

Beeton's book of birds : showing how to manage them in sickness and in health.

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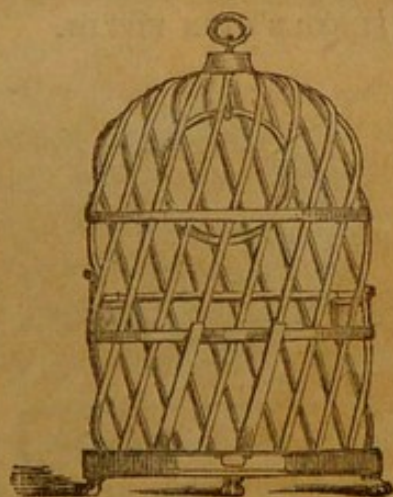
LEIGHTON, BROS.

SCARLET LORY, LEADBEATER COCKATOO, GREEN AND GREY PARROTS.

BEETON'S
BOOK OF BIRDS:

SHOWING

HOW TO REAR AND MANAGE THEM IN
SICKNESS AND IN HEALTH.



LONDON:
S. O. BEETON, 248, STRAND, W.C.

1316

BOOK OF BIRDS

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PREFACE.

THERE are but few amongst us, it may be asserted, who are indifferent to the pleasure of "keeping" birds. Almost every one has, in his home or homestead, some feathered favourite, which tends to his enjoyment and demands his care. The love of possession and dominion is, doubtless, at the bottom of the attention and wealth lavished on these little creatures. For it is not enough that we *hear* the lark, "the messenger of morn," carolling at "Heaven's gate;" the thankful nightingale chanting its evening hymn; it is not enough that we *see* the crimson-breasted, flame-crested pipers and warblers darting and flashing in the sunlight. We want more than this, we must possess them—have dominion and control over them, and call them *ours*. How beautifully *my* blackbird sings! how elegantly *my* pigeons gambol about and sail through the air! what a lot of eggs *my* hens lay!—this is what we aspire to say, being content only with absolute ownership. Tastes naturally differ as to the *kind* of bird which is best. There is a wide field for selection. Blackbirds, Thrushes, Finches, Canaries; Parrots, Macaws, Lories, and many others, each with its pretty peculiarity,—all with ample claim to be "petted."

In keeping Pets, however, of whatever kind, one great truth should always be borne in mind: while we, by virtue of our great privilege, have dominion over the birds of the air, the beasts of the field, and the fish of the sea, it is our duty to use our authority so gently that persuasion may supplant force, and our demands be shaped in form of favours craved. We should never forget that, with the custody of the docile little creatures, we also take the responsibility of their comfortable existence; and that if we evade that responsibility we commit a crime. Let us ever bear in mind that their wants began with their captivity or exile; and continue only because they cannot, in their arti-

ficial state of existence, assist themselves. Now, as ignorance of the law is held as no excuse for illegal behaviour, so ignorance of the proper way to keep our prisoner-pets will not avail us, should they pine and die in our hands. It must be admitted, however, that there are difficulties in the way of those who seek for books to put them right as to the manner of rearing or managing their little menagerie. The information to be gained concerning the right way to keep various birds, for example, has hitherto been confined to a few costly works which were only available for wealthy people; the instructions contained in books of a moderate price being of so worthless a character that they are assuredly worse than useless, and can lead only to the most disastrous results.

In the following pages the inquirer may depend upon finding simple, sound, and practical information on every subject connected with the keeping of birds. The humblest of our little friends receives the same careful treatment as the most magnificent; little "Jenny Wren" in an equal degree with stately Macaw. Confident are we that a perusal of our little volume will earn for us the approval of the reader. Sure are we, too, that, if the little prisoners themselves were able, they would unanimously return us *their* thanks. Our labour has been lightened by the consciousness that many a birdcage will henceforth contain, in the place of a moping, unclean, disease-wasted tenant, a merry creature, happy and joyous in its life, and ever eager to testify to its keeper in its own best way, the most unbounded satisfaction.

The Coloured Illustrations are mostly from sketches by HARRISON WEIR. The chapters on "Birds' Eggs" and "Bird Stuffing" serve to the completeness of the "Book of Birds."

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THE GOLDFINCH.

WHATEVER difference of opinion may exist as to which is the best singer, the goldfinch or his rival the canary, it must be unanimously allowed that the former excels the latter in splendour of plumage, as, indeed, it does every other member of the finch family.

This assertion is a bold one, and means more than at first glance appears. It must not be imagined that the finches seen in our English hedges, or at the shops of bird-fanciers, are the only ones in existence. There is the purple finch of America, the brown and the blue-bellied finch of the Brazils, the curiously-spangled finch found at the foot of the Snowy Mountains in India, and who (according to Campbell) are so sociable, that one vast nest four yards in circumference and a yard deep serves for an entire colony; the finch from the western coast of Africa—a terrible looking little bird, with a blood-red beak, naked eyelids, and flesh-coloured body;

and the pretty mottled finch from Angola. Not one of these, however, is equal, either in plumage or song, to our own noble-looking British-born goldfinch.

Moreover, on account of his disposition, he is a song-bird to be desired before any other. The canary will have fits of moodiness, lasting sometimes for weeks; the chaffinch fits of passion, in the midst of which he won't stand nice about snapping at your hand; even the gentle and patient linnet is sometimes moved to fits of petulance and ill-temper; but the goldfinch is *always* the same,—always sprightly, cheerful, and even-tempered. And this is the more to be commended because there is no song-bird whose sagacity, or instinct, or whatever you may choose to term it, so nearly approaches *reason*; and it should be borne in mind, that from "those to whom much is given," much is often in vain "expected."

The goldfinch is so well known that a minute description will be unnecessary; still, as it is very possible to mistake the female for the male bird, it may be as well to point out the difference.

In the male bird, the front of the head is blood red, and the same colour (with an intervening ring of black) surrounds the stump of the beak. The cheeks and front of the throat are white, while the back of the neck—indeed, the whole back—is of a ruddy brown. The pinion feathers are jet black, and are tipped with white. If the bird is old, this white tip, however, will nearly have faded off. There is a golden stripe along each pinion. The tail is slightly forked and black.

The female is not so large as the male, but as that is a matter of comparison (a thing not always allowed by a bird-dealer), I may as well tell you that the average length of a male goldfinch, from the *tip* of his tail to the *base* of his beak, is five inches and a half. Probably you will find the female as a rule, never more than five inches. Then she is not so vividly red about the beak as her mate, nor is the black line that divides the red poll from the red beak so intense. The white of her cheeks is intermixed with brown, and altogether she is not generally so bright and sparkling—especially, she has not such bold, bright eyes.

Two species of goldfinch are recognised by the bird-fancier, but in this he is in error. He will tell you that the larger sort is the *wood* goldfinch, and the smaller sort the *garden* goldfinch. Now the case is this: they are all of a family, and the difference in size is simply a question of much or little

THE GOLDFINCH'S NEST.

victuals during the first few weeks of their existence. It is the birds first hatched that are the finest, as they monopolize the greater part of the food brought by the parent birds to their more recent fledglings, and these latter, poor little creatures, feed or go hungry according to the appetites of their elder brothers and sisters. Scientific writers enumerate no end of varieties of the goldfinch, including the black finch, the yellow-breasted, the white-headed, the black-headed, &c. &c., but the ordinary bird-dealer knows of only three sorts, viz.: the "speckled," which has a white spot under the throat; the "bastard cheveral," which has a streak of white half way down the breast; and the "cheveral," on whose breast the white streak extends to the belly. This last is a very fashionable bird, and vast sums will be asked for him: however, as the white streak adds little to his beauty, and nothing at all to his song, I leave it to you if he be worth a penny more than his speckled brother.



HEAD OF MALE GOLDFINCH.



HEAD OF HEN GOLDFINCH.

The nest of the goldfinch is a wonderfully pretty structure, beautifully round and compact, and composed of such materials as the neighbourhood affords. However, let the outer coat of the nest be what it may, you will certainly find it well lined with thistle-down, or some such warm material. If you go nesting for goldfinches, the latter end of April will be the time. It is almost useless to search trees in the vicinity of orchards, as fruit trees are their favourite resort, and while they can find these, they will seldom build elsewhere. If, however, you are so fortunate as to have access to an orchard, your nestlings are almost as good as captured.

It is one thing, however, to discover a goldfinch's nest, and quite another to get at it. In all probability you will spy it at the very top of the tree, and at the extreme end of a slender

bough, so slender indeed, that every puff of wind sways it to and fro. It is the custom of naturalists to assert—without adducing any proof—that the goldfinch chooses such a situation because he delights in the rocking motion! Why don't they tell us it is because the mother birds are alive to the advantage of having their fractious little goldfinches rocked to sleep as is a baby in its cradle! It is my opinion that the bird instinctively chooses the end of a high bough, because it is more secure from pillage than other parts of the tree, and any little inconvenience that therefrom arises, is endured as a lesser evil. The better way therefore to reach the nest will be by means of the gardener's ladder. Don't be too hard on the poor mother. The hen fledglings are not the least use to you, and no doubt she sets as much store by her little daughters as by her sons. You may know the latter by the delicate white ring that encircles the stump of the beak.

STORIES OF FAMOUS GOLDFINCHES.—Many wonderful stories are preserved concerning the docility and affection displayed by birds of this species. The reader must not suppose that I here note down the most marvellous that ever came under my notice, and I will give him the reason—I could be by no means sure of their truthfulness. The following, however, may be relied on.

A lady friend of mine, residing at Enfield, possessed an ordinary black-headed goldfinch, of which she grew very fond, and allowed no one but herself to tend and feed it. Besides this finch, the lady had a little Skye terrier. It happened that she was obliged to come to London for a few months, bringing the dog with her, and leaving the disconsolate goldfinch behind. Now, for four years, the bird had been remarkable for his vocal powers—he sang, indeed, almost incessantly; but from the day on which his mistress left her home, he was dumb, with the exception of occasionally uttering a small whining chirrup, resembling the bird's call-note to his mate.

Two months after the lady had left home, I paid a visit to her house at Enfield, taking with me the terrier, and no sooner was his bark heard within the house, than the dumb goldfinch suddenly recovered his vivacity—fluttering his wings half frantic with delight, and flooding the chamber with his pent-up music. The door of the room in which he was, was half glazed, so that I had a good opportunity of observing this, but no sooner did I and the little dog enter, than a sudden change instantly took place. The disappointment of the poor little

creature at seeing a stranger in company with the dog instead of his mistress, was unmistakable; the song instantly ceased, he craned his neck, and "hished" spitefully, and then retired sullenly to the extreme corner of his cage, nor did he again tune his pipes till six weeks after, when his mistress came home. Then you should have heard him! It would have been worth any money to have understood bird-language but for ten minutes. One moment he would mount on his highest perch with his wings expanded and drooping (you might fancy them "akimbo") and jerk out his notes in the most violent way, as though upbraiding her for her long neglect; then he would come forward, press his beautiful body against the bars of his prison, and sing low and coaxing, as if to say, "Forgive my abuse, you are my dear good mistress; let us be as good friends as ever."

I myself until lately possessed a goldfinch which I would not have parted with for an entire aviary of the choicest songsters. He was thirteen years old when he came into my keeping, and his eyes were beginning to fail him. They grew weaker and weaker, till at last the glare of the sunlight was more than he could bear, and I made him curtains of green gauze for which he was very grateful, and never failed to reward me with a bit of extra good music when they were pulled round his cage on sultry afternoons. When he was seventeen years old he went quite blind, but that did not at all interfere with the friendship that existed between us. He knew my footstep as I entered the room, he knew my voice,—I do believe he knew my cough and sneeze from any one else's in the house. He was extremely fond of cabbage-seed, and the door of his cage having been previously opened, I had only to enter the room and call out "cabbage-seed, cabbage seed," to make him fly out of his cage and come to me. Sometimes I would hide behind the window-curtains, or beneath a table, and it was curious to see him put his little blind head on one side for a moment, to listen in what direction my voice proceeded, and then to dart unerringly to my head or shoulder. What is most remarkable, my brother (whose voice is singularly like mine) has often tried to deceive the blind goldfinch by personating me; but I do believe he might have called "cabbage-seed, cabbage-seed," till it sprouted in his hand, and the blind finch would not stir an inch. One morning when the blind bird was upwards of eighteen years old, I entered the room; alas! he was deaf to the enticement of cabbage-seed—he was dead at the bottom of his cage.

THE GOLDFINCH.

"In the spring of 1827," says Bishop Stanley, "a goldfinch had been lost from a cage that had been left hanging up, and the door open, in the passage-entrance to a back court of a house in a country town in the west of England, when a goldfinch was found one morning feeding in it, and the door was closed upon the prisoner; but as it appeared to be a female, it was shortly after let out again. In the course, however, of about two hours, it returned and re-entered the cage, when it was again shut in, and once more, after a short time, released; and these visits were continued daily for a considerable time. She was then missing for a few days, but returned again, accompanied by a male bird, when she entered the cage, and fed as usual, leaving her companion, who appeared rather more shy, sitting on the outside wires of the cage, from whence he shortly flew to a neighbouring tree till she rejoined him. They then went away, and were absent so long that nobody thought anything more about them; at the end of seven or eight weeks, however, she again made her appearance, accompanied, not only by her former companion, but by four full-grown young ones, when she entered the cage, and fed as usual; but as she could not persuade her brood to follow her example, she finally went off, and from that time was never seen again."

The same authority relates a story of a gentleman who had a goldfinch which was chained to a perch instead of being confined in a cage. Its food was put in a box resembling a water-fountain used for cages, and the little opening at which the bird was fed had a cover, loaded with lead to make it fall down. The bird raised this by pushing down a lever or handle with its bill, which raised the lid of the box; after which, by putting its foot on the lever, it could feed at leisure. He had also a redpole chained on a nearly similar perch; this bird fed from an open box, without the trouble of having recourse to the lifting power, like his neighbour, the goldfinch. But though the redpole could have known nothing of the use of the handle from his own experience, as his food was to be got at without such trouble, yet it seems he must have taken notice of it, and seen that, by touching this handle, he could get at the goldfinch's food, were it within reach; and this he kept in mind for the day of need; for one morning, when loose, and his own seed-box empty, he flew at once to the perch of his friend, raised the lid of the seed-box with his bill, and then, laying hold of it with one foot, kept it open till he had made a good breakfast.

No one more eagerly champions the cause of the wild goldfinch than Mr. Robert Mudie. Not only does the gentleman exonerate the bird from the host of serious charges brought against it, but he most emphatically declares, and adduces the clearest argument to support his declaration, that it is a most valuable friend to the farmer. "It is a maxim in farming, that where the hedges and lanes are foul, the fields never can be clean, and countless instances may be seen in England and in Middlesex, not less than in more remote places, where the farmer gives half of what his land might produce to the weeds, just because he will not grub up some green lane or inconvenient corner, but retains it as an ever-productive nursery of the most destructive species. But though these accumulations of unseemly parts spoil or diminish the harvest of the farmer, they yield an ample autumnal and winter supply for the goldfinch.

"When they disperse for the summer, the goldfinches do not retire very far outward on the bleak moor, or far upward up the hill, or into the forest. If the state of the land is slovenly, they remain among the lower fields, in numbers proportioned to the food that there is for them; and as no human art can fully extirpate or keep extirpated plants, the seeds of which career over the country at nearly the same rate with the winds, there are always goldfinches nestling in the gardens and copses, and among the bushes, and even the thick tufts of nettles on the lower ground. But the goldfinches do not inhabit the marshes, the naked tare or corn fields, that are free from composite or cruciferous weeds; nor do they give the preference to places near the margin of waters or otherwise, where insects may be presumed to be most abundant.

"Hence, it is reasonable to conclude, that the goldfinch is more exclusively a seed-bird than other birds of the order; and perhaps it is entirely so; but although its food is vegetable, it does not eat the seeds of the grasses or of grain-plants, though it does sometimes commit considerable ravages upon those of the cruciferous plants, and also the trefoils, where these are cultivated. Its chief food, however, consists of seeds of plants, which are equally injurious to corn-fields or pastures; and therefore it is one of those birds which, altogether independently of its own beauty and its song, claims the protection of the farmer, as one of the grand natural conservators of the green carpet of earth."

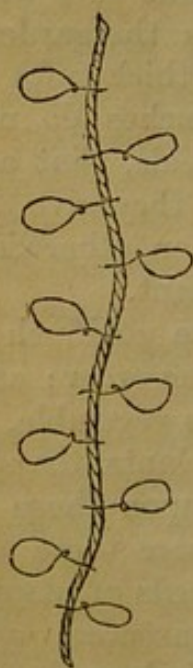
TRAPS AND SNARES FOR GOLDFINCHES.—For my part I con-

THE GOLDFINCH.

sider an old goldfinch one of the most wary and suspicious of birds that fly. He will construe almost everything he does not understand, to mean "trap," and take his measures accordingly. There was a goldfinch's nest in a fruit tree that grew in the garden of a friend of mine, and it happened one day that a gust of wind carried away a strip of red cloth with which he was nailing up some wall-fruit, and lodged it upon the same branch where hung the nest. The parent birds were away at the time, and on their return they were evidently much perplexed to know what the red rag meant. They flew over it, under it, and then took a seat on an adjoining tree, and held a consultation about it. Meantime the fledglings in the nest, anxious for their dinner, set up a twittering that was quite audible where we stood; but the birds dread of "trap" was even greater than their affection, and they continued to fly round about in the most uneasy way for at least three hours, when a friendly puff of wind carried off the red rag, and restored to their impatient nestlings their father and mother.

Still the goldfinch may be caught, and the following is considered to be one of the best methods.

Take a singing goldfinch in his cage, some hazel twigs, some mistletoe bird-lime, and a bunch of thistle seeds. Stand your decoy beneath a bush in the neighbourhood of the goldfinches' haunts, smear your twigs with the lime, and stick them, each with a spray of thistle-seed, about the upper parts of the bush. Let your bird-lime be the best, for the sort that will snare birds by the feathers will not always do so by the feet. They may also be taken among growing thistles with the "hair noose," a simple trap, consisting of a number of horsehair loops ranged on any number of pieces of string, attached to the stalks where the birds come to feed.



HORSEHAIR LOOP-TRAP.

CONCERNING GOLDFINCH NESTLINGS.—In bringing nestlings up by hand considerable care and patience is requisite. For the first week they should be kept in a very warm place and in flannel, or, better still, finely-picked wool. Their food should be the crumbs of *good* white bread, scalded with new milk, and squeezed tolerably dry. After the first week you may gradually

add poppy-seed and soaked and bruised rape-seed to their bread and milk. Feed them at least ten times a day, beginning as soon after daybreak as possible, and continuing, at stated hours, till dusk in the evening. From the poppy and rape-seed they may be gradually weaned, by introducing whole canary-seed, of which they are very fond, and which, indeed, should ever afterwards be the staple of their food.

After all, however, you will find it better to purchase a "pusher," as is called the bird when he leaves the nest and has been "on his own hands" for a few days; or even a "greypate" or "brancher," which is a full-grown bird still retaining his nestling feathers. Until the first moult they have grey, instead of crimson polls: hence their name. It is by no means advisable to buy them during the time they are moulting, as they are likely to take cold and die. It is a common practice to place "pushers" or "greypates" under canaries, in order that they may learn the canary's song, but in my opinion this process is much like that of gilding gold.

CONCERNING "TRICK" GOLDFINCHES.—It is quite possible to teach goldfinches, canaries, &c., to perform astonishing tricks. They may, as doubtless many of my readers are aware, be taught to fire cannons, to feign death, to stand unmoved amidst the flashing of fireworks, to mount a ladder with all the agility of a bricklayer, and other wonderful feats, "too numerous to mention." I could teach you how all this may be done, but will not. It would be worse than useless, it would be wicked, and the only end I should accomplish would be to gain your contempt, and incur the just reprehension for endeavouring to inculcate lessons of cruelty.

I have given considerable time and attention to this and kindred subjects, and the result is that whenever I happen to encounter an exhibition wherein performing children or birds, or horses, or dogs, or pigs, are the principal features, I feel the strongest inclination to "walk in," as invited by the man at the door, and horsewhip the proprietor.

A few years ago, before that annual abomination, Greenwich Fair, was abolished, I scraped an acquaintance with an old (and penitent) circus-master, and together we visited the wretched abodes of every performing Christian and beast we could find, and in *every* case it was the same for all—from the poor spangled little children who nightly delighted large audiences in their "drawing-room entertainment," to the lean and learned pig—there was but one schoolmaster, appalling

THE GOLDFINCH.

and unsparing cruelty ! It is an incontrovertible fact that it is impossible to teach any animal to perform feats distasteful and foreign to its nature without resorting to violent and unnatural means.

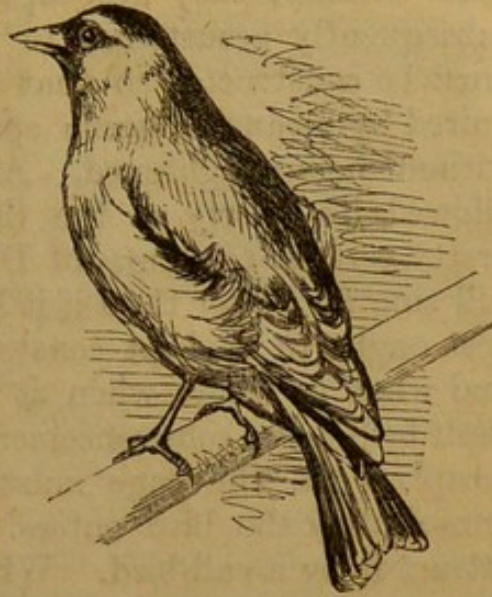
Who that has paid a visit to a bird exhibition, and has clapped his hands with delight at the amusing tricks performed by the tiny feathered actors, imagined that the canary that so nimbly springs from one rail of the ladder to another, was taught to do so by having his wings bound, and his ascent compelled by the application of a sharp needle to his legs and thighs ? That the goldfinch that spins round in the wire cylinder and sets the windmill going, received his lessons in a cylinder, the wires of which were made so *hot* as to compel him to keep up a tortured dance, to save his poor toes from scorching ! That the little creature that stands unmoved amidst the squibs and Catherine wheels, has had his eyes "scaled" by the near approach of hot iron, so that, although he appears to have his sight, he is quite blind, and cannot see the glare of the fireworks, and does not flinch from the noise of the exploding gunpowder for the simple reason that a pistol has been discharged so often near his ears that he is nearly deaf !

Let the humane reader treasure up this information, and act upon it whenever he is invited to go and see "performing birds."

Still there are many tricks they may be taught, harmless and amusing in their nature, and which really seem to afford the birds themselves great delight. He will draw up water from a vessel below his cage, by means of a tiny chain and pail, hauling in the chain with his beak, and securing each piece he so recovers with his feet. He will ring for his victuals. The way to teach him this is to suspend a little bell in the corner of his cage, and for a few hours keep him without seed ; then, by means of a thread attached to the bell, ring once or twice, and immediately bring a few seeds, and place them in his seed glass. In a few days he will have learnt that seed is brought when the bell rings, and taking the thread by which the bell is suspended, in his beak, will peal away as lustily as any ancient dustman or seller of muffins.

GOLDFINCH MULES.—The most beautiful mules are those that are bred from the male goldfinch and the canary. However, it will be necessary to pay some attention to the colour of your hen's plumage, to ensure handsome mules. The canary should be all of a colour. For instance, the common red-eyed white

canary (the most delicate of the finch tribe), and the goldfinch will produce mules, at least the males, with canary-coloured bodies, and the head, tail, and wings of a goldfinch; whereas if you "pair" a "spangled," or variegated canary with a goldfinch, the plumage of their progeny will undoubtedly be blurred or irregular. I once saw a mule whose father was a goldfinch and whose mother was a dove-coloured canary, and without exception it was the most beautiful bird I ever beheld. "Dove" canaries, as they are called, are by no means common; they are the progeny of a cinnamon brown hen and a green canary.



MULE GOLDFINCH.

Full directions concerning the breeding-cage, its furniture, and all that is necessary to be known respecting the breeding of mules, will be found appended to the instructions respecting the canary.

It is possible to allow the goldfinch his liberty altogether for four months in the year. I fancy there are few of my readers would care to risk this, but that it may be safely done I will quote Bechstien (one of the most learned and conscientious naturalists with whom I am acquainted), to prove.

He says, "A goldfinch must be taken in the winter, and one not too much accustomed to the warmth of the chamber, and in its cage, placed every day at the window, or on the sill, or upon a board, where it cannot be reached by mice; and near the cage some hemp-seed must be strewn, with a little bunch of thistle-heads, the seeds of which are to be scattered among the hemp. Soon afterwards, other goldfinches, attracted by the call of the one in the cage, will fly thither to seek their food. When this is the case, it is no longer necessary to hang the decoy bird in the cage at the window, as eventually it might be injured by the cold, and it is then only hung within, a trap cage being placed outside, not for the purpose of immediately catching these birds, but to check the visits of the sparrows, and prevent them eating the seed. The fall of this trap cage must be connected by means of a string passed through a hole in the window, so that from the inside it may be caused to fall at pleasure.

THE GOLDFINCH.

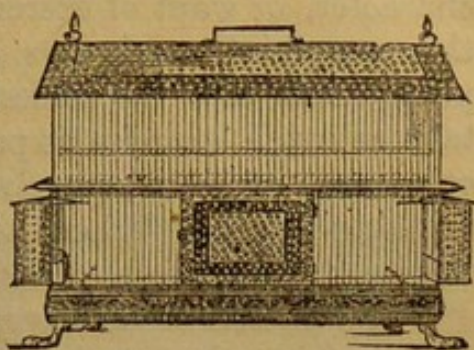
The goldfinches should be allowed to visit, without disturbance, until the snow begins to melt, and before flying off to some other locality, they are captured, tamed in a birdcage, and subsequently accustomed to fly about the room. The cage must be constructed so that the door will close when it is required by means of some spring that the bird can act upon without being frightened. A bird thus trained may safely be allowed its liberty at the time it moults in August. It is pretty certain to return in December when the snow falls, and will sing far better than if it had been kept in confinement. Its nest ought to be kept constantly at the window, that it may find what it wants when it returns. But it rarely presents itself before the commencement of winter, and then, in order to recapture it, the cage must be so placed that it will close immediately the bird enters. The most certain method is to attract it by a call-bird. When recaptured, it may be kept in the cage until the season of liberty arrives again."

As a rule, the mule-hen will not breed; but, like other rules, it has its exceptions, and rather a remarkable one was furnished the Rev. J. F. Wood by his friend, Mr. Cookson. The latter gentleman says, "In the autumn of 1838, a male-bird, the produce of a goldfinch and a hen-canary bird, escaped from my aviary, and was not seen again until the following spring, when we were agreeably surprised by the re-appearance of our lost favourite, in company with a goldfinch. As the pair were inseparable, we at once suspected that they had mated, and in a few days our suspicions were confirmed by seeing them feed each other and collect materials for building.

"By watching their movements we soon discovered their nest, in a cedar-tree near the aviary. In due time four eggs were laid, which I carefully removed, and placed under a canary bird; they, however, all proved abortive. In a few days after this disappointment, a second nest was built by them in the same tree, which we left undisturbed, and the result was favourable; five birds were hatched, which I took from the nest when about ten days old, and brought up by hand; of this number, two cocks and two hens are still living.

"I am aware that hybrids in a state of captivity and restraint have not unfrequently proved prolific, when brought to pair with a mate of either of their parent stocks; but I do not remember that I ever heard an instance of an animal of pure breed in a wild and unrestrained condition by choice selecting a hybrid mate."

THE GOLDFINCH'S CAGE.—Pay not the least attention to the bird-dealer's dictum, that the proper cage for the goldfinch is that apportioned to the chaffinch—a wretched little prison about eight inches square. If you do, you will soon have the mortification to discover that he has scrubbed off all his beautiful tail against the bars of the pent-up little crib. Let him have “elbow room” that he may be free to perform his endless antics. The cage may be open at all sides,



GOLDFINCH'S CAGE.

but not at the top; this must be of wood, as the goldfinch has a habit of “twirling,” and running along the roof of his house, if it happens to be of wire. The goldfinch's cage should be flat on the top, and not more than ten inches high, but it may be as broad and deep as you please. The perches should not be more than three inches apart, as this bird is not fond of hopping upwards. Clean out the cage at least four times a week, scraping and scalding the bottom drawer, and cleansing the perches with soap and a piece of flannel. This last direction is of considerable importance, as thousands of birds get diseased feet through the foul and heating matter that is allowed to accumulate on the perches.

HOW TO FEED THE GOLDFINCH.—While they are very young it is most important that they should be carefully fed. Give them white bread over which scalding milk has been poured, together with a little bruised rape or canary-seed. If you buy a “grey pate,” feed him, until he has moulted, on flax, rape, and canary-seed, and if he is not a very strong bird, you may add to this daily, a dozen grains of hemp-seed crushed. On this last-mentioned food you should, for a few weeks, diet your newly caught old birds. Then (in the case of the old birds) you may gradually substitute grits for the hemp-seed. When your bird has got well used to confinement, feed him constantly on two thirds poppy-seed, and one third rape and canary-seed. As regards the bath, no bird is more fond of it than the goldfinch, and if it is not allowed him, you will see him repeatedly ducking his head as far as he can into his drinking-glass. Let the goldfinch have water to bathe in every afternoon during the summer, and fresh water to drink twice a day. He will be very grateful for an occasional bit of lettuce leaf or watercress.

DISEASES OF THE GOLDFINCH, AND HOW TO CURE THEM.—The

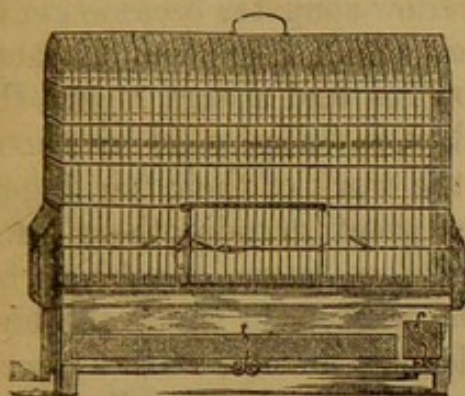
THE GOLDFINCH.

disease to which the goldfinch is most subject is epilepsy, and is occasioned by a superabundance of food, food of too rich a character, or want of exercise. Goldfinches once attacked by this complaint, rarely live very long. The best remedy is to plunge him into the coldest water you can procure, make him take as much exercise as possible, and for three days after the occurrence of the fit, put five drops of olive oil each day in his drinking-water. When he has skimmed it off the surface, change it, and give him clean water.

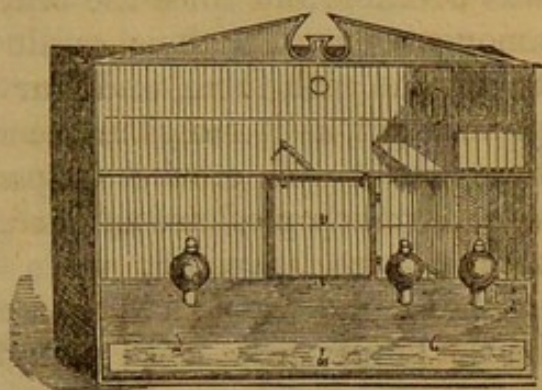
The evil that occasions epilepsy will likewise affect the bird's eyes, causing them to become weak and much swollen. There is no better remedy for this than to apply very fresh butter to its eyelids with a fine pencil.

If the bird is afflicted with "scouring," or looseness of the bowels, grate a piece of chalk, the size of a small pea, in his daily allowance of food.





WAGON CANARY CAGE.



CANARY BREEDING CAGE.

THE CANARY.

ITS INTRODUCTION INTO EUROPE.—The introduction of the canary into Europe was attended by an uncommon amount of romance. A merchant ship, containing a large number of the then marvellous “golden” birds, was wrecked on the coast of Italy. The waves were triumphant, and the poor ship ceasing to struggle against its doom, was settling down to its deep grave, when one of the crew, bethinking him of the imprisoned birds, opened the door of their cage, and gave them their liberty. As the ship went down the glad birds rose in the air, and flying to the nearest land—the Island of Elba,—there took up their abode. The climate being favourable, no doubt they would speedily have increased and multiplied, but for two obstructions. Firstly, the rage that speedily beset the inhabitants for snaring and possessing the curious “golden” birds, and the utter ignorance that naturally prevailed as to how they should, when secured, be housed and fed; and, secondly, the fatal fact that among the multitude of shipwrecked canaries there were not more than two or three females. However, enterprising traders speedily fetched more of the birds from the Canary Islands, and so they gradually found their way through Europe.

It will do the canary-keeper no harm when he hears his pets filling the house with their glorious music, to think of the humane sailor in the sinking ship, who let the birds free. The

legend does not say if it was a *man* who opened the prison door. In my opinion it was a boy—a cabin-boy—who had a mother and several little brothers and sisters at home. Boy or man it was a good deed, and I have no doubt helped the doer toward heaven.

It is nearly three hundred years ago since the canary ship was wrecked, and since the brave yellow songster became known amongst us. To their credit they retain the good character that came with them, and our mothers and sisters regard this parlour pet, as it hangs in the window, in its splendid wire house hung about with crochet drapery, the work of their fair fingers, with as much pleasure as our great great grandmothers before crochet was invented, when birdcages were anything but splendid, and when the panes of the window in which the bird-house hung were cased in ugly leaden frames, and so small that a sun-beam was broken into a dozen pieces while endeavouring to struggle through.

THE CHOICE AND PURCHASE OF CANARIES.—The “pure” canary in these days is not a fashionable bird. Through cross breeding with the goldfinch and other birds, there are now nearly thirty varieties of the canary, each different from the other in shape and colour of plumage. To be a “perfect beauty,” a canary should possess the following characteristics. He should be very slim, and almost straight from the crown of his head to the tip of his tail. His *ground* colour should be yellow,—not the yellow of the lemon, but that of the Maltese orange. From the stump of the upper half of his beak over to the back of his pole, should be jet, glossy black,—not in the least speckled or “splashed” as it is called. His tail should possess twelve black feathers, and each wing eighteen feathers quite black, from the tip to the quill. His legs and feet should be clean, bright, and free from warts or other blemishes.

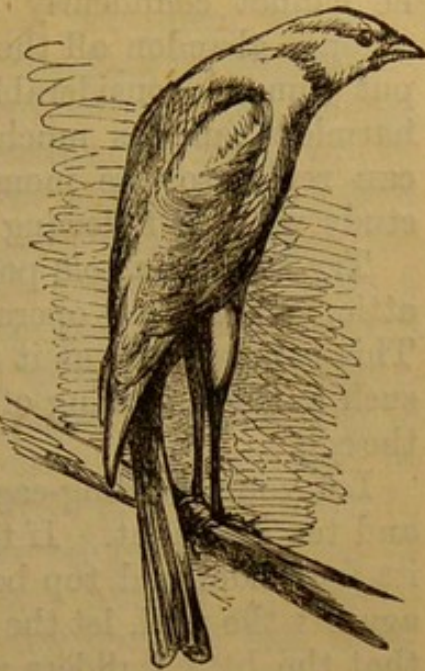
Bear in mind, however, that it is by no means necessary for a bird to possess all these outward beauties to be a good singer. In the first place, the price that would be asked for such a bird as the one above described would hardly leave sufficient change out of a five-pound note to buy a birdcage with; and, unless papas have grown more liberal than they were when I was a boy, such a sum would as near as possible represent two years’ pocket-money. But, as I have already observed, there is no need to go to “fancy” prices for a good singing-bird. As William Kidd truly says, “colour should at all times be sacrificed to accomplishment.” I go further than that. I have

at this moment at my elbow a rakish-looking runt-tailed little vagabond singing away fit to stun one. I bought him in St. Andrew's Street, Bloomsbury, and I gave four shillings for him. For my part, I would no more think of slighting a songster because of its disrespectable plumage, than I would think of despising Jenny Lind, because she happened to have a pimple on her nose; or Sims Reeves, should his hair not happen to curl.

It is no easy matter for an amateur to distinguish a cock from a hen canary; still you are not likely to fall into error if you carefully observe the following rules. The cock canary has a larger, a squarer, and altogether a *harder* looking head than the hen. The body of the cock-bird is slimmer than that of the hen. Round about the eyes of the cock-bird the colour is brighter than any other part of him. "Mealy," or whitish-yellow, birds are the weakest, while those of a greenish-yellow are the most robust. After all, however, the best advice I can give you is, before you purchase a bird, hear him sing. Be sure, too, that he does *sing*,—hen-birds utter a sweet twittering which may possibly deceive the inexperienced.

It is a common dodge with fanciers to point to the lightness of a bird's plumage as proof of its tender age. Bear in mind that exactly the contrary is the case. From the first time of a bird's moulting, his *ground* colour becomes lighter and lighter. An old bird may always be known by the rough, scaly appearance of his legs, and the crookedness and length of his claws. As regards plumage, a canary is in its prime from seven to ten months old.

ON CANARY BREEDING.—The breeding of canaries requires considerable care and attention, but he who meditates the



BELGIAN CANARY.



LONDON CANARY.

occupation should be quite clear on two most essential points. Has he sufficient leisure? Has he sufficient patience? If he cannot confidently answer these questions, he had better at once abandon all thoughts of a pursuit which will certainly put him to considerable useless expense, and inflict on two harmless canaries much pain and annoyance. If, however, he can reply to the momentous queries affirmatively, let him study well the following directions.

Try to obtain sole possession of some odd room, or closet or attic, so that your operations may by no chance be disturbed. This is important, as it sometimes happens that a sudden noise, such as the slamming of a door, will kill the chick while still in the egg.

Let your breeding-cage be eighteen inches long, ten in depth, and ten in height. If the cage is to be placed on a stand, let its four sides and top be of wire, but if you mean to hang it against the wall, let the back of it be of wood, as you may find that the little builders will be unscrupulous enough to tear off your wall paper to decorate their nests. In one corner, near the top of the cage, let there be a box hung, having two holes in the front, large enough for a bird to pass through easily. In this outer box place *two* others. The reason for having two nest boxes is this. The hen may want to go to nest again before her first little family have got their feathers, and if that should be the case, she will have no hesitation in turning the naked little creatures out of the nest to accommodate the new eggs. In each nest-box should be placed a little finely-picked cowhair, mixed with moss and white wool. Morsels of thread and paper shavings may be added, and suspended from the roof of the cage there should be a net containing a plentiful supply of building material, so that the birds may help themselves.

The space beneath the nesting-boxes should be partitioned from the rest of the cage with a wire fencing, and in this compartment, the young birds when fledged should be placed, to keep them from accident. Don't fear that they will be neglected. As often as needful you will find a row of open beaks poked through the bars, and the old hen gravely stepping from one to the other, filling the tiny mouths with carefully selected morsels.

As regards the birds you intend to breed from, let the cock be at least two years old, and the hen *older*,—if as old again it does not matter, for it is a singular fact, that when the hen

is the eldest of the pair, more male than female birds will be produced. To obtain birds of handsome plumage, some attention must of course be paid to their most prominent features; as for instance, a cock and hen each possessing a "top-knot," will probably produce bald-headed progeny, whereas, if a smooth headed bird and one that is crested be mated, the result will be satisfactory. Again, if a male whose colour is greenish yellow be paired with a female whose plumage is bright yellow, the result will often be a brood of a beautiful cream colour. As a preliminary to pairing, the birds should be placed for a few days in a small cage that they may get used to each other's society. Some birds fight desperately when so placed together, and in almost all instances the hen is the aggressor. She will peck at her mate's head, refuse to let him eat, drive him from perch to perch, till the poor fellow is fain to take refuge in any out of the way corner into which he can squeeze himself. However, the little vixen generally relents after a few hours of this behaviour, and then you may see them seated close together on the same perch, even feeding each other. But if you should find after a couple of days that the feud still continues, it will be better to try another hen.

The time for pairing depends pretty much on the geniality of the season. Sometimes you may commence to pair in March, and at others it will be the middle of April before you may safely begin. Let it, if possible, be bright sunny weather, and let your breeding-cage hang fair in the light and warmth of the sun. Having obtained an agreeable male and female, turn them in. You will be able to discover if they have mated, for the cock will bring food to the hen, and feed her as he would a young bird. Within eight days you may expect to find in the nest a little sea-green egg, streaked with dark red at the larger end. Canaries almost invariably lay their eggs from seven to nine o'clock in the morning, and the number of eggs they lay varies from two to six.

The time of sitting is thirteen days, during which the hen is waited on by her mate with the greatest care and attention. After the eggs have been sat upon for seven or eight days, it may be as well to examine them. Take them gently between your finger and thumb, and hold them before the flame of a candle. If they appear quite clear you may as well throw them away, as they will never come to anything. If the egg be filled with a sort of network of fine red threads, you may rest satisfied that a bird will be hatched from it. Hen canaries

THE CANARY.

will frequently eat their eggs. The only way to prevent this is to replenish the food-box over night, as the first thing the hen does after laying an egg is to see about her breakfast. If she doesn't find it she may get into a rage, and destroy all the eggs she has laid. If, however, your canary be an incorrigible egg smasher, you had better purchase half a dozen ivory eggs, and each time she lays, the genuine egg must be removed and a fictitious one substituted. When she has done laying, you must restore to her her eggs and chance all the rest. If you store eggs in this way it is best to keep them in a warm corner in dry silver sand. If possible, however, it is much the better plan to leave the birds to their own devices; indeed, if you should have a hen that cannot be trusted with her eggs, you had better get rid of her.

At the expiration of the thirteen days the birth of as many little canaries as there were eggs in the nest will reward your care. Then boil a chicken's egg till it is hard, cut it up fine, and add to it part of a roll that has been soaked for a few minutes in water, and then squeezed dry. With this mess, the birds (or rather the cock-bird, for on him the duty of feeding the children devolves), will feed the little ones. Never mix more than a tablespoonful of this food at a time, for if it is allowed to go the least sour, you will certainly have to mourn your young canaries.

If through some accident the little birds should be left orphans, it is possible to bring them up by hand. Keep the nest as warm as possible; grate up a plain biscuit, and pound some hemp-seed; mix the two together, and, moistened with a little raw yolk of egg and water, drop morsels into their gaping mouths with the end of a quill. This must be done once *every hour*, from six in the morning till six in the evening. The quantity administered to each at a meal should not exceed a third of a teaspoonful.

In a fortnight the young birds will be able to shift without their parents, and to feed themselves. When they are a month old you may take them out of the breeding-cage. Do not, however, entirely discontinue the soft food. It should, for at least five weeks longer, be mixed with the usual food of old birds. A sudden substitution of solid food for the softer sort may occasion constipation and death.

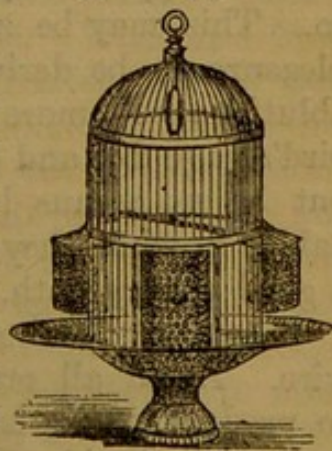
MULES.—The most favourite hybrid or "mule," as it is called, is a cross between the goldfinch and the canary; and a male bird of the former sort mated with a female of the latter,

will breed birds who will not only be superior to either of their parents in plumage but likewise in song. It is by no means so easy to pair a cock canary with a hen goldfinch, and even when it is effected the result is not nearly as satisfactory. The handsomest mules are produced from a canary of a pure golden yellow, and a full-grown garden goldfinch.

All birds that have an affinity to the canary may be paired with him. The list includes the linnet, redpole, siskin, serin, and citril. The mule of the grey canary and the linnet differs from its dam in appearance in no other way but that its tail is closer and longer, while its song can hardly be said to be an improvement on its papa's. A canary mule, with a serin for its male parent, is still every bit a canary to look at, only its beak is somewhat thicker and shorter. Mated with the redpole the canary produces a mule unhandsome in plumage and indifferent in song.

Bechstein informs us that the bullfinch, the greenfinch, the chaffinch, the yellow bunting, and even the sparrow has been mated with the canary. With what success, however, he does not say, and I never had the opportunity of observing. As experiments, these attempts at cross breeding no doubt are very amusing and instructive, but I should by no means advise my readers to indulge in them. The chances are twenty to one against success, and "more plague than profit" will be the inevitable result. Indeed, it appears after all, that the only sort of mule-breeding to be safely and profitably indulged in is that in which the canary and goldfinch alone are concerned.

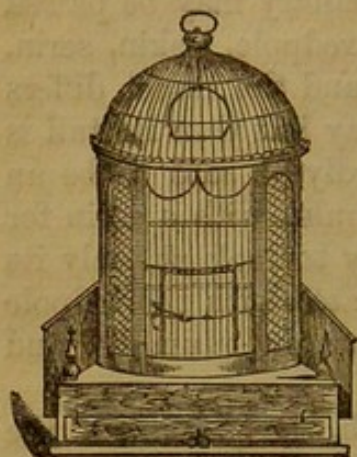
THE CANARY'S CAGE.—The *shape* of your bird's house is quite a matter of taste. Its *size* is a matter of principle. The larger the dwelling, the less music you will in all probability get out of its occupant. He will think more of skipping and jumping about than singing,—in short, he will pay more attention to his own amusement than to yours. But, on the other hand, who wants a bird to be singing from morning till night? You may depend that what you lose in quantity, you gain in quality; and, in my opinion, it can't be wrong to allow to caged birds the use of their limbs in return for the music of their throats.



CANARY CAGE.

If we narrow a canary's prison for the sake of extorting his music, it looks like taking the first step in the path which

leads to that maximum of cruelty—bird blinding. I should be very sorry to be obliged to tell all the dreadful stories I know concerning this species of torture, commonly practised by the ruffian class of bird-fanciers for the sake of making the poor little creatures sing strong and loud, and as well at midnight as at noon.



CANARY CAGE.

Canaries should be eternally grateful to the man who invented the "pagoda" cage. It is so much more commodious and handsome than the ancient, tiny hutch, with its wooden top, and back, and bottom. Then again, as it is necessary that the pagoda should be suspended from the ceiling, the inmate has a much better chance of obtaining a plentiful supply of light and air; and, more than all, as this sort of cage is always in sight, poor Dick is less likely to suffer occasionally the pangs of thirst and hunger,

through the forgetfulness of his owner.

Let your bird bathe. No boy acquainted with the luxury of the bath will deny it to his feathered pet. Of course the process is accompanied by a little splashing, so it will be as well to spread a towel on the carpet before he begins. During the hottest portion of the year let him have his bath every afternoon, and, if possible, in the full rays of the sun. In the winter he will not require the bath so often, but, even then, never let him have reason to complain that you do not afford him the opportunity of washing himself when he wishes to do so. This may be some little trouble; but, I assure you, the pleasure to be derived from watching the little creature at his ablutions will more than repay you. Be careful to make the bird's cage dry and comfortable after he has bathed, and—last, but by no means least,—never let your *hens* have water to dabble in while they are sitting. A deep breakfast-saucer makes a good canary bath.

Whatever be the size or shape of your cage, avoid brass wire. Avoid all ornaments in brass, as that metal is certain to produce verdigris, which the bird will as certainly peck off and poison itself. Likewise, avoid painted wire of all colours; but, especially green, as there is a possibility of its containing arsenic, which you need not be told is quite as poisonous as verdigris. The sort of wire that should be used is the simple

white-tinned sort. It should be furnished with two transverse perches, one about six inches above the other. The food and drinking vessels should be suspended outside the cage, or, if placed within the cage, each vessel should be fitted with a lid in which a round hole, large enough easily to admit a bird's head, is cut; otherwise, great splashing of water and a considerable waste of seed will result. Take care that the floor of your cage is movable, and always strewn with coarse sand.

Study the disposition of your canary: many a good bird has been lost through this being neglected. Some canaries are convivial,—fond of company, and of singing glees and choruses. Others, from excessive modesty or excessive vanity (see how extremes meet!), prefer singing alone, and will mope and sulk while in the presence of another bird. Some canaries, again, grow furious at hearing other birds sing, and will so exert their powers to drown the music of their rivals with their own, as to make a separation at once necessary. Indeed, under such circumstances, canaries have been known to expire suddenly of ruptured blood-vessels.

THE CANARY'S FOOD.—This is most important. Let the food be as true to nature as possible, and have little to do with artificial compounds. Let your standard be rape-seed,—summer rape-seed. There is another sort—winter rape-seed,—but this is not nearly so good; it may be distinguished from the proper sort by its being larger and blacker. Mix with this occasionally, and by way of a treat, cabbage-seed, whole oats, or canary-seed. If it be summer-time, their food may be varied by the addition of a sprig of water-cress (not land-cress), a head of groundsel, or a bit of cabbage-leaf. In the winter a canary will be grateful for a morsel of sweet apple. When the birds are breeding, bruised hemp-seed may be mixed with the customary food. Do not give your canary lump-sugar, or plum-cake, or even bread-and-butter. He will eat them greedily enough, but the chance is, you may get up one morning and find him, dead of rupture, at the bottom of the cage. Lump-sugar is not found on trees, plum-cake does not grow on hedges, therefore it is certain that the birds can do without such things. A small lump of bay-salt is by no means a bad thing to stick between the bars of a canary cage. The bird will relish it, and it will help to counteract the baneful effects of high and indiscriminate feeding.

Having told you the sort of food to administer, I will proceed to inform you how to administer it. I have heard many people

say, "My canary is very well, but he is such an unequal songster,—one day he sings himself to within an inch of apoplexy, the next he is as mopish as an owl." The secret of this lies in the seed-glass. Say it is Monday morning; well, like a careful bird-keeper, you tidy up the canary's house, and replenish his seed-glass with food enough to last till Thursday. All Monday the bird sings beautifully! No wonder! He has turned over the whole of his three days' provision, and picked out the fattest and the fullest seeds. Next day he does not sing so well, because he is reduced to second-rate fare. The third day he does not sing at all, he mopes and regards you sullenly from between the wires of his house. Poor fellow! He has sorted the contents of his seed-glass till nothing remains but such seeds as are dry and distasteful to him.

Now all this may be avoided by a little judicious management. For a full-grown canary, two large teaspoonfuls is sufficient for a day's consumption. Put this quantity into his seed-glass every morning. You will seldom find more than a dozen seeds, good or bad, left when feeding time comes round again, and the bird will sing uniformly, and retain his good health. Of course you will replenish his drinking-glass at the same time as you give him fresh food, and you need not be told that his water must not be limited. When your bird is moulting, keep a small rusty nail in the water he drinks.

THE DISEASES OF CANARIES, AND HOW TO CURE THEM.—As long as your bird is lively and cheerful, as long as his plumage feels and looks sleek and smooth, and adheres close to his body, you may know that he is in good health. Whenever you see that he is dull and mopish; when his eyes are half closed, and he squats down on his perch so that his feet and legs cannot be seen; when his feathers are dull, and hang loosely from his body, you may know that he is ill, and requires immediate attention.

Endeavour to discover the cause of his sickness. Has he been frightened? Has he been hanging in a draught and caught cold? Has he any difficulty in getting at his food or water? Are both these latter articles perfectly sweet? If there is no fault to be found with these things, examine his body. Blow up the feathers that cover his belly; if it appears swollen, transparent, and full of tiny red veins, with a sinking of the bowels to the extreme parts, the bird has a "surfeit," or inflammation of the intestines. The disease is occasioned by cold, over-feeding, or bad water.

The state of the bird's bowels should be immediately attended

to. Put as much magnesia as you can pile on a sixpence into a gill of water, which place in his drinking-glass. Renew the dose every morning till the bowels are free, and the inflammation subsides. If the bird should be *very* bad, give him *two* drops of castor-oil. It may be poured down his throat through a quill, but by this method the oil may be wasted, and the surest way of administering it is as follows:—take away his water for about two hours, and then return it to him with the dose of castor-oil floating on the surface. He will be thirsty, and along with his first draught of water, the oil will be swallowed without difficulty. See that he has plenty of sand at the bottom of his cage; the sharp little grains will materially assist his impaired digestion. Feed him on bread and milk, on which you may sprinkle a little maw-seed. Put a small pinch of salt into his drinking-glass every morning for a week or two.

Sweating is a disease peculiar to hen-birds, and attacks them while they are sitting on their eggs more than at any other time. It is important that it should be looked to, as otherwise the young brood may be weakened. There is no mistaking this disease, for when the bird has it, the belly-feathers are always saturated with perspiration. As weakness is the chief cause, nourishing food should be administered. Induce it to take exercise, and every morning wash the bird in lukewarm salt and water, afterwards rinsing it with clear water of the same warmth, that the salt may be washed from the feathers. Let the bird dry again as quickly as possible.

The yellow gall is a small ulcer that forms on the head or near the eyes. While the pimple is very minute, it may be cured by giving it for a time choice food. If, however, the tubercle should grow to the size of a peppercorn, it should be cut off, and the wound anointed with lard or fresh butter.

Sometimes, after moulting, the canary will lose his voice. Feed him for a few days on the same food as you would give to a fledgling. If your bird should catch cold in his head, and take to sneezing, pass a small feather through his nostrils, hang him in a warm corner, and give him comforting food.

Birds will occasionally have fits. Pull out one of the smaller tail-feathers, which will draw blood, and most likely recover him. It is less cruel, however, and quite as effective, to plunge him for a moment in cold water. Don't leave him until you see that he resorts to his water trough for drink. For two or

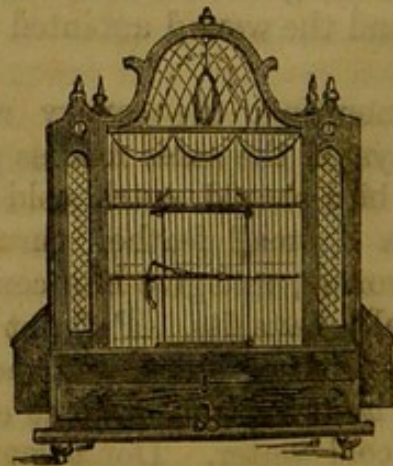
THE CANARY.

three successive mornings after these fits, a drop of spirits of nitre in his water will do him no harm.

If you see your bird's tail drooping downward, or if the feathers about the rump are rough and touzled, you may conclude that the poor little creature is afflicted with that dangerous disease—the pip. Blow up the feathers, and you will find a tiny white bladder close on to, and impeding the vent of the bird. This may be softened, and ultimately cured by the application of butter and sugar to the part. It must be very fresh butter. The ordinary remedy is to pierce the hardened gland with a needle, or to cut it off altogether, but birds cured of the pip in this way usually die at moulting.

If your bird looks lean and out of condition, if he is restless—especially of nights—and is continually pecking himself, look carefully about his body for vermin, and examine well his cage. You will probably find it infested with red mites. If so, at once remove the bird, and give him frequent baths of diluted tobacco-water—a quarter of an ounce of tobacco to three half-pints of water. See that he is quite free from mites before you return him to his cage, which of course must likewise be thoroughly cleansed.

Consumption is a disease with which birds are commonly afflicted. It may be recognized by the bird's inflating and distending itself, the roughness of its plumage, and the wasting of its flesh. For this complaint, Bechstein advises a house-spider to be administered by way of a purge, and a rusty nail in their water for the strengthening of their stomachs; their food at the same time being the most nutritious of the sorts that are good for them. The same authority avers that water-cresses is almost a certain cure for consumption.



CANARY CAGE.

THE GREENFINCH.

Of all the finches that sing this is the most humble. He is the boy's first songster,—the penny bird. Often have I seen the schoolboy wistfully eyeing the birdcatcher's store-cage, and turning his penny over and over in his pocket, while his face wears a perplexed and anxious expression. Willingly would he change his penny for a bird, but then—what shall he keep it in. There is no such thing as a bird-cage at home, so he is afraid he must,—stay a minute, though! There is that old bonnet-box, discarded by sister Jane—his empty rabbit-hutch—one of those empty pickle-jars—either of which will serve as a make-shift cage while he “saves up” till he can buy the genuine and proper article. So at once the penny is transferred to the birdcatcher's pocket, and the green bird to the boy's, and home he hurries, proud as a peacock.

