour and luminous. The wings should be bright black, the breast of a pale reddish hue, and the belly and vent white. The plumage of the bird should be close and compact, and the wings and tail well-braced together, and neatly carried. The bird chosen should be docile and tractable in a cage, and entirely free from stains of dirt.

GENERAL REMARKS.—Wheatears must be kept in a cage until thoroughly domesticated, as they are apt to become wild and

intractable if placed in an aviary when newly caught; hand-reared birds do not come under this restriction. The young birds, prior to the moult, are spotted with brown and reddish-cinnamon on the upper parts of their bodies, and with reddish yellow and dusky below. Male birds do not attain their full colour until they are two years old. Young birds soon become tame, but it is a difficult matter to reconcile old ones to captivity, and they seldom live long in confinement. Wheatears require considerable attention, and a frequent change of diet, to preserve them in health.

DISEASES AND THEIR TREATMENT.—Wheatears are very subject to diarrhoea and decline, and generally die of the last-mentioned disease. All depends on the supply of natural food which is given them; they never thrive well on artificial diet. For treatment in case of illness, see Chapter V., on "Diseases."

CHAPTER L.

THE WHINCHAT.

Motacilla rubetros, Lin. ; *Le grand Traquet ou Tarier*, Buf.

DESCRIPTION AND CHARACTER.—The Whinchat forms a pleasing variety, either in a cage or aviary, but, like the whole of the *Motacilla* tribe, requires considerable care and attention bestowed upon it in order to keep it in vigorous health and fine condition. These birds never attain their mature plumage until the third year.

An adult specimen measures 5in., of which the tail is 1½in. The bill is black. The irides are dark hazel. The upper part of the head, neck, back, and rump, are dingy black, edged with pale russet. From the base of the bill a streak of white runs, passing above the eyes and beyond the ears; the cheeks and temples are black. The wings are black, edged with bright russet, with the exception of the hindmost feather, which is white at the base. The wing coverts are brown, having a rufous tinge at the edge; part of the feathers on the outside are white, and these form a transverse stripe near the shoulder, and a white spot near the bastard wing. The tail, for about two-thirds of its length nearest the base, is white, and the remainder dusky brown; the two centre feathers are black almost to the roots. The chin is white; the rest of the under parts of the body are reddish white, the breast inclining to red, and the belly to white. The legs and feet are black. Young birds before moulting do not show the white marks over their eyes.

HABITS AND BREEDING.—Whinchats are partly migratory; the majority of them appear to leave this country about the

end of September, returning again in April and May. They are quite common in France, Germany, and Italy, and also in some parts of Russia. They frequent heaths and hillsides, more especially those where there is an abundance of furze, as they seem very partial to this plant, perching on it, and singing their scant but cheerful ditty.

The Whinchat does not appear to be able to endure the cold, and, when winter approaches, leaves its Northern haunts, and betakes itself to warmer and more genial parts of the Southern counties of England.

It breeds chiefly on heaths and the sides of hills, making its nest on the ground, among the tall grass at the foot of a tree, or the side of a furze bush, but sometimes in a plantation. The nest is composed of dried grass and moss, and is lined with hair or feathers. The hen lays from four to six greenish white eggs, spotted with black, and incubates fourteen days. The nest is difficult to discover, and caution and skill are required to trace it. It can only be done by zealously watching the movements of the parents. The young birds may be taken, when twelve or fourteen days old, and reared by hand; they then become tame and tractable. Old birds very frequently sulk, and are difficult to reconcile to domestication; being apt to repine, they rarely live long in confinement.

METHODS OF CAPTURE.—These birds are easily caught by fixing limed sticks to the furze bushes where they congregate, or by clearing and baiting a piece of ground, and judiciously arranging limed twigs about. They may likewise be taken by the use of nooses and spring traps.

When first caught they are, like all their tribe, very difficult to entice to eat. To tempt them, give them flies, small beetles, crickets, &c., followed by mealworms, finely-chopped meat and bread, and bruised hemp seed; afterwards, feed them in the same manner as other soft-billed birds of this class, such as Fauvettes, Whitethroats, &c.

FOOD AND TREATMENT.—In a state of Nature, these birds feed on beetles, flies, moths, earwigs, woodlice, &c. In confinement, they may be fed on the diet recommended for Wheatears, Robins, or other members of the Motacilla family.

REARING THE YOUNG.—The young birds should be reared in the same manner as the young of the Wheatear. Before moulting, young males have black and rust-coloured spots on the

upper parts of their bodies, the feathers being edged with white; on the under part of the body they are like matured females. When they moult, they may be known by the dark markings on the cheeks and back.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is much paler in colour than the cock, and her wing markings are less conspicuous. The white markings over the eyes are not nearly so distinct nor so white in the female as in the male, and the black markings, so noticeable on the face of the latter, are altogether wanting in the hen.

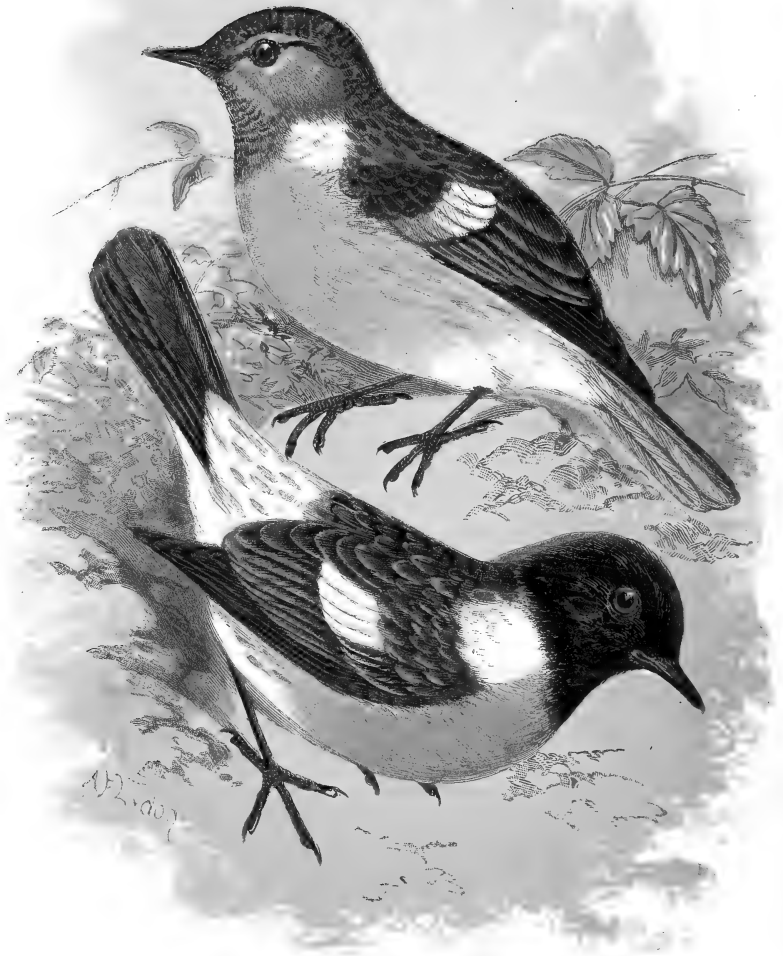
SONG.—The natural song of this bird is not very impressive, being rather weak; but it is susceptible of great improvement if the bird be hand-reared, and trained under good song birds. The Whinchat will imitate the notes of the Goldfinch, Robin, and Whitethroat, and soon picks up those of the Titlark; if kept in the company of other birds, it will imitate the notes of most of them, and ultimately produce a sort of medley not at all unpleasant to listen to. It sings freely during the day, in the early morning, in the twilight, and also by artificial light at night-time.

POINTS TO BE OBSERVED IN JUDGING.—A three-year-old bird is the best for show purposes, as then it is in full colour, and looks attractive. Select a bird rich in hue, with the bordering of the feathers clear and distinct, and plainly showing a striped appearance. The white markings over the eyes are a distinguishing feature; they should be well defined, and pure white. The cheeks should be intensely black, and the throat and breast deep and pure in tone, and rich and varied in colour. The markings on the wings ought to be clear and well defined. The body feathers should be close and compact, and the wings and tail well and closely braced together. The bird must be entirely free from the least tinge of dirt, steady on the perch, and tractable.

GENERAL REMARKS.—Whinchats thrive better in cages than in aviaries. They require cages similar to those recommended for Nightingales. During the winter they must be kept in a room warmed by means of a fire, and on frosty nights the cages must be covered. These birds require insect food frequently to keep them in good order and song, as they are rather delicate. When first caught, they should be fed on crushed hemp seed and bread, and a little raw, lean beef, finely shredded, should

likewise be given them. They are particularly fond of small beetles, earwigs, butterflies, and insects of most kinds, and, if these are freely supplied, will become cheerful and contented, and sing with more freedom. Mealworms are, likewise, a favourite diet. Many people take a great interest in these birds, as they become very docile and tractable when well cared for; they are rather quaint-looking, as the eye markings give them a sort of froggy appearance about the head. Male birds may be purchased of professional birdcatchers for about 1s. 6d. each.

DISEASES AND THEIR TREATMENT.—Whinchats are subject to cramp and diarrhœa, and, if not kept well supplied with small gravel and insect food, die of atrophy. For treatment in case of illness, see Chapter V., on "Diseases."



STONE-CHATS.
(Male and Female.)

CHAPTER LI.

THE STONECHAT.

Motacilla rubecula, Lin.; *Le Tranquet*, Buf.

DESCRIPTION AND CHARACTER.—The Stonechat, when it has attained the age of three years, is a very handsome bird indeed, as it is then in its richest and most elegant costume; as the bird grows older, however, it exhibits more white markings, and the hue of its plumage becomes less resplendent. Stonechats are hardier than Whinchats, and more plentiful in this country, though the two species appear to be closely allied.

A fully-grown Stonechat is $4\frac{3}{4}$ in. long from tip of bill to end of tail, and of this the tail measures $1\frac{1}{2}$ in. The bill is black, and the iris bright brown. The head, cheeks, neck, and throat, are blackish brown, margined with reddish brown; the cheeks and throat are nearly black. On each side of the neck, immediately above the shoulders of the wings, is a stripe of white, which widens as the bird gets older. The wings are blackish brown, edged with reddish brown; the ends of the lesser quill feathers and their coverts are white, forming a conspicuous spot on the folded wing. The back and other wing coverts are black, margined with brown. The tail is black, edged with reddish brown; the two outer feathers have reddish tips as well. The rump is white, and the breast reddish yellow or chestnut brown; the belly is paler, and the vent almost white. The legs and feet are black.

HABITS AND BREEDING.—Stonechats are partly indigenous and partly migratory; the greater quantity of them remain with us during the winter, more especially if it be a mild one.

They are well-known throughout Great Britain and most parts of Europe, frequent commons and heaths, and in their habits very much resemble Whinchats. They build their nests at the foot of a bush or tree, beneath a large boulder, in a hole or chasm in a projecting rock, at the side of a hill, or among the close underwood in a plantation or on a common. The nest is composed of the same materials as employed by Whinchats, and greatly resembles the habitation of that bird. The hen lays from four to six eggs, of a bluish green colour, sparingly dotted with reddish brown spots; she incubates fourteen days, and is very wary and secretive at this time, never alighting in close proximity to the nest, but approaching it by stealth, creeping quietly towards it through the grass for several yards; hence, it is most difficult to discover, and can only be found, after a close and wearisome search, by cautiously watching the actions of the parents through a good binocular field glass.

METHODS OF CAPTURE.—Stonechats are cautious and suspicious, and, consequently, difficult to ensnare. In the winter, they may be secured by the use of limed twigs, scattered over a piece of ground which has been cleared and baited with mealworms or ants' eggs. They may be taken in the autumn by means of the decoy bush, but are very wary about entering a trap.

FOOD AND TREATMENT.—In a state of Nature these birds feed on all kinds of insects, and in confinement should be given the food recommended for Whinchats.

REARING THE YOUNG.—The young should be taken when twelve or fourteen days old, and reared either on ants' eggs and bread soaked in milk, or on the food recommended for rearing Whinchats.

DISTINGUISHING MARKS OF COCK AND HEN.—The colours of the female are paler and duller than those of the male; the top of the head is brown in place of black, the white markings at the sides of the neck are less conspicuous, and the rump is brown instead of white. The throat of the hen is white, spotted with black, and the breast and belly are very much paler in hue than those of the male bird.

SONG.—The song of the Stonechat varies to some extent in different birds. The natural song is very peculiar, and most difficult to describe; it consists of about three—not more than four—notes, which are varied, and continued for a length of

time with little intermission. It is a sort of thudding, monotonous whistle, with scarcely any variation. When hand-reared, and placed near a good singing bird, the Stonechat readily acquires a pleasing song, which it sings loudly, almost continuously, and late at night. If it be accustomed to artificial light, it will in a short time sing at all hours of the night.

POINTS TO BE OBSERVED IN JUDGING.—Select a three-year-old bird, if possible, as at that time it will be in its most perfect plumage. Choose a bird firm in feather, bright and clear in colour, and with a brilliant white rump and neck markings. The face and throat should be velvety black, the breast a bright chestnut brown, and the wings distinctly spotted with white. The bird chosen should be good in shape, in prime condition, and perfectly free from any stains of dirt. The wings, tail, and feet, must be in good order.

GENERAL REMARKS.—The Stonechat is a quiet, peaceable bird, and thrives better in a cage than in an aviary. Like all its tribe, it is difficult to keep in health and condition without a frequent supply of insect food, cleanliness, and plenty of fine gravel and sand. Old birds, caught in the open air, never do so well as hand-reared, or even ensnared, young birds, as they are difficult to reconcile to confinement.

Stonechats that have been newly caught may be obtained from birdcatchers or dealers for 2s. or 3s. each; those that have been reared by hand, and trained to sing under other birds, are worth considerably more.

DISEASES AND THEIR TREATMENT.—Stonechats, like Whinchats, are equally very liable to cramp and diarrhœa, and, if not kept well supplied with insects and gravel, die of atrophy. For treatment in case of illness, see Chapter V., on "Diseases."

CHAPTER LII.

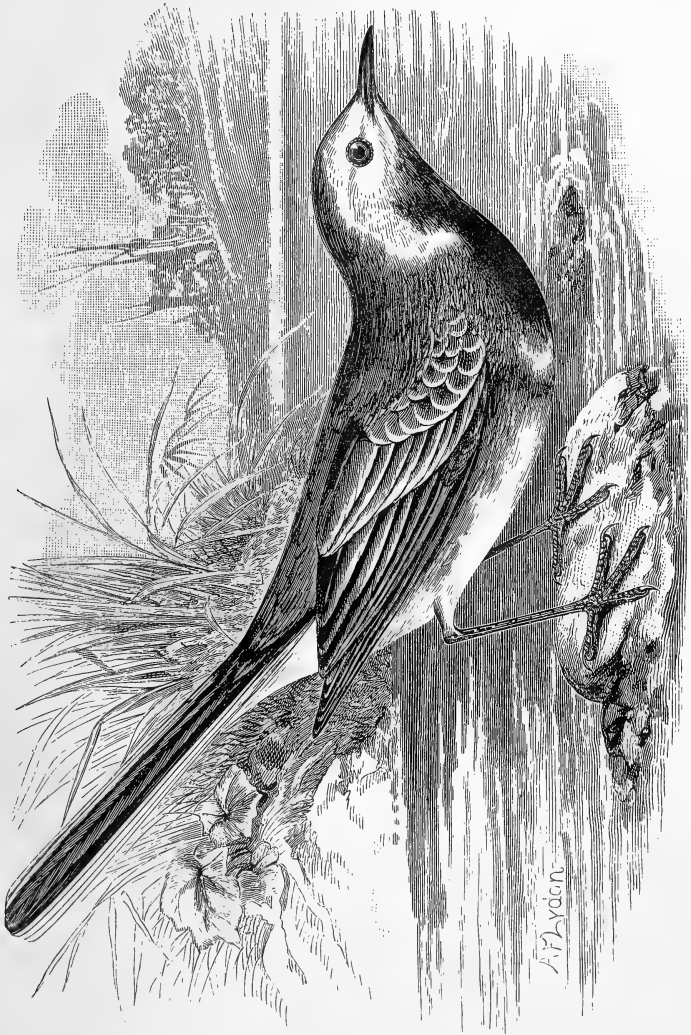
THE PIED WAGTAIL.

Motacilla alba, Lin.; *La Lavandière*, Buf.

DESCRIPTION AND CHARACTER.—The Pied Wagtail, better known as the Water Wagtail, or Black and White Wagtail, and also as the Dishwasher, is the commonest of any of the varieties of this species. It is a familiar bird, and entertaining on account of its peculiar habits and its evident desire to be on good terms with mankind, in whose presence it exhibits no signs of fear or mistrust. It is a droll bird, and most amusing to watch when engaged in its favourite pursuit—catching flies.

In warm weather, when flies are plentiful, it may be seen, close to the margin of a stream, chasing aquatic insects, and securing them in a rapid and dexterous manner, or wading a little way in shallow water, in search of worms or grubs, or baby minnows, which it seizes with great adroitness. These birds may be frequently seen in pastures, threading their way among a herd of browsing cattle, in search of the flies that hover round the “cow platter.” In the breeding season, they may frequently be seen to alight on the backs of cattle that lie basking in the sunshine, and to tug out, remorselessly, mouthfuls of hair, with which they line their nests. They are, in this matter, exceedingly audacious, and their bold, nonchalant manner, combined with their peculiarities and social temperament, give them a charm which is recognised and appreciated by most naturalists and lovers of birds.

A fully-grown bird measures 7in. from beak to tail, the latter being $3\frac{1}{2}$ in., and the former $\frac{5}{8}$ in. The beak is thin and



PIED WAGTAIL.

pointed. The eyes are dark hazel. The back part of the head and neck is black; the fore part of the head, the cheeks, and the sides of the neck, are quite white. The back, lesser wing coverts, sides of breast, and rump, are a deep bluish ashen grey. The wings are brownish black; the coverts and secondary pen feathers are bordered with broad margins of greyish white, which produce bars of white across the closed wings. The large pen feathers are almost black, with pale margins. The tail is black, with the exception of the two outermost feathers on each side, the external ones being almost wholly white, excepting at the base and tips of the inner web, and those adjoining marked with a wedge-shaped, white spot. The throat, under part of the neck, and upper portion of the breast, are black. From the face, and surrounding the velvety black breast marking, is a narrow line of white, in the form of a crescent; but this is not observable in old birds. The lower part of the breast and belly is white. The legs and feet are black, the former being rather slender.

Pied Wagtails differ considerably in plumage, according to age and sex. In young birds, the upper parts of the body are grey, the belly and throat dingy white, the wings both paler and greyer than in moulted specimens, and all the colours less bright, and fainter in hue. Young birds also occasionally have white throats.

HABITS AND BREEDING.—The Pied Wagtail is a migratory bird; it is met with in Norway and Sweden, as well as in this country. A few of these birds remain with us all the year round, but the greater number migrate in the autumn, and make their way to some more genial climate, where flies and insects are plentiful; they most probably find their way to Africa, or to the south of France and Italy. They arrive in England in March, and leave again in October. They usually locate themselves in the immediate neighbourhood of rivers, brooks, sand banks, and marshy wastes. Their nests are frequently found on the banks of rivers, in the crevices of rocks, beneath huge boulders, between two stones on the brink of a river sheltered by the growth of tall grass or weeds, or in holes in walls. The nest is lightly put together, and is made with dried grass or hay, roots and moss, and lined with horse or cow hair, feathers, wool, or swine's bristles. The hen lays from four to six whitish eggs, spotted with brown, and incubates about fourteen days.

The parent birds are very attentive to their progeny, and keep the nest scrupulously clean. They continue to feed the young birds for a considerable time after they are able to fly, and likewise instruct them how to procure flies and insects, never leaving them until they are fully competent to cater for themselves.

METHODS OF CAPTURE.—In severe weather, these birds may be taken in traps or springs baited with maggots, which can be obtained at any time from the yard of a horse slaughterer or from a tannery. They may likewise be captured by the use of limed twigs, which should be scattered over a cleared piece of ground which they have been observed to frequent, and on which mealworms or preserved flies have been placed.

FOOD AND TREATMENT.—In a natural state, Pied Wagtails exist on flies of various kinds, spiders, gnats, and aquatic insects and their larvæ. They may be frequently seen on newly-ploughed land, picking up insects and grubs. In confinement, they may be fed on mealworms, ants' eggs, wasp grub, and insects of all kinds. They will thrive on the same food as Nightingales and Whitethroats, and will eat bread and milk, and also the Compounds No. 1 and No. 2 (*vide* pp. 189, 190), mixed.

A large shallow pan should be placed in the aviary, and daily replenished with fresh water, as these birds like to wade and bathe very much, and would, if possible, be almost constantly in this element during hot weather.

REARING THE YOUNG.—The young should be taken when twelve days old, and fed on boiled liver or mutton, chopped very fine, mixed with white breadcrumbs, and moistened with water to form a soft paste. If procurable, a few ants' eggs may with advantage be mixed with it. When the young birds can peck, give them a few mealworms and preserved flies every day, and, as soon as they are seven weeks old, feed them the same as adult birds.

DISTINGUISHING MARKS OF COCK AND HEN.—The head and neck of the hen bird is brown, whereas that of the cock is black; and, altogether, the females are paler and less decided in hue. The white portions on the forehead, cheeks, and neck, in the female are quite dingy, and the wing bordering is narrower and greyer than that of the male. These remarks refer to adult moulted specimens.

SONG.—The song of the Pied Wagtail is not by any

means of a high order; but the voice, though low, is not unmusical, and the notes are varied. In an aviary, when mingled with the songs of other birds, it makes a pleasing variety. The Pied Wagtail sings during ten months of the year.

POINTS TO BE OBSERVED IN JUDGING.—A bird of this variety is very rarely exhibited; but should one be shown, the body colour ought to be clear and bright, the feathers smooth and firm, the tail and wings in good order, and the specimen clean, and in good condition.

GENERAL REMARKS.—The Pied Wagtail is best kept in an aviary. A few stones should be piled up here and there, or a rockery built for it to rest upon, and a small pool formed in the centre of the exercise ground, to hold a supply of water. This pool should be about 2in. deep, not more, and 3ft. square; it should be bricked out and cemented, or lined with zinc, and have a waste water pipe affixed, connected with a drain, and fitted with a movable plug, so that the water can be let off, and a fresh supply given.

Under favourable conditions, there is no reason why birds of this species should not breed in confinement. A plentiful supply of sand and gravel is an indispensable requisite, and, if not provided, the birds will speedily fail in health. Pied Wagtails do not thrive so well in cages as they do in an aviary in the open air. If kept in cages, those of large proportions should be chosen, as the birds are very apt to get their tails and feet matted with dirt when kept in ordinary sized ones. They may be preserved in good health and condition for several years by careful attention and a frequent change of diet. If reared by hand, they may be trained to leave and return to the aviary, and will in time become as tame and domesticated as house pigeons.

DISEASES AND THEIR TREATMENT.—Pied Wagtails are tolerably healthy, but at the period of the moult are liable to attacks of diarrhœa. At this time, too, they not infrequently become very particular about their food; ants' eggs, mealworms, and flies, will generally restore them to health. If neglected, they will refuse their food altogether, pine away, and die of atrophy.

CHAPTER LIII.

THE GREY WAGTAIL.

Motacilla boarula, Lin. ; *Bergeronette jaune*, Buf.

DESCRIPTION AND CHARACTER.—The Grey Wagtail, also known as the Grey and Yellow Wagtail, is rather an elegant bird, and very attractive in appearance, its plumage being beautifully diversified. It is not so plentiful as the Pied Wagtail, and is much more prized. It is not considered so hardy as the Common variety, and is, consequently, less frequently kept in confinement, though it makes a pleasing and attractive addition to a carefully-selected aviary of British birds.

A fully-grown bird measures, from beak to tip of tail, $7\frac{1}{2}$ in. to 8 in., the tail measuring $3\frac{7}{8}$ in. The bill is dark brown, verging on black. The irides are brown. The head, hind part of neck, cheeks, and back, are dark ashen grey, slightly tintured with green, particularly about the head. The large pen feathers and wing coverts are dusky greenish brown, the latter being edged with ashen grey. The secondary quills are white at the base and brown at the ends, and are tipped with yellow at the outer edges; in length, they are almost equal to the major flight feathers. The middle feathers of the tail are black; the exterior feathers are white, the next adjoining white on the inside and at the tips, and on the outside black. The third feather on each side is white on the outer and black on the inner edge. The rump and upper tail coverts are yellow. Over each eye is a streak of greyish white, and another passes from the gape, or base of the beak, down the sides of the neck; a narrow band of black runs parallel from the gape to the eye.

The chin and throat are black, forming a sort of crescent, or gorget. The breast, sides, belly, and vent, are bright yellow. The legs and feet are a sort of brownish yellow or dirty flesh colour, and in some specimens black.

HABITS AND BREEDING.—The Grey Wagtail is termed, in the South of England, the Winter Wagtail, owing to its habit of migrating to that part of England and remaining there during the winter; it leaves in the spring, and goes northwards, returning again in the autumn or early winter. The Grey Wagtail is, therefore, indigenous to Great Britain, and is the only variety of this species that does not migrate to a foreign country. It is, however, an inhabitant of most of the countries of Europe. It is not so sociable as the commoner kinds, and repairs chiefly to mountainous and wooded parts, in cultivated districts, where shallow brooks abound. It does not seek the association of man so readily, and is less confiding and valorous, than the species previously mentioned.

The birds breed twice a year, and their nests are to be found by the side of a stream, rivulet, brook, or mill-dam, in a stone dyke beneath a pile of wood or stones, or on the ground near the water's edge. The nests are composed of grass or hay, dried roots, and moss, and are lined with hair, mostly that of the cow. If the weather be favourable, the birds commence to build early in the year, as soon as the day dawns about 6 a.m. The hen lays from four to seven (generally five or six) dirty white eggs, mottled with yellowish spots. The parents are very fond of their young, and most assiduous in their attentions to them.

METHODS OF CAPTURE.—The Grey Wagtail may be taken in the same manner as recommended for the Pied variety; some fowlers place large, flat-headed stones in the shallow parts of streams, with their tops out of the water, and on these they place limed twigs, and bait with mealworms; others raise a mound of earth close to the water's edge, and bait similarly. Both methods are more or less successful.

FOOD AND TREATMENT.—In a wild state, these birds feed principally on aquatic insects, flies of all sorts, ants and their eggs, spiders, and grubs.

In confinement, they may be fed on white bread and milk, mixed with ants' eggs, mealworms, wasp grub, and the Compounds No. 1 and No. 2 (*vide* pp. 189, 190), mixed; they will

likewise eat hard-boiled egg, chopped fine, and mixed with white breadcrumbs.

REARING THE YOUNG.—The young birds should be treated in all respects the same as the young of the Pied Wagtail.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is destitute of the black throat present in the male bird, and may easily be distinguished. As is the case with females of most varieties of birds, she is paler in colour than the cock. The throat of the hen is a sort of tawny or reddish yellow colour.

SONG.—The song of the Grey Wagtail is very circumscribed; it consists of very few notes, and has little variety. The voice is clear, and its tone not at all displeasing.

POINTS TO BE OBSERVED IN JUDGING.—A three-year-old bird is probably the most perfect in markings and richest in colour, and, consequently, best adapted for the show bench. Choose a bird with a good bluish grey back and a jet black throat. Birds of one and two years old frequently have white spots mixed with the black which forms the gorget; this is objectionable. The white face markings should be distinct, the wings and tail intense in hue, and the rump, breast, and belly, of a beautiful vivid yellow; all the feathers ought to be smooth and compact, and tight-fitting to the body, the tail and wing feathers being closely braced together. The exhibit must be perfectly clean, in good condition, plump, and lively, and the picture of health. It is useless to exhibit a bird with broken or damaged plumage, or one out of condition.

GENERAL REMARKS.—The Grey Wagtail is greatly and justly admired. It is peaceful, and unpretentious in its habits and bearing. When hand-reared, it becomes tame and tractable, but is never so confiding or daring in its disposition and demeanour as the Pied variety.

DISEASES AND THEIR TREATMENT.—The same careful attention and treatment should be given to this as to the Pied variety, as it is subject to the same ailments.

CHAPTER LIV.

THE YELLOW WAGTAIL.

Motacilla flava, Lin. ; *La Bergeronette du printemps*, Buf.

DESCRIPTION AND CHARACTER.—The Yellow Wagtil differs from its congeners in having a shorter tail, which, when it alights on the ground, it partly spreads like a fan, at the same time oscillating it—a manœuvre peculiar to this species. This bird may frequently be met with, in summer time, in cornfields and meadows—its most usual haunts. It is not by any means bashful, but is endowed with a considerable amount of confidence and trust, and will let anyone approach it within a few feet before attempting to move away, and even then will not go far ; in this respect it greatly resembles the Pied, or Common Wagtail.

The full-length of this bird, from the tip of the beak to the end of the tail, is $6\frac{1}{2}$ in., of which the tail measures $2\frac{1}{2}$ in. The bill is of a dusky colour, and almost black. The irides are dark hazel. The head, and upper parts of the body (including the lesser wing coverts), are olive green, with the exception of the rump, which is Siskin green. The wings are blackish brown, and, together with the larger coverts, are bordered with pale yellow. Over each eye is a streak of pale yellow ; a dark line passes in front and behind the eyes, and there is a dark streak beneath the eye, and curving upward towards the hind part of the head ; the under parts are bright yellow, excepting with old birds, when they are more of a sulphur colour. The throat is slightly speckled with black, and sometimes the breast as well ; the tail is black, with the ex-

ception of the two exterior feathers on each side, which are half black and half white collaterally. The legs and feet are black, and the hind claws very long. The young birds, before they moult, are much paler in colour than their parents, and this is more particularly observable on the under parts of their bodies.

HABITS AND BREEDING.—The Yellow Wagtail is a bird of passage, arriving in this country in March, and leaving again in September, though a stray specimen may be occasionally met with in the winter in some of the warm Southern counties of England. It has two broods of young ones annually, and builds its nest the same as Larks, on the ground, in corn-fields and meadows, or by the side of a stream, among the tall grass. The nest is composed of dried grass stalks and root fibres, and is lined with wool or hair. The hen lays five or six dusky grey or pale lead-coloured eggs, with dusky brown spots and irregular lines; she incubates thirteen days, and the young remain in the nest until fully fledged, if not disturbed or molested.

METHODS OF CAPTURE.—The same plans may be resorted to as recommended for capturing Pied Wagtails, though these birds are much more difficult to ensnare than their congeners, as they are more suspicious.

FOOD AND TREATMENT.—In a state of Nature, Yellow Wagtails feed chiefly on flies and small insects; they devour the insects which torment sheep and cattle, and may be frequently observed in the vicinity of pastures.

In confinement, they will eat, and thrive upon, the same kinds of food as given to other varieties of Wagtails. They are very partial to hard-boiled egg, chopped fine, and mixed with white breadcrumbs and ants' eggs, or mealworms.

REARING THE YOUNG.—The young may be taken when ten or twelve days old, not later, and reared on milk and bread, mixed with ants' eggs or chopped mealworms; or they may be fed on hard-boiled egg, grated, and mixed with breadcrumbs; this should be moistened, worked into a soft paste, and mixed with ants' eggs and a little finely-shredded beef suet, freed from the skin. As they get older, they will require a larger quantity of insect food, such as mealworms and flies. When they reach the age of six weeks, they may be fed and treated in all respects the same as adult birds; but it must be remembered,

that a few fresh flies will at all times be greatly relished by them.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is not only much paler in the hues of her plumage than the male, but she is minus the black spots on the throat. The streak which passes over the eyes will, in her case, be found white instead of yellow, as in the male bird.

SONG.—The Yellow Wagtail is a better singer than either of the other members of this family; but, with this advantage conceded, it cannot be regarded in the light of a song bird proper. None of the species sing much, and their song at all times is very limited, both in quantity and quality.

POINTS TO BE OBSERVED IN JUDGING.—The Yellow Wagtail is not so handsome as the Grey variety, and, consequently, not so desirable as a show bird. The bird chosen should be clear and bright in colour, distinct in body markings, close and compact in feather, well-shaped, stylish, of good carriage and general appearance, in sound health and faultless condition, and perfectly clean.

GENERAL REMARKS.—Yellow Wagtails are often selected as aviary birds, and may be readily procured, from a professional birdcatcher, at from 9d. to 1s. each, and sometimes less, according to the season of the year and the length of time they have been caught. It is probable that these birds would breed in an outdoor aviary, if kept by themselves, and under favourable conditions; they would, however, require to be hand-reared birds, or young ones obtained before the first moult. Yellow Wagtails are hardier than the Grey variety, and live longer in a state of domestication.

DISEASES AND THEIR TREATMENT.—These birds are subject to the same complaints as the Pied and Grey varieties, and require the same marked attention and careful treatment during the process of the moult, which is by far the most critical period in their lives.

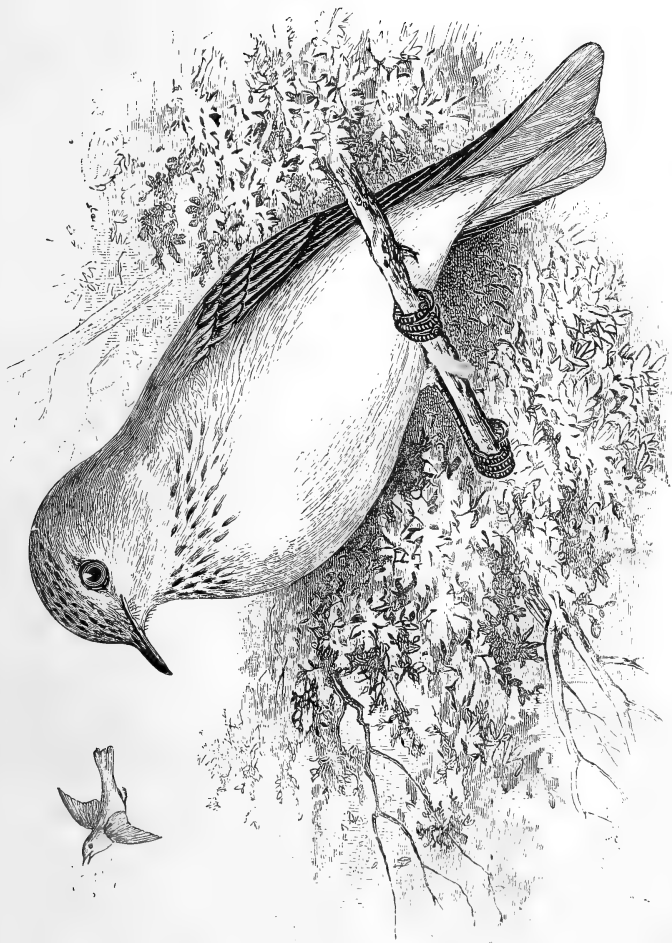
CHAPTER LV.

THE SPOTTED FLY-CATCHER.

Muscicapa grisola, Lin.; *Le Gobe Mouche*, Buf.

DESCRIPTION AND CHARACTER.—This interesting and amusing bird can scarcely be deemed handsome, but it is by no means a despicable object to look upon, and displays a most confiding and affable disposition. Much amusement may be derived from watching the actions of this adroit little bird. On warm days in summer it takes up its position on a pillar, gate post, or, it may be, on the lower branch of a tree bordering on a thoroughfare. From this 'vantage ground it may be observed to be intently looking out for its natural prey, a winged insect—either a butterfly, a moth, a common house fly, or, in fact, a fly of any description. As soon as it espies one of these passing, it suddenly leaves its retreat, dashes forward with much energy, instantly secures it, and returns at once to the place selected as a post of observation. Whilst thus occupied, it will permit the near approach of any person, whose actions do not betray too much curiosity or hostility, without showing the slightest symptoms of alarm or dismay; nor will such approach act as a deterrent to it pursuing its avocation. It is rather interesting, as well as astonishing, to watch this bird dart forth almost every minute in pursuit of some winged object, and to notice with what precision and dexterity it grasps its prize, especially when it is considered that it will practise this sport or exercise for half-an-hour or more without intermission, and always return to the spot chosen as the scene of its operations.

The length of a fully-grown specimen is $5\frac{3}{4}$ in., of which the



SPOTTED FLYCATCHER.

tail measures $2\frac{3}{8}$ in. The bill is blackish brown, but the base is inclined to white, and is surrounded with short feathers, which stand erect, and appear like bristles. The head is pale brown, indistinctly spotted with black; the back is brownish grey; the wings and tail are blackish brown, the former being edged with white; the breast and belly are white, the throat and sides, beneath the wings, being slightly tinged with red. The legs are black.

HABITS AND BREEDING.—The Spotted Fly-catcher is a bird of passage, and arrives in this country about the latter part of March, or early in April, leaving again at the end of September or early in October. It is an inhabitant of Spain, Italy, France, Greece, Switzerland, Turkey, and some parts of Germany and Russia. It is a very familiar bird, and evidently delights in the society of man, as it will build its nest in a vine or cherry tree attached to a garden wall or dwelling-house, and sometimes in a sweetbriar or rose bush, in close proximity to a garden walk, or near to the main entrance of a residence. It likewise builds in the roofs of detached buildings contiguous to habitations, inside workshops, stores, barns, stables, or cow houses, or in holes in a wall.