For my own part, the greenfinch will always retain a kindly corner in my remembrance, for it was he who first set my mind on bird-keeping. It came about in this way. Many years ago, when I was quite a little chap, indeed, and wore a pinafore, I lived at Kensington. One morning, while I was taking a walk through a lane—it was very early—I came upon a milk-boy, who had with him a little dog. The dog was snarling and jumping, and the milk-boy was clapping his hands, as though urging the animal to attack something. Presently I discovered that the object of sport was a little bird, whose wings were somehow injured so that it could do no more than flutter along the ground. I remonstrated with the milk-boy (he was bigger than I), but finding that of no avail, I seized his cur and gave it a cuff, upon which its master immediately retaliated by striking me. I never was a great hand at fighting, but this behaviour of the milk-boy so exasperated me, that I hit him in return, and the result was a pitched battle, which ended in the

boy and the cur slinking off, leaving me master of the field, and at liberty to do as I pleased with the lame greenfinch (for such I discovered it to be), who, during the fray, had huddled against the wall, trembling with fright. I took it up, wrapped it in my ensanguined pinafore, and hurried home to my parents, who were not a little alarmed at sight of my disfigured countenance. As for the sick bird whose cause I had championed, there was no such thing as a cage to put him in, so I installed him in a great, dreary, unused meat-safe, that stood in the kitchen, and there he resided till his injured wing was completely healed.

He got quite well in a very short time, and we got to be capital friends. After a while I persuaded my father to have the old meat-safe wired at the sides and converted into a breeding-cage, and then, having obtained a couple of hen canaries I soon had quite an aviary.

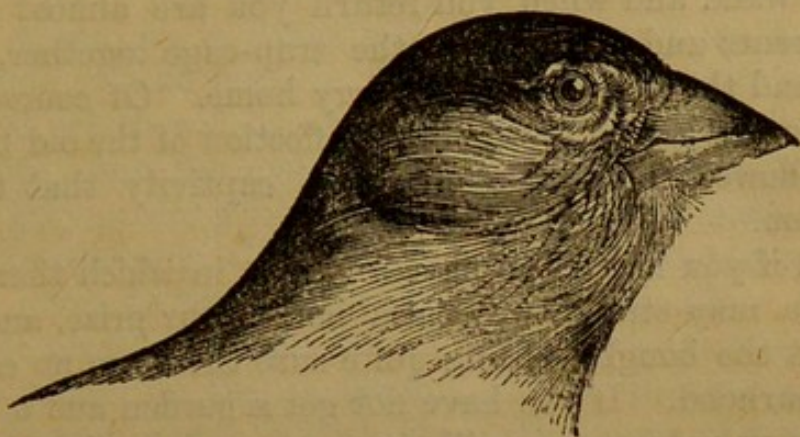
The green bird is a robust and handsome fellow, the prevailing colour of his plumage is olive-green, which (in the cock-bird) is brighter on the breast than elsewhere. Indeed, in the fall of the year, when the foliage of the trees and hedges is fading from green to yellow, it is anything but an easy matter to distinguish the greenfinch from the bough on which he may be sitting. This peculiarity is thus prettily remarked by the poet Wordsworth:—

“ One have I mark’d, the happiest guest
In all this covert of the bless’d,
Hail to thee, far above the rest,
In joy of voice and pinion.
Thou linnet, in thy green array,
Presiding spirit, here to-day,
Dost lead the revels of the May,
And this is thy dominion.

“ Upon yon tuft of hazel trees,
That twinkle in the gusty breeze,
Behold him, perch’d in ecstasies,
Yet seeming still to hover.
There, where the flutter of his wings
Upon his back and body flings
Shadows and sunny glimmerings
That cover him all over.

“ My sight he dazzles, half deceives,
A bird so like the dancing leaves,
Then flits, and from the cottage eaves
Pours forth his song in gushes;
As if, by that exulting strain,
He mock’d, and treated with disdain,
The voiceless form he chose to feign,
While fluttering in the bushes.”

It is a great pity, however, that the prettiest verse (the last) should convey a false idea of the capabilities of the bird eulogised. Wordsworth speaks of the greenfinch "exultingly pouring forth its gushing strains," while, in fact, the song of this demure little bird is as modest as his plumage.



HEAD OF GREENFINCH.

HOW TO REAR GREENFINCH NESTLINGS.—I know of no bird that exhibits more affection for its little ones than the greenfinch. The distress they evince on returning home (with a beakful of food), to find the nestlings, house, and all gone, is painful to witness. I am no advocate for bereaving the poor parent of home and children at one swoop, as I trust I have made apparent, by repeatedly advising that the cock-birds may be taken, and the hens (there are pretty sure to be one or two), left. As regards most song-birds I have never observed (even in the aviary) that the abduction of a nestling or two from half-a-dozen at all distresses the parent birds; but with the greenfinch it is a different matter. If the hen misses but a single fledgling she will immediately come to the ground and search about, no doubt with the notion that it must have fallen out of the nest, nor will she, for a considerable time, cease her anxious search, uttering at the same time a tiny note, corresponding to the "cluck" of a fowl for her missing chick. I will tell you of a scheme by which you may engage the services of the old birds to bring up the fledglings for you, in your own house.

I will assume, to start, that you know where there is a greenfinch's nest. You start out, taking with you a "trap-cage." This, if you are ingenious, you may construct for yourself. Get any large square cage, take off the door, and so suspend it *above* the aperture that the weight of a bird perching on a cross

perch near the bottom of the cage will instantly bring down the door to its proper position.

Hang the trap-cage to a tree adjoining that in which the nest is. Then climb the tree, take the nest of fledglings (if possible, before the eyes of the old birds), and place it in the trap-cage, with the trap, of course, set. Then you can go for a short walk, and when you return you are almost certain to find parents and fledglings in the trap-cage together, the trap down, and the whole ready to carry home. Of course this has been brought about by the brave affection of the old birds, who have followed their little ones into captivity that they may feed them.

Now, if you happen to have a garden in which there is a big tree, you may straightway carry home your prize, and hang it amongst the boughs—being quite sure there are no cats in the neighbourhood. If you have not got a garden and a tree, then hang up your trap-cage with its contents in a light airy room, and fill the seed-box with a mixture of green barley, turnip-seed, hemp, and linseed. If there is not much commotion in the room, you may, after the first day or two, lift the trap of the cage, and let the old birds stretch their limbs by flying about,—never fear but they will return to the cage when the little birds require them. When the fledglings have attained sufficient strength, they too will delight in hopping from the cage, and trying their wings by short flights from one article of furniture to another in the chamber.

In a short time the old as well as the young birds will have got habituated to indoor living, and when the snow is on the ground you may safely open the window. Do not be alarmed because they all immediately fly out; they will certainly return when they have discovered how dreadfully cold it is, and that there are no such things as brimming seed-boxes lying about. If, however, they should be tardy in returning, a singing linnet, hung at the open window, will speedily call back the truants.

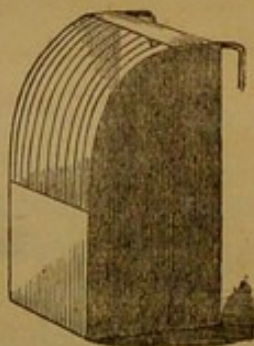
If you bring nestling greenfinches up by hand you may feed them (carefully, for they are as ravenous as young blackbirds) with a mixture of white bread scalded with milk, and the lean of raw mutton, shredded to atoms. If placed under the canary, the goldfinch, or the chaffinch, they will learn the song of either with great facility. Another favourable characteristic of the greenfinch is that what he once learns he seldom or never forgets.

The hen differs from the cock-bird inasmuch as she is

smaller and her plumage browner, and the belly grey. The nest of the greenfinch must be looked for not among the leaves of a tree, but at the butts of large branches, just where the branch juts from the trunk. The nest is small, and constructed principally of wool, hair, and feathers. The eggs are very beautiful, being dazlingly white and spangled with rich brown spots. Although the greenfinch is a remarkably hardy bird when full grown, he is delicate while a nestling, so that it is not advisable to take them in the nest until they are tolerably well fledged, which will be about the beginning of July. You may at once know the male nestlings from the female, as the latter are grey-green, while the former are yellow-green.

THE GREENFINCH'S CAGE.—Any cage suits the greenfinch. Not being given to "twirling," or such like frivolities, he may as safely be placed in a bell-shaped, open-roofed cage as in one considered proper for the chaffinch. If you provide him with two perches, very good; if with three, the more the merrier; if you don't give him any perch at all, never mind—he will roost on the edge of his seed-box. He is not whimsical, as are other birds of his tribe, and never grumbles, however mean his house or however scantily furnished.

But bear in mind he is as great a stickler for cleanliness as the very handsomest of his brethren, and is as careful of his olive-green coat as is the goldfinch of his variegated garment. Therefore give the greenfinch water enough, let him never pine for a bath or a drinking-vessel full of fair water. Likewise see that the bottom of his cage is well strewn with sharp sand, and that the drawer of the cage be scraped twice a week, and once a week scalded.



BIRD-BATH.

HOW TO FEED THE GREENFINCH.—Like the siskin, the greenfinch is a very hearty feeder, indeed it is this simple failing (is it a failing, boys?) that makes him an objectionable companion in the aviary. If any bird presumes to interrupt him while he is feeding, he will dart at, and take a beak full of feathers from the aggressor's poll in an instant. This is the greenfinch's mode of attack, and I have seen birds who have been a few months his companions, with their heads plucked as bald as pebbles.

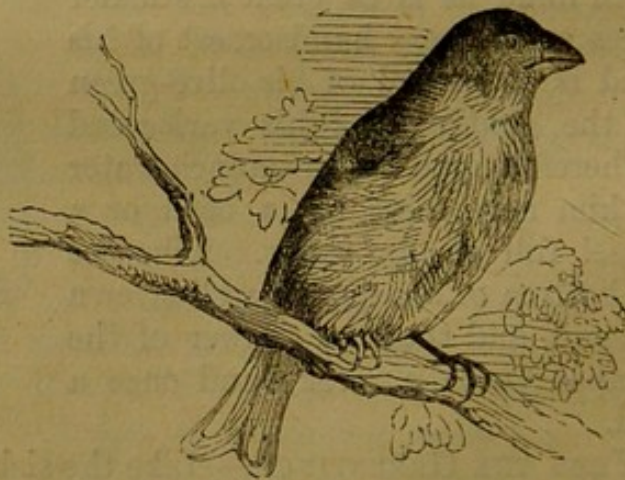
The staple of his food should be an equal mixture of rape and cabbage-seed, with, once a week, a few grains of hemp. It is highly necessary that this bird should be well supplied with

THE GREENFINCH.

green food, therefore be careful that he is never without a spray of water-cress, or a stalk of groundsel between the bars of his cage. When he moults, put a little saffron in his drinking-water, and by way of priming him up to singing condition again, give him an extra allowance of hemp-seed, and, as an especial treat, a few juniper berries.

DISEASES OF THE GREENFINCH, AND HOW TO CURE THEM.—The chief disease to which the greenfinch is subject, is epilepsy, brought on by overloading the stomach. The ruffled condition of the bird's plumage is indicative of this disease. Blow up the belly-feathers, and if the belly is much swollen and inflamed, at once drop three drips of castor oil on the surface of his drinking-water, which he will skim off and swallow the first time he attempts to drink. Let his diet for a week consist of rape and maw-seed.

If anything else should ail him, apply the remedies recommended for the siskin. If, however, the greenfinch is supplied with plenty of water and a moderate and simple diet, he will live for ten or twelve years, and never know a day's sickness.



THE GREENFINCH.



THE NIGHTINGALE.

“The nightingale, another of my airy creatures, breathes such sweet loud music out of her little instrumental throat, that it might make mankind to think that miracles had not ceased. He that at midnight, when the very labourer sleeps securely, should hear, as I have very often, the clear airs, the sweet descants, the natural rising and falling, the doubling and redoubling of her voice, might well be lifted above earth and say, ‘Lord, what music hast thou provided for the saints in heaven, when thou affordest bad men such music on earth!’”

So saith simple pious Isaac Walton, and we eagerly endorse the sentiment of the good writer with a hearty amen. Like the skylark, the nightingale owes not his high position to capricious fashion or dazzling plumage, but solely by right of his surpassing excellence as a songster. The bird’s fame is as old as poetry itself, and “lines to the nightingale” may be found in books almost as ancient as the art of printing. Its music is the standard of perfection, and when critics grow rapturous in their eulogiums of some human songstress, the highest meed of praise they can bestow is, “she sings like a nightingale.”

THE NIGHTINGALE.

The nightingale has been called a melancholy bird, a notion probably grounded on the fact of the bird's love of night, and its retiring habits. It is a mistake, however, to suppose the nightingale a sad bird. No bird sings for the ease of a heavy heart, but because—because—well, I suppose from much the same reason that boys skip, and sing, and halloa, and seemingly delight the more in pranks because they are aimless; but then middle-aged and old folks don't skip, and sing, and halloa; and, for all that is known to the contrary, middle-aged nightingales are as constantly melodious as the new year's nestling; so you see the simile breaks down at once. After all it matters little to us *why* the nightingale sings. Let us accept it as one among the ten thousand blessed gifts of the Bountiful Giver and be humbly thankful.

Respecting the imputation of melancholy levelled against the nightingale, Coleridge prettily says:—

“ And hark! the nightingale begins its song,
‘Most musical, most melancholy’ bird.
A melancholy bird? Oh, idle thought!
In nature there is nothing melancholy.
’Tis the merry nightingale,
That crowds and hurries, and precipitates
With fast thick warble his delicious notes,
As he were fearful that an April night
Would be too short for him to utter forth
His love chant, and disburden his full soul
Of all its music.”

Bechstein, who has closely studied the habits of this bird, says that it expresses its different emotions by suitable cries and particular intonations. The most unmeaning cry when he is alone appears to be the simple whistle “fitt;” but if the syllable “crr” be added, it is then the call of the male to the female. The sign of displeasure or fear, is “fitt” repeated rapidly and loudly, before adding the terminating “crr,” while that of satisfaction, pleasure, or complacency is a deep “tack,” which may be imitated by smacking the tongue. In anger, jealousy, rivalry, or any extraordinary event, he utters hoarse, disagreeable sounds somewhat like a jay or cat.

The same authority gives the numbers of a nightingale's notes as twenty-four, and moreover opines that they are so distinct that they may be intelligibly written. They *have* been written, and by a naturalist thoroughly conversant with bird language. I am afraid, however, that the description will not be exactly so easy as a b c to all my readers. However, I lay it before them:—

HABITAT OF THE NIGHTINGALE.

Tiuu tiuu tiuu tiuu—spe tiuu zqua

Tiō tiō tiō tiō tiō tiō tiō tix—qutio qutio qutio

Zquo zquo zquo zquo—tzu tzu tzu tzu tzu tzu tzu tzu tzu tzi

Quorror tui zqua pipiquisi—zozozozozozozozozozozo zizzhoding, &c.

HABITAT OF THE NIGHTINGALE.—The nightingale builds its nest in low thickset bushes. It generally affects low marshy land, not, as has been said, because it loves to abide in a moist atmosphere, but because in such situations stunted bushes generally abound. The nest is by no means a model of bird architecture. It is loose and rough, and most generally composed of hay, dried leaves and twigs on the outside, while the inside is indifferently lined with hair or wool. In choosing a situation for her nest, the nightingale displays considerable ingenuity, taking advantage of any rut or fall in the ground, indeed it is by no means uncommon to find the nest *on* the ground, on a sand-bank, or in a hole in the side of a hill. From three to six eggs may be found in the nest, and they are of a greenish-brown colour.

NESTING FOR NIGHTINGALES.—If you want nestlings to raise by hand, your time for finding them will be the last week in May. The eggs are laid at the end of April, they take fourteen days to hatch, and, at the time recommended for taking the nestlings, they will be rather more than a fortnight old.

One of the best ways of discovering a nightingale's nest, is to discover the bush where he sits to sing. Then (taking care that you are not seen) screw a few mealworms in a bit of tissue paper, and throw it near the bush. The nightingale, who is a most inquisitive bird, will come down to see what it is, and, discovering the mealworms, will immediately take some in her beak and fly off to the nest; you follow, and from the chirping of the hungry nestlings you discover your prize. Bear in mind that the males are lighter than the females, especially about the throat. Take these and leave the hens. One can easily imagine the grief and despair of so sensitive a bird as the nightingale at finding her home routed, and her little family stolen:—

“The nightingale,
When returning with her loaded bill,
The astonished mother finds a vacant nest,
By the hard hands of unrelenting clowns
Robbed; to the ground the vain provision falls,
Her pinions ruffle, and low drooping, scarce
Can bear the mourner to the poplar shade;
Where, all abandoned to despair, she sings
Her sorrow through the night, and in the bough
Sole sitting, still at every dying fall

THE NIGHTINGALE.

Takes up again her lamentable strain
Of winding woe, till, wide around, the woods
Sigh to her song, and with her wail resound."

You will generally find two-thirds of the brood to be hen birds; therefore, if you are content to take only the cocks, the parents will still have a tolerably large family left. Indeed, it cannot be an uncommon event, when the nest is undiscovered, for one or two of the fledglings to be missing, as they have a habit of scrambling out of the nest long before they are able to fly; and if the parents happen to be away at such times, they chance to furnish a sweet mouthful to some bird or animal of prey.

Before you set out nightingale nesting, take care to provide yourself with a small box (half a large cocoa-nut shell is as good as anything) well lined with the softest and warmest material you can procure. In this you must place the fledglings the moment you take them from the nest, or they will certainly take cold and die in a few hours. Take especial care that they are kept from draught and cold, and feed them upon ants, ants' eggs, and shredded mealworms, mixed with the crumb of French roll over which scalding milk has been poured. When they are five or six weeks old, you may put them in a cage, in which, if you can procure it, you should place dry mould taken from an ant-hill to the depth of half an inch. If you cannot get this, place in the cage a handful of wheat-straw. The diet of ants' eggs and sopped bread may be continued, or instead you may give them the following ingredients, well pounded together so that it is perfectly smooth: soaked bread crust, barley-meal, and carrot, in equal quantities. Or, raw sheep's heart shredded very fine, an egg boiled hard and pounded, and the crumb of good white bread.

A GOOD NIGHTINGALE TRAP.—The time at which the nightingale is most easily caught is early in April, and birds caught at this time are considered the best. There are various ways of snaring them, but in my opinion that which promises the greatest success is the following:—

Scoop out of the ground, in the vicinity of their haunts, a hole about eighteen inches long, a foot wide, and ten inches deep; stick two or three pegs into the bottom of the trench, just firm enough to support a flat piece of board a foot long and nine inches wide. Cover this tiny platform with earth, and sprinkle on it some ants and mealworms. Then have another piece of board, rather larger than the hole, which must

be stuck upright at the front of the hole by means of some slight support. The board that stands over the hole must be so attached to the baited platform, that when the bird, bent on securing part of the tempting spread, alights on the latter, it falls, bringing with it the former, securely covering in both bait and bird.

Another way is to merely loosen the surface of the soil, sprinkle about some mealworms or earwigs, and round about the bait to plant limed twigs. However, the first-mentioned trap will be found superior to this or any other. As soon as your bird is caught, it is a good plan to carefully pull out a few of the small feathers about the vent, or it may happen that they will become matted together, and cause an obstruction and the death of the bird. Also slip an elastic band (you may buy them at any stationer's) over the body, so as to confine the wings to the sides before you put them in the store cage, otherwise they will flutter about and do themselves some injury.

It is difficult to get newly-caught old nightingales to eat. Indeed, for the first two or three days you will find it necessary to feed them, as you would fledglings, with mealworms and moistened bread. Some persons prefer to feed them with raw sheep's heart and bread three times a day, leaving in the interim a supply of the same food in the food-box, mixed with a few live ants, that the bird may be tempted to help himself. However I cannot recommend this latter plan, as a sort of scurvy about the base of the beak very generally follows its adoption. Do not remove the elastic band from about his body for at least a week.

THE CHOICE OF A NIGHTINGALE.—Unless the reader is possessed of abundant perseverance and patience, he must be content with such opportunities as chance may throw in his way of hearing the song of the nightingale in its wild state. True enough, you may buy caged and singing nightingales for six or seven shillings each, but they may not, when in your possession, be worth as many pence. I know of no bird so peculiar and whimsical as this. He will sing up-stairs, and will mope and sulk if you bring him down; hung on the right-hand side of the room, he will pipe away merrily enough; shift him to the left-hand side, and he is at once mute. I have known one to pout for a week because the room in which he always hung was papered with a new paper of a different colour from the old. A friend of mine has a nightingale, a splendid fellow,

who insists on living in a cage patched about and falling to pieces with old age, and for no other reason than this—he had occupied it for thirteen years, had got used to it; he nearly pined to death because he was shifted to a cage befitting a bird of his ability.

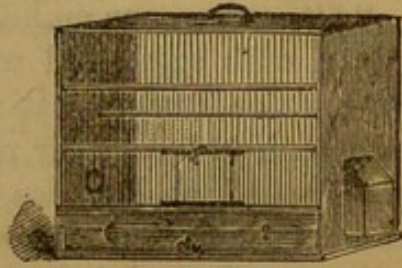
In purchasing a nightingale, the greatest care and caution is requisite. It may happen that the dealer will press on you at a cheap rate a bird about whose capacity there can be no doubt. There he hangs, before your eyes, making the place echo with his music; but for all that, don't buy him, at least for the present. Call again in three or four days, and then, if the nightingale seems as sprightly as when you last saw it, you may venture to purchase. This caution is necessary, because it sometimes happens that newly-caught birds will, instead of pining, take to singing so fiercely and continuous, as in a short time to kill themselves. This is a curious fact, and would seem to disprove the assertion that birds sing only when they are pleased. I should like those who hold this belief to observe a nightingale while singing himself to death. Pleasure! it is plainly enough a passionate remonstrance at your cruelty, an imploring appeal for liberty, the mere ravings of the miserable little captive, mad with despair. Take my advice, boys, if you ever happen to have a bird brought to this pass, open the cage door and let it fly. If you do not, and the bird dies, it is likely you may feel a little uncomfortable.

From the similarity of the redstart to the nightingale, it is often sold as such by the dishonest bird-dealer. There is, however, this difference between the two birds. The hen redstart is much smaller than the nightingale, and its tail is lighter, longer, and more slender. Moreover, the nightingale is much more graceful in its movements than the redstart. It carries its head erect, and walks with dignity and deliberation. There is another feature worth noticing in the nightingale. When any object takes his attention, he puts his head on one side, as does the robin, and seems to look at the object with but one eye. To discover whether a nightingale is young or old, examine well his wings and tail. If you discover a few—even one or two—yellowish feathers, you may conclude that the bird is young. This is important, because the younger the bird, the more docile and tractable he will be.

It is by no means easy to distinguish the male from the female nightingale. The chief difference, however, is, that the legs of the hen are shorter than those of her husband, her

head is not so long and tapering, but round, so that the beak juts out more abruptly, and her eyes are smaller, and by no means so bright as his.

THE NIGHTINGALE'S CAGE.—The nightingale requires a spacious cage. It should be at least twenty inches long, nine broad, and twelve high. As recommended for the lark-cage, the roof should either be of cloth, or the wood or wire should be covered with some soft material, so that the bird, in leaping upward, may not injure his head. The nightingale dislikes too strong a light, and yet, at the same time, he must not be debarred of plenty of fresh air; so that the best way to manage will be to have all the sides of his cage wire, hung round with the lightest green gauze curtains, which should not hang close to the bars of the cage, but about an inch off. The cage must be provided with three perches, which may be covered with some thin soft material,



THE NIGHTINGALE'S CAGE.

as the feet of the nightingale are extremely tender. Cleanliness is of the first importance. Clean out the cage every morning, and not only refill the seed and water glasses, but wash and dry them. Bechstein recommends a sheet of blotting-paper to be laid at the bottom of the cage, by way of absorbing all impurities, but birds, like ourselves, sometimes have strange tastes, and I think it very probable that the nightingale might take it into his head to nibble at his carpet, and then I would by no means be answerable for the indigestion that would ensue. He is fond of bathing, so every day give him a deep saucer three parts full of clean water, and as he may, by mounting his covered perches with his feet still wet, saturate the cloth, it will be as well to have the perches moveable, and to remove them before the bird begins to bathe.

HOW TO FEED THE NIGHTINGALE.—Bechstein, who without doubt has carefully studied the subject, is of opinion that ants' eggs should form the principal of the nightingale's food. He says :—

“Whoever cannot procure ants' eggs should not keep nightingales, as many die before they become accustomed to artificial food. The best summer diet is merely ants' eggs, and daily from two to three mealworms. The ants themselves may also be used, being first killed with hot water. When

fresh ants' eggs are no longer to be obtained, dry, or, what is better, boiled bullock's heart, is given to them, together with Swedish turnip, both being grated together, and mixed up with dried ants' eggs. The yellow turnip, which may be kept in fresh sand, keeps the stomach and intestines in order. Sometimes, indeed, they may have lean beef or mutton, chopped fine, given to them. With this, after experimenting on various kinds of food, I feed my nightingales, and they thrive well upon it. The cheapest food, however, is very ripe elder-berries, dried like fruit, and mixed with ants' eggs, just as it is customary to mix Swedish turnip and roll together.

"Other persons make for winter use a baked cake of pea-meal, mixed with eggs, and when it is used, they grate it, moisten it with water, and mix it with dried ants' eggs. Others again, who wish to feed their nightingales as cheaply as possible, take poppy-seed, and bruise it in a mortar, to free it from the oil, and mix it up with some roll crumbs. They will freely eat this mixture, when they have been gradually accustomed to it, but it eventually generates consumption.

"There are other artificial kinds of food used, but which I shall pass over, as the majority of them are injurious. Whoever adopts the plan above recommended for feeding his birds, will find that they continue not only healthy, but from their cheerfulness, they will delight him with the frequency and animation of their song."

However, with all deference to the above-quoted trustworthy authority, I cannot endorse his opinion that "no person should keep a nightingale, who cannot procure ants' eggs." Let your bird have them, if possible. If not, feed him on roast bullock's heart and grated carrot. A small piece of boiled parsnip will not come amiss to him, and in place of the ants, and ants' eggs, take care that he has always a spider, an earwig or two, a few maggots or mealworms, at least once a day. I know of several nightingales who have been thus fed for years, and who still retain their voice and health.

DISEASES OF THE NIGHTINGALE, AND HOW TO CURE THEM.—At moulting time, the health of the nightingale is sure to be extremely delicate. The action of the bird's bowels seems quite deranged, and altogether he requires your constant attention. If you find he needs a purgative, let him have a large house-spider, or two small ones, or two or three of those little green caterpillars that infest oak and other trees. Their food at this period should be rich and comforting. Above all, be quite

sure you do not hang him where there is any chance of a cold draught from the door or window reaching him, for if during the moult he takes cold, all the bird doctors in Europe cannot cure him. If the action of the bird's bowels is very irregular, put sufficient saffron in his water, to turn it the colour of malt vinegar.

The husk is a malady which sometimes attacks the nightingale in the autumn. It is a sort of cough, and the only way to treat it is to keep the bird warm, and let him have a good sized spider every day. This also is a good remedy for excessive fat, which he is also liable to acquire at the end of the summer. Swede turnip grated will also check unnatural corpulence.

If he is attacked with cramp (which you may know by his trembling, and grasping the perch with spasmodic tenacity), hold his feet and legs in a glass of sherry three or four minutes, and cover him warm.

While talking of the bird's feet, it may be as well to mention that the nightingale is very liable to disease in those members. When the scales on the legs look loose and horny, soak them in warm water until the scales can be easily removed with the point of a penknife. Of course, you will observe the utmost tenderness while doing this. Then, carefully dry the bird's feet and legs, and anoint them with fresh butter.

If he should lose flesh, and grow lean and ragged, put a pinch of iron rust in his drinking water, and chopping up a fig into atoms, mix it with his ordinary food.

THE SKYLARK.

As the lion is king of beasts, so may the skylark claim the monarchy of the musical feathered tribes. Indeed, the comparison is rather disparaging than otherwise to the lark, for whereas the monarch of the jungle maintains his rule by virtue of his brawny limbs and tough muscles; the tiny chorister compels our love and admiration, not by reason of its splendid plumage, not by its bold flight, not even by its magnificent music, but by its humility and gratitude. As soon as the sun peeps from his glorious hiding, making the dull doubtful clouds bright and hopeful, up springs the little brown bird from his lowly bed among the grass, and, rejoicing as he goes, speeds heavenward to give thanks to the Great Giver of a new day. Higher and higher he mounts till he seems no bigger than a bee, still the music of his tiny throat, no more capacious than a little reed, fills the broad expanse, and is sweetly audible to us as we stand in the cornfield, with our head thrown back, and our eyes shaded by our hands, lest we altogether lose sight of the quivering speck among the motes that float in the sunbeams.

It is impossible not to feel something better than mere admiration for the skylark—reverence, I am not afraid to say, would more correctly express the feeling. It must be so. Why else do I, who have been writing about redpoles and chaffinches and such “small deer,” with inky fingers and a pen splayed at the nib—why, I ask, do I, before preparing to write about the lark, so scrupulously wash my hands, cut a bran new pen, and tear off the outer sheet from my blotting pad? Good gracious! I could not make greater preparation if I were once more a young man and about to indict a love letter to my sweetheart.

Of no song-bird has so much been written as the skylark. He has been a fruitful subject with the poets from time immemorial. Shakespeare calls the bird “the herald of morning;” indeed, from Chaucer to Peter Pindar, there never lived a poet but had said his prettiest about this glorious songster. A volume might be filled with such extracts, and if I had their arrangement, Wordsworth’s tribute should stand before all others.

“Ethereal minstrel! pilgrim of the sky!
Dost thou despise the earth, where cares abound;
Or, while thy wings aspire, are heart and eye
Both with thy nest, upon the dewy ground?

Thy nest which thou canst drop into at will,
Those quivering wings composed and music still.

“To the last point of vision, and beyond,
Mount, daring warbler! that low prompted strain
('Twixt thee and thine a never-failing bond),
Thrills not the less the bosom of the plain.
Yet might'st thou seem, proud privilege, to sing,
All independent of the leafy spring.

“Leave to the nightingale the shady wood,—
A privacy of glorious light is thine,
Whence thou dost pour upon the world a flood
Of harmony, with rapture more divine.
Type of the wise, who soar, but never roam,
True to the kindred points of heaven and home.”

There are many that assert that the woodlark is superior, or at least equal, to his soaring brother. This, however, is decidedly not my opinion, and I think my choice is defensible; for whatever diversity of opinion may exist as to the surpassing excellence of either bird as a songster, it must be allowed, that for power of song, gracefulness of deportment, and shape, and hardihood, the skylark carries the palm. Besides the above enumerated good qualities, the skylark is a long-lived bird, whereas the woodlark, without the most scrupulous care and attention, seldom lives longer than five or six years; a fact alone sufficient to turn the balance in favour of the skylark, even



THE SKYLARK.

allowing that in other respects the rivals are exactly matched; for it must be borne in mind (especially by boys who have an inclination for lark breeding) that a really good bird of this species cannot be purchased for at least a guinea. Indeed, at the present time, I know of a poor fellow, a French-polisher, in Hare-street, Bethnal-green, who refuses to take *eight pounds* for his skylark. The lover of lark-music need not, however, penetrate the nasty locality above alluded to, he need only to stroll down Fleet-street in the summer season, any time of the day,—from three in the morning till dusk in the evening—and there, hung above the shop of a shell-fishmonger, he will hear a lark, the glory of whose song triumphs above the everlasting

roar of the traffic below. Within a few yards, on either side of the way of this main thoroughfare, are many pent-up courts and alleys, each teeming with houses of business and manufactories, where are employed thousands of women, and men, and girls, and boys, and for my part I consider they ought to be, I have no doubt they are, much obliged to the good shell-fish-monger for providing them with music, so superior to anything that can be got out of wind or string, that the heart instead of the feet is set dancing with gladness.

STRUCTURE OF THE SKYLARK.—Speaking of the skylark's wondrous structure, Mudie says, the accordance of the skylark's song with the mode of ascent is worthy of notice. When the volutions of the spiral are narrow, and the bird changes its altitude rapidly in proportion to the whole quantity of flight, the song is partially suppressed, and it swells as the spiral widens, and sinks as it contracts; so that though the notes may be the same, it is only when the lark sings, poised at the same height, that it sings in a uniform key. It gives a swelling song as it ascends, and a sinking one as it comes down, and even if it takes but one wheel in the air, as that wheel always includes an ascent or a descent, it varies the pitch of the song.

"The song of the lark, besides being a most accessible and delightful subject for common observation, is a very curious one for the physiologist. Everyone in the least conversant with the structure of birds must be aware that with them the organs of intonation and modulation are *inward*, deriving little assistance from the tongue, and none or next to none from the mandibles of the bill. The windpipe is the musical organ, and is often very curiously formed. Birds require that organ less for breathing than other animals having a windpipe and lungs, because of the air-cells and breathing tubes with which all parts of their bodies (and even their bones) are furnished. But these diffused breathing organs must act with least freedom when the bird is making the greatest efforts in motion—that is, when ascending or descending; and in proportion as they cease to act, the trachea is the more required for the purpose of breathing. The skylark thus converts the atmosphere into a musical instrument of many stops, and so produces an exceedingly wild and varied song,—a song which is, perhaps, not equal, either in power or compass in the single state, to that of many of the warblers, but one which is more varied in the whole ascension. All birds that sing ascending or descending have similar power, but none so perfect as the skylark."

HOW A SKYLARK PREACHED A SERMON.—Stories, as well as poems, concerning the skylark abound; but one of the best, both for interest and as showing the constant love of Englishmen for this truly English bird, came to my knowledge a few months ago.

As you are doubtless aware there is no such thing as a song bird natural to Australia; there are birds who chatter, birds who shriek, but no bird that sings. Well, there was a young man who went out from England as a gold-digger, and was lucky enough to make some money, and prudent enough to take care of it. He opened a "store" (a sort of rough shop, where everything, from candles to coffins, are sold) at a place called "The Ovens," a celebrated gold-field, above two hundred miles from Melbourne. Still continuing to prosper, he, like a dutiful son, wrote home for his father and mother, requesting them to come out to him, and, if they possibly could, to bring with them a *lark*. So a lark was procured, and in due time the old folks and their feathered charge took ship and departed from England. The old man, however, took the voyage so much to heart, that he died, but the old woman and the lark landed in sound health at Melbourne, and were speedily forwarded to Mr. Wilsted's store at The Ovens.

It was on a Tuesday when they arrived, and the next morning the lark was hung outside the tent, and at once commenced piping up. The effect was electric. Sturdy diggers—big men with hairy faces and great brown hands—paused in the midst of their work, and listened reverently. Drunken, brutal diggers left unfinished the blasphemous sentence, and looked bewildered and ashamed. Far and near the news spread like lightning—"Have you heard the lark?" "Is it true, mate, that there is a real English skylark up at Jack Wilsted's?"

So it went on for three days, and then came Sunday morning. Such a sight had not been seen since the first spadefull of the golden earth had been turned! From every quarter—east, west, north, and south—from far off hills and from creeks twenty miles away, came a steady concourse of great rough Englishmen, all brushed and washed as decent as possible. The movement was by no means preconcerted, as was evident from the half-ashamed expression of every man's face. There they were, however, and their errand was—to hear the lark!

Nor were they disappointed. There, perched in his wood and iron pulpit, was the little minister, and, as though aware of the importance of the task before him, he plumed his crest,

and, lifting up his voice, sung them a sermon infinitely more effective than the bishop himself could have preached. It was a wonderful sight to see that three or four hundred men, some reclining on the ground, some sitting with their arms on their knees and their heads on their hands, some leaning against the trees with their eyes closed, so that they might the better fancy themselves at home and in the midst of English corn-fields once more; but sitting, standing, or lying, all were equally quiet and attentive, and when, after an hour's steady preaching, the lark left off, his audience soberly started off, a little low-spirited, perhaps, but on the whole much happier than when they came.

"I say, Joe," one digger was heard to say to another, "do you think that Wilsted would sell him,—the bird, you know; I'll give as much gold-dust for him as he weighs, and think him cheap."

"Sell him, be blowed!" was the indignant response; "how would you like a feller to come to our village at home and make a bid for our parson?"

THE CHOICE OF A SKYLARK.—It is a pleasant reflection and a comfort to our consciences, that the skylark seems in no way to suffer either in health or spirits through being made captive; indeed, if you have the good fortune to possess a young and healthy bird, and treat him properly, there is no natural reason why he should not delight you with his music for fifteen or even twenty years. It is asserted by some naturalists that the skylark has even attained the great age of thirty years, but for the truth of this I will not vouch. However, the first thing is to get a young healthy bird, and as it is by no means easy to distinguish a healthy from a sickly bird, or even the cock-bird from the hen, the following hints respecting the choice of a skylark may be found useful.

The bird should be slim, upright, and well planted on his legs. He should hold his head well up, so that from the front the whole of his under parts to the extremity of his tail may be seen. Fleck your finger along the bars of his cage, and observe whether he instantly puts up his crest. If he does so, and if he in every way answers to the above description, you may conclude that he is a healthy bird. To know his age, examine his legs. If they are clumsy and scaly, or if they are mottled, showing that the scales have been removed, he is an old bird. If its legs are sleek and clean, and its toes all perfect, it is a young bird. To distinguish the cock from the hen, see

that the breast feathers are simply of a dingy white, just tinged with light brown. If so, it is a cock. If, on the contrary, the ground colour of the breast is nearly white, and vividly spangled with dark-brown specks, it is a hen bird. Beside this, the hen bird is smaller.

For humanity's sake, bird-buyers should be careful as to what dealer they go to. Those who keep their birds well-fed and cleanly should be patronised; those, on the contrary, who treat birds as anything but creatures endowed with taste and feeling, should never be countenanced.

Almost daily I pass a shop in Old-street, St. Luke's, and there, exhibited in the open window, may always be seen a sight loathsome and sickening. Store-cage packed on store-cage, and each one literally *crammed* with birds of various kinds, larks, linnets, thrushes, &c. To say the least, each cage is *half-full* of birds, so that they perch on each other's backs, while, at the same time, the cages themselves are as filthy and disgusting as can be imagined. I wonder what prevents the officers of the Society for the Prevention of Cruelty to Animals from giving the bird dealer in question a call.

TRAPS AND SNARES FOR SKYLARKS.—Among the most favourite modes of snaring the skylark, the following is one of the best. Start at break of day, carrying with you a well-trained singing lark. Tie its wings, so that it can do no more than hop about the ground, and under the string that confines the wings slip the ends of two lengths of flexible whalebone, the projecting ends of which must be well smeared with good birdlime. Let the limed twigs cross each other over the decoy bird's back. Watch from what part of a meadow a lark rises, and then put down your decoy near the spot. As soon as the decoy begins to sing, the wild bird—if he be ever so high—will speedily drop like a stone on to the back of the trespasser, the lime adheres to the wild lark's spread pinions, and it is caught.

In the winter after a frost, or when the snow slightly covers the ground, larks may be taken in considerable numbers by the "hair noose." This is accomplished by simply driving pieces of wood into the ground frequented by them, so that about three inches are above the surface. These strings should be about three yards apart, and then—after the fashion of laundresses' clothes lines—stretch twine from stump to stump. Then make nooses in lengths of horse-hair and suspend them from your lines, so that the running loops dangle freely

about two inches from the surface of the ground. Scatter oats or other grain about your nooses, and the hungry larks, in seeking to pick it up, will find themselves held captive by the treacherous horsehair.

The wholesale way of catching larks is by a net, called a "trammel." It is about thirty-six yards long, and eight yards wide. At each side of the net there is a pole, while the extremity of the net is so weighted as to drag close to the ground. This can only be worked on dark nights, when the birds are at roost. The men holding the poles and raising the front of the net, tramp forward; if they (the bird-catchers) are lucky, all the birds roosting within the course dragged by the net are captured. The most favourite and secure way to work the trammel-net is by the help of two horses; the men who hold the poles, hold each a horse by the bridle, so that the footfall of the animals may drown theirs. The poor larks, hearing only the footsteps of the horses, and having no fear of them, doze on, and are thus cheated and captured. The worst part of this sport is, that while conveying the poor birds—all in the dark—through the meshes of the net to the store-cage, great numbers of them get crushed to death. This, however, is a matter of indifference to the trammel-worker; the birds he catches are not for the cage, but the gridiron! However people can *eat* larks is a wonder to me. I declare, whenever I happen to pass a poulterer's, and see the announcement "larks ready for the spit," I feel much the same horror and indignation as I should, were I to see written up, "ready trussed babies may be had here."

TO REAR SKYLARK NESTLINGS.—If you have any intention of bringing up nestling skylarks, you may take them from the nest about the first week in June, as they will by that time probably have tail feathers of nearly an inch long. It is a bad plan to take the nestlings less fledged than this. You may easily distinguish the male from the female birds, by the former being nearly yellow, while the latter is greyish-brown. For the first day or two the food of the nestlings should be bread sopped in milk, and poppy-seeds steeped in warm milk till they are soft. A few ants' eggs occasionally will bring them on famously. They should be fed regularly and moderately every two hours, from daylight till dark. Bear in mind, that the young lark is accustomed to take his breakfast at about three o'clock in the morning, and if you want him to thrive, you must administer his first meal as soon after that as possible.

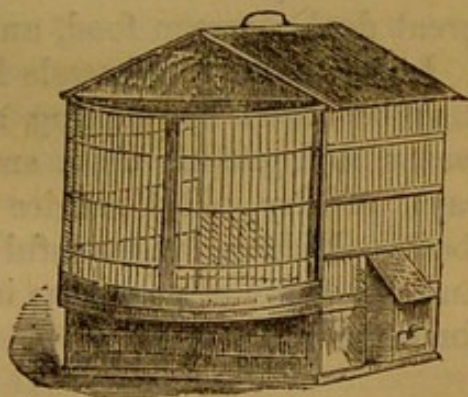
When the nestlings have been in confinement three or four

THE SKYLARK'S CAGE.

days, you may add a little lean raw beef to their diet. Continue this for a week, and then put them in a large cage, with about two inches of chaff spread over the bottom. Be careful that this chaff is renewed at least every day, or you will be annoyed by a disagreeable effluvia.

They will not be able to feed themselves till they are at least five weeks old; but in the meantime you may gradually introduce more lean beef and some crushed rape-seed into their food. When they are old enough to feed themselves, supply them with hard-boiled egg, bread, and hemp-seed, bruised together. After a week of this diet you may withdraw the egg and give the hemp-seed whole, as by this time the bird will doubtless be strong enough to crack them himself.

THE SKYLARK'S CAGE.—It is not imperative that the lark should be kept in the sort of cage well known as the "lark's cage." Any shaped cage suits the lark, provided it is large, open, and clean. A perch in the skylark's nest would only be in the way, as, asleep or awake, he would not leave the bottom of his cage. It should have a movable wooden bottom, which should be always well strewn with coarse sand. The vessels for his drink and food should be of glass, and placed outside the cage. Bechstein recommends that cages



THE SKYLARK'S CAGE.

in which newly-caught birds are placed should not have a solid roof, but one of cloth, as the bird, while wild, has a habit of springing upward, and if the substance against which he strikes his head be nothing softer than wire or wood, he may possibly dislocate his neck.

Above all, don't forget the fresh green turf, at least three times a week. It is impossible to estimate the pleasure the poor bird must feel in inhaling the fragrance of the tiny patch of verdure, or in feeling it so cool and comfortable to his feet. Besides this, the insects and worms he will find in it are essential to his health.

HOW TO FEED THE SKYLARK.—The natural food of the skylark is ants' eggs, oats, seeds of all kinds, worms, insects, young buds, &c., &c. Endeavour to supply him as far as possible with his natural food. As the staple of their diet, however,

the following mixture will agree with them very well. Six spoonfuls of fine oatmeal, three or four large sweet-almonds, a spoonful of brown sugar, a spoonful of carraway seeds, and two spoonfuls of rape oil. Let all these ingredients be well mashed together, and rubbed through a sieve. If you feed him on this, take care that at the same time he has a plentiful supply of green food, such as lettuce, watercress, endive, &c. If instead of the paste you feed the skylark upon poppy-seed, crushed hemp, lean beef, and ants' eggs, he will not require so much green food. When old larks are first taken, they should be fed entirely on poppy-seed and oats.

DISEASES OF THE SKYLARK, AND HOW TO CURE THEM.—The skylark is subject to almost all the diseases that afflict other birds. There is one malady, however, which seems to be peculiar to larks, and that is a sort of yellow scale at the base of the beak. This, no doubt, arises from impurity of the blood, and the way to eradicate it is to give the bird laxative seeds, a great deal of green food, and a few mealworms.

Looseness of the bowels frequently attacks the skylark. This may be cured by putting a little saffron into their drinking-water, and grating up a small piece (as large as a hazel nut, say), of dry old Cheshire cheese, and mixing it with their food. Half a teaspoonful of ground rice in the food-glass and six drops of port wine in the water-glass is another remedy for scouring.

THE TITLARK.

Besides the Skylark and Woodlark, there are several others. There is the shore-lark who has a yellow throat and a horse-shoe-shaped crest on his breast; the field-lark, the meadow-lark, and the titlark.

With the exception, however, of the last-mentioned, neither of these are sufficiently known as cage-birds to need description. Indeed they are not worth the trouble of keeping. The first-mentioned being but an indifferent songster, and the other two being extremely delicate birds in confinement.

The titlark, however, is worthy of a page. He is the smallest of his tribe, being but five and a half inches long, and even more slim than his brother of the woods. The upper parts of his body are of a rich brown, speckled with black. The under parts are dingy yellow. Each wing is crossed with a yellowish white bar, and the tail is narrow and slightly forked. The hen titlark differs little from the cock. Indeed, the only difference is, the breast and under parts of the body are even of a more dingy yellow, and the bars across the wings are of a more vivid white.

The titlark's nest, which much resembles the woodlark's, is always built on the ground in the midst of a tuft of grass, or beneath a bush. It is almost impossible to describe the eggs of the titlark, as they appear in almost any colour, red, pink, grey, brown, and green—that is to say, the ground colour; but they may always be known from the eggs of any other bird on account of the large size of the spots with which they are dotted. From four to six eggs is the number laid.

The time to search for titlark nestlings is about the third week in May; and the place to search, the nearest meadow, moor, or common. The situation of the nest may be discovered by following the old bird, whose plaintive notes, especially when she approaches her nestlings, will easily guide you. If, however, the old bird sees you approaching, she will hop out of her nest, and scud along the grass as fast as she can run, fluttering her wings and screaming the while like a bird that has been badly wounded. This must be a ruse to attract your attention from the situation of the nest, for if the bird were frightened for its own safety, it could at once dart up in the air and out of danger; besides, when she finds you have discovered, and are robbing her home, she will return in

THE TITLARK.

the most courageous way, uttering sharp cries and circling round your head.

As the fledgling titlark is a very delicate little creature, it will be as well to provide yourself with a small warmly-lined box or basket, as in the case of the nightingale. The males can only be known from the females by their much brighter appearance. The fledglings should be fed every two hours, and their food should be a mixture of white bread, over which boiling milk has been poured, ant's eggs, and crushed poppy seed. You cannot do better than follow the directions given as regards skylark nestlings.

THE TITLARK'S CAGE.—The titlark's cage should be exactly like that proper for the skylark, with this difference: he is a perching bird, and must therefore be supplied with two perches. The titlark takes great pride in his personal appearance, so you must not forget to supply him constantly and plentifully with water. Unlike the other larks, this one does not dust itself in the sand.

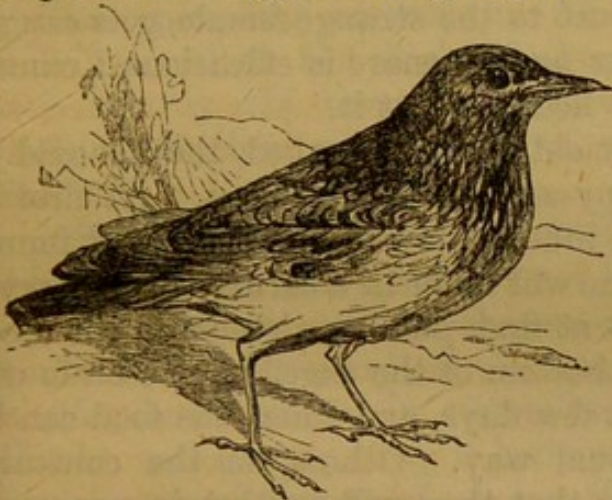
FOOD OF THE TITLARK.—With the exception of the nightingale, there is no bird so delicate in his appetite as the titlark. In a state of freedom he subsists entirely on flies of all kinds, caterpillars, beetles, ants, and ant's eggs. Indeed, its habits so closely resemble those of the nightingale, that as a rule the same diet will suit both birds, except that to the titlark may occasionally be given rotten cheese and crushed hemp-seed, food which the nightingale must not have.

DISEASES OF THE TITLARK, AND HOW TO CURE THEM.—The disease to which the titlark is most subject is a wasting of flesh, similar to consumption. The bird appears to dwindle daily in size, and its feathers fall out as though it were going to moult. The only remedy for this is to endeavour, at least for a time, to supply it solely with such food as it is used to in a natural state.

The pip is another malady that frequently attacks the titlark. This may be known by a tiny whitish bladder, which forms above the vent of the bird, and may easily be seen by blowing the feathers aside. To cure it, prick the bladder with a needle first dipped in pure salad oil; afterwards anoint the place with fresh butter.

THE WOODLARK.

Although I demur to ranking the woodlark first, there is no question that among the lark tribe the bird in question is entitled to rank second. He may easily be distinguished from the skylark by the comparative shortness of his tail, a reddish-brown streak above each eye, and from being altogether a smaller bird. Like the skylark he builds his nest on the ground, but generally under a hedge or bush rather than in the open meadow. Unlike the skylark he is a perching bird, and will sing on the wing, hovering high in the clouds, or on the limb



THE WOODLARK.

of a tree. It is a fact not generally known, that the woodlark, like the nightingale, will sing at night; indeed, there is little doubt that among persons not well acquainted with bird music the song of one is frequently mistaken for that of the other.

The male woodlark is not easily mistaken for the female. The poll of

the cock is reddish brown, the sides of the head brown, the breast is dingy yellow with brown spots, the tail is brown, as are the wings, and two of the feathers of the latter have a triangular light red spot upon them. The hen is of a deeper colour on the poll, the markings are altogether darker, and the spots on the breast are more numerous. Moreover, it may be as well to mention that (contrary to the rule) the female bird is *handsomer* than the male, and that *she sings*. However, this faculty is not peculiar to the hen woodlark. All hens of the lark species make a twittering, which often assists the fraudulent bird-seller in passing them off for cocks. The note of the hen, however, is faint and jerky, and very little experience will secure the bird buyer from imposition.

NESTING AND SNARING THE WOODLARK.—To secure fledgling woodlarks, the neighbourhood of woods and coppices should be searched in the second week in May. The nest is rather loosely made, and composed of coarse moss, hair, and wool. Most generally five nestlings will be found in a nest, and those of the

yellowest complexion are the males. They should be put in a small box or basket with hay at the bottom, and covered over with wadding or flannel. For a few days they should be regularly and moderately fed on ants' eggs mixed with white bread that has been scalded with milk. After that, the directions already given respecting the skylark should be exactly followed.

At the beginning of September old birds as well as branchers may be taken by the "hair-noose," and with other traps such as are used to snare the skylark. I have heard of the woodlark being taken through a female decoy, her wings being tied, and a limed twig fastened to her back. Thus equipped, she is set to run about a place where woodlarks abound, and the gallant male woodlark in paying his court to the strange female, gets caught for his pains. Whether or no this snare is efficacious I cannot say, never having had the heart to test it.

When the newly-caught old birds are caged, they should be fed for a few days on poppy-seed and ants' eggs. At first he will be very shy,—so shy, indeed, that if his food is not immediately beneath his nose, he will mope in a corner till he starves to death, therefore, do not at first put his victuals in the seed-box, but strew it over the bottom of the cage. Some birds will recover their courage in a few days, and then the food can be put in the glass in the usual way. Others, on the contrary, are so obstinate and sulky that they will not eat in your presence for months. Watch them through the keyhole of the door, and you see them pecking away in the most homely way; but as soon as you enter, back they shuffle to a distant corner, and regard you defiantly. However, it is a maxim among bird-fanciers that the more self-willed a bird is at first, the better songster he will turn out.

The woodlark's cage should be exactly similar to that already described as proper for the skylark.

HOW TO FEED THE WOODLARK.—He is the most dainty feeder of the lark tribe. When his appetite is good, rape and poppy-seed, or even oats, will satisfy him, provided you do not stint him of green food and insects; but when his stomach is out of order, he must have some dainty,—a few nice mealworms, a little roasted bullock's heart, some new-laid ants' eggs, or some bruised hemp-seed. The following paste will always please the woodlark in his daintiest moods:—Soak part of the crust of a French roll in cold water for half an hour, squeeze it dry, put it in a basin, and add to it half a teaspoonful of brown sugar, an ounce of carrot finely grated, and three

teaspoonfuls of wheat flour. Beat well together, and rub through a sieve.

DISEASES OF THE WOODLARK, AND HOW TO CURE THEM.—The woodlark is a delicate bird, and more subject to disease than any of his brethren. Amongst other complaints, that known as "tympany" occasionally attacks him. Sometimes only at one portion, sometimes the whole, of his body will be swollen to an alarming size. Dreadful as the poor bird looks, his cure can be effected almost instantaneously. Prick the part affected with a needle, and immediately the air that has accumulated beneath will escape, and the poor little fellow gives himself a shake and is as well as ever.

The "pimples," or stoppage of the fat glands, is another "ill" to which the flesh of the woodlark is "heir." The best remedy for this is the one prescribed by Bechstein, so I will faithfully transcribe the recipe from his "Chamber Birds :"—

"Every bird has, above the rump, a gland which secretes the oil required by the bird to smear its plumage, to retain them supple, and to prevent the moisture passing through. In confinement, birds neglect the frequent pressure of this gland, as they are more rarely exposed to getting wet than when at liberty, and consequently it becomes hard and inflamed. If the bird is seen sitting and drooping, the tail bending downwards, or if the feathers upon the rump are observed to be ruffled, and that the bird frequently pecks at them, you should see if the swollen gland is not the cause. This may be frequently softened by the application of very fresh butter, mixed up with a good deal of sugar, the aperture being enlarged by gently distending it with a needle or a small knife; but a lead salve, or rather a salve of litharge, white lead, wax, and olive-oil, which must be ordered at an apothecary's, opens it best. The usual remedy is to pierce it with a needle, or to cut off the hardened gland. But this process, whilst it removes the stoppage, destroys the gland, and birds thus healed usually die at moulting from wanting the oil requisite to smear their feathers."

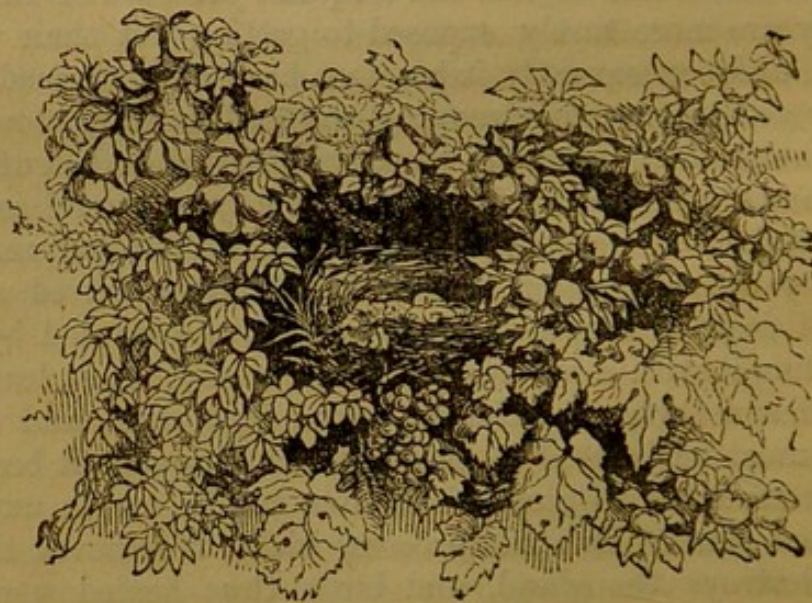
Tscheiner, another German naturalist of note, says of this malady :—

"If this evil have not yet too severely affected the health of the bird, it may be sought to be remedied by puncturing the gland, compressing it frequently, bathing the bird with a syringe, and plucking out some of the feathers of the tail.