The nest is chiefly composed of moss, intermixed with root fibre, and is lined with wool or hair; its size is rather prodigious in proportion to that of the bird. The hen once a year lays from four to six eggs (usually four or five), of a greyish colour, mottled with reddish brown spots, and incubates about fourteen days. The parents are much attached to their offspring, uttering a mournful and piteous wail when deprived of them, and continuing to grieve for a considerable time afterwards. They return to the same locality year after year, if not molested.

METHODS OF CAPTURE.—Spotted Fly-catchers are wary birds apart from their tameness, and, consequently, difficult to ensnare. Probably the best plan to adopt would be to place some good birdlime on sundry gate posts and palings, or other places where the birds are known to frequent, as they rarely go far away from the locality selected for breeding operations until the young are fully fledged, when they retire to the nearest woods that afford them plenty of protection. Another plan is to wait until the birds are so intent upon their occupation of fly-catching as to be almost oblivious of all around them, and then to

expertly place a hand net over them. A third method, which has been adopted with success, and particularly so in the case of young, unsuspecting birds, is to take a large garden syringe filled with water, and then, having got as near the bird as possible from behind, when its attention is fixed upon some object send a stream of water over it; if this be dexterously done, very little difficulty will be experienced in securing the prey.

FOOD AND TREATMENT.—The Spotted Fly-catcher feeds almost exclusively on winged insects, and prefers to take them in the open air, when they are flying. It likewise exhibits a predilection for fruit, and is very partial to cherries, attacking them as soon as ripe, and destroying large quantities; hence, in Kent, and some of the adjoining counties, this bird is known by the name of the Cherry-sucker. In confinement, these birds require to be fed on flies and other insects, and ants' eggs; after they become thoroughly acclimatised they will eat, and thrive on, the following Compound:—Preserved cherries, two parts; dates, freed from the kernel, two parts; honey and fine flour, or ground rice, each one part. Mix well together, and make into a paste with hot water; afterwards allow it to simmer for twenty minutes, but do not let it get burnt or baked. This compound will keep good for a week or ten days, excepting in very hot weather. When procurable, a few flies may be mixed with this compound, which is much relished by the birds.

REARING THE YOUNG.—The young birds ought to be taken when ten or twelve days old, and fed on fine white bread, soaked in warm milk, with a little red currant jelly, or preserved cherries, and a few ants' eggs, added. When they are seventeen or eighteen days old, insect food must be given, such as flies, moths, butterflies, small caterpillars, or other garden insects. They will ultimately eat the Compounds No. 1 and No. 2 (*vide* pp. 189, 190), mixed; but insect food must be frequently given in order to preserve them in health and condition. When fledged, they should be kept in an out-of-door aviary, provided with a tree, in which to retire. In winter, they must be protected from cold at night, and, during severe frost and snow, in the daytime as well, although they are not particularly delicate.

DISTINGUISHING MARKS OF COCK AND HEN.—The males and females greatly resemble each other, though the latter are a

shade smaller in size, less vivid in the colours of their plumage, and more effeminate in appearance.

SONG.—These birds do not sing; they simply twitter.

POINTS TO BE OBSERVED IN JUDGING.—Spotted Fly-catchers are not adapted by Nature for show birds, and never thrive when confined in cages.

GENERAL REMARKS.—These birds are comely in appearance, and of a lively disposition when once they become tame, but are difficult to keep in good health in a state of domestication. Newly-caught birds of this species rarely live long, unless taken when young. Those that are reared by hand thrive much better than older birds that have been captured, as they feel the change less. They are, however, rather difficult both to rear and moult, and great care and attention is necessary, in either case, to obtain successful results.

DISEASES AND THEIR TREATMENT.—The moult is a precarious period in the lives of these birds. At this time they require special attention, and a plentiful supply of insect food. They are most liable to consumption, the result of artificial feeding.



CHAPTER LVI.

THE PIED FLY-CATCHER.

Muscicapa atricapilla, Lin. ; *Le Tranquet d'Angleterre*, Buf.

DESCRIPTION AND CHARACTER.—This species of Fly-catcher is indigenous to this country, but is very scarce, and much localized. It may be met with in most of the Midland counties of England, and sometimes in Yorkshire, Durham, and Northumberland, but, being a shy bird, is not seen so frequently as its congener, the Spotted Fly-catcher.

The full-length of an adult bird, from beak to tail, is 5in., and of this the tail measures $2\frac{1}{4}$ in. The bill is black. The eyes are dark hazel. On the forehead is an elliptic white spot; the top of the head, and around the eyes and hind part of neck, as well as the tail, are black, with the exception of the external feathers of the latter, which are white. The back is black, intermixed with brown; the rump feathers are paler, and interspersed with grey. The pen feathers of the wings are russet brown. The wing coverts are blackish brown, the larger ones being tipped with white; the outer side of the secondary quill feathers is white. The throat, fore part of neck, cheeks, breast, belly, sides, and vent, are white. The legs and feet are black.

HABITS AND BREEDING.—These birds dwell principally in the neighbourhood of pools and low marshy grounds, or in thickets and woodlands at the side of a stream or lake. They build their nests in hollow decayed trees, usually pollards, or in dense thickets among the scrub wood; sometimes they build in a hole in a wall. The nest is difficult to find; it is

loosely made of small roots, husks, grass, moss, and hair, or similar materials. The hen lays from four to seven eggs, of a uniform pale greyish blue colour, and incubates fourteen days. The young are fed at very short intervals by their parents, who display great assiduity in attending to their wants.

METHODS OF CAPTURE.—The same as adopted for the Spotted Fly-catcher (*vide* Chapter LV.).

FOOD AND TREATMENT.—Feed and treat these birds in the manner recommended for the Spotted Fly-catcher.

REARING THE YOUNG.—Treat in all respects the same as for the young of the Spotted Fly-catcher (*vide* Chapter LV.).

DISTINGUISHING MARKS OF COCK AND HEN.—The female is brown in colour where the male is black, and is entirely destitute of the white spot which adorns the forehead of the latter; the white on the wings, also, is duller and greyer, and the under parts are dusky white.

SONG.—These birds make a pleasant, twittering noise, but it can hardly be designated a song.

POINTS TO BE OBSERVED IN JUDGING.—Pied Fly-catchers are scarcely adapted by Nature for exhibition, as they require more attention, with regard to diet, than they would be likely to get at a show. When used for this purpose, however, the points most desirable are good shape, close, compact feathering, rich clear colours, a well-formed white spot on the forehead, and distinct and even markings. The wings, tail, feet, and claws, must be in good order. Condition and cleanliness are highly essential points.

GENERAL REMARKS.—Pied Fly-catchers make pretty and attractive aviary birds, but are not suitable for cages. They are delicate, and require a considerable amount of attention to keep in good condition and health; an abundance of insect food should be supplied daily. The lively and graceful motions of these birds are very much admired.

DISEASES AND THEIR TREATMENT.—These birds are very difficult to moult, and require special attention at this period of their existence. They must be supplied with insect food in variety, ants' eggs, and hard-boiled fowls' egg, chopped fine or grated. They are subject to consumption, and almost invariably die from this complaint. For treatment of other ailments, see Chapter V., on "Diseases."

CHAPTER LVII.

THE GREAT TITMOUSE.

Parus major, Lin. ; *Grosse Mésange, ou Charbonnière*, Buf.

DESCRIPTION AND CHARACTER.—The Great Titmouse, more commonly termed the Ox Eye, is a well-known bird, and is a great favourite with bird fanciers, not only on account of its beauty and docility, but also because of its bright and cheerful disposition and engaging manners. It is a very merry, and also a very mischievous, bird ; and, on account of the latter reason, it is not advisable to keep it in an aviary with others of a different species, as it is uncommonly courageous, and also cruel, and will attack birds much larger, and of greater bodily strength, relying upon its activity and dexterity to vanquish its opponents, which it almost invariably does by attacking them about the head and braining them. When hand-reared, and brought up with other varieties (or species), it is not so vindictive, and hence more reliable ; the males, however, should never be placed, during the breeding season, with any but their own species, for this propensity seems an inherent part of their nature. When reared by hand, they may be taught several amusing tricks, and also to draw up their food and water after the manner of Goldfinches and Redpolls. They are apt pupils, and readily learn their lessons, appearing to appreciate what is taught them.

A fully-grown bird is $5\frac{1}{2}$ in. long from beak to tail, the latter measuring $2\frac{1}{2}$ in. The beak is conical in form, very hard, sharp at the point, and in hue black. The iris is dark brown. The head, neck, chin, and throat, are deep black, the head and neck



GREAT TIT.

being slightly tintured with dark blue or purple. The cheeks are white; the junction of the neck and back is Siskin green, intermixed with white; the back is a lovely pale olive green, and the rump and tail coverts bluish grey. The pen feathers are bluish black, the larger quills being edged with white, and the secondaries with palish green. The wing coverts are bluish ashen grey in some birds, and olive brown in others; the greater coverts are tipped with white, forming a bar across the closed wings. The tail is bluish black, the two centre feathers having a decidedly blue shade; the exterior feathers are white on the outer, and part of the inner, plume, and the remainder edged with pale blue; the second feather on each side is tipped with white. The breast and belly are yellowish green, showing more yellow as the bird gets matured. Down the centre, from the breast to the vent, is an irregular, broad, black stripe; the vent is black, edged with greyish white; the sides are olive green; the thighs are pale grey, spotted with black. The legs and feet are lead colour. These birds are not in their best plumage until three years old.

HABITS AND BREEDING.—The Great Titmouse is indigenous to this country, and may be met with in all parts of England and Wales, and in most parts of Scotland and Ireland. It is likewise found pretty generally throughout Europe, and also in Africa. It frequents gardens, orchards, groves, thickets, and hedgerows. In winter time, these birds to some extent may be considered gregarious, as they keep together in family parties, and move from place to place, in search of food, until the advent of spring, when they separate in pairs, and nest in woods, groves, or some dense thicket, where they may hope to bring forth their young with little fear of molestation.

They commence breeding in March—sometimes before, but seldom later—and have from two to three nests in the year. They usually select a hollow tree in which to rear their edifice, but sometimes avail themselves of the deserted nests of other birds, and especially those of the Magpie. The hen lays from seven to twelve eggs, according to her age and the time of year, but rarely hatches more than seven young ones. The eggs are white, variously marked and spotted with reddish brown, principally at the thickest end. After the young are fully fledged, they never go far away from the locality of their

birthplace, and the parents continue to exhibit an interest in their welfare.

The nest is skilfully built, and composed of layers of moss, wool, and hair, or feathers, and is rather bulky. The young do not leave the nest until they are about three weeks old; they, however, occasionally come out for a short time to stretch their limbs, but retire at once on hearing the least noise. In winter, during severe weather, and when pressed by hunger or thirst, these birds visit villages, farmhouses, and small country towns, and become almost as tame and bold as House Sparrows.

METHODS OF CAPTURE.—In the winter time, when frost and snow make it a difficult matter for birds in the open air to procure food, Great Titmice betake themselves to the neighbourhood of dwellings, farmsteads, orchards, gardens, &c., and may then be caught readily with a decoy bird and limed twigs, placed on a piece of ground baited with hemp seed, groats, or a little finely-shredded suet. They can likewise be taken with horse-hair nooses, attached to a cord, and fixed to the ground with short sticks; or in spring traps, formed chiefly of wood, and covered with felt horsecloth at the sides, or jaws, to prevent injury to the captives. Occasionally these birds will enter the ordinary trap cage, but, as a rule, only when pressed by hunger.

FOOD AND TREATMENT.—In a wild state, Great Titmice feed upon insects of various sorts—moths, caterpillars, flies, gnats, grasshoppers, bees, woodlice, ants, &c. When insects become scarce, they resort to seeds of various kinds, berries, &c. They are partial to maggots and decayed meat.

In confinement, they will eat almost any kind of food supplied to soft-billed birds, as they are not at all dainty in the matter of diet; seeds of most sorts, insects, mealworms, wasp grub, and vegetables, may be given them. They are very fond of cheese, boiled or roasted fat meat, and of suet, and eat the Compounds No. 1 and No. 2 (*vide* pp. 189, 190) with evident delight, especially No. 1. They hold their food between their claws, and pull it to pieces in the same manner as a hawk does.

REARING THE YOUNG.—The young may be taken when twelve days old, and either reared on white bread, soaked in milk, and mixed with ants' eggs, or on beef, or bullock's heart, chopped fine, and mixed with breadcrumbs, moistened with water. As

soon as they are able to peck, give them a change of diet gradually—flies, mealworms, or insects of any kind. When six weeks old, they will partake of the same food as adult birds. They must be supplied with fresh water daily, both for drinking and bathing purposes, as they are partial to it, and it will keep them in good health. The young birds before moulting are much paler in colour than their parents.

DISTINGUISHING MARKS OF COCK AND HEN.—The females may easily be distinguished from the males by the black stripe which runs down the centre of the under part of the body. In the male bird this extends from the neck to the vent, whereas in the female it only extends part of the way down the abdomen, and is narrower, and less distinct. The hens are smaller than the cocks, and the colours of their plumage less vivid.


SONG.—The song of the Great Titmouse is meagre, and wanting in variety. The voice is flexible, clear, and even penetrating, but the notes are few and disjointed, and resemble a continuous chatter more than a song, and is apt to grate on the senses rather than exhilarate them.

POINTS TO BE OBSERVED IN JUDGING.—Select a bird in full adult plumage, with a bright, deeply lustrous cap, collar, and throat marking, and with clear, white cheeks; the colour of the back must be a pale rich olive green; the breast, of a fine yellow tint, with a distinct black line running down the centre; the tail and wings should be shaded with blue. The bird chosen must be of good contour, compactly feathered, and with the tail and wings closely and firmly braced. The exhibit must be in sound health, and in good condition generally.

GENERAL REMARKS.—The Great Titmouse is much admired by a large number of fanciers. It thrives well in a spacious cage, which should be fitted with a wooden nest box, to roost in, of the kind recommended for use in breeding hybrids (*vide* pp. 52, 53). If moulted in a house for one or two consecutive seasons, and kept in a properly constructed out-of-door aviary, under favourable circumstances, these birds would no doubt breed. As a change of diet when insect food is difficult to procure, a little hard-boiled egg, chopped fine, and mixed with breadcrumbs and a sprinkling of maw seed, will be found beneficial, and, in most cases, highly appreciated by the birds.

DISEASES AND THEIR TREATMENT.—When kept in cages of small dimensions these birds are very subject to cramp. They

are by nature uncommonly active and energetic, and, consequently, thrive best in a large aviary out of doors. With regular and careful attention, and a frequent change of diet, they rarely, when kept under such conditions, ail anything, and will live in confinement for years. If fed too much on a stimulating diet, such as hemp seed and fat meat, they become gross and gouty, and are also liable to epilepsy and other kindred diseases, for treatment of which see Chapter V., on "Diseases."





BLUE TITS.
(Male and Female.)

CHAPTER LVIII.

THE BLUE TITMOUSE.

Parus cœruleus, Lin.; *Mésange bleue*, Buf.

DESCRIPTION AND CHARACTER.—This beautiful and interesting bird, which is, perhaps, better known as the Tomtit, is, on account of its social disposition and charming manner, greatly esteemed. It rarely wanders far away from human habitations. Even in the breeding season, when most birds exhibit a natural sensitiveness and watchful jealousy, the Blue Tit seeks out a quiet corner in a garden, orchard, or pleasure-ground attached to a dwelling, generally not far distant from a town or village, and there builds its nest, almost courting notice, and not showing the slightest fear or timidity, even if the nest be looked at when the mother is engaged incubating her eggs, or cherishing her callow brood.

The length of this bird is $4\frac{1}{2}$ in., the tail being $2\frac{1}{2}$ in. The bill is about $\frac{3}{8}$ in. long, and blackish in colour, with the exception of the lips and extreme point, which are white. The iris is dark brown, verging on black. On the top of the head is a beautiful blue cap; a dull white line passes across the forehead, over the eyes, and round the back part of the head. The cheeks and face are white; a narrow stripe of black runs, parallel with the eyes, from the base of the bill to the hind part of the head. The lower part of the hind neck is black, fringed with a narrow border of dullish white; from this band a crescent-shaped, narrow line of dark blue, extends to the throat. The back is of that pale yellowish green known as Siskin green, the feathers being very fine in texture and silky in appearance.

The quills forming the wings are greyish black, edged with pale dusky greenish blue; the wing coverts are pale blue, the larger ones being tipped with white, like the spangles on a Lizard Canary. The tail is blue, edged with pale blue on the outer plume; the two centre feathers are the longest. The breast, sides, abdomen, and vent, are pale greenish yellow; and down the centre of the body, from the middle of the breast, passing between the legs, is a longitudinal stripe of pale blue. The legs and feet are bluish black; the latter are of a shape adapted for climbing.

HABITS AND BREEDING.—The Blue Titmouse is well-known throughout Europe, and is partly migratory. In this country it is known by a variety of names. It is exceedingly active and vigorous in its movements, and most industrious in destroying insects and their larvæ, and, consequently, of great service to horticulturists. Its motions and attitudes when in quest of food are graceful and elegant, and the rapidity with which it traverses the branches of trees is quite surprising.

The chief resorts of Blue Tits are gardens, orchards, groves, pleasure-grounds, and woods in close proximity to towns and villages. They principally build their nests in the holes of trees, or in walls. The nest is composed of moss, hair, and feathers, the latter being used in great abundance. The hen lays from eight to sixteen whitish eggs (sometimes more, but rarely), slightly spotted with brown, and, as a rule, hatches eight or ten young ones. Blue Tits only have one nest in the year, unless molested, or deprived of their eggs. If the eggs are handled, and one damaged or broken, the hen will forsake them, unless this should happen before she has finished laying, or when she is near hatching. The female defends her eggs and progeny with the greatest courage and determination, and will not leave them when on the nest; and if an attempt be then made to disturb her, she will draw herself up on one side, puff out her feathers like a barndoor fowl in charge of newly-hatched chicks, erect her tail, let down her wings, hiss like a snake, and bite with the utmost ferocity.

These birds have a violent antipathy to owls, their greatest enemies, who rob them of their nestlings, and often devour the parents likewise; but, in spite of this fact, they show no signs of trepidation, and, with a heroism almost beyond belief, will

attack the enemy, and sacrifice their lives to protect their offspring.

The parent birds are most assiduous in supplying the natural cravings of their young ones, and may be seen carrying insects to them, at surprisingly short intervals, when they are well advanced towards maturity. The male bird generally roosts in close proximity to the hen, and often in the nest beside her.

METHODS OF CAPTURE.—Blue Tits are easily caught. Place a decoy bird in an ordinary wired cage, and proceed with it to an orchard, large kitchen garden, or other place where they are known to congregate. Put the cage on a sheltered walk or beneath a tree, place a few kernels of nuts between the wires (Spanish or beech nuts will do), and then erect a number of limed twigs around the cage, in an oblique position. If the decoy does not call freely, use a small whistle to attract the attention of the birds. Tits are naturally inquisitive, and appear anxious to find out the cause of any noise, or other proceeding, which they do not clearly understand, and will soon proceed to explore the neighbourhood whence the noise proceeds; so that, as soon as they espy the captive bird feasting on the nuts, they will surround him, and endeavour to obtain a share. These birds may also be taken in the Tit trap, and, in the autumn, with horsehair nooses, baited with service or elderberries, and secured to trees or bushes in an orchard, garden, or field which they are accustomed to frequent.

FOOD AND TREATMENT.—In a wild state, Blue Tits feed largely, in the spring and summer months, on insects, and their eggs and larvæ; in autumn and winter, they eat berries and seeds. In confinement, they will thrive on mealworms, egg and bread, and hemp seed, and also on the Compounds recommended for soft-billed birds on pages 189, 190.

REARING THE YOUNG.—Take the young at the age of ten or twelve days, and rear them on white bread sop, mixed with ants' eggs; or give them a piece of cooked lean meat, minced fine, and mixed with breadcrumbs, grated, and moistened with water. When they are able to feed themselves, give as a change a few flies and small insects of any sort. When six weeks old, they may feed the same as adult birds.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen birds are smaller in size, and fainter in the various colours of their plumage, than the cocks; the markings on the head, also, are

not so vivid and prominent as those of the mature male. In the hen, the back is not of that beautiful Siskin green colour present in the cock, but more of an ashen grey; the stripe of blue on the abdomen, also, is less distinct, and in young birds scarcely perceptible.

SONG.—The song of the Blue Tit is meagre and insignificant, and by no means symphonious.

POINTS TO BE OBSERVED IN JUDGING.—Select a strong, lively bird, with close, tight-fitting plumage. It should be soft and silky in appearance, brilliant in body colours, and have distinct and well-defined face and throat markings, a rich, clear blue cap, very white cheeks, and a vividly coloured back, breast, wings, and tail. The toes and nails must be perfect in form, and the exhibit tame and tractable, and free from dirt and damaged feathers.

GENERAL REMARKS.—The Blue Tit should be shown in an open wired cage, not too large, and closely wired with fine wire. A two or three-year-old bird is best for exhibition, it being then more resplendent and perfect in the various colours of its plumage. A show bird should not be given too many dainties; make it tame and familiar by frequent handling, and feeding at intervals. Do not leave a constant supply of food and water in the cage until the bird becomes thoroughly domesticated, and free with strangers. Wild birds, as a rule, are not successful on the show bench.

Blue Tits are best kept in a small aviary by themselves, and supplied with an abundance of clean sand and fresh water. They are mischievous and quarrelsome with birds alien in species. They will breed in out-of-door aviaries, under favourable conditions. A few cocoanut shells, hollowed out, and with a small round hole in the side, hung inside the aviary, for the birds to roost in at night, is very commendable.

DISEASES AND THEIR TREATMENT.—The Blue Titmouse is subject to the same complaints as the Great Titmouse, and the treatment recommended for the latter bird must be observed with regard to this one.

CHAPTER LIX.

THE COLE TITMOUSE.

Parus ater, Lin. ; *Le petite Charbonnière*, Buf.

DESCRIPTION AND CHARACTER.—The Cole Titmouse, or Coal Tit, as it is occasionally designated, is the smallest of the British species of this genus. Like its congeners, it is exceedingly active and lively in its movements, and almost incessantly in motion. It principally subsists on insects, and moves from tree to tree in search of them in a rapid, business-like manner, examining with great care and diligence almost every leaf and twig presenting tokens of their presence, and seizing them with great dexterity. The Cole Titmouse cannot be said to be a particularly handsome bird, but is well known on account of its very conspicuous and peculiar black and white markings. It forms a pleasing variety when kept with other members of the Tit family; but it should not be kept in an aviary with birds of a different species, as, like all other varieties of the Tit, it is naturally mischievous and cruel, and would, without hesitation or compunction, destroy their eggs or progeny.

The full-length of the Cole Titmouse is 4in., of which the tail measures $1\frac{3}{4}$ in. ; it weighs about 2 drachms. The bill is black, with a greyish tip. The iris is dark brown, verging on black. The top of the head, hind part of neck, collar, throat, and upper part of breast, are purplish black; the cheeks, and fore part of the neck, are greyish white, and there is a white spot on the back of the neck. The back, shoulders, tail, and upper wing coverts, are greenish ashen grey; the large coverts are black; both the lesser and greater coverts are tipped with greyish white, forming

bars across the wings. The larger, or flying feathers of the wings, are greenish brown, with a greyish tinge, and are bordered with iron grey. The tail is blackish brown, edged with greyish brown; the sides and lower portion of the breast and belly are white, tinged with reddish grey; the vent is dirty white. The legs and feet are leaden grey. The Cole Titmouse is a very thoughtful and provident bird, and stores up food for the winter; this it secretes beneath the loose bark of fir trees, in niches in walls, or holes in trees, or other convenient receptacles which appear to it to afford security. The same forethought is observable in the case of a bird of this species confined in an aviary, for, as the winter approaches, if a superfluity of food be provided, it will seek to hide it in some secluded corner, behind or beneath a stone or tree stump, or in a similar place. The same propensity is observable in the other varieties of Tits.

HABITS AND BREEDING.—The Cole Titmouse is indigenous to Great Britain, is common throughout Europe, and is also found in some parts of America. It is very plentiful in the Midland and Southern counties of England, and most abundant where there are forests of oak or pine trees. It invariably selects hilly ground abundantly clothed with woodland and coppice as a habitation, for in such places it appears to love to dwell. The Cole Titmouse may occasionally be seen in the vicinity of orchards, gardens, and pleasure-grounds attached to suburban mansions, but only in the latter part of autumn, in winter, and during the early spring months, for it evidently enjoys secluded haunts, only leaving them after the breeding season is over, and its offspring fully matured. The Cole Titmouse associates with the Golden-crested Wren and the Lesser Redpoll, and these three birds may frequently be seen travelling together in flocks in search of provender. When insect food is not obtainable, the Cole Tit eats the seeds of several wild plants which grow by the wayside and in ditches.

The nest is usually built in the holes of trees, not very far from the ground, and sometimes among the dense underwood in plantations, or in thickets; other places selected are the sides of banks or dykes, holes in rocks, or crevices in a dilapidated wall surrounding a plantation or orchard, though this bird has been known to build in a disused mole hill or a forsaken rabbit burrow.

The hen lays, twice a year, from six to eight eggs, which are whitish in colour, and spotted with pale red; she incubates about thirteen or fourteen days. The young leave the nest when about three weeks old, or a little more, but the parents continue to associate with their offspring, who never go far away from their birthplace.

METHODS OF CAPTURE.—Cole Tits may be taken, during stormy weather, by means of a decoy bird; one of its own species, or a Redpoll, will be found best suited for this purpose. Clear a piece of ground in a garden or orchard which these birds frequent, bait with mealworms, or pieces of beef suet, shred fine, and then place limed twigs around. They are sometimes caught by tying a piece of suet to a clothes pole, and surrounding the top of it with limed sticks.

FOOD AND TREATMENT.—In a wild state, these birds subsist on small insects, and their eggs and larvæ, and on a variety of wild seeds, more particularly those of the pine and fir; hence, they are most frequently found in the neighbourhood of pine and fir woods. They will eat beech mast, and most kinds of nuts and their kernels.

When kept in confinement, they may be fed on mealworms and milk and bread, or on a mixture of shredded suet and breadcrumbs, mixed with crushed hemp, lin, or maw seed. They will, when thoroughly acclimatised, and accustomed to the aviary, eat any of the Compounds prescribed and recommended for soft-billed birds on pages 189 and 190.

REARING THE YOUNG.—When intended to be hand-reared, the young should be removed from the care of their parents at the age of ten or twelve days. Feed with milk and bread, alternated with a little beef suet, shred very fine, and mixed with scalded bread and oatmeal in equal quantities; feed every hour, from early morn to 7 p.m. A few ants' eggs should occasionally be mixed with the food. When six weeks old, they may be given the food recommended for adult birds. Always moisten their throats after feeding with a few drops of water. They require to be kept very warm, as they are very delicate, and difficult to rear. The young birds greatly resemble their mothers when in their nest plumage.

DISTINGUISHING MARKS OF COCK AND HEN.—The male bird is more pert and energetic in his actions, and is blacker on the head, wings, and tail, and whiter on the cheeks and breast, than

the female. The black markings on the breast of the cock extend farther down, and are more decided, than those of the hen. The resemblance in other respects is very great, and the sexes are not easily determined, especially by amateurs and inexperienced persons.

SONG.—The song of the Cole Titmouse is by no means euphonious. It consists of very few notes, and these are uttered in a harsh, irregular manner, with a refrain on the note "Tzit, tzit," repeated several times in succession. During the period of incubation, however, the bird seldom sings, but is noisy enough in the spring, before the pairing season commences.

POINTS TO BE OBSERVED IN JUDGING.—Choose a well-proportioned bird, with distinct and clearly-defined markings, with the general colours pure and bright, and the plumage sleek, and close-fitting to the body. The tail, wings, and feet, must all be in good order, and free from any blemish. The bird must be in prime condition, clean and plump, lively in its gait, steady on the perch, and tractable.

GENERAL REMARKS.—The Cole Titmouse might be induced to breed in an out-of-door aviary, under favourable conditions. It bears cold well, and needs no artificial heat in the hardest of weather. Like all other Tits, it delights in a snug roosting-place, and, when kept in an aviary, nothing suits it better than a cocoa nut husk, which should be placed in a suitable corner. This bird has been confounded with the Marsh Tit, but differs from it both in appearance and habits, and is evidently a distinct variety of the same species.

DISEASES AND THEIR TREATMENT.—Cole Tits mostly die of consumption, caused by the want of a frequent change of diet and a plentiful supply of insect food. If well attended to, they are not particularly delicate, and, excepting during the moulting period, rarely get out of order; they must, however, have a frequent change of diet, and be supplied with their natural food, especially whilst moulting, or they will soon pine away and die.

CHAPTER LX.

THE MARSH TITMOUSE.

Parus palustris, Lin. ; *Le Mésange de Marais*, Buf.

DESCRIPTION AND CHARACTER.—The Marsh Titmouse, or Black-headed Tom Tit, as it is not unfrequently termed, is a very pretty bird indeed, and not greatly unlike the Cole Tit, though it may be readily distinguished from that variety by the absence of the white marks on the neck and wing coverts. Its call note is “Itz,” which is pronounced clearly and sharply.

Like the other Tits, though in a less degree, it becomes docile and social when kept in confinement. The length of a fully-grown specimen is $4\frac{1}{2}$ in., of which the tail measures 2in. The bill is black. On the top of the head is a deep black cap, which extends from the bill, and includes part of the hind neck; it runs almost parallel with the under part of the eyes. The face and sides of the neck are creamy white; the back, shoulders, wing coverts, and rump, are brownish ashen grey. The wings and tail are dusky brownish black, edged with brownish white. The throat is black; the breast, belly, and sides, are dingy white. The legs and feet are a dark lead colour.

HABITS AND BREEDING.—The Marsh Titmouse is indigenous to Great Britain, and is found in other parts of Europe; it is common in Sweden, Denmark, Italy, &c. In this country it is found in greatest abundance in neighbourhoods where the land is in a bad state of cultivation, and where draining has not been resorted to, such as the Lincolnshire fens, and similar marshy places; hence its name of Marsh Titmouse.

Occasionally it visits orchards and gardens, in search of insects, and the seeds of the sunflower, of which latter it appears passionately fond.

Like all the members of the Titmouse family, it is uncommonly vivacious and active, and flits about from place to place with great rapidity. It is very interesting to watch these birds chase bees in the summer time, and to observe the ingenuity, dexterity, and determination with which they pursue and capture them.

The Marsh Tit builds its nest in hollow trees, mostly preferring the decayed stump of an old willow, which it excavates readily. The nest is composed of moss and dried grass, and is lined with hair, wool, fur, feather, or thistledown. The hen lays from eight to twelve eggs (generally eight or ten), of a brownish white colour, spotted with reddish orange, and incubates from thirteen to fifteen days. The parents are very attentive to their young, and look after their welfare long after they have quitted the parental roof.

METHODS OF CAPTURE.—The Marsh Titmouse may be taken in the ordinary Tit trap, or by the use of a decoy and limed twigs; bait with nut kernels or oats. Some birdcatchers fasten a few sunflowers to two or three sticks, about 4ft. long, sharpened at one end, and driven into the ground; these sticks are erected at the side of a pool which the birds are known to frequent. The sticks have holes bored in them in several places with a gimlet, and in these round pieces of wood, resembling the perches in a bird cage, are firmly secured, and coated with birdlime. This device is usually successful.

FOOD AND TREATMENT.—In their natural, or wild state, Marsh Tits feed extensively on aquatic and other insects, and grubs and larvæ of any sort. In the autumn and winter, when insect food is difficult to obtain, they eat various kinds of wild seeds, and elder, ivy, and mountain ash berries.

In confinement, they may be fed on mealworms, ants' eggs, raw or cooked meat, chopped fine, mixed with breadcrumbs, and moistened with water; or on Compounds No. 1, No. 2, and No. 3 (*vide* pages 189, 190). They are fond of peameal, mixed with a little oatmeal and bruised hemp seed, or the seeds of the sunflower, and made with water into a moderately soft paste.

REARING THE YOUNG.—The young ought to be taken when

eleven or twelve days old, and reared on white bread sop (made fresh daily), mixed with ants' eggs; or they may be fed on a mixture of peameal, oatmeal, and ground linseed, moistened with water, and with a little melted beef fat stirred up in it to the consistence of paste. At the age of six weeks they may be fed exclusively on the same food as adult birds. They must be kept very warm, and fed, at short intervals, from an early hour until 7 p.m. They must never be gorged, as they are delicate, and very difficult to rear. After feeding, the mouths of all young birds should be moistened with a few drops of water.

DISTINGUISHING MARKS OF COCK AND HEN.—The male and female of this variety have a great resemblance to each other; the hen is slightly paler in the various colours of her plumage. The surest way of distinguishing the sexes is by observing the black markings on the throat; in the female these are scarcely perceptible.

SONG.—The song of the Marsh Tit is of a limited character. The voice is weak, and the song, or what is designated the song, is more like a continuous chatter than anything else. It consists of a succession of notes bearing a great resemblance to each other, uttered in a sharp and lively manner, but of short duration.

POINTS TO BE OBSERVED IN JUDGING.—Choose a bird with a deep, black cap; clear, well-defined face markings, and a nice, level coloured, ashen grey back, and intensely black throat. The exhibit should be well-formed and proportioned, close and compact in its body feathers, and with well-carried wings, and a tail free from blemish. The feet and claws must be in good order, and free from any malformation. The bird should be lively in manner, steady on the perch, tractable and docile, and free from all appearance of dirt and damaged feathers.

GENERAL REMARKS.—The Marsh Tit is not often used for show purposes, as it is too delicate to send about from show to show, or to be exposed to sudden changes of temperature. It makes a very pleasing variety, and might be utilised in this capacity at local shows. It forms a striking contrast when kept in an aviary containing all the different varieties of Tits. It will not breed in confinement.

DISEASES AND THEIR TREATMENT.—These birds seldom live long in a state of domestication, unless frequently supplied with

insect food, and given an almost constant change of diet. They are difficult to moult, and at this time should have a plentiful supply of ants' eggs, mealworms, and sunflower seeds, given them almost daily. If kept in cages, these should be placed in the open air on warm, sunny days, but in some place entirely free from draught, which would be apt to check the process of the moult.

For treatment of other ailments, see Chapter V., on "Diseases."

CHAPTER LXI.

THE LONG-TAILED TITMOUSE.

Parus caudatus, Lin.; *La Mésange à longue queue*, Buf.

DESCRIPTION AND CHARACTER.—The Long-tailed Tit is the most elegant and interesting of its species. It is graceful in contour, beautifully diversified in colour, and sylph-like in its movements. It is not so common as most of the other varieties, and is more difficult to domesticate and keep in confinement.

The length of this bird is $5\frac{1}{2}$ in., of which the tail measures $3\frac{1}{4}$ in. The bill is very short, stout, sharp pointed, and black in colour. The irides are hazel, and the orbits red. The face is very peculiar, and resembles that of an Owl. The top of the head is a mixture of white and grey; running from the forehead to the exterior part of the occiput is a broad band of black feathers, passing over and behind the eyes, down the sides of the hind neck, and encircling the back part of the head. The back is black and reddish chestnut brown intermixed, the latter colour predominating about the shoulders, and the former on the back and saddle. The cheeks, throat, and breast, are white; the belly, sides, vent, and rump, are of a dullish rose, or reddish chestnut colour, interspersed with white. The quill feathers of the wings are dusky greenish brown, with palish brown edges; the outer coverts are blackish brown, and the inner ones white, edged with dullish chestnut.

The tail is formed of feathers of unequal lengths; the two centre ones are 3in. long; the next on each side, $3\frac{1}{4}$ in.; the

third, 3in. ; and the remainder graduating to the two extreme outside feathers, which measure only $1\frac{3}{4}$ in. The four middle feathers are all black ; the remainder are white on the outer web. The entire plumage is soft, full, and tufty in appearance. The legs and claws (climbers) are black.

HABITS AND BREEDING.—The Long-tailed Titmouse is indigenous to Great Britain, but found in greater numbers in some parts than in others. It is not so plentiful as the Ox Eye or the Blue Tit. It is regarded as a singular bird, and is known by a great variety of names, the most common, and more generally recognised, being the Long-tailed Tit and the Bottle Tit—the latter name being derived from the form of the nest, which bears a strong resemblance to the shape of a bottle. Mac Gillivray makes a separate genus of this variety, which he calls the “Muffin” (*Mecistura*) ; but he is the only naturalist that has done so, all others classing it among the Tits.

These birds, like the other varieties of the same species, inhabit woods, orchards, gardens, and pleasure grounds attached to country houses, and are equally troublesome to horticulturists and the proprietors of gardens and orchards. They build their nests in bushes, dense undergrowth, or small trees, in the latter case always choosing the fork of a branch about 3ft. or 4ft. from the ground ; they never suspend them from a branch, as some of the other Tits do. The nest is both curious and elegant, and displays, both in its construction and finish, architectural and mechanical skill of a high order. It is oblong in form, with an aperture at one side (sometimes one on each side) for ingress and egress, and is beautifully formed and artistically executed. The materials used to make the outside are moss, dry grass, and wool, or liverwort, these being ingeniously woven together in a most dexterous and masterly fashion ; the nest is profusely lined with feathers and the down of plants, and occasionally with fur.