THE WOODLARK.

The accumulated fat is absorbed in the renewal of the feathers when the gland resumes its natural functions."

Another disease to which the woodlark is subject, is peculiar to that bird alone,—a sort of ossification of the legs and feet. As the woodlark grows old, his feet become more and more brittle, and not unfrequently a toe will chip off as though it were glass. What is more remarkable, the bird does not seem to suffer the least pain from the accident. I have both read and been told that instances have been known of the bird's leg snapping short off at the thigh, but such a case never fell under my observation. Cleanliness is the only remedy for this complaint, especial care being taken that hair, or anything else likely to tangle about the bird's feet, is removed from the cage.



NEST OF THE WOODLARK.

TITMICE.

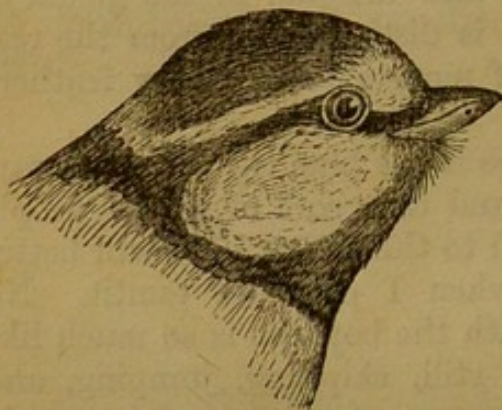
The "tit" family is exceedingly numerous. There is the "Ox-eye Tit," the "Cole Tit," the "Blue Tit," the "Bottle Tit," the "Marsh Tit," the "Crested Tit," and the "Bearded Tit." As regards the two latter, however, passing mention will be sufficient, as it is unlikely that the reader, unless he be a Swede, or a German, or a Russian, ever saw one or the other, unless it was among a collection of stuffed birds. As its name implies, the crested tit has a tuft of feathers surmounting its head. It is a solitary bird, and delights in the gloom of dense forests. The bearded tit is distinguished from the rest of its species by a funny sort of moustache of glossy feathers overhanging its beak.

The best known of the tit tribe is the blue tit, that is to say, it is best known to naturalists, and that sort of severe people by that name; but I am inclined to think that boys will better recognize their little favourite when I call him tomtit. No wonder he is such a favourite with the boys, he is so much like themselves. Never a moment still, skipping, jumping, and hopping here and there, turning summersaults round its perch, tormenting its fellows, brimming over with fun and mischief. The gardener gives Tom a dreadful character. He calls him a thief, and declares that he is never to be seen without a bud in his mouth, so in the spring time the gardener has ever got a loaded gun "round the corner" to shoot poor Thomas down. As he ever was, and (it seems) ever will be, the gardener is a blunderer. It is quite true that Tomtit is seldom seen without a bud in his mouth, but it is equally true that the bud is *certain* to contain a worm. It is the worm, not the bud, that is the attraction. "I would not so much care," said a gardener to me, "if the little imps would fill their bellies with the buds and have done; but they are so wasteful, just pick out the hearts, and then throw them away." For Tomtit's sake I did my best to convince this dense-headed gardener that the bird merely laid the bud sufficiently open to get at the worm; he merely shook his head, and replied that "it was all very well for gen'lmen as didn't grow fruit to stick up for the warmint, but they warn't agoin' to knock that sort of logic into him."

The plumage of the tomtit is very beautiful. The front of his head and the sides are white, and a streak of white extends backward over the eyes to the nape of the neck. Within this

pearly setting is his crown of dazzling azure blue. His back is of a bright olive-green, the under part of the throat is black, the wings are sky-blue tipped with white, and his tail is as brilliant as his crown. The female, although equally active and amusing, is not near so handsome as her husband. She is rather smaller in stature, and the blue of her plumage is generally toned down with grey.

"The bill of this bird," says a naturalist, "is exceedingly strong, and from the active industry of its habits I have little doubt that when it cannot find a hole suitable for its nest it either hews one out or enlarges it to its mind. In one of these



THE BLUE TIT.

nests which I lately examined in the hole of an oak at Shooter's Hill in Kent, the wood, which was, indeed, decayed and soft, had evidently been cut away, so as to give an upward winding entrance to the nest, and I have remarked a similar winding either upward or on one side in the nests of this bird in old stone walls, mortar or small stones having pro-

bably been removed with this design. The power of its bill in such cases I had an opportunity of witnessing in one which was kept in a cage. In a common wire cage it could not be confined for many minutes, as it always warped the wires aside, first with its bill and then with its body, till it got out; but it did not find it so easy to escape from a cage made with netted wax thread, upon finding which unmanageable it attacked the woodwork, and into one of the dovetailings of this it thrust its bill, acting with it in the manner of a wedge. It was unsuccessful, indeed, in unhinging this, but I have no doubt that half the force and skill it exhibited would have proved sufficient to hew out a nest-hole in a decayed tree."

As regards the strength of the tomtit's beak, or rather of the muscular power of his thick bull-neck, a friend of mine experienced an unpleasant practical instance. Besides a tomtit he kept an aquarium, a handsome glass-panelled affair, plentifully stocked with fish, lizards, beetles, &c. The contents of the glass cistern were evidently a subject of great perplexity to the inquisitive little tit (who, by-the-bye,

was allowed to fly free about the room). He would perch on the back of a chair, wagging his bullet-head with the utmost gravity, and watching the water animals as they sported about. One day, however, Tom for the first time observed a lizard crawling up the glass. Uttering a shrill cry, either of fear or defiance, he suddenly darted at the reptile, striking the glass with such force that the whole side was shattered to pieces, and the apartment at once deluged.

The tomtit most frequently builds in oak or beech trees, and his nest will be found near the top. They lay as many as ten eggs, of a pink ground, and speckled with brown.

There are various methods of snaring birds of the tit tribe, but those most worthy of recommendation on account of their simplicity and success are those spoken of by Bechstein in his "Chamber Birds." He says:—

"In autumn or spring you go with a call bird, which is kept in a square bird-cage, to such places, especially orchards, where these tits resort, and place the cage upon the ground, and plant obliquely some sticks to which limed rods are attached. When they hear the decoy bird, curiosity, or the desire to join a fresh companion, soon brings them down. This is rendered more certain if a pipe be made of the hollow bone of a goose, the sound of which being heard to a greater distance, will bring all the tits together throughout the neighbourhood.

"In winter they may be attracted to the trap in gardens, if baited with the kernels of nuts, bacon, and oats. This trap is a small box, a foot long and eight inches high and broad, the sides of which, if you happen not to have boards painted green, may be made of elder sticks, which are propped by four round corner pillars, and then it only requires a wooden floor and covering tied to the corner sticks. In the centre of the floor is a little peg, across this a transverse stick is placed, upon which, on one side, the half of a walnut is fixed, and on the other a piece of bacon; upon this rests another stick, which keeps the cover open about three or four inches. When the tit jumps



THE OX-EYE TIT.

upon the transverse wood, or pecks at the nut or the bacon, the roof falls, and the bird is caught. The cage is placed upon a tree with some thrashed oat-straw spread beneath it, to which the tits fly, and which they can observe from a distance."

When the tomtit is first caught, it should be plentifully supplied with crushed hemp-seed. Its general food should be insects and grubs of every description. In the autumn it will enjoy pulpy berries of all sorts. They drink a great quantity of water, and care should be taken that they always have plenty both for drinking and bathing.

THE OX-EYE TIT.—With the exception of the bearded tit, the ox-eye is the largest of his tribe. He is not such a pretty fellow as his little brother Tom, nevertheless he is by no means unhandsome. His poll is glossy black, his cheeks are snowy white, his back dark green, and his breast of a rich greenish yellow; the wings bright brown tipped with white, the tail dark brown and blue and white. The hen ox-eye may be known from her mate by being smaller, and altogether more dingy in appearance.

The ox-eye tit is by no means particular as to where he builds his nest—in a bush, in a hole in a wall, in a tree stump, or in the summit of one that towers fifty feet above the earth. If it can find an old magpie's nest, it will not take the trouble to build at all, but just pull it together a bit, line it with a few feathers and a little moss, and proceed to lay. The eggs laid are from eight to ten in number, cream coloured, and dotted and striped with purple. A nest of ox-eye tits may frequently be found literally filled with stout and apparently able-bodied birds, and this is accounted for by the fact that a young ox-eye cannot fly till it is nearly full grown. It must be terrible work for the old folks to be obliged to find food for so many big sons and daughters for so many weeks!

In its wild state the food of the ox-eye tit consists of insects, seeds, berries, caterpillars of all sorts and sizes, flies, bees, gnats, grasshoppers, &c. &c. It is even said that they will greedily devour carrion. In captivity they are very accommodating in their tastes. They will breakfast with you on roll and butter, and even assist you with your egg or rasher; they will dine with you whatever your joint, or whether it be roast or boiled, fat or lean (they prefer the former); vegetables of all sorts and puddings they are very partial to. After dinner they will take a morsel of cheese with much relish, and if you are rich enough to indulge in dessert, a bit of fruit, a Barcelona, or a walnut

will be most thankfully received. He makes but one stipulation—he must have enough. This must be specially looked to, if he happens to live loose in an aviary with other birds, for—it is a terrible accusation to bring against so pretty a creature—the ox-eye tit is a cannibal! Should the pangs of hunger assail him, he will find consolation in the skulls of his comrades. Like all of the tit tribe, he has a powerful spear-like beak, and he makes terrible use of it. When hungry, he is a perfect little demon; and no matter that his companions are bigger and stronger than himself, chaffinches, linnets, and canaries, he will mount on their backs, cleave their heads asunder with his awful bill, and sup on their brains! Brutal-minded bird-fanciers have been known to keep “fighting tits,” and back them for sums of money to slaughter so many sparrows in so long a time, and they have been known to kill birds as large as the lark and thrush. Tit fighting, however, along with bird blinding, and other monstrous practices of a kindred nature, is, I am happy to say, fast disappearing.

The best cage for the ox-eye, indeed for all kinds of tits, is the bell-shaped, and constructed entirely of wire. Their song is by no means to be despised, for though it is not loud it is very melodious and varied. They have a capacity for learning the notes of other birds, and with patience and good victuals may be taught to perform almost as many tricks as the bullfinch.

THE COLETIT.—This lively little creature is smaller than the last-mentioned, and not so varied in its plumage; indeed, with the exception of its vividly marked piebald head and neck, it is as soberly attired as a sparrow. Like the rest of the tit tribe, it seems utterly indifferent as to the situation of its nest. I have seen a coletit's nest taken from a hole at the foot of a tree, and have heard birdcatchers say that deserted molehills are much patronized by coletits in search of a building site. The nest is not at all a neat affair; indeed, it is so loosely put together that it is impossible to take it up entire. They lay from six to nine eggs, of a dazzling white ground dotted with bright red spots.

It sings but indifferently; indeed, it can be scarcely called a



THE COLETIT.

TITMICE.

song, as its only utterance is "sifi, sifi, sifi," repeated in sudden bursts with a clear bell-like sound. Its chief recommendation as a cage-bird is its incessant activity. In a wild state it is their habit to make provision for the winter by collecting and concealing seeds, nuts, &c., in crevices and between the bark and wood of trees. This storing propensity is not forgotten by them when in confinement. If in an aviary, they will select an obscure corner and there hide away as much seed as the magazine will hold, guarding it with jealous care, and occasionally overhauling it to see that none has been removed. Even when by itself in a cage, it will empty the seed-box and pile the seed in a corner, covering it over with whatever it can scrape together. That their intention really is to "put by for a rainy day," a coletit possessed by a friend amply convinced me. Hearing that the little creature was addicted to concealing the contents of its seed-box, I persuaded my friend not to replenish it for a day or two. The result was that the tit sat for a long time regarding his empty glass, and then, seeming to think that "hard times" had really come, he uncovered his magazine, made a scanty meal, and covered it over again. For three days he was thus left to himself, and such was his economy that at the end of that time he had not consumed more than he did in one day in times of plenty.

Respecting the tits' eccentric notions of what is an eligible building-site, Stanley relates that a pair of these birds built their nest in the upper part of an old pump, fixing it on the pier on which the handle worked. It happened that, during the time of building and laying the eggs, the pump had not been in use; when again set going the female was sitting, and it was naturally supposed that the motion of the handle would drive her away. The young brood, however, were hatched safely, without any other misfortune than the loss of a part of the tail of the sitting bird, which was rubbed off by the friction of the pump-handle. The same authority tells of another pair of titmice, who fixed on a frightful spot for their nest—the skeleton-mouth of a man hung in chains for murder.

THE LONG-TAILED, OR BOTTLE-TIT.—As truly says Bishop Stanley, the tit tribe might be called our minor jackdaws, so pert and bustling, never at rest, always prying about, peering into every chink and cranny, and even in the breeding season,—when most birds retire to more unfrequented haunts,—still lurking about our homesteads, and building their odd little nests in the oddest situations.

Busy, prying, industrious as any of its brethren, this tit with the long tail stands pre-eminent as a nest-builder. Mr. Yarrell, the distinguished naturalist, says of the bottle-tit's nest, it is an example of ingenious construction, combining beauty of appearance with security and warmth. In shape it is nearly oval, with one small hole in the upper part of the side, by which the bird enters. I have never seen more than one hole. The outside of this nest sparkles with silver-coloured lichens adhering to a firm texture of moss and wool; the inside profusely lined with soft feathers. The nest is generally placed in the middle of a thick bush, and so firmly fixed, that it is mostly found necessary to cut out the portion of the bush containing it, if desirous of preserving the natural appearance and form of the nest. In this species the female is known to be the nest-maker, and to have been occupied a fortnight or three weeks in the completion of her habitation.

The long-tailed tit, however, is not the only bird that builds a bottle-shaped nest. There is a sparrow peculiar to Hindostan, called by the natives "baya," who not only weaves a "bottle" of long grass, but that it may be further secured from the attacks of serpents and monkeys, hangs it at the end of a slight branch. Nor is this the most wonderful feature of the "baya's" nest. To quote the words of a naturalist, "the nest contains several apartments appropriated to different purposes; in one the hen performs the office of incubation; another, consisting of a small thatched roof and covering a perch, without a bottom, is occupied by the male, who, with his chirping note, cheers the female during her maternal labours."

Bechstein is the only naturalist who has placed the bottle-tit in the list of British song or cage birds. Indeed, it is no easy matter to reconcile the little bird to the "place" assigned it. It is as tenacious of its liberty as a young gorilla, and will, unless food be forced into its mouth, prefer starvation to your tame prison fare.

The number of eggs laid by the bottle-tit is very large,—ten, twelve, and even fourteen of the tiny white red-speckled things being found in one "bottle." The young brood of the year keep company with the parent birds during their first autumn and winter, and generally crowd close together on the same branch at roosting-time, looking, when thus huddled up, like a shapeless lump of feathers only. They have several notes, on the sound of which they assemble and keep together.

TITMICE.

One of these call-notes is so soft as to be scarcely audible to the human ear; a second, the sweethearting call, is a sort of shrill rattling twitter; and a third, a hoarse croaking note, emitted when the bird is jealous or angry.

The chief malady with which birds of the tit tribe are afflicted is epilepsy. The cause is over-feeding and want of sufficient exercise. The cure is daily syringing with ice-cold water, and two drops of olive-oil every other day in the water they drink. Atrophy is another disease to which they are liable; and to cure this they should be plentifully supplied with fresh ants' eggs. In this latter case, a moderate quantity of green stuff—a sprig of watercress or a bit of lettuce-leaf—may be given advantageously.

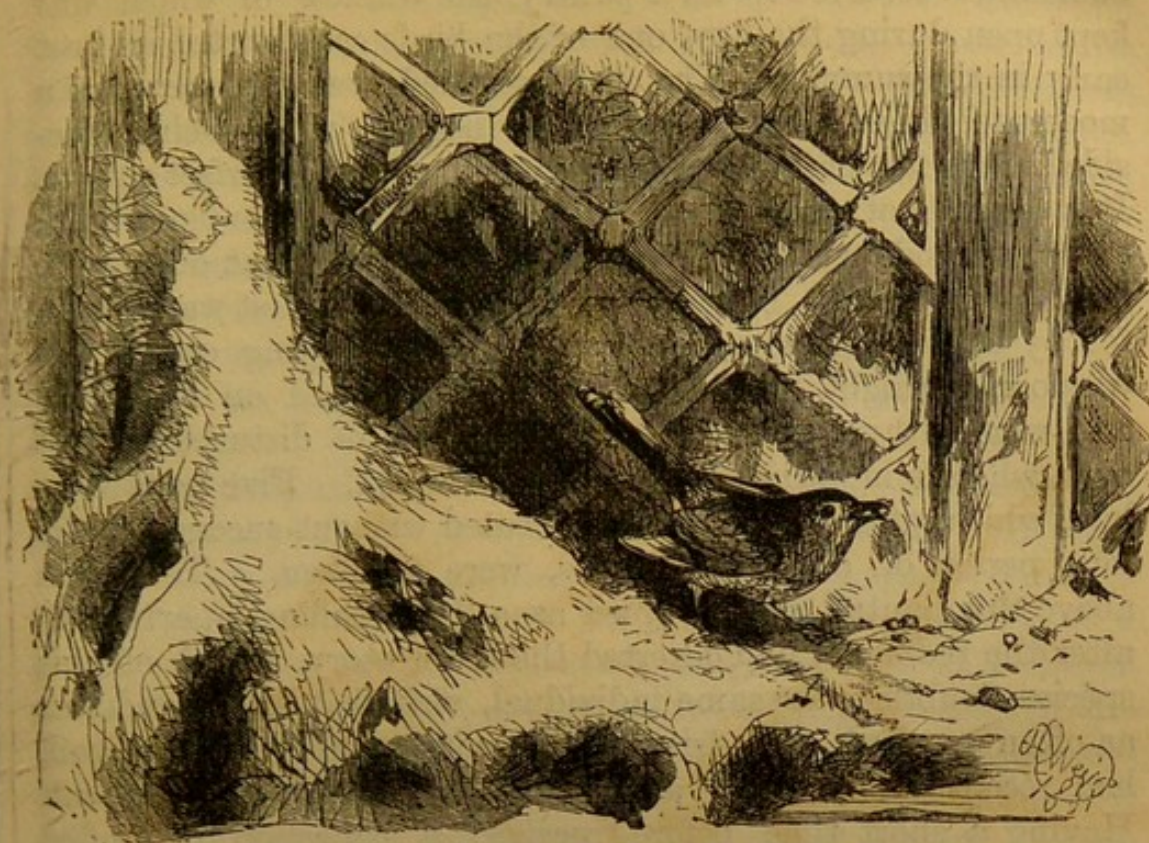


BOTTLE-TIT'S NEST.





THRUSH AND BLACKBIRD.



THE REDBREAST.

ITS HABITAT.—Without doubt the redbreast, or robin redbreast as he is familiarly called, is the most popular bird in England. He is equally well beloved by young and old. Little children, at least when they become old enough to be acquainted with the doleful history of the "Babes in the Wood," look upon him with awe and admiration; the schoolboy hurrying along in the morning, bread and butter in hand, breaks a piece and throws it to "Robin;" the ploughman picks up the unearthed worm, and tosses it to the expectant bird; the angler spares a "gentle" to the little inquisitive redbreast who sits in a bush near at hand, curiously watching the process of baiting the hook; and even the surly gardener, although he suspects (and not without reason) that master Rob is an orchard robber, a glutton for currants and ripe berries, forgives and tolerates him for his sociality and courage.

As a wild bird, the robin is a respectable member of society, and has many excellent qualities. He will often take up his abode *indoors*. Several instances are recorded of this peculiarity by Mr. Thompson: in all the cases, however, "shrubberies and plantations were quite near to the chosen spot." "At Fort William," says he, "the seat of a relative, the following cir-

cumstance occurred :—In a pantry, the window of which was kept open during the day, one of the birds constructed its nest early in the summer. The place selected was the corner of a moderately high shelf among pickle bottles, which being four-sided, gave the nest the singular appearance of a perfect square. It was made of green moss, and lined with a little black hair; on the one side which was exposed to view, and that only, were dead beech leaves. When any article near the nest was sought for by the housekeeper, the bird, instead of flying out of the window, as might have been expected, alighted on the floor, and waited there patiently until the cause of disturbance was over, when it immediately returned to its nest. Five eggs were laid, which, after having been incubated without success for the long period of about five weeks, were forsaken. The room above this pantry was occupied as a bird-stuffing apartment: after the redbreast had deserted the lower story, a bird of this species, doubtless the same individual, visited it daily, and was as often expelled. My friend, finding its expulsion of no avail, had recourse to a novel and somewhat comical experiment. Having a short time before received a collection of stuffed Asiatic quadrupeds, he selected the most fierce-looking carnivora and placed them at the open window, which they nearly filled up, hoping that their formidable aspect might deter the bird from future ingress: it was not, however, to be so frightened ‘from its propriety,’ but made its *entrée* as usual. The walls of the room, the tables in it, and nearly the entire floor were occupied by these stuffed quadrupeds. The perseverance of the robin was at length rewarded by a free permission to have its own way, when, as if in defiance of the *ruse* that was practised against it, the place chosen for its nest was the head of a shark, which hung on the wall (the mouth being gagged, may have prevented its being the site); while the tail, &c., of an alligator stuffed served to screen it from observation. During the operation of forming this nest, the redbreast did not in the least regard the presence of my friend, but both man and bird worked away within a few feet of each other. On the 1st of June I saw it seated on the eggs, which were five in number; they were all productive, and the whole brood in due time escaped in safety.” A similar, and still more remarkable instance of this bird’s social qualities is related by the same authority. The story was given to him by a relative. “The two nests of a robin in the carpenter’s loft are placed on the corner of the wall supporting the roof; the foundation that serves for both nests is a

quantity of wood shavings, of which the sides of the nests are likewise formed, together with green moss, beech leaves, wool, tufts of cow hair, &c., but they are lined with horse hair only. The mass of materials of which these two nests are made, is about a foot and a half in length, eight inches in breadth, and five inches in thickness. On wet days the male bird kept much within the loft and sang there. The carpenter tells me that only one of them collected the leaves and shavings; this individual was known from its wanting its tail; it made very free with his pot of grease, and pecked from it while in his hand."

In the "Magazine of Natural History," published some years ago, there is a record of two robins building their nest on a bible, which lay in a reading-desk in the parish church of Hampton, in Warwickshire. Mr. Jesse makes mention of a robin, which for several successive years resorted to a church at Dudley, Staffordshire; during divine service the song of the bird would be heard mingling with the voices of the people and the deep solemn tones of the organ. In this way, the people got very attached to the pretty little warbler, and his absence one day was particularly noted, much to the sorrow of the congregation. But he returned no more, and some years afterwards, when our robin was almost forgotten, or the reminiscences attached to it were perhaps only to be found in the storehouse of memory, the organ was pulled down to be cleaned, and then, in one of the pipes, they discovered the skeleton of the redbreast.

A curious fact connected with this bird's nidification is the variety of material with which it builds its nest, as some think, varying with the situation in which it is placed. A very creditable authority thus alludes to this singular habit:—"The robin, which had its nest on the shelf of the greenhouse, surrounded it with a great quantity of oak-leaves; while another, which for two years built amongst the straw which covered some seakale in my kitchen-garden, formed it of a small quantity of moss only, lined with hair. Another, which built in a trained gooseberry-bush, against the wall, used also moss and hair, with some few oak-leaves: and, in some instances, where these birds have used a large hole in a bank to build their nest in, the sides of the hole have been completely filled in with a great quantity of oak-leaves. I am inclined to think that some birds, and the robin amongst the number, vary the materials with which their nests are built, not so much from the

difficulty of procuring them, as for the purpose of assimilating them more nearly to the appearance of the objects which surround them."

With regard to the *song* of the redbreast opinion greatly varies, inasmuch that a correspondent in the "Natural History Magazine" calls attention to the superior notes of the robin, and even goes so far as to compare them with the song of the nightingale,—not much in favour of the latter. I cannot, however, agree with such a notion; and if Philomel has no greater opponent to the throne of song than he of the red breast, he need not fear the loss of the "purple." Setting aside any such lofty pretension, the robin must be considered as a very lively and pretty songster; he sings nearly all the year round—the depth of winter excepted,—and even then he does not altogether deprive us of his pleasant harmony. Even in the winter months, a bright sunny day is apt to excite the robin to perch upon a twig, and pour forth a sweet, though broken, melody.

The redbreast sings very often after daylight has faded, and it is recorded that one was heard piping in the most joyous manner in the middle of a moonlight night. Sometimes several of them may be heard singing in unison, which often, like the harmonious meetings of a sister nation, ends in a regular "row" and fight. Although the robin is so susceptible of cold, he will often be heard in the coldest season trilling forth his notes, when all the other birds have long since deserted us.

Like the chaffinch, the redbreast ranks somewhat as a pugilist among his feathered friends; and a curious instance of this is related by Thompson:—

"Their (the robins) being so wholly absorbed during combat as to be regardless of all else, was ludicrously evinced at Springvale, by a pair fighting from the air downwards to the earth, until they disappeared in a man's hat, that happened to be lying on the ground, and in which they were both captured." The same authority relates one or two more anecdotes of the robin's pugnacity, which, as they are somewhat remarkable—and, without doubt, strictly veracious,—I shall quote them for the delectation of my readers. "On one occasion," says he, "two of these birds, caught fighting in a yard at Belfast, were kept all night in separate cages. One was given its liberty early in the morning, and the other being more tame—possibly from having been the better beaten of the two,—was kept with

the intention of being permanently retained. So unhappy, however, did the prisoner look, that it, too, was set at liberty in the yard, which was believed to be its chosen domicile. The other came a second time and attacked it, when my informant, who was present, hastened to the rescue, and the wilder bird flew away. The tamer was again caught and brought into the house for safety. The intruder was now driven out of the premises, and in the evening, when it was suspected that he was in a different locality, the other bird was turned out; its wicked and pertinacious antagonist, however, still lay in wait, a third time attacked, and then killed it. The tame bird, though the inferior of the other in strength, always 'joined issue' with it, and fought to the best of its poor ability." The same gentleman was also one day at a place called Wolf Hill, when he saw two robins fighting most obstinately in the air. After a time, becoming tired and losing breath, they alighted on the ground to recover themselves preparatory to a renewal of the conflict; and in due time were ready to commence again, when a pacific old duck, who had, no doubt, been calmly watching their proceedings, deliberately waddled up, and pushing one to the right and the other in an opposite direction with its beak, at once prevented further hostilities—at least, while the gentleman remained.

It has been known to penetrate even the prison of its enemy to gratify its vengeance, as is shown by the following communication from a correspondent:—"The parlour window was open, and I was sitting close to it, in the evening, reading and making the most of the fading light. Presently, with a screaming and fluttering, the window entry was invaded by two little birds, one chasing the other. In my astonishment I pushed out the open book, and thus parted the belligerents, the hindmost one coming with a tremendous bang against the open pages; but, instantly recovering itself, darted out into the garden, leaving its companion panting on the summit of a clock standing on a bracket. The window was closed, and the prisoner robin secured and taken to another apartment. More than half an hour afterwards, and when it had grown quite dark, the window was again opened, for the purpose of showing a friend the exact position of things when the invasion occurred, when, with a sharp cry, the vindictive redbreast that had been shut out darted into the room, circled round it twice in search of its foe, and, finding it not there, scrambled through the window again, with a low 'chick, chick,' of disappointment."

Jesse also bears witness to the redbreast's extreme pugnacity. "I lately observed," says he, "two of them, after giving the usual challenge, fight with so much animosity that I could easily have caught them both, as they reeled close to my feet on a gravel-path. After some time, one of them had the advantage, and would have killed his opponent had they not been separated. Indeed, these birds will frequently fight till one has lost his life."

"One of these birds," says another authority, "killed *upwards of twenty* of its own kind, merely because they came into a greenhouse which he chose to arrogate to himself."

The robin's courage is inherent, and it must not be supposed that it needs the biting frost and cold of winter to freeze every atom of fear and timidity out of his brave little heart ere he exhibits anything like real pluck. I should be sorry if it were otherwise; because then all the wonderful stories we hear of him would seem only to prove that it was not courage at all, but merely the recklessness of self-preservation. He is just as brave and daring in the summer as he is in the winter, and from a far higher motive than that of filling his empty belly, viz., defending his young. A remarkable instance of this came under my own observation a few years ago.

Near the market-place at Brentford there was a blacksmith's shop, and it happened at the beginning of April (just when the robin begins to lay) that the blacksmith was so slack of work that he shut up his shop, and did not go near it for some weeks. There was a broken window in the smithy, and on the top of the big bellows was a little old saucepan with which the smith used to bale water on to the fire. About the end of April work came in, so the blacksmith unlocked his workshop door, and began to make his fire up. He had not been in the place many minutes, however, before he became aware of a twittering, and on looking about he discovered five unfledged robins in their nest in the little saucepan on the top of the bellows. He had barely made the discovery, when the father of the little brood made his appearance at the broken window, with a worm in his mouth. Instead, however, of being afraid, and flying away (to use the blacksmith's own words), "there he stayed, looking as indignant as though I had invaded *his* premises rather than *he* mine." Presently the hen robin also made her appearance, so the good smith resolved to put back the saucepan as he had found it, and to go on with his work. The old birds immediately flew in, and, delivering the worms

into the expectant little beak, went off again. When they returned, the bellows was going, the fire roaring, and the smith hammering, still the brave little robins were nowise disconcerted; they flew on to the heaving bellows, backward and forward, all day long, and when the evening came they perched on the edge of the saucepan, and tucked their heads under their wings. When I saw them, the fledglings had just begun to fly, and were all perfectly hearty and contented.

In connection with the robin's affection for its young, a story is related of a gentleman who gave directions for a waggon to be packed with sundry hampers and boxes, intending to send it to Worthing, where he himself was going. For some reasons his journey was delayed; and he therefore directed that the waggon should be placed in a shed in his yard, packed as it was, till it should be convenient for him to send it off. While it was in the shed, a pair of robins built their nest among some straw in it, and had hatched their young just before it was sent away. One of the old birds, instead of being frightened away by the motion of the waggon, only left its nest from time to time for the purpose of flying to the nearest hedge for food for its young; and thus, alternately affording warmth and nourishment to them, it arrived at Worthing. The affection of this bird having been observed by the waggoner, he took care, in unloading, not to disturb the robin's nest; and the robin and its young ones returned in safety to Walton Heath, being the place from which they had set out, the distance travelled not being less than 100 miles.

That the robin can in the summer be sociable of his own free will, and without any selfish inducement, is attested by that unimpeachable naturalist, Gilbert White. He says, "During my early days a redbreast attached itself to us, and not only favoured us with his company during the frosts of winter, but continued his visits during summer. On hearing his name, 'Bob,' he would chirp in reply, and come to see if there was any food for him. We have recognized him while walking, and heard him respond to his name. He used to come and sit by while we fed the rabbits, and at last became so impudent as to sit on the edge of a pan from which a rabbit was eating, and assist in the demolition of his dinner."

I myself know of an instance of a robin not only knowing and answering to the name by which it was christened, but also exhibiting evidence of a first-rate memory and no little affection.

THE REDBREAST.

There is a lady-friend of mine at Enfield who has a large troop of bird pensioners of one sort and another, who are the constant recipients of her bounty through the winter. Among the rest was a knowing old robin whom she called "Samuel." He, however, was a bird of independent habits, and would not be beholden to his benefactress for a crumb, only when he was completely starved out of the woods and gardens. As soon as the winter gave signs of breaking, Samuel would be off to look for his living, and seldom made his appearance till the fall of the year. One October afternoon the lady in question was out walking at least three miles from home; suddenly we heard a sharp "chik, chik" from a hedge near at hand, and immediately a robin flew past, within a yard of us. "That is marvellously like my Samuel," said the lady. "Sam! Sam!" "Chik, chik, chik," replied the bird, and again brushed near us. This was repeated at least a dozen times, and ended in the truant Samuel following his mistress right home. He at once took up his quarters in the garden behind the house, and abided there all the winter.

SUPERSTITION CONCERNING THE REDBREAST.—The amount of superstition respecting the robin that is displayed by people of the lower, and I should, perhaps, say the lowest classes, is almost incredible. It is universally believed by them that the redbreast never lives longer than thirty days in confinement. Even among bird-fanciers of the lower order this belief is prevalent; they won't keep them for sale, and when, on one occasion, I pressed a fancier for his reasons, he replied, "Well, some says it makes no difference, and some say it ain't lucky to have robins in the house; anyhow, I likes to be on the safe side, so I don't have no truck with 'em."

So settled and deep-rooted is the prejudice among the poor against robin-keeping, that several rhyming proverbs are known among them, deprecatory of the practice. One is,—

"Robins and swallows
Are God's own scholars."

You perceive it is necessary to pronounce swallows "swallars" to make the rhyme perfect, but with some people this is no great difficulty. Another runs,—

"When you go to catch a robin,
Mind you don't come back a sobbin'."

A third is,—

"The red on the breast of a robin that's sought,
Brings blood to the snarer by whom it is caught."

There are several others that I have heard, but of which I have now no recollection. At the present time I know of an honest fellow,—a fish-porter at Billingsgate market, who has been a bird-breeder for several years. He shared the general prejudice against robin-keeping; but meeting with a rare bird, and being over-persuaded by his wife, he resolved to buy him. He did so, and hung it in his room, where it sang splendidly. However, as ill-luck would have it, the very next week three of his children took measles, and were very ill indeed. All one evening he sat smoking and brooding over the fire, till at last he exclaimed to his wife, "Polly, you may depend it's that blessed robin that gave the children the measles." "I don't think they could catch it of a little creature like that," replied Polly; "besides, Ned, I never heard——" "I don't mean, you stupid woman, that the young 'uns caught it of the robin; I only know and believe it's all come about through caging him up; so you see, Polly, our best plan will be to send the bird off, and let the babies get well again!"

So he at once opened the window, and let the redbreast go. I have no doubt, that when the blissfully ignorant fish-porter reads this he will think it very unkind of me thus to publish his weakness, but the story furnishes so apt an illustration to my subject that I could not forbear relating it.

I confess I am somewhat loth to meddle with a belief, which, though undoubtedly fallacious, does its possessors no harm, while at the same time it secures to thousands of these little birds their freedom; yet I see no reason why Master Robin, who of all birds is the first to apply to us when he is in distress, should not share with his equally handsome, capable, and, in many instances, much more delicate and sensitive brethren, their present bondage; therefore I will venture to instruct you how to manage him.

ROBIN TRAPS AND SNARES.—There are several methods, but that which is easiest, and in my opinion the most successful, is called "chinking for robins." You must have a "clap-trap," which, it may be as well to mention, is a piece of board, to each side of which half a net is attached. When the trap is set, the net lies flat on the ground, but by touching a spring in the middle of the board, and which is connected with the net, each side of the net flies up, claps to, in fact, and secures the bird. When I say that the principle of the clap-trap is exactly that

of the common iron-toothed rat-trap, I have no doubt it will be sufficient to enable the ingenious boy to construct one for himself. Besides the trap, you must take with you a handful of barley and two small pieces of slate. Find a neighbourhood where robins abound, set your trap, scatter the barley over the board, and taking a piece of slate in each hand, strike them twice sharply together, so as to produce a "tack, tack;" this is as near an imitation as possible of the call of the robin to its mate. Some birdcatchers use instead of the slate two old heavy penny pieces, but a little experience will convince anyone that the dull "tack, tack," produced by the former much more nearly resembles the call-note than the "chink, chink" of the pence.

Of course you will take care to conceal yourself while you are imposing on the credulous redbreasts with your slate. Presently you will hear a genuine "tack, tack," from a neighbouring bush, and then another from another quarter, then another, till you are surrounded by them, and on peeping from your hiding-place you will see half a dozen inquisitive little robins perched on the lowest branches of the hedge, endeavouring to spy out the newly-arrived "tacker." Although they may fail in discovering him, they certainly will not miss the glorious spread of barley that lies before them. Down they come, and the next instant a robin, sometimes two, will be regarding with consternation the net above their heads.

Another way (perhaps a better) of snaring the robin by the chinking process, is to have a braced redbreast attached to the trap-board instead of barley spread thereon. It is by no means necessary that your decoy should be a songster; but it must be a cock-bird and as lively and bold a looking fellow as you can procure. To brace a bird, it will only be necessary to pass over his body, beneath the wings, one of those India-rubber bands already recommended as being the best to confine a newly-caught bird's wings. Underneath, and between the bird's legs, attach to the ring a piece of silk cord of a dark colour. A small screw-ring should be attached to the trap-board, and through this ring the cord must be passed and secured.

Manage your pieces of slate exactly as above directed, and secure your braced decoy close to the spring that releases the net, but not so close that he can hop on to it. "Tack, tack," "tack, tack,"—the neighbouring robins hear the challenge and rouse up much as would Englishmen—ay, and English boys too, or I'm mistaken—were they to hear the banging of French

men-of-war guns near the English coast. Despite his many good qualities, there is no denying that the robin is a pugnacious little Turk, whom nothing delights more than a "row" and a battle. In less time than it takes to write, the challenge of your decoy bird, or rather the challenge you have made in his name, is accepted by a bold scarlet-breasted robin; down he plunges, and is yours. Make haste and remove him, however, for if you allow the captive sufficient time to recover his presence of mind, he will give your decoy such a mauling as may be the death of him.

NESTING FOR ROBINS.—As has already been intimated, the robin will build his nest almost anywhere. Truly says the poet,

"High is his perch, but humble is his home,
And well concealed; sometimes within the sound
Of heartsome mill clack, where the spacious door,
White with dust, tells him plenty reigns around;
Close at the root of briar-bush that o'erhangs
The narrow stream with shealings bedded white,
He fixes his abode and lives at will.
Oft near some single cottage he prefers
To rear his little home; there, pert and spruce,
He shares the refuse of the goodwife's churn;
Nor seldom does he neighbour the low roof
Where tiny elves are taught."

As a rule, however, the robin's nest may be sought for in thick bushes in quiet lanes, or among the thick ivy that covers old walls. It is not a particularly handsome nest, and is most generally composed of dried grass, moss, and dead leaves. The robin lays from five to seven eggs, and they are white, spotted with reddish brown. Sometimes, instead of spots, the marking takes the form of tiny rings.

THE MANAGEMENT OF FLEDGLING ROBINS.—If you want nestling robins, the time to search for them is the first week in May, as, generally, they will at that time be about a fortnight old. You will find the male and female nestlings much alike, namely, all yellow, but the male is invariably the brightest bird. Keep them in a basket, among some wool, and feed them every hour and a half with a mixture of shredded meal-worms and ants' eggs if you can procure them. If you cannot procure for them this diet, make them a mash of finely cut lean roast beef and boiled carrot. They are voracious little birds, and will eat till they die of surfeit if you let them. Enough at each meal will be four or five pieces (administered at the end of a feather) about the size of a horse-bean.

THE REDBREAST.

When they are pretty well fledged and able to shift for themselves, they may be put in a cage in which has been placed a layer of moss or wool to the depth of an inch. You may have to try three or four sorts of food before you hit on one that suits their appetites. Try first a mixture of bread-crumbs, boiled lean meat, and hard-boiled egg, mixed all together and mashed very fine. If they do not seem to relish this, make a fine paste of the following ingredients:—The crumb of well-baked stale bread, 3 oz.; barley meal, 2 oz.; and boiling new milk. It will be as well to soak the bread in cold water for a few minutes before you add it to the meal. Take care that you squeeze all the water out of it. It is, however, generally found that the first-mentioned mixture is greedily devoured by the young birds, especially if a few ants' eggs are mixed with it.

The cock may easily be distinguished from the hen bird, the latter being smaller, and the colour of the breast brick-dust yellow rather than red—at the same time, it must be borne in mind that the breast of the cock robin is more often an orange red than vivid scarlet. Moreover, the poll of the male robin is much brighter than that of the hen. Before the first moult, however, the plumage of the male is as near as possible the same as that of the female.

Handsome looking birds may sometimes be seen for sale with white or rather cream-coloured feathers in the wings or tail. This is managed by plucking out the feathers a month or so after the bird has recovered from a moult. The new feathers will be white. This, however, is a cruel practice, the adoption of which I by no means recommend. Besides, it is hardly worth the trouble, as feathers so produced are so weak and sickly as to break off or fall out with the least violence.

THE FOOD OF THE ROBIN.—Even in a wild state the robin has an extraordinary fancy for butter and grease of any kind. An eminent naturalist thus alludes to this peculiar taste:—“Butter is so great a dainty to these birds, that, in a friend's house, frequented during the winter by one or two of them, the servant was obliged to be very careful in keeping what was in her charge covered, to save it from destruction: if unprotected it was certain to be eaten. I have known them to visit labourers at breakfast hour to eat butter from their hands, and enter a lantern to feast on the candle. One, as I have been assured, was in the constant habit of entering a house in a tan-yard in Belfast by the window, that it might feed upon

tallow, when the men were using this substance in the preparation of the hides." Indeed, its exceeding fondness of this species of diet is so strong that it will even venture into danger for the sake of a few scraps of fat. A well-known authority makes mention of a robin that regularly visited the abode of a golden eagle at feeding-time;—"the robin, to my surprise, took the eagle's place on the perch the moment that he descended from it to the ground to eat some food given him, and, when there, picked off some little fragments of fat, or scraps of flesh; this done, it quite unconcernedly alighted on the chain by which the rapacious bird was fastened."

When caught and caged, the robin's singular appetite for fatty substances continues. The said appetite, however, must not be indulged; as, in the case of the American parrot, who, in a wild state, devours considerable quantities of salt, but to allow it to partake of it after freedom of limb has been denied it, will be to jeopardise its existence. As a caged bird, the food of the robin should be as follows:—

In the season when berries are plentiful, let him have an abundant supply, especially of ripe elderberries, of which he is very fond. A little bruised malt with the elderberries is a good thing. A few small tree-buds, or some grains of wheat that have begun to sprout. With this food, however, must be mixed lean meat, and as the bird will always neglect the latter for the former, it should all be mixed well together. Some birds are very fond of cheese, and in such cases it may be given with the fresh green food in lieu of meat.

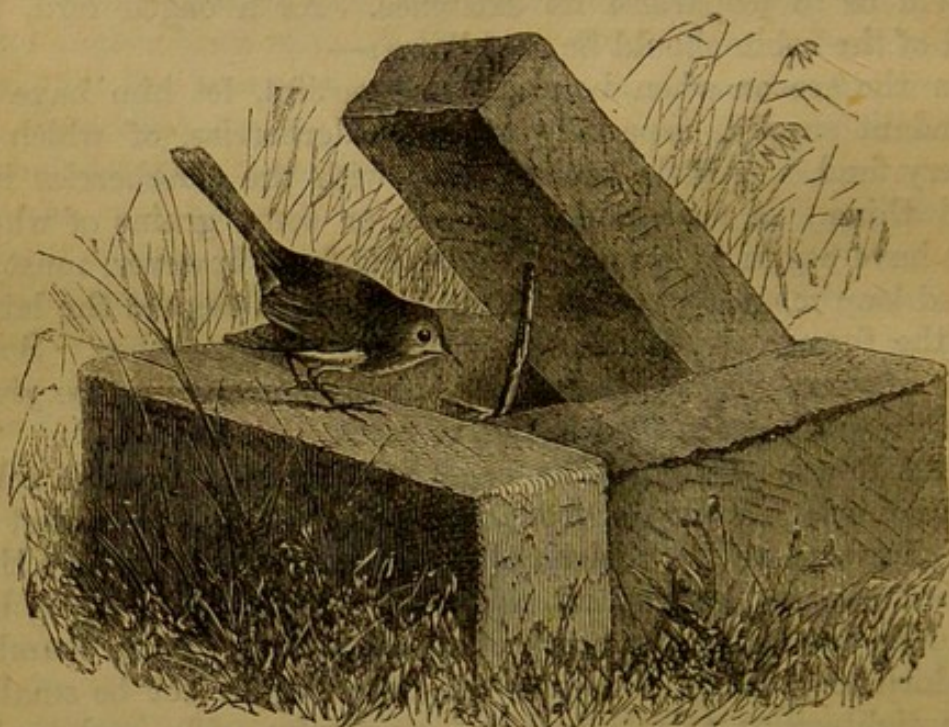
THE ROBIN'S CAGE.—The cage best adapted for the robin is one open only in the front, for not only is he subject to that tiresome habit "twirling," but is also so inquisitive that if his house is open at all sides, he will think of nothing but watching the actions of every other inhabitant of the chamber in which he is hung. In size the cage should not be smaller than eighteen or twenty inches long, twelve wide, and twelve high; the top of the cage should be arched, and covered with some elastic material, that he may not injure himself in flying upward. It will conduce much to the bird's comfort if the two perches are also tightly covered with wash-leather. The seed and food vessels should be placed outside the front of the cage, at the two extreme corners.

DISEASES OF THE ROBIN, AND HOW TO CURE THEM.—If he should be affected by dysentery, let his diet consist almost solely of ants' eggs, mealworms, and bruised malt. This

THE REDBREAST.

disease, which is so fatal to most birds, is by no means hard to cure in the robin.

Mealworms will also cure them of cramp. If they are troubled with giddiness, administer every day an earwig, or a green caterpillar. Sometimes, without any known cause, robins grow dull and melancholy; when this is the case, a marigold flower, chopped up with their food, will cheer their spirits. When he is moulting, put enough saffron in his water to slightly tinge it, and give him some poppy-seed. Let him have plenty of water to drink and bathe in. As regards this latter practice, no bird seems more to enjoy a bath than the robin; he will dabble about in the water till his feathers are all plastered down to his body, and he looks a perfect fright.



TRAP FOR THE ROBIN.



THE LINNET.

This modest little songster is a living contradiction of the old-fashioned proverbs, "Fine feathers make fine birds," "It is the coat that makes the man," &c. There is rather a large family of this sort of proverb, and the sooner they are banished from amongst us the better, as their teaching serves but to embolden the arrogant and dishearten those whose lot it is to strive and persevere with little present prospect of "fine feathers." Besides, even as regards birds, it is untrue—as regards flowers, as regards all nature, it is untrue. Who would think of comparing the kingfisher, with his blue and green and scarlet suit, to the little brown nightingale? Which is most prized, the gorgeous crossbill or the lark? among flowers, the lily or the tulip, the rose or the sunflower? among animals, the horse or the zebra, the fox or the honest cur? No, my boys, it is *not* the coat that makes the man; wealth without worth is a flower without scent, and good repute the most becoming coat a man can wear. However, this is not intended for a disquisition on stupid proverbs, so we will get back to the linnet.

To my fancy he is, without exception, the nicest little finch of the whole tribe; more grateful for kindness, more solicitous to please you than any other. It is by no means a fashionable bird, you will find more of them in the vicinity of "Butcher's Row," Whitechapel, than in Belgravia; but this is no criterion of the bird's worth, and the same remark holds good with all song birds except the canary.

THE LINNET.

HABITAT OF THE LINNET.—This little species of the finches arrives here in considerable flocks. "The young birds appear earliest, then the females, and lastly the mature males, which may be said to be the order of movement with all autumnal birds, how limited soever the distance to which they migrate." It is somewhat difficult to distinguish the male from his mate in a wild state, and Mudie says, "When one comes suddenly upon the linnét, attracted by his song, which, in the wilds, is particularly cheerful, it instantly drops into the bush, before its plumage can be very carefully noticed; and if one beats the bush out hops a brown bird, the female, and gets credit for the song of her mate. The deception, or the mistake, is further increased by the male ceasing his song and raising his alarm-call as soon as he is seen and until he disappears in the bush, for he does not generally fly out, but the female does, and, as is the habit of the female in many birds, she offers herself to the enemy, that is, tempts him, by short flights, to wile him away from the nest, and when the coast is clear she again flies into the bush, chirping softly the note of safety, and soon after the male resumes his song. Thus, though it is the male that is heard, it is the female that is most frequently seen."

If easily attainable, the linnét prefers wild open country, although they may be found in gardens and hedgerows. It builds its nest of dry leaves, wool, and hair, usually lining it with feathers. The linnét lays from four to six eggs, of a dingy bluish-white colour, with flesh-coloured specks. It has usually two broods in the season, the first in May, and the second in July or August.

THE LINNET'S VARIOUS COLOURS.—Writers of bird books are just now making a great fuss concerning what they seem to think a modern discovery. We are told not to be deceived by the cheating propensities of bird-dealers, who delight to palm off one sort of linnét for another. We are informed that the "yellow," the "brown," and the "grey" linnét is the selfsame bird, and that what we have hitherto known as the "greater redpole" is nothing else than a linnét in its third year. I don't know for whom the information is intended, but during my experience I never yet met a linnét-keeper who was not well aware of these remarkable facts, and who would no more think of confounding the birds than they would of attempting to catch them by the application of salt to their tails.

The simple fact is this. During its first year the linnét has no scarlet feathers in its head; it is then, as it is called, a grey

linnet. When it recovers from its *second* moult, the red of the breast blending with the amber edges of the feathers produces a golden hue; then the linnet is said to be yellow. After the *third* moult, the breast of the bird becomes a bright carmine, and the flanks the red of iron rust; now it is a "rose linnet." At this period he is in the prime of his plumage, and every successive moult he will become dingier.

But, after all, these remarks only apply to wild birds and perhaps to those reared in extensive aviaries. In a cage there is no depending on his colour, which is by no means certain to undergo the various gradations above described; indeed, the probability is that a caged nestling will never be anything but grey or at best a tawny yellow.

THE LINNET'S SONG.—Brown, or grey, or yellow, or red, his music will be the same; even sickness does not put his tiny pipes out, and, more wonderful than all, the older he gets, the better he sings! I have heard brutal, bird-blinding fanciers assert that this is solely because they have lost the use of their eyes; but this is incorrect, as I have seen many linnets extremely old, but whose eyes have not left them, sing magnificently.

Having made mention of "bird blinding," it may be as well to give some explanation. Will folks of the nineteenth century believe that there exist brutes in the shape of men who will deliberately *burn* out a bird's sight that *his voice may be strengthened*? They bind five fine cambric needles to a bit of stick, make them red-hot, and thrust them into the bird's eyes! Some barbarians, with more refined cruelty, will simply *glaze* a bird's eyes! This is done by holding a hot iron to the eyes till a film obscures them. This film wears off in a few months, and can be renewed again at the fancier's "pleasure." This last trick is principally resorted to by men who train birds to sing against each other. They say a bird will study his song better without his eyes than with them! Upon my word, such things almost make one believe in the possibility of stifling one's conscience altogether; surely, if bird blinders were as other men, they would hear, in the fervour of their sightless victims' songs, a prayer for vengeance, rather than an "improved tone."

The song of a linnet (a "battling" linnet he is called) who is trained to sing against another, is very different from that of the "weighed" linnet, who dwells on every note with wonderful exactness. This quality is not necessary to the battling linnet, whose sole business is to rattle out his notes as loud and

fast as he can, with a view of confusing, and, ultimately, of silencing his antagonist.

The song of the linnet consists of a number of sentences or "jerks," as they are called, and each one is so distinct from another, that the referee of a linnet singing-match will at once know if a bird repeat one "jerk" more than twice; if he does so it is not counted, nor is the note recorded unless it is fairly begun and finished. To the best of my recollection the following is the whole of the different "jerks" a linnet should utter:—"Tuck-tuck-fear." "Tuck-tuck-fear-ic-quake-a-weet." "Tuck-tuck-fear-ic-ic-ic." "Tuck-tuck-joeey." "Tuck-tuck-tuck-tuck-joeey." "Tollic-cha-ic-quake-a-weet." "Tuck-tuck-wizzey." "Tuck-tuck-wizzey-tyr-tyr-tyr-cher-wye-wye-cher." "Tolloc-ejup-r-weet-weet-weet." "Tolloc-ejup-r-weet-cher." "Tolloc-ejup-r-weet-weet-cher." "Tolloc-tolloc-cha-ic-ic-ic-quake-ic-ic." "Tolloc-tolloc-cha-ic-ic-ic-quake-ic-ic-tyr-fear." "Tolloc-tolloc-r-weet-weet-cheer-tolloc-cher-ejup." "Tolloc-tolloc-r-ejup." "Tolloc-tolloc-r-cha-pipe-pipe-pipe." "Tolloc-tolloc-r-ejup-pipe-pipe-pipe." "Lug-lug-g-cher-cher-cher." "Lug-lug-orchee-weet." "Lug-lug-g-pipe-pipe-pipe." "Lug-lug-g-ic-ic-ic-quake-e-pipe-chow." "Lug-lug-e-chow-lug-ic-ic-quake-a-weet." "Ic-ic-r-ejup-pipe-chow." "Lug-lug-e-chow-lug-ic-ic-quake-a-weet." "Ic-ic-r-ejup-pipe." "Ic-ic-r-ejup-pipe-chow." "Ic-ic-r-cher-wye-wye-cher." "Ic-ic-r-cher-weet-cheer." "Ic-ic-quake-a-weet." "Ic-chow-e-chow-ejup-weet." "Tyr-tyr-cher-wye-wye-cher." "Bell-bell-tyr." "Ejup-ejup-pipe-chow." "Ejup-ejup-pipe." "Ejup-ejup-poy-pew-poy-pew-poy" (this is their call-note). "Cluck-cluck-cha." "Cluck-cluck-cha-wisk-r-wisk." "Ic-quake-a-weet-r-cher." "Ic-quake-e-pipe-tollic-ic-tollic-ic-tolloc-ic-r-cher." "Fear-fear-weet-ejup-pipe-chow." "Pipe-pipe-pipe-pipe-ejup-ejup-ejup." "Ejup-r-lug-ic-ic-quake-a-weet." "Ic-ic-r-chow-ic-ic-r-ic-ic-quake-tyr-fear."

Talk of a peal of bells: fancy the industrious little linnet ringing all these changes on his pipes in less than fifteen minutes! I do not mean to say that a bird should be able to utter all the above array of "jerks" in order to be a good songster. Indeed, I daresay not one in half a dozen is master of so many sentences; still, if linnet keepers will take the trouble to listen to, and jot down the linnet's song, I promise its wonderful variety will astonish him not a little.

HOW TO NEST, SNARE, OR BUY A LINNET.—There are three ways of procuring linnets: in the nest, with snares, or at the

bird fanciers. If you mean to go nesting, the best time of the year for the purpose is the first week in May; because the brood will be hatched about the middle of April, and the nestlings will not be fit for taking in hand till they are fifteen days old. He is a very cunning bird in his wild state, and wonderfully clever in hiding his nest; so, unless you are diligent and persevering, don't go linnet-nesting. He generally builds in furze bushes which grow on heaths and commons, in all sorts of thick hedges that border grass fields, and particularly in sloe bushes and among the bristling foliage of "may" or white-thorn. The nest is small and compact, and composed chiefly of dried grass and moss. The eggs are very light blue, speckled at the larger end with small red spots.

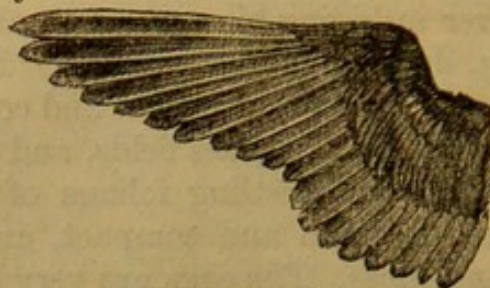
Of all birds, there is none so hard to *snare* as the linnet; indeed, "as shy as a linnet" is a bye-saying with bird-catchers. As these gentry say, "there is nothing about 'em to *work* on." They are neither inquisitive, like the robin; pugnacious, like the chaffinch; nor greedy, like the siskin; and they seem to scent "trap" as quickly as crows seem to scent gunpowder. The only snare I can recommend is that which is made by tying limed hazel twigs to the stalks of lettuces that have run to seed. The bird is passionately fond of lettuce-seed, and by the above means I have seen great numbers of linnets taken. Another way is to pull up the lettuce-stalks, and, spreading a "clap-net" on a common in the vicinity of furze bushes, to plant the sticks in the ground between the meshes of the net.

If, however, you prefer purchasing them, be careful to what dealer you go; however, if you carefully follow the following directions, you will successfully circumvent the birdseller, be he ever such a cheat. In the first place, choose a bird that stands bold and upright on his perch; not a bird that crouches down, so that half his legs are hidden by his body. Let it have a broad flat head, and see that its feathers are sleek and smooth. Look particularly to its tail; if the feathers of that appendage are whole and sound, the bird has a good temper; if, on the contrary, his tail is scrubby and ragged, don't buy him, for he has a bad temper; and a bad-tempered bird, like a bad-tempered boy, is never "worth his salt," as the saying is.