The hen lays from ten to twenty eggs (usually sixteen or seventeen), about the size of a kidney bean, and in colour greyish white, dappled with pale red, these markings being most numerous, and fainter in hue, at the blunt end. The hen incubates from fourteen to sixteen days, and sometimes hatches as many as fifteen young ones, but rarely more than

ten or twelve. The parents are most assiduous in their attentions to their offspring, and feed them at short intervals. The young birds remain with their parents until the following spring, when they separate, and set up homes of their own.

METHODS OF CAPTURE.—These birds may be taken in the Tit trap, and likewise by the methods recommended for capturing Cole Tits.

FOOD AND TREATMENT.—The Long-tailed Titmouse lives almost entirely on insects, and, like the other members of the species, searches diligently for them in trees, or other likely places. In winter, when flies and grubs are not procurable, it resorts to worms and spiders, and when pinched by hunger partakes of elder, ivy, and holly berries. In confinement, it is difficult to manage, as, unless it has a daily supply of insect food in some form or other, it speedily succumbs. It is not an easy matter to reconcile it to a state of domestication, and, as a rule, only those taken when young, or reared by hand, can be successfully kept in a cage or aviary. Give a few mealworms—say three or four—and some preserved flies each day, and occasionally a spider or two. As a change of diet, a little hard-boiled egg, mixed, in equal proportions, with raw sheep's heart, chopped very fine, may be given. Most soft-billed birds are fond of this food, and, when insect food is difficult to procure, it forms an excellent substitute; captured birds, however, will not partake of it until they have become acclimatized, and thoroughly reconciled to their changed circumstances.

REARING THE YOUNG.—Remove them from the care of their parents at the age of ten or twelve days, and feed on hard-boiled egg and raw sheep's or pig's heart, chopped exceedingly fine, and moistened with water. Ants' eggs, when procurable, should be substituted for the heart, as a change of diet, say every third day; and two or three mealworms may be chopped up and mixed with the egg once a week as a further change. When the young ones are three weeks old, give them a few small flies once or twice a day. Long-tailed Titmice are most difficult to rear, and it requires much care and patience to accomplish the task, and also to keep them in health in a state of domestication; but they are most interesting birds, and deserving of the extra trouble necessary for their preservation.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is paler in colour throughout than the male. The back is reddish

brown in place of black; the black band which passes through the eyes is less distinct in the female, and in some specimens entirely wanting.

SONG.—The song of the Long-tailed Tit is more harmonious, continuous, and pleasing, than that of any of the other varieties, but it is of short duration, as these birds usually cease to sing as soon as they commence breeding operations.

POINTS TO BE OBSERVED IN JUDGING.—A good and graceful contour; clear, bright plumage; full but close-fitting coat; perfectly formed wings and tail, tightly braced together, and well carried, are essential points. Freedom from dirt, good bodily condition, and vivacity, combined with tractability, are also required to make a successful show bird.

GENERAL REMARKS.—The Long-tailed Tit is plentiful in Sweden, and most of the Northern parts of Europe. It has a rapid and peculiar flight, and, being a very slender bird, and long in the tail, appears to shoot through the air like a barbed arrow. It will not breed in confinement, and is most difficult to get over the moult, and to keep through the winter months; consequently, it requires more than ordinary attention.

DISEASES AND THEIR TREATMENT.—These birds mostly die of consumption, doubtless resulting from the want of a proper supply of their natural food. If of robust constitution, and well cared for, they may be kept for two or three years, but seldom much longer. For treatment of ailments see Chapter V., on "Diseases."

CHAPTER LXII.

THE BEARDED TITMOUSE.

Parus biarmicus, Lin. ; *Le Mésange barbue ou moustache*, Buf.

DESCRIPTION AND CHARACTER.—The Bearded Tit is a very attractive bird in appearance, not only on account of its delicate and variously-coloured plumage, but also because of its peculiar facial markings, which are very striking. Unfortunately, it is a very timid bird, and difficult to approach, being apparently much averse to the society of human beings. It is most difficult to capture, and when caught terribly wild and intractable. Unless reared by hand from the nest, these birds are not easily reconciled to domestic life. They never become properly tame when taken later on, in this respect differing greatly from most of the varieties of this somewhat numerous and widespread family.

The length of the Bearded Titmouse is $6\frac{1}{4}$ in., of which the tail exceeds 3 in. The bill is rather long, thin, curved slightly at the point, and of an orange colour, with small dark bristles surrounding the base. The irides are deep yellow (known as "gravel-eyed"). The forehead is palish yellow; the head and upper part of the hind neck are a beautiful, delicate, pale or ashen grey. The nape of the neck, back, rump, and tail, are chestnut orange, or faint, soft, russet colour, the three outer feathers of the tail being tipped with white. The throat and fore part of the neck are silvery white. Over and beneath each eye, and running to a point at the sides of the neck, is a black marking, almost in the form of an acute triangle, from which the bird derives the name of "Bearded" Tit. The breast is

pale pinkish white or flesh colour; the belly, sides, and thighs, are pale chestnut yellow; the vent is black. The quill feathers of the wings are an indefinite blackish brown, edged with white; the lesser coverts are of the same colour, and the greater coverts chestnut orange, with pale margins. The secondary flying feathers are edged with reddish brown outside, and white on the inner plume; the bastard wing is dingy blackish brown, bordered and tipped with white. The tail is cuneiform in shape, the two exterior feathers being much shorter than the remainder. The legs and feet are black.

HABITS AND BREEDING.—The Bearded Tit, known by a variety of other names, such as the Bearded Pinnock, the Lesser Butcher Bird, and the Bearded Reed Bird, is indigenous to this country, and is found chiefly in fenny and marshy districts, and on uncultivated wastes where reeds and rushes grow amid pools of water that have no outlet, in some parts of Kent, Gloucestershire, Devonshire, Cornwall, Staffordshire, Lincolnshire, Lancashire, and Westmoreland. It is common in some parts of Denmark and Sweden.

The nests are seldom met with, as the birds generally build in places which can only be reached by means of a boat or punt. They are, however, sometimes found attached to reeds growing in the centre of a shallow pool, by the side of a lake, or, may be, secured to a willow overhanging a stream of water in some valley in a mountainous district. The nests are composed of grass stalks, root fibres, and the down of various plants, and are made in the shape of an old-fashioned long purse.

The hen lays four or five eggs, of a pale reddish, or pink colour, spotted with brown and chocolate; she incubates about fourteen days. The young remain in the nest until fully fledged, and able to fly clear away.

METHODS OF CAPTURE.—The Bearded Tit is difficult to ensnare. The best method is to fix horse-hair nooses, or secure limed twigs, to reeds or rushes that bear seed, in any locality the birds are known to frequent. The spot selected for operations should be carefully watched from a distance by the aid of a good field glass, and those birds which become entangled speedily liberated, or they will in all probability injure themselves in their struggles for freedom.

FOOD AND TREATMENT.—In a wild state, these birds feed almost entirely on insects of various kinds, and the seeds that

grow on reeds and rushes. In confinement, they should be fed on mealworms, ants' eggs, maw seed, and crushed hemp. When thoroughly domesticated, they will live on the same food as the other varieties of the same species.

REARING THE YOUNG.—Secure them when ten or twelve days old, and keep on a soft bed of moss and cow hair, cut short, and placed in a wooden box or basket. Put the box in a warm place, near the kitchen stove, and feed the birds, at short intervals, from early-morning to sunset. Give them pigs' or sheep's heart, and mealworms, chopped very fine; ants' eggs may be substituted for the latter. The food should be given in a moist state, and after each meal a few drops of water must be administered with a fine quill, shaped like a pen. At the age of six weeks the young birds will be able to partake of the usual diet given to adults.

DISTINGUISHING MARKS OF COCK AND HEN.—The females are destitute of the conspicuous cheek markings which adorn the male birds, and their rumps are the same colour as the abdomen, whereas in the male that portion of the body is in all cases black. The difference in sex is easily distinguished.

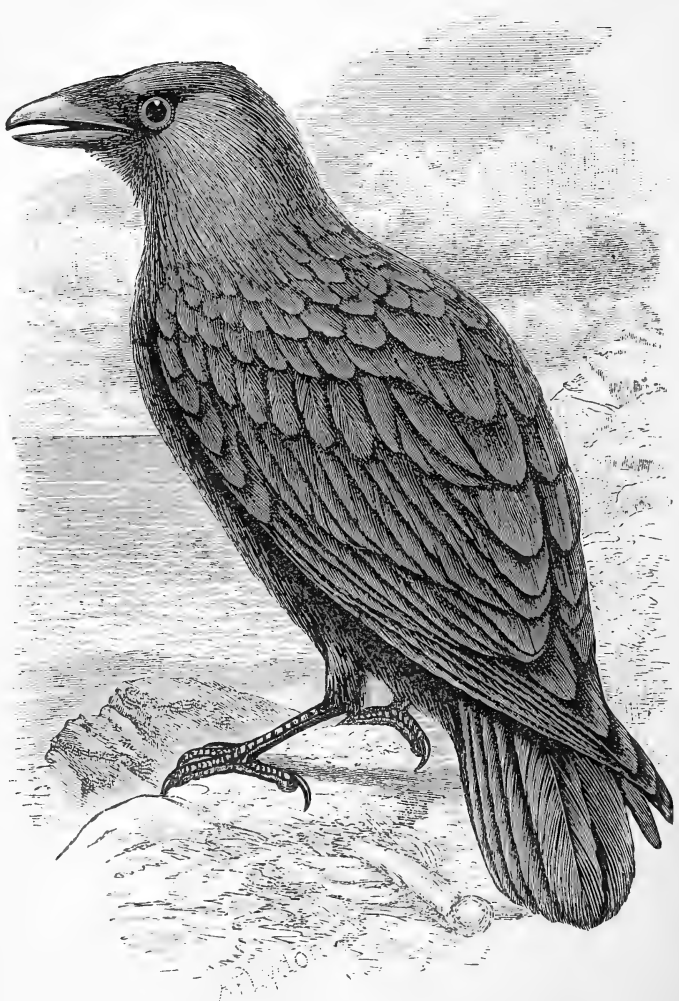
SONG.—The song of this bird is not very inspiring; it is meagre, but not altogether unmusical. When a flock of a dozen or so are suddenly disturbed, they scamper off hurriedly, uttering, as they skim over the tops of the reeds or willows, a low, pleasant, silvery note, in a rapid and somewhat agitated manner. They fly low, but swiftly, and get out of sight as quickly as possible, diving among reeds or willows for shelter and protection.

POINTS TO BE OBSERVED IN JUDGING.—These are, good shape; smooth, level feathers; bright, clear colours; a well-formed and fully-developed beard, intensely black, and a pearly grey head. The back and tail should be of a nice chestnut orange, the throat clear white, and the breast pinkish white. The wings must be tightly braced to the body, and the tail free from broken or twisted feathers, and well carried. The feet and claws must be perfect in form, and the exhibit in good bodily condition. There must be an entire absence of dirt, and the bird should be tame and tractable when under examination by the judge.

GENERAL REMARKS.—Bearded Titmice are famous climbers, and run up and down reeds with the agility of squirrels. They

are very clannish, associating together in numbers varying from ten to thirty or more. These birds will not breed in confinement; in fact, they can only be kept alive in health by exercising great care, and giving a frequent change of diet.

DISEASES AND THEIR TREATMENT.—These birds are liable to the same complaints as Long-tailed Tits, and require the same remedies. For treatment of ordinary ailments, see Chapter V., on "Diseases."



RAVEN.

CHAPTER LXIII.

THE RAVEN.

Corvus corax, Lin. ; *Le Corbeau*, Buf.

DESCRIPTION AND CHARACTER.—The Raven is generally very droll and entertaining, and creates much amusement, especially where dogs, horses, cattle, or cats, are kept. It becomes very domestic in its habits—tame, tractable, and familiar with everyone with whom it is brought into daily intercourse. It displays a disposition to be on good terms with both people and domestic animals, as a rule ; but it is rather a dangerous bird to keep uncaged where there are valuable young chickens, ducklings, or goslings of tender age running about, as these not unfrequently become a prey to its voracious appetite. Ravens are cruel and cunning birds, full of mischief and devilry ; but, being capable of uttering words and short phrases with great distinctness, they possess a charm for many people, who delight in having them about their stables and outbuildings. They are irrepressible thieves, and if not carefully watched will steal and hide anything they can conveniently remove, more particularly bright objects and coins. If very hungry when kept in a state of domestication, they will seize and destroy rats and mice. In the wild state, they not unfrequently attack weakly lambs, rabbits, and young leverets, or any predatory animals of small size that come within their reach, such as stoats and weasels.

The Raven is from 2ft. to 2ft. 3in. in length, and weighs about 3½lb. ; the tail measures 9in., and is cone-shaped. The bill is black, very strong and massive, and 2¾in. long ; it is surrounded by stout hairs, or bristles, which extend beyond the nostrils.

The irides are dusky brown ; the eyes are expressive of cunning and cruelty. The upper parts of the body are deep, rich, glossy black, tintured with blue, which is most observable in a strong sunlight ; the under parts are duller, and more dusky in hue. The wings, throat, and tail, have a green reflected lustre radiating the outer surface. The legs and feet are black.

HABITS AND BREEDING.—The Raven is by far the largest member of the Corvine family, and is found pretty generally distributed over the entire surface of the globe. It has been found as far north as Greenland and Iceland, where it is utilised as an article of food ; and the natives, after curing the skins, wear them as a protection against cold. The Raven not only inhabits the Arctic regions, but is found also in hot countries—in India and Japan—and, in the Western hemisphere, in Canada, the United States, and Mexico ; it likewise visits some parts of South America, such as Chili and Peru. It is indigenous to Great Britain and several other countries. In our Island, it is found in greatest abundance in Scotland and Wales. It is solitary in its habits, and chooses mountainous and extensively wooded regions in quiet, secluded districts, or steep, rugged rocks or cliffs bounding the seashore.

It builds its nest most frequently in tall trees overhanging steep crags, or in dense woods or forests ; sometimes it selects for this purpose a crevice in a projecting rock or promontory girt by the sea, or a hole in a perpendicular rock at the side of a mountain ; but, whatever place be selected, it is usually adhered to with unwavering fidelity, even though the birds may be occasionally deprived of their offspring. Ravens appear to possess in an eminent degree the faculty of locality, and are difficult to oust from any place which they have chosen as a home ; they are courageous and daring during the period of nidification, and will attack indiscriminately any bird, from a Jackdaw to an Eagle, that trespasses too near their domain. The nest is composed of twigs broken from decayed branches of trees, root fibres, and sometimes small bones ; it is lined with moss, wool, and hair, or fur. The hen lays from three to six eggs (generally three or four), of a dull greyish green, spotted with dark green and olive brown, and incubates from twenty to twenty-one days. The male supplies his partner with food at this time, and relieves her, two or three times a day, for a short period. Both parents feed the young.

and show much devotion to them, until they are fully fledged and capable of sustaining themselves, when they drive them away ruthlessly with beak and claws.

METHODS OF CAPTURE.—Ravens are very wily, and excessively cautious and suspicious; hence, they are difficult to ensnare. They can be taken in spring traps, placed by the seashore, which they are known to frequent in search of provender. The trap selected should be similar to that used for taking rabbits or rats; it should be lightly covered with dry sand, and surrounded with pieces of horseflesh or other carrion, dead mice, rats, or small birds. Old birds so taken are very vicious, and it is not a pleasant task to have to handle them; but young birds—and these are the most easily caught—are less difficult to deal with. If, before releasing the captives, their wings be cut tolerably short with a pair of scissors, it will deprive them, in a great measure, of their strength and ferocity. The young birds soon become reconciled to the change, but the old ones nearly always continue vindictive and revengeful.

FOOD AND TREATMENT.—In the wild state, Ravens are perfect scavengers, and devour any kind of putrid flesh they can find. They eat fish of all kinds, either fresh or putrid, and also rats, mice, frogs, toads, or, in fact, any kind of bird or animal that they can conveniently seize and destroy. When hard pressed by hunger, they will eat ground beetles and other insects, and also grain, especially oats and barley. They possess large appetites, and are, probably, with the exception of vultures, the most voracious birds in existence.

In a state of domestication they are quite omnivorous, and will eat flesh of all kinds, fish, fowl, biscuits, bread, potatoes, &c., &c.; in fact, the scraps of meat from the dinner table, with cold boiled potatoes and biscuit, make a good and much-appreciated meal. To keep the Raven in good health and plumage, it should have facilities for bathing every day.

REARING THE YOUNG.—Procure them when about ten or twelve days old, and feed on raw bullocks' liver, or pieces of any sort of coarse flesh, thoroughly boiled; or on earthworms, or cooked fish of any kind, mixed with moistened bread. A change of diet is at all times most beneficial. When the birds get older, say when about nineteen or twenty days old, give flesh meat more freely. At the age of five or six weeks they

will cater for themselves. They are by no means dainty, and when hungry will swallow anything, even to a piece of old leather. Cut their wings before turning loose, to prevent them straying from home and getting into mischief. If placed in an orchard or garden, or in a yard, especially one with stables or cart sheds attached, they will soon make themselves at home. They should be housed at night. They require frequent feeding when first taken from their parents, though care should be exercised not to stuff them to repletion.

SONG.—The Raven does not sing, but utters a most unearthly croak, “Koack, Croack, Koack,” which, once heard, is not readily forgotten. It can, however, be taught to talk, and, when carefully trained, speaks with greater fluency and ease than a parrot.

POINTS TO BE OBSERVED IN JUDGING.—The bird should be in good order and condition in all respects, well feathered, bright in colour, clean, and free from vice.

GENERAL REMARKS.—Ravens are vicious as well as courageous, and a source of terror to Rooks and Jackdaws unfortunate enough to settle in the immediate locality chosen by them to build their nests. Though during the period of incubation these birds will attack and drive off an eagle should it approach too near to their nesting-place, they, for some unaccountable reason, offer no resistance to a man when engaged in depriving them of their nestlings. Ravens have been known to live for nearly a century.

DISEASES AND THEIR TREATMENT.—The Raven is a hardy bird, and rarely suffers from disease. It frequently overfeeds itself, and then goes off to a quiet place, where it remains in an inert and semi-torpid state for several hours; but the moment it recovers it returns to the feast. When suffering from surfeit occasioned by eating too much raw animal food, substitute fish, bread, and grain. This bird is much troubled with vermin resembling lice, and should, therefore, be frequently soused with a strong solution of alum water, or have some snuff sprinkled upon its feathers.

CHAPTER LXIV.

THE CROW.

Corvus corone, Lin. ; *La Corneille*, Buf.

DESCRIPTION AND CHARACTER.—The Crow, or Carrion Crow, as it is not infrequently termed, on account of its partiality for putrid flesh, is also known as the Black Crow, Corby Crow, and Gore Crow. It bears a striking resemblance to the Raven, though considerably smaller, and is regarded by some naturalists as a link between that bird and the Rook. It is bold and daring, very mischievous and destructive in its habits, and held in great abhorrence by agriculturists, gardeners, and gamekeepers. These birds select a home in some well-cultivated district, and not infrequently in the neighbourhood of pheasant preserves, or where partridges abound. They root up and destroy, not only the newly-sown seed corn, but also the young blades of the plants, as soon as they appear above ground, and neither guns nor scarecrows prove effectual remedies against their depredations.

Although it is unquestionably a fact that they destroy large quantities of moles, field mice, worms, grubs, and similar pests, they are so predatory and voracious as to be quite intolerable. They devour both the eggs and young of pheasants, partridges, and grouse, and stealthily approach farmyards and carry off young chickens and ducklings, and even eat the eggs. They are very destructive to fruit, and have an especial weakness for cherries; they also pluck off walnuts before they are matured, and eat them. Like most of their tribe, they are great gluttons, and when hungry are

not fastidious in their choice of viands. They have been known to attack and devour young rabbits, and are courageous enough to tackle full-grown rats, and ultimately kill and eat them. Despite these forbidding characteristics, Crows have their redeeming qualities, for they are very intelligent; when hand-reared and tamed they are exceedingly amusing, and show a considerable amount of gratitude, and even attachment, to those who aid and succour them. They soon become familiar with the members of a household, more particularly with the junior ones, entering into terms of confidence and companionship with them, and following them about from one place to another with the sagacity and docility of a quadruped. When these birds get accustomed to a house and its inhabitants they rarely leave it; and, if they should go off during the pairing season, the probability is that, in most cases, they will return again after the moulting period is over.

The Crow measures from 18in. to 19in. from tip of beak to end of tail, and 26in. from tip to tip of wings; it weighs, ordinarily, about 20oz. The entire plumage is black, tinted with violet, though these colours are not so radiant in sheen as in the Raven. It is a much duller and heavier-looking bird than the Rook, more lumbering in its flight, and less active in its movements. It flies very high, and utters an almost incessant "Caw, caw!" It is unquestionably courageous, and in the breeding season will drive off hawks, and even Ravens, if these birds should venture too near its chosen domain.

HABITS AND BREEDING.—The Crow is indigenous to Great Britain, France, Germany, Italy, Spain, and other European countries, and is also found in some parts of North America. It usually builds its nest in well-wooded plantations in cultivated localities, selecting tall trees for the purpose. Each pair of birds claims a certain area, seldom breeding in close proximity to each other, as Rooks do, but preferring partial isolation during the period of nidification. Crows are mostly to be observed in pairs, which are said to remain faithful to each other during the period of their existence, or until one of them pays the debt of Nature. The nest is composed of twigs, root fibre, and dried grasses, and is lined with wool. The hen lays from four to six bluish green eggs, splashed and spotted with brown and dingy grey, and has young

ones in April, which remain in the company of their parents until the following spring, when they set up on their own account.

Crows are not so gregarious in their habits as Rooks; they keep together in winter in small flocks only, and in the spring separate, and betake themselves to the districts most congenial to their tastes.

METHODS OF CAPTURE.—In winter time, clear a piece of ground, and bait with pieces of raw meat, attached to short, stout pieces of stick, or thick rope; cut the latter into short lengths, and besmear well with fresh-made water birdlime. The birds settle on the sticks or rope in their endeavours to tear away the meat, and so get entangled.

FOOD AND TREATMENT.—In a natural state, Crows feed on worms, caterpillars, grubs, beetles, moles, mice, young birds of most kinds, and eggs of all sorts. When in the vicinity of the sea they feed on fish, mollusca, carrion, or whatever of an edible nature presents itself. In confinement, they may be fed on the food given to pigeons and poultry, or on any refuse from the table; but nothing appears more gratifying to their taste than a piece of decayed flesh of any sort, which, if hungry, they will devour in the most ravenous manner.

REARING THE YOUNG.—If it be intended to rear the young by hand, they should be taken when ten days old, and fed on soaked bread, pieces of raw bullock's liver, worms, maggots, &c., the same as young Ravens. When six weeks old they may be treated as adult birds.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is not so bright in the colour of her plumage as the male, and is quieter and less demonstrative in manner; in other respects there is a great similarity.

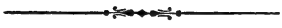
SONG.—The Crow does not sing, but utters a hoarse "Caw, caw." It can, however, be taught to repeat short words, and readily mimics sounds, such as those of a sheep bleating, or a cow bellowing, if kept for any length of time within hearing of these animals.

POINTS TO BE OBSERVED IN JUDGING.—Crows are not fit subjects for the show bench; but should one be required, care should be taken to select a specimen that is smart and active in its movements, and in perfect plumage.

GENERAL REMARKS.—Owing to the bad character these birds

are credited with, they are seldom kept as domestic pets ; they are, however, very diverting in their ways, though exceedingly crafty. They are more mischievous than Jackdaws, and quite as great adepts at thieving. If a Crow be kept by anyone having a house to which a stable and large yard are attached, and where no poultry or pigeons are confined, it will prove a source of much amusement, more particularly to young people and children. If these birds prove mischievous to garden produce, a place similar to that used for keeping poultry during the time that the vegetables and flowers are growing, should be provided for them. In the winter and early spring they should be allowed their full liberty, as they will eat up the slugs and caterpillars.

DISEASES AND THEIR TREATMENT. — Crows are subject to the same diseases as Ravens and Rooks, and should be treated in all respects the same as these birds.



CHAPTER LXV.

THE RED-LEGGED CROW.

Corvus graculus, Lin. ; *Le Coracias*, Buf.

DESCRIPTION AND CHARACTER.—The Red-legged Crow, or Chough, as it is called in Devon and Cornwall, is also known to a great many people as the Cornish Chough, from the fact of its being frequently found on the coast of Cornwall. It is considered the handsomest representative of the Crow family proper, being an elegant and graceful bird. It possesses a restless and somewhat turbulent disposition, is of a fearless nature, and is very difficult to scare. It is not so readily domesticated as the Jackdaw or the Rook, and is inclined to be malevolent and spiteful.

A fully-grown specimen measures from 16in. to 17in. in length, the bill being fully 2in. long, and considerably curved, more particularly the upper mandible; it tapers to a sharp point at the tip, and is almost as red as vermilion (not unlike a piece of bright red coral). The irides have an outer and an inner circle, the former being red, and the latter greyish blue; the eyelids are red. The entire plumage is of a deep purplish, lustrous black. The legs are bright red, from which peculiarity the bird has derived its name.

HABITS AND BREEDING.—The Red-legged Crow is indigenous to this country, but entirely localized. It frequents the coasts of Devon and Cornwall, the cliffs at Dover, and parts of Wales and Scotland. It has been found in Switzerland, Persia, and Egypt, but is nowhere very common. Its nest, built in the crevices of rocks, is similar in construction to

that of the Jackdaw. The hen lays four or five creamy white eggs, spotted with yellow and pale brown, and feeds its young mostly on worms and insects.

METHODS OF CAPTURE.—The birds may be taken in winter by scattering limed sticks over a piece of broad, flattish rock, or ground which has been previously baited with mealworms or juniper berries. The spot selected should be near their place of habitation.

FOOD AND TREATMENT.—In the wild state, these birds feed chiefly on worms, beetles, caterpillars, moths, and berries. They show a preference for juniper berries. In confinement, they may be fed on soaked bread or biscuit, pieces of cooked meat, and earthworms.

REARING THE YOUNG.—Red-legged Crows may be reared by treating in all respects the same as Jackdaws or Rooks.

DISTINGUISHING MARKS OF COCK AND HEN.—The male birds are bolder and more majestic in carriage and bearing than the females, brighter and richer in colour and sheen of feathers, and redder on the beak and legs.

POINTS TO BE OBSERVED IN JUDGING.—Choose a large, sleek, well-formed bird, of brilliant colour and sheen, and with a tight-fitting coat and well-formed wings and tail, free from frayed or broken feathers. It should be upright and majestic in bearing, bold and fearless, with bright, keen eyes, and, above all, with a rich, brilliantly coloured beak and legs. The exhibit must be quite tame, steady on perch when being handled, in good condition, and free from all appearance of dirt.

GENERAL REMARKS.—These birds are not kept as domestic pets so frequently as Jackdaws and Rooks, for they are vicious as well as mischievous, and without the redeeming qualities of those birds; their splendid appearance is what is most admired in them. Like the other members of the family, they are guilty of committing gross depredations when allowed their liberty, even when their wings have been shortened. If kept in confinement, an aviary will be found the most suitable place.

DISEASES AND THEIR TREATMENT.—These birds being similarly constituted to Crows, Jackdaws, and Rooks, consult the chapters on these birds as to treatment in case of illness.

CHAPTER LXVI.

THE ROOK.

Corvus frugilegus, Lin. ; *Le Freux ou la Frayonne*, Buf.

DESCRIPTION AND CHARACTER.—The Rook, likewise known as the Bare-faced Crow, and also as the White-faced Crow, is almost as familiar to the generality of people as the House Sparrow, and, like that bird, appears to have a desire to form associations with mankind. Hence, in villages, towns, and even populous cities, these birds not unfrequently take up their abode in public parks or in private pleasure grounds. The Rook, although a stupid, conventional looking bird, is really very intelligent, and when domesticated is almost as amusing as a Jackdaw. In the wild state, these birds are extremely cautious, and, when a number of them alight to feed, two or three are invariably told off as watchmen, to keep a vigilant outlook from some adjacent tree. When anyone approaches the spot closely, the watchers fly away, uttering their familiar “Khra, khra,” and those that are feeding, if they deem it necessary, also take to flight, mingling in chorus the same familiar and unmusical call note.

The length of a full-grown Rook is about 17in., more or less, the tail measuring 7in. The beak is stout and powerful, but thin towards the tip ; it is bare of feathers from the nostrils to the eyes, and, in a matured specimen, around the base of the bill, differing in this respect from the Crow, which is well-feathered in these parts, and has stout hairs, or bristles, like a Raven. The whole plumage of the Rook is black ; in young, unmoulted birds, the colour is dingy and indefinite, but in

old birds it is intensely resplendent with iridescent reflections of purple, green, and blue, especially about the neck and shoulders. The legs and feet are black.

The young birds, prior to moulting, have the entire head covered with feathers, but afterwards become bare round the base of the beak, the same as old birds. Sometimes, but very rarely, albino and pied specimens of these birds are met with.

HABITS AND BREEDING.—The Rook is found in France, Norway, Sweden, and other Continental countries, where it is said to be migratory in habit. It is indigenous to Great Britain, and gregarious in its habits. It rises early during the summer, and may be seen traversing the country in search of newly-ploughed fields, or lands that have been recently manured, for there it finds the largest number of worms and insects, on which it chiefly feeds.

In the breeding season, these birds generally select a clump of trees surrounding a mansion, or some tall trees, such as beech and elms, growing near the outskirts of a plantation, in which to build their nests; but in this respect they are frequently erratic. They mostly select the same spot year after year, rarely ever leaving it. In mild, open seasons, they begin to build as early as the first week in February, and may be seen industriously carrying twigs in their beaks for long distances. After they have completed the external structure of the nest, they not infrequently pull it to pieces, and try another branch in the same tree, or carry the materials to an adjacent tree, especially if they are interfered with by other Rooks. They build in the forks of the topmost branches, and quarrel a good deal in the choice of sites; some birds are jealous, quarrelsome, and unsociable, and do their best to drive off others that attempt to erect a nest in close proximity to them. The nest is composed of dried twigs, and is lined with the roots of plants, and straw, and in some cases with wool. It is a huge affair, badly and carelessly constructed, and rather shallow. The hen lays from three to five eggs (usually four), of a pale bluish clouded green colour, blotched and freckled with opaque greenish brown and dull dark grey spots, and incubates about eighteen days. The cock provides the hen with food during the period of incubation, and relieves her at intervals for exercise. The parents feed their progeny on worms of all kinds, and also on cockchafer grubs.

They rarely have more than one nest in a season; but in mild, open weather, when they have gone to nest early, a few pairs, more ardent than the rest, have been known to have two.

Rooks usually retire from the domain which they select for the propagation of their species, to some well-wooded locality, until the moulting sickness is over, when they again return as occasional visitors. In October, they frequently commence to repair their nests, or strengthen them, before the turbulent and destructive winds of winter arrive. At this period of the year they seek shelter in well-wooded plantations with plenty of dense undergrowth, which affords them protection during inclement weather. They roost in wild nut bushes, or on the ground, beneath projecting, uncovered roots of trees, or overhanging boughs, or in other sheltered spots. They rarely go to roost until the grim shadows of night cast a veil of darkness all around.

METHODS OF CAPTURE.—Rooks are cautious, knowing birds, and difficult to ensnare. In winter, during severe weather, when the ground is covered with snow, clear a small, square spot of ground, adjacent to a wood where they are known to roost, turn it up with a spade, and scatter a few oats over it; then place on it some gins, or horse-hair nooses, made three or four-ply in thickness, securing them to stout cord, and fastening them to stakes driven into the ground; a few heads of oats, wheat, or barley, must be so placed as to hide the stakes and twine as much as possible, and a close watch kept, in a place screened from observation, for, though hunger makes these birds bold, their natural timidity never forsakes them.

FOOD AND TREATMENT.—Rooks, in the wild state, feed on worms of all descriptions, and are particularly partial to cockchafer grubs; they eat slugs and insects of all sorts, and also grain. In confinement, they may be fed on worms and maggots, groats, and soaked bread, or on a compound composed of equal parts of barley meal, oatmeal, and flour, made into a kind of porridge; they will also pick bones, and eat almost any scraps.

REARING THE YOUNG.—The young intended to be reared by hand should be taken at the age of ten days, and fed on soaked bread, worms, maggots, or pieces of boiled sheep's or

pigs' liver or lungs. At the age of six weeks they may be treated as adult birds.

DISTINGUISHING MARKS OF COCK AND HEN.—The male birds are bolder, more sleek in form, and erect in carriage, than the females; they are also more intense and brilliant in the colour of their plumage, and possess in a much greater degree the iridescent reflections of green, purple, &c., about the neck and shoulder. The voice of the male bird is more powerful and emphatic than that of the female. In other respects the sexes bear a striking resemblance to each other.

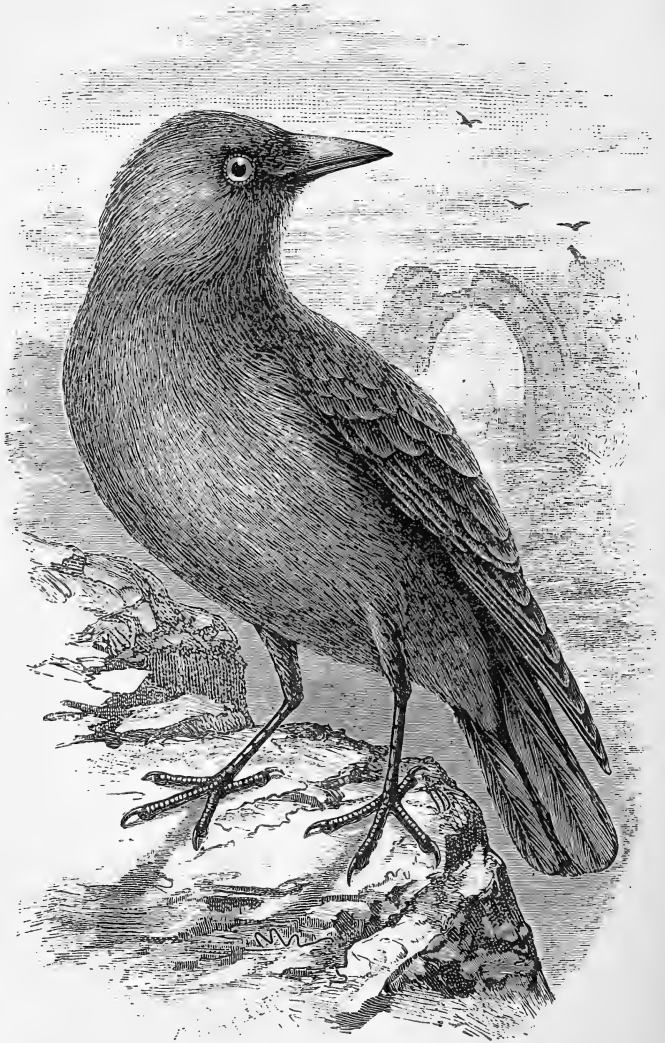
SONG.—The Rook is not endowed with any musical abilities, its only gift in this direction being the utterance of the almost incessant "Khra" and "Caw," in various modulations of voice. Shepherds profess to tell the weather by the manner of flight and the call note of these birds.

POINTS TO BE OBSERVED IN JUDGING.—The Rook cannot be considered a show bird. If, however, it be desired to exhibit one, select a sleek, well-formed bird, majestic in carriage, closely feathered, in good condition, and free from dirt.

GENERAL REMARKS.—The Rook is not a cage bird, but may be kept with poultry in a fenced inclosure, or be permitted to run about the yard with its wings clipped. It is a useful bird to keep in an inclosed kitchen garden, and, although its naturally mischievous disposition causes it at times to commit sundry depredations, it more than compensates for this failing by the great zeal it unquestionably displays in destroying beetles and other insects that commit ravages on vegetables and other garden products.

DISEASES AND THEIR TREATMENT.—Rooks are hardy, long-lived birds, and seldom suffer from disease. They are much plagued with vermin, and should be given a bath made with rain water in which a piece of alum and salt has been dissolved. They sometimes suffer from skin disease when fed too liberally on stimulating food; to remedy this, change their diet entirely.





JACKDAW.

CHAPTER LXVII.

THE JACKDAW.

Corvus monedula, Lin. ; *Le Chouca*, Buf.

DESCRIPTION AND CHARACTER.—The Jackdaw is a pert, adventurous bird, and although naturally somewhat cautious, is bolder and more fearless than any other member of the Corvine family. He is a noisy, clamorous fellow, uttering his call notes almost incessantly as he moves from place to place ; he loves to be mounted on an eminence, and, when the weather is chill, on chimney tops, so as to reap the benefit of the warm air as it ascends. The call note of this bird varies under different circumstances, and at times is difficult to describe ; on some occasions it is a distinct “Caw,” or “Kae ;” at other times, especially when suddenly surprised, it sounds like “Jock.”

The Jackdaw is from 13in. to 14in. in length. The bill is $1\frac{1}{4}$ in. long, and blackish in colour. The irides are creamy white. The forehead and crown, as also the sides of the head beyond the eye, and the chin, are glossy black. The hind part of the head and neck, and sides of the neck, are more or less grey ; in old birds this colour is more prominent than in young and middle-aged ones. The remainder of the plumage is deep lustrous black ; the under parts are duller, the belly and vent being palest. When the bird is viewed in a strong, bright light, reflections of blue and purple are seen on the back and shoulders, these colours being more conspicuous, both in males and females, between the months of April and July. The legs, feet, and tongue, are black.

HABITS AND BREEDING. — The Jackdaw is indigenous to Great Britain, and is gregarious in its habits. It is met with in France, Germany, Holland, Denmark, Italy, and other countries, including the colder regions of Russia and Siberia, but in these countries is said to be migratory. These birds build their nests in holes in decayed trees, in the chimneys of disused dwellings, in church steeples and belfries, amongst old ruins, on projecting crags or overhanging rocks by the seashore, in old, worked-out stone quarries, on the parapets of bridges, and, on rare occasions, in rabbit burrows. The nest is generally a huge affair. Instances have been known of these birds piling up quite a pyramid of sticks and pieces of wood as a base for further operations. The nest is composed, externally, of small twigs, and is lined out with straw, hay, or dried grass, wool, and feathers. The hen lays from four to seven eggs, but rarely more than five or six. They are oval in form, of a pale greenish blue or bluish white colour, and spotted with dark brown, black, and pale purple; these spots are most profuse at the thickest end, but are not so plentiful as on the eggs of the Rook. The Jackdaw and the Rook rear their young ones in much the same manner.

METHODS OF CAPTURE.—The same means may be employed as recommended for ensnaring Rooks. Jackdaws are taken occasionally by thickly coating stout pieces of round wood with water birdlime, and placing them about chimney stacks and old ruins which they frequent; also by putting a net at night-time over the holes in ruins or old buildings where they are known to roost. These birds are very inquisitive, and if a piece of red ribbon be tied to the sticks, it will induce them to draw near, in order to gratify their curiosity.

FOOD AND TREATMENT. — Jackdaws feed on worms, grubs, and insects and their larvæ, and are almost as omnivorous as Crows. They kill grasshoppers and beetles with one stroke of their powerful bills, but before eating them divest them of their heads, wings, and legs. They devour wasps and bees, and when in the neighbourhood of the sea regale themselves on fish and crustaceans; they also, when hungry, eat carrion and grain, but prefer insects and their larvæ to all other kinds of food. In confinement they will eat scraps from the table, and are particularly partial to picking bones of birds, fish, or animals.

REARING THE YOUNG. — Jackdaws are easily reared. The young must be taken when ten or twelve days of age, not later, and kept in a warm place, in a basket or large cage, the latter for preference. This cage should contain hay or straw, cut into short lengths, and frequently changed. Feed on soaked bread, worms, and insects of any kind; pieces of boiled liver or meat may be given occasionally as a change of diet, and more frequently as the birds advance toward maturity. When between five and six weeks old they may be treated as adult birds. They are fond of bathing, and should be supplied with a dishful of fresh spring water, once or twice a week, for this purpose. When reared by hand, Jackdaws become as domesticated as pigeons, and rarely attempt to fly away. In the spring, however, it is prudent to clip their wings, lest their natural desire to propagate their species should induce them to take their departure.

DISTINGUISHING MARKS OF COCK AND HEN.—The females are a trifle smaller than the males, and less brilliant in the sheen of their plumage; they are, also, less bombastic and bold in their demeanour and carriage. Young birds prior to moulting are destitute of the grey colour and reflections about the neck, face, and sides of throat. The females, also, are less conspicuous in this respect than males.

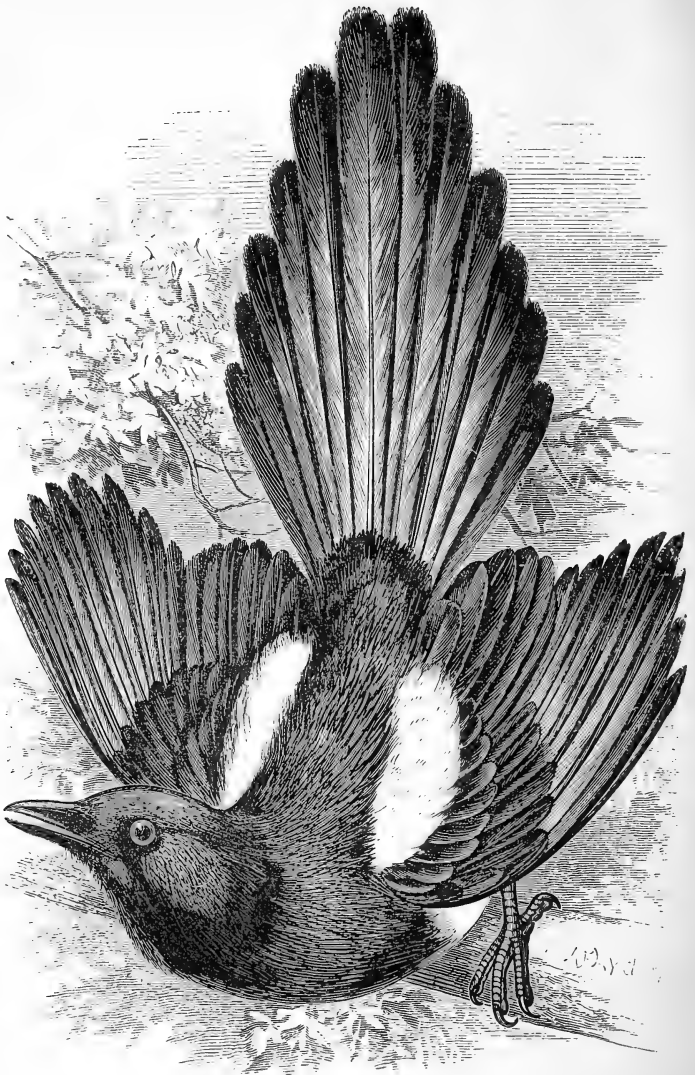
SONG.—The Jackdaw is not a song bird, but can be taught to utter words and phrases with great distinctness. It is customary to loosen the tongue by severing the ligament beneath it with a pair of small surgical scissors; this operation, however, should be performed by a medical man, veterinary surgeon, or other experienced person. This operation is not absolutely essential to enable these birds to articulate words, though those which have been so manipulated invariably prove the best and most fluent talkers.

POINTS TO BE OBSERVED IN JUDGING.—Select a sleek, well proportioned bird, erect in carriage, defiant in bearing, intensely brilliant in colour, and with the metallic reflections pervading the feathers; the cap should be especially deep in colour, with a flowing sheen, and the back of the head and neck should exhibit a decided grey. The bird must be close and tight in feather, with well-formed wings and tail, tightly braced, and well carried. In addition, good health and condition, cleanliness, and well-formed feet and claws, are essential to success.

GENERAL REMARKS.—Jackdaws, like Rooks, are both cautious and vigilant. They are faithful in their attachments, and, when once paired, remain together until separated by death. There is a variety of Daw in Switzerland which possesses a white collar, and in Norway and Russia birds all white are frequently seen. The Jackdaw is a very audacious, venturesome bird, and deliberately settles on the backs of sheep, not merely to search for and capture insects, but also to help himself with wool wherewith to line his nest. Like Magpies and Ravens, these birds have a propensity to thieve, although with them it is not so strongly developed. They, however, possess a natural instinct to secrete their food, or such part as they cannot consume, and have a curious and comical way of examining all objects that are bright or dazzling, such as brass buttons, thimbles, coins, steel beads, or other glittering articles, and will look out for a favourable opportunity to carry them off to some hiding-place.

In winter, Jackdaws associate with Rooks, and may frequently be seen, especially in the early morning, winging their way, in the company of these birds, over vast tracts of land, in search of newly-ploughed fields, where worms and larvæ are most easily procured. They seldom display any hostile feelings toward each other; on the contrary, acts of friendship are often noticed between them. When feeding with Rooks, Daws are easily recognised, not only by their being smaller, but by their majestic and stately movements; and when they walk they display more agility and vivacity.

DISEASES AND THEIR TREATMENT.—Jackdaws are uncommonly hardy birds, and rarely ail anything. In the moulting season they sometimes display a lack of vigour, and sleep much, but a few worms, insects, and grubs, will speedily revive them. They are occasionally affected with skin diseases, through being fed too exclusively on animal food; as treatment, give bread and boiled potatoes, and a little wild garlic, of which they eat freely. Bathe the parts affected with a weak solution of Goulard's Extract, sugar of lead, or sulphate of zinc. When they are observed to suffer from laxness of the bowels, put a sprinkling of prepared chalk among their food. If they are affected with costiveness, add a few grains of Epsom salts to their drinking-water. When well cared for, these birds live to a good age.



MAGPIE

CHAPTER LXVIII.

THE MAGPIE.

Corvus Pica, Lin.; *La Pie*, Buf.

DESCRIPTION AND CHARACTER.—The Magpie is a handsome, bold, sagacious, and tricky bird, and greatly admired by most lovers of birds, on account of its free and familiar manner, and the friendly greeting it almost invariably bestows upon those who supply its wants and treat it with kindness.

The Magpie measures from 17in. to 18in. in length, the tail being $10\frac{1}{2}$ in.; its weight, when in good condition, is $8\frac{1}{2}$ oz. to 9oz. The bill is rather long, well formed, powerful, and black in hue. The irides are hazel. The head, neck, breast, and back, are of a deep, rich, velvety black. The larger wing feathers are brownish black, the secondaries purplish blue, and the greater coverts greenish blue. The first eleven pen feathers of the wings are white in the middle, on the inner web, and gradually lessen inwards. The tail is wedge-shaped; the two middle feathers are the longest, the outermost being only about half their length. The scapulars, and the inner parts of the body, below the breast, are snowy white, forming a pleasing contrast to the other parts of the body covering. On the throat and upper part of the neck there are to be found, in old birds, thin, whitish grey feathers, greatly resembling hairs. The feathers on the neck are excessively long, extending a considerable distance down the back. The rump is tinged with ashen grey. The legs and feet are black.

HABITS AND BREEDING.—The Magpie is indigenous to this country, and common throughout the greater part of England, Ireland, Scotland, and Wales. It also inhabits France, Germany, Italy, and other European countries, and has been discovered in North America.

The Magpie is very destructive in its habits. It damages plantations of young oaks, and destroys large numbers of the eggs and young of partridges, pheasants, and grouse, besides those of many other birds, and is looked upon by the lesser members of the feathered tribes as a general marauder and common enemy. It usually builds its nest in a good-sized ash tree, not far away from a farmyard; in some dense, overgrown hedge, surrounding a plantation; or in a private park, or other place where it can easily procure provender for its offspring. The nest is somewhat artfully made, but this is only characteristic of the bird. Selecting the fork of a branch, the Magpie interweaves a few sharp thorn twigs round it, and interlaces these with other twigs that are smooth. This forms the outer shell, or skeleton, of the nest, which is first lined with earth or clay, then with layers of fine root fibres, turf, and dry weeds, and lastly with wool, to form a sort of cosy mattress. The bird then roofs and barricades the nest with sharp thorns, leaving only a moderate-sized aperture for ingress and egress.

The Magpie is an affectionate bird, and very courageous in protecting its young. The parents will venture to attack a cat, or other predatory animal, which may attempt to assail their fortress, and deprive them of their eggs or nestlings. The hen lays from four to seven eggs (the average number is five), of a pale whitish green colour, speckled and marked with numerous black and dusky greyish brown spots and stripes. The young birds, like their parents, have voracious appetites, and seem to devour their food with much relish, especially when such dainties as newly-hatched young birds form the staple diet. The food supplies are various, much depending on the locality in which the domicile is situated. Young frogs, newts, worms, cockchafers, beetles, berries, and even vegetables, are consumed by these birds when they are hard pressed for provender.

As soon as the young are able to fly, the parents entice

them to some secluded wood, or dense thicket, and attend to them until they are capable of providing for themselves.

METHODS OF CAPTURE.—Magpies, especially male birds, are easily caught in spring traps baited with fresh raw meat, but it is necessary to cover the side pieces with felt, or stout cloth, to protect the birds from injury. They are frequently taken in rabbit traps, by gamekeepers. They are very venturesome, especially when pressed by hunger. They may also be caught, in winter time, with an apparatus made of lin. laths, the frame being 2ft. square, and covered with wire netting, fixed with wire hooks. This machine requires to be securely tethered to a stake or hedge. It is constructed with a lid, and two wire springs, like those used for a rat trap, are placed inside, and fixed to the back of the frame and the lid. In the centre of the trap is an arrangement in the form of a cross, made of wood, and fixed to an upright stake, which is driven in the ground, or screwed to a lath fastened to the bottom of the trap. To this pieces of raw meat are attached by a piece of twine or thread; and between the cross and the lid is a bit of stick, which is used to prop up the latter. The cross must be so contrived as to yield with the weight of the bird, and cause the prop to fall, when the extended springs instantly close the lid.

FOOD AND TREATMENT.—In a natural state, Magpies feed on worms, flies, beetles, snails, small frogs, young birds, birds' eggs, or carrion; in winter time, on acorns, berries, or grains. In confinement, nothing appears to come amiss to them, and though they prefer meat, whether raw or cooked, to any other kind of food, they are content to share the meals of the household, and eat bread, cooked potatoes, pudding, vegetables, or fruit.

REARING THE YOUNG.—Magpies may be reared and treated in all respects the same as Jackdaws and Jays, but it is best to give them their liberty when they are old enough to take care of themselves, as they never thrive so well when confined in a cage or small aviary. Where there is a stable attached to a dwelling, "Mag" may be placed there, and no accommodation could better suit his taste and requirements.

DISTINGUISHING MARKS OF COCK AND HEN.—The male bird is the sleeker, smarter, and most genteel-looking; he draws himself together, and assumes an air of much greater importance

than the female. The colour of his plumage is more intense and brilliant, and clearer in the different hues that pervade the feathers. The head of the male bird is fuller and rounder, and the bird itself more active and alert; in other respects there is much similarity. The hens, as a rule, are the stouter and larger birds.


SONG.—Magpies are not song birds; but, when taken at an early age, and reared by hand, they can, with little trouble, be taught to talk well, and almost fluently. It is necessary in most cases, however, to sever the ligature that binds the tongue with a pair of small, sharp scissors, but the operation should be performed either by an expert or a surgeon. Magpies have been known to repeat words without this operation having been performed, but they never articulate so well, or speak so freely, as birds which have had their tongues liberated.

POINTS TO BE OBSERVED IN JUDGING.—Obtain a sleek, closely-feathered, majestic bird; one about two years old, with great depth of colour and brilliancy of sheen on the feathers, the black portions having the appearance of velvet, and the white pure and unsullied. The tail is an important feature in the Magpie; it should be long, well-formed, gracefully carried, and resplendent with the iridescent radiance pervading the back and wings. The exhibit must be free from dirt, and in good condition in all respects; the feet and claws should be well formed.

GENERAL REMARKS.—Magpies are natural thieves; it is an instinct that cannot be altered, either by careful training or correction; hence a watchful eye is necessary where these birds are allowed their liberty, as they will carry off everything in the shape of edibles or ornaments that their strength will permit; they are most partial to coins and objects that are bright and glittering, and endeavour to hide these in any hole or crevice that can be found, unless they have access to a stable-loft, or dovecote, or similar place of retreat, in which to conceal their ill-gotten gains. There is not a bird of any species more entertaining than a well-trained Magpie, when it has been thoroughly domesticated.

DISEASES AND THEIR TREATMENT.—The Magpie is a very hardy, robust bird, but possessed of a voracious appetite when in health; having a disposition to eat any comestible which

comes in its way, it frequently suffers from temporary disorders. In case of any apparent ailment, secure the bird, place it in an aviary or large cage, give it bread soaked in milk, and put half a teaspoonful of Epsom salts in a pint of fresh water, to be used as drinking-water. Give it also a supply of fine gravel, a handful or two of rough sand, and a few flies, grubs, and worms, and it will speedily recover. If a bird is observed to be relaxed in its bowels, mix some finely-powdered prepared chalk with its food. For other disorders, and the treatment to be resorted to, see Chapter V., on "Diseases." If the bird appears dull and dispirited—generally arising from damp and cold—give it a little fresh, raw, lean meat.



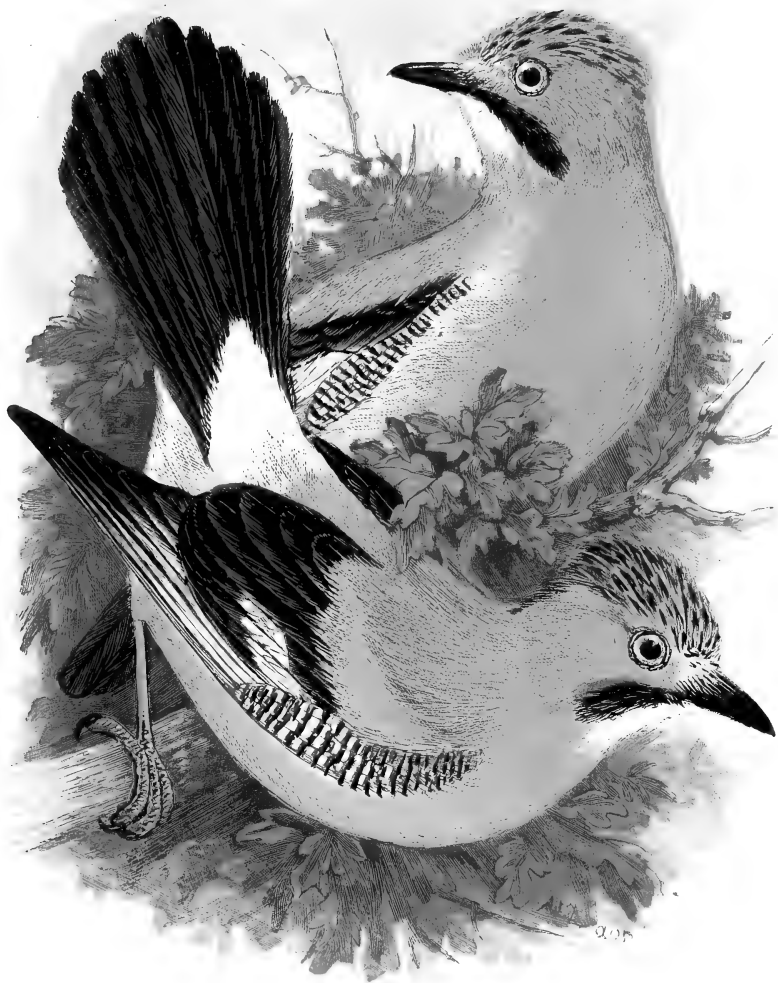
CHAPTER LXIX.

THE JAY.

Corvus glandarius, Lin. ; *Le Geai*, Buf.

DESCRIPTION AND CHARACTER.—The Jay, when fully matured, is remarkably handsome, and may be justly considered one of the most elegant varieties of our native wild birds; its contour is pleasing, and the diversified colours and markings of its plumage are exceedingly attractive and pleasing. When obtained young, and reared by hand, it becomes remarkably tame; otherwise it is disposed to be rather vicious and wilful. It is an active, energetic, noisy bird, of a quarrelsome disposition, and inclined to be arbitrary when placed in an aviary with other varieties; but, despite this propensity, it has a great many admirers.

A fully-grown Jay measures from 13in. to 13½in. in length, and weighs, when in ordinary condition, 7oz. The head is rather long, but well-shaped; the bill is 1¼in. in length, strong, formed like that of the Crow, and black in colour. The irides are pinkish white. The forehead is white, the crown and hind part of the head cinnamon colour, streaked with black; the feathers on the head can be raised to resemble a crest, which is generally done when the bird is excited. The neck, back, face, breast, belly, and sides of body, are cinnamon colour, the under parts being paler in hue, especially the abdomen; the throat, rump, and vent, are white. On each side of the throat, commencing at the base of the lower mandible, is a rather broad streak of black, descending about half-way down the sides of the neck. The lesser wing



JAYS.
(Michigan P. 1891.)

coverts are pale chestnut brown; the larger ones are beautifully barred with black, azure blue, and white, alternately, looking like a piece of elegant chequer work; the larger pen feathers are black and ashen grey mixed; the base of the central feathers, and edges of others, are white, forming a lovely white mark on the wings; the tail is black, with greyish brown margins to the feathers, and fan-shaped when spread out; at the root it is grey. The legs and feet are pale brown, inclining to flesh colour.

HABITS AND BREEDING.—The Jay, or Blue-winged Jay, as it is sometimes called, is indigenous to Great Britain, and also found in various parts of Europe, including France, Spain, Germany, Italy, Greece, Denmark, Russia, &c. It is distributed throughout the greater portions of the counties of England, Ireland, Scotland, and Wales, and is most plentiful in well-wooded districts and uncultivated waste lands.

Being predatory in habit, it is a source of great annoyance to gamekeepers, as it is very destructive during the breeding season, and eats the eggs of Partridges, Pheasants, and other birds, never missing an opportunity to do so when one presents itself; when driven by hunger, it will attack and devour the young of these birds as well. It is as rapacious as the Magpie, and, being keener sighted, and more active in its movements, is proportionately more mischievous and destructive.

The nest, which is generally built in fir, beech, or oak trees, though occasionally in a tall, well-grown bush, inside a plantation or dense thicket, is composed of slender sticks and twigs interwoven, and is lined with root fibre and dried grass; it is a rather primitive affair, not over-carefully constructed, and often very shallow. The hen lays from four to six eggs, about the size of a Dove's or Magpie's egg, ashen grey in colour, mixed with green, and faintly, but liberally, spotted with olive brown. They frequently, however, differ considerably in appearance, both in ground colour and markings, some being much paler and freer from spots than others. The hen incubates about fifteen days, and has one, and sometimes two, nests in a season. The young remain in the immediate locality of their birthplace, and associate with their parents during the moulting season, and autumn and winter months. In the spring they separate, as all wild birds do at this time, to propagate their species.

METHODS OF CAPTURE.—Jays may be taken in spring traps, baited with mice, young birds, or pieces of raw flesh, and in winter, with acorns or berries; or they may be captured by the use of limed twigs, or the decoy bush.

FOOD AND TREATMENT.—The Jay, in its natural state, feeds on acorns, beech mast, berries, cherries, and green peas; it is much addicted to eating the eggs and young of birds, and when hungry will devour small mice or birds. If any of the foregoing delicacies are not obtainable, it will eat worms and insects.

In confinement, it eats readily a mixture of oatmeal, flour, and barley meal, in equal proportions, moistened with milk; soaked bread, wheat, scraps of meat, or any kitchen refuse, may be given it; it will usually eat anything that is given to the Jackdaw.

REARING THE YOUNG.—Remove at the age of twelve days, and feed on white bread soaked in milk, mealworms, pieces of raw or cooked meat minced fine, or bullock's liver; boil a piece of the kernel of a cocoonut, or a few chestnuts, bruise, and mix with moistened bread or oatmeal. Occasionally, as a change of diet, give a piece of boiled celery, bruised, and well incorporated with moistened white bread. Keep the young birds in a large cage, provided with straw cut into short lengths, or some moss litter, which change frequently until the birds are able to perch, when sand and small gravel should be substituted. The cage ought to be cleaned out twice or thrice a week, or the birds will get their plumage much soiled.

DISTINGUISHING MARKS OF COCK AND HEN.—The male bird is more active and lively in his movements than the female, and the colours of his plumage display more sheen, the back having a slight tinge of purple intermixed. At the back of the neck the hen has a tinge of grey, whereas the neck of the male is pale chestnut or bright cinnamon. The young birds before moulting resemble the adult female.

SONG.—During the pairing season the males utter a low, soft, impressive note, but it cannot be called a song. The birds are, however, very imitative, and can render sounds very accurately—such as the ticking of a clock, the sharpening of a saw, and similar noises—which are made in their hearing. They may be taught to whistle, and will occasionally

imitate a few notes of the Thrush or Blackbird, when kept constantly in the company of these birds. The Jay can be taught to pronounce words, and repeat short phrases intelligibly, especially if the ligature beneath the tongue is severed; this should be done when the bird is about five or six weeks old.

POINTS TO BE OBSERVED IN JUDGING.—Choose a well-formed bird, erect in carriage, brilliant in the various colours of its plumage, and close and compact in its body feathering. The throat and rump should be pure white, the “moustache” well defined, and the back, breast, neck, &c., of a clear reddish cinnamon. The chequering on the wings is of considerable importance, and should be regular and distinct. The tail and wings must be well formed, and carried jauntily; the eyes should be keen and penetrating. The exhibit must be lively in its actions, perfectly clean, in good bodily condition, and possess well-formed feet and claws. It must be steady on the perch whilst being handled, and not afraid of strangers. Hence, house-moulted birds of two or three years of age are best.

GENERAL REMARKS.—The Jay is not so easily domesticated as the Magpie, and when allowed its liberty, even with clipped wings, it soon becomes wild, and easily scared. It is best kept in a large cage, which should be well sanded and frequently cleaned out; its food and water are best placed on the outside, as it is a dirty, mischievous bird, and, if soft food were given it inside the cage, it would pull the vessels about, and scatter the food in all directions. The Jay is a very inquisitive bird, and may be observed listening attentively to any unusual sound, and, in the wild state, through this natural propensity it frequently discovers food secreted by other birds or animals. It is so much persecuted and hunted after by farmers, gardeners, gamekeepers, and others, that even hunger will not always induce it to approach too near human habitations for succour and support.

DISEASES AND THEIR TREATMENT.—The Jay is an uncommonly hardy bird, and seldom on the sick list. When it is, a change of food will generally restore it. It is subject to the same complaints as the Magpie, and the remarks anent that bird are equally applicable.

CHAPTER LXX.

THE CUCKOO.

Cuculus canorus, Lin.; *Le Coucou*, Buf.

DESCRIPTION AND CHARACTER.—This peculiar and remarkable bird is an enigma in many respects to ornithologists generally, and although much has been learnt as to its singular habits during the present century, there are still many mysteries connected with its character and actions that are difficult of solution. The Cuckoo is a noble, well-formed bird, pleasingly diversified in the colours and markings of its plumage, but very unsocial and timid, and most difficult to deal with in a state of captivity.

The Cuckoo is as large as the Hawk, being 14in. in length from tip of the beak to end of the tail, the latter measuring $7\frac{1}{4}$ in. The expanded wings measure 25in. from tip to tip. The bill is nearly 1in. in length, and slightly incurvated. The upper mandible is black, and the lower one bluish black, yellow at the corners of the lips, and orange at the base of the bill, the latter being rather weak for so large a bird. The irides and circles surrounding the eyelids are yellow; the nostrils are round, and very prominent, forming a sort of rim. The head, back of the neck, back, saddle, rump, and wing coverts, are bluish ashen grey, the back and shoulders having iridescent reflections. The head and back are darker than the rump; the throat, fore part of the neck, and upper portion of the breast, are of a delicate pearly grey colour; the greater portion of the breast and belly is white, beautifully barred with undulated lines of black; the vent is buff

slightly spotted with dingy black. The wings, like those of Hawks, are long, extending to within an inch and a half of the end of the tail. The first pen feather on each side is nearly 3in. shorter than the remainder; the whole are dingy brown in colour, the inner web of each being marked with an oval white spot. The tail is wedge-shaped; the two centre feathers are black, tipped with white, and the rest dusky brown, marked alternately with oval white spots on each side of the shaft. The legs are short, and are yellow, or willow colour; the feet have two toes in front and two behind, formed for climbing. In young birds, the legs, bill, and tail, resemble those of matured birds; the eyes are pale blue; the throat, neck, breast, and belly, are beautifully barred with brown stripes on a pale ground; the back is of a leaden hue, intermixed with brown, and faintly lined with white; the tail feathers are irregularly marked with dingy black, pale brown, and white, and have white tips.

HABITS AND BREEDING.—The Cuckoo is a migratory bird, usually arriving in our Island about the middle of April, and leaving again about the latter end of September, or early in October, after the period of moulting; it is believed to go to Africa, as it has been frequently seen at Malta, twice in the year, on its passage to and fro. It is known throughout Europe, and has been found in Japan, Asia Minor, India, and Africa, though in some of these countries it varies considerably in the colour and markings of its plumage, attributable to climatic changes. The Cuckoo builds no nest, but, in the month of May, when the hen is about to deposit her eggs, the male bird accompanies her from place to place in search of the nest of some suitable and approved birds to act as foster parents to their offspring, and likewise to protect her from the assault of small birds who frequently make an attack upon her at this time, more particularly Robins and Greenfinches.

The hen lays two eggs, but seldom both in the same nest, dividing her favours on these occasions, and usually selecting the nests of birds of peaceable and industrious habits, but varying considerably in species. The Hedge Sparrow generally comes in for the greatest amount of favour, and next to it the Yellowhammer, the Wagtail, and the Titlark, all of these being

quiet, peaceably-disposed birds. At other times the nest of a Greenfinch is selected; but these birds prove resentful, and sometimes throw out the intruded egg. Whenever a Cuckoo is about to lay her eggs, the fact may easily be discovered by the hubbub created by the small birds in the immediate neighbourhood, as they follow her about, exhibiting a threatening attitude, and making a most hideous noise. The Cuckoo does not appear to be either courageous or vindictive, and bears the rebuffs to which she is subjected at this time with considerable fortitude and forbearance. The eggs deposited by the rightful owner of the nest are mostly left until the period of incubation has expired, when the young birds are invariably thrown out of the nest. Whether this is done by the young Cuckoo, the mother, or the parent Cuckoo, is not known for certain, but appearances are in favour of the theory that the parent Cuckoos are the ejectors, and that their instincts prompt them to do so in order that their progeny may be better fed, and receive the undivided attention of the foster parents. At a very early age young Cuckoos display strong passions, and become almost ferocious when handled or unduly interfered with, and never become tame or tractable.

METHODS OF CAPTURE.—Cuckoos are most difficult birds to ensnare, being naturally of a timid and wild nature. Young birds are occasionally caught with horsehair nooses, secured to a line formed of stout twine, pegged down on a piece of newly-ploughed land in close proximity to a wood or thicket, and baited with mealworms. The best time to insure success is the early morning. Old birds so caught are useless as pets, as they never get tame, usually refuse to partake of food, and starve themselves to death. Even young birds, not many weeks fledged, are most difficult to reconcile to a state of domestication, and are most obstreperous and wilful. Their wings require to be clipped short to render them the least amenable to the laws of civilisation.

FOOD AND TREATMENT.—In the wild state, Cuckoos feed chiefly on worms and caterpillars, and also catch and devour dragon flies on the wing. They are very partial to cranberries and elderberries. In a state of domestication they eat worms, boiled liver of any description, or flesh meat, bread and milk, and the Compounds No. 2 and No. 3 (*vide* page 190). They are particularly fond of mealworms and

caterpillars, and display a considerable amount of rapacity when these are given to them.

REARING THE YOUNG.—Secure at the age of eight or ten days, and feed with scraped raw beef and bread sop, alternated with pieces of boiled pigs' liver, earthworms, and bread and milk. The Cuckoo has an immoderate appetite, difficult to appease; care, however, must be taken not to gorge the nestlings. When a month old, give a few flies, small worms, and caterpillars. These birds are some time before they are able to feed themselves; they grow rather slowly, and require much attention.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is smaller than the male; the neck is reddish brown at the back, and yellowish brown in front, and streaked transversely with dark brown; the upper part of the body is grey, spotted with dingy brown; the abdomen is dirty greyish white, striped with brown. The tail is barred with reddish brown and black, and there are white spots on each side of the shaft.

SONG.—The voice of the Cuckoo is familiar to all, and its joyous cry well known; although it may not be correctly described as a song, we are assured by Mr. L. Bowles that, as a musician, the Cuckoo is the most scientific performer among the feathered tribes, the notes being "the fifth and third of the diatonic scale," and consequently in strict accordance with musical numbers.

POINTS TO BE OBSERVED IN JUDGING.—The exhibit should be clean, and free from broken feathers—two difficult points to obtain in these birds—in good condition, and so far domesticated as to permit of its being examined without its performing a series of evolutions around the cage.

GENERAL REMARKS.—The Cuckoo is interesting, not only to ornithologists, but to all lovers of birds, on account of its rarity and the singular habit it has of not nesting or incubating like other birds. When kept in captivity, it should not be placed in an aviary with other species, as it possesses a vicious and unsocial disposition, but placed by itself in a spacious cage with a perch placed crosswise, and not too far from the bottom; the perch should be thickest in the centre, and taper gradually towards each end. The cage should be cleaned out every alternate day at least, and the

bottom liberally covered with a mixture of sand and fine gravel, as the bird is naturally dirty in habit, and its excrement very offensive.

DISEASES AND THEIR TREATMENT.—Cuckoos never live long in confinement; they do not appear to suffer from any specific ailment, but evidently die from want of exercise, and from not assimilating their food. If they could be tamed, and permitted their liberty, like Hawks and other birds, the case might be different; but this cannot be accomplished, as they never become thoroughly domesticated under any circumstances.



CHAPTER LXXI.

THE WRYNECK.

Yunx torquilla, Lin.; *Le Torcol*, Buf.

DESCRIPTION AND CHARACTER.—The Wryneck is a very pretty bird, and somewhat uncommon; its plumage consists of neutral and rather sombre colours, but these are so diversified and artistically arranged as to form an admirable study to anyone interested in such matters. It is a comical and amusing bird, and sits on the perch in a most peculiar position; it holds itself very erect, with its body inclining backwards, and wriggles its head and neck in a tortuous manner, stretching out its neck to the utmost, and twisting its head round until the tip of the bill extends to the centre of the back, pointing downwards; its tail is spread out like an open fan, and the feathers of the head and neck elevated in the manner of a game fowl about to begin an encounter; the body is kept writhing and swaying backward and forward without intermission so long as it is watched. This peculiarity seems to arise from a too nervous and sensitive temperament. When reared by hand, and fondled, these birds become tolerably tame; otherwise they are exceedingly shy, and of a retiring disposition.

The length of a mature male is 7in., of which the tail measures 3in. The beak is $\frac{3}{4}$ in. long, slender, sharp, and pointed; it is of a pale lead colour in summer, and in autumn and winter dingy green. The tongue is a remarkable feature in this species, and greatly resembles that of the Woodpecker, being of considerable length, round in form, and

capable of being pushed forward and drawn back again, similar to the slides in a telescope; at the point is a hard, horny substance, about the thickness of a stout sewing needle, which it uses for procuring small insects, on which it principally subsists. The head is ashen grey, spotted with black, white, and russet brown, a broad stripe of brownish black commencing at the occiput, or back part of the head, and extending a considerable way down the back, running in an irregular line; the remainder of the upper portion of the body is grey, striped and spotted with black, white, and reddish brown in an elegant fashion; from the upper corner of the eyes, extending backward, is a pale streak of yellowish chestnut. The cheeks, throat, fore part and sides of neck, the upper part of the breast, and vent, are yellow, tinged with chestnut or reddish brown, and closely crossed with pencilled, black, wavy lines.

The lower parts of the breast and belly, as well as the thighs, are yellowish white, mottled sparsely with triangular-shaped blackish brown spots. The larger pen feathers are black, marked on the outer web alternately with spots of dark brown and russet brown; the secondaries, or lesser quill feathers, and wing coverts, are brown, beautifully striped with grey and black, and mottled profusely with black and white spots, so that, when the wings are closed, they appear like a piece of chequer work; the tail, which is composed of ten long and two short feathers, is light grey, mottled with black and brown, and crossed by four broad, irregular bars of black; the legs are short and slender, but the feet appear strong, and are formed for climbing, there being two toes placed before and two behind, which are lead colour; the claws are much hooked, and very sharp. Wrynecks have a heavy, awkward mode of flight, and do not progress with ease or freedom.

HABITS AND BREEDING.—The Wryneck, or Writheneck, is merely a summer visitant in England, and is confined chiefly to the Southern counties, being tolerably plentiful in some parts of Kent, Essex, Surrey, and Sussex. Occasionally it is seen in the Midlands, but rarely in the North. It also inhabits Italy, Greece, Turkey, Sweden, Russia, and Lapland, and has been found in North Africa, Western Asia, and other

countries. It arrives in our Island about the latter part of March, or beginning of April, and leaves again in September. It frequents woods, groves, thickets, parks, and gardens in retired situations, where there is an abundance of trees and shelter.

The Wryneck usually selects, for its nest, a hole in a decayed tree, and roosts there at night time. The nest is a miserable affair, usually made of withered grass, though sometimes of moss, or wool and hair. The hen lays from six to ten glossy white eggs, and incubates about fifteen days. In the spring, the Wryneck associates freely with its own species, but after it has paired repairs to some sequestered spot, and there leads a life of solitude during the breeding season.

METHODS OF CAPTURE.—First discover a place which the birds frequent on their arrival in the spring. Then seek out a decayed tree, and in some conspicuous hollow in the trunk place a quantity of soil containing ants and their eggs; the birds will soon discover these, and return for more. After ascertaining that the bait has been visited, replenish the supply, and place a number of limed sticks in close proximity to the orifice. The only other method is to place a quantity of limed twigs around the hole wherein the nest is placed. Old birds are difficult to reconcile to a state of domesticity, and must be supplied without delay with ants' eggs, to induce them to eat. Keep them partly covered, for a week or two, in a spacious cage, until they exhibit symptoms of submission and tractability.

FOOD AND TREATMENT.—These birds, when at liberty, principally subsist on ants and their eggs, and with them feed and rear their young. They devour other insects, and their larvæ as well, but prefer the ants and their eggs when procurable. In captivity, give ants' eggs mixed with Compound No. 1 (*vide* p. 189), or the food recommended for rearing Nightingales. A supply of ants, however, must be provided during the period of the moult; these should be placed among soil, in a flowerpot saucer or similar vessel.