Having satisfied yourself as to the appearance of the bird, make certain of its sex. Take it in your hand, and spread out the wing. If it is a cock-bird, you will find four or five of the feathers edged with snowy white, which is continued up to the

THE LINNET.

quill; besides this, the cock-bird has a white collar and a little white in the tail-feathers. The hen-linnet is altogether smaller, and of a lighter and more uniform brown than the cock. If it is a clever or educated bird you are about to buy, hear him sing before you pay for him, and be sure the seller stands at



THE MALE LINNET'S WING.

some distance while the bird is singing; for, by a movement of the hand, a motion of the mouth even, a bird-trainer can stop a bird instantly when he is about to do something bad.

HOW TO RAISE NESTLING LINNETS.—As soon as you get the nestlings home, cover them up warm, and give them a meal of scalded rape-seed, mixed with bread soaked in warm milk, and squeezed nearly dry. Repeat this every two hours, from six in the morning till dusk in the evening. Four mouthfuls at each meal will be enough. By the time they are about four weeks old they will begin to feed themselves; then, with the scalded rape-seed and soaked bread, you may mix the white of hard-boiled egg. Let this be fresh every morning in the winter and *twice* a day in the summer, or they will certainly die.

When they begin to feed themselves, the sooner you break them of the sopped-bread diet the better. Mix rape, flax, and canary-seed, well bruise it, and strew it about the cage, at the same time supplying them with less soft food, from which they may thus be gradually weaned. Some people give their nestlings rape-seed alone; this may be very good in the summer, but in the winter it is not comforting enough. The following German paste should also be given: crumb of well-baked bread, soaked for an hour, and then squeezed dry; add to your bread double its quantity of barley meal; make into a stiff paste with boiling milk. When the nestlings are five weeks old they may be separately caged off and hung below a singing-bird.

The linnet is imitative, and may be taught the song either of the lark or of the robin. Indeed, to my thinking, the song of the titlark and the linnet is amazingly alike. If you desire to teach your linnet the song of another bird, you have nothing

to do but to hang the nestling and his tutor one above the other, in a room where there is no other bird. It is quite useless attempting to teach an old bird—even a “brancher” or three months old bird—another song. When once the note of the parent bird is learnt, it is never forgotten.

If you are satisfied with a linnet who sings only his own song (you won't find a prettier), you may save yourself the trouble of bringing up nestlings by buying them at a shop when they are four or five weeks old, and able to crack their seed. As they are very cheap at this time, you had better buy two or three; as, while they are so young, there is a difficulty in distinguishing the males from the females. Some people prefer buying the birds that are caught in July (they are then just able to fly from tree to tree), and there is no doubt that this sort generally turns out healthier birds, and, if put under an old one with a good song, will soon be as valuable, or even more so, than the tutor.

LINNET MULES.—There is no song-bird so fastidious in his choice of a mate of another species as the linnet. You may introduce him to three or four ladies of the canary breed before he will condescend to make love to one. After all it is not to be wondered at. What do we know about the “standard of perfection” among birds? It is very well for *us* to set a hen canary up as a beauty because she is sleek, and well-marked, and symmetrical. Is that all? How many people, good reader, do you and I know who are “sleek and symmetrical,” but with whom, for the life of us, we could not associate? How much truth is there in the old rhyme,—

“I do not like you, Doctor Fell;
The reason why, I cannot tell;
But this I know, and know full well,—
I do *not* like you, Doctor Fell.”

Let us then respect the scruples of the linnet, and take care to provide him with a pleasing mate.

There is another consideration:—never breed what the bird-fancier terms “in and in,” that is, never mate birds of the *same* family. If you do, the result is sure to be disappointment; you will have puny nestlings, weak, ill-feathered, and, perhaps, blind. This remark does not apply to mule-breeding, but to pairing birds of a species. Mules *won't* breed together.

Let your linnet be two years old, and your hen canary twice that age, and provide them with a breeding-cage, nest materials, &c., exactly as you have already been directed to manage

THE LINNET.

with regard to the goldfinch mule—with this difference. A goldfinch will require *two* hens. When the first brood is a week old, you may put into the cage another hen, and another set of breeding-boxes; thus, in three weeks, you will have two families of goldfinch mules. The linnnet, however, is no bigamist, and if you were to give him another wife, after his first little family was born, his modesty would be so outraged that the new comer would have rather a harassing time of it. Some prefer to breed from male canaries and female linnnets and goldfinches, but this I do not advise, as I always find that birds born of such unions are not near so handsome as the others; besides, the song of both parents is not so nicely blended, and the mule is sure to have a much greater share of one than the other.

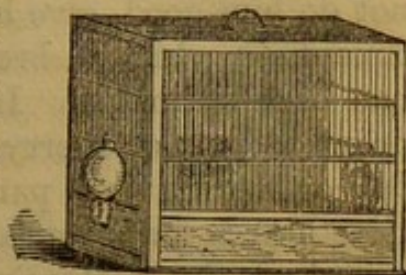
Thirteen days after the last egg is laid the little birds will make their appearance. Boil together, for ten minutes, grated French roll and rape-seed, squeeze it dry, and add to it the yellow of a hard-boiled egg; mash this into a soft paste, and put a supply of it daily inside the cage. If the hen (or the cock) appears to take proper care of their progeny, let her have the sole management of them for five weeks. Then put them into small cages, and gradually wean them from the paste with flax, rape, and canary-seed. Keep a head of groundsel between the wires of the young birds' cage. It sometimes happens that the fledglings while in the nest will get in a dirty condition, their feathers will be matted together, and not only will the bird look unsightly, but, if allowed to remain so, its health will suffer. Dip the nestling in a basin of warm water, and clean him with a flannel and Windsor soap. Be sure you dry the bird thoroughly; first, as well as you can with a towel, and afterwards by holding it near the fire.

If the parent birds should neglect their little ones (not at all an uncommon occurrence) you will have to take them in hand yourself. Feed them with the food already mentioned as good for young birds,—the first week every hour in the day, after that every two hours. Feed them with a quill, and as tenderly as possible, as if you should hurt their mouths or throats they will probably refuse the food altogether.

THE LINNET'S CAGE.—Give him room enough. The old fashioned rule as to the "proper size" of the linnnet's cage being eight inches high, six deep, and seven wide, is happily fast disappearing. People begin to discover that it is no more proper to immure a bird in a morsel of a cage than it is for a

whole family to live and sleep in a small room. I know no reason why the linnet should not have a handsome "pagoda" cage as well as the canary. The objection to this shaped cage for goldfinches and chaffinches is their habit of "twirling," that is, looking over their heads; but this is a habit to which the linnet is never addicted. However, if the old shape is persisted in, let it be at least fifteen inches long, ten high, and ten deep. Let no part be wood except the back and bottom; the bottom must be double, the upper piece sliding out at the end, in order that it may be frequently taken out and scraped and *scalded*. Let the food and drinking vessels be suspended outside the cage.

Like all song-birds, the linnet is very fond of a bathe. Let him have it at least three times a week. A common saucer will do very well for the linnet, as, unlike the bullfinch and some others, he is not a *deep* bather, preferring rather



THE LINNET'S CAGE.

to sit in it and to scatter about the water with his wings and tail. Take out the upper bottom of his cage before you let him bathe, as then, when he has done, you can slide it in again, well covered with coarse sand, and all will be dry and snug again. Look frequently to his water-glass, as he sometimes has a habit of fouling it. The water should be replenished twice a day, and no one who values his bird's health will neglect this.

HOW TO FEED THE LINNET.—First of all, don't *over* feed him. Though not a greedy bird, he is not able to resist the offer of delicacies, upon which he will speedily grow unhealthily fat, and go off in a surfeit. Let the staple of his food be rape-seed (summer, not winter seed), and, provided it is sound (which you will know by its firmness and gloss), old seed is preferable to new, as new seed is likely to serve little birds precisely as new bread serves some of us. Twice a week you may put a head of groundsel between the bars of his cage. Once a week he may have a thimbleful of canary-seed, of which he is very fond. Hemp-seed may be given medicinally, but never at ordinary times. Hemp-seed is of a heating nature, and, much indulged in, will disease the bird's lungs.

DISEASES OF THE LINNET, AND HOW TO CURE THEM.—If properly fed and tended, the linnet is by no means an unhealthy bird; but if he is neglected, kept short of water, hung in a draught, or lodged in a dirty house, he soon gets out of order

One of the diseases to which he is subject is "scouring." This is the result of bad seed or want of water. To cure this you must give him lettuce-seeds with his other food. If he does not get better, take all the seed out of his box, and for a few days give him nothing but flax-seed. As soon as he gets a little better, give him a little bruised hemp or a little ground rice, and some saffron in his water.

As before remarked, he is liable to surfeit from over feeding; you may know this by the belly being swollen and covered with red veins; put a pinch of magnesia in his water. If that does not do him good, give him two drops of castor-oil, at the same time dieting him on bread and milk, on which some maw-seed has been sprinkled. If the surfeit arises from cold, put six drops of port or sherry wine in his water, and feed him for a day or two on two parts maw-seed and one part hemp-seed. Give him a few crumbs of stale pound-cake, and change the gravel at the bottom of his cage every morning, as the sharp grains the bird picks from among it are a great help to his digestion. In administering seed to birds, whether medicinally or in the ordinary way, bear in mind their various properties. Flax has an inclination to open the bowels, maw and hemp to stop relaxation, while canary and rape act simply as tonics.

I have not hitherto said anything about the treatment of song-birds during the moulting period, and, in honest truth, my observation and experience of this matter has been of such a character as to cause me considerable perplexity as to how the subject should be dealt with. I consult Kidd, Hirst, Adams, De Berg, and Bechstein, and this is the substance of the advice they give:—

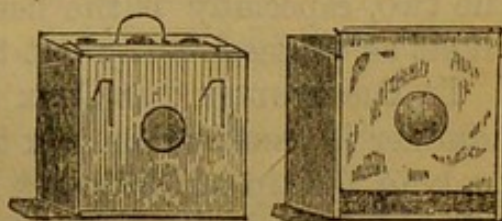
"All you have to do is to keep the birds quiet and free from draughts. As the moult will probably occur during the hottest months of the year, you need not muffle them up. Hang them in the sunshine as much as possible; give them hemp-seed, stale sponge-cake, and any nourishing food they seem to fancy. Let them constantly have a lump of sugar to peck, and throw into the water a little saffron or a piece of liquorice. * * * Should the moult prove very bad, give sponge-cake soaked in sherry wine, and a little of the wine may be blown over his feathers every day or two while he is moulting."

This advice may be followed by people who live in genial regions, but in so variable a climate as England I am sure it is not the best course. Besides, I certainly do not approve of

the practice of turning your bird's cage during moulting time into a sweetmeat shop. Of course the only use of the sponge-cake, the lump sugar, the liquorice, the sherry, and the hemp-seed, is to promote heat, and a moisture of body consequent on high feeding; but you may depend that the sweets and the hemp-seed will not fail to do their work on the lungs of the bird. It should be borne in mind that this sort of feeding, although it may assist the moult, will bring the bird to such a condition that he will take cold at the least puff of wind, and if he does take cold while he is moulting he is a dead bird. The following is the method adopted by all bird-dealers.

As soon as the bird begins to shed his feathers he is well bathed, his cage thoroughly cleaned out, and he is put, cage and all, into a contrivance called a "moulting-box."

This is a square wooden case, a little larger than the bird-cage, having in its front a movable glass panel. There is a slit at the bottom of one of the sides of the case, through which the drawer of the cage can be removed. When the bird is placed in the case, the



MOULTING-BOX.

glass panel (which slides in grooves), is lowered entirely, and every day for three weeks it is pushed up a little higher till there is no more space left than is needful to supply the poor little prisoner with air. As soon as the new feathers mak

their appearance, the glass slide is gradually lowered until the moulting is over. His water-can is replenished every day, but his seed-box filled simply with his usual diet, to which about a fifth of hemp-seed is added but twice a week. The slit at the bottom of the case admits of the cage being cleaned every morning, and through the glass panel you may always see how the bird is going on, and satisfy yourself that he wants for nothing.



FEMALE LINNET.

THE YELLOWHAMMER.

This handsome little songster belongs to the bunting family; indeed, naturalists, one and all, seem resolved not to allow him the name by which he is so well known. They insist on styling it *yellow bunting*; well, let them have their way, and we will have ours. I'll be bound though, that if nine out of every ten bird-dealers were applied to for a "yellow bunting," they would know no more what was meant, than if you inquired for it by its Latin name, *Emberiza citrinella*.

It is necessary to give rather a minute description of this bird, as it is a very common habit of the bird dealer to sell an *old* hen for a *young* cock-bird. Indeed the difference between the two, especially if the hen be a stout, well-kept bird, is so slight as to deceive any but the most wary.

TO DISTINGUISH THE COCK FROM THE HEN.—The cock-yellow-hammer is usually from six to seven inches from the tip of his beak to the tip of his tail. Its head and neck are of a bright yellow splashed with brown spots. This is supposing the bird to be under four years old; after that period the brown spots gradually fade out, leaving the head and neck pure yellow, which increases in intensity the older the bird grows. This is an important consideration, as it is seldom that the bird lives more than six years.

The neck of the male bird is dark green, the back a mixture of very dark brown and light red, the breast and belly feathers are chrome yellow. The wings are black and light brown edged with yellow; the tail feathers are nearly black, having on the two outside feathers a white spot.

However, there will be little difficulty in distinguishing the *full-grown* male bird from the female, as the latter is smaller, the plumage of the head and throat merely tinged with yellow, and altogether it has a grey, rather than a yellow appearance. When, however, the cock-bird is very young, he much resembles the old hen, being of the same size, and bearing the same markings, with this difference: the young cock-bird has a golden streak over each of his eyes, which the old hen does not possess.

NESTING AND TRAPPING.—The time to go nesting for yellow-hammers is about the second week in April, as then the fledglings will probably be three weeks old. The nest will be found in close stunted bushes and even upon the ground, especially

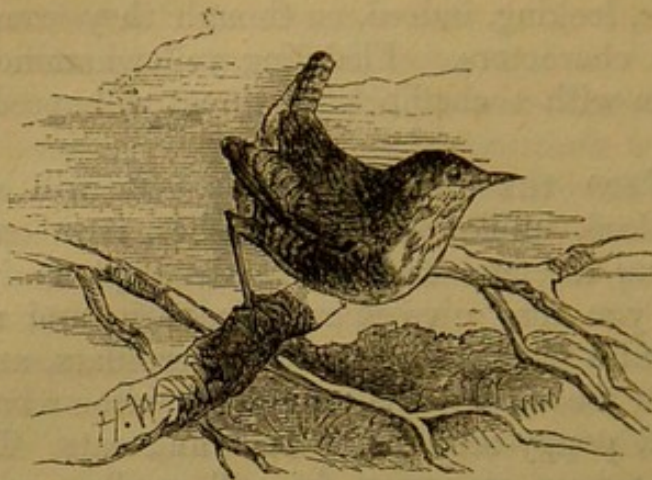
if moss abounds in the neighbourhood. You will generally find either three or five fledglings in the nest; if three, you may almost depend on all of them being cock birds. The eggs are most peculiar, looking, indeed, as though they were inscribed with Chinese characters. Fledgling yellowhammers hung in the same room with a chaffinch or linnet will speedily acquire its note.

HOW TO FEED THE YELLOWHAMMER.—It will eat almost anything; indeed, unlike all other finches, it is only by constantly varying its food that it can be kept in health. In the summer, you may give it rape, canary, and millet seed, whole oats, and a plentiful supply of caterpillars, and any sort of insects. In the winter, the crumb of white or brown bread, lean raw beef, poppy-seed, hemp-seed, and oats. The smaller seeds, such as rape or poppy, he will swallow whole; while the larger sorts, such as canary, oats, and millet, he will strip of the husk, and then swallow.

THE YELLOWHAMMER'S CAGE.—It may have as large, as open, and as handsome a cage as you please. Its song is by no means powerful, yet it is very agreeable. It is particularly clear and mellow. Always take care to provide the yellowhammer with plenty of good sharp sand at the bottom of his cage, and, as he is a coarse and heavy feeder, his cage will need cleaning out more often than that of the majority of smaller song-birds. Be sure he has plenty of clean water to drink and to bathe in.

DISEASES OF THE YELLOWHAMMER, AND HOW TO CURE THEM.—The caged yellowhammer seldom attains a greater age than six years. The complaint to which it is chiefly subject is consumption. You will know this by the bird's puffed and inflated appearance. Give it plenty of warm food, such as hemp-seed and crushed oats, and take care that the bowels are sufficiently opened. If they are not, give him a good-sized house-spider. A piece of oak bark in their drinking water will strengthen their stomachs. Some fanciers recommend unlimited watercresses. Bechstein recovered a siskin, who had been brought to death's door to perfect health by giving *nothing* but watercresses for three days.

There is scarcely another bird with whom the moulting period goes so hard as with the yellowhammer. I am convinced, however, that if the "moulting-box" were adopted, its chance of recovery would be increased threefold.



THE WREN.

The wren is a capital illustration of what may be effected by cheerfulness and industry. Here is little "Jenny," the smallest almost of the feathered tribe, and clothed in the humblest russet, equally well known and infinitely more respected than the splendid peacock himself.

Not that I mean to assert that cheerfulness and industry are the only good qualities possessed by the wren. It has a voice wonderfully musical, and, for its size, wonderfully powerful; and the best of it is, its musical pipes are not frozen up in the winter, as are cistern pipes, neither is it affected by drought in the hottest summer; all the year through (with the exception of the time necessary for moulting), the stout little songster is ever ready to oblige you with a stave. It is by no means difficult to understand how the wren came by the appellation of "Jenny." To see it in the aviary among other birds, to observe its incessant bustle, its erect tail, and wings so composed that they might be called "tucked up," it is almost impossible to conceive anything in feathers more resembling a housemaid.

In order to distinguish the male from the female wren, it must be borne in mind, in the first place, that the latter is the smaller bird, that her feet are yellow, while those of her mate are light-brown, and that although both birds are generally russet-coloured, a redder cast pervades the plumage of the hen than that of the cock-bird. Besides, the wings and tail of the latter are distinctly barred with black.

THE NEST OF THE WREN.

The wren's nest is a wonderful structure. It is oval,—of the shape and size, indeed, of an ordinary-sized lemon. Generally there is an incision in the side, admitting of ingress and egress; but it sometimes happens that a hole is made for the same purpose in the crown of the nest. Generally, the wren will lay as many as eight eggs, the tiniest things that can be imagined, with a pearl-white ground, and spotted with reddish-brown spots.

More than ordinary skill and patience is requisite in wren-nesting. In the first place, you never know where to look; the nest may be in a hole in a wall, it may be in a bush, it may be among the ivy that has climbed to the very summit of a tall tree, or it may be upon the ground. Then again, the wren never misses an opportunity of constructing the outside of his nest with materials that as nearly as possible match in colour the tree or wall in which he builds.

It will frequently happen that wrens' nests are discovered that exhibit no signs of having ever been inhabited; indeed, if the *interior* of such nests are examined, the total absence of that snug inner coat of feathers, wool, vegetable down, &c., which, however rough the exterior of the nest, birds always prepare for the reception of their eggs, is at once proof that they were never intended by the builders to be inhabited. These nests are known in some parts as "cock nests," and there is a belief that during the period of incubation, the male bird, desirous of doing something to amuse himself, goes on constructing these "carcasses" till his brood is hatched, and his services required in the victualling department. However this may be, it is certain that a genuine nest is generally to be found in the vicinity of these fictitious ones—a fact that should be borne in mind by wren-nesters.

Nestling wrens require the most tender management. They may be taken from the nest as soon as the tail feathers are a quarter of an inch long. Cover them up warm, and when you get them home, put them in a snug place, and every two hours feed them on the crumb of white bread scalded with new milk, and a few bruised mealworms or ants' eggs. Be very careful how you feed them, as the least injury to their mouths will make them refuse to swallow another morsel. When they are fully fledged, and able to help themselves, they may be caged off separately; bear in mind that a wren can escape through a hole through which a mouse could creep. After a while, the above diet may be changed, Like the nightingale, the wren

THE WREN.

is rather a dainty feeder, and requires that his food should be varied. He may have raw or cooked lean meat, very finely shredded, boiled carrot, parsnip, or cauliflower, hemp-seed (in small quantities), flies, ants, mealworms, and soft juicy berries. He is very fond of elderberries.

In autumn he may be captured with the ordinary "tit trap," or taken off the boughs by liming the tip of a long fishing-rod and touching him on any part of the body with it. This is by no means so difficult as would at first appear, as the wren is by no means a shy bird.

DISEASES OF THE WREN, AND HOW TO CURE THEM.—This tiny songster is liable to almost every disease which afflict other birds, but consumption is the most fatal. In a few weeks his neat plumage will go rough and ragged, his little body grow smaller and smaller, and then he will die—unless you prevent it. There is small hope for a consumptive wren; but the best thing is to give him a small house-spider every third day, and to lay a rusty nail in his drinking-water.

Should he be afflicted with any other disease, treat him according to the directions already given, always bearing in mind the delicate structure of your tiny patient.

THE GOLDEN-CRESTED WREN.—This is the smallest of the wren tribe; indeed, the smallest of European birds. Its entire length is only three inches and a half, of which more than a third is monopolized by the bird's tail. Truly has it been said that this wren with the flaming crown is a citizen of the world. He is found in the East and West Indies, in South and North America, and in the depths of African forests and jungles. Everywhere is his sovereignty acknowledged. The Spaniards entitle him *reyezuelo* (little king); the Germans, *schneekönig* (snow-king); the Portuguese, *ave re* (king-bird); the Italians, *re di siepe* (king of the hedge), and *reattino* (little king).

Without a doubt it is a gorgeous little bird. Its back is yellow-green, the breast and sides under the wings of a delicate cream colour, the wings and tail russet and edged with olive yellow, over each eye is a bow of jet black, and between these black bars is set the flame-coloured crown. While on the wing or flitting among the branches, the little creature has the power to raise and lower his fiery head-dress with great rapidity, and thus seen among the dark green leaves, it looks as though a light had been suddenly kindled.

The boy must be a bold climber who ventures to go nesting for the golden-crested wren. Even after he has made his way

to the top of the tall oak, larch, or fir-tree, he will yet have to creep to the extremity of the weak overhanging bough, amongst the leaves of which is secured the beautiful little ball-like nest,—a beautiful little house, even more snug and comfortable than that of the common wren. It seems surprising that birds should only occupy these snug retreats during the warm months of the year, and trust to fortune to provide them with a warm corner in the winter.

The golden-crested wren may easily be distinguished from his hen. The latter has much more grey about the body, and her poll-crest is of a more dingy yellow. Like the common wren she lays from six to eight eggs, perfectly white, and no bigger than an ordinary grey pea.

Both as a fledgling and full-grown bird, the golden-crested wren should be treated exactly according to the directions already given in the case of his meaner-clad brother. Humble little “Jenny” is, however, a much better singer, and keeps her health and temper whilst in confinement much better than he of the golden crest.

Besides the wrens already mentioned, there are two others, the reed wren and the willow wren. The first mentioned is the largest of the wren tribe. Its universal colour is brown, and it may easily be known from any other species of wren by the length of its beak, and the peculiar shape of its tail, which looks as though it had been trimmed and rounded with a pair of scissors. It frequents fens and other places where reeds abound, hence its name. As a cage bird it presents no great recommendations. On the contrary, the willow or wood wren is a little bird to be desired. He is a pretty fellow. His throat and beak are marbled with dark and light yellow, the wings and tail are of a dark brown, there is a streak of orange over each eye, and a tint of reddish grey on each side of the head. His size is between that of the common wren and the reed wren.

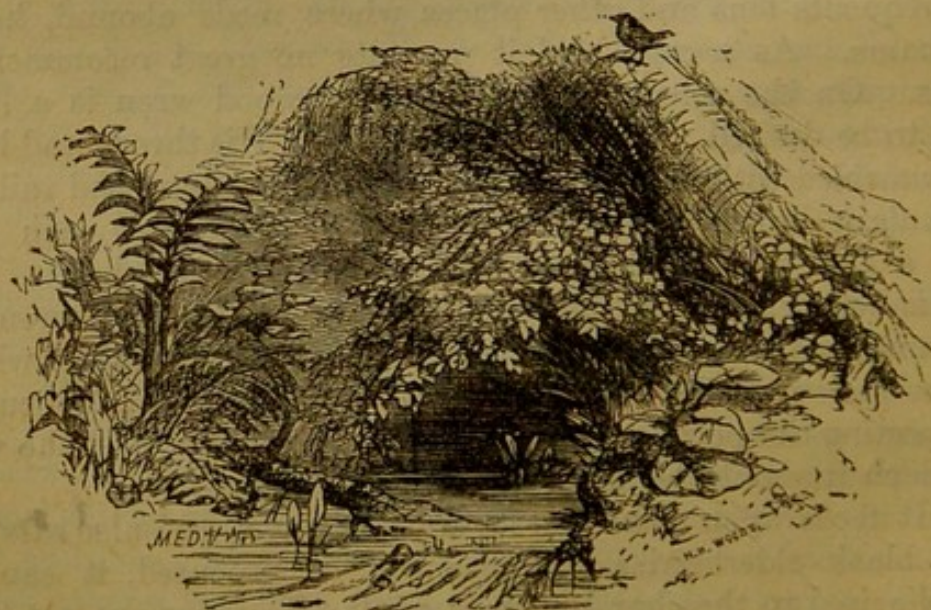
In the autumn these birds congregate in vast numbers where willows abound, and about August they may easily be procured. Respecting the peculiar habits of the willow wren, and the way in which it should be treated, Bechstein says:—

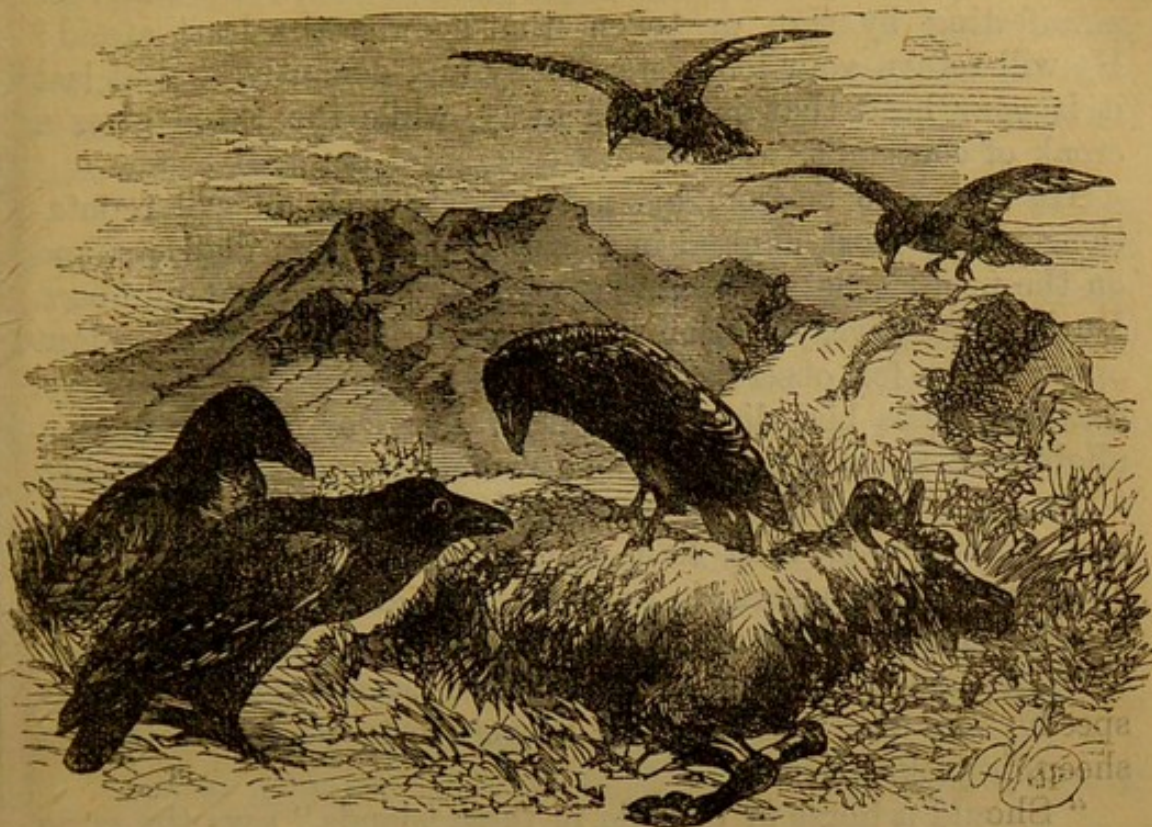
“It feeds upon small insects and their eggs, and also eats red and black elderberries. If flies can be procured, it can be familiarised to the chamber, even adult; its wings are not then clipped, and it is allowed to fly about the room; it will eat fresh and dried ants’ eggs, and it will not reject the universal food, or crushed hemp-seed. It at once selects a place to perch in the

THE WREN.

room, either the corner of a cupboard, or a cage, or even prefers a string to which cages which are drawn upwards by means of a roller are attached. From this spot it flies off at least twice every minute, making the circuit of the whole room, catching flies in its course. It conveys these to its perch, and eats them. They are lively birds, which scarcely soil the furniture, and often utter their long shrill notes. They very speedily clear the room of flies. When flies begin to be scarce, it is merely necessary to throw a few into the food trough, and they will then speedily accustom themselves to the chamber food."

It seems to me that the above extract is well worthy the attention not only of folks in private life, but also of shopkeepers whose wares suffer so severely from the attacks of legions of flies. Fancy, how much nicer than those abominable "catch 'em alive oh's," which in the summer time offend the eye and shock the nerves whenever one passes a grocer's or confectioner's; how much more pleasant it would be to see a couple of nice little wrens darting about here and there, and demolishing a pest at every dart! I really think the suggestion much too valuable to throw away, and I give all confectioners and grocers warning that if they adopt it, I shall expect in every case a drum of figs or a strawberry tart.





BRITISH TALKING-BIRDS.

THE RAVEN.

WHILE the raven exists, so will belief in the supernatural. In vain may naturalists treat him with classic coolness, call him "Corvus Corax," and explain that he is of the crow tribe, that his bill is of such a length, his pinions so broad from tip to tip, and that his tail is somewhat conical and obtuse, they will never bring us to regard him as we do other birds. What is more, I do not believe that they themselves so regard him, or that the most self-possessed naturalist that ever lived, any more than you, dear reader, or I, could sleep with a raven at large in his chamber. Who could? Who could close his eyes and compose himself to slumber while a pair of raven's eyes,—full of mystery, full of daring, full of cunning and mischief,—were watching him from a corner! You may look the most savage dog in the face till he hangs his head,—it is even said that the lion will cower before the steadfast gaze of

human eyes,—but who ever heard of a raven cowering, or manifesting by sign or token that he was the least afraid? He will return your looks steadfastly and defiantly, and at last it is *your* head that is turned away, while the raven gives a croak of contempt.

He comes to us from his native wilds with an evil reputation. They most abound in dreary mountainous districts, and on the north coast of Scotland may be seen in great numbers. During M'Gillivray's sojourn in the Hebrides he had abundant opportunity for observing the habits of the raven. He says, that when the bird discovers a dead sheep or other animal it alights on some eminence, looks round, and croaks. It then advances nearer, eyes its prey with attention, leaps upon it, and examines it in a half crouching attitude. If matters are found as it wishes, it croaks aloud, and picks out an eye or nibbles a bit of the tongue if it happens to be protruding. One by one other ravens make their appearance, and very speedily the dead animal, if it happen to be no larger than a sheep, is picked clean.

"Should a horse or cow die in these islands," says the same authority, "as in my younger days was very frequently the case in the beginning of summer, after a severe winter or spring, or should a grampus or other large cetaceous animal be cast on the shore, the ravens speedily assemble, and remain in the neighbourhood till they have devoured it. A large herd of grampuses having been driven by the inhabitants of Pabbay on to the sand-beach of that island, which is one of those in the Sound of Harris, an amazing number of ravens soon collected from all quarters, and continued for several weeks to feast upon their carcasses. By the time this supply of food was exhausted, autumn was approaching, and the inhabitants became alarmed, lest, prolonging their stay, the ravens should attack their barley, which was their main dependence." Various schemes were tried in vain, till at length one was devised by a certain Finlay Morison, which produced the desired effect. It was customary with the ravens to retire at night to a low cliff on the east side of the island, so "Finlay and a few chosen companions, intimately acquainted with the principal fissures and projections of the rock, made their way at midnight to the roosts of the ravens, caught a considerable number of them, and carried them off alive. They then plucked off all their feathers, excepting those of the wings and tail, and in the morning, when their companions were leaving their place

of repose, let loose among them these live scare-crows. The ravens, terrified by the appearance of these strange-looking creatures, which, it seems, they failed to recognize as their own kinsfolk, betook themselves to flight in a body, and did not again return to the island."

I am of opinion (and I am certain that every English boy will indorse it) that it was a great pity that the ravens did not "recognize their kinsfolk," and revenge the diabolical cruelty inflicted on them, by wasting and consuming every ear of barley belonging to the inhabitants of the Sound of Harris.

An apt illustration of the proverb, that "two of a trade can never agree," is furnished by the fact of the raven and the fox being the most deadly enemies. The sight of the latter is enough to set the raven croaking and hissing in the most vindictive way. Instances have occurred during the chase, where reynard has been betrayed into the hands of his red-coated enemies through the raven crying hoarsely, and wheeling about the spot where he lay concealed.

In some parts of the country there is current the following distich:—

" Pray, ere you go in quest
Of sea-mew, or raven's nest."

But better advice is not to attempt raven-nesting at all. They build in the most inaccessible places, in the clefts of beetling rocks, or at the very summit of the tallest trees they can find. Gilbert White gives an account of a raven's nest at Selborne. He says, "In the centre of a grove stood an oak, which, though shapely and tall on the whole, bulged out into a large excrescence, about the middle of the stem. On this a pair of ravens had fixed their nest for such a series of years that the oak was distinguished by the name of the raven-tree. Many were the attempts of the neighbouring youths to get at the eyrie. The difficulty whetted their inclinations, and each was ambitious of surmounting the arduous task. But, when they arrived at the swelling, it jutted out so in their way, and was so far beyond their grasp, that the most daring lads were awed, and acknowledged the undertaking to be too hazardous. So the ravens built on, in perfect security, nest upon nest, till the fated day arrived in which the wood was to be levelled. It was in the month of February, when they usually sit. The saw was applied to the trunk; the wedges were applied to the opening; the woods echoed to the heavy blows of the mallet: and the tree nodded to its fall; but still the dam sat on. At

last, when it gave way, the bird was flung from its nest, and though her parental affections deserved a better fate, was whipped down by the twigs, which brought her dead to the ground."

Considering the affection of the raven for its young, and the shape and dreadful power of the raven's beak, it was perhaps a fortunate thing for the adventurous Selborne youths that they were not able to overcome the obstacle. People who undertake raven-nesting wear thick leather gloves, and their faces covered with some impenetrable material. The nest is a mere bunch of hay, hair, and other similar material, about as ragged and twice as large and deep as a rook's nest. The eggs are from four to seven in number, longer than ordinary eggs, and having both ends of equal size. In colour they are sea-green, splashed with brown and grey spots of an oblong form.

If, however, you can procure a nest of "squabs," as the young ravens are called, they are easy enough to rear. They should not be more than a fortnight old when they come into your hands. Their diet for the first seven days should be bread and milk, and after that shredded meat,—no matter what sort or whether it be raw or cooked,—all sorts of worms, grubs, and cockchafers, &c. &c., till they can feed themselves. You need be under no apprehension but they will let you know when they are able to accomplish this feat. Left to their own resources, ravens will devour the most preposterous things,—soap, tallow, blacking,—anything! I know a gentleman who kept a raven, and who indiscreetly left his violin case open: in the morning every string had vanished, together with the resin. Whether or no the bird's accommodating stomach received the latter, or whether it was carried away and hid, was never known.

The host of raven stories that might be compiled would fill the doomsday-book. Some time back I stumbled over one in a rare old black-letter book, which struck me as being interesting, from the simple fact that it was many hundred years old. I do not of course vouch for its truth, nor am I prepared to say that Cæsar actually did encamp in the village mentioned; I merely tell it as it is recorded in the letters black.

When Julius Cæsar invaded Britain he encamped with his Roman legions, at West Wickham, in Kent. The camp was sore in need of water, and the legions were well nigh famished with thirst. Sitting at the door of his tent, Cæsar observed a raven settle at a particular spot, and for several mornings and

evenings he observed the same thing repeated. This set the great general considering, and no doubt made him uneasy; for in those days great folks as well as small had unbounded faith in "augurs" and foreshadowings, and the raven, even at that early period, was regarded with considerable awe. Cæsar, however, came to the sensible conclusion that possibly the bird came there to drink, so he ordered the spot to be examined, and the result was the discovery of a spring, and the thirst of his soldiers was satisfied. The spring was at once named Ravensbourne, or Ravensbrook; and hence the river Ravensbourne got its name.

In the same ancient volume I read, that once upon a time there lived at Middle, in Shropshire, one Thomas Elkes. Elkes was left guardian to his eldest brother's child who was an infant. The infant stood between Thomas Elkes and a large estate, so he hired a boy to entice his little nephew into a corn-field to gather flowers. Sending home the decoy he took his little ward in his arms, carried him to a pond at the further end of the field, and there drowned him. The child was, shortly after, missed, and suspicion falling on Elkes, he fled and took the road to London. Mounted officers were despatched in pursuit of him, and as the pursuers were speeding along the high road near South Mims, in Middlesex, they saw two ravens sitting on a cock of hay, scattering it about with their feet and beaks, and making a loud croaking. Beneath the hay-cock lay the murderer, who at once confessed that the ravens had followed him ever since he had done the murder. He was brought back to Shrewsbury, condemned to death, and hung in chains on Knockin heath.

It is a curious fact that a bird of so grave and sedate a demeanour, should so affect inns and taverns. Whether it is that being burthened with an evil conscience, he seeks there to drown it, not by indulging in intoxicating liquor, but rather in the row and riot consequent on its absorption by mortals, or whether, being of a cynical turn, he delights in the contemplation of folks doing the same thing from the most opposite reasons,—drinking, because they are jolly, because they are miserable, because they can afford it, and because they are so wretchedly poor,—is more than I can say. I only know that of the few remaining ravens left in London, at least one half are attached to public-houses, and nearly always to such houses as adhere to the old custom of sign-posts and water-troughs.

Some years ago there was attached to a tavern at Stoke Newington, a raven whose great antipathy was grey, or white horses.

Brown, black, or roan horses might halt outside and welcome, but so sure as one of the detested colour drew up and appeared at the water-trough, Peg was on the alert. She would perch on the edge of the trough and abuse the poor animal in the very choicest Billingsgate, or utter "gee, whoa!" in exact imitation of a carter, and start it off. I should have thought all this was done for pure fun and love of mischief, but for an incident related to me by the landlord, and which at once proved that the bird was actuated by sheer malice. It happened one day that Peg was particularly curious respecting a tobacco-box belonging to a sailor who was drinking ale in the parlour. Presently the sailor took a "quid" from the box and put it in his mouth. Peg watched the operation with great attention, and observing that the sailor relished the disgusting mouthful, as soon as his back was turned she darted at the box and swallowed its contents at a gulp. The consequence was that for the remainder of that day and the next she was very ill indeed. A few days after an unlucky white horse, attached to a hay cart, arrived at the house in question, and was drawn up to the trough to drink, and the raven instantly began her persecution. The white horse, however, had met Peg several times before, and had learnt to treat her impudence with indifference. Finding abuse and assault of no avail, Peg turned into the house, and finding some men smoking in the tap-room, she caught up a paper of tobacco from the table, flew to the edge of the trough with it, and deliberately dropped it into the horse's nose-bag.

It was great fun to see the way in which the raven in question would treat any strange dog that happened to be loitering near her master's premises. She would skip close up to him, and for a few moments appear to take not the least notice, then, when close to his ear would suddenly shout, in her loud harsh voice, "Halloa! whose dog are you?" and before the bewildered cur could recover from its surprise, follow up the inquiry with a great demonstration of rage and loud shouts of "hi! ho! go home!" and never failed of sending the poor beast flying up the street at a frantic rate.

Again, ravens have been known to exhibit great affection towards dogs; to share their kennels; and bring them all the bones and scraps they could procure. In justice to the raven, I cannot do less than record an instance of sympathy and solicitude manifested by this much maligned bird to a dog, and which has been kindly supplied by a correspondent.

"While travelling in Wiltshire I put up at the 'Red Lion,' at Hungerford, and unfortunately drove a wheel of my chaise over the leg of my Newfoundland dog. While we were examining the injury done to the dog's foot, a raven named 'Rafe,' belonging to the inn, was evidently a concerned spectator, for the minute the dog was tied up under the manger with my horses, Rafe not only visited him, but fetched him bones, and attended upon him with particular marks of kindness. The bird's kindness was so marked that I observed it to the ostler. He informed me that the raven had been brought up since a fledgling with a dog, and that the affection between them was mutual. Rafe's poor dog unfortunately broke his leg, and during the time he was confined the bird waited upon him constantly. One night the stable-door was by accident closed, and the raven shut out, but the next morning the bottom part of the door was so pecked away, that in a short time longer an entrance would have been effected."

My last raven story shall be of an inimitable raven, and told by that inimitable writer, Mr. Dickens. He says,—

"As it is Mr. Waterton's opinion that ravens are gradually becoming extinct in England, I offer a few words about mine.

"The raven in this story (Barnaby Rudge) is a compound of two great originals, of whom I have been at different times the proud possessor. The first was in the bloom of his youth, when he was discovered in modest retirement in London by a friend of mine, and given to me. He had from the first, as Sir Hugh Evans says of Anne Page, 'good gifts,' which he improved by study and attention in a most exemplary manner. He slept in a stable, generally on horse-back, and so terrified a Newfoundland dog by his preternatural sagacity, that he has been known, by the mere superiority of his genius, to walk off unmolested with the dog's dinner from before his face. He was rapidly rising in acquirements and virtues, when, in an evil hour, his stable was newly painted. He observed the workmen closely, saw that they were careful of the paint, and immediately burned to possess it. On their going to dinner, he ate up all they had left behind, consisting of a pound or two of white lead, and this youthful indiscretion terminated in death.

"While I was yet inconsolable for his loss, another friend of mine in Yorkshire discovered an older and more gifted raven, which he prevailed upon the landlord to part with for a consideration, and sent up to me. The first act of this sage was to administer to the effects of his predecessor by disinterring

THE JACKDAW.

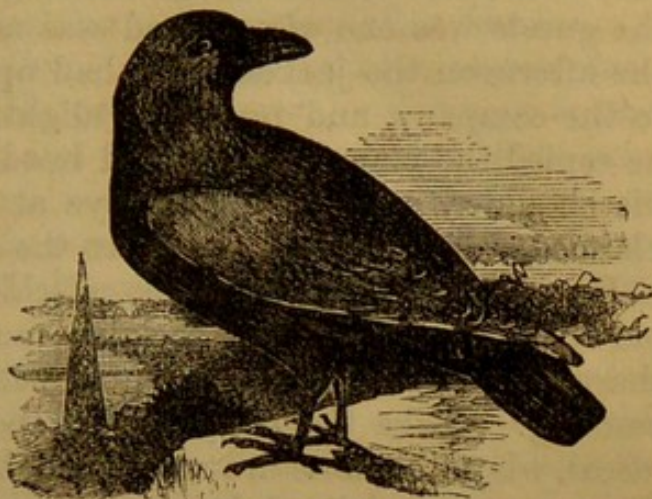
all the cheese and halfpence he had buried in the garden; a work of immense labour and research, to which he devoted all the energies of his mind. When he had achieved this task, he applied himself to the acquisition of stable language, in which he soon became such an adept, that he would perch outside my window and drive imaginary horses with great skill all day. Perhaps, even, I never saw him at his best, for his former master sent his duty with him, 'and if I wished the bird to come out very strong, would I be so good as show him a drunken man,' which I never did, having (unfortunately) none but sober people at hand. But I could hardly have respected him more whatever the stimulating influence of this sight might have been. He had not the least respect, I am sorry to say, for me in return, or for anybody but the cook, to whom he was attached, but only, I fear, as a policeman might have been. Once I met him, unexpectedly, about half a mile off, walking down the middle of the public street attended by a pretty large crowd, and spontaneously exhibiting the whole of his accomplishments. His gravity, under those trying circumstances, I never can forget, nor the extraordinary gallantry with which, refusing to be brought home, he defended himself behind a pump, until overpowered by numbers. It may have been that he was too bright a genius to live long, or it may have been that he took some pernicious substance into his bill, and thence into his maw, which is not improbable, seeing that he new pointed the greater part of the garden-wall by digging out the mortar, broke countless squares of glass by scraping away the putty all round the frames, and tore up and swallowed in splinters the greater part of a staircase of six steps and a landing. But after some three years he, too, was taken ill and died before the kitchen fire. He kept his eye to the last upon the meat as it roasted, and suddenly turned over on his back with the sepulchral cry of 'Cuckoo.' Since then I have been ravenless."



THE JACKDAW.

THOUGH the least, the jackdaw is by no means the most insignificant of his tribe. If he lacks the gravity and decorum possessed by his brother the raven, he is also without his

sinister disposition ; if he is not so sprightly as his pie-bald cousin the magpie, he certainly bears a much better character. He is a sociable bird. Even in a wild state, should he find the company of his own species not sufficiently enlivening, he will spend a day or two with the rooks and crows ; nay, he has been known to take his wife with him and to spend the entire winter at rookdom. When domesticated, he becomes as well-behaved an inhabitant of the poultry-yard, as the tamest duck or chicken ; he generally attaches himself to one individual upon the premises, and to that one he devotes the whole of his affection.



THE JACKDAW.

I am not libelling the jackdaw when I say that this person is the cook. Perched on the kitchen table, he takes a breathless interest in the preparation of a joint for the spit ; especially if it be a joint that requires trimming. When the meat is hung to the fire, he watches it with as much concern as though he was the party responsible for its well-doing. No matter what may be going on—apple-peeling, poultry-trussing, game-drawing, or suet-chopping,—jack is sure to be in attendance with an insatiable appetite for rejected morsels.

That he is more honest than the magpie is true enough, but that he is *perfectly* honest, is refuted by many printed and published stories, among others, that of the pickled cockles. A certain jackdaw was possessed by a gentleman who was particularly fond of the tiny shell-fish pickled ; and, after considerable difficulty, procured a cook who could dress them to perfection. Having pickled a quantity of cockles and put them in a jar, the cook was much surprised to discover next morning that the parchment cover had been partly ripped off the jar, and a quantity of the cockles abstracted. Without mentioning the matter, she tied down the jar again, and went about her work. In the middle of the day, while she was roasting a joint, she heard a rending of parchment, and there was the jackdaw with his head hidden in the jar, and nothing but his tail and hind-quarters visible, feasting gloriously. Unfortunately for

poor jack, the cook happened to have a ladle full of hot fat in her hand when she made the discovery, and ejaculating "You rogue! you go to the cockles, do you!" threw it over him. The result was, that all the feathers were scalded off his head, and he went about the house, a bald jackdaw. Some time after, the master of the house gave a party, and among the guests was one whose head was nearly bereft of hair. In the afternoon the jackdaw was had upstairs to afford diversion to the company, and presently, alighting on the mantel-shelf, he espied the man with the bald head. At once he flew on to his shoulder, and cocking his eye at the naked cranium, exclaimed, "You rogue! *you* go to the cockles, do you!"

He is, perhaps, not quite so mischievous a bird as the magpie or raven, but still the jackdaw must plead guilty to a large share of misdemeanours, executed with a marvellous degree of cunning. Take the story of the poaching jackdaw, a sad rascal, whose exploits are mentioned by an eminent naturalist. He says: "A jackdaw belonging to one of my friends was a most inveterate poacher, having taken to himself an associate or accomplice in the person of the cat belonging to the house. This oddly matched couple used to make their egress and ingress through a hole in the bottom of a very thick quickset hedge, and as soon as they merged into the open fields, would immediately hunt for game. Their mode of catching and killing game was not clearly ascertained, but its successful result was evident, from the frequency with which they used to bring home dead hares, often as large as the cat, but generally small. On one occasion, a singular fluttering of wings and scratching of claws was heard in the hedge, and when the owner of the two animals went to ascertain its cause, he found that they had brought home a hare so large, that they could not drag it through the hole in the hedge, and were quite frantic in their eagerness to attain their object; the cat pulling from within, and the jackdaw pushing from without."

The naturalist Wood, one of the most observant and pleasant of writers, tells a story of a jackdaw who had a curious predilection for lighting lucifer matches, and was continually putting the house in commotion by his incendiarism; "of which amusement," says the naturalist, "he was as fond as any child. On one occasion he lighted the kitchen fire in the course of the night. The cook had laid the fire overnight, intending to apply the match early in the morning. The jackdaw contrived to get hold of the lucifer-box, and had evidently rubbed the match

upon the bars, and so set fire to the combustibles, as the cook found the fire nearly burnt out, the jackdaw in the kitchen, and some eighteen or nineteen exploded matches lying in the fender.

"The first time that this jackdaw lighted a match, he was so frightened at the sharp, crackling report, that he ran away as fast as he could go, coughing and sneezing after his fashion from the fumes of the sulphur, he having held the match close to the phosphorus end. He never seemed to distinguish the ignitable end of a match, and would rub away with great perseverance on the blank end, without discovering the cause of his failure. By degrees he contrived to singe all the feathers from his forehead and nostrils, and once burned his foot rather severely.

"He was greatly afraid of thunder, and had a singular power of predicting a coming storm. In such a case, he would retire to some favourite hiding-place, generally a dark hole in a wall, or a cavity in an old yew, which exactly contained him, and would there tuck himself into a very compact form, so as to suit the dimensions of his hiding-place; his body being tightly squeezed into the cavity, and his tail projecting along the side. In this odd position he would remain till the storm had passed over; but if he were called by any one whom he knew, his confidence would return, and he would come out of his hole very joyously in spite of the thunder, crying out, 'Jack's a brave bird!' as if he entirely understood the meaning of the sentence. He may possibly have had some idea of the sense of words, for he hated being called a coward, and would resent the term with all the indignation at his command."

A curious instance of the attachment of a jackdaw to his master, is given in the "Annals of Sporting." The narrator says: "I pulled up to bait at the 'King's Head,' Egham, and soon after my arrival, a young man rode into the inn-yard from the opposite direction; and dismounted at the door of the tap-room belonging to the hotel. Almost immediately following this new comer, a jackdaw alighted on a shed adjoining, which, however, as these birds are frequently kept at such places, did not attract any particular attention, till the ostler called out, 'Ah, here you are then again, true to the old house and young master.' I immediately asked whom he meant. 'Why Jack, sir, yonder!' pointing to the daw. 'And what of him?' I went on to inquire. 'Oh sir, he is a most 'cute and cunning fellow, and follows his master either on horseback or

on foot.' This awakened my interest, and I received these further particulars of this extraordinary bird.

"He belonged to the son of the ostler of the 'Bush,' at Staines, and was constantly fed and taken care of by him, until he became quite his familiar friend; so much so indeed, that the circumstance created wonder in the vicinity of his home. So convinced was the ostler of the faith and devotion of his feathered acquaintance, that on one particular occasion, as he was setting off from Staines to Hounslow on horseback, he made a wager (a large one for him) of two bowls of punch, with a person who doubted that the bird would obey the call of his master and follow his route. He then mounted, and exclaiming, 'Come, Jack, I'm going!' put his horse in motion. In a very short time the bird's wings were extended, and he attended the progress and return of his feeder, leaving not the shadow of a plea for the non-payment of the bet which the sceptic had so unwittingly ventured.

"This, and some other circumstances which my informant mentioned, induced me to watch more narrowly the motions of the bird, and I observed him constantly hopping from place to place, and every now and then pitching upon the sill of the window that lighted the tap-room, in order to ascertain if his travelling companion were still within. On one occasion, indeed, he pressed quite anxiously into the room, and observing him he sought not inclined immediately to move, he took a flight in a circular direction for nearly half a mile, returning again to his former station. Soon after this, the man prepared his horse, Jack mounted upon the sign-post, and as soon as the former had ridden about a hundred yards on his road to Staines, he fluttered his dark pinions, and followed the well-remembered track of the ostler-boy of Staines."

Some years ago, a jackdaw, the property of a retired inn-keeper residing at Aylesbury, was the means of saving his master's property, and perhaps his life. The inn-keeper had possessed the jackdaw while he was in business. He had learnt the bird to utter "mind the reckoning," and as a warning,—a caution to reckless customers—hung him in the public parlour. No doubt the jackdaw's friendly admonition aided his master not a little in the accumulation of a fortune. It was fortunate, however, that Jack did not forget his share of the business; for, a long time after his master had retired to private life, his house was attacked by a gang of burglars. They effected an entrance through the window of the room in which hung the

daw, and while they were in the lowest whispers consulting as to which part of the house to visit first, "mind the reckoning" smote their guilty ears. They were in the dark, and could not tell from whence the sepulchral sounds proceeded. "Good Lord!" whispered one of the burglars, "I trust we——" "No trust! no trust!" cried the same dreadful voice, "mind the reckoning! mind the reckoning!" So the thieves leapt from the window and scrambled over the garden wall, leaving their ugly tools behind them.

It seems that the jackdaw is a worse character abroad than at home. Bishop Stanley gives evidence against the daw of Ceylon, and his description of the way the vagabond bird obtains a living, is most animated and interesting. "In the island of Ceylon," says the worthy naturalist, "these birds (jackdaws) are extremely impudent and troublesome; and it is found very difficult to exclude them from the houses, which, on account of the heat, are built open, and much exposed to intruders. In the town of Colombo, where they are in the habit of picking up bones and other things from the streets and yards, and carrying them to the tops of the houses, a battle usually takes place for the plunder, to the great annoyance of the people below, on whose heads they shower down the loosened tiles, leaving the roofs exposed to the weather. They frequently *snatch bread and meat from the dining-table, even when it is surrounded with guests*; always seeming to prefer the company of man, as they are continually seen hopping about near houses, and rarely to be met with in woods or retired places. They are, however, important benefactors to the natives; making ample compensation for their intrusion and knavery, for they are voracious devourers of carrion, and instantly consume all sorts of dirt, offal, or dead vermin. * * * * On this account they are much esteemed by the natives, their mischievous tricks and impudence are put up with, and they are never suffered to be shot, or otherwise molested."

He has a relation in North America, known by the name of the Cinereous Crow, who for impudence and pilfering is, perhaps, the most accomplished of the family. According to Hearne, this bird will steal all sorts of provisions, no matter whether they are fresh or salt. It will hop into the tent of the hunter or Indian, and coolly perch upon the edge of the kettle by the fire, and draw the victuals out of the dishes. Indeed his depredations know no bounds, and he is often very troublesome to the hunter, whom he will sometimes follow all day long. While

the trapper is baiting his martin-traps, the crow will perch upon a tree and quietly watch his proceeding, but as soon as the man's back is turned, he will descend from the tree, and, with the greatest audacity, devour the bait.

The wild jackdaw invariably builds its nest in an elevated place, for the purpose of protecting its eggs and young from weasels, stoats, &c.; holes and chinks of ruined towers, church-steeple, and parapets of bridges, are favourite building-sites with the jackdaws. Occasionally, too, the jackdaw will take possession of other birds' nests, merely adding a fresh stratum of hay, and make itself perfectly contented in its borrowed home. Jack's notions of architecture are of a very shabby kind, its nest consisting merely of a bundle of sticks and hay, and is hardly a straw better than that of the rook. It lays from four to six eggs, which are in colour dark green, spotted with purple and black. The female may readily be distinguished from the male, by the darker colour of the hood. When full grown the jackdaw measures about fourteen inches in length. If you are fortunate enough to get a nest of young daws, you must treat them according to the directions given in the case of the ravens. If an old bird should come into your possession, his wings must be clipped twice a year; in the spring and in the autumn.