REARING THE YOUNG.—Remove when twelve days old, and rear on milk and bread, mixed with ants' eggs; when three weeks old, give a few mealworms; at the age of one month, place a piece of wasp comb, containing the young grub,

in the cage, or some hard-boiled egg, chopped fine, and made into a moist paste with breadcrumbs. Keep the birds in a large box cage, arranged for their especial use, in a dry, warm room, but not too hot, until they are fully fledged. As soon as they are capable of providing for themselves, they may be treated as adult birds. It is better to keep them in cages than in aviaries.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is a trifle smaller than the male, and paler in the hues of her plumage, especially on the under parts of the body; her markings, also, are not so clearly defined, or exquisite in appearance.

SONG.—The Wryneck is destitute of a song, but makes a loud, chirping noise. Its call notes are “Gui, gui” and “Peup, peup.”

POINTS TO BE OBSERVED IN JUDGING.—Select a fine, healthy specimen, bright and clear in colour, close and compact in its feathers, with well-defined markings and perfectly-formed wings and tail. The bird must be in prime condition, free from dirt, and tame.

GENERAL REMARKS.—The greatest attraction about the Wryneck is its beautiful plumage; its singular behaviour is an additional charm to many of its admirers. If two or three are kept together, they will be found to prosper best in an outdoor aviary, and to thrive well when kept apart from birds of different species. These birds are lively, and at times mirthful, and if a moderate-sized tree can conveniently be introduced into the aviary, much amusement will be afforded by the antics of the birds, as they frequently chase each other in playfulness, leaping and bounding from branch to branch in a sportive manner. If a quantity of ants' eggs be secreted in the interstices between the boards forming the aviary, in a chink or cranny in the wall, or in any similar place, it will afford pleasure to the birds and amusement to those who watch their movements, for they display much ingenuity and dexterity in finding and catching the insects. Wrynecks in form and habit closely resemble Woodpeckers, but never associate with these birds, and appear to form a distinct genus.

DISEASES AND THEIR TREATMENT.—Wrynecks are not delicate birds; they suffer most during the winter, when their

natural food is difficult to obtain, and at the period of the moult. During the latter period, ants and their eggs, and a few small caterpillars, are absolutely necessary to their well being, as the complaint from which they suffer most is decline or consumption, brought about by neglect, or the want of a constant change of diet. If they have been reared by hand, they will eat the Compounds recommended for soft-billed birds (*vide* pp. 189 and 190), but animal food is an indispensable requisite to keep them in a good state of health. They should be placed in a bright sunlight, but shaded from the direct rays of the sun, in a situation free from draughts of cold air, say for two or three hours together during the afternoon.



CHAPTER LXXII.

THE NUTHATCH.

Sitta Europaea, Lin.; *La Sittelle, ou le Torchepot*, Buf.

DESCRIPTION AND CHARACTER.—The Nuthatch is a shy, solitary bird, rather quaint in appearance, but nicely diversified in the colours of its plumage, and pleasant to look upon. In its habit and manner of life it bears a striking resemblance to the Woodpecker. When hand reared, or obtained young, and become thoroughly domesticated, it is decidedly entertaining as an aviary bird. It is expert and dexterous in cracking nuts, and creates much amusement, amongst those to whom it has been accustomed, by the performance of this operation. With strangers it is usually reserved, and, unless hungry, refuses to display its talents in their presence.

The Nuthatch is 6in. in length, of which the tail measures $1\frac{1}{2}$ in. The bill is $\frac{3}{4}$ in. long, strong, straight, and slightly compressed at the tip; the upper mandible is bluish black, the lower greyish white. The irides are pale hazel. The crown of the head, and hind part of the neck, saddle, wing coverts, and rump, are of a pretty bluish grey. The cheeks and throat are white, slightly tinged with yellow; a black line passes from the root of the beak in front, and over the top part, and behind the eyes. The breast and belly are pale dusky orange colour; the sides of the body, and the thighs and vent, are pale chestnut or cinnamon brown. The primary feathers of the wings are dusky brown, inclining to black; beneath the wings are two spots, one of which, at the root of the larger pen

feathers, is white, and the other, at the joint of the bastard wing, black. The tail is composed of twelve feathers; the two in the centre are bluish grey, like those on the back; the remainder are dullish black; two, and sometimes three, of the outermost feathers, are spotted or marked with white near the ends, and tipped with bluish grey. The legs and feet are willow colour; the feet are strong, and formed for climbing; there are three toes in front, and one behind; the middle and exterior toes are united at their bases; the hind toe is long and powerful, with an extra strong claw, much bent, which enables the bird to take a firm grip.

HABITS AND BREEDING.—The Nuthatch, Nutcracker, or Nut-jobber, as it is variously termed, is indigenous to England, and confined principally to the Southern, Western, and Midland counties. It frequents woods, chiefly selecting those where oak, elm, beech, chestnut, pine, or fir trees abound. It likewise frequents private parks and pleasure grounds, in sequestered situations. It invariably selects places which afford the greatest shelter from wind and rain.

The Nuthatch builds in holes in trees, and makes its nest with moss and leaves, mixed together. The hen lays from four to eight eggs (mostly from five to seven), of a dusky white colour, spotted and marked with reddish brown, and incubates about fourteen days. If the hole chosen has a larger aperture or entrance than is needed, the birds build up part of it with fine clay, leaving no more room than is absolutely necessary for ingress and egress, this precaution being evidently taken in order to protect themselves and their offspring from the attacks of other birds who make use of similar places, and from predatory animals. The female is most assiduous in the performance of her duties, and nothing, as a rule, can induce her to leave the eggs during the period of nidification. During this time the male is most attentive and industrious in supplying the partner of his joys with food, and both parents pay marked attention to the wants of their progeny. They generally have two broods in the year.

The call notes of these birds have a strong resemblance to the words "Whyte, whyte," and "Geu." Nuthatches are very indifferent flyers; owing to their short wings they never fly far, the flight is much laboured, and onward progress is evidently difficult to accomplish.

METHODS OF CAPTURE.—The Nuthatch may be caught by placing limed twigs about the branches of the trees they usually haunt; or they may be taken in a spring box trap, baited with oats or nut kernels, in winter time, when they visit orchards and gardens, and come about stables and farm buildings for shelter and protection.

FOOD AND TREATMENT.—In a natural state, Nuthatches feed on various kinds of insects and nuts. They hunt for the former in trees in a similar manner to the Tits, and are excellent climbers. They eat caterpillars and small beetles also. In winter time, they feed in small groups (probably the members of one family), and exist principally at that time on acorns, chestnuts, beech and hazel nuts; when these are not obtainable they resort to grain, preferring oats. In confinement, they may be fed on caterpillars, ground beetles, mealworms, and the Compounds No. 1 and No. 2 (*vide* pp. 189 and 190). They will eat bread and milk, with a sprinkling of maw seed or ants' eggs mixed with it. They may have, for a change, a mixture of crushed hemp seed and groats. They are very destructive birds, and require to be kept in cages made of zinc, or tin and wire. They do not sleep on perches, and ought to be provided with cocoanut husks for this purpose, or a small box nest (*vide* Fig. 13, page 40). Do not give more food to them than is necessary for one or two meals, as they endeavour to hide what they cannot consume, and by this means frequently waste more than they eat.

REARING THE YOUNG.—The young should be obtained when about twelve days old, and may be reared on bread and milk, mixed, with a little fine oatmeal, into a soft paste. When they attain the age of eighteen or twenty days, a small portion of the Compound No. 1 (*vide* p. 189) may be mixed with this food, and when they are a month old add a small quantity of crushed hemp or maw seed. At this time it will be well to give each bird two or three mealworms or house flies daily. When six weeks old, they may be given the same food as recommended for adult birds. Keep them in a box cage, in a moderately warm room, until they are fully fledged.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is smaller in size than the cock, and weighs only 6dr., whereas the male weighs 8dr. The female is paler in the various

hues of her plumage, and this is more noticeable on the head, breast, and sides of the body.

SONG.—In the spring, when the pairing season has arrived, the male birds utter a few flute-like notes, of an amatory character; but they are scarcely deserving of the name of song. When the hens hatch, the males cease their song until the young broods are reared, and the hens are about to go to nest again. After this period their voices are seldom heard, and only then at distant intervals. They commence to moult in July, and sometimes earlier.

POINTS TO BE OBSERVED IN JUDGING.—The upper plumage should be a nice soft bluish grey, evenly distributed, the forehead being more vivid than the back and wings; the cheeks and throat quite white; the eye markings well defined, and bright black in colour; the breast and belly reddish orange; the pen feathers deep in hue; and the wings and tail well formed. There must be no broken, damaged, or frayed feathers. Good bodily condition, cleanliness, and well-formed toes and claws, are indispensable requisites.

GENERAL REMARKS.—Nuthatches thrive either in cages or aviaries; but if kept in the latter, they should only be placed among birds congenial in nature, such as Tits and Creepers. In cages, they must be kept singly or in pairs (male and female together), and it is desirable to fix a sort of rack, provided with small holes or niches, between the perch and the bottom, in such a manner that nuts may be placed in it, and so arranged that the birds can reach it from the perch without difficulty. Two pieces of wood, so constructed as to form a narrow crevice, in which to place ants' eggs, and secured to the outside of the cage front, would add greatly to the enjoyment of the birds, whose efforts to obtain the eggs would prove highly amusing to the onlooker. Any similar device would answer equally well, and could also be applied to an aviary, if desired.

DISEASES AND THEIR TREATMENT.—Nuthatches are hardy birds, and seldom on the sick list; the moulting period is the most trying ordeal, and the more of their natural food that they get at this period the greater will be the chance of a successful and speedy issue. Long-protracted moults are detrimental to the health of birds of all sorts. These birds die more frequently from decline than from any other

ailment; it is almost invariably brought about by neglect and inattention. When well cared for, Nuthatches can be kept in health and vigour, either in a cage or aviary, for a number of years. They are subject to some of the numerous complaints from which most birds suffer, for particulars and treatment of which see Chap. V., on "Diseases."



CHAPTER LXXIII.

THE CREEPER.

Certhia familiaris, Lin. ; *Le Grimpereau*, Buf.

DESCRIPTION AND CHARACTER.—The Common Creeper is a small, neatly-formed bird, not much larger than a Kitty Wren. It is a timid little creature in a wild state, and, as it moves with the greatest ease and celerity, and always endeavours to hide itself from the gaze of the public, it is seldom noticed, except by ornithologists and professional birdcatchers.

In length, a fully-grown specimen measures $5\frac{1}{2}$ in., the tail being $2\frac{1}{2}$ in. It weighs, when in good condition, 5dr. The bill is long, slender, and much incurvated. The upper mandible is brown, and the lower one whitish brown. The irides are dark hazel. The head, hind part of neck, back, and wing coverts, are dark brown, variegated with markings of pale brown and black intermixed. The quill feathers of the wings are dusky blackish brown, tipped with white, and margined and barred with yellowish brown; the rump and tail feathers are tawny, and forked at the end. Over each eye is a thin line of black, and above this, from the gape to the back of the head, is a line of white, forming a sort of elongated eyebrow. The throat, fore part of neck, breast, belly, and vent, are pearly white. The legs are short, and of a brownish grey colour. The claws (three before and one behind) are long, sharp, and much bent, which enables the bird to run along the branches of trees, in quest of insects and their larvæ, with ease and facility.

HABITS AND BREEDING.—The Creeper not only inhabits

England, but is met with in most Continental countries. It chiefly frequents woods, parks, groves, and thickets, and is difficult to pursue, as it can elude the vision almost without an effort, it is so agile and alert in all its movements. It prefers to dwell in warm, isolated, wooded localities, where insects abound, and shelter from observation is easily obtained. It builds its nest in holes of trees, with moss, dried grass, and leaves. The hen lays from four to six ash-coloured eggs, streaked and marked with dusky spots of the same colour, and incubates about fourteen days. These birds cling with considerable tenacity to the place of their choice, and are only driven from it, by severe weather, in mid-winter, to places where food is more readily procurable; in the spring, they return to their former haunts.

METHODS OF CAPTURE.—The Creeper may be ensnared by placing limed twigs in and around the holes of trees containing their nests, or by fixing horsehair nooses to some of the branches. They are most difficult to capture, and are seldom taken, excepting in the late autumn or winter, when places are specially baited with a few live mealworms, placed in the interstices of the branches of trees which they are known to frequent regularly.

FOOD AND TREATMENT.—The food of Creepers, when roaming from tree to tree and wood to coppice, is insects and their larvæ. In captivity, they may be fed on ants' eggs, mealworms, a little scraped raw lean meat (beef or mutton), mixed with breadcrumbs, small flies, and the insects and their larvæ that are to be found in the pieces of moss taken from the boles of trees. In the course of time they will partake of the Compounds No. 1 and No. 2 (*vide* pp. 189 and 190), but it will be judicious to add a few insects or ants' eggs, as an inducement, in the first instance. In winter, when insects are difficult to obtain, a little finely-scraped raw beef or mutton must be given twice or three times a week, or the birds will probably die for want of it.

REARING THE YOUNG.—The young may be reared by treating in all respects the same as Blue Tits. The nestlings return to the nest to sleep until they are fully fledged, and able to cater for themselves. It is better not to take them from the nest until they are a month old, as they are very delicate and difficult to rear when taken younger.

DISTINGUISHING MARKS OF COCK AND HEN.—The male bird is deeper and brighter in colour, and whiter on the throat, breast, and belly, than the female. He also droops his wings more, and frequently carries the points of them below the tail.


SONG.—The Creeper does not sing, its vocal powers being confined to making a weak, simple, and unpretentious note, amounting to a mere chirrup, which it utters from time to time during the pairing season, and when in quest of food.

POINTS TO BE OBSERVED IN JUDGING.—The body colour ought to be clear and bright, and the markings well defined, even, and regular; the breast, belly, and throat, silvery white; the plumage, smooth and tight; the tail and wings, well-formed, and free from damage; the feet and claws in good order, and the exhibit in prime condition, and free from dirt.

GENERAL REMARKS.—The Creeper is seldom kept in confinement, excepting in an aviary of small birds, for the sake of variety, as it requires to be kept in a place very closely wired, and where there are no loopholes for escape.

It is a very shy and timid bird, and it is a long time before it becomes quite tame and reconciled to a cage or aviary, and acquainted with its attendants. It always shows fear at the presence of a stranger.

DISEASES AND THEIR TREATMENT.—The Creeper is a rather delicate bird. It is difficult to moult, and requires much attention at this period of its existence. Insect food at this time is an indispensable requisite. The birds mostly die of atrophy, for want of a frequent supply of insects, their natural food. For treatment of other ailments, see Chapter V., on "Diseases."



CHAPTER LXXIV.

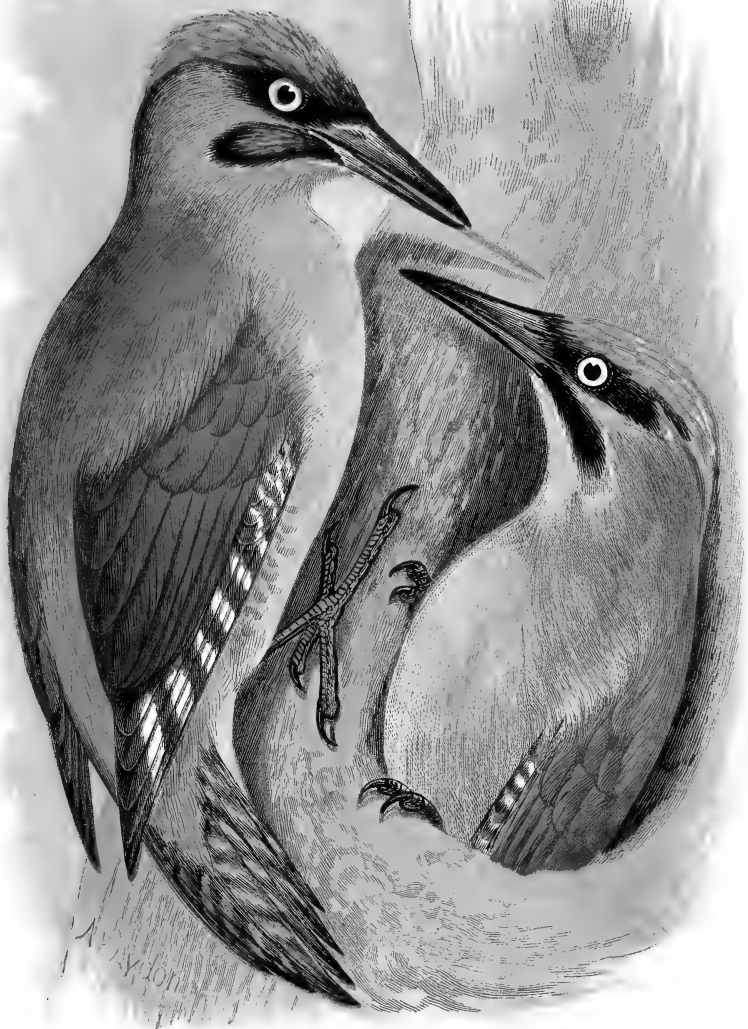
THE GREEN WOODPECKER.

Picus viridis, Lin. ; *Le Pic vert*, Buf.

DESCRIPTION AND CHARACTER.—The Green Woodpecker is a strikingly handsome bird, and one of the most beautiful of the gorgeously plumaged varieties that we can lay claim to; but, unfortunately, this is the greatest recommendation which it possesses, for it is sullen and capricious in confinement, of a most unsocial disposition, and can never be completely reconciled to a cage or aviary.

The Green Woodpecker is $12\frac{1}{2}$ in. in length, when fully matured, the tail being $4\frac{1}{2}$ in.; the bill is $1\frac{3}{4}$ in. long, triangular in form, straight, sharp at the point, and of a dusky lead colour; the bird weighs $6\frac{3}{4}$ oz. when in good condition; the irides are French white, with an inner circle of pale reddish brown surrounding the pupil. On the top of the head, extending to the nape of the neck, is a beautiful lavender, or silver grey, cap, elliptic in form, each feather being pointed with crimson or bright red, which, to a casual observer, gives it the appearance of a brilliant crimson headdress; but on closer examination, it will be found that the lavender colour is distinctly visible, giving the head a dappled-like look, being spotted or marked with that colour. The bird can, when so inclined, and does when it is at all excited, raise the feathers on the cranium like a Rosy Cockatoo, forming a sort of bastard crest.

From the root of the bill there runs an elongated, oblong, velvety black eye marking on each side, which entirely



GREEN TERN, *Sterna viridis*,
(W. S. P. del.)

surrounds the eyes, and extends some distance beyond; and, from the base of the lower mandible, extending backward and downward in a slightly oblique direction, is a rather long, pear-shaped spot of black, beautifully enriched with a vivid crimson centre; the hind neck, back, and lesser wing coverts are a lovely yellowish green; the rump and tail coverts are a mixture of yellow and green, the first-named colour predominating. The tail is pale brown; the feathers composing it are spotted or barred on each side of the shaft with dark brown, and tipped with black. Each wing contains twenty pen feathers; the first on each side are shorter than those adjoining. The nine outer feathers are dusky, or blackish brown, with white spots on each side of the shafts, and have the appearance of the quills of a porcupine; the remainder are olive green, with vandyked brown borders next the rib, on the outside, and are spotted with white and dark brown alternately on the inner margins, dappled with large white marks or spots.

The larger wing coverts are mottled the same as the primary feathers of the wings; the latter are very long, covering a considerable portion of the tail. The sides of the head, neck, throat, breast, and abdomen, are an indefinite whitish green colour, and at the sides of the body are small, almost imperceptible, spots or marks of darker green, in longitudinal stripes. The vent and under tail coverts are darker in hue, shaded with white, and striped with pale brown. The legs are short, and greyish ashen green in colour; the toes—two in front and two behind—are formed for climbing. The tongue of this bird is one of its peculiar features; it is 5in. in length when fully extended, and provided with a hard, horny tip, almost as sharp as a darning needle, for the purpose of piercing its prey; it is covered with a glutinous substance, to which ants' eggs and the larvæ of insects readily adhere. The bird can extend and contract this membrane at pleasure.

HABITS AND BREEDING.—The Green Woodpecker is indigenous to this country, but is most plentiful in the Southern and Midland counties of England; it is well known throughout the greater portion of Europe. It inhabits woods, parks, groves, orchards, and gardens, in sequestered districts, and especially where old, decayed trees are to be found. In

these trees it excavates large holes, and roosts there during the night time. It does not fly much; the flight is unsteady and undulating, but rather rapid. It spends much of its time in climbing about old trees in search of insects, and stripping off the bark where it is loose. It does not attack sound and healthy trees. It has a singular method of striking trees with its beak. The blows are given in rapid succession, the bird swinging its body to give it force, to frighten the insects from their place of concealment; the noise made in the performance of this operation is loud and distinct, and may be heard for a considerable distance—some say half a mile. The bird climbs the trunks of trees spirally, using its tail as a lever both in ascending and descending, as it comes down tail foremost, in which respect it differs entirely from the Nuthatch. The Green Woodpecker is a vigorous, lively bird, and goes about its work in a business-like, methodical manner. It usually selects a large wood or forest as a haunt, and seldom changes its quarters, being very conservative in this respect, and only leaving it in the late autumn and winter, when it frequents orchards and gardens. It usually selects an ash or beech tree for the purpose of breeding in, and makes a rather extensive excavation, of a globular form, but very deep, with a circular entrance no larger than is necessary to admit of easy access and exit; the site chosen is mostly from 15ft. to 25ft. from the ground. Both parents assist in the work, relieving each other. No nest is made, the eggs being placed among the few chips of wood that are left at the bottom of the hole. The hen lays from four to six (five generally) greenish white eggs, with very thin shells, and incubates about seventeen days. The young birds leave the nest when about eighteen days old, and before they can fly climb about the trees like young parrots, but return again to be fed and to roost at night.

METHODS OF CAPTURE.—These birds sleep in the hollows of decayed trees, and may be taken by placing limed sticks about the entrance, or by putting a hand net over these places on moonlight nights. It is well to bear in mind, however, that, as old birds are untameable, it is only a waste of time to secure them. With young birds it is altogether different, for, if they are captured prior to moulting, they may be domesticated with a little patience and trouble.

FOOD AND TREATMENT.—In the natural state, these birds principally feed on insects, and are frequently seen on the ground exploring for ant-hills; these they sometimes attack with their feet as well as the bill, scattering the earth about similar to a barndoor fowl, devouring, first the ants, and ultimately the eggs, at their leisure; they show a great partiality for young wasps, and in winter time attack tame bees whenever an opportunity is afforded them. In confinement, they should be fed on maggots, ants and their eggs, wasp comb, and cooked meat of any kind, though they prefer the live food.

REARING THE YOUNG.—Take at the age of ten or twelve days, and feed on white bread, scalded, and afterwards soaked in milk, and mixed with ants' eggs; give mealworms and cooked meat occasionally, when they are fourteen days old, as a change of diet. They will eat the Compound No. 1 (see p. 189), mixed with ants' eggs, after they become reconciled to a state of domestication. They need a bountiful supply of fine gravel, and must be kept scrupulously clean.

These birds thrive best in an outdoor aviary devoted solely to their use, or they may be kept with the Greater or Lesser Spotted Woodpeckers, or birds similar in species, such as the Nuthatch and Creeper.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen may be distinguished by the absence of red or crimson in the "moustache," or neck marking, and the crimson cap on the head is neither so full nor brilliant in colour as that of the male. The back and wings, too, are paler and duller in the various hues. Young birds do not attain their full colour until after the period of the moult; the young hens are much greyer on their heads than the opposite sex.

SONG.—In the pairing season, the male bird utters a few peculiar notes, which sound like "Glow, glow," "Gluck," and "Yaffu, yaffu, yaffle," the latter resembling a shrill laugh. It is a poor attempt at a song, but is evidently intended to serve that purpose.

POINTS TO BE OBSERVED IN JUDGING.—Choose a male bird, in good feather, with bright brilliant plumage, a rich crimson cap, and a well-defined and richly-coloured "moustache," with distinctly-marked wings and tail, both being well and closely braced, and gracefully carried; the feet and claws

perfect in form, and the exhibit free from dirt or stain. It should be shown in a large open-wired or basket cage, and a piece of an old log (wood) should be artistically placed at one side, in an oblique position, next the back of the cage, for the bird to rest upon, and show itself to the best advantage.

GENERAL REMARKS.—The Green Woodpecker thrives best when kept in an outdoor aviary with birds congenial in habit. It can bear a considerable amount of cold without appearing at all incommoded. When taken young, or reared by hand from the nest, it becomes comparatively tame, and forms an interesting acquisition to a select aviary of birds.

The Green Woodpecker is facetiously termed the “Weathercock” in some parts of the North of England, as it utters a piteous, wailing cry, “Pleu, pleu,” whenever wet weather is approaching; and this habit has doubtless obtained for it the designation of “Woodwail,” a name frequently given to it by people in rural districts.

DISEASES AND THEIR TREATMENT.—The Woodpecker is a very hardy bird, and may be kept in confinement for a long time, providing it be carefully attended to, and given a liberal supply of insect food. It is particularly fond of bees, and a few of these will generally revive a drooping bird sooner than anything else. Preserved insects, mealworms, and ants’ eggs, also act as restoratives. Like most insectivorous birds, Green Woodpeckers require a supply of their natural food to keep them in health, otherwise they will die of atrophy. They are most liable to get out of health during the periodical moulting sickness, when they should be plentifully supplied with insects.

CHAPTER LXXV.

THE GREATER SPOTTED WOODPECKER.

Picus major, Lin. ; *L'Epeiche*, ou *le Pic Varié*, Buf.

DESCRIPTION AND CHARACTER.—The Greater Spotted Woodpecker is a much smaller bird than the Green Woodpecker, being very little larger than a Starling; neither is it so elegant in appearance, although the diversity of its plumage is attractive. In habit and general character it greatly resembles the green variety, but dwells mostly in the upper branches of trees, rarely descending to the ground. It strikes the trees in a similar manner to its congeners, but more rapidly and frequently, and shakes the loose bark with its powerful bill in order to dislodge the insects. It climbs about in an easy and dignified manner, but on the approach of a pedestrian it instantly creeps behind a bough to shield itself from observation, and remains concealed until the disturber of its privacy has passed out of sight.

The length of a fully-grown male is $9\frac{1}{4}$ in., the tail measuring $3\frac{1}{2}$ in.; its weight is $2\frac{3}{4}$ oz. The bill is $\frac{7}{8}$ in. in length; the upper mandible is of a dark horn colour, and the lower horn blue, and stout at the base; on both sides of it are high, angularly-formed ridges. The irides are reddish brown. The forehead is pale cinnamon; the crown, hind neck, shoulders, and back, are black. At the back of the head is a large spot of crimson. On each side of the hind neck is an elongated white stripe. The cheeks, surrounding the eyes, are white, forming a large elliptical eye-marking. From the root of the bill, encircling the jaws, is a narrow crescent-formed line of black,

and a short, narrow stripe of black runs from the lower part of the hind neck to the top of the breast, in a sort of zig-zag fashion. The scapulars and part of the wing coverts are white; the wing feathers and the remainder of the coverts are black, tipped and spotted with white; the throat and breast are yellowish grey; the lower part of the abdomen and vent are crimson, slightly tinged with dull red; the tail is black and white, the four middle feathers being all black, and the others variously marked with white; the exterior feathers on each side have two black spots on the inner and outer web, and the next has two on the inner and only one on the outer web. The legs and feet are of a dark lead colour, the feet being so formed as to enable the bird to take a firm grip with its claws, whilst swinging the body with its full force, to strike the trees to frighten the insects from their hiding-places.

The tongue is so constructed that the bird is enabled to protrude it to a considerable extent, and it is so fine and strong at the tip, that it can thrust it with impunity into the closest interstices of the trees to bring out the insects lodged there. In order to do this, there are connected to the tongue two elastic ligaments, which are united near the junction of the upper mandible to the skull; these pass round the back of the head and beneath the lower mandible, so that the birds are enabled, by moving the muscles of the neck, to protrude the tongue to the extent of several inches, and withdraw it by a reverse motion; the extremity is horny, and covered with a gummy secretion, to which the small insects and their larvæ adhere.

HABITS AND BREEDING.—The Greater Woodpecker is indigenous to Great Britain. It is less common than the Green Woodpecker, but more widely distributed; it is met with in most parts of Scotland, whereas the latter variety is rarely seen so far north. The Greater Woodpecker is found pretty generally throughout Europe, and has been discovered in some parts of America. It is not uncommon in the counties of Worcester, Hereford, and Warwick, and is less solitary in disposition than the green variety, as it is often observed in orchards and gardens, feeding on old, decayed apple trees, where insects abound. Woodpeckers do not attack sound, healthy trees, for in these insects

find no place of refuge. These birds are cunning and stealthy, and require to be watched narrowly from a distance with a field glass to discover their habits and tactics for obtaining their food, for they instantly hide themselves when anyone incautiously approaches their place of location. The noise they make when tapping a tree may be heard distinctly at an incredible distance, and their presence discovered by this sign alone. They build no nest, but scoop out a deep hole in an unsound portion of a tree, and in doing so simply whittle away the wood without making a noise; the hen lays her eggs amongst a few fragments of decayed wood.

In order to protect themselves, they have been known to make a hole on each side of the tree, so that they may have a loophole for escape in the event of being molested. The hen lays four or five glossy white eggs, and is most attentive to her duties during the period of incubation, which lasts about sixteen days. The young are reared principally on insects.

METHODS OF CAPTURE.—The same methods as recommended in the chapter on the “Green Woodpecker” should be adopted.

FOOD AND TREATMENT.—In a wild state, these birds feed on various insects and their larvæ, acorns, the seeds of pine and fir cones, hazel nuts, chestnuts, and beech mast. In confinement, give mealworms, ants and their eggs, scraped beef, nuts of most kinds, and the Compound No. 1 recommended in the chapter on the “Starling” (*vide* p. 189).

REARING THE YOUNG.—Follow the treatment recommended in the chapter on the “Green Woodpecker,” and when the birds are fully fledged give them a few Spanish or Brazil nuts, chopped into small pieces, or bruised in a mortar, by way of a change. The heads of the young before moulting are red.

DISTINGUISHING MARKS OF COCK AND HEN.—The sex of these birds may be determined by the colours of the head alone, as the female is destitute of the crimson spot which adorns the back of the head of the male.

SONG.—This bird is not endowed by Nature with a song, but it makes a singular, jarring noise, peculiar to the whole family of the Woodpeckers.

POINTS TO BE OBSERVED IN JUDGING.—Good shape, close

feathering, rich colour, well-defined markings; perfectly formed wings and tail, toes, and claws; prime condition, cleanliness, and steadiness whilst being handled.

GENERAL REMARKS.—These birds are best kept in an outdoor aviary; they form a pleasing contrast with their congeners, the green variety, and will agree with them, but do not care for the company of birds of a different species. If it is thought desirable to keep other varieties with them, Nuthatches, any of the Tits, Creepers, or Flycatchers, will be found most congenial to their taste. If not visited frequently, they are apt to become wild and intractable. They are observant, and soon recognise a stranger, and are terrified at the sight of animals if not daily accustomed to them.

DISEASES AND THEIR TREATMENT. — The Greater Spotted Woodpecker is naturally robust, and seldom on the sick list so long as it is well provided with suitable food, and kept in the open air, amidst natural surroundings; but if kept in a cage, or in a closely confined, stuffy place, and at all neglected, it soon repines, and ultimately dies of atrophy.

CHAPTER LXXVI.

THE LESSER SPOTTED WOODPECKER.

Picus minor, Lin.; *Le petit Epeiche*, Buf.

DESCRIPTION AND CHARACTER.—The Lesser Spotted Woodpecker is a rare bird, and much localised; it differs from its larger relative, the Greater Spotted Woodpecker, in size, and likewise in the colours and variegation of its plumage, but in habit, and many other respects, greatly resembles it.

The length of a full-grown specimen is $5\frac{1}{2}$ in., of which the tail measures 2in. It weighs, in good condition, only 1oz. The bill is shorter than that of the other varieties in proportion to the size of its body, and is a dingy greenish lead colour. The irides are red. The upper parts of the body are black and white, marked or variegated in the form of stripes; the forehead is pale dullish buff, and the top, or crown, of the head crimson; the cheeks and sides of the neck are white; the scapulars and wings are variously mottled with black and white; the wings are long, as in all the varieties of the Woodpecker, and when closed extend half way down the tail; the under parts of the body are dingy greyish white, faintly tinged with red, and thinly and lightly streaked on the sides with black; the tail is black and white, the four centre feathers being entirely black. The legs and feet are of a dirty greenish lead colour.

HABITS AND BREEDING.—These birds, although scarce, are found in many parts of Europe. In England they are mostly met with in the Midland and Southern counties, where they breed. They resort to woods, orchards, and

gardens, and show much partiality for elm trees, and mostly select one of these in which to lay their eggs, making for the latter purpose a deep hole in some part of the tree where the wood has commenced to decay; they build no nest, but act in all respects similar to their larger brethren—the Greater Spotted Woodpeckers. The hen lays four or five eggs, rather smaller in size than those of the latter bird, incubates them for about sixteen days, and rears her young after the same fashion. The Lesser Spotted Woodpecker is known by the name of Hickwall, and in some parts is termed the Pump-borer, on account of the peculiar noise it makes when hunting for insects.

METHODS OF CAPTURE.—The Lesser Spotted Woodpecker may either be taken by placing limed sticks about the entrance to the holes in decayed trees on which the bird roosts, or by placing a hand net over the holes, on moonlight nights.

FOOD AND TREATMENT.—The Lesser Spotted Woodpecker should be fed and treated exactly the same as the Greater Spotted Woodpecker.

REARING THE YOUNG.—The remarks made under this heading in the chapters on the “Green Woodpecker” and the “Greater Spotted Woodpecker” are equally applicable to this variety.

DISTINGUISHING MARKS OF COCK AND HEN.—The female may be known by the colour of the head, which is white, whilst that of the male is crimson. Neither the male or female are possessed of the red vent which adorns the Greater Spotted Woodpecker.

SONG.—The bird under consideration is destitute of a song; its call note is “He, he, he,” repeated several times in succession, and when angered it makes a peculiar, loud noise, resembling the snorting of a fiery charger.

POINTS TO BE OBSERVED IN JUDGING.—See observations under this heading in the chapter which treats on the Greater Spotted Woodpecker, as they will be found equally appropriate and applicable to the Lesser variety.

GENERAL REMARKS.—There is another variety of the Spotted Woodpecker, called the “Middle,” or “Medium.” This bird I regard merely as a smaller variety of the Greater Spotted Woodpecker, as the principal differences are that it is

thinner in the bill, and has a crimson head, about the only noticeable distinction, and these may arise as a sport, in the same manner as the white throat in the Goldfinches known as "Cheverels." All birds of this species are best kept by themselves in aviaries in the open air.

DISEASES AND THEIR TREATMENT.—See remarks on the "Green" and "Greater Spotted Woodpecker" under this heading (pp. 416 and 420).



CHAPTER LXXVII.

THE KINGFISHER.

Alcedo Ispida, Lin. ; *Le Martin pêcheur*, ou *L'Alcyon*, Buf.

DESCRIPTION AND CHARACTER.—This is the most gorgeous and beautiful of all the species of British birds, the diversity and brilliancy of its plumage being simply magnificent, and when viewed in a vivid sunlight quite dazzling to behold. The shape of the bird is rather peculiar, but its contour is well adapted to its habits. It is to be regretted that Kingfishers are so difficult to domesticate and keep in confinement, as, in the richness, diversification, and splendour of their plumage, they equal many tropical birds.

An adult specimen of this variety is 7in. in length. The tail is short, and measures $1\frac{1}{4}$ in. only; the breadth, from tip to tip of the wings, is 11in. ; and the weight, $1\frac{1}{4}$ oz. The bill is $1\frac{3}{4}$ in. long, straight, slightly compressed at the sides, and pointed. It is horn brown, bordering on black outside, but the base of the lower mandible is yellow, and inside it is orange, or bright saffron colour. The irides are reddish brown. The top of the head (forming a lovely elliptical cap) and wing coverts are of a rich refulgent deep green, the head being spotted transversely with a bright luminous blue; the wing coverts are marked with oval spots of the same colour. The shoulders, back, and rump, are adorned with lovely azure blue. The tail, when closed, is very slightly convex in form, in colour dark blue on the upper surface, and blackish blue beneath. A broad orange stripe runs from the nostrils through and below the eyes, across the cheeks, as far as the back part



KINGFISHERS.
(Male and Female.)

of the head. The side and fore neck, and part of the cheeks and throat, are white, and this is intersected on each side by a streak of the same colour as on the head, running in an oblique direction through it to the shoulders. Immediately above the base of the upper mandible there is a small white mark, and beneath this a spot of black. The throat is tinged with red. The primary feathers are palish black on the broader plume, and greenish blue on the narrow plume. The breast, belly, sides, vent, and under tail coverts, are of a dull reddish orange colour, the belly, vent, and under tail coverts being palest. The legs and feet are red, the latter being adapted for walking.