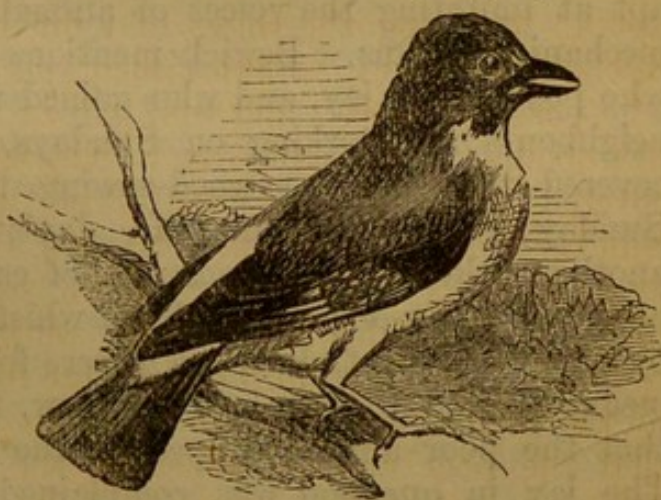
In captivity, the jackdaw is a very amusing and social bird, and will generally endeavour to make himself as comfortable as possible. Of course, as with all talking-birds, he must be allowed a great deal of liberty.

As a rule, he is cleverer as a trickster than as a talker. Still, as will be seen from the examples given, he is quite capable of expressing himself intelligibly. The only chance, however, if you wish to train a jackdaw, is to obtain one from the nest, and feed and tend it *entirely* yourself. I am informed by a celebrated bird-dealer, that the very best way to learn a jackdaw to articulate, is to confine it in a room with a docile and voluble magpie, especially one who can ask for his food. My friend informed me that it was his custom to make a great parade of taking in breakfast to the room where the two birds were caged. As soon as the magpie saw the food, he would flap his wings and exclaim, "don't forget me! don't forget me!" Of course mag was not forgotten. In full view of the other poor hungry prisoner, he had his belly filled, never failing to utter between every mouthful as it was given him, "don't forget me." All this time the famished jackdaw would be in a terrible

pucker, fluttering, hopping, shrieking,—everything but talking. On account of this deficiency, he was kept without his breakfast. In a marvellously short time he seemed to comprehend the state of the case, and in less than a week, while the magpie was in the midst of his morning performance, Jack, worked up to agony pitch at sight of so much good victuals going at so cheap a rate as the mere utterance of “don’t forget me,” made a frantic effort to do business on the same terms. At the top of his voice he bawled such an imploring “don’t—don’t—don’t”—(he could not get any further) that his master’s heart melted, and the next moment he was beak deep in the coveted jar.

THE JAY.

OF all British-born talking-birds, none can boast of such magnificent attire as the jay. His ground-colour is silver-grey. From the base of his beak, on either side, a bright jetty black hue extends halfway down his neck. The colours of his wings and tail are beautifully blended, as those of the rainbow, and on his head he wears a crown of black and purple and red. The only difference between the male and female bird consists of the neck-feathers of the latter being ashy grey, while those of the former are dusky red.



THE JAY.

Considering his size, the jay is a most voracious eater, and is remarkable for the wideness of his swallow, which enables him to devour his food with great rapidity, seldom making two bites of an acorn or chestnut. Some other delicacies, such as the flower of the cruciferæ, which the jay is fond of, he eats more daintily, carefully removing petal by petal. In a wild state, the jay often suffers for its inquisitiveness, thrusting his bright head into all sorts of bushes, and often getting his coat

torn for his trouble. When he is hard pressed for food, and the fruit-trees are getting barren, he will hunt among the fallen leaves for the nest of small animals, and plunder their hoards. Folks who live in the country will find no difficulty in procuring a jay's nest, and there is no reason, in this penny-a-mile travelling age, why town-boys should not share the privilege. Woods and coppices are the places in which the jay's nest should be sought, especially those in the neighbourhood of cherry orchards, or pea or bean fields. The nest may easily be distinguished from any other large bird's on account of its trim and substantial make. The eggs are grey, blurred with brown, and streaked at the largest end with dark purple. The lower branches of the oak is a situation frequently chosen as a building-site by this bird.

The young jays should be at least a fortnight old before they are taken from the nest. Until they can help themselves, they should be fed six times a day on sopped bread, curds, and finely-shred beef.

If you wish to train them to talk, the fledglings must be hung apart from any other birds. Their capacity, however, for imitating the human voice is small, though no bird is so apt at imitating the voices of animals or noises produced by mechanical means. Bewick mentions the case of a carpenter who possessed a jay, and who gained an evil repute among his neighbours for working on Sundays, till at last it was discovered that all the wood-sawing that was performed on Sunday proceeded from Mr. Jay's throat. He mentions another, who, at the approach of cattle, amused himself by hounding a cur-dog upon them, whistling and calling on him by name. At last, during a severe frost, the dog was by this means incited to attack a sick cow, the result of which was that the poor animal slipped on the ice and was badly hurt. The jay in question was complained of as a nuisance, and ordered to be destroyed. I myself know of a jay, the property of an undertaker, and who has so successfully caught the restless "tap, tap, tap," of the little hammer on the big-headed nails that it is a certain fit of melancholy to hear him.

Between the owl and the jay there exists a most unfriendly spirit, and should ever the former bird encounter the latter, he of the rainbow wings immediately sets up such a screaming as speedily attracts all the jays in the neighbourhood. It is seldom the owl is attacked, otherwise than verbally, by his tormentors: so there he sits, calmly regarding them with his

big foolish-looking eyes, while they heap abuse and accusations on his head. The bird-catcher takes advantage of this, and makes it a means of turning the tables on the jay to his own profit. He climbs a tree with a stuffed owl and some limed twigs, perches the owl on a branch, and fastens the twigs all about it. Then he hides in a hole at the foot of the tree, and with the aid of a whistle exactly imitates the "who whoo" of the owl. The jays hear the notes, and from every direction come to assault their enemy. They perch on the twigs, where they stick, and while engaged in bullying and threatening the stuffed owl, the bird-catcher climbs the tree and captures them with the greatest ease. As the jay exhibits the same antipathy to the weasel-tribe, a white ferret will answer your purpose equally well. Moreover, the jay's passion for the eggs of other birds—more particularly those of the pheasant and partridge—may be taken advantage of in capturing it, and it will generally be enticed by an egg or two placed in a nest as bait. The advantage of this mode is, that at any period of the year it will answer equally well; for the jay does not suspect the trap, even in the depth of winter, when of course such eggs are unattainable, of which fact the bird seems perfectly ignorant.

From his inquisitiveness, the jay is a terrible nuisance to the sportsman; for on the sight of a man with a gun or dogs, he will set up a loud screech, at once proclaiming to the whole of the birds in the neighbourhood that danger is abroad. Indeed, it would almost seem an instinctive quality of the bird, for the conduct of the English jay meets with a curious coincidence in that of his American brother. Sir Francis Head, who travelled in the most wild and unfrequented parts of North America, where in all probability a gun had never been used before, and therefore the bird could not have learnt the proper distance to keep without the range of a shot, yet found the jay as inquisitive and cautious as if it were quite a common occurrence to see a sportsman, and to know how to thwart his views; for the birds kept up a continual chattering, and flew from tree to tree, arousing all its neighbours. In this manner the deer-hunter is often baulked of his game, and some of the hunters have taken, in consequence, a great dislike to the jay, and whenever they see it, they shoot it.

Its nest does not rank in a high order of bird-architecture, but is very roughly made. It is generally built in some tall tree, such as the cedar, the inside of the nest being lined with

fine fibrous roots. It lays four or five eggs, which are of a dull olive colour, spotted with brown.

The great objection to the jay as a cage-bird is the offensiveness of his excrement; but this arises from the custom of allowing the bird to eat anything he will, which is simply every eatable thing,—fish, meat, poultry, vegetables, and fruits. I should advise jay-keepers to compel their birds to vegetarianism. Keep them almost entirely on nuts and wheat. You will find that this diet, with a plentiful supply of water for drinking and bathing, will keep the jay in perfect health, and his cage will be no more offensive than that of the starling or blackbird; the best cage being in fact very like that used for the starling, but with brass wire bars, and of the largest size,—not less than two feet square.

The American blue jay is a very handsome bird; on his head he wears a crest of light blue, and the upper portions of his body are of a light bluish purple. The chin, cheeks, and throat are bluish white, while the abdomen is pure white. The wing-coverts are of rich azure, barred with black streaks, and tipped with white. The middle feathers of the tail are light blue, deepening into purple towards the tips, and the remaining feathers are light blue, barred with black and tipped with white.

It is a native of North America, and in its habits very much resembles the common English jay. As an imitator of voices and sound, the blue jay is unequalled, and will, with equal fidelity, utter the softest and most musical notes, or the harsh screaming of the hawk. Indeed, in the latter performance, it seems to take an especial delight, and true to the mischievous character of the family, will sometimes break out into the loud scream of the hawk, to be immediately followed by the tiny wailing of a bird in distress, at once putting all the little songsters in the neighbourhood into terrible commotion.

The blue jay exhibits the same aversion to owls as his English relative, and will attack them whenever they meet. Hawks also are held in disfavour in jaydom, and whenever a solitary one comes to their neighbourhood, he is almost sure to be driven out in a most lamentable condition. Sometimes, however, the tables are turned, for the hawk will suddenly dart at one of his persecutors and fairly carry him off, to the great consternation of his friends.

Webber, the naturalist, gives a very animated description of the blue jay and its antecedents. He says: "The pine-log cutters of the north know him well. and bestow on him many a

blessing from the wrong side of the mouth. The deep snow is raked away, and the camp is pitched beneath the gloomy shelter of the heaving pines. Scarcely has the odour of the fireroast streamed through the air, and freighted every biting wind, when, with hungry cries from every side, the jays come gathering in. They swarm about the camp in hundreds, and such is their audacity when hard pinched with hunger, that they are frequently seen to dash at the meat roasting before the fire, and hot as it is, tear pieces off till they can cool it in the snow. They are regarded with singular aversion by these lonely men; for take what precautions they may, they are often robbed to such serious extent by their persevering depredations, as to be reduced to great suffering. They dare not leave any article that can be carried off, within their reach; when they kill game, and leave it hung up till the hunt is over, the jays assemble in thousands, and frequently tear it in pieces before they return.

"The blue jay has many of the habits of the magpie, and, like him, possesses an inveterate propensity for hiding everything he can lay hold of in the shape of food. The magpie hides things that are of no value, but a jay is in every respect a utilitarian, and when, after feeding to repletion, he is seen to busy himself for hours in sticking an acorn here, a beech-nut there, in a dark hole, or wedging snails between the splinters of some lightning-shivered trunk, or making deposits beneath the sides of decaying logs, naturalists wonder what he is doing it for. But our Euphuist knows well enough, and you may rest assured, if you see him along that way next winter, as you will be apt to do if you watch, you will find that he has not forgotten the place of one single deposit; and that, with a shrewder economy than the ant or the squirrel, instead of heaping up his winter store in one granary, where a single accident may deprive him of it all, he has scattered it here and there, in a thousand different spots, the record of which is kept in his own memory. So it cannot be doubted, whatever may be said of his thieving and other dubious propensities, that the blue jay is a decidedly sagacious personage."

The negro slaves in the Southern States regard this bird with singular superstition. They believe the jay is the special agent of the dark gentleman below, and that it carries all manner of slanderous tales to him, especially concerning "niggers," and also supplies the fuel to burn them with. Hence they are regarded with deadly animosity by the blacks.

Says Webber, "When I was a boy, I caught many of them

THE STARLING.

in traps during the snows, and the negro-boys who generally accompanied me on my rounds to the traps, always begged eagerly for the jay birds we captured to be surrendered to them, and the next instant their necks were wrung, amidst shouts of laughter."

As to diet, the blue jay is not so strict a vegetarian as our own common jay, but devours more animal food than anything else. Still it is very partial to fruit and nuts, as the agriculturist often finds to his cost. It will, if captured young, become very domesticated and attached to its owner, and will readily learn to talk, which acquisition it is very fond of displaying to strangers.



THE STARLING.

WITH the exception, perhaps, of the raven, I know of no bird more gifted than the starling. His sagacity is wonderful. He can whistle, he can sing, and he can talk. He has his friends



THE STARLING.

and his enemies, and is not at all slow at manifesting his emotions at the sight of one or the other. Wonderful stories are told of the starling's cleverness and docility, and I, myself, was, once upon a time, personally acquainted with a bird of this species whose biography would make a large and interesting

volume. I was a very small boy at the time when "Bob" was "one of the family." He was allowed the run of the kitchen, and many a time have I had to lament the loss of my bread and butter, transixed and carried off on "Bob's" lead-coloured, awl-like beak. Bob was particularly fond of raw, lean beef, and no one was more anxious than he for the matutinal ring at the bell, and the cry of "butcher." He would hop on the maid's

shoulder and accompany her to the street-door, watching with intense interest the transfer of the joint from the basket to the dish. If it happened to be beef, he would come back screaming and chattering with delight, but if it was any other sort of meat—especially pork,—his rage was tremendous. “Too fat! too fat!” he would ejaculate, dashing about like a mad bird, filling the kitchen with his lamentations.

Everything that displeased Bob was “too fat.” I recollect on the occasion of a little brother being born, his (the bird’s) extraordinary behaviour. He had hitherto been the pet, and now that he saw the whole family neglecting him to caress the baby, he sulked and moped dreadfully. At last, when the baby was about a fortnight old, and was lying in the nurse’s arms, Bob perched on the top of her chair, from whence he regarded his rival with a most sinister expression. “Pretty baby, pretty boy,—aint he, Bob?” said the nurse. “Too fat, too fat!” screamed Bob, and, flying to the top of the large clock, hid himself for the remainder of the day.

Bob’s greatest enemy was the cat. She was a stout, able-bodied animal, and between them there were frequently dreadful battles, but Bob was generally victorious, because of his malicious propensity to fly on to her back, grip fast hold of her neck, and peck at her ears. Their mutual bitterness was extraordinary. The cat would at any time desert its ample dinner for the sake of purloining the morsel given to the starling,—an injury which the latter had a peculiar way of revenging. As sure as ever the cat’s-meat-man made his appearance at the area railings, and nobody but the cat and the starling were in the kitchen, the latter would hide himself behind the window curtain, and bawl out “not to day,” with so excellent an imitation of the maid’s voice, that over and over again the meat-man has replied “Thanky mum,” and trotted off, leaving puss dinnerless.

Bob was remarkably convivial. He was never in such spirits as when there was company at the house. He would be “upstairs and downstairs, and in my lady’s chamber” all in a minute, as cheerful as a cricket,—nothing being “too fat” for him. If there happened to be a song in the evening, there would be Bob on my father’s chair-back, listening to the harmony with the greatest attention; and when a stave or two had been sung, my father had only to say. “Now, Bob, give us the ‘Miller of the Dee,’” the starling would strike up, and go through with the tune in the most correct manner.

However, this will never do, I never know when to leave off when once I begin to talk about old times and Bob the starling. Let me, therefore, proceed to give my readers some instruction as to the best way to treat their "Bobs."

There is little difficulty in distinguishing the male from the female starling. The beak of the male is yellow; of the female dark brown. The plumage of the former is bluish black, shading off to purple about the breast, and to green at the hinder parts. The tail and wings are black edged with light brown. The feathers about the head and neck are edged with grey, and those of the under part with a whitish hue, so that the bird's plumage has altogether a dazzling and uncertain appearance. The feather-edgings of the female are broader and more distinct, so that she has altogether a lighter appearance.

The exact period at which the starling quits us for warmer climates is uncertain, and a good deal depends upon the state of the weather. They have been observed to depart as early as the middle of July; but, supposing the weather to be tolerably mild, the second or third week in September witnesses the commencement of their annual migration—which continues for several weeks; and about the third week in October, the starlings have all taken their departure. Bishop Stanley has well described the habits of this bird, and I cannot give my readers a better account than by quoting his words. It appears that close to his residence was an ivy-mantled church, with massive grey towers, and a weathercock surmounting them. In the holes and crevices of this old building, a great number of starlings annually took up their establishment, and hence he had frequent opportunities of observing them.

"At the close of January," he says, "one or two unconnected birds now and then make their appearance. In February, if the weather happens to be mild, the number of idlers may possibly now and then increase; but still the visit seems to be but the mere passing call of a few strangers, without a leading object. In March, however, about the first or second week, according to the state of the weather, things begin to assume a more bustling appearance, and serious business begins. Hitherto, but one or two, or at most, three or four, may have dropped in, as if to say, Here we are; The winter is passed and gone, a happier season is at hand. * * * * About the latter end of the second week, affairs begin to be placed upon a more regular footing; the parties on or about the battlements and weathercock seem as if they had determined upon a permanent establishment. From

early dawn till about ten, there they remain, carolling away their communications; at that hour, however, off they go, and till four or five o'clock are seen little more throughout the day, being absent in the fields, where they may be seen chattering in company with the inhabitants of a neighbouring rookery, or a noisy set of jackdaws, who have, for time out of mind, been the undisputed tenants of a certain portion of an ancient beech-wood, at no great distance.

“About the third week the plot begins to thicken still more.
 * * * Detachments may be now seen prowling busily over the roof, cautiously creeping in and out from under the projecting eaves, and by the end of the month, the regular establishment, amounting to about thirty, has assembled, and the grand work of the year fairly commences. From this time all is bustle; straws and nest-furniture are seen flying through the air in beaks, contriving, nevertheless, to announce their comings and goings by particular harsh or low muttering cries, according as they think they are watched or not. They are cunning birds, and discover, in an instant, whether a passer-by has an eye to their movements, and perfectly aware whether he is following his own business or theirs. If he steps onwards, without troubling himself about them, they go in and out with perfect unconcern; but if a glance of curiosity or observation is directed to their motions, they are all upon the alert; the bearer of a tuft to the nest wheels to the right-about, and perching on the naked upper twig of a small beech-tree, or the projecting point of a gable end, sits there uttering a particular note, which seems to give, as well as words could do, intimation to a mate to be on its guard, as a spy is at hand. * * * At length the nests are built, the eggs laid, and the young ones hatched. Then a new scene of noise and activity and bustle commences, increasing, of course, as the nestlings become older and more voracious. Then it is that the lawn becomes a favourite resort; hitherto, a few idlers may have hopped and picked up a stray worm or two, but now the search is a matter of serious occupation. Down they come, the sober-coloured hen, and the cock with the sun glittering on its spangled feathers, with claws and beaks as busily employed as if their very existence depended upon it. * * * The noise and the bustle go on incessantly, till the young ones are fledged, when for a day or two they may be seen fluttering about the building, or taking short flights. At length their strength matured, old and young collect on the tower, and then wheel away to the neighbouring

fields, as if practising for future and more important evolutions. * * * At last, however, a day comes when all is hushed. No hungry guests are feasting on the lawn, no clamorous throats are calling aloud for food, no twitterings are heard from bough or battlement, not even a straggler is to be seen on the pinnacle of the weathercock. The joyous assemblage is broken up. The starlings are gone; and till the next season, with scarcely an exception, we shall see them no more."

"When I was at a friend's house in Yorkshire," writes a gentleman well known to the scientific world, "last autumn, there were such immense numbers of these birds who sought sustenance by day on the neighbouring marshes, and at night came to roost on his trees, that at length there was not room for their entire accommodation; the consequence of which was, that it became a matter of necessity that a separation of their numbers should take place,—a part to new quarters, and the remainder to retain possession of their old haunts. If I might judge from the conflicting arguments which their confused chattering seemed to indicate, the contemplated arrangement was not at all relished by those who were doomed to separate from their companions. A separation, however, did take place, but the exile would not leave the field undisputed. Birds, like aides-de-camp of an army, flew from one side to the other, unceasing voices gave note of dreadful preparations, and at last both sides took flight at the same moment. The whirring sound of their wings was perfectly deafening. When they had attained a great height in the air, the two forces clashed together with the greatest impetuosity. Immediately the sky was obscured with an appearance like the falling of snow descending gradually to the earth, and accompanied with a vast quantity of bodies of the starlings which had been speared through by hostile beaks. It was then growing rather dark, I could merely see the contending flock far above me, so I returned home to my friend, to whom I described the curious scene I had witnessed. In the morning he accompanied me to the field of battle, where we picked up 1,087 of these birds, the majority of them dead, but some of them merely wounded, and a vast quantity of broken feathers."

The starling's nest is a very simple affair, being loosely constructed of leaves, hay, and feathers. The eggs, generally seven in number, are grey-green. The time to go nesting for starlings is about the second week in April. They build in the hollows and holes of trees generally, but sometimes beneath

the eaves of houses. The fledglings are so exactly of a colour that it is impossible to distinguish one sex from the other. They should be placed, nest and all, in a basket warmly lined with hay, and fed every two hours, from sunrise to sunset, with the crumb of white bread moistened with fresh milk. If you wish to teach the starling to pipe, he must have his lessons very early in the morning, training him from the nest, and carefully secluding him from hearing the notes of any of his own species. Cover his cage, or place him in an adjoining room, and whistle to him; or, better still, play on the flute such notes as you wish him to acquire, taking care that they are not too elaborate or too numerous at first, and petting and feeding him with tit bits as he goes over his daily task. If you want him to learn to articulate words, it may be easily accomplished. Put no faith in the popular error that the starling must have his tongue cut before he will talk. The best way to teach them is to begin when they are about six weeks old: let his lesson consist but of two or three, or at the most four, words of one syllable, and if I can make you understand my meaning, let the words be such, that in pronouncing them yourself they will fall trippingly from the tongue; choose words, which, having uttered one, there will be no occasion to alter the position in which it leaves the tongue and lips to utter the next. For instance, "good day" would do very well; but "good morning" would necessitate a change in the form of the mouth, and would not do. Say the lesson is "good day." Do not stand before the young starling, or even remain in his sight, while you slowly, distinctly, and over and over again, repeat it. Get behind a screen or curtain, or even call it through the keyhole of the door. The curiosity of the bird will be roused, he will wonder whence the sound proceeds, and consequently be more impressed with it.

However, an uneducated starling is by no means to be despised. His music is mellow and harp-like, and you may depend on it nearly all the year round. He will do much better if allowed the



STARLING CAGE (OR DOVE).

range of the house; but, unfortunately, he makes too much litter to please the women folk, so you had better put him in a cage. Let it be a large cage, made of wicker, and at least two feet

long and twenty inches wide. A round domed cage is best, as in that he is less likely to damage his plumage. Let him have plenty of water to drink and to keep his glossy coat bright and clear.

FOOD OF THE STARLING.—The natural food of the starling is all sorts of insects, worms, grubs, and grasshoppers. In confinement, however, he has a most accommodating appetite. He will eat meat raw and cooked, bread, cheese, mushrooms, in fact, everything that is neither salt nor sour. When old birds are newly caught they are very violent, and will often starve themselves to death. The best way to treat them is to pass an elastic ring over their bodies, so as to confine their wings, and to strew the bottom of the cage with nuts, eggs, and meal-worms.

DISEASES OF THE STARLING.—Like many other birds, the starling is subject to atrophy, which exhibits itself in the emaciation of the bird and unhealthy appearance of its plumage. This in all probability arises from want of fresh air; a visit to the country is the best medicine, cleanliness and careful feeding the next.

Unless you supply him with plenty of water, and thus enable him to keep himself clean, he will harbour vermin. The best way to destroy the little hosts is to infuse half an ounce of tobacco in a quart of warm water, and well syringe the bird's plumage with the mixture, afterwards cleansing him with clear warm water.

THE MAGPIE.

THE magpie enjoys the reputation of being the sauciest, the most inquisitive, and the most thievish of the feathered tribes. I say "enjoys," and I believe it, for never does he display so much vivacity as when engaged in a robbery; never do his jolly eyes so sparkle as when he is abusing an enemy according to his powers of speech. Not that his tongue is his only defensive weapon—to the power of his short, sharp, black beak, of the colour of and looking as hard as steel, many cats and dogs could bear testimony.

Although simply black and white, he is a handsome fellow.

That is to say, these are the only colours he wears in captivity; but when at large, when darting here and there in the sunshine, and among the green leaves, with his broad tail spread like a fan, tints of purple and green are revealed, which, coming and going as he flies in the sunshine and out of it, gives a dazzle and splendour to his plumage never to be seen between the bars of a cage.

The magpie's nest is, I think, one of the most remarkable structures to be met with in bird architecture. It is a complete fortress, and impregnable to stoats, weasels, and even to foxes. The centre of a thorny hedge or tree is generally the site chosen. The nest is pumpkin-shaped, with a slit in the side, just large enough for the bird to pass in and out. The outer part is composed of branches firmly laced and tied to the branches of the hedge or tree; and while nests have been found measuring externally two feet in diameter, the interior, warmly lined with the hair of animals and vegetable down, measured no more than six inches in diameter. A celebrated naturalist thus speaks of a magpie's nest he discovered,—“ While travelling between Huntly and Portsay (Scotland), I observed two magpies hopping round a gooseberry-bush in a small garden, near a poor-looking house, in a peculiar manner, and flying out and into the bush. I stepped aside to see what they were doing, and found, from the poor man and his wife, that as there are no trees all around for some miles, these magpies, during several succeeding years, had built their nest and brought up their young in this bush, and, that foxes, cats, hawks, and other creatures, might not interrupt them, they had barricaded, not only their nest, but had encircled the bush with briars and thorns in a formidable manner; nay, so completely, that it would have given the fox, cunning as he is, some days' labour to get into the nest. The materials inside of the nest were soft, warm, and comfortable; but all on the outside so rough, so strong, and firmly entwined with the bush, that without a hedge-knife, hatch-bill, or something of the kind, even a man could not, without much pain and trouble, get at their young; for, from the outside to the lower part of their nest, extended as long as my arm.”

The erection of so formidable a castle, of course occupies a long time, sometimes as long as six or eight weeks, both birds labouring indefatigably, and sometimes carrying the heavier portion of the materials between them. Then seven or eight bluish white coloured eggs, spotted with greenish brown, are laid, and male

and female sit alternately on them for fourteen days, when as many little blind magpies break their shells. All in the dark, for seven days, the naked brood gape their mouths for the tender morsels their mother provides, and at the end of that time they open their eyes, and remain amazingly wide awake till their dying day.

After perusing the above description, my readers can please themselves as to whether or no they will go magpie-nesting. If a pet magpie is desired, it will be necessary to procure a nest somehow, as, unless the bird comes into your possession before he is three weeks old, you will have considerable trouble in teaching him anything. For the first week the nestlings should be fed on bread moistened with milk, the next on finely-chopped meat, and after that on almost any eatable that may be at hand.

When they begin to fly they may be taken into the garden, and allowed to flutter to a neighbouring tree, always supposing that you have previously well filled their bellies. When they begin to grow a bit hungry again, you may depend they will return. Provided you begin with him early enough, no bird learns to talk more quickly or with greater ease than the magpie. Be careful that your pupil's lessons are not too heavy at first, and that he has thoroughly mastered one, before he begins another. It is said that the best way to commence the education of the magpie, indeed, all talking-birds, is to learn them to pronounce the vowels.

Your magpie will be all the more healthy if allowed the range of the house at least half the day; let it, however, be the first half, for I have always found that the magpie is more mischievous and thievishly inclined at twilight than at any other time. Watch him just at that uncomfortable period when it is too dark to thread a needle, and economy says it is too early for lamp-light, watch the "thievish pie" stalking about the house as stealthily, yet withal as determinedly as a professional burglar. At such times look after your valuables. Keep an eye on your brooches and locket, pencil-cases, lace sleeves, and embroidered handkerchiefs. "Mag" is about, and if you don't look after them, he will.

Should trinkets or knick-knacks be lost where a magpie is kept, no one should be suspected till the house has been searched from top to bottom, and hardly then. I know a gentleman, who until lately kept a magpie, through whose evil practices an innocent person might have been cast into prison. The pie

in question led to all appearance a virtuous life, and was never known to filch as much as a bit of riband. Well, one day a tiny gold watch, belonging to the gentleman's wife, was gone, stolen from her bedroom. Two or three days previous to the theft, a new housemaid had been engaged, and as she, and no one else, had business in the room in question, she was suspected, and a constable sent for. High and low searched the constable, till he came to the girl's bedroom, and then plainly enough there was a tick, tick, ticking somewhere. Fancy the poor housemaid's terror, when the constable put first his head, then his arm up the chimney, and out of a hole produced the missing watch. Luckily at the very moment master magpie made his appearance among the company. "Is that your bird, sir?" asked the constable. "It is." "Then I think we will have another dive," replied the sensible fellow, plunging his arm up the chimney again. He was not unrewarded, for when his hand again made its appearance, it grasped a pair of spectacles that had been lost months before. Three silk handkerchiefs, a child's coral, a toothpick, and sundry other trifles, were produced in succession, to the wonder of the girl's master and mistress, the joy of the girl, and the discomfiture of the magpie, who stood by, like a detected thief as he was, eyeing the constable as though he expected to be immediately handcuffed and walked off.

One would have thought, after such an exposure, that the magpie would have mended his ways. He didn't. Scarcely a fortnight afterwards he threw the family into a state of alarm by one day appearing amongst them sneezing and coughing, and evidently in an advanced stage of suffocation. It was presently discovered that a small bottle of smelling salts was missing, and after a short search it was found in the hole in the chimney, with the silver-sheathed cork lying by its side.

The malpractices of this bird ended tragically. One day he purloined from a sideboard the silver-mounted cork of a brandy bottle. The cork was thoroughly impregnated with the flavour of the spirit, so poor Mag nibbled and pecked away till the whole was devoured; the consequence was a stoppage in the internal regions from which he never recovered.

"I once," says a correspondent, "had a magpie, who, soon after his arrival at my house, struck up a singular friendship with a favourite Newfoundland dog, which I had some years in my service. Lion was a splendid fellow, a fine specimen of his variety, and immensely strong. Bob, the magpie, was one

of the most disreputable looking birds I have ever seen. He had only one eye, having lost the other in some ill-starred expedition of his; his coat was dreadfully shabby, of a dusky brown hue, and his plumage was altogether in a vagabond condition. From the first, I believe Lion was a shocking coward in the presence of the magpie; somehow his sinister appearance seemed to terrify the dog in such a manner, that Bob completely subdued him, and, like most evil geniuses, he made him his abject slave. In a very short time, the magpie was at feud with all the animals in the neighbourhood, and I really believe Lion was the only four-footed friend that Bob possessed. Dogs, especially, the magpie delighted in worrying, and there was not one within a mile of my residence, that did not owe Bob a grudge, and would have paid it too, if it had not been for Lion. He was a match for half a dozen common curs; this the magpie knew, and took advantage of. Bob never ventured abroad without his invaluable canine friend. He would walk by his side, or rather behind him, well knowing that other dogs always came to pay their respects to Lion when he walked out. So when they were congregated about the huge fellow, Mag would slyly hop round and give one poor animal a pinch in the ear, from another he would pluck a beakful of hair from his shaggy coat, always taking care that it should be so sudden and sharp, that the cur would wince dreadfully. Sometimes he would serve three or four dogs in this manner, with marvellous rapidity, and then instantly take shelter by mounting on Lion's back, from which eminence he would bully his foes in the most impudent manner, feeling that his safety was perfectly secure. Lion had often to fight battles for his villainous acquaintance, in which affrays Bob enjoyed himself mightily, and would descend again and again from his friend's back to annoy and assault the half-maddened dogs surrounding him."

In the days of hawking and falconry, magpies, according to Sir John Sebright, formed no inconsiderable feature of the noble sport. He says:—"Nothing can be more animating than this sport; it is in my opinion far superior to any other kind of hawking. The object of the chase is fully a match for its pursuers,—a requisite absolutely necessary to give an interest to any sport of this kind; and it has the advantage of giving full employment to the company, which is not the case in partridge-hawking. A down or common, where two trees or bushes are dispersed at the distance of from thirty to fifty yards apart, is the place best calculated for this diversion.

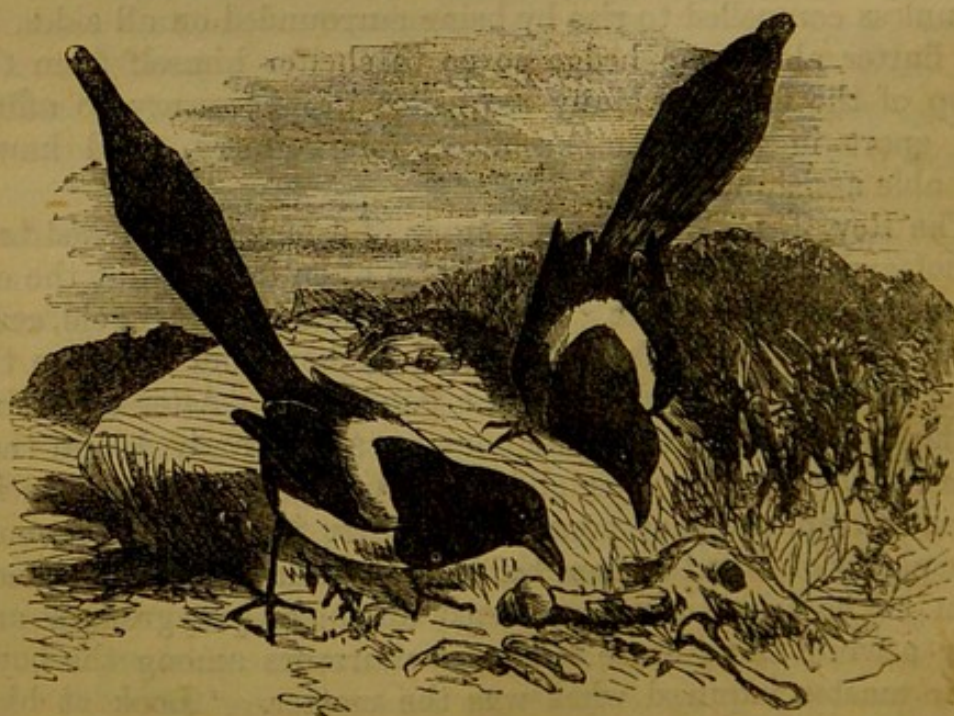
When a magpie is seen at a distance, a hawk is to be immediately cast off. The magpie will take refuge in a bush the moment he sees the falcon, and will remain there till the falcon arrives, with the hawk waiting in the air. The magpie is to be driven from his retreat, and the hawk, if at a good pitch, will stoop at him as he passes to another bush, from whence he is to be driven in the same way, another hawk having been previously cast off, so that one or the other may always be so situated as to attack him to advantage. The second hawk is necessary, for the magpie shifts with great cunning and dexterity to avoid the stoop; and when hard pressed, owing to the bushes being rather far apart, will pass under the bellies of the horses, flutter along a cart-rut, and avail himself of every little inequality of the ground in order to escape. Four or five assistants besides the falconer, who should attend solely to his hawk, are required for this sport. They should be well mounted and provided with whips; for the magpie cannot be driven from the bush with a stick; but the crack of a whip will compel him to leave it even when so tired as to be hardly able to fly. The magpie will always endeavour to make his way to some strong cover; care, therefore, must be taken to counteract him, and to drive him to that part of the ground where the bushes are farthest from each other. It is not easy to take a magpie in a hedge. Some of the horsemen must be on each side of it; some must ride behind and some before him, for unless compelled to rise by being surrounded on all sides, he will flutter along the hedge so as to shelter himself from the stoop of the falcon. Many requisites are necessary to afford this sport in perfection,—a favourable country, good hawk, and able assistants."

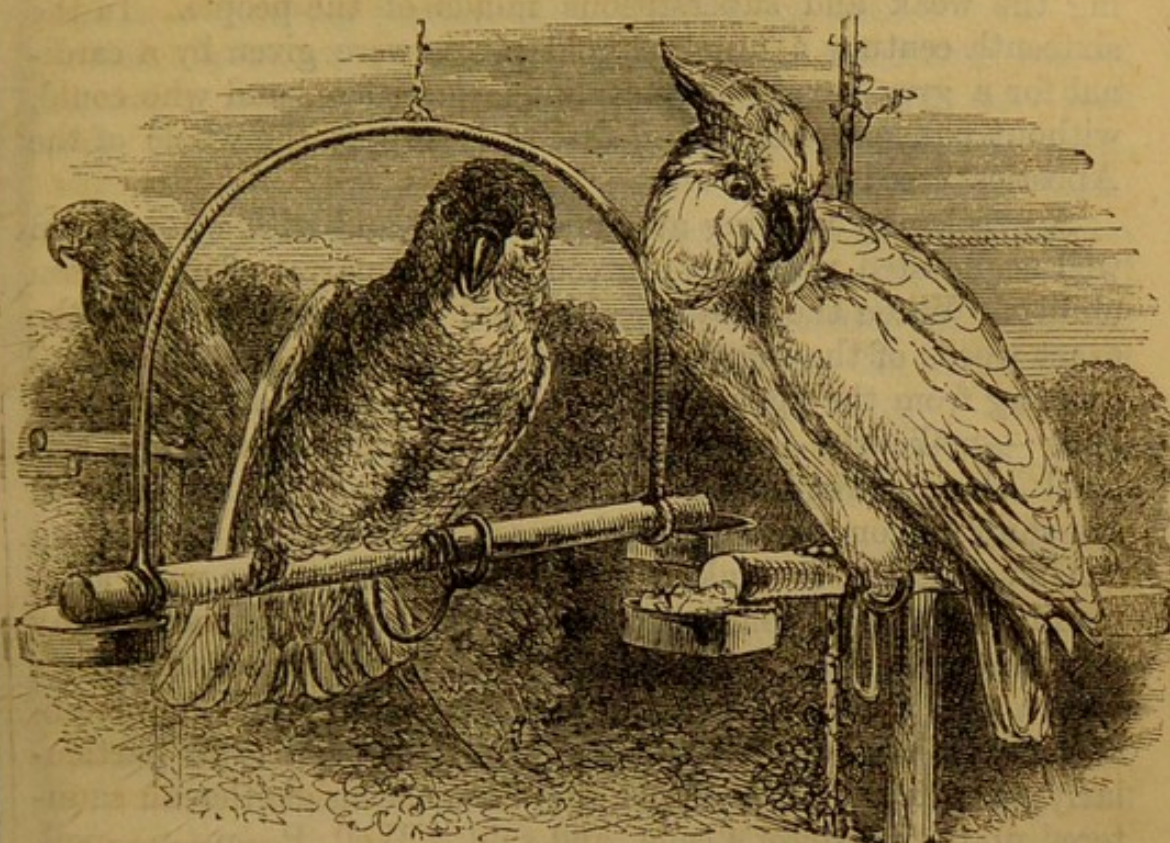
The Rev. J. G. Wood tells a story of a magpie attached to a school, and whose love of mischief was often indulged at the expense of personal comfort. "The weather had been very cold, several sharp frosts had taken place, and the boys had seized on the opportunity to make themselves a good slide. After exercising themselves for some time, the hour for school arrived, and they were obliged to leave their slide. In order to restore it to its original freshness, they poured water over it, so that it would have plenty of time to freeze before they came out of the school-room. The school window opened upon the playground, and after a while there arose indignant murmurs among the boys. Their master inquired what was the matter. 'Look at him, sir,' said the boys; 'he is walking up and down our slide.'

THE MAGPIE.

There was no necessity to name the offender, for every one knew that none but the magpie could think of such a thing. He had seen the boys actively engaged on the slide, and decided that they must value it very much. Accordingly, he promenaded the slide in a slow and dignified manner, breaking up the half-frozen mass into innumerable elevations and depressions, and so quite destroyed the smooth surface which had been so carefully preserved."

The same magpie was the perpetrator of another dirty piece of work, and in this wise. It appears that he particularly affected one part of the building, which was formerly a stable, but at that time was devoted to various purposes, one of which was knife-cleaning. The boy who did that business had on this morning put on a clean collar, and being unwilling to soil it unnecessarily, had taken it off and laid it on a chair. When the knife-cleaning operation was over, the boy was going to mount the collar again, but found it covered with mud. No one, to his knowledge, had been in the place but himself, but upon inquiry the magpie was found to be the delinquent. He had watched his opportunity, and seizing upon the collar while its owner's back was turned, he carried it into the yard, in which there was a puddle; he then carefully placed it in the muddy water, trod it down once or twice with his feet, took it in its beak and replaced it on the chair.





THE PARROT TRIBES.

STORIES OF FAMOUS PARROTS.

By way of apology to such clever talkers as the raven, magpie, starling, &c., it may be as well to state that it is by no means on account of superior intelligence that the parrot tribes are here allowed to take precedence of all other birds. As will hereafter be shown, the raven is capable of understanding the nature of an interrogatory by the applicability of its immediate response; while in the case of the parrot, it is rare that he advances beyond a few set phrases, used with little or no discrimination.

Without doubt, however, there have existed, and at the present writing exist, hundreds of parrots, parrakeets, and lories, capable of saying and doing wonderful things. In the "dark ages," parrots were in good odour with the priests of

the Romish church, not as creatures that could afford a certain amount of innocent amusement, but as instruments for deluding the weak and superstitious minds of the people. In the sixteenth century a hundred gold pieces were given by a cardinal for a grey parrot of uncommon cleverness, and who could, without pause or hesitation, distinctly repeat the whole of the Apostles' creed

A gentleman residing at Huddersfield, and with whom I am well acquainted, possesses a green Amazon parrot of uncommon ability. When the baby cries, he will endeavour, by using the exact words of the nurse, to pacify it. When he sees the steam gushing from the spout of the kettle, he exclaims "The kettle boils;—make the tea!" When the weather is lowering, and black clouds prognosticate a storm, he is dreadfully uneasy. He shuffles from one end of his perch to the other, ejaculating "Ain't it dark! I think it will rain." One of the most astonishing things in connection with this bird happened in my presence. My friend gave a dinner party, and one of the guests was a gentleman who stammered very much, and it was observed that whenever the latter spoke, the parrot was particularly attentive. After dinner the stammering gentleman sauntered up to the parrot's cage, and said, "Well, P—p—p—poll, what's o'clock?" upon which the parrot immediately replied, "P—p—p—past four!" imitating the stammer so capitally that its possessor could not forbear laughing as heartily as the rest.

Nothing seemed to afford it so much delight as mischief. When its cage was hung at the window, it would amuse itself by hailing every fruit-vendor or itinerant merchant that passed below, and then chuckle in the most hearty way at their bewilderment. Opposite my friend's residence there were some buildings in course of erection, and the men at the top of the scaffold were in the habit of calling to those below for such material as they wanted—"More bricks," "More mortar," and so on. In a very short time Poll had these terms by heart, as well as the gruff tones in which they were uttered. No sooner did the labourer (an Irishman) relieve himself of a load, than the everlasting cry, "More mortar," assailed his ears. He bore it with exemplary patience, till the mortar-board on the top of the scaffold was piled up; once more the order for "Mortar, more mortar!" was given, and then, to my friend's delight (he was a spectator of the scene), the Irishman flung down his hod, and making a speaking-trumpet of his

hands, bawled to the bricklayers above, "Tare an' ounds! is it mor-r-tar mad that ye are? Shure a man nade have as many legs as a centrepig [centipede] to wait on the likes of ye's."

This imitative propensity is, however, sometimes carried beyond a joke. A few years ago, a parrot that was kept near the quay in a seaport-town, had learned the term, with its appropriate enunciation, used by carters in "backing" their horses so as to bring the wagon in a convenient position for loading or unloading. One day a horse and cart had been left for a few moments unattended near the water's edge, and was presently spied by the mischievous parrot, who cried in a gruff voice "woa! back." The unsuspecting cart-horse "woa-backed" accordingly, and again and again, as the delighted bird repeated the command, till horse and vehicle tipped over the stone coping, and the poor animal was drowned.

When I was a child and lived at Kensington, I have a distinct recollection of a grey parrot belonging to an inn-keeper there, and which was usually hung out of an upper window. A capital talker the fellow was, and from morning till night kept the thoroughfare alive with his chattering. One day as I was returning from school, and paused as usual to hear what the parrot had got to say, I found her in a state of high hilarity, and screaming out at the top of her voice, "Cod, oh! cod, oh! plaice and eels alive, oh!" Casting about to discover whom the bird was calling after, I could see nothing—nothing but a highly respectable old gentleman, with brown gaiters and an umbrella, leaning on the latter, and laughing till his jolly face grew purple. "Cod, oh! live eels!" the bird continued to bawl, and it being evident to me that the old gentleman was in the secret, I took the liberty of inquiring of him what the bird meant. "What does he mean, boy? why he means *me*," replied the good-natured old fellow. "He has the memory of a tax-gatherer, has that bird; he remembers me, the villain, for all my fine coat. It's nearly twenty years ago since I drove a fish-cart, every day, through this parish, and called out my ware, but he don't forget. I musn't come through Kensington if I wish to forget I was once a poor fishmonger."

Then there is the wonderful German legend of the grey parrot who brought a murder to light, and a murderer to the gallows. Many years ago there resided, in the worst part of the town of Nuremburg, a shoemaker, named Carl Schnop, who had for a lodger an eccentric old gentleman, Herr Wouter

It was a wretched neighbourhood, that in which the shoemaker lived, and the room occupied by his lodger was dingy and most meanly furnished; it, however, suited Herr Wouter, for he was a miser, the sole aim of his life being to pass for a miserably poor wretch. But the shoemaker found out the secret, or rather his wife did. One evening she hurried breathless to Carl's workshop to tell him that the two stone jars, which appeared to contain the meal with which Herr Wouter made his porridge, were, in truth, full of gold pieces, with just a sprinkling of meal on the top. The result was that Carl Schnop and his wife resolved to rob and murder Herr Wouter, who, so far from being a beggar, could have weighed his meal-jars against the money-bags of any burgomaster in the city, and who was an outcast by choice.

Herr Wouter kept a parrot, a wonderfully clever bird, so clever, indeed, that on Carl Schnop being brought to trial, there were not wanting witnesses to swear they had frequently heard both men and women talking and singing in his room. They were mistaken; nobody either talked or sang in Herr Wouter's room but himself and the grey parrot.

The instrument with which the guilty shoemaker resolved to slay his lodger, was the formidable great-faced hammer with which he beat out his sole-leather. So he and his wife crept up the stairs so stealthily, and entered the miser's room with their naked feet in so cat-like a manner, that they were fairly at the bedside before even the parrot awoke. "Who are you? who are you?" screamed the bird, but before the affrighted Herr Wouter could ask the same question, or even grasp the carbine that always hung at his bedhead, the hammer fell, as did Herr Wouter, crying "Murder, murder." It is unlikely that the grey parrot had ever heard that terrible word before, much less practised it; it was uttered, however, in a tone so shrill, so agonized, that the bird caught it up instantly, and cried murder too.

"Twist that villain's neck," said Schnop to his wife, "while I carry the money into the cellar; he will bring the whole town about our ears else."

So while Carl was gone down-stairs, madame opened the cage-door, and endeavoured to seize the parrot. He, however, snapped at her hand, fierce as a mastiff, and so tore it that it was speedily as red as the miser's pillow.

When Carl came up-stairs again, he found his wife still tussling with the parrot, so said he, "Get out of the way,

I'll flatten him like sole-leather in a twinkling ;" but the brave parrot still snapped, and tore, and screamed murder. Handfuls of his beautiful plumage were torn out, but they could not still his voice, nor abate his courage. At last the poor bird darted through the door of his cage, and swept through the room with his heavy wings, incessantly uttering the dreadful word, while the affrighted murderers, she with the iron candlestick (the candle had been buffeted out), and he with the terrible flat-faced hammer, hurrying after and chasing the poor bird, with no better light than the moon gave through the green curtain at the window. Through the window presently the heavy hammer went crashing, and out at the hole darted the parrot through the quiet streets, over the housetops, startling the good people of Nuremberg in their beds with its appalling cry.

Daybreak found the parrot perched on the cross in the market-place, ragged, bleeding, and forlorn. For awhile it would sit in silence, and then rising heavily would make the circuit of the market-cross, shrieking the last words it had heard its master utter. Everybody noticed the bird, some shook their heads and looked grave, others laughed and treated it as a joke. At last, an old woman who dealt in grapes, and who lived opposite, recognized the bird as belonging to Herr Wouter. This led to an inquiry. Carl asserted, and his wife affirmed, that Herr Wouter had gone out late the preceding night, and had not yet returned. Madame Schnop's lacerated hands, however, was a difficulty that could not be got over, especially as medical evidence clearly proved that the flesh had been torn with the beak of a bird. Besides this, when the man and wife were confronted with the ragged parrot, it exhibited such unmistakable tokens of rage, and fluttered its wings, and kept crying "Murder, murder!" so fiercely, that presently the woman fell on her knees and confessed the crime, where the money was hid, and that the body of Herr Wouter was in the washhouse chimney.

The paragon of parrots, however, seems to have been one domiciled at Hampton Court, and specially mentioned by that pains-taking naturalist Mr. Jesse, who reports its sayings and doings in the words of the sister of its owner, for whose truthfulness he vouches. It seems to have been a female bird, and her laugh is described as most extraordinary as well as infectious, especially when in the midst of her laughter she cries out, "Don't make me laugh so,—I shall die, I shall die," and

then laughing still more violently than before. Her crying and sobbing are also curious. When asked "Poll, what is the matter?" she says, "So bad, so bad—got such a cold," and, after crying some time, she will gradually cease, and make a noise like drawing a long breath, saying, "Better now," and begin to laugh.

Imitating a child's voice, she has been heard to call out, "Payne, I am not well, I am not well!" and on Payne (the servant) going into the room, she would stop and begin laughing in a jeering way. When affronted, she cries; when pleased, she laughs; if any one coughs, she says, "What a bad cold!" On one occasion the children were repeating, in her presence, some of her sayings: Poll looked up and said, "No, I didn't!" She calls the cat plainly, saying, "Puss! puss!" and then answering "Mew," and on the lady who relates all this, calling "Puss! puss!" she answers "Mew." She barks so naturally, that all the dogs on the parade at Hampton Court have been set barking in return; and a party of cocks and hens have been thrown into consternation by her imitation of their crowing and clucking. She sings like a child. If she makes a false note, she will correct herself with an "O Lor!" and a burst of laughter at herself, beginning again in quite another key. "Buy a broom!" is her favourite tune, which she says quite plainly; but if the relater repeats the words in order to induce her to go on, she says, "Buy a brush!" and laughs. She performs a sort of lance exercise, putting her claw behind her, first on one side then on the other, then in front and round her head, saying the while "Come on, come on!" finishing with "Bravo! beautiful!" drawing herself up at the same time. Strange ladies she receives with "How do you do, ma'am?" and one day the narrator went into the room and asked, "Where has Payne gone?" To her astonishment and almost dismay, the bird answered, "Down stairs!"

Scores of stories illustrative of the imitative powers of the grey parrot might be quoted. Buffon says, "one of these parrots was instructed by a sailor, on the voyage from Guinea, whose hoarse voice and cough it imitated so naturally, that the crew were often deceived, and thought they heard the sailor, when it was the mimic. He was afterwards taught by a young man, and, although he then heard no other voice, he still did not forget the instruction of his old master, and it was amusing to hear him pass from the soft and agreeable voice of youth, to the hoarse accent and rough voice of the old sailor. This bird

had not merely great capacity for imitating the human voice, but it even exhibited great desire for the attainment, which could be recognized in the attention and trouble he took to imitate voices. Even in sleep he dreamt aloud, so deep an impressions did the lessons make upon him."

STRUCTURE OF PARROTS.

THE appearance of birds of this tribe bespeaks them climbers in the fullest sense of the term. Their toes, four in number, and armed with substantial hooked claws, are opposed two and two. The two foremost toes are attached, at their base, by a membrane, while the hinder ones are distinct.

Besides these handy graspers, the parrot, as every one must have observed, assists itself from point to point by means of its beak. A beautiful provision has been made to this end. With one or two exceptions (as for instance, in the *Buphagus Africanus*, or rhinoceros bird, and the capercalzie) the upper mandible of all birds is capable of more or less action. In the parrot tribe, however, this mobility of the upper half of the beak is highly developed; indeed, it is a bone distinct from the rest of the cranium to which it is hinged. The habits of the parrot render this conformation of bill essential. Audubon, speaking of a flock of parrakeets he once watched about to roost for the night, says, "Alighting against the trunk of a sycamore, or any other tree in which is a considerable hollow, the birds all cling to the bark, or crawl into the hole to pass the night. When such a hole does not prove large enough to hold the whole flock, those around the entrance hook themselves on by their claws and the tip of their beaks, and look as if hanging by their bill."

The parrot's tongue is fleshy and thick, and, without doubt, is a highly-sensitive organ. It is covered with tiny spines, and moistened with a salivary secretion, which enables it to taste and compare various articles of food. In the parrots of the Blue Mountains, and some others which feed on the nectar of flowers, the hairy tongue is fringed with minute suckers through which it imbibes its dainty fare. Mr. Caley relates that one of these

birds, on seeing the painting of a flower, attempted to suck it, and repeated the endeavour when a piece of coloured chintz was shown it.

The eyes of the parrot being placed on either side of his head, he cannot distinguish a small object held close to him, without turning his head on one side, which gives a bird so employed a grotesquely-critical air. The colour of the iris differs considerably in different species. In some it is of a golden hue, in others orange, or pearl-grey, or red, or brown, but it is generally found to grow of a deeper tint with increasing age. The upper and lower lids form a perfectly round orifice, and the upper lid is movable. The pupil of the parrot's eye is not, as in most birds and animals, situated in the centre of the iris, but inclines inward. This is not its only peculiarity. The bird can contract the pupil of the eye, independently of the influence of light, anger, fear, or mirth. Any excitement, indeed, will induce the pupil of the parrot's eye to dwindle, till it looks a tiny spot no bigger than the smallest pin's head.

In respect of plumage the hen birds often differ from the males; this, however, is not observable in adults, for, after the first, second, sometimes even as late as the third moulting, they remain of exactly the same colour. The tail is composed of twelve quills, a circumstance to be borne in mind by the doubting purchaser, when the unscrupulous seller tells him that the bird's tail is not yet fully grown. As the wings of the parrot are, as a rule, and when compared with the bulk of his body, short, it has, or seems to have, a difficulty in rising from the ground; when, however, it has attained a proper elevation, it can fly very well, and with considerable rapidity.

HABITAT OF THE PARROT TRIBE.—The European parrot-market is supplied almost entirely by importation. There can be no doubt, however, that the birds in question will breed in Europe, but it must be in localities where the temperature of the air is warm and unvarying. At Caen, for instance, M. Lamouroux informs us, there were, some years ago, two blue macaws that bred year after year. In four years and a half these birds produced sixty-two eggs, and from this number were hatched twenty-five young ones, of which ten only died.

The number of eggs laid by these macaws varied from two to six, and took from twenty to twenty-five days to hatch. The eggs were pear-shaped, and of almost the size of a pigeon's egg. The little macaws were born as naked as babies, and it was more than three weeks before they became clothed with a thick

slate-coloured down. It was six months before they acquired their proper plumage, and a year before they attained full growth. It was found much easier to breed from these climatized birds than from their parents.

The parrot family is a very extensive one, and is scattered all over Asia, Africa, and America. There are, however, other parts of the world besides Europe that are non-productive of parrots. The northern and central regions of Asia, Greenland, Iceland, and the northern parts of America do not afford a home to the brilliant psittacidæ.

Brazil, Guiana, and America, contain the greatest variety of parrots, and to these regions the macaws are exclusively confined. Parrakeets likewise abound in Africa, from Senegal to the forests near to the Cape of Good Hope. The common green parrakeet is found chiefly in the Straits of Magellan. In Asia, parrots are found in Hindostan and its dependent islands; in Cochin China, in China, and the Eastern Archipelago. Lories are found only in the Philippine Islands and in New Guinea. Cockatoos are confined to the Eastern Archipelago and Australia, but in much greater abundance in the latter country than in the former.

In its wild state, the food of the parrot consists chiefly of fruits and berries; but it is asserted by some authors, that a few of the tribes live on roots and succulent herbs. The way that a parrot extracts the kernel from an almond or other nut is interesting. Taking it in its beak, it fixes it on the under wrinkled surface of the upper mandible; then, with the tongue, it is turned round and round till in a proper position to admit of the insertion of the chisel-like edge of the lower mandible, when the shell is split with the greatest ease, the husk rejected, and the nut swallowed.

Marshy ground, and the borders of streams and rivers, are the favourite abiding places of the parrot tribe. It is not, however, because they need frequently to drink that such localities are selected; on the contrary, wild parrots, as well as tame ones, drink very little. Instinct teaches the parrot that eating and drinking are not the sole essentials to comfortable existence. Without his bath, the wild parrot would be a miserable bird; his body, sweating beneath its heavy covering, would breed little pestilent insects, and his gorgeous plumage become tarnished as the second-hand frippery one sees in the shops of theatrical clothiers; or, not to go so far a-field for a simile, as tumbled, and touzled, and slatternly, as half the

caged parrots in London. Nature, whispering to the parrot, tells it that *cleanliness* means health, and strength, and beauty; and so the parrot adopts the hint, and never loses a chance to lave its buoyant carcass in the cool sparkling water. Travellers tell us that many of the tribes will bathe as often as six or eight times a day, and that when bathed they come to the bank to shake themselves, like so many water-spaniels, and then, hopping up into the trees, sit all along the boughs and doze deliciously, while the blazing sun is busy drying and curling their fine feathers again. More will be said on this most important subject by and by.

Except during the important business of egg-hatching, the parrots live in flocks. The nests which they construct exhibit none of that neatness which distinguishes those of European birds, but are merely holes in trees or rocks, padded with rotten wood and leaves. They breed several times in the course of the year, but not more than three or four eggs are hatched at one time. When the little parrot breaks its shell, it is about as ugly a creature as can well be conceived. It is as naked as a human baby, and its head is so large that its body appears but a little something attached to it. So large, indeed, and heavy is the head of the baby parrot, that for some hours it fairly anchors its owner to one spot, from which it has not the least power to move. The birds are of rather slow growth, and not thoroughly fledged till they reach the age of three months. They stay in the parent nest till their first coat has been shed, and the second attained, and then they set out to find mates, and otherwise enter into the serious business of life.

Parrot catching and teaching is a trade regularly practised by the natives of the regions where the birds abound. Some are taken in the nest, and others are snared. It seems that the parrot is particularly fond of the seed of the cotton-tree, and that the natives strew it in its path. The seed of the cotton-tree possesses intoxicating qualities, and after eating it the deluded birds become so dreadfully tipsy as to become an easy prey to the parrot-catcher.

It is asserted that the natives of Paraguay have a mode of trapping parrots peculiarly their own. To the trunk of a tree frequented by the birds, the snarer attaches a sort of platform, and on this he builds a little hutch of leaves, into which he can creep and lie concealed. With him he has a tame decoy, whose voice attracts the wild birds, which come to see what the row is about. The man in the hutch has a sort of fishing-rod with a

string noose at the end, and this he casts round the necks of the sympathizing visitors to the treacherous decoy. A system of rewards and punishments is the plan adopted by the natives in educating the parrot; if he is obstinate, they blow tobacco-smoke in his face, or immerse him in the coldest water. If he is obedient, he is rewarded with cocoa-milk and sugar.



VARIETIES OF THE PARROT TRIBE.

IN referring to the various Parrots (by which familiar title be it understood the entire tribe—including maccaws, parrots, cockatoos, parrakeets, and lories—will be here designated, when spoken of, *collectively*), I shall beg to be absolved from the tedious business of giving each its stiff-starched, unpronounceable, Latin cognomen. Clever Mary Howitt's excuse for adopting the course I propose shall be mine. She says, "It may be very agreeable to read the descriptions of birds by naturalists, with all their long Latin names, as *Haliaeetus leucocephalus*, *Polyborus vulgaris*, *Plectophanis nivalis*, and the like; but give me a quiet nook to watch them in on a fine summer's day, either in this country or any other. Their free and frolicsome motions, their glancing colours, their voices more expressive of joy, of life, of spirit, of passion, than any Latin; their habits and ways of living, all peculiar to themselves,—that is, indeed, a treat, and a lesson in natural history. I have seen the parrot in the Australian woods thus making the dusky gum-tree all alive; and they gave me ideas of a divertimento that I never find in reading of them as *Platycercus*, the *Trichoglossus*, or *Plyctolophus*. In the one case, I seem to be looking into a museum of the stuffed defunct; in the other, into the living world itself."

The form of parrots, as says Bechstein, is, generally speaking, somewhat clumsy and deficient in elegance; their head and bill appearing too large for the rest of the body. In parrakeets this disproportion is, in great measure, counteracted by the length of the tail, and many of them exhibit an elegance and grace not surpassed by any other bird. The general formation of the feet, two toes placed forward and two backward, seems to prove that woods and forests are the natural habitat of the race. It

is accordingly in those regions where trees are clothed with perpetual verdure, and where a never-failing succession of fruit and seed can be procured, that parrots are found in the greatest number and profusion. Thus the recesses of the endless forests of South America are enlivened by the presence of the superb macaws; those of India and its islands, by the scarlet-clothed lories and their elegantly-formed congeners; while those of Australia resound with the harsh voices of the cockatoos, and the shriller scream of the parrakeets. In these, their natural situations, their movements are marked by an ease and gracefulness which are never exhibited in confinement.

THE GREY PARROT.—This bird, both on account of its docility and superior intelligence, is entitled to rank foremost in the parrot family. It is a native of Guinea and other of the hottest parts of Africa. In size, the grey parrot varies from nine to twelve inches in length. The bill is black, strong, and much hooked, and the orbits and space between them and the eyes covered with a bald and white skin. The entire body is of a combined pearl grey and slate colour. The feathers of the head, neck, and under parts of the body, are also edged with a greyish white. The tail is of a deep bright scarlet. The feet and toes are grey, tinged with red. It is one of the most healthy and long-lived of the parrot family; indeed, Le Vaillant makes mention of one he saw at Amsterdam, that had attained its eighty-first year. It is, however, only fair to state that anything like vigour had long since departed from the bird in question; it was shaky, blind, and decrepit, and as exactly "on its last legs" as possible. It wandered in its speech and jabbered idiotically, and would take no other food than biscuit soaked in Madeira wine. It had been a remarkably clever bird in its time; would call the servants by name, fetch its master's slippers, and otherwise exhibit an uncommon degree of intelligence. Up to the age of sixty, it retained its full vigour and capacity for learning, in a day or two, any new phrase that was offered it; soon after, however, its memory began to fail, and it began to mix, with the sentences it had so often repeated, scraps of its proper parrot language—declined indeed to second fledgling-hood. It moulted regularly for sixty-five years, and then the process became irregular, its tail grew yellow, and no further change of plumage took place.

THE GREEN AMAZON.—This bird is one of the most desirable of the parrot family. In the first place, it is certainly the cheapest. Persons desirous of purchasing a parrot at a cheap

rate, should visit the neighbourhood of Wapping, Ratcliffe Highway, and other localities affected by sailors. Some of these birds are brought over in almost every ship that trades to the east, by mariners, as presents for their wives and sweet-hearts. While the money lasts, the present is cherished, but as soon as it is spent, away goes the parrot for what it will fetch. Almost every chandler's shop you pass has in its window an announcement of a bird of this sort for sale. Nobody, however, but a shrewd person should venture on this errand, as the orthography of the denizens of Ratcliffe is sometimes faulty. For instance, on one occasion I saw scrawled on a piece of paper "A parehot for sail hash kuler," and on another "A pairakick within chepe." I much doubt if a casual passer would ever have dreamt that the first announcement bore any reference to an ash-coloured parrot, or the last to a parrakeet.

In the neighbourhood above mentioned, a strong young bird of the green Amazon family may be bought for ten or fifteen shillings. It is much the same size as the grey parrot. The prevailing colour of the plumage is brilliant green, while the back, and under parts are tinted yellow. The beak is black, and the iris of a gold colour. The fore part of the head is inclined to blue, and the throat-feathers edged with cerulean green. It is a fluent talker.

There is another common green parrot that may be mistaken for the Amazon, and as an error in the selection would certainly lead to disappointment and vexation, it may be as well to point out the difference. The second green parrot is a native of Trinidad. It is nine or ten inches in length, the body is of a dark green hue, the pinion-feathers red and blue, and the head yellowish red. Of course, it will be at once seen that the distinction between the Amazon and the Trinidad is broad; still, seeing the birds apart, a mistake *might* occur, and if it did, the purchaser would get not nearly so good a talker for his money, nor one nearly so hardy and easy to rear as he bargained for.

THE CARDINAL.—The only variety of this parrot at all common in England is one that is about a foot in length of which the tail comprises nearly half. The upper part of the body of this bird is of a sombre green colour, shading off to light green under the belly. The back is peach-coloured, and the throat black, and encircled by a still blacker colour. The head is violet, blended with blue and red.

There is another variety of cardinal with a red head and a light blue back; and still another, whose cranium is of the colour of peach blossom, the body green and yellow, and the tail spangled with snowy white dots. Unfortunately, however, the appearance of all the cardinals is their chief recommendation. They are timid, chilly, and but indifferent linguists.

THE ILLINOIS PARROT.—This pretty creature is, as a rule, about the size of the grey parrot, or perhaps a trifle larger. It rarely becomes a good talker, but is such a good tempered, sociable bird, that it is sure to become a favourite wherever it is domiciled. The prevailing colour of the Illinois parrot is gold green, the forehead, cheeks, and throat being of a brilliant orange. Round the eyes of the bird is a bald grey-tinted skin, and the iris is of a fine orange. The bill is almost white. The female may be known from the male by having on her forehead a patch of yellow.

THE MORETON BAY PARROT.—This magnificent little bird may be ranked among the most valuable of parrots. It is so scarce in this country that very little is known of its imitative capacity, but in appearance it is unsurpassed, being one blaze of dazzling flame colour. It subsists chiefly on the nectarine juice, and pollen extracted from flowers and blossoms. Mr. Gould says, "However graphically it might be described, I scarcely believe it possible to convey an idea of a forest of flowering gums tenanted by various species of these birds. The incessant din produced by their thousand voices, and the screaming notes they emit when a flock of either species simultaneously leave the trees for some other part of the forest, baffles all description, and must be seen and heard to be fully comprehended. So intent are they for some time after sunrise upon extracting their honey-food, that they are not easily alarmed, or made to quit the trees on which they are feeding. The report of a gun discharged immediately beneath them has no other effect than to elicit an extra scream, or cause them to move to a neighbouring branch, where they again recommence, with all the avidity possible, creeping among the leaves, and clinging to the branches in every variety of position. During one of my morning rambles I came suddenly upon an immense Eucalyptus (gum-tree) which was at least two hundred feet high. The blossoms of this noble tree had attracted hundreds of birds, both parrots and honey-suckers, and from a single branch I killed four different species."

THE BLUE-MOUNTAIN PARROT.—This bird, called by the





LEIGHTON, BROS.

CANARY, BULLFINCH, AND GOLDFINCH.

natives of New Holland the Warrior, is very handsome. Its body is deep crimson, and its wings the most lovely blue. It is a remarkable bird, as possessing what is vulgarly termed a *temper*; that is, it will conceive the most cordial friendship towards one member of a family, while towards the rest, and without the least cause, it will exhibit the most evident dislike, screaming, and getting into the most dreadful passion whenever its cage is approached. Mrs. Howitt says "He has what I never heard in others of these birds, a very soft, musical note;" and Mr. Caley further observes "It does not eat any kind of grain, even when in a domesticated state (it is a honey eater like its neighbour of Moreton Bay). It is much subject to fits, which generally prove fatal; and it is difficult to find an individual kept alive above a couple of years. The flesh of this bird is very good eating."

PARRAKEETS.

THE most anciently known of the parrot family belong to this tribe, the member that is known as the Alexandrine parrakeet having been, it is said, brought from India or Ceylon by Alexander the Great, after whom the bird took its name. In the reign of Nero, parrots of various species were introduced into Rome from different parts of Africa, and more highly prized and elegantly housed even than at the present time. Cages of silver and ivory were not thought too splendid for the gorgeous birds; and, as a marketable commodity, the price of a parrot exceeded that of an adult slave.

THE CAROLINA PARRAKEET.—This parrot is peculiar to North America, and is indeed the only bird of the species found there. It is met in the United States as far north as lake Michigan, but on the east coast does not extend beyond Maryland.

Not the least singular fact connected with the Carolina parrakeet is, that, being of a family otherwise so exclusively confined to the hottest regions of the tropics, it should be discovered at such an immense distance from what has been designated its natural home. That it is not a bird of passage is evident, as it has been seen in great flocks on the shores of the Ohio as late in the season as February. Various attempts have

been made to account for the existence of such eminently hot-climate birds in a region where, at certain seasons of the year, ice and snow prevail, but among them all the following seems most feasible. "It is not to be ascribed to a milder climate prevailing in these parts so much as to the existence of certain peculiar features of country, to which these birds are particularly and strongly attached. These are low, rich, alluvial bottoms, along the borders of creeks covered with a gigantic growth of sycamore-trees or button-wood, deep and almost impenetrable swamps where the vast and towering cypresses lift their still more majestic heads, and those singular *salines*, or as they are called *licks*, so regularly interspersed over that country, and which are regularly and eagerly visited by the parrakeets."

The Carolina parrakeet averages about fourteen inches in length from the base of its beak to its tail tip. The ground colour of the bird is vivid emerald green dashed with purple and blue. The forehead and cheeks are orange red, and the rest of the head and neck gamboge. The body and under parts are a delicate yellowish green. The tail is green, tinged with orange red. The beak of this parrakeet is rounded and very hard and strong, and if it gets a fair chance to bite, you may depend it will not neglect it.

In a natural state the parrakeets of Carolina are exceedingly sociable and kind one to another. They fly in large flocks, and roost in companies thirty or forty strong in the inside of a hollow tree, or other convenient shelter. To companions in misfortune, they manifest the utmost sympathy, as the following instance quoted from Wilson's "American Ornithology," will serve to show.

"At Big Bone lick, thirty miles from Kentucky river, I saw them in great numbers. They came screaming through the woods in the morning about an hour before sunrise, to drink the salt water, of which they, as well as the pigeons are remarkably fond. When they alighted on the ground, it appeared at a distance as if covered with a carpet of the richest green, orange, and yellow; they afterwards settled in one body in a neighbouring tree, which stood detached from any other, covering almost every twig of it, and the sun shining strongly on their gay and glossy plumage, produced a very beautiful and splendid appearance. Here I had an opportunity of observing some very particular traits of their characters. Having shot down a number, some of which were only wounded, the

whole flock swept repeatedly round their prostrate companions, and again settled on a low tree within twenty yards of where I stood. At each successive discharge, though showers of them fell, yet the survivors seemed rather to increase; for after a few circuits round the place, they again alighted near me, looking down on their slaughtered companions with such manifest symptoms of sympathy and concern as entirely disarmed me."

By the bye, for fear I should forget it, I may as well here warn the keeper of a Carolina parrakeet against the use of salt. Taking the cue from the above described habit of the bird at the salt "licks," in his native wilds, the reader might be inclined to give his pet an inexpensive saline treat. To do so would be to endanger the bird's life. The use of it may be all very well while the bird is at liberty and uncontrolled in its diet; but to give salt to a caged Carolina parrakeet would certainly lead to an attack of scurvy, and a dreadfully mangy condition of plumage.

THE ROSE-RINGED PARRAKEET.—This charming little bird is also known as the Guinea sparrow. It is about fifteen inches in total length, of which the tail comprises at least two-thirds. Its prevailing colour is grass-green shaded with red and blue, and round its neck is a rose-coloured collar, from whence it derives its name. It is a native of India. The colours of the hen bird are the same as those of the male, excepting that the rosy ring round the neck of the former is so pale beneath as to be nearly undistinguishable. The rose-ringed parrakeet has as good a claim to the title of "love bird" as any that fly, as may be proved by any one who will take the trouble to obtain a bird of each sex and enclose them in one cage. Indeed, if after living together for some time one of them should die, the remaining one, whether it be he or she, will be inconsolable, and will speedily pine and follow its mate, unless another companion is speedily obtained. In case such a catastrophe should occur, and a second mate for your bereaved rose-ring be unattainable, it may be as well to adopt a plan suggested by Bechstein, viz., putting a mirror inside the cage, and so cheat the poor widow into a belief in her husband's presence.

In a wild state the rose-ringed parrakeets breed in holes of trees and buildings, and hatch three or four eggs each time. As the grain crops ripen, they frequent the trees in the neighbourhood, whence they make descents on the fields, returning again to the boughs with a head of grain in their beaks, which they munch at their leisure. Dallas, speaking of this bird, says.

"it is exceedingly graceful and docile, and may be taught to speak with great facility."

Besides the parrakeets mentioned, there are a great number of others; but as the reader is very unlikely to possess any one of them, to treat of them here would be out of place. Two of them, however, are such interesting creatures, one being a parrakeet that never flies, and the other one that *warbles*, that it would be hardly right to pass them by in silence. The walking parrot is a native of New Holland. It is about a foot in length, and is coloured green and black, in regular and alternate bands. Mr. Gould avers that he never saw it perching, and that he never succeeded in driving it into a tree. "It usually frequents either sandy, sterile districts, covered with tufts of rank grass and herbage, or low swampy flats abounding with rushes, and the other kinds of vegetation peculiar to such situations. It is generally observed either singly or in pairs; but, from its very recluse habits, and great powers of running, it is seldom or never seen until it is flushed, and then only for a short time, as it soon pitches again, and runs off to a place of seclusion." It lays its eggs on the ground.

The little singing parrot is also an Australian, and is known as the grass parrakeet, and abounds over the vast central plains. In size it is about equal to the lark. "In captivity," says Dallas, "these diminutive creatures are amongst the most pleasing of the parrots, for they are not only elegant in their forms, and lively in their movement, but, instead of the horrible screeching noise which renders so many of their larger and more brilliant brethren exceedingly disagreeable neighbours they have a soft warbling note which is very pleasant."



THE MACAWS.

THE true Macaws, whose classic appellation is *Macrocerus*, Ara being the Indian name, which is supposed to describe the ordinary note of the bird. The macaws are, without doubt, the most magnificent of the gorgeous parrot family. They are confined to the hottest regions of Brazil, Guinea, the West-India

THE GREAT SCARLET MACAW.

Islands, and America, where they inhabit the skirts of the dense woods.

The macaws occasionally attain immense size, measuring as much as three feet from poll to tail-tip. This, of course, is an unusual size; however, two feet six inches might be set down as a fair average. The macaws may be distinguished from any other of the parrot tribe by the face being entirely bald, or at most furnished with a few spare lines of feathers.

THE GREAT SCARLET MACAW.—This, the largest of the macaw family, was once common in the West-India Islands,

but has become almost extinct in those localities. South America is now the chief macaw depôt, and from thence they are imported to Europe. The greater part of its body is of a brilliant scarlet, the quill-feathers blue, which colour also marks the lower part of the back and wings, while the tail is a wondrous blending of red and blue and brown, and violet and pink.

Mr. Wallace, in his "Travels on the Amazon and Rio Negro," informs us that the natives of the latter region wear head-dresses made from the shoulders of the red macaw. "The Indians," says he, "keep these noble birds in great open houses or cages, feeding them with fowls, solely for the

sake of their feathers, which are highly prized, not only from their being almost equal in beauty to a plume of white ostrich feathers, but from the birds themselves being rare."

This bird is seen to much better advantage if it is chained to an open perch: so secured, its plumage is less likely to be broken and injured than when confined in a cage. Still, this is a course which the disposition of the bird will not always allow. As a rule, it is cross, snappish, and spiteful, and should never

MACAW. be kept where there are little children. If reared from the nest it can be made a first-rate talker, but to attempt to teach an adult anything beyond its natural horrid shriek, is labour in vain.

THE BLUE AND YELLOW MACAW.—This bird is smaller than

THE PARROT TRIBES.

the preceding. The whole of its upper parts are of a fine blue colour, more or less tinted with green, whilst its lower surface, from the breast downwards, is of a light orange-yellow. The bill is entirely black, and very large and strong. A peach-stone between the mandibles of a macaw is of no more account than a walnut between the laps of a pair of iron nut-crackers. From the base to the tip the bill of the blue macaw measures three inches and a quarter, and is considerably hooked. The cheeks are bare, and somewhat resemble the cheeks of the turkey. The legs and feet are blackish grey. The throat is marked with a largish and blackish spot, which runs under the greater part of the bare white skin of the cheeks.

There is another macaw, not larger than a pigeon, common in Brazil and Guinea. Its prevailing colour is green. It is a tremendous pest to the coffee-growers, visiting the plantations in flocks, and devouring vast quantities of the berries. This macaw is said to be particularly susceptible of kindness, and violently jealous of anything else favoured or caressed in its presence.

There are others of the parrot tribe called *Psittacara*, from their apparently forming a connecting link between the parrots and macaws. They are smaller than the genuine macaws, and have the head entirely covered with feathers, except a small circle round the eyes. Their plumage is magnificent, and they learn to articulate very easily. Le Vaillant relates that he once heard one of this tribe say the Lord's Prayer in Dutch, lying on its back the while and folding its feet in an attitude of prayer.

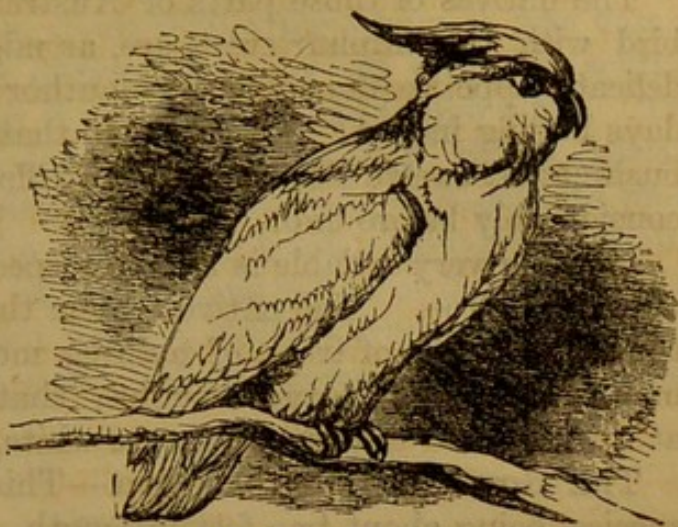
THE COCKATOOS.

THESE curious birds are confined to the Eastern Archipelago and Australia, occurring in the latter country in great abundance. Like others of their congeners, they make their nests in decayed trees; indeed, if the tree should not be very much decayed, it makes little difference to the cockatoo, who can speedily dig for himself a hole in the trunk with his iron-like bill. When taken in the nest, or shortly after they leave it, it is an easy matter to tame them completely, and, by the exercise of much industry and patience, to teach them to imi-

THE SULPHUR-CRESTED COCKATOO.

tate the human voice. As a rule, however, their accomplishments in this respect extend no further than to repeating their own name, their ordinary voice being nothing better than a harsh and abominable shriek.

THE SULPHUR-CRESTED COCKATOO. — This, the commonest of the cockatoos, is a splendid bird. The ground of its plumage is snowy white with a tinge of orange or rather lemon-colour, on the feathery



LEMON-CRESTED COCKATOO.

crown that surmounts its head. The longer feathers of this crest measure as much as seven or eight inches in length. In various parts of Australia they abound in vast flocks. Says Mary Howitt, "It is a pleasant sight to see a large flock of these great white cockatoos. 'What a splendid flock of geese,' say you, 'sitting on yonder green meadow! How beautifully snowy white they are!' Your geese, my friend, are cockatoos. There they sit, hundreds, thousands of them, basking motionless in the sun, and in charming contrast to the rich green grass. Now don't get down your gun and attempt to shoot any of them, for they require three days' stewing to make them tender. But yet do as you please, for you will only have your labour for your pains. Quiet as they seem, and still as so many stones, they have their sentinels on the alert, and before you could come within a Minié rifle reach of them, they would be up and almost rend your ears with their rasping cries. Of all lovely birds, they have the most horrible grating screech, and when a whole flock of thousands is passing over, it is, as you lovers of Latin would say, *monstrum horrendum*."

And yet that sound is often a delightful one to the traveller, for where the cockatoos are, water is not far off. They are pretty sure to rest in the tall red-gums which skirt a brook or river. Not so sweet, however, is the scraping note of the white cockatoos to the farmer, for they are dreadful plunderers of the corn crops. They assemble by thousands about the ripening wheat-fields, and what is a flock of sparrows to them! Havoc

and devastation are the work of these handsome snowy birds, with their lemon-coloured crests.

The natives of those parts of Australia where is found the bird with the sulphur crest, are, as might be imagined, of less delicate appetite than the lady author above quoted. Three days boiling indeed! I'll warrant that a cockatoo given to a bushman at twelve o'clock, would be killed, gutted, and devoured, considerably before two.

Nothing very reliable is known respecting the breeding habits of the cockatoo. The natives assert that it makes its nest in the rotten limbs of trees, of nothing more than the vegetable mould formed by decayed boughs; that it has two young ones at a time; and that the eggs are white, without spots.

THE ROSE-CRESTED COCKATOO.—This is the largest of the species, being about two feet in length. The crest of the rose-crested bird assumes a rounded form, and falls back over the neck, whereas in the other species it is lengthened to a point and curved upwards. This crest is composed of feathers for the most part of a bright orange-red beneath. The prevailing colour of the plumage is white, with a pink tinge. The beak is bluish black, and the eyes dull grey. Like its lemon-crested cousin it has a very slight knack of speech, but will learn to mew like a cat, bark like a dog, or crow like a cock readily.



ROSE-CRESTED COCKATOO.

THE LESSER SULPHUR-CRESTED COCKATOO.—This pretty creature, which is three or four inches shorter than its big brother, is of a pure white colour excepting a lemon spot beneath the eyes and the tips of the tail feathers, likewise fringed with the same colour. As the bird's name implies, its crest is sulphur-coloured. It is a native of the Moluccas, but of its natural habits little or nothing is known. It is a good-tempered bird, and will submit to be caressed and even handled by strangers without exhibiting any of that ferocity which attaches to the parrot tribe.

LEADBEATER'S COCKATOO.—An elegantly-shaped bird, about fourteen or fifteen inches in length from the beak to the tail, and well proportioned, highly valued also for its docile dis-

THE LORIES.

position, but so rare that as much is asked as twenty guineas for a pair of them. It is a native of the Blue Mountain range of Australia, whence a skin was sent to Mr. Leadbeater, well known to ornithologists, about 1830, after whom it was named by Mr. Vigors. It is distinguished by its crest of scarlet, yellow, and white, which it erects and expands like a fan. The back, tail, and wing feathers are white, shaded with a delicate pink on their under side; the breast is also of a delicate pink, which extends round the sides of the head, gradually increasing in tone till it is lost in the scarlet and yellow of the crest. The beak is ashy grey; the head a delicate white, very slightly tinged with pink; the eyes a bright brownish red, with naked whitish orbits.

THE LORIES.

THE birds of this family are altogether of slighter build than those pertaining to the true parrot tribe. The beak is more oval-like and slender, especially as regards the lower mandible; it comes to a more prolonged and finer point, and its cutting edges are straight. The lory's tongue is rough, whereas, as has been already observed, the regular parrot's tongue is thick, soft, and smooth. The tongues of some of this species are furnished with a fringe of stout hairs, useful for probing the depths of honey-yielding flowers, and extracting the juice of tender peach-like fruits; this sort of diet forming the chief sustenance of these beautiful birds.

The smallest of the lory tribe is he of Papua and other parts of New Guinea, and known to classical folks as *Charmosyna Papuensis*, and to those of plain English speech as the Papuan Lory. The body of the Papuan lory is not larger than that of our common thrush, though, on account of its full-setting plumage and extensive tail, it looks fully twice as large. The tail of this bird, or at least the two central feathers of it, measure eleven or twelve inches in length.

The colours of the Papuan lory are very gorgeous. Its wings are emerald green, as is its back, while its breast and thighs are adorned with dazzling flame-colour. Towards the tail the colour is deep azure, the poll and nape of the neck

being barred with the same, margined with dusky purple. The beak is a deep ruddy orange, and the long drooping tail-feathers are green and gold.

THE PURPLE-CAPPED LORY.—The lory may be distinguished from the rest of the parrot family by the peculiar formation of his beak. It is altogether straighter, sharper, and more slender than that of either the parrot or parrakeet.

The lory tribe is not a small one, but he of the purple hood must be regarded as its chief. His size is that of an ordinary pigeon. The ground colour of his body is the most gorgeous scarlet, and round his neck he wears a semicircle of burnished gold. The thigh feathers are sky-blue; the wings, the dazzling green of the emerald margined with violet; and from the eyes over to the nape of the neck, extends the purple cap from which he takes his name. After reading this description, it will be easy enough to understand how the lory in question maintains his reputation for beauty. The worst of it is, he is very high-priced. A handsome purple-capped lory, evincing anything like an inclination to speak, is worth, in the parrot market, from five to ten guineas. The purple-capped is the most capable of all the lories. He has a more melodious voice than any other parrot, and speedily learns how to articulate words and even sentences seven or eight words long. His imitative powers are brought into play on every occasion; he is a clever ventriloquist, and will draw corks, do the clicking of a meat-jack, or the sound of water gurgling through a pipe in a wonderful way. He is not, however, a long-lived bird. A sudden change from hot to cold weather is enough to bring your lory to death's door in the space of a few hours; therefore a genial and unvarying atmosphere is of the first importance in the management of this bird.

THE AUSTRALIAN LORY.—This genus, instead of having the prevailing colours of its plumage of that brilliant red that distinguishes the Indian birds of this order, has a ground colour of green. In shape, the Australian differs from the true lory in many respects. The wings are sharper and nearly red in colour, and the tail longer and narrower. Although, however, it is in appearance so different from its Indian relations, its leading characteristics are such as to place its proper classification beyond dispute. It has the same rough pencil-tipped tongue, and the nature of its food is precisely similar, the soft outer portions of fruit, and not the seeds and kernels (as is the case with the parrots proper), forming its staple food.

PARROTS' CAGES AND PERCHES.

They will not admit of being separated even for a moment; and whether in their cage or at liberty, every act and every movement of one has a reference to the acts and movements of the other. They are lively, active, and familiar, distinguishing and following those who attend them with perfect confidence, *but always acting in concert.*

PARROTS' CAGES AND PERCHES.

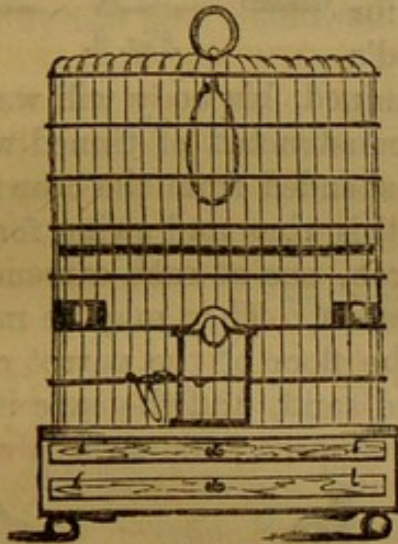


Fig. 5.

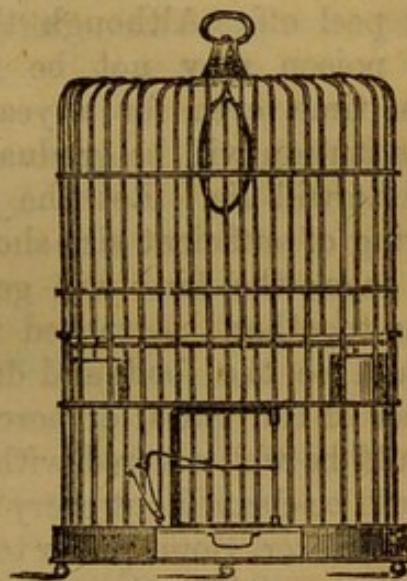


Fig. 6.

THE best cage for parrots is that which is cylindrical, with an arched roof; but cages are sold in a great variety of shapes, both square, cylindrical, and octagonal. Fig. 5 represents a square-shaped cage of common iron wire, with an arched top, measuring 28 inches by 17, with drawers in the bottom for convenience in cleaning. Fig. 6 is a circular cage of lacquered wire, particularly elegant in shape, from its great height in proportion to its breadth, being 3 feet in height by 20 inches. Fig. 7 has more structural pretensions, having a verandah of perforated zinc pro-

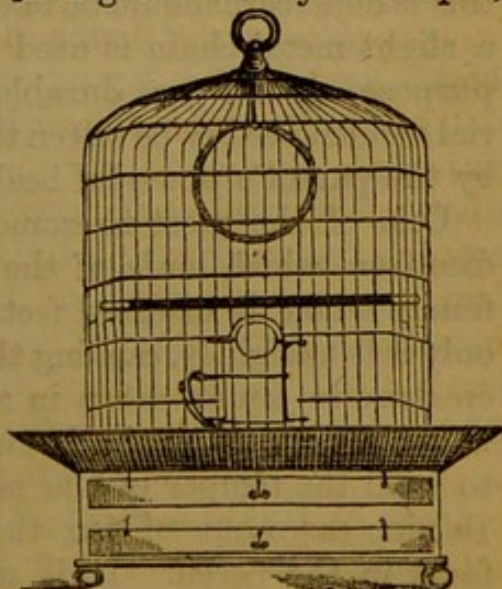


Fig. 7.

jecting all round, forming a tray, and the body being of lacquered brass wire; while fig. 8 is entirely of zinc, in broad bands wound diagonally across. All these cages are made by Mr. Andrews, of Compton-street and the Pantheon, by whose permission they have been drawn. Unlacquered brass wire is frequently used in the construction of parrot cages, but this is an error which has caused many a fine bird's death. It is impossible to avoid the accumulation of verdigris on this metal, and this the bird will peel off. Although the effects of the poison may not be manifest for some time, even for a year, the bird's

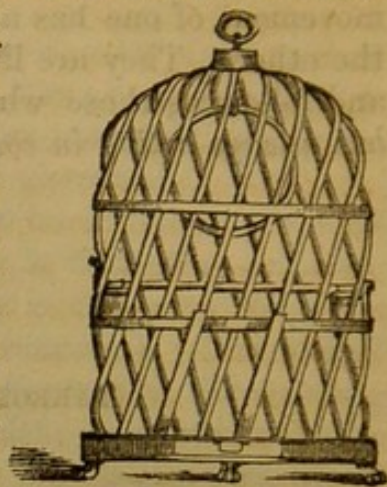


Fig. 8.

constitution will be gradually undermined, his body will waste, and he will die. Let the cage be constructed of tinned wire. A ring of sufficient size should be suspended from the crown of the cage; the bird will get within this ring and swing for an hour together. Attached to the perch, one at each extremity, should be the food and drinking vessels. They may be made either of tin, glass, or porcelain. The floor of the parrot cage should be well covered with coarse red sand, and the cage itself should be cleaned out every day in the summer, and twice a week in the winter. Some prefer to do without the cage altogether, and to attach the bird to an open perch (fig. 9) fixed to an ornamental stand. When this is done, care should be taken that a slight metal chain is used for the purpose, as any less durable material would speedily be bitten through by the parrot's powerful beak.

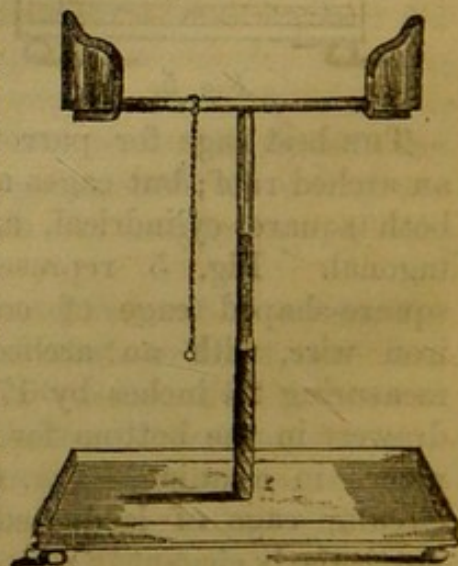


Fig. 9.

One of the most tiresome maladies from which birds of the parrot family suffer is diseased feet. Not only is it unsightly, causing the poor creature to squat down in an ugly manner, but the pain is sufficient to spoil the temper of the most amiable parrot that ever lived. In nine cases out of ten the sore feet are occasioned by some fault in the perch. It is not kept sufficiently clean, or it is merely a straight round stick. This latter shape should be

TRAINING AND TREATMENT.

avoided. Let the perch be at least a third bigger in the middle than at the ends, tapering gradually. This will afford the bird considerable ease, and tempt him to change his footing.

The macaw cage should be cylindrical, and at least three feet and a half in diameter, and six feet high. Unless the blue macaw has at least this space for exercise, he will speedily get diseased feet, and be liable to fits. Its excrement is particularly offensive, and should be removed at least twice a day. He is fond of bathing, and if not indulged with plenty of water for this purpose, his close plumage will soon swarm with parasites. When this is the case, the bird should be well syringed with a solution of white precipitate, and furnished afterwards with a tepid bath, as the precipitate is poison, and might be pecked off by the bird if allowed to remain.

TRAINING AND TREATMENT.

THERE can be no doubt that the best way to win the affections either of a reasoning or an unreasoning animal is to treat it with gentleness. This is true as regards all grades, from the Indian savage to the performing canary. Approach them with harsh or threatening gestures, and Nature will immediately prompt them to stand on the defensive; approach them with a soft word and kind look, and they are, if not at once subdued, ready to listen to anything you are about to say or do.

This is particularly true of the parrot. You may depend on it, the impression you make during the first three or four interviews will be lasting, whichever way it tends. As a rule, parrots will learn quicker from women than men, and quicker still from children. Vieillot had in his possession a grey parrot which he never dared approach without having his hands covered with leather gloves, and yet the bird was in all respects obedient to Madame Vieillot. He further states that a female of the same species was, on the contrary, peculiarly attached to himself and indifferent to the caresses of his wife.

I believe the very best way to teach all birds to speak is to keep quite out of sight while you are giving a lesson. I know of nearly a dozen birds of various sorts who have been

educated on this principle, and who in a miraculously short time have turned out fluent talkers. As I have before observed, too much attention cannot be paid to the "linking together" of words forming any sentence you may wish them to learn. Let each word glide into the next as smoothly as possible. If you find that your bird experiences great difficulty in repeating a particular lesson, you had better not persist in teaching it at that time, as you may make him sullen or irritable.

The staple diet of the grey parrot, and indeed of every other sort, should be bread and milk. Parrot-fanciers cut a stale loaf into slices, lay it in a pan, and cover it with warm water. After it has soaked for a quarter of an hour, it is taken out, and squeezed as dry as possible. Then, enough of scalding milk is poured over it to moisten it without making it pappy. I was inclined to think that the first soaking in water was a mere economic trick to save milk, but it appears that a "mash" thus made will keep sweet much longer than that prepared entirely with milk. This food, however, may be varied very considerably. You may give them any sort of nuts or almonds (except of course the bitter kind), biscuit (without seed), cold boiled Indian corn, and almost any sort of fruit.

I have heard many persons complain that their parrots pluck out their feathers, giving themselves an unsightly appearance. The reason is simply this,—they are allowed to eat animal food. Most parrots have a great relish for meat, and I am sorry to say most parrot-keepers are nothing loth to gratify the propensity. After a while the birds acquire so determined an appetite for this sort of food, that they pluck out their own feathers for the sole purpose of sucking the stems. Instances have been known of parrots stripping themselves of every feather within reach of their beaks. Desmarest, the French naturalist, states, that he once saw a parrot who had plucked its body as clean as a chicken prepared for the spit. Yet during two very severe winters, this bird never ailed in the least, and always had a capital appetite and good spirits.

It should always be borne in mind that a bird's gizzard is to it what teeth are to us, and further, that the said machine can no more act unless attended to, than a mill can grind without mill-stones. Clean, coarsely-sifted dry gravel should be supplied to the bird at least three times a week. Do not be tempted to neglect this replenishing because the parrot "has plenty of gravel" in its cage. It may have plenty, but you must allow him to be the better judge as to whether it is suitable. Do

not argue the matter beyond this; brush out his house, and supply him with fresh mill-stones.

Some little care is requisite in the preparation of bread and milk for a parrot. It must not be sloppy. Not the least particle of what is left of the previous day's supply must be allowed to remain in the food pot. It will indeed be as well, especially during the summer months, to *scald* out the food vessel each day, and wipe it thoroughly dry. Looseness of the bowels is the commonest and most dangerous ill that parrot flesh is heir to, and nothing causes it sooner than sour food. By the bye, avoid *zinc* food-vessels,—they are poisonous.

Another of the diseases to which parrots are subject, is asthma. This either arises from an undue allowance of heating food, or through cold. This last is a matter that requires special mention. A choice exotic bird should be carefully placed in the sunniest nook, and scrupulously screened from cold draughts; but these unfortunate natives of the hottest countries in the world are too often left hanging before open windows on chill autumn nights, and placed before chinks and crevices through which there is sufficient draught to turn a windmill. It should be borne in mind that the best treatment goes for nothing unless you keep them snug and warm in chilly weather.

The symptoms of asthma are shortness of breath and a frequent disposition of the bird to gape. If the attack is but slight, it may be cured by altering the diet, taking care that a good portion of his food is of a moist and warm character. If the bird is very ill, make a stiff paste of boiling milk and wheat flour, and add to every table-spoonful half a dozen grains of cayenne pepper. Give him nothing else for at least three days.

Insufficient attention as regards cleanliness will induce bad feet. The bird's perch should be moveable, and scraped and scalded at least once a week. The feet should be frequently cleansed with a piece of flannel and windsor soap. A covered perch may be substituted for the bare one until the bird's feet heal. They are subject to a disease which seems much the same sort of thing as gout with us. The legs and feet swell, and the bird is unable to grasp its perch properly. Like gout, it is very difficult to cure, and the best remedy I know of is to place the bird in a smaller cage, and stand him up to the thighs in water,—two parts boiling and one part cold. Let him remain in this warm bath fifteen minutes, then take him out, dry his feet before the fire; do this daily. If he has sores on his feet, apply to them a little loaf sugar.

Scouring is caused either by a sudden change of diet or through taking sour fruit, or some other improper food. The symptoms are a drooping tail, a tenacious white excrement adhering to the feathers beneath the tail, and a general uneasiness exhibited by the bird. The hinder parts, which will be found to be much inflamed, should be anointed with palm-oil; rice-biscuit, crumbled with the yolk of hard-boiled eggs, may be given with advantage; also boiled Indian corn, with which a chilli has been cut up.

Diseased eyes may proceed from cold or improper food. When you see the rims red and inflamed, bathe them with a warm decoction of white hellebore. It is deadly poison, so be careful that the bird does not drink it.

Consumption is a disease by no means uncommon with birds of the parrot tribe. The symptoms indicative of this disease are ruffled plumage, hollow eyes, loss of appetite for all sorts of food except green; gouty appearance of the lower extremities, and prominence of the breast-bone. Let him have plenty of the best food proper for him. Two days in each week feed him on nothing but fresh bread and milk, in which there is mixed some hemp-seed; do not let the quantity of hemp-seed exceed a tea-spoonful for a day's consumption; along with the hemp-seed you may throw in a black peppercorn. Bechstein appears to think that water-cresses are a certain cure for consumption. He says, "The birds should be fed with the best description of their appropriate food. In birds which will eat vegetables I have always found this, and especially water-cresses, the surest remedy against consumption and waste." If treated according to the above directions as soon as the symptoms become manifest, the disease may be speedily eradicated.

Some parrots (especially the lories) are subject to fits. They will tumble off their perches, and after a few convulsive struggles lie as if dead. When this happens, squirt the coldest water you can get over its head. If this does not revive the bird, take him by the legs and dip him three or four times into a pan of cold water. If he should still remain insensible, pluck out a tail feather and lay him on the warm stones. If after this he does not recover, you may make up your mind if you will have him buried or stuffed. Parrots subject to fits should occasionally have administered to them a little spirits of nitre. Pour half a dozen drops on to their bread and milk. There is nothing more likely to produce fits than costiveness. You may know when a bird is so afflicted by his constant and

useless efforts to relieve himself. A little saffron boiled in their milk will usually cure this, but if it does not, you should give the bird four drops of castor-oil. It is no easy matter to administer castor-oil to a full-grown and strong-beaked parrot unless you know how. The best way is to have a piece of hard wood or bone, about a quarter of an inch thick and three quarters wide; in the centre of this there must be a small hole: open the bird's beak, put in the piece of wood, so as to keep it open, put a quill through the hole in the wood, and pour the castor-oil through the quill.

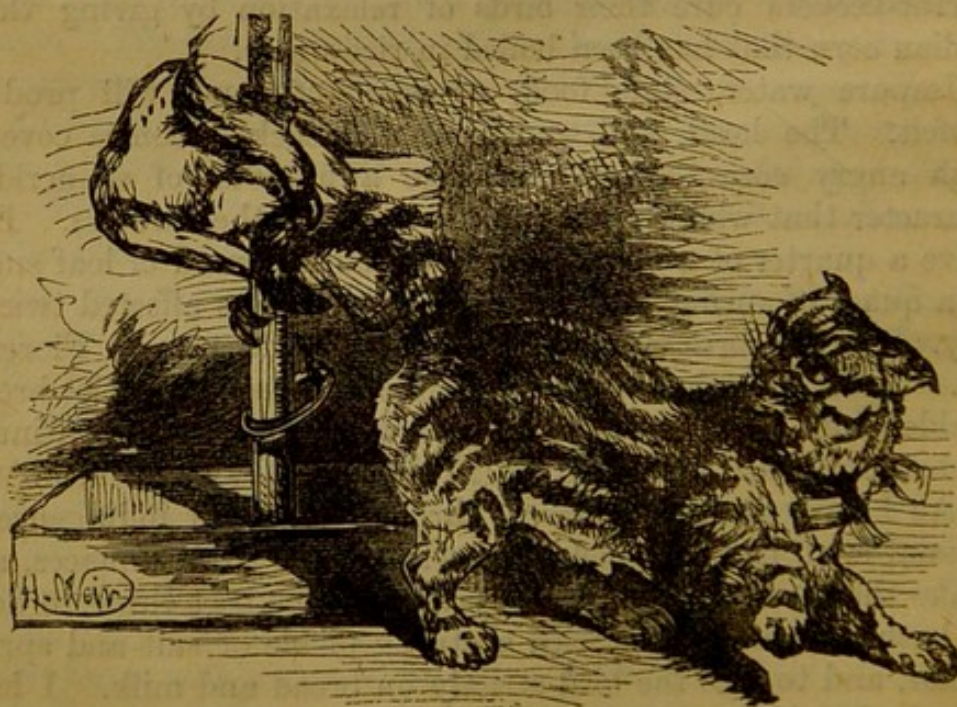
Sudden changes in the weather, or want of proper care as regards warmth, will sometimes produce inflammation. The symptoms of this disease are melancholy and a disposition to go to roost while it is yet daylight. If you blow up the feathers of the belly, you will find the extreme parts much swollen and a multitude of tiny red veins showing through the skin. This is a dangerous malady, and should be seen to in time. If the bird's bowels are relaxed, give him, until he gets better, as much magnesia as can be piled on a sixpence. His diet should be bread and milk and maw-seed. A little port wine in his water will do him no harm. As the magnesia will sink, you had better put it in a vessel so shallow that the bird will be sure to disturb and partake of it when he goes to drink. Some parrot-keepers cure their birds of relaxation by giving them Indian corn that has been boiled in rice-water.

Impure water, stale food, or want of sand, will produce surfeit. The head, and sometimes the back, becomes covered with angry sores, which discharge a humour of so acrid a character that wherever it runs it removes the feathers. Dissolve a quarter of a pound of salt or half a pound of loaf sugar in a quart of spring water, and bathe the parts affected twice a day. Dry the sores thoroughly, and anoint them with Florence oil. Their diet should be as simple as possible. Rice-bread, scalded with milk, is the best food while the surfeit continues, and nothing else should be given, but keep the bird warm.

As I have already observed, through a foolish indulgence in animal food, parrots pluck themselves quite bald in places, and make themselves look extremely ugly. The best thing to do is to bathe the bald parts with a strong pickle of salt and spring water, and to diet the bird strictly on bread and milk. I have heard that if the bird be well syringed with diluted ox-gall it will cure him of this disagreeable habit, but I have never had an opportunity of trying the remedy.

During the moulting period, parrots require great care and attention. Sometimes considerable pain and difficulty attend the operation, and two or even three months will be thus miserably passed by the poor bird. The only way in which you can aid him is by giving him extra nourishment and keeping him as warm as possible. It is a good plan to cover the cage entirely with brown paper. Add saffron to the bird's drinking-water, so that it is the colour of pale sherry. A biscuit (without seeds) soaked in milk, in which a few chilli pods have been boiled, is a good thing to give occasionally.

The most healthy birds will sometimes be troubled with ugly wart-like excrescences. Occasionally they will grow as large as a pigeon's egg. Pass a piece of fine silk cord round the base of the tumour, and at each end of the cord make a loop; secure the cord round the excrescence by passing a small wooden peg through the loops; every other morning give the peg a twist, so as to draw the cord a little tighter, and in a short time the tumour will wither and fall off. Provided you manage the tightening of the cord with care, the operation will be attended with little or no pain. It will, however, be a long time—indeed, not till the next moult—before the bald place caused by the tumour will be covered with feathers.





HAWKING-BIRDS.

ANTIQUITY OF HAWKING.—To what country or people the world is indebted for the invention of this renowned pastime it is impossible to tell. Ancient historians, with that ambiguity for which they are sometimes remarkable, spread their arms, as it were, and point, with either hand, to the east and the west, and, still extending them, take half a turn on their heels, and point to the north and the south as being, without doubt, the region where the sport took root. There can be little doubt that, if not the very first, the eastern quarter of the globe was among the earliest to cherish the hawk for its special attributes. Marco Polo, who went on an embassy to China from Pope Gregory X., relates that he found hawking to be a fashionable sport in the vast empire of Kublai Khan, and describes with great particularity his celestial majesty's retinue of falconers, and his large establishment of falcons, pigeons, pheasants, and other birds used in the sport.

Bishop Stanley, writing on the subject, says, "About two thousand years ago, ancient writers speak of hawking as a common sport. People used to go out into the marshy grounds, and beat amongst the reeds and bushes for small

birds which harboured there; and, as they flew away, hawks were let loose in pursuit, and when the game fell to the ground, either through fright or struck by the hawks, the men ran up and secured them. In China it is a favourite sport with some of the mandarins to hawk for butterflies and other large insects, with birds trained for that particular pastime. In India, the goshawk and two other species are taught to keep hovering over the hunters' heads, and when deer and other game start up, they dart down, and fix their claws upon its head, and thus bewilder it till it is secured.

* * * * A certain sultan, called Bajazet Ilderim, maintained a corps of seven thousand falconers."

Denmark was, in ancient times, a famous place for hawks and hawking. According to ancient Danish law, it was death to hurt or kill a hawk. Iceland was the depôt for the hawks used in Denmark, and, according to a writer on Icelandic history (1758), the king of Denmark sent every year a falconer with two attendants. "On landing, they repair to a house, called the king's falcon-house, for the purpose of receiving birds caught by persons who are licensed and are native Icelanders. About midsummer these catchers bring their birds on horseback, holding a pole, with another fixed across it, on which ten or twelve sit, all capped, that is, with their heads covered with caps or hoods. This pole is held in the hand and rested on the stirrup. The falconer examines them very carefully, and, returning those that are of an inferior sort, sends off the best to Denmark. During the voyage they are arranged between the decks, tied to poles two rows of a side; these poles are covered with coarse cloth over a stuffing of straw, and lines are strung from one side to the other, pretty close, that they may have something to catch hold of in case of the ship's rolling. The catchers receive a written testimony of their respective good qualities, by virtue of which they are paid by the king's receiver-general about three pounds for the best, which are white."

The Arabians used to employ the falcon to hunt the goat, and a very good description of how this sport was managed is given by a very quaint and interesting old writer, Hasselquist. He says, "I had an excellent opportunity of seeing this sport, near Nazareth, in Galilee. An Arab mounted a swift courser, held the falcon in his hand, as huntsmen commonly do; when he espied the rock-goat on the top of a mountain, he let loose the falcon, which flew in a direct line like an arrow, and

attacked the animal, fixing the talons of one of his feet into the cheek of the creature and the talons of the other into its throat, extending his wings obliquely over the animal: spreading one towards one of its ears, and the other to the opposite hip. The animal attacked made a leap twice the height of a man, and freed himself from the falcon; but being wounded, and losing its strength and speed, it was again attacked by the falcon, which fixed the talons of both its feet into the throat of the animal, and held it fast, till the huntsman coming up, took it alive, and cut its throat, the falcon drinking the blood as a reward for its labour, and a young falcon which was learning was likewise put to the throat of the goat; by this means are young falcons taught to fix their talons in the throat of the animal, as being the properest part: for should the falcon fix them into the hip, or some other part of the body, the huntsman would not only lose his game, but his falcon also; for the animal, roused by the wound, which could not prove mortal, would run to the deserts, and the tops of the mountains, whither its enemy, keeping its hold, would be obliged to follow, and being separated from its master, must of course perish."

The mode of capturing and training falcons among the Arabs is quite different from that practised in Europe, where they are taken very young. The children of the desert prefer capturing *their* falcons when they are at an age to be able at once to "open shop" on their own account. Their mode is as follows. Supposing the Arab to have noted some particular place in which falcons abound, usually in ruins or rocky places, he provides himself with a pigeon or partridge, or any bird that the falcon is fond of. Fastened round the body of this bird is a very fine net, and when the sportsman has placed his decoy in some convenient spot, in the vicinity of the falcons, it is not long before one pounces out upon the bird, and is entangled in the net. Out rushes the Arab, who has been hiding not far distant, and seizes the falcon before he can manage to escape. He then claps a hood over the head of the falcon, and fastens jesses to its feet. So long as the bird is deprived of sight, it is perfectly powerless, and will not make the least attempt at escaping. Its captor then carries it home on his shoulders, and commences its education.

Amongst the Persians, the falcon largely figures in their poetry and romances. One of these stories, related in "My Feathered Friends," has such an exquisite moral attached to it

that I shall extract it for the delectation of my readers:—
 “Once upon a time,” runs the legend, “a king of Persia went out hawking, carrying his favourite falcon on his wrist. A deer started up, and the king let fly his bird, which pursued the deer, and, finally, brought it to the ground. The king, being eager in the chase, outstripped his attendants and courtiers, and, at the death of the deer, found himself alone.

“He took the falcon again upon his wrist, and, remounting his horse, began to search for water, for the chase had been a very severe one, and he was exceedingly heated and thirsty. At last he discovered, at the foot of a mountain, a stream of water, that came trickling down among the rocks. So he took out of his quiver a little cup, and, with some trouble, filled it at the spring,—for the water dropped very slowly. By patiently waiting, however, he filled the cup, and raised it to his lips. Just as his hand was raising the cup, the hawk clapped his wings, and upset the contents.

“The king was vexed at the interruption, but thinking it an accident, he again applied the cup to the gently-trickling stream, and again raised it to his lips. A second time the falcon shook its pinions, and threw it out of the cup. The king was so angry with the bird that he dashed it to the ground in his anger, and killed it on the spot in his rage.

“Just then, one of his attendants came up, and the king, giving him the cup, desired him to wipe it clean, and to bring him some of the water. But he was so very thirsty that he had not patience to wait for the filling of the cup, drop by drop, and directed the servant to climb up the rocks, and fill it at the spring itself.

“The servant obeyed his master, and when he had reached the top of the rock he discovered there a crystal spring, at which he filled the cup. But, a little lower down, he caught sight of a huge serpent lying dead, with its head resting in the course of the stream, and polluting the water with the poisonous foam that issued from its jaws.

“He presented the cup, and told his master of his discovery. The king was much affected by the thought that he had, in his blind rage, destroyed the faithful bird who had endeavoured to save his master from ill, even at the risk, and, finally, at the cost of his own life.”

From time out of mind the sport of hawking has been favoured in England. King Alfred wrote a treatise upon it, for the edification of his nobles and the glory of the “royall

sport." When Norman Duke William conquered the country, hawking still retained all its nobility, and several laws were passed which prevented any but the highest in rank and power pursuing this sport. Thanks to the weak and vacillating character of King John, things did not last longer in this manner than the reign of that monarch; and, amongst other important privileges wrested from him, was the Forest Charter, which enabled all freemen to fly their own hawks and keep their heronries on the banks of their own rivers. Still it remained felony to steal a falcon or its eggs (*i. e.* from a freeman's own woods), and a term of imprisonment, not exceeding a year and a day, was thought sufficient punishment for the latter heinous offence.