HABITS AND BREEDING.—The Kingfisher is indigenous to this country, and an inhabitant of Europe generally. It is likewise found in some parts of Asia and Africa, but is not plentiful anywhere. In England it is scarce, but not quite so rare as is generally supposed, for it is a solitary bird, frequenting pools, lakes, brooks, and rivers principally, and keeping much inland. It is a rapid mover, and when on the look out for food flies along at an immense pace, generally keeping along the margin of a river, or in the centre of a narrow stream, for a distance of several hundreds of yards, till it espies its prey, when it rises in the air twenty or thirty feet, wheels round, hovers for a few seconds, and then darts down suddenly, seizes the fish, and hastens off to some projecting branch of a tree that overhangs the water, or to the side of an embankment, to dispose of its prize.

If the fish be a small one, it is placed beneath a foot, seized by the head, and swallowed whole; if too large for this mode of disposition, it is eaten piecemeal, beginning at the abdomen, and ripping it open. Whilst thus engaged it will permit a near approach in a quiet, unobtrusive way; otherwise it will dart off suddenly, and in such haste that it frequently leaves the whole or a portion of its prey behind. At other times it will quietly settle on the branch of a tree overhanging a pool, a narrow, shallow stream, or a sheet of still, clear water, and watch intently for minnows or other small fry with which to regale itself. The Kingfisher is very quick in sight and certain in aim, rarely missing the object aimed at.

Kingfishers can only prosecute their avocation on bright,

clear days, when the water is calm and pellucid, for they are solely guided by their power of vision. When the water is turbulent or muddy, or during a gale of wind, when the surface is lashed into diminutive wavelets, their occupation as fishermen is gone; then they resort to flies and worms.

Kingfishers do not generally build nests, but lay their eggs in holes in the embankment of a river, or in a piece of projecting earth that overhangs a stream. Sometimes they place together a few dried roots and feathers, if the earth is clayey or hard; but in sand banks they rarely take this precaution. The hen lays from six to eight whitish eggs, and incubates in about sixteen or seventeen days. When the young are about six days old they have a peculiar appearance, the quills of the covering feathers being raised like the bristles on the back of a hedgehog; at from eight to ten days these unfold like the petals of a flower, and at the age of fourteen the birds are fully blown or covered. They do not leave the nest until they are fully grown and able to fly. At this time they may be seen sitting on bushes or branches of trees close to the water's edge, waiting patiently the return of their parents with a supply of provender, and when they espie the old birds approaching they commence to twitter and flutter their wings rapidly. Should the parents pass on without feeding them, which they are sure to do if they descry anyone near, the fledglings will not infrequently rise and pursue them; but, failing to reach their more agile parents, they return again to the spot whence they started.

METHODS OF CAPTURE.—Kingfishers may be caught by placing limed rods round the holes where their nests are situated; but it is a cruel practice, and serves no good purpose, for it is next to impossible to reconcile an old bird to a cage or aviary, and very few of those that are taken survive, even for a short period, as they become sullen, refuse all proffered food, and die.

FOOD AND TREATMENT.—Kingfishers, in the natural state, live chiefly on small fishes, horse leeches, newts, earthworms, slugs, flies, moths, and aquatic insects of all kinds. They show a partiality for the May, dragon, and butterflies. In confinement, they may be fed on fish, worms, slugs, and the milt and roe of fishes. The undigested parts of food

eaten by these birds is emitted in the form of small balls or pellets.

REARING THE YOUNG.—Secure at the age of nine or ten days, and place them in a box laid on its side, with a small piece of wood nailed on the lower side of the front; above this fix a wire frame, to open on hinges, like a door; put in a handful or two of silver sand, and some clean straw cut into short lengths, and clean out when necessary. Cover the box with some thin material, and keep it in a moderately warm place until the birds are feathered. Feed frequently, from early morn to sunset; give bread and milk, and the milt and roe of fishes beaten to a jelly, and moistened and mixed with the yolk of an egg; whip the two together in a basin with a fork. When sixteen days old a change of food may be given. Destroy a few earthworms by pouring boiling water over them; afterwards place them in a pickle bottle or wide-mouthed jar, with a small quantity of fine, pure, salad oil, simmer slowly over a moderate fire for half-an-hour, and mix with the food before-named, having previously beaten the worms to a pulp. When the young birds are three weeks old or so, give them a few flies and small grubs. When they are able to peck, place them in a large cage, put in a shallow dish containing clean spring water, and place the food among it. The diet now should be pieces of fish—plaice, dabs, or minnows, cut up; they will eat it with more relish given in this manner. When seven or eight weeks old they will prefer the minnows alive. They must be supplied with a stout perch, fixed above the water vessel in such a way that they can pounce on the food easily.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is darker and less brilliant in the various hues of her plumage than the male, the bright blue being supplanted by green; the small patch of white just behind the upper mandible is less prominent, and sometimes altogether wanting.

SONG.—The Kingfisher, like most birds possessed of gaudily-coloured plumage, is not a vocalist; it utters, whilst on the wing, a piping, dolorous cry, but only when flying; at other times it is mute.

POINTS TO BE OBSERVED IN JUDGING.—Choose one with a long, straight, well-formed bill; a radiant cap, rich bright green, spotted with luminous blue; the neck and throat

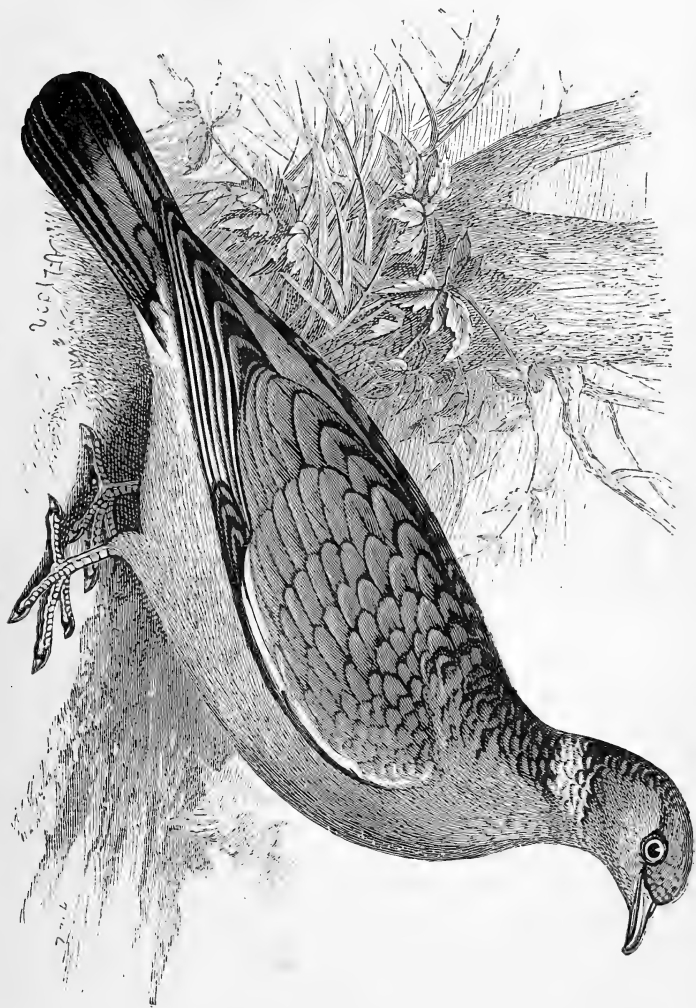
CHAPTER LXXVIII.

THE RING-DOVE.

Columba Palumbus, Lin. ; *Le Ramier*, Buf.

DESCRIPTION AND CHARACTER.—The Ring-dove, most commonly called the Cushat, or Wood Pigeon, is probably known to every sportsman throughout the United Kingdom. It is the largest of the British species, but very difficult to reconcile to a state of domestication. Many instances have been known of young birds of this species, although reared in a dovecote, flying away, on the advent of spring, to their native woodlands, never again to return to their birthplace and companions ; thus clearly showing that with them instinct is stronger than the ties of friendship.

A fully-grown specimen is $17\frac{1}{2}$ in. in length, the tail measuring 7in. The breadth, from tip to tip of wings, is 29in. ; and the weight, from 16oz. to 20oz. The bill is $\frac{7}{8}$ in. in length, orange brown, with a grey base, which surrounds the upper mandible, forming a sort of wattle. The head, cheeks, throat, fore and side neck, rump, tail coverts, and upper portion of the tail, are bluish grey, being darkest about the head and palest on the rump and tail ; the back and wing coverts are pale bluish slate colour, with a slight tinge of vinous red intermixed ; the hind neck is slate colour and emerald green, with a reddish purple irradiance pervading the feathers ; on each side of the neck is a crescent-shaped spot of white, the feathers forming this distinctive mark being emerald green at the base, with broad white borders ; the primary feathers (ten in number) are dusky grey or blackish slate colour, bordered with white on the outer



RING DOVE.

margin; the third feather is the longest. The pinion coverts are dull dusky grey; the secondaries (likewise ten in number) are darkish grey, the innermost being the lightest in hue; at the elbow joint, or bastard wing, dividing the primary and secondary wing feathers, are several white feathers, and others adjoining these are white on the outer web, the latter together forming a conspicuous white patch in the centre of the wing; the wing linings are silvery grey; at the end of the tail is a bar of black, 3in. in depth; the lower portions of the neck and breast are vinous purplish brown, intermixed with ashen grey; the abdomen and thighs are faint greyish blue. The legs are clothed with feathers to the feet, the latter being reddish purple, and the claws horn brown.

HABITS AND BREEDING. — The Ring-dove inhabits Great Britain, and is partly indigenous and partly migratory and gregarious in its habits. It is found more or less throughout Europe and Asia, and is very common in most of the well-wooded and cultivated districts of England and Scotland. It is very destructive in its habits, and on this account is a recognised pest to farmers, for where large numbers of them take up their abode in the immediate neighbourhood of a farm they commit grievous depredations, attacking the newly-sown seeds or grain, and devouring the young succulent blades of wheat, as they put forth their tender shoots; they also regale themselves freely on the ripening grain, or on peas, tares, beans, or any cereals that are grown within easy reach of their native woods, and treat the usual scarecrows with contumely and contempt. They devour the tender leaves of young turnip and clover plants, and wherever they abound in numbers their presence is severely felt.

The Ring-dove is a shrewd, wary bird, and, although it feeds on the ground the same as the pigeon, it rarely goes near a fence, and rises and flies away on hearing the least noise, or at the least appearance of impending danger; and, being very powerful on the wing, and a rapid mover, it can soon place a safe distance between itself and the sportsman. Cushats prefer fir to all other kinds of trees, and whenever fir plantations abound are usually plentiful; the thick, umbrageous foliage affords them excellent protection from wind and rain, and screens them from observation.

Ring-doves build their nests in trees, generally near the

top; at other times, but rarely, where the trees are clad thickly with ivy, they may be discovered not many feet from the ground. The nest is large and flat, composed of a few slender sticks loosely interwoven together on the fork of a branch, and so open that the eggs and young, in many cases, are plainly discernible from beneath; the nests are so shallow that, during a high wind, the eggs, and even the young, are blown out of them. The hen lays two white eggs similar to those of the domestic pigeon, and incubates about seventeen days; she has two broods in the year, and, under exceptional circumstances, three. The male assists in incubation and rearing the young. The latter when first hatched resemble the young of the House Dove, being thinly covered with down; they remain blind about eight days. In their nest feathers they are duller and darker in colour than their parents, being of a dingy brown. The white crescent, and green and purple reflection on the neck, are only obtained after moulting.

METHODS OF CAPTURE.—In winter time these birds may be taken by the use of the clap net. Select a piece of ground verging on a wood where they frequent, scatter grain and hemp seed over it for a week or two, till the birds lose their suspicions, and look on it as a feeding ground, and then set the net; if a tame bird can be tethered inside to an iron pin as a decoy the prospect of a good take will be greatly increased. Great caution and circumspection are needed, for Ring-doves are very wary.

FOOD AND TREATMENT.—The food of the Ring-dove is various. In summer and autumn it eats corn and grain of most kinds, peas, tares, and vetches, several kinds of seeds, and bilberries. In winter it resorts to oak and beech woods, and feeds on acorns and beech mast; it likewise eats turnip tops and clover, and in the spring devours the young blades of corn and the tender shoots of the turnips. In confinement, the Ring-dove should be fed on wheat, barley, tares, millet, and hemp seed.

REARING THE YOUNG.—The most satisfactory method is to obtain one or two sittings of eggs, and place them under domestic pigeons to be hatched and reared. If brought up by hand, take at fourteen or sixteen days, and rear on bread, boiled in milk, and made into a soft paste with

wheat or barley meal. The food should be placed between two pieces of stick, hollowed out and shaped to resemble the bill of the bird, though much larger, as the young feed by inserting their bills into those of their parents, and must be trained to do so between the pieces of wood, as they will not open their mouths to be fed, but will help themselves to food in this way.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is slightly paler in colour than the cock, and this is most noticeable about the head, neck, and breast. The green and purple reflections about the neck are scarcely so extensive or brilliant as those on the male bird; but the difference between the sexes is very trivial.


SONG.—The Ring-dove's soft, plaintive "Coo-coo, Co-co-Cooo-roo-roo-o-o-o," is familiar to most people. It has a thrilling, although sometimes a saddening effect, when heard on a calm summer eve, in a lonely, sequestered wood. The tone of voice, however, is not always the same; it is mostly of the wooing, amorous kind, and when so has a soothing influence; at other times it is mournful, and painfully pathetic, almost dejecting, but always soft and gentle, and never offensive to the ear. The voice of the Ring-dove is only heard, as a rule, at the pairing season, and during fine weather.

POINTS TO BE OBSERVED IN JUDGING.—A male bird should be selected for exhibition purposes, as the points to be observed are size, contour, plumage, and carriage. The body must be well formed and massive; the chest deep and broad; legs rather short; head sleek and fine, and the eyes clear and bright. The body feathers must be close-fitting, and firm in texture. The colour should be pure, of a nice greyish blue on the head, back, &c., the breast being reddish purple, and decided. The white neck markings should be well formed and distinct, and the tail bar broad, and intense in hue. The sheen on the neck and breast should be brilliant in iridescent reflections; the legs and feet should be red. Good condition and cleanliness are indispensable.

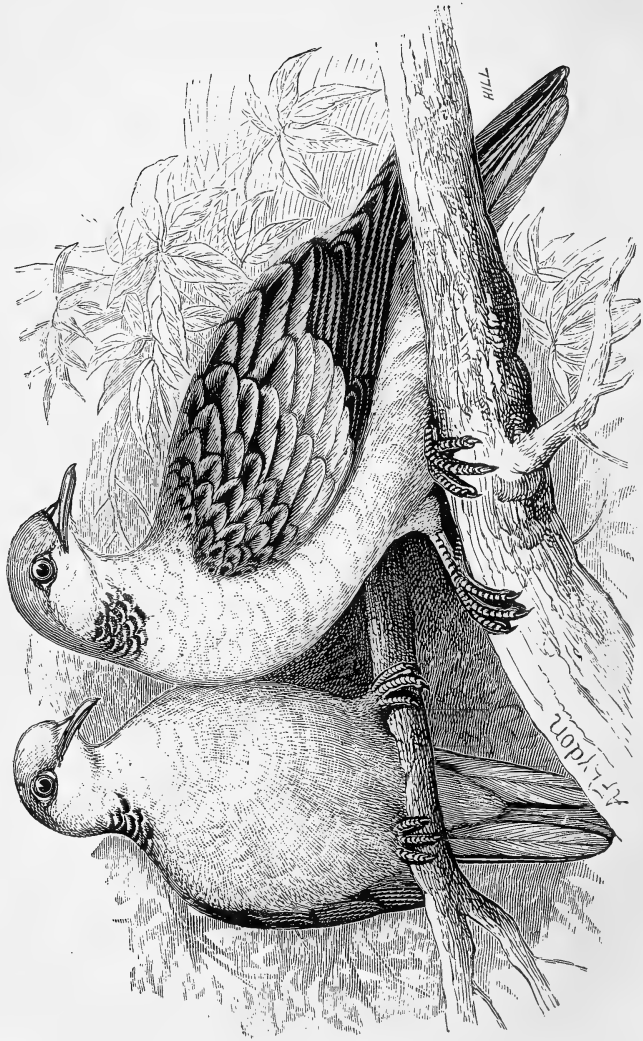
GENERAL REMARKS.—Ring-doves may be kept in an outdoor aviary with Turtle or other varieties of Doves. They do not attempt to breed in confinement. If kept with pigeons, and permitted their liberty at spring time, they will in all probability fly away to the woods to pursue their amours, ac-

ording to their natural instincts; it is therefore advisable for the owners of these birds to keep them strictly confined till the breeding season is well over.

DISEASES AND THEIR TREATMENT.—Ring-doves are exceedingly hardy, and gifted with robust constitutions, and, if well cared for, and given a frequent change of diet, seldom ail anything. If laxness of the bowels be observed, add a little prepared chalk to their drinking-water, and feed for a few days with hemp seed and tares. For other ailments and their treatment, see Chapter V., on “Diseases.”







TURTLE DOVES.

CHAPTER LXXIX.

THE TURTLE DOVE.

Columba Turtur, Lin.; *La Tourterelle*, Buf.

DESCRIPTION AND CHARACTER.—The Turtle Dove, or Ring-necked Turtle, as it is frequently named, is a handsome and interesting member of the *Turtur* family, graceful, compact, and slender, and the smallest of the British varieties. Though this bird has been praised by poets, and other writers, all over the world, for its docile and gentle nature, its affability, tenderness, affection, and constancy, it is, nevertheless, neither so peaceful nor yet so faithful as represented, although, when once an attachment has been formed between a male and female of this variety it is rarely severed excepting by death; when, however, such an occurrence does take place, the male bird almost invariably proves the delinquent. In an aviary where several are kept together, and a pair are separated through any cause, the remaining bird rarely frets, but proceeds to win some bachelor or spinster, according to the sex that is deprived of its partner. Flirtations and quarrels among them are not uncommon.

The Turtle Dove measures in length from 11in. to 12in., though occasionally specimens are found that do not exceed 10in. The bill is slender, and of a pale brown colour, shaded with blue. The irides are reddish yellow, and a naked space or rim that surrounds each eye is of a reddish flesh colour. The top of the head and nape of the neck are bluish ashen grey, tinged with pale red; the forehead is much paler, being deeply imbued with white. At each side of the neck is a

black patch, intermingled with crescent-shaped, transverse spots of white. The throat is pale bluish white; the fore neck and breast are pale purplish red; the back is ashen brown, deepening in colour towards the rump. The primaries are an indefinite dusky blackish brown, with pale edges and tips, and the secondaries bluish ash colour, edged with palish red; the smaller wing coverts are bluish grey, and the larger ones russet brown, with a spot of black in the centre of each feather. The abdomen, vent, thighs, and under tail coverts, are white. The tail is dusky brown, tipped with white, with the exception of the two central feathers; these are entirely dusky. The extreme outside feather on each side is edged with white externally, and the upper coverts are brown, tinged with red. The legs and feet are red.

HABITS AND BREEDING.—The Turtle Dove, in the wild state, is found in all the southern parts of Europe and Asia, and in most of the islands south of China. Specimens of this bird have been brought to this country from India. In England it is merely a visitant, being a bird of passage, and seldom found beyond the Southern, Western, and Midland Counties, although occasionally observed in Yorkshire, Durham, and other Northern counties. These birds are probably most plentiful in Kent, where they resort to the woods during the pairing season, and pay frequent visits to the pea fields, in small flocks, as soon as the peas begin to ripen. On these they feed, to the annoyance of the farmers or occupiers of the land, and prove rather destructive at times.

The Turtle Dove arrives in this country about the latter part of April, or beginning of May, and leaves again at the end of August, or early in September, after the period of moulting is over. At breeding time it inhabits dense plantations, detached groves, or belts of trees, in the vicinity of cultivated lands but seldom approached by human beings, preference being given to districts in which pine and fir trees prevail, for in these the Turtle Dove mostly builds its nest. When these are not available, it resorts to beech or other trees having thick foliage. The nest is composed of a few dry twigs, carelessly woven together, and often very fragile, as a boisterous wind has been known to blow the entire structure to pieces; it is generally erected at a good height from the ground.

The hen lays two eggs, oval in form, and white in colour, and incubates seventeen days. She usually has two broods in the season, but sometimes only one—much depending on the weather and other circumstances. In an aviary the Turtle Dove breeds with much freedom.

METHODS OF CAPTURE.—The same methods as recommended for the capture of the Ring-dove should be adopted.

FOOD AND TREATMENT.—This bird feeds on all sorts of grain and several varieties of seeds. It is very partial to peas, tares, and vetches, and feeds largely on a weed common to cornfields, named corn spurry (*Spergula arvensis*.) It eats beech mast, acorns, alder seeds, fir cones, and bilberries. In confinement it should be fed on wheat, tares, vetches, linseed, and bread. Oats are objectionable, and do not appear to agree with it. The Turtle Dove is exceedingly fond of “salt cat,” which is given to fancy pigeons. Small gravel and old crushed lime is necessary to its well-being, and ought not to be withheld. Cleanliness is likewise indispensable. The aviary should be cleaned out once a week.

REARING THE YOUNG.—The most simple and effective method of rearing young Turtle Doves is to obtain a pair of eggs, and place them under domestic pigeons, who will hatch them and bring up the young. To feed these birds by hand is a tedious process, as they require much attention, in addition to being fed every hour. A pair of young birds, five or six weeks old, and able to look after themselves, may be purchased for a small sum from any breeder of Turtle Doves; therefore, where such can be procured, it is preferable to obtaining the eggs of wild birds and rearing them under pigeons. The young birds are grey on the upper parts of their bodies, and the wings are spotted with blackish blue; the breast is a dull brownish red. When they moult they assume the plumage of adult birds.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is neither so smart nor so sprightly looking as the male, and is paler in colour on the breast; the wings are dappled with russet brown, the neck markings are less distinct, and not so thickly spotted, and the sheen on the plumage is less brilliant; but the distinction between the sexes is not particularly conspicuous.

SONG.—The Turtle Dove has but one note, a sort of humming murmur, loud and deep, but not at all unpleasant, and which it continues to utter for a lengthened period—“tur-r-r tur-r-r.”

POINTS TO BE OBSERVED IN JUDGING.—Choose a well-formed, sprightly, vivacious bird, with a clear, bright eye; one very pure and rich in colour. The wing and neck markings should be well-defined, the breast a bright, vinous red, and the belly quite white, forming a strong contrast. The exhibit should be closely and compactly feathered, with the full complement in wings and tail. It must be in good bodily condition, and free from broken or twisted feathers and dirt.

GENERAL REMARKS.—The Turtle Dove will readily breed with the Collared, or Barbary Dove, and the hybrids partake of the characteristics of both parents. In Germany this is a favourite cage bird, especially in country places, not only on account of its tameness, and other attractive qualities, but because of a popular superstition that it is more predisposed to disease than human beings, and that, when illness visits a home, it is believed to take it rather than the residents.

At the pairing time these birds are apt to display a good deal of pugnacity, especially the males, who become quarrrrelsome, jealous, spiteful, and vindictive, and more particularly so if a hen they choose resents their advances, and shows a preference for some more fortunate admirer. In such cases sanguinary battles take place, might frequently overcomes right, and the vanquished bird has to submit to his fate with the best grace he can command; this being the usual state of things, it is advisable not to place birds together, and to avoid, if possible, having odd or unpaired birds, as this leads to grave consequences, and more particularly so if the odd birds prove males. It is an excellent plan to place the males and females together in pairs, in cages, before putting them in the aviary; but even with this precaution conflicts take place occasionally.

In the "shelter-house," which is an indispensable requisite to every well-formed out-of-door aviary, a few shelves should be erected, about 12in. apart; between these are to be fixed upright pieces of wood, to form divisions, at about the same distance (12in.), and on the front of each row of these compartments must be nailed to the floor and sides a 2in. thin lath, to form nesting-boxes, and to prevent the eggs and young birds from falling out. After the first severe conflict is over, each pair of birds will choose one or two of these nesting-boxes, which they will endeavour to defend against all intruders. It is desirable, however, to have a "peep-hole," and to keep a vigilant

outlook, to see how matters progress, as it may be found necessary to remove a bird which may take pleasure in tyrannising over his companion ; but this need not be done without it be found to be wilfully mischievous, for bickerings and heart-burnings are not infrequent occurrences at this period of their existence, even in the best regulated aviaries. Some fanciers place earthenware pans on the floor, such as flower-pot saucers, for the birds to nest in ; but this arrangement is more or less objectionable for several reasons, which it is not necessary to enumerate. A supply of nice clean straw, cut into short lengths, must be given to them to make their nests with.

In confinement these birds breed more frequently than in the wild state ; but they require a spacious aviary, and one that is so formed as to inclose a portion of a tree will be much appreciated by the inmates. In erecting an aviary for Turtle Doves, it is best to have it divided, so that the young birds may be provided with a retreat, as the old ones shamefully maltreat them if they intrude on or approach their breeding-place whilst a fresh brood is being reared. The Turtle Dove will live to the age of ten or twelve years in an aviary with care and proper attention.

DISEASES AND THEIR TREATMENT.—The Turtle Dove thrives well in an out-of-door aviary, and does not suffer more than any of the other varieties. It is liable to cold, and is sometimes troubled with roup. A few grains of saltpetre, powdered very fine, and blown into the throat through a quill, will in most cases cure it in the first stage ; or a gargle, made with 10grs. of the sulphate of copper and 8oz. of water, and applied two or three times a day with a feather to the affected parts, will generally effect a cure. This bird is liable to diarrhœa and kindred ailments, for the treatment of which consult Chapter V., on "Diseases."

CHAPTER LXXX.

THE STOCK DOVE.

Columba oenas, Lin.; *La Biset*, Buf.

DESCRIPTION AND CHARACTER.—This bird differs from the Ring-dove in appearance, voice, and habitat. At one time it was believed to be the progenitor of the domestic pigeon, but this idea has now been abandoned; the title by which it is commonly known is assumed to have originated the idea. The name Stock Dove is now supposed to have been given to this species on account of its almost invariably selecting the stock of a tree as a nesting-place. An adult Stock Dove measures from $12\frac{1}{2}$ in. to $13\frac{1}{2}$ in., the females being slightly smaller than the males. The bill is palish red in summer and pinkish white in winter, and slightly incurvated at the tip of the upper mandible. The iris is bright brown. The head, hind neck, throat, upper part of back, scapulars, and wing coverts, are of a deep bluish grey, the latter being fringed with rose colour. The sides of the neck are embellished with green, gold, and purple reflections; the lower portions of the back and rump are pearly grey. The outer primary feathers are dusky slate grey, edged with white, and the secondaries bluish grey, marked with black spots on the outer web. The large wing coverts are likewise spotted with black, forming two bars across the wings. The tail is light bluish grey, and black at the end; the lower half of the two exterior feathers is white; the under parts of the neck and breast are bright reddish purple or wine colour, tinged with grey; the abdomen, sides, vent, and

thighs, are palish blue or ashen grey. The legs and feet are red, and the claws black.

HABITS AND BREEDING.—The Stock Dove is migratory in habit, although a few specimens have been known to winter in this country. It arrives on our shores in March, and leaves again in October. It is common in the Midland counties of England, and is abundant in southern Europe and in Africa. It is termed by MacGillivray the Blue-backed Dove, by Temminck the Wood Dove, and by Mudie the Bush Dove, as it occasionally builds its nest in a dense nut bush, though more frequently in the stocks of trees, such as pollard willows or pollard oaks that have been headed down, and consequently are bushy at the top, affording protection to the eggs and young. It sometimes selects the hollow of a decayed tree for this purpose, the trees being situated in low lying ground, or near a marsh. It returns to the same spot year by year, and has generally two nests in the season. Sometimes these birds affect a wood, but more frequently a row of trees by the side of a river or on a heath, but never far removed from cultivated districts. Like all the dove or pigeon tribe, the hen lays two white eggs, and incubates about seventeen days; the male assists in the process of nidification.

METHODS OF CAPTURE.—Same as recommended for the Ring-dove or Wood Pigeon.

FOOD AND TREATMENT.—In the wild state, these birds feed similarly to Ring-doves, and in the moulting season associate with these birds to go in search of provender, which consists of peas, various kinds of grain, vetches, linseed, pine and fir cones, beech mast, and acorns. In a state of domestication they may be fed the same as tame pigeons; they are very fond of wheat and hemp seed.

REARING THE YOUNG.—Rear and treat in the manner directed for the Ring-dove (*vide* p. 432).

DISTINGUISHING MARKS OF COCK AND HEN.—The distinction between the sexes is very trifling, and is only discernible to a trained eye. The male bird is a little more pronounced in the depth and brightness of his plumage, and more brilliant in the sheen and reflections about his neck, than the female. The cock is also bolder, and more majestic in his actions and movements.

SONG.—The Stock Dove has a peculiar voice; it does not “coo,” but utters a harsh, disagreeable note, which Mudie likens to a “hollow grunt”; the sound is a sort of hollow rumbling, which it repeats at intervals.

POINTS TO BE OBSERVED IN JUDGING.—Size, form, brilliancy and purity of colour; close, compact feathering; erect carriage and graceful bearing, with an abundance of sheen radiating the neck and breast. Good condition, and freedom from dirt, are the chief points for consideration.

GENERAL REMARKS.—Stock Doves reared by pigeons and kept in an outdoor aviary will breed with common House Doves; but if granted their liberty, they will depart in the autumn, when the period of migration arrives. The young, the produce of this cross, generally show the distinctive features of one or other of their parents. Stock Doves are very timid birds, and if unduly interfered with during incubation will forsake their eggs.

DISEASES AND THEIR TREATMENT.—See remarks on the Ring-dove (Chapter LXXVIII., p. 430) under this heading; Stock Doves, being subject to the same diseases, require the same treatment.

CHAPTER LXXXI.

THE ROCK DOVE.

Columba domestica, Lin. ; *Columbia livia*, Ratü. ; *Biset*, ou
Pigeon de Roche, Buf.

DESCRIPTION AND CHARACTER.—The Rock Dove, or Wild Blue Pigeon, is not so plentiful as either the Ring-dove or Stock Dove, and is only to be met with in Great Britain, in its natural state, in localities where steep, precipitous rocks abound, for these birds dwell chiefly near the sea where the coast is bound by steep, dangerous crags, or where old castellated ruins stand on high, towering eminences, or on rocks or ruins entirely surrounded by the sea, their favourite resort being steep, overhanging rocks, with deep, almost inaccessible caverns, that are difficult to reach either by land or water.

A fully-grown bird is from 12in. to 12½in. long. The bill is bluish black ; the irides dark yellow ; plumage pale leaden grey. The lower portions of the back and rump are white ; the neck and breast are brilliantly adorned with green and reddish purple reflections. Across the wings are two transverse bars or bands of bluish black ; the primaries and tail feathers are tipped with the same colour ; the exterior feathers on each side of the tail are white on the outer web. The legs and feet are red.

HABITS AND BREEDING.—The Rock Dove is indigenous to Great Britain, and is widely diffused throughout Europe. It has been met with in Africa, in Japan, at Madeira, and in some parts of North America. It inhabits most of the rocky

islands in the Mediterranean. In Great Britain it is most plentiful in Devon, Wales, Northumberland, and Scotland, principally along the rocky coast, in isolated places, and in the vicinity of cultivated lands. The nest is built in a hole, on the ledge of a rock which is sheltered by another abutting or overhanging it, or in a cavern, on some projecting piece of rock that affords the necessary space and requirements. The nest is extremely primitive, and consists of a few slender twigs, a bit of dried grass, or a few herbs or leaves, but very sparse. The hen lays two eggs, quite white, and in all respects similar to those of tame pigeons; she incubates about seventeen or eighteen days. The male assists in the process of incubation and feeding the young. Their movements and actions are in all respects the same as those of the common domestic Pigeon. The males coo, strut about in a proud, imperious manner, and make short leaps and gyrations; they fill their throats, ruffle the feathers on their necks, and affect the same ardent, amorous gestures when wooing their loved ones as the domestic Doves. They continue to feed their offspring for a week or ten days after they leave the nest.

METHODS OF CAPTURE.—Shoot one or two, tie them to sticks by their legs, head downwards, and place them in a field adjoining a place which they inhabit; the heads of the dead birds should almost touch the ground. Then fix your nets on each side, sprinkle a few handfuls of corn about, and ensconce yourself in a hollow, or other place of concealment. The sympathy and attachment of Rock Pigeons is so strong that they will come to examine their companions, and after doing so, if hungry, commence to feed on the scattered corn; then draw your nets. The early morning or late evening is the best time to select for this operation. Rock Doves are bold, but wary, and the least noise will startle and disturb them.

FOOD AND TREATMENT.—The same as recommended for the Ring-dove and the Stock Dove, excepting that the first named variety eat holly berries when other food is scarce.

REARING THE YOUNG.—Obtain some newly-laid eggs, and place them under house pigeons to hatch and rear.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is slightly paler than the male in the hues of her plumage.

The green and purple reflections on her neck are less brilliant, and more circumscribed; in other respects they greatly resemble each other.

SONG.—This bird coos, moves, and acts in all respects like the common House, or Stock Dove, whose progenitor it is said to be.

POINTS TO BE OBSERVED IN JUDGING.—Select a well-developed, shapely bird, sprightly in its actions, with a good sound, smooth, tight-fitting plumage. The colour of the body feathers must be clear, and free from tinge, with a decided shade of rich pale blue; the rump should be pure white, and well-defined; the neck and breast must be lustrous with green and purple reflections, and the wing bars clean, neatly formed, and quite black; the eyes should be bright, intelligent, and of a nice pale orange hue; the tail, wings, feet, and claws, must of necessity be in good order, and the exhibit free from dirt, and in good bodily condition.

GENERAL REMARKS.—Dr. Bechstein, in his interesting work on “Chamber Birds,” says: “In Germany Rock Doves may be noticed in open dovecots in the farmyards, in churches, towers, old buildings, &c., while in England, Italy, and Russia, they are found wild in great numbers in holes of the rocks at the seaside.” The pigeons which have become domiciled on some of the public buildings in Continental cities, as Saint Mark, at Venice, and Pont Neuf, at Paris, and other places, are said to be the original common Blue Rock Doves. In many parts of England and Scotland birds strongly resembling this variety may be found flying about old ruinous edifices in a semi-wild state, but whether they have been in the first instance reclaimed from the wild state, or bred between that variety and the common domestic pigeon driven from its birthplace when the family has outgrown the convenience provided, and forced by compulsion to seek a place of refuge and a new home, is a problem that has not yet been solved.

DISEASES AND THEIR TREATMENT.—See remarks under this heading in Chapter LXXVIII., on the Ring Dove (p. 434), as these birds are subject to the same ailments, and require the same treatment.

CHAPTER LXXXII.

THE KESTREL HAWK.

Falco Tinnunculus, Lin. ; *La Cresserelle*, Buf.

DESCRIPTION AND CHARACTER.—The Kestrel Hawk is a noble, elegant bird, graceful and majestic in its contour, and unquestionably the handsomest of the Falconinæ tribe. It is altogether an interesting bird, not nearly so vicious and cruel as the Sparrowhawk, and when reared by hand and properly domesticated becomes as tame and tractable as a home-bred pigeon. A full-grown adult specimen measures 14in. in length, the tail being 6in.; the width from tip to tip of the wings is 27in., and the weight about 7oz. The bill is short and stout, the upper mandible being much incurvated, and the colour dusky blue. The cere and edges of the eyelids are yellow, and the eyes blackish brown; above the bill is a narrow line of buff; the head, and hind part and sides of the neck and cheeks, are a leaden bluish grey, faintly streaked with thin black lines; the cheeks are paler and greyer in colour than the surrounding parts; from the corner of the gape, on each side of the head, is a small line of faintish black, striking downwards. The back and wing coverts are a deep reddish fawn colour, edged with a paler tint, and variously marked with black, according to the age of the bird; the under parts of the body are reddish yellow, striped and spotted with bright russet brown and black; the hocks, or leg feathers, and rump, are of the same colour; the tail feathers are dark greyish blue on the upper side, and silvery grey beneath, with black shafts, and barred near the

end with a broad black stripe; the tips are greyish white. The legs are yellow, and the claws black. The wings are long, and when folded cover the greater portion of the tail.

Kestrel Hawks differ in appearance considerably, according to age. Young male birds are darker in the body colours, are much more profusely marked, and are minus the bluish grey head and collar, these only appearing after the second moult, or when the birds are one year old. Old birds are found entirely destitute of the black stripes on the head and neck, are less spotted on the body, and brighter and paler in the various hues of their plumage.

HABITS AND BREEDING.—The Kestrel Windover, Stannel Hawk, Stonegall, Stengale, and Keelie, as this bird is variously designated, is partly migratory in habit, and is met with in all parts of Europe. It does not fly with the dash and rapidity of the Sparrow Hawk, but sails away in a graceful, easy manner, frequently wheeling round, and hovering over newly-ploughed fields and meadows, or stubble-fields, according to the time of year, and more particularly in windy weather, searching for dormice and Larks, of which it is very fond. It has a keen, eager, penetrating vision, and observes the slightest movement of its hidden prey, which crouch out of sight as soon as they espy their enemy. As soon as the Kestrel observes either a suitable bird or animal, it pounces down upon it with the rapidity of an arrow shot from a tightly-strung bow, but with more certain and deadly aim. After securing its prey, it hastens off to some convenient spot—a wood, a thicket, or a high rock—to feast on its captive. When pressed by hunger, the Kestrel will venture near a farmyard, and if it discovers a young duckling or chicken within easy grasp it will pounce upon it and carry it off in triumph. It also proves troublesome at times to the professional bird-catcher, as it does not hesitate to swoop down and kill their decoy birds.