From a little transaction that took place between Geoffrey Fitzpercie and King John, we can at once see the importance of this sport,—the former presenting his royal master with a brace of falcons, in consideration of his friend, Walter de Modin, being allowed to export a hundredweight of cheese; seeing the latter must then have been of some value, we cannot but suppose that King John had less than its equivalent worth in the brace of falcons. We are further informed, that the same royal personage received a hawk from Nicholas the Dane, in return for the king's permission to trade throughout his dominions. In Edward the Third's reign a law was passed to the effect, that if any person should find a goshawk, he should deliver it to the sheriff of that county in which the bird was found, who was to advertise the hawk for the space of four months; at the expiration of that period, if the finder was legally entitled to the possession of a hawk, it should be given up to him; if not, the bird remained in the possession of the sheriff.

In the reign of Henry VII. it was enacted, that if any man should take the eggs out of a hawk or falcon's nest, he should be imprisoned for a year and a day, and suffer any pecuniary fine the king might please to inflict;—one half of the money to go to the royal coffers and the other half to the owners of the estate robbed. If a man destroyed hawks' eggs on his own estate, the same pains and penalties were in store for him; but whether in such a case half the fine was returned to the offender is not stated.

Henry VIII. was equally solicitous of the welfare of his falconry. His bluff bigamous majesty was passionately fond of hawking; so fond, indeed, that on one occasion it bade fair

to be his death; for, being in pursuit of his game afoot, at Hitchen, in Hertfordshire, and attempting to leap a ditch by the aid of a pole, the treacherous stick snapped as Henry was at the height of his vault, and down he plumped, so that his head was buried in the mud. A friendly footman happened to be at hand, or there would have been an end to the king's hawking.

It furnishes a tolerable notion of the sort of place London was at the time of the reign of the last-mentioned king,—that the wild and shy kite and hawk were common in the streets; “they were attracted by the offal of butchers’ and poulterers’ stalls; and as, on account of their use in removing so offensive a nuisance, they were not allowed to be killed, they became so fearless as actually to mingle with the passengers, and take their prey in the very midst of the crowds.” It is no less an authority than Bishop Stanley who furnishes this information, and he further says:—“Few people are aware of the number of hawks existing in London at this day. On and about the dome of St. Paul’s they may be often seen, and within a very few years a pair for several seasons built their nest and reared their brood, in perfect safety, between the golden dragon’s wings which formed the weathercock of Bow Church, in Cheapside. They might be easily distinguished by the thousands who walked below, flying in and out, or circling round the summit of the spire, notwithstanding the constant motion and creaking noise of the weathercock as it turned round at every change of the wind.”

When Wales was a kingdom, there were only three officers of the king’s household who ranked above the chief falconer. This latter personage occupied the fourth place at his royal master’s table, but—thorn among the roses his office vouchsafed—was allowed “to drink but three times, lest he should exceed propriety, and rather sleep than tend his precious charges.” The king of Wales would at times even so far do homage to the favoured sport as to rise from his royal seat to greet his falconer, and on some special occasions would hold his stirrup while he mounted his horse.

In ancient days, France was faithful to her hawks and to her grand falconer. Fifty gentlemen and fifty serving-men made him a train, and his salary was four thousand florins a year. He was allowed to keep three hundred hawks, and every one in the kingdom who set up as a hawk-dealer had first to buy a licence of the grand falconer; and in addition he received a fee

on every hawk sold. When Edward III. invaded France, that nation had an opportunity of knowing that we too had a passion for hawking as deep as themselves. Froissart says, "With him the king took thirty falconers on horseback, who had charge of his hawks, and every day he either hunted or hawked, as he was disposed."

It is seldom that a sport—or, for that matter, a serious business—gets such universal hold on a people as did hawking. Every one indulged in it. A lady could not go a journey of a mile without her merlin perched on her wrist; when Darby walked out into the fields with Joan, he carried his tercel as commonly as he now carries his walking-stick; and to such wicked lengths did the fast young bucks of the period carry the passion, as to take their hawks with them to church. This desecration of the sacred edifice was the theme of a poet who lived so long ago that the language in which the complaint is couched is now unintelligible, except to the profoundly learned. It has been modernized as follows by a recent writer:—

"Into the church then comes another sot,
Without devotion, fretting up and down,
All to be seen, and show his gaudy coat,
With sparrow-hawk on his fist, or falcon,
Or else a cuckoo; wearing out his shoes,
Before the altar up and down he'll wander,
Having no more devotion than a gander.
In comes another, his hounds at his tail,
With lines and leashes, and such-like baggage;
His dogs bark, and so, without fail,
Trouble the whole church by their outrage."

When in those pagan times a hawk fell sick, the keeper, as he administered the medicine, uttered the following established prayer,—“In the name of the Lord, the birds of Heaven shall be beneath thy feet;” and if a conflict occurred between a hawk and a heron, and the former got worsted, it was proper for the company to ejaculate, “The lion of the tribe of Judah, the root of David has conquered! Hallelujah!”

No better illustration of the universality of the sport of hawking can be given than the following extract from an ancient and credible writer on the subject. According to one's station in life, a hawk of a certain quality was apportioned him for his pastime;—every one to his kind, from the emperor to the “knave,” as the serving-man was in those days designated:—

“For the Emperorthe Eagle, or Vulture.
For the Kingthe Ger-Falcon.

HAWKING-BIRDS.

For the Prince.....	the Falcon gentle, or the Tercel gentle.
For the Duke	the Rock Falcon.
For the Earl.....	the Peregrine Falcon.
For the Baron	the Bastard Falcon.
For the Knight	the Sacre and the Secret.
For the Esquire	the Harrier and the Lammeret.
For the Lady	the Merlin.
For the Young Man	the Hobby.
For the Yeoman.....	the Goshawk.
For the Poor Man	the Tercel.
For the Priest.....	the Sparrow-hawk.
For the Holy-water Clerk..	the Musket.
For the Knave, or Servant..	the Kestrel."

I trust that I have shown, with tolerable clearness, that if ever a creature was entitled to the appellation of "Home Pet," the hawk is that creature, and as such claims a place in this volume. Without doubt it is a "pet" of a bygone age. No one would care to see the sport of hawking revived; indeed, to re-establish it in all its ancient glory would be impossible. Fancy the gentle Lady Daffodil riding through Rotten Row with her delicate hand thrust into a glove clumsy enough for a ditcher, and with a coarse and savage bird perched on her wrist! or comfortable old Mr. Pearlash, the city merchant, who lives at Clapham; fancy the staid begaitered old gentleman hurrying to the Common, accompanied by Mrs. Pearlash; he with his goshawk and she with her merlin. It was all very well in those rough and tough times, and without doubt such "pets" accorded well with the rude and unrefined "homes" of the period; but in these days it would be quite out of the question. Even her Majesty, although she still counts among the servants of her household a "grand falconer," would probably be unable to distinguish a ger-falcon from a tercel. Still, the hawk family were without doubt "home pets" with our forefathers, and a description of the principal members of the hawk family, together with their training, management, and education, will not here be out of place.

VARIETIES OF THE HAWK TRIBE.—When Linnæus classified the various birds of prey, he included, under the denomination *Falco*, the eagles. Although, in the course of their existence, the falcons undergo such alteration of plumage as to make it difficult to distinguish between them with exactitude, still these generic characters are such as to be sufficiently definite and precise. The beak of the hawk is curved from the base; whereas that of the eagle is straight for at least two-thirds of its entire length, and terminating with a sudden hook. Again, the wing-feathers of the eagle family differ from those of their

THE GOSHAWK.

rapacious brethren, the hawks. The first three wing-feathers of the eagle are shorter than the fourth and fifth, while in the falcon the first feather is the longest, and in the common hawk the first and third feathers are of equal length, and the second the longest. The falcons may be distinguished from all other birds by their compact form, their bold-set bullet heads, and their sharp curved claws.

The whole family is carnivorous, and as eager for prey as the most savage beast in an African jungle. Flesh, fish, and fowl,—nothing in the shape of animal food comes amiss to them. When hard pressed by hunger, they will not scruple to devour every atom—including bones and feathers—of any bird they may capture. This, however, does no harm to the bird; on the contrary, it is a wise provision of nature for cleansing the stomach of the voracious feeder, the indigestible portions of the diet being rejected in the form of oblong pellets, or castings, as the falconer calls them, the bones being neatly packed in the skin and feathers.



THE GOSHAWK.

The largest of the hawks is the goshawk, called by ancient writers the “falcon gentle,” and reputed by them to be the most courageous of living birds. The goshawk is larger even than the ger-falcon, but is shorter in the wing, and not nearly so compact and tight-looking.

The female of this member of the hawk family is altogether

more attractive than the male. The latter is not more than two-thirds the length of his better half. He is not so "well-shouldered," and his wings are not so powerful. The male and female goshawks differ in colour. In the female, the whole of the upper parts, including the ear-coverts, are of a deep brown; the back is mottled, and the quills and tail-feathers margined with dusky red. In the male, the reddish-brown pervades the greater part of the plumage, and the mottling is much paler. In both birds the naked parts are yellow, the irides grey, and the eyes quick and piercing.

It is a solitary bird, and delights in wild inaccessible cliffs near the seashore, where it can build and breed without molestation, and yet be within an easy fly of the game on which it feeds. It is excessively destructive to mountain-game, by reason of its destroying the parent birds and leaving the nestlings to perish. It is docile and easily tamed, but is not nearly so prolific as the other hawks, the number of its eggs rarely exceeding three, and never four.

There exists in Syria a small variety of the goshawk, called by the natives the "shabeen." Despite its diminutive size, the shabeen will, it is said, attack, and successfully, the boldest of bold birds, the eagle. Says Dr. Russel, in his account of Aleppo, "Were there not several gentlemen in England to bear witness to the fact, I should hardly venture to assert, that with this bird, which is about the size of a pigeon, the inhabitants sometimes take large eagles. The hawk, in former times, was taught to seize the eagle under the pinion, and thus, depriving him of the use of one wing, both birds fell to the ground together; but I am informed that the present mode is to teach the hawk to fix on the back between the wings, which has the same effect, only that the bird, tumbling down more slowly, the falconer has more time to come to his hawk's assistance; but in either case, if he be not very expeditious, the falcon is inevitably destroyed. I never saw the shabeen fly at eagles, that sport being disused in my time; but I have often seen him take herons and storks. The hawk, when thrown off, flies for some time in a horizontal line, not six feet from the ground; then, mounting perpendicularly with astonishing swiftness, he seizes his prey under the wing, and both together come tumbling to the ground. If the falconer is not, however, very expeditious, the game soon disengages itself."



THE PEREGRINE FALCON.

This noble bird, which, both in elegance of plumage and in courage and strength, is but little inferior to the ger-falcon, has almost as many aliases as the most accomplished vagabond could desire—the peregrine falcon, the blue hawk, the red tercel, the grey hawk, &c. &c. The former is, however, the usual name given to it by most naturalists; and, moreover, it possesses the advantage of a simple meaning—peregrine, from the Latin word *peregrinus*, a wanderer; therefore, as the peregrine falcon I beg to introduce him to the reader.

The colour of the male bird is, on the upper parts of the body, bluish grey; the head and back of the neck are black, tinged with bluish grey; the back is blue, deepening into black towards the tail. According to Mr. McGillivray, who has taken some pains to investigate the matter, the peregrine falcon does not complete its moult until November; and, moreover, he is of opinion that, as with the eagle, the falcon renews its plumage at all seasons of the year. Like the ger-falcon, the peregrine falcon is remarkable for the velocity of its flight, being known to travel a hundred and fifty miles an hour. It is occasionally taken out at sea, many hundred miles from any land, and in 1838, at a meeting of the Zoological Society, a peregrine falcon, and with it a letter, was received from Captain Robertson, commander of the ship *Exmouth*. The letter stated,—“The accompanying hawk was caught on board the *Exmouth*, on the 12th of February last, on her passage from Bengal to London, and when the ship was about three

hundred miles from the Andaman Islands; and, from observing the bird's tendency to fly towards the east about the time of sunrise, for some time after it was caught, I am led to suppose that it must have been blown off, or followed its prey until out of sight of those islands. * * * When approaching the coast of England, it was very remarkable that the bird again struggled to get away in the direction of the land, although we were so far off as not to see it from the ship."

The perseverance with which the peregrine falcon will hunt its prey is very remarkable, and accounts for the ready manner it takes to hawking when tame. Thompson, in his "Birds of Ireland," give an interesting instance of this. He says:—

"The finest chase by the peregrine falcon of which I have heard was communicated to me by Richard Langtry, Esq., on his return from Inverness-shire, after the shooting season of 1838. On the first day, in the beginning of August, that he went out from Alexander towards Loch Ruthan, he observed an eyrie of these birds in the mountain cliffs, on its western side. Among those which darkly beetle above Loch Coor, on the opposite side, a pair formerly nested. The old pair were seen that day. One of them struck a heron, and also a grey crow that came near, though without pursuing, or caring to pursue, either to the death. Very different were curlews treated one day at the end of August, to seize which every attempt was made. My friend and his companions were fishing on Loch Ruthan, when a flock of nine of these birds (curlews) appeared. Immediately afterwards a tercel came in sight, bearing down upon them so suddenly as to be barely seen until he had singled out and swept one of them from a height of about fifty yards into the lake. Here he pounced at it, but without striking, though it did not go beneath the surface of the water. On the tercel's flying a little way off, to take one of his bold circles, when the quarry is put down, or 'at bay,' the curlew rose to follow the flock, and had got away about a hundred yards when the tercel again bore down upon it. Refuge was a second time taken upon the lake. This was repeated not less than ten times. The speed of the tercel's flight was considered to be twice that of the curlew's, as, when circling about two hundred yards off, he never gave his despoiled victim leave to get more than about half that distance ahead, until he had it down again. The curlew, though apparently more fatigued and worn out every time it was put down,—the last time hardly able to rise from the

lake,—escaped, in consequence of the flock from which it came, or a similar number of birds, appearing in sight, when its persecutor betook himself after them. He very soon had one of this flock also in the water, and enacted just the same part towards it as he had done towards the other. It was put down to the lake at least a dozen times, and along a great extent of its surface, once between the boats of the fishing party, not more than about fifty yards distant from each other. The hawk and curlew were both several times within about twenty yards of the boats, and once, indeed, the latter, closely pursued, took the water just before the bow of one of them. Eventually the tercel left off the chase, though, as in the former instance, the curlew was nearly worn out. The poor bird, now seeing two of its species come in sight, joined them, and they all went off safely in company. The chase was continued so long, that two of my friends, whose taste inclined more to fishing than to hawking, resumed their avocation, though, as sportsmen, highly enjoying the chase at first; but the third, who communicated the circumstance, possessing trained falcons himself, witnessed it to the last, and described the sweeps made by the wild bird as bolder, and its flight certainly more swift, than that of any trained one he had ever seen."

Concerning the peregrine falcon in America, Wilson, in his "American Ornithology," gives some interesting information. He says:—"This noble bird had excited our curiosity for a long time. Every visit which we made to the coast was rendered doubly interesting by wonderful stories which we heard of its exploits in fowling, and of its daring enterprise. There was not a gunner along the shore but knew it well; and each could relate something of it, which bordered on the marvellous. It was described as darting with the rapidity of an arrow on the ducks when on the wing, and striking them down with the projecting bone of its breast. * * * * *

If we were to repeat all the anecdotes which have been related to us of the achievements of the duck-hawk, they would swell our pages at the expense, probably, of our reputation. * * *

From the best sources of information, we learn that this species is uncommonly bold and powerful; that it darts on its prey with astonishing velocity; and that it strikes with its formidable feet, permitting the duck to fall previously to securing it. The circumstance of the hawk's never carrying the duck off on striking it, has given rise to the belief of that service

being performed by means of the breast, which vulgar opinion has armed with a projecting bone, adapted to the purpose. But this cannot be the fact, as the breastbone of this bird does not differ from that of others of the same tribe, which would not admit of so violent a concussion.

“When the water-fowl perceive the approach of their enemy, a universal alarm pervades their ranks; even man himself, with his engine of destruction, is not more terrible. But the effect is different. When the latter is beheld, the whole atmosphere is enlivened with the whistling of wings; when the former is recognized, not a duck is to be seen in the air; they all speed to the water, and there remain until the hawk has passed them, diving the moment he comes near them. It is worthy of remark, that the peregrine falcon will seldom, if ever, strike over the water, unless it be frozen; well knowing that it would be difficult to secure his quarry.

“When the sportsmen perceive the hawk knock down a duck, they frequently disappoint him of it, by being the first to secure it; and as one evil turn (according to the maxim of the multitude) deserves another, our hero takes ample revenge on them, at every opportunity, by robbing them of their game, the hard-earned fruit of their labour.

“The duck-hawk, it is said, often follows the steps of the gunner, knowing that the ducks will be aroused on the wing, which will afford it an almost certain chance of success.

“We have been informed that those ducks which are struck down have their backs lacerated from the rump to the neck. If this be the fact, it is a fact that the hawk employs only its talons, which are long and stout, in the operation. One respectable inhabitant of Cape May told us that he has seen the hawk strike from below. * * * * * In the spring, the duck-hawk retires to the recesses of the gloomy cedar swamps, on the tall trees of which it constructs its nest and rears its young secure from all molestation. In these wilds, which present obstacles almost insuperable to the foot of man, the screams of this bird, occasionally mingled with the hoarse tones of the heron and the hooting of the great horned owl, echoing through the dreary solitude, arouse in the imagination all the frightful imagery of desolation.”

After many long and laborious searches in quest of this hawk, which proved unsuccessful, the great American ornithologist was delighted by a present of a specimen from Egg Harbour, and was thus enabled to add his own invaluable

testimony to that of others. It would seem that in some respects, the American duck-hawk differs from its European relative. Pennant says, "the American species is larger than the European." With regard to the latter, the same authority observes:—"This species breeds on the rocks of Llandidno, in Caernarvonshire, Wales. That promontory has been long famed for producing a generous kind, as appears by a letter extant in Gloddaeth library, from the lord treasurer Burleigh to an ancestor of Sir Roger Mostyn, in which his lordship thanks him for a present of a fine cast of hawks, taken on those rocks, which belong to the family. They are also very common in the north of Scotland, and are sometimes trained for falconry by some gentlemen who still take delight in this amusement, in that part of Great Britain. Their flight is amazingly rapid; one that was reclaimed by a gentleman in the shire of Angus, a county on the east side of Scotland, eloped from its master with two heavy bells attached to each foot, on the 24th of September, 1773, and was killed on the morning of the 26th, near Mostyn, Flintshire."

A final paragraph in favour of the peregrine falcon, in connection with its affection for its progeny. Sir John Richardson is the witness. He says:—"We noticed a peregrine falcon's nest, placed on the cliff of a sandstone rock. Mr. M'Pherson related to me one of its feats, which he witnessed some years previously as he was ascending the river. A white owl, in flying over a cliff, seized and carried off an unfledged peregrine in its claws, and, crossing to the opposite beach, lighted to devour it. The parent bird followed, screaming loudly, and, stooping with extreme rapidity, killed the owl by a single blow, after which it flew quickly back to its nest. On coming to the spot, Mr. M'Pherson picked up the owl, but, though he examined it narrowly, he could not detect in what part the death-blow had been received; nor could he, from the distance, perceive whether the peregrine struck it with wing or claws."

THE GER-FALCON.

This favourite member of the hawk family would appear to derive its name from *geyer*, the German for a vulture. It is one of the most beautiful as well as the most powerful of the species. In the adult of both sexes the body is white, having the upper parts marked with dark grey spots. The beak is light blue, and the cere and feet pale yellow. In shape it is compact and thick-set, with a short stout neck and flattened round head. The female is larger than the male, and in general appearance resembles its mate.

The ger-falcon is only a visitor to this country, and a rare one, its proper home being the most northern parts of Europe and America. Throughout Iceland and Greenland it is well known, and was frequently seen by Dr. Richardson during his journey through North America. He says, "In the middle of June a pair of these birds attacked me as I was climbing in the vicinity of their nest, which was built on a lofty precipice, on the borders of Point Lake, in latitude $68\frac{1}{2}^{\circ}$. They flew in circles, uttering loud and harsh screams, and alternately stooping with such velocity that their motion through the air produced a loud rustling sound; they struck their claws within an inch or two of my head. I endeavoured, by keeping the barrel of my gun close to my cheek, and suddenly elevating its muzzle when they were in the act of striking, to ascertain whether they had the power of instantaneously changing the direction of their rapid course, and found that they invariably rose above the obstacle with the quickness of thought; showing equal acuteness of vision and power of motion. Although their flight was much more rapid, it bore considerable resemblance to the snowy owl."

The Rev. J. G. Wood, in his "Feathered Friends," says, "The ger-falcon is a terrible bird in fight as well as in chase, and can even vanquish the raven himself, in spite of his pickaxe of a beak and his exceeding craftiness. Sometimes, though, the ger-falcon is defeated in the chase, and that by one of the most helpless of birds, the ptarmigan. The falcon as well as the ptarmigan is light-coloured in plumage, and chases the latter bird over the snow-covered water. But when the falcon pounces on a flock of ptarmigans, the intended victims elude

their pursuer by boldly plunging into the deep snow, and tunnelling a way for themselves beneath its shelter, where they wait until their enemy has left the spot."

In the "good old times," when hawking was the great and all-engrossing sport of the day, the ger-falcon was a bird in great demand; its powers of flight and boldness in striking its prey were considered as scarcely inferior to the eagle itself. Fabulous prices are said to have been given for them; and it is recorded in the traditions of hawking that one Sir Thomas Monson, or Morrison, who lived in the reign of James VI., gave no less a sum than a thousand pounds for a "cast" of ger-falcons, which consists of two birds.

THE HOBBY.

This member of the hawk family, though measuring but from twelve to fourteen inches in length, in general formation bears a striking resemblance to the peregrine falcon. The wings of the former bird are, however, comparatively longer than those of the latter, and are on their lower parts longitudinally streaked with brownish black. The extended wings of the female hobby measure, from tip to tip, twenty inches, and those of the male twenty-six. In colour it is brown above, whitish and spotted brown underneath; the thighs and lower part of the belly are dusky red, and it has an irregular patch of black on each cheek.

So rare a visitor is the hobby to this country, that but very few English naturalists have had the opportunity of writing its description from personal observation. It is common in France, Germany, and other European countries, and is occasionally met even in the deserts of Siberia and Tartary. Its time for arriving in England is in April, and it stays with us till October. It builds its nest in very high trees, and the female lays three or four whitish eggs, unequally spotted with olive-coloured points, and in size are not quite so large as those of a bantam.

The natural prey of the hobby are the various members of the finch tribe and larks. M. Temminck asserts they likewise pursue small river-birds. The speed of this bird is marvellous. "It has often been observed," remarks a naturalist, "pursuing a lark, and it is astonishing to watch how dexterously the latter creature avoids the fatal stroke until it becomes fatigued. When a hen harrier has joined in the chase, it has

only been to be distanced by the hobby, who has made sure of its prize." In olden times the hobby was trained for hawking; not generally, however, after the usual mode, but for assisting the capture of larks and partridges by the net. The hobby was let loose among the birds, who were so amazed with fright, that the fowler with his net made them prisoners with the greatest ease. The sport was called *daring*.

Mr. Hay kept several hobbies about his residence, giving them full liberty the whole summer, and allowing them to range about the country as they pleased, but training them to come to call every day at three o'clock to be fed. At this time he would walk into an adjoining field, and, by whistling, or waving a glove in the air, although the birds were not visible before, they might be seen coming immediately towards him with great haste, alighting, one after another, upon his arm, to take their meal; after which they would fly off. It was found necessary to confine them, however, when the migratory season approached.

THE MERLIN.

This is the smallest of the British falcons, measuring only about eleven or twelve inches in length. Like the hobby, it is now rarely seen in this country, though, when "bluff King Hal" ruled the land, it was as common as the goldfinch is now. Its neatness and courage recommended it to special notice, and it was voted the proper bird for a lady to hawk with. The insensibility of this tiny falcon to danger is curious. A gentleman, writing to Thompson, the naturalist, says, "A merlin has taken up his residence in a small grove near my house during the past winter, and at any time after dusk I can be sure of finding him there, generally in or near the same tree. He is remarkably tame, and on being startled merely flies into a neighbouring tree; even after firing two barrels at him he pitched again in the same grove. I once took, as I believed, a most deadly aim at this bird in the dusk, and on going to the base of the tree to pick him up, as a matter of certainty, was astonished to find that he had never left the spot at which he was fired at, but remained quietly perched there, about twelve or fifteen feet above my head, apparently in the quiet enjoyment of his night's repose. After some time he seemed to awake from his slumbers, and, discovering my intrusion, quickly decamped." The same gentleman remarks, that a

merlin, which he once saw attacked by a number of swallows, was by no means satisfied to put up with their insults tamely, as a kestrel or a sparrow-hawk would have done, but darted about after the tormentors, and descended upon them from above in so furious a manner as quickly to put them to flight.

In shape the merlin is a very model of excellence. Compact and muscular as the peregrine falcon itself, it possesses greater depth of body, and its head is rounder even than the rest of its species; its short sharp bill is pale blue at the base and bluish-black at the tip. The general colour of the upper part is a deep bluish-grey, each feather having a central black line; the sides of the head and the cheek are of a whitish grey; on the dark lines over the eye is a greyish-white line, margined beneath with black; on the neck, behind, is a broad half-band of pale red, with lanceolate black spots; the upper part of the plumage is compact, below more blended. The wings are long, rather broad, tapering towards an end, and, when closed, about an inch and a half shorter than the tail, which is nearly square, the lateral feathers being only the third of an inch shorter than the centre.

The female, like all the falcons, is much larger than the male; the wings in the one extending twenty-six inches and in the other twenty-nine; and the general colour of the plumage is a deep brown, tinged with blue, each feather having a medial black line, most of the back feathers being terminally notched with reddish spots. Old birds of both sexes attain an increased bluish tinge, which, in the male, amounts to a leaden hue.

"This beautiful little hawk," says Mr. Lloyd, "visits us about October, and leaves us in the spring. Scarcely larger than a thrush, the courageous creature glides with the rapidity of thought on a blackbird or a fieldfare; sometimes even on the partridges, and, striking his game on the back of the head, kills it at a single blow. The merlin is a very bold bird, and seems afraid of nothing. I one day winged one as he was passing over my head, at a great height. The little fellow, small as he was, flung himself on his back when I went to pick him up, and gave battle most furiously, darting out his talons (which were as hard and sharp as needles) at everything that approached him. We took him home, however, and I put him into the walled garden, where he lived for more than a year. He very soon became quite tame, and came, on being called, to receive his food, which consisted of birds.

HAWKING-BIRDS.

rice, &c. So fearless was he, that he flew instantly at the largest kind of seagull that we gave him. When hungry, and no other food was at hand, he would attend the gardener when digging, and swallow the large earthworms when turned up. To my great regret, we found the little bird dead under the tree in which he usually rested, and, though I examined him carefully, I could not find out the cause of his death."

Whether the merlin's mate is compelled to or thinks it her duty to assist her husband in getting meat for the children, I can't say; I only know they have been seen to hunt in pairs, assisting each other in the most systematic manner. First, one merlin speeds after the fated lark or swallow for a short time, while his companion,—

———"hung in the middle air,
With their little wings outspread,
As if let down from the heavens there,
By a viewless silken thread."

In a moment, however, the stilly floating hawk stirs to action, and, darting down, relieves his fellow-hunter, who in turn rests. By such artful management, the poor lark, be he never so strong at starting, is finally tired out, and succumbs to a sudden dart, and before a pendulum can swing twice, the two merry merlins are beak deep in his tender body.

The merlin chooses some retired and rather rocky ground among the hills for its nest, which is roughly constructed of twigs and tufts of heath; the eggs three or four in number, broadly elliptical, an inch and a half in length, of a reddish white, spotted or blotched with deep red. When drawn from the nest, the parent birds fly about, and hover overhead, displaying great anxiety, uttering shrill cries, but keeping at a safe distance.



THE SPARROW-HAWK.

There is a vulgar supposition that this bird takes its name from making sparrows its peculiar prey. This, however, is very far from being true. Scarcely anything comes amiss to the bold rapacious creature. Larks and finches, partridges and pigeons,—even ducks and fowls,—have reason to dread the proximity of the sparrow-hawk. “Not content,” says a naturalist, “with the partridges and other *feræ naturæ*, this bold little freebooter invades the poultry-yard. The hens scream; the ducks quack, and rush to the cover of the plantation; whilst the tame pigeons dart to and fro amongst the buildings, but in vain. The sparrow-hawk darts like an arrow after one of the latter birds, and carries it off, though the pigeon is twice or three times its own weight. The woman who takes care of the poultry runs out, but it is too late to see anything more than a cloud of white feathers marking the place where the unfortunate pigeon was struck. Its remains are, however, generally found at some little distance, and when this is the case, the hawk is sure to be caught, as he invariably returns to what he has left. Sometimes he comes back the same day to finish picking the bones of the bird, but often does not return for two or three days. In the mean time, whatever part of the pigeon he has left is pegged to the ground, and two or three rat-traps are set round it, into one of which he always contrives to step. When caught, instead of seeming frightened, he flies courageously at the hand put down to pick him up, and fights, with beak and talons, to

the last. Occasionally, when standing still amongst the trees, or even when passing the corner of the house, I have been startled by a sparrow-hawk gliding rapidly past me. Once one came so close to me that his wing actually brushed my arm, the hawk being in pursuit of an unfortunate blackbird. On another occasion a sparrow-hawk pursued a pigeon through the drawing-room window, and out at the other end of the house through another window, and never slackened his pursuit, notwithstanding the clatter of the broken glass of the two windows they passed through. But the most extraordinary instance of impudence in this bird that I ever met with was one day finding a sparrow-hawk deliberately standing on a very large pouter pigeon on the drawing-room floor, and plucking it, having entered in pursuit of the unfortunate bird through an open window, and killed him in the room."

The female sparrow-hawk is bigger than the male, by at least a fifth, and considerably more than a fifth heavier. The upper parts of the male are bluish ash-colour; its throat and chest reddish-brown. The hen is of an altogether browner complexion than the male, with the throat and under parts white. Its nest is built in low trees and shrubs, and it occasionally happens that the proud hawk, thinking the process of building menial and degrading, will take the house as well as the life of one of the larger birds on which he preys, and settle down with his family. Of the courage with which he will defend his nest, ample evidence exists. Says Thompson, "An ornithological friend of mine, on climbing a tree to one of their nests, was, when within a few yards of it, attacked by the female bird, and his cap, at one stroke, sent to the ground. He speedily followed it, lest the next stroke should be on his bare head; but, replacing the cap more firmly on, he gallantly remounted to the nest, which he had been almost daily in the habit of visiting, and was gratified with the sight of four young birds that day hatched." The same authority relates that a friend of his has frequently taken the nest of the sparrow-hawk from the tree when the young were nearly fledged, and placed it on the ground under a basket, in the bottom of which a hole was cut to admit the old birds when they came to feed them. The basket was quite exposed to view, and rat-traps were placed about, in which, though often screened but by a single leaf of the sycamore, the old birds were captured; in snares thus set around the basket they were often caught. Once, when the female was taken, the male fed the young

regularly for eight days, or until he was himself secured; he must have dropped the food to them during the whole period, as he could not otherwise have fed them without being trapped or snared.

"I once kept one of these birds," says the Rev. J. G. Wood, "for the purpose of destroying the little birds; but I very much regret to say that he was not of the least use, and, in fact, rather attracted than affrighted them. He was the most extraordinary coward, and the birds knew it well. In consequence, they used to assemble for the purpose of mobbing and persecuting my poor hawk; and, after chasing him up and down the gravel walk, among the cabbages, and into the wood-house, they used to leave him cowering among the beanstalks, and then adjourned to the currants and cherries for refreshment after their sport.

"There were two birds especially that excelled in persecution, the wagtails and the tomtits; the former out of the mere exuberance of their spirits, and the latter from interested motives. The wagtails would come over the wall with their peculiar jerking flight, settle on the ground in the very face of the hawk, wag their tails impudently, and then run at him open-mouthed. Whereupon the hawk would utter screams of fright, turn tail, and run away. But the tomtits were very wise birds, and had an eye to the main chance. As the hawk was afraid of little birds, and never seemed to catch any mice, it was evident that he must be fed, and he was accordingly favoured with a piece of raw meat every day. Now, tomtits are quite carnivorous in their nature, and thought that the hawk had no more right than themselves to the meat. So they were accustomed to assemble about noon, and to wait until the hawk was fed; then, unless some one stood near while the bird was eating his dinner, down came the tomtits, and bullied him until he dropped the meat, with which they flew away, quarrelling among themselves as bitterly as they had harassed the hawk."

It would seem, however, that this apparent imbecility on the part of the hawk is often simply a bit of very clever manœuvring to get a snap at one bird,—among a flock, of course he has a good chance of picking out a fat one. The before-mentioned authority says:—"I was walking in a curious lane, that had been cut through a red-sandstone hill, so that the level of the fields was some fifteen feet or so above. The cattle were prevented from tumbling into the road by a

bushy hedge that was planted on the margin, and which sent out long streamers of bramble, that had taken root here and there down the rock, and overhung the road in thick clusters. This was an admirable locality for the sand-martins, who had taken up their abode in great numbers, and had quite honey-combed the rock with their nest-tunnels. It was a beautiful summer's day, and the martins were flying about as thick as gnats under a tree, filling the air with their weak but musical little chirp, and glancing in the sun like white butterflies.

"Presently their chirps ceased, the martins all disappeared, and a singular hubbub began on the opposite side of the hedge. The tumult increased, and in a few minutes a sparrow-hawk came near the hedge, and flew down the lane, accompanied and surrounded by a perfect cloud of martins, who were screaming with all the power of their throat, dashing by him and striking him with their wings as they passed. The hawk was apparently quite bewildered by this treatment, turned round, and flew back again, followed by the martins, still buffeting him, and screaming triumphantly.

"Suddenly there was a dead silence, all the martins scattered off on every side, like the sparks from a catherine-wheel, shrieking with fear, not with triumph. And then I saw the hawk quietly sailing away, carrying in his claws a wretched little martin, who was vainly screaming for help from his terrified friends. The hawk sailed up high in the air, and disappeared with his prey behind the same hedge from which he had come, and I saw no more of him."

The perseverance with which the sparrow-hawk will pursue its prey is remarkable. The following, communicated by a correspondent living in the North of England, is of sufficient interest to present it to the reader:—"While taking a walk through a meadow adjacent to my residence, my attention was suddenly attracted to two objects some height in the air, about a dozen yards distant from me. Presently I discovered them to be a poor little linnet closely pursued by a sparrow-hawk. I shouted at the top of my voice to frighten the hawk from its victim, but without success. In a few minutes, after a long chase, the linnet made all sail for the land, and the sparrow-hawk redoubled its efforts to strike at it. With one fell swoop the linnet dropped at my feet, the hawk following it within an arm's length of my stick, which I raised to keep it off. The poor little bird was quite dead; the last great effort to escape had been too much for its strength, and

it had broken a blood-vessel. The hawk, not perceiving its victim was dead, still hovered about for some time before it took its departure."

Thompson, in his "Birds of Ireland," introduces a note to the following effect:—"The following occurrence, though not happening on Irish ground, was witnessed by so accurate an observer, William Ogilly, Esq., that I cannot resist introducing it here. 'I once,' he remarks, 'had an opportunity, from on board a Ramsgate steamer, of witnessing a curious pursuit of a thrush by a sparrow-hawk. We were off the North Foreland at the time; the thrush was, when first seen, a considerable way ahead of her pursuer, and making vigorous efforts to gain the woods which surround the seat of Mr. Alexander, near Broadstairs; the hawk was evidently bent on facing her out to sea, for which purpose, instead of flying directly at the thrush, he kept close in along the shore, always heading her, and thus effectually cutting off her retreat. This lasted for a considerable time, till at length the thrush, wearied with flying, and probably despairing of reaching the wood, wheeled suddenly round, and made directly for the steamer. The hawk dashed boldly and rapidly after her, and was with some difficulty prevented from pouncing on his victim even when perching on the foremast. Baffled in this attempt, he retreated to the woods on shore.'"

After so much evidence in proof of the savage and bloodthirsty disposition of the sparrow-hawk, it is pleasing to be able to record any instances of good-will and mild character in a bird seemingly so altogether untractable; so much so, indeed, that many naturalists have denied the possibility of taming it. The first of such testimonies to the bird's good character is made by Bishop Stanley, of whom, be it observed, no writer is more anxious to impress upon the reader's mind, that all animals are sent us for some all-wise and beneficent purpose, and either deserve our sympathy or respect. To dispel the delusion that the hawk is, after all, so very untameable, he gives the following evidence:—

"About four years ago, a young sparrow-hawk (generally considered the fiercest of the whole tribe) was procured and brought up by a person who was fond of rearing a particular breed of pigeons, which he greatly prized on account of their rarity. By good management and kindness, he so far overcame the natural disposition of this hawk, that in time it formed a friendship with the pigeons, and associated with

them. At first the pigeons were rather shy of meeting their natural enemy on such an occasion, but they soon became familiarized, and approached without fear. It was curious to observe the playfulness of the hawk, and his perfect good humour during feeding-time; for he received his portion without any of that ferocity with which birds of prey usually take their food, and merely uttered a cry of lamentation when disappointed of his morsel. When the feast was over, he would attend the pigeons in their flight round and round the house and gardens, and perch with them on the chimney-top or roof of the house, and this voyage he never failed to take early every morning, when the pigeons took their exercise. At night he retired and roosted with them in the dovecot; and though for some days after his first appearance he had it all to himself, the pigeons not liking such an intruder, they shortly became good friends, and he was never known even to touch a young one,—unfledged, helpless, and tempting as they must have been. He seems quite unhappy at any separation from them, and when purposely confined in another abode, he constantly uttered most melancholy cries, which were changed to tones of joy and satisfaction on the appearance of any person with whom he was familiar. * * He was as playful as a kitten and as loving as a dove." Being quite able to vouch for the respectability of the "witness," I shall take the liberty of extracting another anecdote of a buzzard, from the same valuable source. "A female of this species," says he, "domesticated and kept in a garden, was set with some eggs of the common poultry, which she hatched at the usual time. When the chickens were freed from the shell, this strange stepmother defended them in the most furious manner, scarcely allowing any person to approach the wooden box in which they were hatched and kept, and to which they retired whenever they chose. Its fury far surpassed that of a common hen, as long as the chickens were young and helpless, but gradually slackened as they grew older; the habits of affection, however, never entirely ceased, for the chickens, after they became full-grown fowls, remained with it, and all lived together in the same garden in perfect harmony. A single instance of so extraordinary a deviation from the general habits of birds might be received with hesitation, but when corroborated by similar occurrences on record in other places, its truth scarcely admits of a doubt."

Mr. Anderton, the American ornithologist, gives an account

of a sparrow-hawk which he tamed, and which was all its life a faithful servant. He says:—"No bird can be more easily raised and kept than this beautiful bird. I once found a young male that had dropped from the nest before it was able to fly. Its cries for food attracted my notice, and I discovered it lying near a log. It was large, and covered with soft white down, through which the young feathers protruded. Its little blue bill and great grey eyes make it look not unlike an owl. I took it home, named it Nero, and provided it with small birds, at which it would scramble fiercely, although yet unable to tear their flesh, in which I assisted. In a few weeks it grew very beautiful, and became so voracious, requiring a great number of birds daily, that I turned it out, to see how it would shift for itself. This proved a gratification to both of us; it soon hunted for grasshoppers and other insects, and on returning from my walks I now and then threw a dead bird high in the air, which it never failed to perceive from its stand, and towards which it launched with such quickness as sometimes to catch it before it fell to the ground.

"The little fellow attracted the notice of his brethren, brought up hard by, who, accompanied by their parents, at first gave it chase, and forced it to take refuge behind one of the window-shutters, where it usually passed the night, but soon became gentler towards it, as if forgiving its desertion. My bird was fastidious in the choice of food; would not touch a woodpecker, however fresh; and, as he grew older, refused to eat birds that were in the least tainted.

"To the last he continued kind to me, and never failed to return at night to his favourite roost behind the window-shutter. His courageous disposition often amused the family, as he would sail off from his stand, and fall on the back of a tame duck, which, setting up a loud quack, would waddle off in great alarm, with the hawk sticking to her. But, as has often happened to adventurers of a similar spirit, his audacity cost him his life. A hen and her brood chanced to attract his notice, and he flew to secure one of the chickens, but met one whose parental affection inspired her with a courage greater than his own. The conflict, which was severe, ended the adventures of poor Nero."

THE KESTREL, OR WIND-MOVER.

This courageous little hawk derives its second name from its peculiar mode of flight. Flying gently along at some thirty or forty feet from the ground, it stops every now and then, remaining perfectly stationary, narrowly eyeing the ground beneath. Should the grass be stirred by nothing more violent than the gentle breeze, the kestrel flies a little farther, and again scrutinizes. No sooner, however, does his quick eye detect the movement of a tiny living thing below, than, quick as thought, tail and wings are closed, and, whiz! the hoverer comes towards the ground like a stone. It does not quite reach it, however, when tail and wings are again expanded, the cruel claws pounced on the little victim, that is triumphantly borne off to some secluded nook, where its bones may be picked in peace. This habit of hawking on the wing attaches to the kestrel more than to any of its fellows. It does so for its amusement, and when not on business, Bishop Stanley asserts that it had been seen on summer evenings darting amongst a swarm of cockchafers, seizing one in each claw, and eating them on the wing, and then again darting amongst them.

It has been asserted by naturalists that the kestrel lives entirely on mice and insects, and will not attack a bird, though never so small a one. Willughby and Waterton agree that "mice form *almost* its sole article of food," while a learned contributor to Macgillivray's "History of British Birds" says flatly, "birds constitute no part of the kestrel's food." Following suit, Dr. Wilde, in his Narrative of a Voyage to Madeira, &c., relates, "I was not a little surprised at the good-feeling and familiarity that seemed to exist between the swallows and numbers of kestrels that flew round with the most graceful motion, now skimming with rapid flight along the sands, and anon balanced on extended wing for minutes together, ere they pounced upon their quarry. Their prey was not birds, but a large species of grass or sand hopper, with remarkably brilliant crimson legs. The wings and back of this insect were of the exact colour of the sand, so that when the animal lay quiet on the ground, not even the eye of a hawk could distinguish it. The bird, however, marked with unerring accuracy the spot whereon it alighted, and remained hovering over it as described till the insect again took flight, when its red legs and the under part of its body, rendering it very

conspicuous, he pounced upon it while on the wing. But neither did this hawk appear to mind the smaller birds, nor did they, as if aware of their security, pay the least attention to him."

In opposition to this, writes Dr. Burkitt:—"I recollect one evening, in the summer of 1835, being struck by the appearance of a sparrow, which alighted on a myrtle within two yards of me, and hopped backwards and forwards within a space of eight or ten inches, evidently in a state of extreme terror. For the few moments that it continued this, my attention was exclusively attracted by its most peculiar motion; but almost at the same instant I felt as though something brushed my head (my hat being off at the time), and before I could turn to ascertain the cause a female kestrel dashed at the sparrow, and bore it off." William Thompson, the naturalist, furnishes as positive an instance as the above of the kestrel's bird-pursuing habits. "In November, 1845, as Mr. Higginson was riding in a coach from Belfast to Antrim, a skylark, pursued by a kestrel, flew into the coach (the window being open), when near Templepatrick, and alighted at his back. Feeling confident that it had taken refuge from some bird of prey, he gently laid hold of and carried the lark for some distance, until certain that it would be beyond the reach of its pursuer, when it was given liberty. A friend of Mr. Higginson's, travelling outside the coach, observed the hawk to sweep close past the coach, but did not perceive the lark."

Bishop Stanley, in his "History of Birds," says the kestrel will not only kill small birds but others nearly as large as itself, as the following facts will prove. "One of them was observed to seize a young blackbird just able to fly, which it was in the act of carrying off in its talons. The old blackbird gave chase, with loud cries and apparent determination to rescue her young one, when the kestrel, having allowed her to approach unmolested, in an instant dropped the young bird, and as instantaneously caught up the screaming parent, and carried her clear away."

The Rev. J. G. Wood (who by the bye makes a point of the kestrel's extreme utility to the farmer, and execrates the idea of its being confounded with the ravenous sparrow-hawk) tells a curious story of a deformed kestrel.

This bird, whose character and habits so closely resemble those of the legendary fairy changelings, that if there were such things as hawk fairies, the accipitrine poets and ro-

mancers might have made much of such a foundation for prose or verse. It was tame enough, but of weird-like aspect, having strange angles in its anatomy in unexpected places. It did not stand or walk like its brethren. It was always hungry, and ate great quantities of meat, which did not appear to have much effect in quenching its eternal hunger, and none at all in bringing it from its gaunt ungainly aspect to a respectable hawk-like shape. At last it finished its life by dying in spasms.

"The owner dissected it, in order to obtain some clue to its peculiarities; and on removing the integuments a most singular state of things presented itself. Hardly a single bone in the body of the poor bird had escaped fracture—scarcely a joint had escaped dislocation. One of its thigh-bones had been broken in five places and the other in four. The spine was crooked, and the legs were twisted out of all shape. There were more than twenty fractures in the large bones alone. It was thought that the bird might have thus suffered from want of food in sufficient quantity or quality; but on inquiry it was found that it had been brought up with other hawks, and fed, like them, on mice and small birds. All its companions were perfectly healthy, while it alone was afflicted with this singular disease."

In some parts of the country the kestrel is such a terrible enemy to the professional birdcatcher, pouncing down and carrying off his trained call-birds, that it is necessary to contrive a suitable trap for taking the rapacious creatures. One of the most favourite of kestrel snares is constructed as follows:—A white napkin, to attract the hawk while in the air, is spread upon the ground, and fastened down at the corners with little sticks; in the middle of the cloth a live sparrow is placed, fastened by two or three inches of string to the ground. Slender twigs are then placed all round the napkin, so as to prevent the hawk from attacking the decoy from any position but above. Two long and slender willow twigs are placed, one at each end of the cloth, so as to form a kind of arch over the sparrow, but just high enough to prevent the decoy-bird from fluttering against it. These twigs are placed very lightly in the ground, so that when the hawk strikes down at the sparrow, and his wings stick to the limed twigs, he will, by his fluttering, carry them away attached to his wings, thereby at once rendering him helpless; as it is a curious fact, that the strongest birds, when once in the sticky power of the twigs, can be captured almost

as easily as the smallest sparrow-hawks can be caught in the same trap.

A kestrel, whose weight does not exceed six ounces, has been known to attack a weasel, and carry it up some height into the air, but being too much for it, both fell together to the ground, the weasel escaping unhurt; but its assailant was killed from a bite in the throat by its vindictive captive. A similar instance of the hawk's courage is recorded by Stanley:—"In the spring, a gentleman walking in the fields saw a small hawk attempting to fly off with some prey it had just pounced upon, but evidently prevented, by the weight of its capture, from rising to any height above the ground. It was pursued by a hare, which, whenever it came within her reach, attacked it with her paws, and at last succeeded in knocking it down, when it dropped its prey. At this moment the gentleman ran forward, and the hawk and its pursuer both made their retreat. Upon his reaching the spot where the prey had been dropped, he found it to be a fine leveret, which at once explained the cause of the parent hare's gallant attack on the hawk. It was wounded on the side of the head and was bleeding, but the gentleman left it in a furrow, hoping that the wound might not prove fatal, and that the mother might find it, and reap the reward of her maternal attachment."

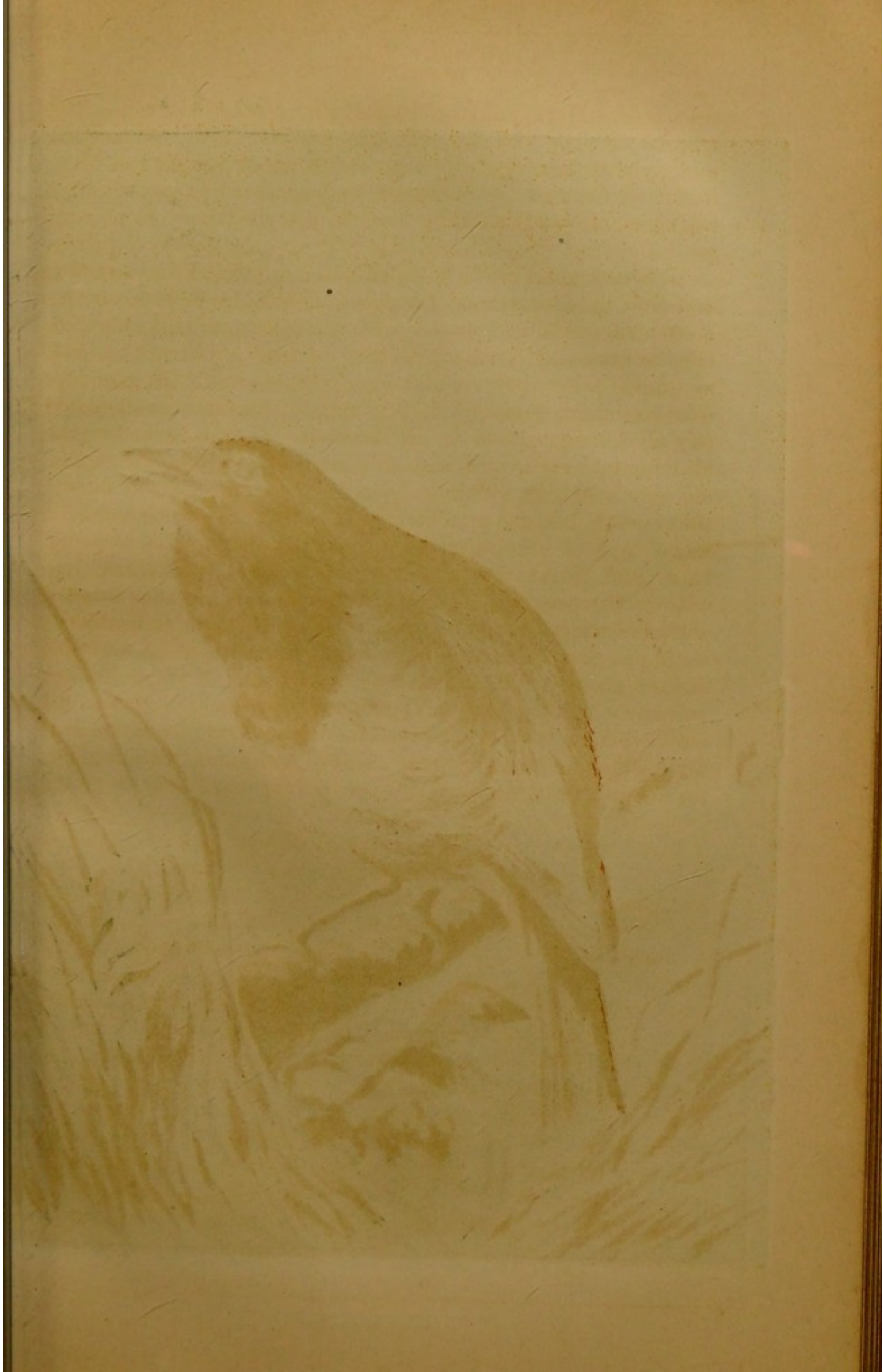
In common justice to the hawk family, however, it should be stated that instances are not wanting wherein this savage bird of prey has exhibited wonderful tenderness and solicitude, and this to creatures of a species it is its nature to abhor. Even the savage buzzard can be not only docile, but amiable in its disposition.

Mr. Yarrell says: "The extreme partiality of the common buzzard to the seasonable task of incubation and rearing young birds, has been exemplified in various instances. A few years back, a female buzzard, kept in the garden of the Chequers Inn at Uxbridge, showed an inclination to sit, by collecting and bending all the loose sticks she could obtain possession of. Her owner, noticing her actions, supplied her with materials; she completed her nest, and sat on two hen's eggs, which she hatched and afterwards reared the young. Since then she has hatched and brought up a brood of chickens every year. She indicates her desire to sit by scratching holes in the ground, and breaking and tearing everything within her reach. One summer, in order to save her the fatigue of sitting, some young chickens just hatched were put down to her; but she destroyed

the whole. Her family, in June, 1831, consisted of nine; the original number was ten, but one had been lost. When flesh was given to her, she was very assiduous in tearing and offering it as food to her nurslings, and appeared uneasy if, after taking small portions from her, they turned away to pick up grain."

M. Fontaine relates a story of a buzzard that he had tamed, and that lived on terms of strictest friendship with his entire household, including four cats, with whom he would take his food. Off the premises, however, he was as true a buzzard as ever, and made prey wherever and whenever he could. To save him from harm, M. Fontaine had to make it known that he would pay all damage caused by his buzzard. At last, however, the bird came to grief. "I had been used to call him every evening with a whistle, which he did not answer for six days; but on the seventh I heard a feeble cry at a distance, which I judged to be that of my buzzard. I repeated the whistle a second time, and heard the same cry. I went to the place from whence the sound came, and, at last, found my poor buzzard with his wing broken. He had travelled more than half a league on foot to regain his asylum, from which he was then distant about a hundred and twenty paces. Though he was extremely reduced, he gave me many caresses. It was six weeks before he was recruited and his wounds were healed; after which he began to fly as before, and follow his old habits for about a year; he then disappeared for ever."







THE ROBIN.



HAWKING.—PART II.

THE GREAT SHRIKE, OR BUTCHER-BIRD.

There are several reasons why mention should be made of these singular birds in connection with hawks and hawking. Their strong hooked bill and curved claws give them a very marked resemblance to the falcons, with which, moreover, not a few of their habits bear comparison. They not only attack and swallow insects, worms, &c., but without hesitation fall on and devour any small bird that may fall in their way. Nor is its carnivorous habit to be checked by confinement. Bechstein relates that he kept a bird of this family caged, and that though amply supplied with dead birds and insects, it refused to be comforted or to appease its hunger. "On the fourth day I set him at liberty in the room, supposing him too weak to hurt the other birds, and thinking that he would become better accustomed to his new food if he were left at liberty. No sooner was he set free than he seized a hedge-sparrow before I had time to save it. I let him eat it, and then put him back into his cage. From this time, as if his fury was satisfied, he ate all that was placed before him."

Lanius excubitor is the bloodthirsty shrike's classic appellation. *Excubitor*, or sentinel, applies to the bird's vigilance in watching that no other bird savage as himself approaches its nest. Falconers take advantage of this peculiarity of the shrike to make him useful in the practice of snaring hawks. Towards the end of the year, in October and November, the hawks are on their passage to the southern and warmer climes of Europe; and at this season the falconer can secure the most birds. He builds a low turf hut in the open country, with a small opening on one side; at about a hundred yards' distance from this hut, a pigeon (usually a light-coloured one, to attract the hawk while soaring high in the air) is placed in a hole in the ground, which is covered with turf, and a string is attached to it, reaching to the hut. Another pigeon is placed in a like position on the opposite side, at the same distance from the hut. At a dozen yards from each pigeon a small bow-net is fastened to the ground, which is so arranged that the falconer can pull it over, by a small piece of iron attached to the net, and leading to the hut. The string by which the pigeon is held passes through a hole in a piece of wood driven into the ground, in the centre of a bow-net. The falconer has also a decoy-pigeon, in a string at a little distance from the hut, and half-a-dozen tame pigeons are placed on the outside of the hut, which, on the sight of a hawk, immediately take shelter within. The next, and most important adjunct in the business, is the butcher-bird. He is placed on a hillock of turf at a short distance from the hut, and is fastened by a leather thong. The falconer, however, does not sacrifice the life of his servant, but humanely makes a little hole in the turf, into which the bird can escape when it chooses. Having thus everything prepared, the falconer has nothing to do but to sit in the hut, and watch the motions of the butcher-bird. Habit has sharpened the sight of this little bird, and he descries his natural enemy long before the falconer would be able to see it. At first, if a hawk is approaching, the shrike exhibits a certain uneasiness, a drawing-in of the feathers, and a fixed gaze in one direction, the meaning of which the falconer knows well. Even when the hawk is at the distance of three or four hundred yards, the butcher-bird will scream with fear, and retreat into the hole in the turf. The falconer then prepares his decoy, and draws out the pigeons where the bow-nets are placed, which, by fluttering round, soon attract the hawk, who swoops at them, and is caught in the snare. Not only does the

THE GREAT SHRIKE, OR BUTCHER-BIRD.

butcher-bird give its master warning of the approach of the hawk, but informs him also of what species it is. It has been observed that, should the aerial visitor happen to be a goshawk, the shrike will scream most lustily, and make every attempt to escape. If, however, it happens to be a kite or buzzard, it will not exhibit half so much fear, and thus, without moving from the hut, the degree of anxiety exhibited by his little watch-bird will give the falconer some information what kind of hawk is approaching.