The Kestrel Hawk breeds in the hollows of lofty, decayed trees, in the crevices of rocks, and occasionally in a disused stone quarry or chalk pit, in a sequestered place, and in proximity to woodlands. At other times it will take possession of the deserted nest of a Crow, Magpie, or Ring-dove. The hen lays four or five eggs, of a pale reddish white colour, blotched and mottled with reddish brown. The parents leave their

young at an early age for an hour together, in search of food to supply their wants. The young do not leave the nest until they are able to fly.

METHODS OF CAPTURE.—Stout, well-limed twigs may be placed around the nest to secure the parents, but the trapper will require a pair of thick husbandman's gloves before he ventures to handle the birds, and it will be found advisable to clip their wings as soon as caught. The birdlime used for this purpose needs to be fresh and very strong, or it will not hold the birds.

Professional catchers generally use a "hawk trap." This consists of a wooden skeleton frame, made of 2in. laths, $\frac{3}{4}$ in. in thickness; it should be 2ft. long, 20in. wide, and 2ft. 6in. high, as it requires to be made in two stories. It should have a solid wood bottom and a framed lid, with two stout wire springs, one fixed on either side. The trap should be covered with strong netting, or be wired like a cage; the lower story is to hold two or three small birds to act as decoys, the upper portion being the trap. It is arranged with a crossbar of wood in the centre, about $2\frac{1}{2}$ in. wide, and $\frac{3}{4}$ in. in thickness. In the centre of this is a $\frac{3}{4}$ in. auger hole, and into this hole is fixed a round piece of wood perpendicularly to half the height of the upper story, and on the top of this is placed another piece of wood, square in the centre, and with two arms branching from it, made like a stout perch. On the under side a hole should be counter-sunk about $\frac{1}{16}$ in., to keep it steady on the upright piece below; on the top of this is fixed a piece of $\frac{3}{4}$ in. round wood, cut away at each end, and bevelled. The ends should be first greased, and then the upright dexterously arranged between the cross-piece of wood and the lid, so that when the Hawk alights on the cross perch to pounce on the imprisoned birds, its weight will cause the upright to be displaced, and fall, thus liberating the springs and closing the trap.

The space between the two stories is best wired, one side forming a door for putting in and taking out the birds. The trap should be secured to a tree, some distance from the ground, and in open country, where it can easily be discovered. Hawks, as a rule, are neither cautious nor cunning, but rush into danger in a headstrong, impetuous manner, and are easily caught, especially when pressed by hunger.

FOOD AND TREATMENT.—When roving wild among woodlands and fields the Kestrel Hawk lives chiefly on birds, mice, and small reptiles. After it has secured a bird, it places it on its back, and proceeds to pluck the feathers from its body before eating it. Mice it swallows entire, and discharges the hair in the form of pellets. It eats ground beetles, grasshoppers, dragon flies, caterpillars, frogs, and earthworms, by way of a change of diet. In confinement, it will subsist entirely on raw flesh, and sheep's or pigs' liver and lights; but a few half-grown mice or birds should be given occasionally.

REARING THE YOUNG.—These should be taken when covered with white down, before the feathers begin to appear, as then they are more readily tamed. They should be kept in a spacious cage, and fed frequently. They soon commence to "squeal" when they are hungry, and do not cease until their wants are fully supplied. Feed them at first with finely-chopped raw meat of any sort, but do not give too much liver or lights, as it purges them, and does not contain sufficient nutriment to maintain them in health. When they reach the age of three weeks, shoot a few House Sparrows, and give by way of a treat, first plucking off the feathers. A few young mice will be greatly relished when the birds reach the age of five or six weeks.

DISTINGUISHING MARKS OF COCK AND HEN.—The female Kestrel differs greatly from the male, as will be seen from the following description: Length, 15in., of which the tail measures $6\frac{1}{2}$ in. The bill is horn blue, tipped with black; cere and gape, yellowish brown; eyes, dark brown; edges of eyelids (eye ceres), yellow; the tongue is flesh-coloured, with a dark point. Weight of bird, 11oz. The head and upper part of neck are dark russet brown, striped with black; the cheeks are paler, being tinted with yellowish grey; the lower part of the neck, back, and wings, are golden russet or reddish fawn, marked with a horizontal bar of black across each feather. The pen feathers are dusky, vandyked on the inner web with white and brown, the white spots being fringed at the edges with reddish fawn colour. The tail is a brownish slate colour, barred from side to side with narrow bands of dusky brown; near the end is a broader bar, an inch deep, of rich blackish brown; the points or tips are pale greyish brown; the bars show on both sides of the

feathers. The rump is slaty grey, slightly spotted with brown; the thighs, and below the knee, are covered with feathers, and are termed hocks. The inside and linings of the wings are silvery grey, barred with darker grey; the inner wing coverts are beautifully spotted with pale rich brown. The breast is a mixture of brown, pale chestnut, and yellow; the throat, upper part of neck, and breast, are striped with brown longitudinally; the lower part of the breast, sides, and abdomen, are variously marked with round, brown spots; the vent is plain, and of a slaty grey and brown mixed; there is a faint line of a dusky hue from the gape, running downwards, at the sides of the neck, forming a slight under-curve. The shanks and toes are yellow, and the claws black.

SONG.—The Kestrel Hawk does not sing; it simply squalls, or screeches, in a loud, ringing manner, when angered or hungry. Its call differs somewhat from that of other Hawks, and sounds more like "Clie, clie;" but it is difficult to convey the sound in words.

POINTS TO BE OBSERVED IN JUDGING.—Select a long, neat, graceful, noble-looking bird, very closely feathered, rich in colour, and distinctly marked, with well-formed hocks, wings, tail, feet, and claws; a two or three-year-old bird is best, as Kestrels do not attain their adult plumage until two years old. The exhibit must be in good condition, free from dirt, and trained to be steady and tractable whilst being handled.

GENERAL REMARKS.—The young birds should be handled frequently, and, when a fortnight old, carried about daily in the open air, perched on a finger, for at least half an hour at a time. Boys can soon tame these birds if they are partial to them. As soon as the young can fly, let them be placed on a garden fence, or similar spot, before feeding, and entice them with a piece of raw flesh to come to your hand or shoulder to be fed; they soon learn what is required of them. When fully fledged, and able to take care of themselves, they may be given their liberty; they will not stray far away, and are sure to return, unless it be in the early spring or late autumn, when there is a danger of their joining their species; at this time it is advisable to keep the birds caged for a few weeks at least.

DISEASES AND THEIR TREATMENT.—The Kestrel is a hardy bird, and rarely ails anything when allowed its liberty and fed regularly. If too much liver or lights be given, laxness of the bowels is produced; this can be remedied by its discontinuance for a time, and feeding on raw flesh. Mice and birds are suitable when this state of the bowels is observed. When the bird has recovered, give raw meat as well.



CHAPTER LXXXIII.

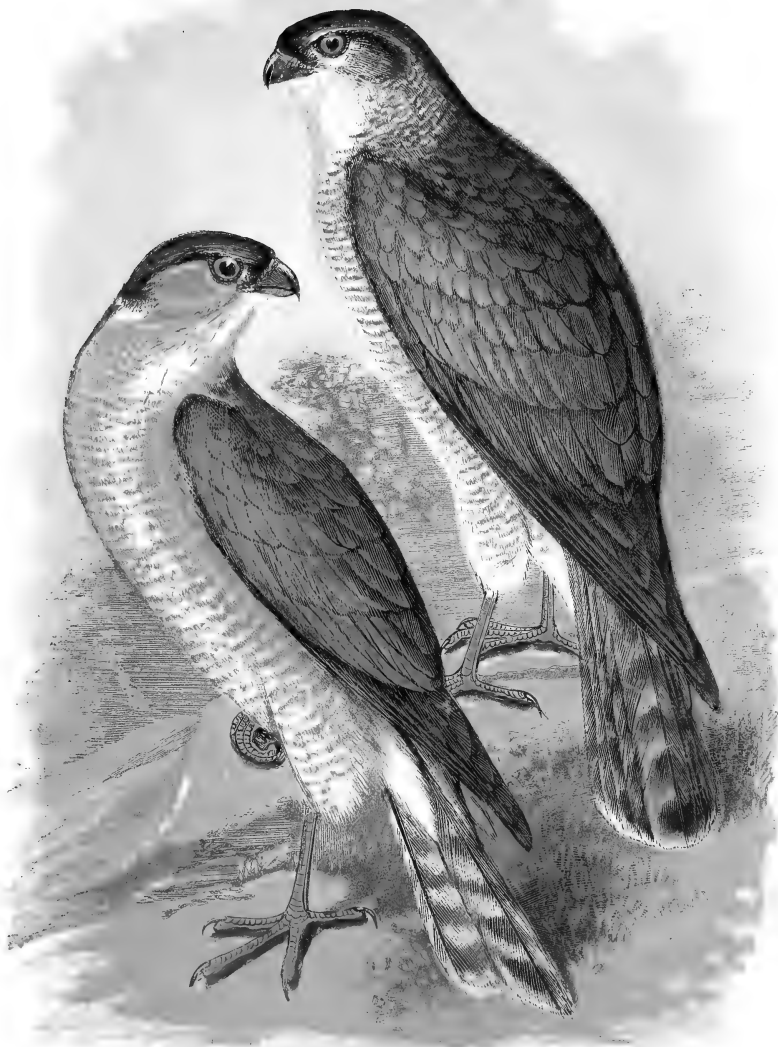
THE SPARROW HAWK.

Falco nisus, Lin.; *L'Epervier*, Buf.; *Accipiter fringillarius*, Raii.

DESCRIPTION AND CHARACTER.—The Sparrow Hawk is a bold, adventurous bird, full of dash, pluck, and determination. It is neither so handsome or lovable as its congener, the Kestrel, but may be rendered equally tame and tractable by frequent handling, and feeding from the fingers.

The Sparrow Hawk differs considerably, both in size and colour, according to age. The following is a description of a young male nine months old: Length, 13in., of which the tail measures 6in. The bill is short, stout, much hooked, and of a dark inky blue colour, the upper mandible overlapping the under one, as in all the *Falco* tribe; the nostrils are prominent; the iris is pale orange (termed, in speaking of pigeons, "Gravel-eyed"). The head is flat at the top, and over each eye is a bony protuberance, evidently intended to protect the eyes from the fierce glare of the sun's rays, or other external injury; above each eye is a faint streak of yellowish white, extending backwards; the forehead and crown are blackish brown, and there is a white spot at the back of the head. The neck, back, wings, wing coverts, saddle, tail, and rump, are dusky brown, faintly pencilled with golden brown round the edges of the feathers.

The scapulars, or pinion coverings, are beautifully spotted with white and buff, a bar of pale brown separating the colours; the flight feathers, twenty-two in number, are golden brown



SPARROW HAWKS.
(Male and Female.)

on the inner web, intersected with four bars of dark brown, extending across the entire width of the wings; the fourth and fifth primaries are the longest, as in many birds that are powerful on the wing, and excel in rapidity of flight. A few of the inner flight feathers, next the body, have broad transverse spots of white. The tail consists of twelve feathers, which are golden brown in colour, but less vivid, and a few shades darker in hue, than the flight feathers, and intersected with five or six bars of dark brown. The under part of the neck, the breast, sides, and larger wing coverts, are of a beautiful pale partridge brown, interspersed with white, and splendidly barred with wavy lines of dark brown; the chin is leaden grey; the under parts of the wing are silvery grey and dove colour, blended, and elegantly striped with brown; the under tail coverts are pearly grey, and there are five bars of silvery brown on the under side of the larger feathers, comprising the tail. The legs and feet are yellow, and the claws black. In older birds the upper parts become more of a leaden greyish blue in the ground colour.

HABITS AND BREEDING.—The Sparrow Hawk is indigenous to Great Britain, and common throughout Europe. It is a very rapacious bird, and displays great eagerness and determination in the pursuit of its prey, which does not easily escape.

These birds build their nests principally in lofty trees; occasionally they make use of the deserted nest of a Crow. The hen lays four or five bluish white eggs, variously marked and blotched with reddish brown, especially at the blunt end, and in some cases forming a reddish, irregular circle. The young remain in the nest until they are fully feathered and able to fly away. The parents teach them how to hunt and secure their prey. Sparrow Hawks are held in great abhorrence by gamekeepers and farmers, as they attack young Partridges and Pheasants, as well as Chickens, Ducklings, and young Pigeons, indiscriminately, and kill and carry them off in the most daring and reckless fashion. They hunt low, and search hedges for small birds.

METHODS OF CAPTURE.—These birds may be taken in the hawk trap (*vide* Chapter LXXXII., on the "Kestrel Hawk"). They are not infrequently caught with spring traps, baited with a live bird secured to a piece of wood formed like a cross, and driven into the ground in close proximity to the trap.

FOOD AND TREATMENT.—The same as recommended for the Kestrel Hawk.

REARING THE YOUNG.—*Vide* Chapter LXXXII., on the “Kestrel Hawk.” Follow the instructions given therein under this heading.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is considerably larger than the male, measuring from 15in. to 15½in. in length, and weighing from 9oz. to 10oz. She is darker in colour on the back and breast, and the lines or streaks on the latter are more numerous and irregular than those which adorn the male.

SONG.—The Sparrow Hawk, like the rest of the Falconidæ family, has no song; it simply screeches in a low, ringing manner, when angered or hungry. The cry it utters, which it repeats loudly and rapidly, sounds something like “Cawk,” or “Clawk.”

POINTS TO BE OBSERVED IN JUDGING.—Choose a long, slim, bold, defiant-looking bird, closely and smoothly feathered, with well-formed wings and tail; a keen, penetrating, but not vicious, eye; good, graceful carriage; a proud mien, and a richly-coloured breast. It should be regular in markings, and with deep, distinct wing and tail bars. Good condition and cleanliness are great factors in an exhibition specimen. Hawks are rarely used as show birds, as they are apt to shriek when hungry, and thereby alarm their neighbours; and, besides, they require special attention as to feeding, which cannot be reasonably expected from a secretary or a show attendant. They are, however, occasionally tolerated at a local show, where the owner undertakes to attend personally to their wants during the period that the show is open to the public.

GENERAL REMARKS.—The Sparrow Hawk can not only be tamed and thoroughly domesticated, but is capable of being taught to hunt birds, and return, after the chase is ended, to its owner. Some Hawks display marks of affection and even attachment to their attendants and to domestic animals, when reared and kept in everyday companionship with them from an early age. Occasionally a tamed Hawk—almost invariably a female—will exhibit cowardice if attacked and mobbed by a number of small birds, which is not an unusual circumstance if the Hawk has chased and destroyed one of

their associates. The male bird, however, usually resists such an unwarrantable liberty, and, with a sudden dash, scatters and disperses his enemies instantly, one of them very often falling a prey to his anger. It is as well, perhaps, to mention that Sparrow Hawks should either be caged or pinioned for a few weeks in the spring, or they will probably go off in search of a partner, and fail to return.

DISEASES AND THEIR TREATMENT.—Sparrow Hawks are uncommonly hardy, and are hardly ever seriously affected with illness if given their liberty and a plentiful supply of wholesome food. Place a dish of fresh spring water for them to drink every morning where they can obtain it without difficulty.

These birds thrive through all weathers and seasons; but when caged they are apt to get sore feet and cramp, and sometimes to become a little dull during the moulting season. For the first-named complaint, see Chapter V., on "Diseases," and for the latter, give a change of diet.

CHAPTER LXXXIV.

THE HOBBY HAWK.

Falco subbuteo, Lin.; *Le Hobreau*, Buf.

DESCRIPTION AND CHARACTER.—The Hobby is another variety of the Hawk family, a handsomer bird than the Sparrow Hawk, and the swiftest and most eager of all the tribe in the pursuit of its prey; but it is neither so docile or tractable as the Kestrel or Sparrow Hawk after domestication, and consequently proportionately less interesting. The Hobby, in former times, when hawking was a Royal pursuit, was kept for hunting Partridges and Quails, and has been used by fowlers for taking Larks as well. It is exceptionally fleet of wing, and few birds—not even Swallows—can outpace it; its strength and endurance are likewise very great.

A matured specimen measures from 12in. to 12½in. in length, the tail occupying 6in.; the breadth, from tip to tip of wings, is 2ft. 3in. The bill is dingy blue, palest near the junction. The cere and edges of the eyelids are yellow, and the irides dark hazel, in some specimens yellow or gravel; the eyes are fierce and cruel looking. The forehead and crown, the back, and wing coverts, are dingy blackish brown, edged with pale russet brown; on each side of the hind neck is a buff spot. From the junction of the upper mandible, running over each eye, is a streak of yellowish white or pale yellow, forming a distinct eye-marking; from the back of the head, passing through the eye, is a black mark, and striking from this, beneath the eyes, is a crescent-shaped line of black, stretching down the sides of the neck. The wings are dusky brown.

The two middle feathers in the tail are plain, and the remainder irregularly barred with russet brown, having pale greyish tips. The sides of the neck, breast, abdomen, and thighs, are yellowish brown, marked with longitudinal brown spots; the vent is palest, and is free from marks. The legs are yellow, and the claws black.

HABITS AND BREEDING.—The Hobby Hawk is migratory in habit. It arrives in this country in April, and leaves again in October. It has been found in Russia and Norway, and other parts of the Continent. It is a very wild bird, and difficult to approach. In the pursuit of its prey it exhibits much boldness and daring, as well as determination. It frequents forests and mountainous districts which are well wooded, and builds its nest in very lofty trees. The hen lays from four to five yellowish white eggs, speckled with reddish brown. The period of incubation is not known—probably about seventeen days. The young do not leave the nest until they are fully fledged.

In its chief characteristics the Hobby Hawk greatly resembles the Sparrow Hawk. It sometimes follows sportsmen in their excursions, but instinctively keeps beyond the reach of the gun, its object being to chase and capture any wounded birds which have not been fatally hit; these it proceeds to devour at once, and returns, in the hope of securing other victims, until its appetite is fully appeased. Hobby Hawks not infrequently hunt in pairs, the male and female together; they are, however, much more rare than either Kestrel or Sparrow Hawks, and are seldom seen, excepting in wild and hilly localities, or in the neighbourhood of woods and commons.

METHODS OF CAPTURE.—The Hobby, being of a wilder nature than the Sparrow Hawk, is more difficult to capture. A spring trap, concealed among deep grass, baited with a live bird, and placed near its usual haunts, gives the best chance of success.

The Hobby Hawk is taken by fowlers with limed twigs, and frequently gets entangled in the meshes of their nets when they are set for Larks or Finches; but it is more wary than the Sparrow Hawk.

FOOD AND TREATMENT.—Follow the treatment recommended for the Kestrel Hawk on p. 449.

REARING THE YOUNG. — See remarks under this heading in the Chapter on the “Kestrel Hawk” (p. 449).

DISTINGUISHING MARKS OF COCK AND HEN.—The female is about 14in. from tip of beak to end of tail, and 23in. across the wings. She is duller in colour than the male, the spots on her breast are more numerous and conspicuous, and the face markings are paler, broader, and less distinct.

SONG.—See remarks under this heading in Chapter LXXXIII., on the “Sparrow Hawk.”

POINTS TO BE OBSERVED IN JUDGING.—Good shape; bold, free, erect carriage, usually termed “upstanding;” close, tight-fitting plumage; good colour; distinct, well-formed markings; the wings and tail free from broken or damaged feathers; feet and claws perfect. Condition and cleanliness are essential. The exhibit must be steady on the perch, docile, and tractable.

GENERAL REMARKS.—The Hobby may be kept in the same manner as Kestrel and Sparrow Hawks, though it will be found judicious not to give it its liberty until after the second moult, as it is not so confiding as either of the varieties above named, and requires more time to domesticate.

DISEASES AND THEIR TREATMENT.—The Hobby Hawk is subject to the same diseases or ailments as the Kestrel Hawk, and the remedies recommended for the latter on p. 451 are equally applicable to the former.



CHAPTER LXXXV.

THE MERLIN HAWK.

L'Emerillon, Brif.; *Æfallon Bellonii*, Raii.

DESCRIPTION AND CHARACTER.—The Merlin is one of the smallest, as well as prettiest, of the Falconidæ tribe; but despite its diminutiveness it is spirited, brave, fearless, intrepid, and daring. It is named by some people the Stone Falcon, from a habit it has, when in quest of food, of alighting upon stones to watch for small birds.

It was formerly trained and used on the Continent for the purpose of hunting quails, and is highly lauded as a most courageous and gallant bird. In England, it was reserved more especially for the use of the gentler sex, and was termed the "Lady's Hawk," and used by such as took a delight in and practised this kind of sport as a pastime. The Merlin will attack Partridges, Landrails, Magpies, Jays, Thrushes, Fieldfares, Blackbirds, Starlings, &c.; but Larks and Buntings are its favourite prey.

In length it measures from $11\frac{1}{2}$ in. to $12\frac{1}{2}$ in., the tail being 5 in. The width, from tip to tip of the wings, is 2 ft. The bill is bluish lead colour, being darkest at the point. The cere is pale yellow, and the irides very dark brown. The head is dull reddish brown, each feather being marked with a dark blackish blue streak down the centre. The back and wings are bluish ash colour, streaked, mottled, and edged with russet brown; the quills are dusky, almost black, and marked with reddish brown oval spots; the under wing coverts are brown, marked with round white spots. The tail is dusky,

and crossed with bars of reddish yellow or pale brown. The wings are long, as in all the Hawks, and reach to within $1\frac{1}{2}$ in. of the end of the tail; the breast and belly are pale bright brown or reddish yellow, becoming paler toward the vent, with longitudinal, oblong, dark brown spots. The legs and feet are yellow, and the claws black.

HABITS AND BREEDING.—The Merlin is well known in different parts of Europe, and at one time was supposed to be purely migratory in habit; but several instances have been known of its breeding in this country. It appears to prefer rugged hills, well covered with furze and heather, and situated in the neighbourhood of woodlands. It is much more scarce than either the Kestrel or the Sparrow Hawk.

It generally builds its nest on the ground, amongst heather, but has been known to use the deserted nest of a Crow. The nest is formed of slender twigs, and is raised a few inches above the ground. The hen lays four eggs, round in form, and $1\frac{1}{4}$ in. long; they vary somewhat in colour, some being of a palish chocolate brown, tinged with dullish red, and others mottled with two distinct shades of dark brownish red. The period of incubation is not known for certain, but is probably about seventeen days.

METHODS OF CAPTURE.—The Merlin is frequently taken in the day net by professional birdcatchers, as it is very keen and determined in the pursuit of small birds, and apparently not endowed with much caution. It may likewise be obtained in winter time by the use of spring traps baited with live birds, or in the Hawk trap, which is preferable to other methods, and does no injury to the bird.

FOOD AND TREATMENT.—The same as recommended for the Kestrel Hawk (p. 449).

REARING THE YOUNG.—The young may be reared in the same manner as those of the Kestrel Hawk.

DISTINGUISHING MARKS OF COCK AND HEN.—The upper plumage of the female is brown, whilst that of the male is greyish blue. The under parts of the former are yellowish white in the ground colour.

SONG.—This is not by any means a musical bird; it utters a harsh, piercing cry, when it is hungry or angered, and also at the pairing season, when it is particularly clamorous.

POINTS TO BE OBSERVED IN JUDGING.—Good shape; clear

and even colours throughout; close, compact, smooth feathers, with plain and distinct markings; bold, upright carriage, and a defiant mien. The bird should, however, be tame and tractable with all. There must not be any broken, twisted, or damaged feathers in the wings or tail. The exhibit must be in good condition, and free from dirt.

GENERAL REMARKS.—The Merlin may be easily tamed, and taught to hunt small birds; but these it invariably kills, as it displays much eagerness and resolution when in pursuit of its prey, pouncing upon it with considerable ferocity. When once the Merlin becomes entirely domesticated it is docile, amiable, and tractable, and may be freely handled by its owner without incurring risk of injury. By some people the Merlin is highly prized on account of its courage, skill, and other qualities.

DISEASES AND THEIR TREATMENT.—The Merlin is an uncommonly healthy and hardy bird, especially when kept in the open air constantly, or allowed to live the life of a free rover. It seldom suffers from any disease excepting laxness of the bowels, and this is mostly produced by feeding too much on liver or putrid flesh. A change of diet will speedily restore it. A few small young birds or mice will be found best for this purpose, and will add greatly to its enjoyment and well being.

If fed too exclusively on animal food, the blood becomes too much heated, the feathers come off, and a dry scurf is observable about the skin. In such a case give a supply of caterpillars, ground beetles, grasshoppers, or young frogs, as a change of diet, and rub the affected parts with a weak solution of sugar of lead.



CHAPTER LXXXVI.

THE HEN HARRIER.

Falco cyaneus, Lin.; *Le Lanier Ceudré*, Brif.; *L'Oiseau St. Martin*, Buf.

DESCRIPTION AND CHARACTER.—The Hen Harrier, or Blue Hawk, is a large, powerful bird, more sullen and less tractable than either the Kestrel or Sparrow Hawk. It is less common than either of these varieties. It is 17in. to 18in. in length, the tail being $7\frac{1}{2}$ in.; the breadth of the bird, from tip to tip of the spread wings, is 3ft. 3in., and its weight, 12oz. to 13oz. The bill is black, the upper mandible being much hooked; around the base there are a number of long, erect feathers, which somewhat resemble bristles. The cere is greenish yellow, and the irides reddish brown. Round the edges of the eyelids are rims of dusky yellow. There is a sort of feathered disk surrounding each eye, slightly resembling that of the Owls. Above each eye is a faint line of white. The upper parts of the body are bluish grey, the edges of the feathers being tinged with russet grey; the back of the head is white, spotted with pale reddish brown. The primary wing feathers are black, the third and fourth being the longest, and the secondaries greyish ash colour, spotted with black, forming a bar across the wings; the two centre feathers of the tail are grey, and the outer web of the remainder the same colour. The inner web is white, and marked with blackish brown bars; the breast, belly, sides, thighs, vent, and wing linings, are white. On the sides of the breast are a few

small dullish brown marks or streaks; the linings of the wings are ornamented with bars of russet brown. The legs are yellow, and longer than are found in the generality of Hawks; the hocks are profuse, and well formed; the claws are black. These birds vary in size and colour according to age, as all Hawks do. When they get older they become paler in colour and have fewer markings.

HABITS AND BREEDING.—The Hen Harrier is indigenous to England, and inhabits wild, isolated parts of the country, open plains or hillsides, and places where there are steep crags and rugged precipices, in the vicinity of woodlands and heaths. In the North of England it is known by the name of the Blue Hawk, and by some as the Dove-coloured Falcon. It inhabits the whole range of the Cheviots, where it breeds. The hen makes her nest on the ground—quite a primitive affair—beneath a heather or furze bush, in some well-sheltered and sequestered spot, or at the side of a hill or precipice, and lays from three to five whitish eggs, with a pale reddish hue. The young remain in the nest until fully feathered, and are then difficult to secure.

The Hen Harrier, when hawking, flies only a few feet above the ground level, and quarters the ground as closely and carefully as a well-trained setter. When a bird or a young leveret or rabbit is espied, the Harrier rises instantly in the air to a height of several feet, and comes down on its prey with a sudden and precipitate swoop, striking it savagely, and usually killing its victim with one powerful blow. The Hen Harrier is destructive and mischievous, and greatly disliked by sportsmen and gamekeepers, being a powerful bird, and full of pluck and spirit. It attacks hares, rabbits, Pheasants, Grouse, the Black Cock, Partridges, Snipes, and numerous other birds. It can kill a rat at one blow, and displays great courage, skill, and determination in its mode of attack.

METHODS OF CAPTURE.—This bird is difficult to ensnare. In winter, when food is scarce, it may be allured with a live bait—a bird or a mouse—into a spring trap, but before releasing it, it is necessary to secure its wings, and place a strap round it, and then to cover over with a bag, or place the captive in a covered basket or hamper.

FOOD AND TREATMENT.—The Hen Harrier feeds on various kinds of birds and animals, lizards, newts, frogs, and snakes.

In confinement, it may be fed the same as the Kestrel and Sparrow Hawk, but prefers birds, mice, and frogs given to it alive. A bird of this species requires to be kept in a place not less than 5ft. or 6ft. square to preserve it in good health and condition.

REARING THE YOUNG.—Pursue the same treatment as recommended in the Chapter on the “Kestrel Hawk,” and, when the young are fully fledged, they may be fed with flesh meat, birds, mice, frogs, and newts.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is larger than the male, being 20in. in length, and is altogether different in plumage. On the upper parts she is reddish brown, and on the under reddish yellow, with dark russet brown longitudinal streaks and spots. The primary feathers of the wings are dusky brown. The sexes are easily distinguished. At one time they were looked upon by ornithologists as two distinct varieties on account of this great difference. The young resemble the mother in colour; the males, however, assume the bluish grey plumage after their first moult.

SONG.—See remarks under this head in Chapter LXXXIII., on the “Sparrow Hawk.”

POINTS TO BE OBSERVED IN JUDGING.—The Hen Harrier is too large to be kept as a regular show bird, and is in other respects unsuitable. Contour, purity of colour, evenness and closeness of feather, well-formed wings and tail, good carriage, condition, and cleanliness, would be regarded as the distinguishing points of beauty.

GENERAL REMARKS.—The Hen Harrier should only be kept by those who have a superabundance of spare ground attached to their premises, or some convenient building which could be set apart for its use. A properly-constructed domicile, about the size of a small summer-house, should be erected, either with hedge stakes or wooden rails, say 2in. wide and 1in. in thickness. The top should be thatched with whins or rushes, or covered with wood or zinc; and the bird ought to be afforded some protection from the north and east winds, with a few boards, or a thatching of whins, firmly staked against the side of the erection. Some good stout perches are needed, one being fixed near the roof, to form a roost. This bird must not be trusted with its

liberty, like the Kestrel or Sparrow Hawk, as it will be sure to abuse the confidence reposed in it.

DISEASES AND THEIR TREATMENT.—The Hen Harrier is very hardy, and, when well cared for, will live for years and ail nothing. It sometimes gets out of condition for want of a change of food. When it does, the remedy is simple, and easily applied.

CHAPTER LXXXVII.

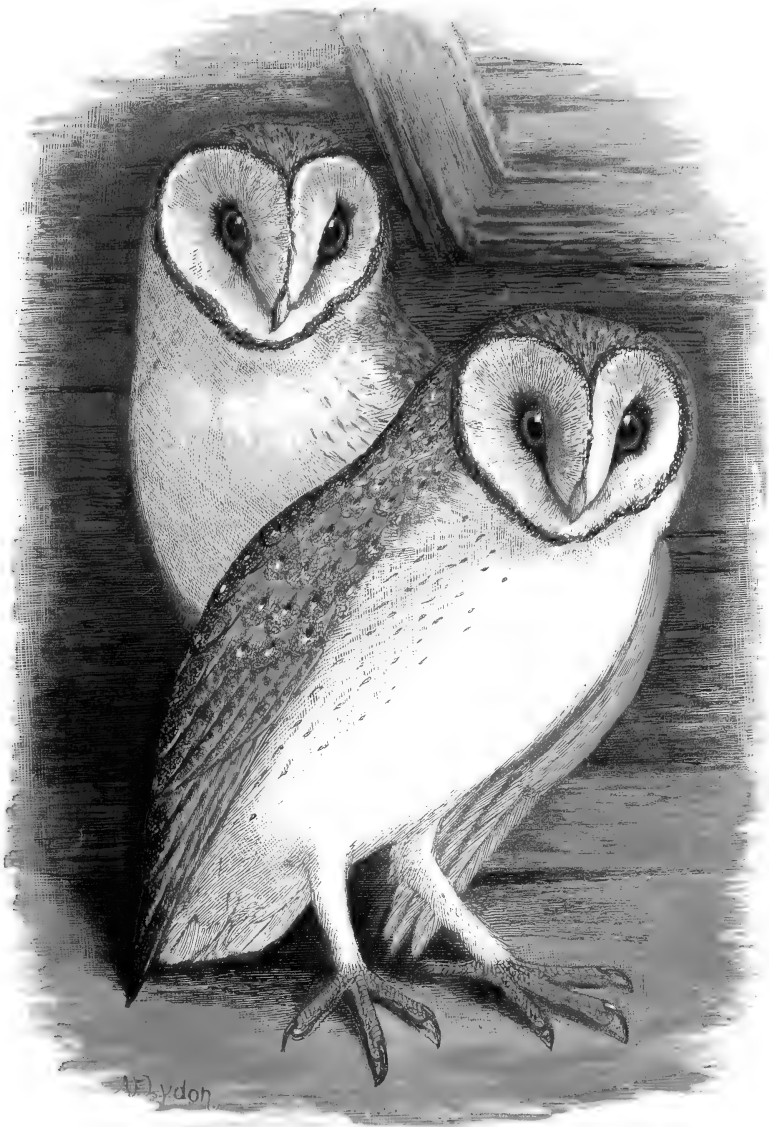
THE WHITE OWL.

Strix flammeau, Lin. ; *L'Effraire, ou la Fresnaie*, Buf.

DESCRIPTION AND CHARACTER.—The White Owl, more commonly known as the Barn Owl, is a handsome bird, although singularly grotesque in its general appearance; this description, to an ordinary observer, may appear hypercritical, but it is strangely true. The colour and markings of the plumage are extremely delicate, and even elegant, whilst the broad but somewhat puckered-up, concave visage, is remarkably unique and curious.

An adult White Owl measures 14in. from tip of the beak to end of the tail—the latter being $4\frac{3}{4}$ in. long—is 3ft. across the wings, and weighs 11oz. The irides are dusky brown. The bill is yellowish white, and 1in. long, half of its length being hidden by the facial ruffle of feathers; the under mandible is short and stout, and the upper one much hooked, especially at the tip, and projecting fully a quarter of an inch beyond the lower. The head, back of the neck, back, saddle, and wing and tail coverts, are a beautiful cinnamon yellow or rich fawn colour, the edges of the feathers being fringed with silvery grey, and enriched by two lovely spots of grey; at the extremities are two dark spots—that is to say, a dark spot at each end, and one in the middle—and between these are silvery grey spots resembling pearls. The pen feathers are fawn colour on the outer, and white on the inner, web, marked with four black spots on each side.

The wings are very long, and when folded project $1\frac{1}{4}$ in. beyond the tail; the second primary feather is the longest. The tail is white, mottled and barred with dusky black, excepting the



WHITE OWLS.
(Male and Female.)



two extreme outside feathers. The face, sides of neck, throat, breast, legs, and all the under parts, are white; the face is surrounded by a circle of soft, white, downy feathers, forming a raised ruffle, which is bordered with a band of bright cinnamon yellow or fawn; the facial ruffles, meeting in the centre, form a ridge at each side of the beak, extending to the forehead, and this gives the bird the appearance of having a nose. From the corner of each eye is a yellowish brown mark, descending to the bill, which forms a sort of channel for the tears to drain from the eyes; the face, or cheeks, are concave in appearance. The legs are feathered to the toes; the feet are mouse colour, and the claws blackish brown, or horn black, and much hooked. There are three claws in front, and one behind; the edges of the middle claws are serrated. White Owls vary considerably in appearance, according to age and sex. The description given is from a bird about three years old.

Young birds have pale whitish fawn-coloured breasts, marked irregularly with longitudinal dusky spots. The breast becomes whiter after each moult; at first it is creamy white. In old birds the breast markings generally disappear. Young birds are likewise darker in the upper plumage than matured specimens.

HABITS AND BREEDING.—The White Owl is widely distributed, being found in most latitudes, and in both hemispheres; it is very common in both Norway and Sweden, and in other Continental countries. It is indigenous to Great Britain.

It is a well-known bird, and familiar to most people; it haunts old ivy-clad ruins, churches, malthouses, barns, and dilapidated buildings of every description, and not infrequently resorts to decayed trees, more particularly those that are covered with ivy. The White Owl reposes by day, as its eyes are so constructed that it is unable to bear the light of the glaring sun. When in a state of somnolency, it makes a singular noise, which greatly resembles the snoring of a human being.

Although a dull, mopish-looking bird when seen by day, the White Owl is most active and energetic when twilight has begun, and is rapidly fading into the shadows of night; it then goes off at full speed, but phantom-like, and quite noiselessly, its wings being so formed as to permit of this being done.

The White Owl has keen and observant eyes, and readily espies its prey: a rat or mouse that has silently stolen out of

its cover to allay the pangs of hunger is instantly seized, and, by a rapid movement, its neck is dislocated or its back broken, and the assailant, uttering a cry of triumph—"Kiau, kiau, kiau"—flies off to some quiet place, or to a tree, and there devours its prey. This bird has a peculiar method of disposing of a mouse; it seizes the animal across the back, gives it a few savage bites to destroy life, then throws it up in the air, and, catching it head foremost, gives it a sudden jerk, when it disappears to about half its length; the body and throat of the bird then begins to work as if suffocating, and lastly, with a final effort, the mouse disappears; the hair and skin are ultimately disgorged in small hard pellets.

On bright moonlight nights the White Owl may be seen gliding around a farmstead, or corn ricks, in quest of its favourite food. It only kills small birds when mice are scarce, and difficult to procure; but these it devours similar to a Sparrow Hawk, tearing them to bits, and swallowing them piecemeal. It may likewise, on moonlight evenings, be observed skimming close to the surface of a stream or river, hunting for small fishes, which it seizes very dexterously in its claws, and carries off to a suitable place to devour.

The White Owl builds no nest, but deposits its eggs in the hole of a wall, among crumbling and decayed ruins; in the steeple or belfry of a church, or in the hollow of some old, decayed tree. The eggs are usually from two to four in number, with rough, chalky-looking shells; it is a prolific bird, and the hen generally commences a second brood before the first are able to leave the nest, in which case the male parent takes charge of them, and attentively supplies their wants until they are fully capable of procuring food for themselves.

METHODS OF CAPTURE.—The White Owl may be captured by closing the holes in a barn or other building which it is known to frequent, or by placing a net over the hole of a tree which it is accustomed to haunt for the purpose of repose. It is a difficult bird to capture, for when assailed it throws itself on its back, and vigorously defends itself with beak and claws; the most successful plan is to throw over the bird a hand net, such as is used by fly-fishers, and, when it commences to struggle, to roll it over until its feet become entangled in the meshes of the net; then cover over with a sack, carry off, place the bird in a room or loft, uncover, and leave it to free

itself. Old birds are difficult to tame, and exhibit a sullen disposition for a lengthened period.

FOOD AND TREATMENT.—The White Owl lives principally on mice and moles, in its natural state; it likewise kills and eats rats, and occasionally small birds and bats. When very hungry, or as a change of diet, it devours beetles and other insects. In confinement, it may be fed on raw meat, mice, moles, and fish of any description.

REARING THE YOUNG.—The young may be reared and treated in all respects the same as those of the Kestrel Hawk (see p. 449).

When they are frequently handled they become comparatively tame, and may be allowed their liberty in a walled-in garden, if they have their wings clipped, and have a properly formed shelter constructed for them to retire into during the daytime.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is a little larger, and slightly darker and duller in the ground colour of its plumage than the male bird, and is, as a rule, more profusely spotted on the breast; but it must be admitted that the birds vary considerably in this respect, no two being precisely alike. The hen is mostly greyer on the under parts and about the face. The sexes are difficult to distinguish, excepting by the general outward appearance; the male is usually fuller and rounder in the face, and there is an undefinable something of the masculine in the contour and manner of a male bird, and an effeminacy in the attitude and gestures of a hen, that is plainly noticeable to a trained eye, but which cannot be accurately described or imparted to an inexperienced person.

SONG.—The White Owl is a very unmusical bird. It shrieks loudly and shrilly, and when molested hisses like a snake.

POINTS TO BE OBSERVED IN JUDGING.—Select a male bird with a rich, fawn-coloured head, back, wings, &c.; a delicate white face; a fine, well-formed ruffle; clear and well-defined markings; a creamy white breast, piercing eyes, and a well-developed head; sound feet and claws, free from deformity; the legs well covered with smooth, soft feathers. The entire plumage must be close-fitting to the body, and bright in sheen; the wings and tail perfect in form and feathering, and free from dirt. The exhibit must also be docile and tractable.

GENERAL REMARKS.—The White Owl is a useful bird to keep about a farmhouse, stable, granary, or malthouse, as it will destroy more mice than a cat, and will kill rats and devour beetles; so that its services are of great value where a stock of grain is kept.

With clipped wings it may be granted its full liberty, but requires to be supplied with a box, or other convenient receptacle, as a roosting-place, fixed in some quiet corner, in a building that is rarely used, and where it is not likely to be disturbed. It must be trained when young to go to this retreat, by placing food and water there, and when it gets accustomed to the arrangement it will not readily forsake the spot. If kept in an aviary, it ought to be one specially constructed for Owls, with a totally darkened retreat; and no other birds differing in species should be kept with it.

The White Owl, if reared by hand, becomes docile and tractable, and in many cases familiar with its regular attendant, and receives the latter, not only with an unmistakable sign of recognition, but in many instances with an expression of pleasure, flapping its wings like a pigeon being fed by its mate, and making a purring or hissing kind of noise in its throat.

DISEASES AND THEIR TREATMENT. — The White Owl is a healthy, hardy bird, and seldom out of sorts. If at any time it appears mopish, give it a change of diet, and this will in most cases restore it in a few days. It is a long-lived bird if properly cared for and liberally supplied with wholesome food, and especially so if kept in a barn or granary, where it can hunt for its prey. It must have a supply of mice and small birds occasionally, or the leg of a pigeon or chicken, or it will be liable to go into a decline unless permitted to hunt for its food as described above.

CHAPTER LXXXVIII.

THE TAWNY OWL.

Strix stridula, Lin.; *Le Chatbuant*, Buf.

DESCRIPTION AND CHARACTER.—The Tawny Owl is not so attractive as the White Owl, as it is not only sullen and intractable, but at times disposed to be vindictive. For these reasons few people care to be troubled with it. The average length of a full-grown specimen is 14in., the tail being 5in., and the breadth 2ft. 8in. The bill is horn white. The irides are inky or dullish blue; the eyes are large and globular, surrounded by a concave disc, formed by a ruffle of diverging feathers, which encircle the face, and give the bird a somewhat cat-like appearance. The head, neck, back, wing coverts, and scapulars, are yellowish red or pale reddish brown, marked and spotted with black, brown, and grey. The wing coverts and scapulars are ornamented with large spots of white, forming three distinct rows; the primary and tail feathers are adorned with alternate bars of reddish and dark brown; the tail coverts are plain, and tawny in colour, the two in the centre being the brightest, and showing most red. The breast and abdomen are reddish white, marked with tranverse bars of brown and longitudinal narrow streaks of dingy blackish brown. The legs are feathered to the claws.

HABITS AND BREEDING.—The Tawny Owl is indigenous to Great Britain, and is found throughout Europe and in America. It is neither so plentiful nor yet so generally diffused as its congener, the White Owl, but is by no means uncommon in England. It inhabits woods and forests chiefly,

and on this account is named by some people the Wood Owl. It is certainly most plentiful in densely-wooded localities, and builds its nest in the hollows of decayed trees. The nest is formed of the undigested pellets which Owls emit, intermixed with hare and rabbit fur. The hen lays three or four dusky white eggs, and incubates about seventeen days. The young at first are covered with grey, fleecy down, like young chickens; when intended to be hand-reared, they should be removed before they commence to feather, as then they become much tamer. They should be kept in a dark place, and be fed during the night, as well as early morning, afternoon, and evening; very few are reared by hand on this account, and those that are mostly by men whose occupations cause them to work during the night time.

The Tawny Owl is troublesome to gamekeepers, for it attacks and destroys young hares and rabbits. It likewise kills and devours Larks and other birds which it finds reposing on the ground. Birds that are reared by hand, or taken when very young, become much tamer than those that have been accustomed to rove among the "woodlands wild."

METHODS OF CAPTURE.—The Tawny Owl may be taken in a spring trap, with a live bait, concealed in some secluded part of a plantation which it is known to frequent. Professional trappers force it from its place of concealment, when it is easily secured by throwing a net over it before it recovers from its surprise, as it is quite stupid and bewildered when driven suddenly into the full glare of the mid-day sun.

FOOD AND TREATMENT.—When living in its natural state, the Tawny Owl feeds on rats, mice, newts, bats, young hares, rabbits, and birds. In confinement, it may be fed and treated in all respects the same as the White Owl (*vide* Chapter LXXXVII.).

REARING THE YOUNG.—Remove at an early age, and feed at first on lean, raw flesh, of any description so long as it is fresh, and later on with mice and small birds. When they are six weeks old they will prefer the mice and birds alive. They enjoy the leg of a rabbit, given raw, or a fat mole. A change of diet is essential to preserve them in a healthy condition.

DISTINGUISHING MARKS OF COCK AND HEN.—The male is

dark in body colour, has clearer and more distinct markings than the hen, and is also bolder and more daring in his general appearance.

SONG.—The Tawny Owl screeches and yells in a most hideous manner; its voice is the very reverse of euphonious.

POINTS TO BE OBSERVED IN JUDGING.—Good shape; large, bright, prominent eyes; rich, clear colour; the body and wing markings well defined, and more particularly those on the scapulars and wing coverts, the latter being large, perfectly white, and regular; the plumage close-fitting; wings and tail free from damaged feathers, and well carried; feet and toes well formed, and the legs well covered with soft, downy feathers. Good condition and cleanliness are, of course, imperative requirements.

GENERAL REMARKS.—Tawny Owls, though neither so elegant nor tractable as White Owls, form a pleasing variety in an aviary of Owls. Though they agree well among their own "kith and kin," it is imprudent to place them with birds of any other species, however large or able to defend themselves. With proper shelter, and plenty of exercise ground—the aviary being erected in a shady, retired situation, liberally supplied with old logs piled up here and there, and surrounded with open rockwork, among which ferns and shrubs are plentifully distributed—the Tawny Owl appears, if not happy, at least contented with its lot, and under these conditions frequently lays eggs.

In order to see the Tawny Owl display its energy and skill to perfection, it is only necessary to liberate some live mice in its aviary on a moonlight night. No cat can possibly show more agility and precision in securing its prey, which it afterwards devours with calm deliberation and evident enjoyment.

The Tawny Owl is called by some people the Cat Bird, on account of its facial appearance and expression, and the cunning manner in which it secures its victims. It is also known by the name of the Brown Owl.

As it gets older it becomes tamer, and ultimately recognises its attendants; but it does not exhibit the strong marks of affection that are displayed by the White Owl.

DISEASES AND THEIR TREATMENT.—Like the rest of the Owl family, the Tawny Owl appears to revel in robust health,

and to possess a very strong constitution. All it needs is fresh air; wholesome food, in the form of live mice and birds; a frequent change of diet, fresh water to drink, room for exercise, a good supply of nice small gravel, and careful attention to sanitary arrangements; given these it will live for many years.



CHAPTER LXXXIX.

THE LITTLE OWL.

Strix passerina, Lin.; *La Chevêche, ou petite*
Chouette, Buf.

DESCRIPTION AND CHARACTER.—The Little Owl has a somewhat sinister appearance, which is by no means inviting; the face has a weird, perverse expression, and there is an appearance of malignant cruelty conveyed by the small, eager eyes and contracted muscles of the face, and an impertinent, disagreeable stare when the bird looks directly towards you. It is only a small bird, but is more ferocious and cruel than either the White or Tawny Owl; it pulls its prey to pieces in a vicious and heartless way, often before the life of its victim is extinct.

The Little Owl is well formed, and of good carriage, and measures from 8in. to 9in. in length, of which the tail occupies 3in.; its width is 18in. The bill is brown, and tipped with faint yellow. The irides are pale yellow in summer and olive colour in winter. The head, back, and wing coverts, are pale greyish olive brown; the top of the head, scapulars, and wing coverts, are variously spotted with white; the radiated circles surrounding the cheeks are white, mottled with black, the feathers being tipped with that colour. The primary feathers are dark brown, relieved by four or five rows of round, white spots, forming oblique bars across the wings; the tail is pale brown, transversely barred with russet brown on each side of the shaft, and tipped with

white; across the throat is a broadish band of greyish white. The breast, belly, sides, and vent, are dingy white, spotted with brown, which has a yellowish tinge in young birds. The legs are covered with reddish grey down; the toes are dark brown, with a few white hairs growing between them; the claws are dusky black. In some specimens there are bars of white in the tail as well as the russet bars. Like all the tribe of Owls, the plumage varies to some extent in different specimens.

HABITS AND BREEDING.—The Little Owl is rather uncommon in Great Britain, but quite plentiful in some parts of Europe. In Germany, Norway, and Sweden, it is considered common. Specimens have likewise been discovered in different parts of North America, having been found as far north as Hudson's Bay. In Great Britain, it is probably most numerous in Wales, and the English counties of Somerset, Hereford, and Salop, though it is occasionally met with in Derbyshire, Yorkshire, and Durham. The Little Owl is presumed to be a bird of passage, although instances of its breeding and wintering in this country are well known.

It inhabits ruinous edifices, towers, old churches, rocks, caves, and similar places to the White Owl. The female makes a rude nest, and lays two white eggs, almost round in form, which she incubates for about seventeen days. The young are reared on mice and young birds chiefly. The eyes of this variety differ somewhat in construction from those of the White and Tawny Owls, which enables it to see and pursue its prey at daytime, and more particularly on dull, dark days, when it sometimes hawks hedgerows and newly-ploughed fields for mice and birds. This variety attacks small birds indiscriminately, and has been seen in eager pursuit of them by the light of day—generally in the latter part of the afternoon.

METHODS OF CAPTURE.—Wherever these birds are known to resort to a hole in a tree, a few wire staples should be driven around the orifice, and a bag net fixed to them by means of wire hooks attached to the net. The latter should be prevented from hanging too low, which might prevent a bird entering, by looping the protruding part to an upper branch. When one of the prisoners essays to emerge from

its hiding-place, it lands in the net, and by struggling to free itself becomes hopelessly entangled. It is then only necessary to unhook the net and carry off the captive (see remarks on this subject in Chapter LXXXVII., on the "White Owl").

FOOD AND TREATMENT.—In a wild state, the Little Owl feeds on mice, birds, bats, and beetles. In confinement, it may be fed on raw fresh meat; mice and small birds must be alternated in order to keep it in good condition and robust health.

REARING THE YOUNG.—Follow the same treatment as recommended for rearing the young of the White Owl (*vide* Chapter LXXXVII.).

DISTINGUISHING MARKS OF COCK AND HEN.—The distinction between the sexes is not striking. The hen is paler in colour, and her general appearance and manners are quieter, more retired, and effeminate-looking.

SONG.—When on the wing the Little Owl utters a cry of "Poupou, poupou," but when resting it calls out more loudly and clearly a different note: "Aime," or "Cheme."

POINTS TO BE OBSERVED IN JUDGING.—Contour, texture and closeness of feather, clearness and brightness of colour, and regularity and distinctness of markings. The wings, tail, feet, and claws, must be well formed, and in good order. General condition, cleanliness, docility, and tractability, are necessary in a bird intended for exhibition.

GENERAL REMARKS.—The Little Owl is exceedingly courageous, and has the temerity to attack a rat. It is rather noisy in confinement, calling out frequently and loudly. When on the wing its call note is "Poupou."

The Little Owl being small, may be kept in a Jay's or Magpie's cage, in a shaded corner, or, if preferred, in a rabbit hutch or any similar place. It does not display towards its attendants those marks of attachment and gratitude which are observable in the White or Tawny Owl. It becomes particularly lively as the day advances toward close, and is exceedingly comical and ludicrous in its actions and manners, when two or more are kept together.

DISEASES AND THEIR TREATMENT.—The Little Owl is more frequently kept in a cage than otherwise, and on this account is more liable to disease than the larger varieties, which

are kept in outdoor aviaries or stable lofts, or empty, unused rooms. It must have a plentiful supply of fine gravel once or twice a week, a daily supply of fresh pure water to drink, and a regular change of diet at short intervals, otherwise there is a danger of it repining, and ultimately being affected with consumption or decline, for treatment of which see Chapter V., on "Diseases."

CHAPTER XC.

THE LONG-EARED OWL.

Strix otus, Lin. ; *Le Nibou*, Buf. ; *Otus vulgaris*.

DESCRIPTION AND CHARACTER.—The Long-eared Owl is neither so plentiful nor so frequently to be met with as the White and Tawny varieties, but for all that it cannot by any means be regarded as a scarce bird. It is less sociable than either of the latter varieties, and is seldom found near the habitations of man.

The length of this bird varies from 14in. to 15in. The tail, as in all the varieties of the Owl, is short, and the wings long; in breadth it is 38in. The bill is black, and the irides orange yellow; the horns, or ears, which are a distinguishing feature in this Owl, consist of from six to eight blackish brown feathers, edged with yellow and white. The upper parts of the body are reddish yellow, beautifully mottled or pencilled with streaks of russet, brown, and greyish white; the wing and tail feathers are marked with dusky brown, and have bright russet bars, each wing being embellished with four or five large white spots. The radiated circle surrounding the eyes is of a pale fawn colour, the upper and backward parts being tinged with red, and the forward parts inclining to greenish white, the colours being separated by a dark circular mark surrounding the upper and under portions of the eye, next the beak. The face is entirely encircled by a band of dark reddish brown; the breast and neck are reddish fawn colour at the base and yellowish white at the tips, longitudinally and transversely streaked with dark blackish brown. The abdomen, vent, and thighs, are pale creamy white, with

oblong markings on the first named. The legs are feathered profusely down to the claws, the latter being very sharp, and black in colour.

HABITS AND BREEDING.—The Long-eared Owl, more frequently designated the Horned Owl, or Horn Owl, is common to England and Ireland, and also found in various parts of Europe. It rejoices in dense, lonely woods and forests, in deep ravines, and wild, precipitous, craggy country, such as may be found in Derbyshire, Northumberland, Cumberland, and Yorkshire, and more particularly in those parts where the ivy climbs and twines its vast spreading branches without molestation. All Owls appear partial to places clothed with this verdant garb of Nature, and their haunts may frequently be discovered by the profusion of this “rare old plant” in any particular wood or locality which they are accustomed to visit. In such places as these the Long-eared Owl dwells, and brings forth its young. This variety is considered to be the most mischievous and vicious of all the family of Owls, saving and excepting its great prototype, the Eagle Owl, and is a source of vexation and annoyance, not only to the feathered inhabitants of the woods and plains, but to game preservers, on account of its destructive instincts.

The Long-eared Owl builds its nest in trees, similar to a Cushat, but more often takes possession of the deserted nest of a Magpie, Crow, or other large bird, or that of a squirrel. It hawks occasionally in the daytime as well as during the night, but usually on dull, dark days, and rarely leaves the woods excepting at night time, being really nocturnal in its habits. The hen lays from two to three white eggs, and incubates about seventeen days. The young at first are covered with fleecy down, but commence to feather when about eight days old, and are tolerably well covered at the age of fourteen or fifteen days.

METHODS OF CAPTURE.—The Long-eared Owl may be caught in the winter time by the use of spring traps, baited with a live bird, or it may be taken with the Hawk trap.

FOOD AND TREATMENT.—Follow treatment recommended for the “Little Owl” (see Chapter LXXXIX., p. 477).

REARING THE YOUNG.—The same treatment must be followed as that recommended for the “White Owl” (see Chapter LXXXVII., p. 469).

DISTINGUISHING MARKS OF COCK AND HEN.—The female is generally the larger bird, and is darker in the ground colour of the plumage, and more profusely marked on the breast and abdomen than the male; the marks, too, are broader and more conspicuous. Owls, however, like all birds of prey, vary considerably, both in the colour and markings of their plumage, at different times of the year.

SONG.—Like the other members of the Owl family, this variety is gifted with a disagreeable, loud, and inharmonious screech.

POINTS TO BE OBSERVED IN JUDGING.—Contour, carriage, colour, and markings. The horns, or ears, as they are variously termed, are a distinguishing feature in this variety; six or seven is the usual number of feathers that compose them, but exceptional specimens exceed this number. The ears should be carried erect, be firmly braced, and taper to a fine point. The exhibit must be full of fine, close-fitting feathers; the wings, tail, feet, and claws, must all be well formed, and free from damage. Prime condition and cleanliness are essential to success.

GENERAL REMARKS.—The Long-eared Owl, when kept with other varieties in a large aviary, usually usurps authority over his associates; so long as he does not abuse the privilege he is permitted to do so, but if he commences to tyrannise over them, he generally finds a powerful antagonist in the Tawny Owl, who at once resents undue interference with its liberties. It is only during the pairing and breeding season that these signs of disagreement are usually shown. In winter Owls are peacefully disposed towards each other as a rule, and, if well fed, and every attention paid to their requirements, appear quite resigned to their changed mode of living.

DISEASES AND THEIR TREATMENT.—This variety is quite as hardy as any of its congeners, and with careful attention, fresh air, and exercise, may be preserved in vigorous health for years.

If it should be kept within the confined limits of a box, or cage, and not properly cared for, the feet will get clogged with dirt, and harden, and in time produce soreness, in which case the bird must be caught, and its feet immersed in warm water, to free them from the dirt; afterwards they must be anointed with goose grease or olive oil. It will be

prudent, before catching the bird, to put on a pair of old, stout, leather gloves, and, to facilitate the use of the hands, the finger ends may be cut off; this precaution is necessary, for if the bird becomes frightened it will turn vicious, and use both beak and claws freely. After two or three operations have been performed on the bird it will understand and appreciate the boon without exhibiting resentment.



CHAPTER XCI.

THE SHORT-EARED OWL.

Strix brachyotus; *Otus brachyotus*.

DESCRIPTION AND CHARACTER.—The Short-eared Owl, or Hawk Owl, as it is variously named, is smaller in the head than any of its congeners, and more Hawk-like in its habits. It is able to fly about during the brightest and most effulgent light without any apparent difficulty, and hawks for its prey quite as well by day as by night, which none of the other varieties of Owls appear capable of doing.

The length of a fully-grown bird, from tip of beak to end of tail, is from 14in. to 16in.; the breadth across the wings is 3ft. 2in., and the weight, from 14oz. to 16oz. The females are the larger birds. The bill is dullish black, the irides vivid yellow. The ears, or horns, as they are usually termed, are very short, and consist of from two to three feathers, which the bird is able to erect or depress at its pleasure; they are yellowish brown in colour, with a dusky streak in the centre. The upper plumage is dingy brown, the feathers being edged with fawn colour. The wings are very long, and extend beyond the tail; in colour they are dark, indefinite brown, alternated with bars of pale brown. The tail is the same colour as the wings, but the four middle feathers have each a brown spot, encircled with fawn, on each side of the shaft, and white tips. The face is enshrined in a circle of greyish white, there being an inner circle of black immediately surrounding the eyes; and from this rim diverges narrow lines of black, like the rays of the

sun spreading through a mist; the outer circle, which environs the entire face, is dusky and fawn colour intermixed. The breast, abdomen, and vent, are yellowish fawn, marked with oblong stripes of brown, these markings being most numerous on the breast. The legs are feathered to the toes, and pale fawn in colour; the claws are black, very sharp, and much hooked.

HABITS AND BREEDING.—The Short-eared Owl is partly indigenous and partly migratory. In some parts of England it is tolerably abundant, and in the autumn as many as twenty, and even thirty of these birds, have been seen together in one field; this appears to betoken that it is to some extent gregarious. It is plentiful in most European countries, and especially so in France and Italy; it is found as far north as Hudson's Bay, and specimens have been met with in various other parts of North America. It appears to prefer the open plain to wooded localities, and in Yorkshire is on this account designated the Moor Owl.

It visits farmyards in the daytime, and has been known to carry off young chickens and pigeons. It is credited with killing young rabbits and game, and is more courageous than the majority of its allies, as it will attack and destroy birds much larger than itself. It frequents turnip and stubble fields, watching for mice with the patience and steadfastness of a cat. If disturbed by a sportsman, it will rise spirally to a good height, and then dash off at a rapid pace, flying in a zig-zag fashion for some distance before attempting to alight on the ground again.

The Short-eared Owl sleeps in thickets or well-grown hedgerows, and in the open fields, or on heaths, in bushes or among furze or bracken, the latter being a favourite resort. It makes its nest on the ground, or at the foot of a bush, putting together a few sticks, and roughly lining them with decayed grass or leaves. The hen has two, and sometimes three, nests in a season, and lays on each occasion from two to four white eggs. She incubates about eighteen days, and feeds her offspring chiefly on mice and young birds.

METHODS OF CAPTURE.—The Short-eared Owl may be captured in a rabbit trap, the sides being covered with a piece of felt or list to prevent injury. A live bird or a mouse, secured to an iron pin driven in the ground, should be used as a bait.

FOOD AND TREATMENT.—The same food should be given, and treatment followed, as recommended for the White Owl (*vide* Chapter LXXXVII., p. 469).

REARING THE YOUNG.—Follow the treatment recommended for its congener, the Long-eared Owl.

DISTINGUISHING MARKS OF COCK AND HEN.—The hen is a little larger, darker in plumage, more profuse in the breast markings, less conspicuous in the egrets, and more effeminate in general appearance, attitude, and bearing, than the male.

SONG.—The Short-eared Owl is no exception to the Owl family generally; its voice is loud and shrill, and at times quite startling to a wayside traveller.

POINTS TO BE OBSERVED IN JUDGING.—Shape, contour, colour, and markings; a well-developed disk; eyes keen and penetrating, and surrounded by a deep, black ring, with radiating pencillings extending across the cheeks. The wings, tail, feet, and claws, require to be in good order, and the specimen perfectly clean, in prime condition, docile, and tractable.

GENERAL REMARKS.—The Short-eared Owl, more commonly named the Short-horned Owl, is quieter in an aviary than the Long-eared variety, but appears less disposed to fraternise with other members of the Owl family. It is quite capable of taking its own part in a conflict when the necessity arises. It is alert and skilful, and cannot be surpassed by any of its congeners in dexterity and in securing its full share of live mice, with which an aviary of these birds may from time to time be regaled. It shows less disposition to pair, when kept in confinement, than any of the other varieties previously described.

DISEASES AND THEIR TREATMENT.—The remarks made under this head in treating of the other varieties of Owls are equally applicable to the Short-eared Owl.

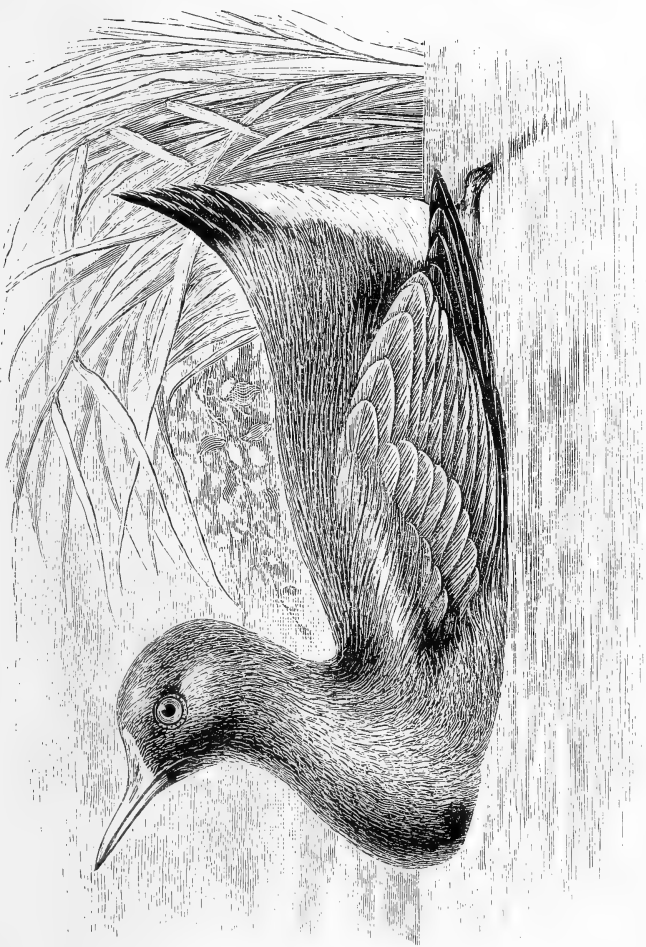
CHAPTER XCII.

THE MOORHEN.

Fulica chloropus, Lin. ; *La Poule d'Eau*, Buf. ; *Gallinula chloropus*.

DESCRIPTION AND CHARACTER.—The Moorhen is an aquatic bird, but is so easily tamed, and of so confiding a nature, that it is worthy of a place in any selection of British birds. It is very graceful in its movements, as it paddles along the surface of the water in Swan fashion; and when obtained young, and kept constantly with Ducks, Geese, or Swans, it becomes quite domesticated, and takes up its abode with them without appearing in the least disconcerted or out of place; and when it gets thoroughly accustomed to the surroundings, and to the people who tend and feed it, little fear is evinced, excepting at the presence of strangers.

Its mode of progression, when not disturbed, is easy and stately, but when in search of food it is restless and jerky, dips its head frequently in the water, as if to secure a fly, and after each dip turns uneasily to the right side or the left, and darts a furtive glance at any onlooker. These remarks apply to the semi-domesticated birds; the wild specimens are suspicious, and the sudden presence of a stranger scares and terrifies them; thus affrighted, they seize the earliest opportunity to dive out of sight, taking shelter among tufts of reeds or aquatic plants not far distant; or, if suddenly startled, they may take wing and fly to a place of shelter. Where there are no plants or reeds showing above the water, they disappear beneath the surface, and either cling to weeds growing at the



MOORHEN.

bottom, or make their way, by walking on the bed of the river or pond, or by swimming, to any thicket of rushes or herbage where they can rest undiscovered. When submerged, they may frequently be observed by the aid of a powerful field glass, as they invariably keep the tips of their bills above the water to obtain air. So long as they imagine themselves secure nothing will disturb them, excepting a dog or an approaching boat; when thus alarmed, they will dash forward with a splashing movement, and skim rapidly across the water, using their feet and wings in precisely the same manner as a hunted duck, and when they reach another place of safety will instantly dive again, and act as before. This bird belongs to the Waders, as it is not web-footed; it can perch, and even climb along the branches of a tree with ease and freedom, and occasionally roosts on a branch overhanging a stream, or one in close proximity to the water's edge. The Moorhen leaves the water in like manner to a duck, even to the jerking to and fro of the tail. It wanders about the shore picking up worms, insects, grubs, and the seeds of aquatic and other plants; but it is much more alert and agile than the duck, and runs about the shore as actively and restlessly as a Wag-tail, and on the least alarm rushes into the water, and dives to prevent observation—unless it happens to be too far away from the water, when it suddenly takes to its wings, and flies off to a place of retreat.

In length this bird measures from 12in. to 14in., and weighs from 14oz. to 16oz. The beak is deep orange, tipped with olive green; at the base is a bare membrane, reddish orange in colour, which spreads across the forehead. The irides are reddish orange. The head, upper part of neck, back, and wing coverts, are blackish olive green; the primary, wing, and tail feathers, are dark brown; the breast and belly are ashen grey; the outer edges of the wings, the vent, and under tail coverts, are white. Immediately above the knees, at the commencement of the naked space, are reddish orange rings. The legs are olive green; the toes are broad and flat.

HABITS AND BREEDING. — The Moorhen, Water Hen, or Gallinule, as this bird is differently designated, is common in England, and is found in many parts of the Continent, as well as some parts of North America and the West India Islands. In Germany it is very abundant.

Its local habitations are the sides of ponds, pools, mill races, bourns, and rivers and their tributaries, where there is plenty of cover, such as rushes or aquatic plants, which afford them a kind of harbour of refuge. It rarely forsakes its haunts excepting through stress of weather, when the pools and lakes are frozen over entirely. It then travels at night time in search of open streams, and remains in the neighbourhood of these until the weather changes and its native haunts are again tenatable. The Moorhen is a moderate and awkward flyer, never essaying to go far by a single effort. Its legs dangle loosely in the air as it flies. Overland it makes rapid progress, being a fast runner. Both parents assist in the construction of the nest, which is a rather large and roughly-put-together structure, composed of rushes and the leaves of herbaceous plants. It is readily found, as it is built on the stump of a tree, in a bush or shrub, or among the sedges or reeds by the side of a pond, pool, lake, or river; and little or no attempt is made at concealing it. The hen lays from six to eight yellowish white or dull reddish white eggs, variously marked, spotted, or smeared, with reddish brown; the eggs are large, being $1\frac{3}{4}$ in. in length. The hen incubates the eggs about twenty-one days, and has from two to three broods in the year, according to the season. The young take to the water about twenty-four hours after they emerge from the shell, and in a fortnight are quite able to take care of themselves, by which time the parent birds are preparing for another brood.

METHODS OF CAPTURE.—The Moorhen may be taken by fixing a herring net round the sides of a pond which it frequents. Sink the outer edge of the net a few inches in the water by the use of lead weights, and fasten to the other parts a few short poles, at a distance of about 10ft. apart; keep a close watch, for when the bird attempts to leave the water to procure food it will get its feet entangled in the net, and, by raising the nearest poles when the bird is found in this dilemma, and throwing the outer portion over it, the prize is easily secured. Other methods are resorted to, such as placing gins and other traps, and limed sticks, about the sides of a pond or pool.

The Moorhen is naturally wary, and difficult to capture. When secured, tie its wings, and keep it cooped with poultry

until it becomes semi-domesticated, when it may be allowed to accompany the Ducks about the farmyard.

FOOD AND TREATMENT.—The Moorhen feeds on aquatic insects, worms, snails, small fishes, and the leaves and seeds of water plants. In confinement, it may be fed on bread and milk, worms, fish, and snails.

REARING THE YOUNG.—Obtain the young just before they are fledged, and, if convenient, place them in a covered coop with young Ducklings; feed on bread and milk, fish refuse, and worms. When reared with poultry, they may be permitted to go about with them, as they soon become tame, and will not attempt to stray beyond the first pond or pool of water, and will return to their domicile to be fed and to roost. Where a piece of ground is walled in for the accommodation of poultry, and an artificial pond is formed for their use, they will settle as contentedly as Ducks. If kept in a farmyard, the Moorhen's favourite resort will be the dunghill, where it may be seen industriously searching for insects and grubs.

DISTINGUISHING MARKS OF COCK AND HEN.—The female is smaller than the male, and paler in colour; in some specimens the throat is white, but not in all. The most reliable mark of distinction is the bare membrane extending from the base of the bill upwards; this in the male is reddish orange, and in the female olive brown.

SONG.—The Moorhen utters a call note only. In the spring, the male bird vociferates almost incessantly until he has paired.


POINTS TO BE OBSERVED IN JUDGING.—The Moorhen is not a show bird; hence, to enumerate the distinctive marks of beauty that would be looked for is unnecessary.

GENERAL REMARKS.—Old birds when first caught are difficult to reconcile to domestic life, and usually seize the first opportunity to make good their escape; but birds obtained young, and reared with Ducks or Chickens, not only become tame, but settle down quite contentedly to a state of artificial existence.

Birds that are caught may be kept in an aviary or poultry pen, but a large tub of water must be supplied to them for constant use, and the water changed frequently. They however thrive far better, and really look more ornamental, if permitted to take up their residence on a pond which is partly

overgrown with reeds and floating herbage, as here the particularly graceful and pleasing movements of the birds can be seen to advantage, which is not the case when they are confined to an aviary. Care should be taken to pinion the birds if they are to be allowed their liberty, as otherwise they are likely to fly away if they are for any reason dissatisfied with their quarters.

DISEASES AND THEIR TREATMENT.—If the Moorhen has no pond or pool in which to revel daily it becomes liable to cramp and attacks of diarrhœa, for the treatment of which see Chapter V., on “Diseases.” In other respects it is a healthy bird, not at all susceptible to cold, and rarely troubled with any of the numerous ailments to which poultry are liable.



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 Magpie, the, 387
 Meadow lark, the, 253
 Moorhen, the, 488
 Mountain finch, the, 123
 Nightingale, the, 258
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 Ouzel, ring, the, 206
 Water, the, 210
 Owl, little, the, 477
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 White, the, 469
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 - Reed, the, 179
 - Snow, the, 184
 - Yellow, the, 171
- Chaffinch, the, 107
- Creepers, the, 410
- Crow, the, 373
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- Cuckoo, the, 397
- Dove, ring, the, 432
 - Rock, the, 444
 - Stock, the, 441
 - Turtle, the, 437
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- Fieldfare, the, 230
- Fly-catcher, pied, the, 341
 - Spotted, the, 338
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- Harrier, the Hen, 464
- Hawfinch, the, 100
- Hawk, blue, the, 464
 - Hobby, the, 457
 - Kestrel, the, 449
 - Merlin, the, 460
 - Sparrow, the, 454
- Jackdaw, the, 383
- Jay, the, 392
- Kingfisher, the, 427

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- Linnet, brown, the, 136
 - Grey, the, 144
 - Mountain, the, 144
- Magpie, the, 387
- Meadow lark, the, 253
- Moorhen, the, 489
- Mountain finch, the, 124
- Nightingale, the, 260
- Nuthatch, the, 406
- Ouzel, ring, the, 206
 - Water, the, 210
- Owl, little, the, 477
 - Long-eared, the, 480
 - Short-eared, the, 485
 - Tawny, the, 472
 - White, the, 469
- Raven, the, 369
- Redpoll, the, 148
- Redstart, the, 268
- Redwing, the, 226
- Robin, the, 298
- Rook, the, 379
- Siskin, the, 129
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 - Blue, the, 349
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 - Common, the, 167
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 - Snow, the, 184
 - Yellow, the, 171
 - Chaffinch, the, 108
 - Creeper, the, 411
 - Crow, the, 373
 - Cuckoo, the, 397
 - Dove, ring, the, 433
 - Rock, the, 445
 - Stock, the, 442
 - Turtle, the, 437
 - Fauvette, the, 285
 - Lesser, the, 288
 - Reed, the, 290
 - Fieldfare, the, 230
 - Fly-catcher, pied, the, 341
 - Spotted, the, 339
 - Goldfinch, the, 86
 - Greenfinch, the, 95

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- Harrier, the Hen, 464
- Hawfinch, the, 100
- Hawk, blue, the, 464
 - Hobby, the, 458
 - Kestrel, the, 450
 - Merlin, the, 460
 - Sparrow, the, 454
- Jackdaw, the, 383
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- Magpie, the, 388
- Meadow lark, the, 253
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