The butcher-bird is found throughout Europe, and remains in the forests through the summer; but as the trees grow leafless, and prey scanty, it has no objection to approach the abodes of man. Its nest, which is a substantial building, warmly lined with feathers and down, is usually built in a solitary tree or thick bush, and from four to six eggs, of a greyish white spotted with pale olive-green, are laid at each sitting. It is by no means a large bird; its length from beak to tail is not more than ten inches, and it weighs but two ounces. The bill is elongated, strong, straight and compressed, with the tip of the upper mandible more or less hooked, and armed on each side with a tooth. The base of the bill is usually as high as broad. The wings are of moderate size, sometimes pointed, sometimes rounded. The tail is long and rounded.

The term "butcher" would seem to be applied to this bird not so much on account of its sanguinary nature as from its singular mode of disposing of the carcasses of its prey. It may be as well, perhaps, to describe, in the first place, how this feathered butcher obtains the said carcasses. Audubon shall tell you. "This valiant little warrior possesses the faculty of imitating the notes of other birds, especially such as are indicative of pain. Thus it will often imitate the cries of sparrows and other small birds, so as to make you believe you hear them screaming in the claws of a hawk; and I strongly suspect this is done for the purpose of inducing others to come out from their coverts to the rescue of their suffering brethren. On several occasions I have seen it in the act of screaming in this manner, when it would suddenly dart from its perch into a thicket, from which there would immediately issue the real cries of a bird which it had seized. On the banks of the Mississippi, I saw one which, for several days in succession, had regularly taken its stand on the top of a small tree, where it from time to time imitated the cries of the swamp and song

sparrows, and shortly afterwards would pitch down like a hawk, with its wings close to its body, seldom failing to obtain the object of its pursuit, which it would sometimes follow even through the briars and branches in which it sought refuge.

"When unable to secure its prey, it would re-ascend to its perch, and emit loud and discordant notes of anger. Whenever I could see it strike its victim, it appeared to alight on its back, and instantly strike its head, which I have several times found torn open."

It will be seen from the above, that the great shrike possesses powers of imitation almost equal to the mocking-bird; the one, however, exercises its leading faculty for its sport, the other in most terrible earnest. Not only in imitative capacity does the butcher-bird resemble the mocking-bird; its general appearance is likewise by no means unlike. Webber, the naturalist, relates a curious story of how, when a boy, he went "nesting" for mocking-birds, and, after a very long search, discovered what he thought, without doubt, was the wished-for treasure. He saw the parent birds skimming about a fence, and presently they betook themselves to a great oak-tree, and there, a long way up the big trunk, was a nest. "Strange place for mocking-birds to build," thought the young naturalist, "but probably this is a new variety, preferring large trees."

"With my heart in my throat, I leapt the fence, ran at full speed at the tree, stripped off my coat and boots, and, before I knew what I was doing, had ascended, as nimbly as a squirrel, the trunk of a tree that I would not have attempted to climb for a fortune, under any other circumstances. It was well that I did not stop to think, or I should never have reached the limbs. As it was, now that I found myself up, the difficulty of getting at the nest seemed as great as ever. The small limbs that bristled out from the great excrescence were as tough as they could be, and how I was to drag my body over them, so as to reach the nest, was the question; but when, by rising on tiptoe, I could peep over the edges of the nest and see the heads and bright eyes of four lusty young birds, I literally tore my way through all obstructions, and grasped my treasure. I seized three, and the fourth sprang out in time to elude me, and sailed down.

"Just at this moment, I saw my old friend approaching, to see what I could be at. I shrieked out to him in my tribulation, for the little wretches had bitten my hand so severely,

that the pain and imminent danger of falling combined had compelled me to let them go, to save my neck.

“‘My mocking-birds! catch my mocking-birds, Mr. B.! Oh! I wouldn’t lose them for all the world! Catch them! catch them!’”

The kind-hearted Mr. B. exerted himself valiantly, and, despite several severe bites administered to his fingers by the savage mocking-birds, managed to secure two (the third scrambled into a cleft in the rocks), and imprison them under his hat. Without exactly knowing what they were, however, the old gentleman, grounding his argument firstly on his bleeding fingers, and secondly on the fact that the captives bore under each eye a black spot, expressed his suspicions that they were not of the sort young Webber imagined. That young gentleman’s confidence, however, was not to be shaken, and home he carried them, placed them in his sister’s charge, and returned to find the one that had slipped into the crevice. He was met, on his return to the house, by his sister.

“‘Brother,’ said she, ‘you never did see creatures eat like our little birds; they do nothing but eat, eat, eat, all the time. I never knew before that mocking-birds were so greedy; and then they bite me so.’

“I smiled benignantly, as became a youthful Cuvier, and, holding out to her the new one, said patronizingly,—

“‘Look here; he could not escape *me*, although this new variety have the cunning of wizards. Never mind the appetite, sis.; we shall be the more certain to raise them, and their magnificent song shall repay us for a little additional trouble.’

“‘Well, brother, I hope you will not find any more of your new variety, for I expect to have my fingers eaten off by these that you have. They are not content with snatching down everything I can find to give them, but have been trying to bite off the fingers that feed them.’

“The reception of my new variety mortified me excessively; but I consoled myself that I was doomed to the common martyrdom of discoverers, and nursed my uncouth and boisterous pets with even greater assiduity that they were rejected of men. I now let them run about the yard; for I soon found that the raven in their maws constituted a sufficient parole of honour to ensure their return to where food was to be obtained. But one morning I witnessed a trick of one of my vagabonds that completely stunned me.

“He had straggled round to the back part of the house,

and had got into the poultry-yard. I saw him march very deliberately up to a brood of young chickens, and, without saying 'By your leave' to anybody, he pounced upon one in the most savage fashion, and would have killed it in an instant, but that the old hen rushed to the rescue with a blow that sent the young robber several feet distant. The indignant mother followed up the attack, and when I was about to interfere, to my surprise, the young wretch, with all his feathers bristling like a little hedgehog, threw himself upon his back, and awaited the onset with open mouth and fierce eyes. The hen struck at him with her beak, and, quick as lightning, he clutched her head with his claws, and the astonished hen ran squalling off, shaking her head in agony, to get rid of this new sort of head-gear. When she had shaken him off, she ran away in a great fright, and he strutted around with a most conscious air.

" 'Well,' muttered I, 'this is getting to be something of a joke; my new variety seems to have more of the hawk than the song-bird in it. I never heard of mocking-birds killing young chickens, or whipping old hens, before.' Just at this moment, my sister, who witnessed the scene, and heard a part of my muttered soliloquy from a window close at hand, burst into a ringing laugh, and, as I looked up, disappeared.

"In a moment she came bounding down the steps to meet me, with a small book in her hand, which I recognized with a foreboding thrill before she reached me. It was a small school edition of selections from ornithology, with woodcut illustrations. She held her hand on the page, to cover something, while she read, as well as she could for laughter, Wilson's version of the lizard story; and when she had got through, removed her hand suddenly from the cut, and, though it was remarkably rudely done, I instantly recognized in my new variety—the Butcher-bird."

The exact position the great shrike—indeed all the shrikes—are entitled to take among their feathered brethren, it is hard to define, as, says Mr. Wood, "one naturalist pounces on the bill, and straightway drags the shrikes into his rostral system; another seizes on the legs, and flings them into his pedal system; a third declares that as they eat birds and mice they ought to be placed among the predacious tribes; while another lays equal stress upon their habit of feeding on grasshoppers and beetles, and wants them to be inserted in the list of the *Muscicapidæ*, or flycatchers. So the poor shrikes are insulted

by divisions into families and sub-families with wonderful names, and are bandied about from one system to another, like one shuttlecock among a dozen battledores, or one mouse among as many cats. It is fortunate for the peace of mind of the shrikes that they live in ignorance of their own unsettled state."

The names by which the shrike is known are as various as the "systems" to which it is specially referred. In some parts of England it is called the "murdering pie;" "pie," because the varied lights and shades of its plumage give it somewhat of a pied appearance; "murdering," for obvious reasons. In Germany it is called "neuntedeo," or "nine killed," because of a vulgar belief that until it has seized and hung up nine carcasses, it will not begin to feed. In the latter country it is also known as the "suffocating angel;" why, it is impossible to say, unless the wickedness of the bird's ways has rendered it fit for comparison with the original fallen angel in his suffocating and sulphuric domain.

The mention of "killing and hanging up" reminds me that nothing before has been said, in this notice of the butcher-bird, in reference to this, its chief peculiarity. Having captured a sparrow, or other winged victim, the "butcher's" first act is to find a convenient thorn, on which he dexterously hooks the little body—as a human butcher hangs up a sheep—and then deliberately tears it to bits with his strong bill, and devours it. When a bird has been given to a caged butcher-bird, it will jamb its head or legs through the bars so as to make it hang, and if it be furnished with more than enough for a single meal, it will hitch the scrap to any little projection it may find, as provision for to-morrow. Mr. Solley relates, that he one day saw a great shrike flying about with a hedge-sparrow in its bill, evidently looking for a hook to hitch it to; it succeeded, for, passing the spot shortly afterwards, there was the poor sparrow neatly suspended and ready for the shrike's eating.

One of this family, found in South Africa, exhibits this hanging-up propensity in even a greater degree than its European cousins. It hunts, hungry or full, from morning till night, and impales everything it captures through the head. Le Vaillant, who was an eye-witness to the manners of the winged butcher of Africa, was informed by the Hottentots that the bird has no relish for fresh food, and for that reason hangs his carcasses till they are sufficiently "high" to please his palate. He is such a wanton slaughterer, however, that a rather curious circumstance arises through this venison taste

of his. Beneath the scorching African sun the gibbeted birds are scorched up before decomposition can set in, and it is no uncommon thing for the traveller to find a bush festooned with ready-dried specimens of the small birds of the country.

The butcher-bird can sing, a fact at which, without knowing why, one cannot fail to be surprised. It does seem strange that such a murderous little bandit should have its savage beak backed by a musical throat. It does sing, however. A writer in the "Naturalist" informs us that he was first led to discover a bird of this species by hearing notes very much like those of a stonechat, yet not quite familiar to him, of which the utterer, to his surprise, was a butcher-bird; on continuing to listen, these notes were soon exchanged for others of a softer and more melodious character, not, however, prolonged into a continuous song or strain. Bechstein says: "The note of the butcher-bird resembles the *guir guir* of the lark; like the nutcracker, it can imitate the different notes, but not the songs, of other birds. Nothing is more agreeable than its own warbling, which much resembles the whistling of the grey parrot; its throat being, at the same time, expanded like that of the green frog. It is a great pity that it often spoils the beautiful melody of its song with some harsh and discordant notes. The female sings also." While agreeing with so renowned an authority as Bechstein, that the introduction of harsh shrieks is calculated to mar melody, it seems to me that many sounds are more lovely than the "whistling of a grey parrot."

The falconers of the Middle Ages named the great shrike the "mattagasse," and, according to an ancient work on field sports, was used occasionally, in regular hawking fashion, for the capture of small birds. The language in the said old book is as quaint as the spelling, and the reader shall have both as I find them:—

"Though the matagasse bee a hawke of none account, or price, neyther with us in any use; yet, neverthelesse, for that in my division I made recitall of his name, according to the French author, from whence I collected sundries of these points and documents appertaining to falconrie, I think it not beside my purpose briefly heere to describe unto you, though I must needs confesse that where the hawke is of so slender value the definition or rather description of his nature and name must be thought of no great regard. Her feeding is upon rattes, squirrells, and lizards, and sometime upon certaine birds she doth use to prey, whome she doth intrappe and deceive by flight,

for this is her devise. She will stand at pearche upon some tree or poste, and there make an exceeding lamentable crye and exclamation, such as birdes are wont to doe, being wronged or in hazard of mischiefe, and all to make other feules believe and thinke that she is very much distressed, and standes needful of ayde; whereupon the credulous sillie birdes doe flock together presently at her call; at what time if any happen to be near her die out of hand, ceazeth on them, and devoureth them (ungratefull subtill feule!) in requital of their simplicity and pains.

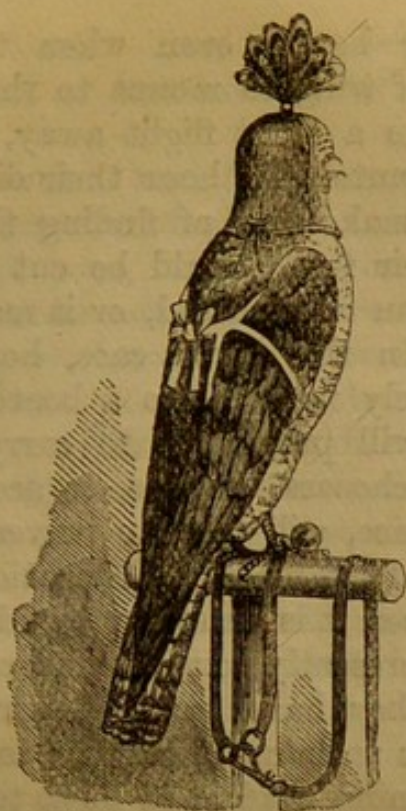
"These hawkes are in no accompt with us; but poor simple fellowes and peasants sometime doe make them to the fiste, and being reclaimed after their unskillful manner, doe bear them hooded, as falconers doe other kind of hawkes, whom they make to greater purposes. Here I end of this hawke, because I wish accompt to be worthy the name of a hawke in whom there resteth no valour or hardiness, or yet deserves to have any more writters of her propertie and nature more than she was in mine author (Francesco Sforzino Vyncentino), specified as a member of my division, and there repeated in this number of long-winged hawkes. Too truely, it is not the propertie of any other hawke by such devise and cowardly will to come by their prey, but they have to winne it by main force of winges at random as the round-winged hawkes doe, or by free stooping as the hawkes of the lower do most commonly use, as the falcon, ger-falcon, sacre, merlyn, and such like which doe lie upon the wing, roving in the ayre and ruff the foule or kill it at the encounter."

In Bengal, birds of this family are trained to fight after the ancient manner of our cocks. Each bird is "braced," and a foot or so of string allowed it, the end of which its human "second" holds. They are then placed before each other, and peck, and maul, and tear, till one is prostrate. Stanley tells us, that in parts of India shrikes are taught to thieve, by pouncing on and bearing off the ornaments of precious metal sometimes worn in the head-dress of the females of the upper class of natives.

And now comes the pleasantest part of the task of writing about the butcher-bird—to bear testimony to its good qualities. Much as it resembles the hawks and falcons in many of its habits, it is their superior in one respect; for, whereas the falcons invariably not only cease to harbour their fledglings after they have attained a certain growth, but drive them away, and set their beaks and talons against them, the butcher-

bird shows a marked attachment, and one of long duration, towards its young. No sooner are the eggs hatched, than the female lends her aid in the discovery of her brood, uniting her vociferations with those of the male until their boisterous thanksgiving chances to lead to the detection of their abode by a human plunderer. Should the happy family, however, have the great good luck to remain undiscovered, the little ones are as carefully tended as doves in a dove-cote, and until they are many weeks old; as, in consequence of their being so heavy and cumbrous, they are not at first expert at pursuing and capturing the winged creatures destined for their prey. Till the following season, when they separate, by instinct, to find each a mate, they all live together, like anything but the sanguinary creatures they appear to us.

Much has been said of their habit of destroying more than they can consume, and this feature of the shrike's character has been quoted, as establishing the unsurpassed cruelty of its disposition; but there is a little fact on record that may show us how daring a thing it is to doubt for an instant the wisdom of the Maker of all things. "During the spring of 1829, locusts abounded to such a degree on the southern coast of Africa, that the whole country was completely ravaged, and the most serious consequences were apprehended; when vast flocks of collared shrikes made their appearance, and never rested from slaying and impaling the locusts till they were utterly exterminated."



HOW THE HAWK IS TRAINED.

The peregrine falcon and the ger-falcon are the two most ordinarily used in the sport of hawking. The former is called a long-winged, or lure hawk, and the latter a short-winged, or hawk of the fist. They are either taken from the nest, captured by means of the butcher-bird, or otherwise. Captured hawks under a year old are called *red hawks*, dusky red being the prevailing colour of their plumage. Over a year old, the falcon is called a *haggard*.

Nestling hawks intended for training are left as long as possible with their mother, that course insuring perfection of wing and tail, which could be by no means guaranteed were the impetuous little fledgling left to its own devices. When first taken in hand, it is fed, regularly and plentifully, on finely-shredded raw beef, from which every particle of skin and gristle has been removed; now and then its savage appetite is encouraged by a present of a newly-killed pigeon or brook. It is impossible for the hawk-keeper to neglect his young charges with impunity; for if fed scantily, or even unequally, they show what are technically called "hunger traces," the wings and tail, when expanded, showing curious marks, as though the edge of a sharp razor had been drawn lightly across them in various directions. It is not necessary

to cage the young hawks even when they have attained sufficient strength of wing to mount to the tops of buildings. They may even take a short flight away, but, provided they can depend to a minute what hour their dinner or supper will be ready, you may make sure of finding them at these times close at hand. Their food should be cut so small that each piece be no more than a mouthful, or it may be given them in one large piece. In this latter case, however, the lump of meat must be securely fastened to a board on the ground, or the bird's nature will prompt it to carry off the meal and devour it where it chooses; besides, to accustom it to eat in the falconer's presence, will tend to prevent it flying off with the game it brings down when its education is perfect. You may easily know when it is necessary to take them seriously in hand, for they will presently come home irregularly, which is a certain sign that they have learnt to hunt for themselves. To capture them for training is called "taking them up," and is managed by fastening a piece of meat to the ground with a small bow-net, so arranged as to be drawn over them when they are feeding; or one end of a long string may be fixed on the ground, and a slip-knot so placed round the meat as to be drawn about their legs. Small leaden bells are sometimes attached to the hawks' legs, to prevent their preying on each other. When thus kept they are termed *hack hawks*, and even after they have been flown at game, by this arrangement they may be left at liberty.

It is now that the falconer's art is put in requisition.



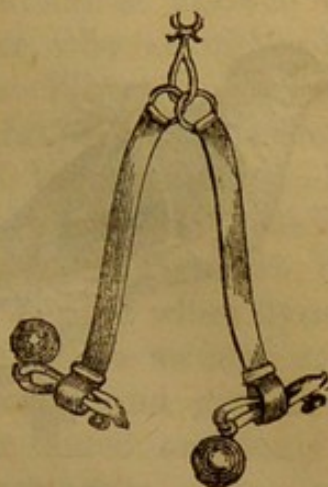
RUFFER HOOD.

The *Hood*, or leather cap, is put on the hawk's head the moment he is taken up. This is so constructed as to prevent him from seeing, while it allows him to feed; it can be taken off and on at pleasure, and requires some dexterity to adjust it. It is advisable that a lay figure should be experimented on first, or the novice may make the acquaintance of the hawk's beak in a sudden and unpleasant manner.

The *Jesses* (slips of leather, seven or eight inches long, and a quarter of an inch wide) are then made fast to the legs, and attached to a small swivel fixed to the end of a thong of leather three or four feet long, called the *Leash*, so arranged that it can be readily detached when the hawk is required to fly. The jesses always remain on the legs, and a hawk should never be touched if it can be avoided, except by

these tags or the leash. Two light bells are also attached to the legs by pieces of soft leather, to assist in finding him should he be lost.

A solid block of wood, kept in the open air, but protected from wind and rain, in shape a truncated cone, eight or nine inches at top, and broad enough at the base to prevent its being overturned, is the resting-place of the hawk. A small staple is driven into the top of this, to which he is attached, with sufficient length of leash to allow him to go from the block to the ground at pleasure. The hawk is now to be trained to stand on the fist with the hood on. At first he will *bait*, that is, flutter off; but replace him gently by hand, he will soon learn to sit still. Carry him about during the greater part of the first day, and frequently stroke his back and legs with a feather.



JESSES.

When he is to be fed, remove the hood. At first this is best done at night, placing the candle so as to give no more than the needful light. In a day or two he may be unhooded in daylight, and fed. He must now be taught to stand quiet when the hood is put on.

The hood is of two kinds, the ruffer and the hood proper. The latter is a cap made of stout leather, with a square opening before, which serves to receive the beak, but sufficiently large to receive the food and eject the castings. Behind is a vertical slit, furnished on each side with a leathern brace, which interlace, so that, when drawn tight, the hood is firmly secured on the head. Care must be taken that, while the eyes are darkened, the leather does not press injuriously on any part. This hood is usually surmounted by a plume of feathers, which serve to hold it by in putting on or taking off. The ruffer-hood, which is soft, and made of cloth or chamois leather, is useful for haggards newly taken, and as yet untamed. It is secured under the throat either by a drawing slip, or by two ends tied together.

The *Brail* is used to keep the bird quiet, and consists of a thong of soft leather, with a slit running longitudinally along the middle of such length as to admit the point of the pinion joints. When the point has been introduced into the slit, the lower end of the thong is brought backwards under the wing,

HAWKING.

and the points are tied above on the back. The wing is thus confined in such a way as to remove it little from its natural



THE BRAIL.

position; it can receive no injury, and of course the wing cannot be expanded. While in this condition, it is useful to drench him thoroughly every morning, by a shower of cold water from a wisp of hay or straw, carrying him about on the fist till dry, stroking him with a feather, and unhooding him frequently. When well accustomed to the hood, neither brail nor drenching will be necessary; but he must be carried about almost all

day on the fist, the hood occasionally taken off, and he may be allowed for a short time to pule upon a pennon, from which little meat can be obtained. A few mouthfuls, however, should be given the moment when the hood is put on.

Hawks, when hooded, are always quiet. In the field it prevents them from *baiting* when birds rise; at other times, it prevents alarm at anything that may be approaching. "It may, perhaps, appear paradoxical to assert," says Sir John Sebright, "that hawks, by being kept hooded, are brought nearer to their natural state; but this is undoubtedly the case, for, by this treatment, they are induced to remain at rest when they are not either feeding or in pursuit of game; and such are their habits in a wild state when left undisturbed."

When the hawk is tolerably tame, he may be unhooded, and, after eating a few mouthfuls, placed on the block and enticed to come to the fist, when held near him. He will soon fly to it when presented at the distance of a few feet.

When he has exercised in this manner for several days, unhood him on the fist, and throw a small piece of meat on the ground. The hawk may thus be taught to follow the falconer wherever he pleases. This is called *waiting on*. When he has alighted on the lure, the falconer walks round him, whistles to, and makes much of him while he is feeding, rewarding him with a good meal when taken up. It is thus that hawks are trained and made obedient to the lure, and exercised when they cannot be flown at game.

The process of enticing the hawk to his game is as follows:

—While the hawk is *waiting on* at a proper height, his head turned inwards, a partridge, attached to a creance, is thrown up, on which he presently pounces, and should be allowed to eat it on the ground, and near the falconer, who should walk round, whistle to, and make much of him. When this lesson has been repeated three or four times, and the partridge thrown up without the creance, the education of the eyes is nearly completed. While giving the above as the training usually followed by falconers, Sir John Sebright thinks it might be better always to feed the young hawk on the lure when flying at hack. He would thus learn to fly at it when swung, and learn to *wait on*. The falconer should kneel and give him meat from the hand, by which means he is tamed and taught not to *carry*. As the hawking season approaches, a few live partridges should be thrown up to him, which he should be allowed to eat on the ground, a few feet off; he will fly down to it, and, having eaten it, fly back, enticed, as usual, by the offer of food; a long light string, or *creance*, being attached to the leash when these lessons are given, taking care that the young bird is trained so gradually that no risk of failure is run. He is now to be taught to come to *lure*.

The *lure* is a forked piece of wood, covered with the wings of birds, and heavy enough to prevent the hawk from flying off with it. Pieces of meat are tied to it on each side, and it is attached to a string, three or four feet long, by which it may be swung in the air or thrown to a distance. The hawk is fed upon the lure, being first induced to come to it when held very near—then a little farther off; it is next thrown to the ground a small distance off, and thus he is brought, by degrees, to fly to it, and seize it eagerly, wherever thrown.

The lure is now swung at some distance from the falconer, who casts off the hawk towards it, but so that he cannot attain it until it falls to the ground. The assistant again swings the lure, but takes it in his hand while the bird is coming; it is swung again when he has passed, and finally thrown on the ground when it is approaching him, taking care always to feed him early in the morning. This mode of treatment Sir John opines would soon accustom the hawk to *stand to the hand*.



THE LURE.

HAWKING.

The management of the passage hawk (respecting whose snaring by means of the butcher-bird mention has already been made) is very similar to that indicated for the eyass. It is, however, much more difficult to "break in," or, as was the ancient term, to "man." The bird was kept awake all night; and thus, in addition to his other labour, the falconer had not unfrequently to keep watch, until dawn, with the savage and fretful hawk on his hand. That this was so is proved by the following passage taken from a MS. of the fourteenth century: "At nyghte goe to the mews and take her fayre and easily juste as she sitteth on her perche; put on her jesses and belles, and looke that ye nether jesse be an inche larger than the farther for batying, then setle her on your fiste, and *beare her all nyghte.*" No wonder that the falconer received good wages, and still no wonder, even in the face of the latter fact, that at the hawking period the following verse should be found in a popular song:—

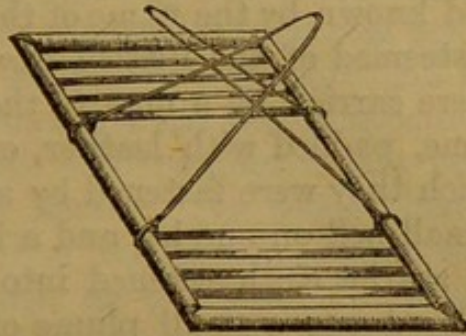
"I woulde not be a serving man,
To carry the cloke-bag stille,
Nor would I be a falconer,
The greedy hawkes to fille."

Greedy as is the hawk, however, it sometimes happens that he will, when first captured, be so filled with rage and yearning for freedom as to scorn the proffered meat and starve himself to death. This, however, must not be allowed, and to prevent it the hawk must be crammed, and a loop put about its throat to hinder its disgorging its distasteful meal.

HOW THE SPORT OF HAWKING IS CONDUCTED.—Unless things alter vastly, hawking will never again be seen in England—at least attended by anything like its ancient splendour. Not only were the hawkers and their attendants splendidly attired, but the hawks themselves were bedizened with all the frippery that their bodies could, without a chance of marring the sport, bear. It must be borne in mind that everybody who owned a falcon (and who did not?) was not a sportsman, any more than in modern times are all owners of dogs. Very many more hawks were carried for ornament than use, and to show the rank of the owner. By the bye, it would seem, that in whatever country the sport of hawking was invented (and, judging from the fact of nearly all terms used in the pastime being of French origin, France would seem to be that country), the practice of carrying the hawk on the wrist was imported from France. In the Bayeux tapestry, King Harold holds his hawk

by the *feet*, but the Count Guy carries his on his *wrist*. Neither of the gentlemen wear hawking gloves, although the falcons represented are as big as Christmas turkeys.

The old English hawk, when "dressed" for pageant or pastime, wore about his neck a delicate collar of gold fillagre, while over his head was drawn a hood of the finest



THE FRAME.

netted silk. Little tinkling bells—the richest sounding ones, made in Milan or Dort—were suspended from the *beurts*, or leather leg rings, and the glove on which he sat was of stout white leather, spangled with gold, and sometimes jewels; and if the hawk were not thoroughly tame, attached to the *beurts* was a dainty silken thread, long enough to allow the bird to take a high flight, and be brought safely to hand again.

One thing, at least, is certain; before the sport could be revived here, we should have to send abroad for masters to train us falconers, the race being, according to Sir John Sebright, extinct. It is nearly forty years ago since he wrote:—"The village of Falconswaerd, near Bois-le-Duc, in Holland, has for many years furnished falconers to the rest of Europe. I have known many falconers in England, and in the service of different persons on the continent, but I have never met with one of them who was not a native of Falconswaerd. It has been the practice with these sober and industrious men to stay with their employers during the season for hawking, and to pass the remainder of the year with their families at home. John Pells, now in the service of my friend, John Dawson Downes, Esq., of Old Gunton Hill, Suffolk, and who also manages the heron hawks kept by subscription in Norfolk, is, I believe, the only efficient falconer now remaining; all the others whom I remember are either dead or worn out, and

there has been no inducement to younger men to follow the employment of their forefathers."

About the time Sir John Sebright wrote the above (1825) there took place a hawking bout, which was duly chronicled in the *Naturalists' Magazine*. The scene of the spot was the flat fen country of Norfolk, and near a heronry. Says the chronicler: "The party assembled in the afternoon, the wind blowing towards the heronry. There were four couples of hawks, all females, of the breed known by the name of the Perigrine falcon, one of the most esteemed of the British hawks in the days of falconry. They were carried by a man to the ground upon an oblong kind of frame, padded with leather, on which the birds perched, and to which they were fastened by a thong of leather. Each bird had a small bell on one leg and a leather hood, with an oblong piece of scarlet cloth stitched into it over each eye; on the top of this hood was a small plume of various coloured feathers. The man walked in the centre of the frame, with a strap from each side over each shoulder; and when he arrived at the spot fixed upon for the sport he set down the frame upon its legs, and took off all the falcons and tethered them to the ground in a convenient shady place.

"There were four foreigners, probably from Falconsward, a village in North Brabant, much famed for its falcons, under whose particular care the birds were placed, each having a bag somewhat like a woman's pocket tied to his waist, containing a live pigeon called a lure, to which was fastened a string.

"After waiting awhile some herons passed, but at too great a distance; at length one appeared to be coming within reach, and preparations were made to attack him. Each of the men being now ready, with a falcon on his fist, and the bag with the lure tied to the waist, and mounted on horseback, proceeded slowly in the direction whence the heron was flying; and as soon as the heron was nearly opposite, though at a very considerable height in the air, they slipped the hoods from off the heads of the falcons, holding them to the fist by the bit of leather till they caught sight of the heron, when the sport commenced in earnest.

"At the moment they were let loose, off they went, straight as arrows, towards the heron, which by this time had gone a considerable distance ahead. As they were dashing away towards it an unfortunate crow happened to cross their course, when one of them instantly darted at him, but he contrived to escape by striking into a plantation, where the falcon followed,

but did not take him. The other falcon soon overtook the heron, which began to prepare for the threatened attack by disgorging its ballast, consisting of two or three fishes; while the hawk, after flying round for a short time in circles, at length soared above him, and then pouncing downwards struck him on the back, when they both came tumbling down together from a great height to the ground. The other falcon, having lost some time in chasing the crow, was now flying with all speed to assist her companion, and was coming up just as the first falcon and heron were falling. At this instant a rook happened to fly across, when the disappointed falcon struck at him, and they both fell together within twenty yards of the other falcon and heron. No sooner had they reached the ground than each of the falcons began to pull its victim to pieces; but as soon as the falconers could come up the lures were thrown out, and the falcons were allowed to make a meal upon the pigeons, having been kept fasting for some hours before. The pigeons were placed for them on the body of the heron; and, after they were satisfied, they were again hooded, and put up for the day.

"The next case of hawks consisted of two younger birds, and when let loose at another heron they flew up to it very well; but the heron was an old one, and was supposed to have been attacked before, for the moment he saw his enemies below he began to soar into the air and set up a low croak, and the two young falcons, not so experienced as the two first, older ones, would not attack the heron, but, after flying about for some time, left him. Upon this one of the falconers set up a call, when one of them, from a great height in the air, immediately closed his wings, and, darting down to the man who called him, was taken in hand. The other falcon, however, was not so well trained or obedient, but continued to sail about in the air.

"At length an heron approached and she attacked it, but without success, and soon left it. At last a third heron crossed, which she attacked, and, after a short struggle, succeeded in bringing to the ground in the same manner as in the first case. This last heron had its wing broken, but the other was taken alive, and afterwards turned out before a single falcon, which struck it down in a minute."

It is very remarkable that when a heron has been once taken by a falcon, it will never afterwards exhibit any boldness in soaring and endeavouring to escape, if placed in a like position. In the above case the heron which had been captured, and was

HAWKING.

at liberty when the falcon was set at it, seemed completely paralysed with fear, and only attempted to struggle when the falcon had it on the ground.

Partridge hawking requires the falconers to be on horseback, provided with a steady pointer and a spaniel or two. When a partridge is marked down the hawk is unhooded and cast off; he flies round the falconer, rising higher and higher each gyration. When the partridge rises the hawk darts down to it with wonderful velocity. Should it evade his stroke, and take shelter in some bush or tree, the hawk makes his point, rises perpendicularly in the air over the spot, and waits on at a moderate height. When it has taken the bird the falconer alone has to approach, kneel down beside it, whistle as at feeding time, and, extending the arm gently, take hold of the partridge. He may then be placed on the wrist, still grasping his prey. He is then hooded, after being rewarded with the head of the partridge, and fed, if he is not to fly again. If he fails in his first flight a live partridge from the bag should be thrown up to him.

Among the many birds at which the hawk may be flown it is hard to find one that affords more sport to the hawkers and more difficulty to the feathered hunter than the bold, cunning magpie. An example of such a morning's pastime was some years ago given in an illustrated newspaper, and, as it may be new to not a few of my readers, I will here reproduce it. "The hawks to be used in this flight should be a cast of male peregrines, called by falconers 'tercels.' The day should not be too sunny or windy; a calm, dull day is the best, and the country open, with a pretty good sprinkling of magpies upon it. Before the hawks leave the hands it is well to explain the part the field should take in the amusement. They should be informed that dogs are not allowable; that upon seeing a magpie they should observe a strict silence until the hawks are cast off. It should also be explained to them that, as the magpie makes up for its want of speed upon the wing by wonderful cunning and activity, he proves himself to be no easy bird to kill with hawks; indeed, a flight may last from twenty to forty minutes.

"This being the case, the falconer requires every assistance from all present, and this help should be thus rendered:—The magpie knows that his safety depends on avoiding the stoops of the hawk, and he escapes them by taking short flights near the ground, from bush to bush, or along a hedge-row, &c., being

well aware that the hawks dare not strike at him in such situations for fear of injuring themselves. The great object of all is, consequently, to make Maggy cross the open country, when the hawks have a chance of stooping fairly at him. Supposing, therefore, that the magpie has been driven into a hedge by the hawks, both horsemen and 'footmen' divide on each side, and make a large circle round the magpie, so as to have him between them. Each party then rapidly approaches the other, and with whips, sticks, and voices, endeavours to force out the magpies, which, being thus surrounded, fly clear of cover, giving the hawks, which are 'waiting on,' room for a stoop, which, however, the quarry will frequently avoid by 'shifting its flight,' *i. e.* turning rapidly in the air, which throws out the hawks, and thus is enabled to regain the cover.

"No time must then be lost in driving him out, as before, for the hawks, it must be recollected, are all the while exhausting their strength upon the wing, while Maggy is resting—ay, perhaps concocting some sly dodge to do his enemies. 'Whoop!' proclaims the kill, when all should fall back, that the falconers may secure the hawks. The first up at the death may claim the tail, which makes a pretty ornament to wear in a cap.

"One great feature of this sport is that no one need be idle; all may join in it and be of use. In fact no quarry gives more sport than the magpie, and the flight has several advantages over others: for instance, it is never too rapid, on account of the quarry being slow in a straightforward flight; and it is easily seen, being so conspicuously marked. As to the sport itself, few scenes can be more exciting than a field of ladies and gentlemen on horseback and on foot, some galloping, some leaping, some tumbling, some using their whips, and some their quarter-staffs, to beat out and frighten the magpie which has 'put in' to cover.

"Then when Maggy is pressed out, you have the wild cry of the falconer to call the attention of the hawks, which work and assist each other with all the sagacity of dogs,—being encouraged instead of frightened by the noise and bustle of the field, which they evidently look upon as allies. Whenever the magpie leaves the cover sufficiently, you have the most splendid stoops at him from each hawk in its turn, and the wary doublings and shifts of the quarry by which he so long avoids their blows are truly astonishing.

"Such a flight as we have been endeavouring here to de-

scribe may be confined to a few fields before we have 'a kill;' but if it be a good rideable country, a good chase across it is most desirable—to secure which the magpie must not be headed, but be allowed to make 'his points,' which, like a fox, will be straight to his stronghold, the nearest wood or cover."

Of course it is very seldom that the magpie has a chance of "serving out" the hawk; but that he never throws away a chance is proved by an anecdote related by the Rev. J. F. Wood, of a magpie in his possession. "Mag's cage being a large wicker one, affords a very good perch, and of this one of the hawks took advantage. Mag disapproved of the liberty, and showed his disapprobation in his own peculiar way. He got into his cage and sulked, as he generally does, when he chooses to consider himself insulted. Meanwhile the hawk sat on the top, looking stolid and unconcerned. But presently the hawk set up a tremendous scream, and began to flutter his wings in a way that showed that something was wrong. And something was wrong, indeed, for Mag had slyly crept under the spot where the hawk was sitting, had seized one of his feet, had dragged his leg completely through the bars and was hanging on it spitefully. The hawk was struggling and kicking to loose himself from the bird's beak, but unsuccessfully. When Mag at last condescended to loose his hold, the hawk went off as fast as he could, and doubtlessly took the lesson to heart."

The branch of falconry in which our forefathers appear to have taken the greatest delight, consisted in flying the hawks at herons, which is thus described by Sir John Sebright:—"A well-stocked heronry in an open country is necessary for this sport, and this may be seen in the greatest perfection at Didlington in Norfolk, the seat of Colonel Wilson. This heronry is situated on a river, with an open country on every side of it. The herons go out in the morning to rivers and ponds at very considerable distances, in search of food, and return to the heronry towards the evening. It is at this time that the falconers place themselves in the open country, down wind of the heronry; so that when the herons are intercepted on their return home, they are obliged to fly against the wind to gain their place of retreat. When a heron passes, a cast of hawks is let go. The heron disgorges his food when he finds that he is pursued, and endeavours to keep above the hawks by rising in the air; the hawks fly in a spiral direction to get above the heron, and thus the three birds often appear to be

flying in different directions. The first hawk makes his stoop as soon as he gets above the heron, who evades it by a shift, and thus gives the second hawk time to get up, and to stoop in his turn. In what is termed a good flight, this is frequently repeated, and the three birds often mount to a great height in the air. When one of the hawks seizes his prey, the other soon *binds to him*, as it is termed, and buoyant from the motion of their wings, the three descend together to the ground with but little velocity. The falconer must lose no time in getting hold of the heron's neck when he is on the ground, to prevent him from injuring the hawks. It is then, and not when he is in the air, that he will use his beak in his defence."

The peregrine falcon would seem to entertain a deeper hatred for the heron than for any other bird, and that it will attack it where and whenever it meets it, and without the natural advantages of soaring above and pouncing on its prey is demonstrated in the following anecdote, related by a reliable authority.

"There was a female peregrine falcon which had been taken from the nest and brought up on ordinary hawks' food, and occasionally treated to a small bird. But she had never been permitted to fly after game, and her instincts had thus been in abeyance. The bird was kept for a day without food, and on the following day an old male heron was placed in the same room. In order to compensate in some degree for the disadvantageous position of the falcon the beak of the heron had been blunted, but otherwise it was a fair conflict.

"The heron did not seem to care particularly for the falcon, but walked round the room seeking an opportunity of escape, while the falcon, perched on a stool, kept watch. Presently she made a dash at the heron's head, but from the low elevation of the stool missed her aim, and was struck by a blow from the heron's beak, which would probably have transfixed her had it not been blunted. As it was, the falcon was for the time repulsed, but soon regained her station on the stool and waited for a second opportunity. This was soon given, and the falcon made another attack with the same result.

"She had now learned experience, and found a perch on a box that was rather higher than the stool, but still too low for her purpose. The heron still continued his rounds, searching on every side for some mode of escape, while the falcon noted every movement with a watchful eye. At last she seemed to

make up her mind, and, springing from her perch, succeeded in fastening her claws on the head and neck of the heron, who was at once brought to the ground.

"The contest was now virtually ended, and the fate of the heron decided. In spite of his superior size and strength he could by no exertion shake off the terrible claws that were clasped round his throat. He struck wildly with his wings as he flapped across the room and endeavoured to kick away his foe with his powerful feet; but all his efforts were vain, and in a very short time the heron lay dead on the ground. The falcon was so rapid in its movements, that the heron had hardly lain prostrate before his foe had nearly severed his head from his body. She then regaled herself on the head and neck of her vanquished enemy."

As is truly observed in the above account, the hawk, from its inability to mount above the heron's head, was at a disadvantage. The heron, however, had its difficulties, which liberty would have removed and perhaps turned the tide in its favour. It is a common trick with the heron, when the hawk is over him and about to swoop down, to turn swiftly on to its back, and, drawing back its neck, present its bayonet-like beak for its foe's reception. The hawk is thus sometimes speared through, and instances have occurred where both birds have fallen dead to the ground,—the one through the spear-stroke, and the other with a dislocated neck obtained in the concussion of the same.

One of the best accounts of a modern day's hawking is furnished by Jules Gérard, especially that account translated and pruned of its excessive verbiage by J. F. Wood. After describing, in his peculiar manner, the gradual arrival and magnificence of the company, the French sportsman writer proceeds:—

"As soon as a hare starts up, the man who first spies it gives the alarm, and the company spread themselves so as to form a circle. In the meantime the falcons are unhooded, and the best-trained birds loosed first. Directly it is free, the bird rises and flies over the circle formed by the horsemen; the falconer gallops in the direction of the hare, and calls his falcon according as he sees it stoop or hover. The falcon stoops upon a hare that runs, and hovers over one that squats.

"When the plains offer a little shelter, the hares are usually so terrified at the sight of the falcon that they squat on the

ground on perceiving the bird. In either case the falcons are loosed in succession, in order to assist the leading bird. It is a most attractive spectacle to see the falcons successively stooping upon the hare, and striking it with their claws without stooping, while the horsemen shake their mantles with exultation, and shout loud enough to frighten to death a braver animal than the hare.

"Whether the hare runs or squats, the falcon does not fasten upon it until the animal is so stunned with the blows which it has received that it gives no signs of life. Then the head falconer issues his commands, the falcons are recovered, hooded, and a new chase commences.

"As falcons become sluggish when permitted to eat their fill, they are only allowed to gorge themselves on the last hare that they catch; but in the meantime they are rewarded for their work, and incited to fresh exertions, by small pieces of meat which the falconer takes care to bring with him. It sometimes happens that the hare, on perceiving the falcon, takes refuge under the belly of the horses, and is even there pursued by the falcon. The chase then becomes full of interest, and noisier than ever. As the falcon cannot strike its prey except from above, the body of the horse forms an obstacle to its success, and the bird expresses its rage by piercing cries, at the same time dashing round or rising above the quadruped protector. At last, when every one has sufficiently enjoyed the sight, a horseman dismounts, takes the hare up in his hands and throws it in the midst of the circle, at the same time calling the attention of the falcons, who impatiently await this, the last scene of the drama.

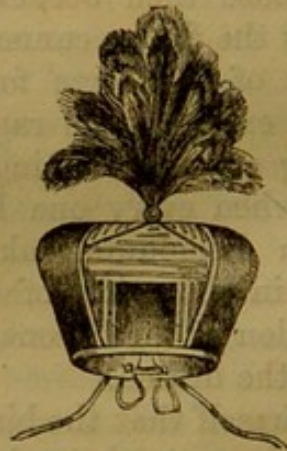
"Having assured himself that the birds are at hand hovering above his head, he holds up to them the hare in his arms, and casts it away with his full force. Hardly does it touch the ground before one of the falcons is on it, and strikes it with his talons. The other birds immediately follow, and inflict the death-blow on the poor animal."

The sport, however, that is most popular in Algeria is hawking the bustard; and, according to Gérard, as many as three hundred horsemen are frequently assembled to share in the pastime.

This bird is generally seen in flocks of from ten to thirty. As it permits the horsemen to approach tolerably near, they spread themselves out so as to form a long line on the plain, preceded by the falconers, who walk in front at some distance

from each other. If it happen that the bustards take to flight too soon, the spot where they settle is marked down, and the line advances until it comes upon a flock that have not left the ground, or that only rise at a short distance. In either case one or two of the best falcons are loosed. Some bustards permit themselves to be killed on the spot; but as this mode of action offers no interest, the Arabs endeavour to prevent the bustards from awaiting the falcon.

In the latter case, the bird selected at first dashes among the flock, in order to be confounded with the other birds; but when it perceives itself to be closely pressed, it darts vertically upwards, so as to keep itself above its pursuer. At that point the remaining falcons are loosed. Generally the battle is a long one, and the bustard cannot be dragged to the ground till the falcons have been able to rise above it to bind it, and to break one of its wings, or peck out an eye. Then, in the midst of the circle formed by the horsemen down fall bustard and falcons, and it not unfrequently happens that the latter are killed by the fall.



"HOOD PROPER."



THE OWLS.

From time immemorial, there has attached to these birds a considerable degree of superstition. The shriek of an owl heard at midnight by the friends of one lying sick was regarded as a certain omen of death, and if heard by the sick man himself, in all probability often hastened his demise. Says Bishop Stanley: "These conceits wiser people have long since thrown aside; but, nevertheless, there is something so mournful and dismal in its night shriek, and such a ghostly sort of motion in its silent gliding movements, when seen glancing through the twilight, or hunting for food on a bright moonlight night, that we can scarcely be surprised at the strange opinions and prejudices of ignorant or superstitious people."

Not only in England is the owl regarded with awe. Amongst the North-American Indians it is customary, at their most solemn meetings, for the chief to wear on his head a hood made from the skin of the great white northern owl. In some countries, it was formerly believed that the heart of a screech

owl laid on the breast of a sleeping person would cause him instantly to divulge any secret he might be burdened with.

The snowy owl, from its size and beautiful appearance, may justly be styled the king of owls. It is found in the arctic regions of the old and new world; Iceland, Sweden, Norway, Lapland, and the north of Europe generally. The head of this bird is small, in proportion to the size of his body; the bill is black, and entirely hidden by the hairy feathers at the base; plumage snow-white, but more or less variegated with transverse brown spots or stripes; the younger the bird is, the larger and more numerous are these spots and stripes; very old individuals are pure white, without any brown spot; iris fine orange-yellow; feet very well covered, so as to look almost woolly to the claws; tail rounded, not much exceeding in length the extremity of the wings. Length twenty-four or twenty-five inches. Female considerably larger than the male.

The habits of a bird coming so little under observation, can be of course but little known; but it has been ascertained that its chief prey is hares and rabbits, and such small quadrupeds, swallowing the smaller sorts whole. Stanley makes mention of one shot in the island of Balta that disgorged an entire young rabbit, and of another in whose stomach was discovered a sandpiper, with the whole of its plumage. Moreover, it is an ascertained fact, that not only do birds of this order hunt on land for their prey, but they also take tithe of the lakes and rivers. Says a well-known naturalist: "The snowy owl is known to be a regular fishing-bird. Motionless as the rock on which he sits, he waits patiently till a fish passes, when, with the rapidity of a shot, he seizes it with his claws; but, although asserted by some naturalists, it had never been quite proved that the common owls were also fish-catchers; however, the fact has been now confirmed by the testimony of more than one credible witness. Some years ago, several young owls had been taken from a nest, and placed in a yew-tree near a gentleman's house. In this situation it was observed that the parent birds repeatedly brought them live fish, such as bull-heads and loaches, which had evidently been taken from a neighbouring brook, in which these species abounded. At subsequent times, bones of the same fish were frequently found lying under the trees on which the young owls were observed to perch after they had left the nest, and where the old ones were accustomed to feed them. How they caught them was not then known; and the report of some

labourers, employed to watch a fish-pond in the flower-garden, was not believed. This pond contained several gold and silver fish, which were observed to diminish in number, and it was suspected that the pond had been poached, and other persons were therefore appointed to watch; when, lo! the poachers proved to be owls, which alighted on the edge of the water, and there awaited the approach of the fish; as soon as these came within reach, they were captured and devoured. This testimony has since been corroborated by another witness, who, at twilight in July, happened to be standing on the middle of a bridge, watching an owl carrying mice to its nest, when suddenly he observed it to drop perpendicularly into the water. At first he thought it had met with an accident, or had been seized with some sort of fit; but before he could reach the end of the bridge in search of a boat, he saw it rise out of the water with a fish in its claws, and convey it to its nest."

The great snowy owl is eaten by the native Indians and the European residents in the fur countries. The flesh is said to be white and well-flavoured.

THE BARN-OWL.

This bird is common in England and Ireland, but less common in Scotland. It is found in Denmark, but is said not to inhabit Sweden or Norway; it is generally spread over temperate Europe, and extends in Africa from the north to the Cape of Good Hope; it is likewise found in India, Japan, and Australia.

In England it is known as the barn-owl, the white owl, the church-owl, the gillihowlet, the howlet, the madge-howlet, the madge-owl, the hissing-owl, and the screech-owl. The upper parts are bright yellowish, varied with grey and brown zig-zag lines, and sprinkled with a multitude of small whitish dots; face and throat white; lower parts in some individuals rusty-white, sprinkled with small brown dots; in others bright white, marked with small brownish points; in others again without the slightest appearance of spots; feet and toes covered with a very short down, more scanty on the toes; iris yellow. Length about thirteen inches. In the female all the tints are brighter, and more developed.

Montagu says that this species is never known to hoot; Yarrell, that it screeches, but does not generally hoot. Jardine

records that he shot one in the act of hooting; and that at night, when not alarmed, hooting is their general cry. It snores and hisses, and, like other owls when annoyed or frightened, snaps its bill loudly. Rats, mice, shrews, young birds, and beetles, form their food, and the mice especially suffer when it has a young brood to sustain. It has been seen to catch fish. It builds its nest in churches, old buildings, and barns, as well as in hollow trees near farmyards and villages. The nest is a rough one; the female laying three or four white oval eggs. Young have been found so late as July, September, and even December. Mr. Blyth, in the *Field Naturalist's Magazine*, throws some light upon this: "A nest of the barn-owl last summer," says he, "in this neighbourhood (Tooting), contained two eggs, and when these were hatched two more were laid, which latter were probably hatched by the warmth of the young birds; a third laying took place after the latter were hatched, and the nest at last contained six young owls of three different ages, which were all reared." Yarrell states that he has been frequently told by boys in the country, that they had found eggs and young birds at the same time in this bird's nest.

In captivity, the barn-owl is a well-behaved and sociable bird, but the cries it utters are anything but melodious. It has not been named "screech owl" without reason. Says Shakspeare,—

"It was the owl that shrieked—the fatal bellman
Which gives the stern'st good night."

To give a description of all the owls would be to fill at least a hundred of these pages, as no less than sixty varieties may be numbered. Eight only of this number are tolerably well known to England, and the one just described is the commonest of them all, as it is likewise the most useful. As in the case of the rook and many another creature, whose lot it is to get a bad name, the owl is commonly regarded as a pilferer of pigeon-houses and hen-coops, and a bird to destroy which is to do a virtuous act. But, as has been proved, the owl is in reality a good servant to mankind, and will never touch tamed and serviceable creatures while wild vermin is obtainable. On one occasion a person who kept pigeons, and had often a great number of his young ones destroyed, laid it on a pair of owls which visited the premises, and accordingly, one moonlight night, he stationed himself, gun in hand, close to the dove-

house, for the purpose of shooting the owls. He had not taken his station long before he saw one of them flying out with a prize in its claws; he pulled his trigger, and down came the poor bird; but instead of finding the carcass of the young pigeon, he found an old rat, nearly dead. Waterton met with a similar proof. He was one evening sitting under a shed, watching for rats, when he killed a very large one as it was coming out of its hole, about ten yards distant. He did not immediately go to take it up, hoping to get another shot; when in a short time a barn-owl pounced down and flew away with it.

THE BURROWING OWL.

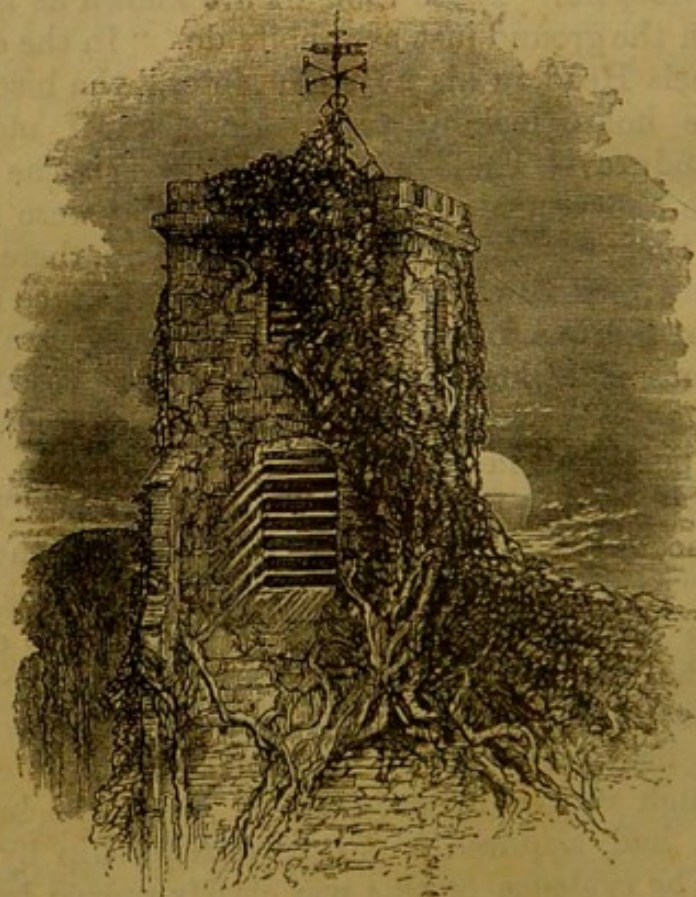
One of the most curious of the owl family is the burrowing owl of the New World. Abounding in the immense South American prairies is a little animal about the size of a badger, but with a head something resembling that of a rabbit, with large bushy whiskers. These animals are known as biscachos, and burrow in the ground just as rabbits do. "In the evening," says Sir Francis Head, in his "Rough Notes," the biscachos sit outside these holes, looking very serious, as if moralizing, thoughtful, and grave. These holes were guarded in the day-time by two of the above-mentioned little owls, who were never an instant from their post. As strangers gallop up, there the owls continue to sit, looking at them, first full in the face and then at each other, moving their old-fashioned heads in a manner which was quite ridiculous, when, as the riders passed close to them, fear gets the better of their dignified looks, and they both run into the biscachos' holes."

The burrowing owl is not nocturnal in its habits. The bright glare of the noon-day sun is as welcome to them as the moon to our familiar "screecher." They breed in the burrows, and the fledglings are brought to the mouth of the hole to enjoy the warmth of the sun. Whether the biscachos and the owl in question inhabit harmoniously the same dwelling, is at least doubtful. It has been inferred by Sury, that they were either common though unfriendly residents of the same burrow, or that the owl had acquired a part proprietorship by right of conquest. The evidence of this was clearly proved by some of these biscachos' holes examined by M. Lucien Bonaparte, on the plains of the river Platta. The burrows tenanted by the owls were invariably in a ruinous condition, frequently caved in, and

THE OWLS.

their sides channelled by the rains, while the neat and well preserved mansions of the builders and original proprietors showed a degree of skill and neatness that was remarkable. There is no evidence, says M. Bonaparte, that the bird and the quadruped habitually resort to one burrow; yet we are well assured by Pivre and others that a common danger often drives them into the same excavation where lizards and rattlesnakes also enter for concealment and safety.

Another of the more conspicuous of *Strigidæ* is the eagle-owl. This bird is rarely seen in France or England, but is plentiful in Russia and Germany. It inhabits the clefts of solitary rocks, and rarely descends to the plains. Although occasionally seen flying abroad at daylight, night is its hunting season, and its prey any small quadruped it may capture, from the mouse to the hare. Its chief peculiarity is that it barks so much like a dog as to make it a difficult matter to distinguish between the two!



THE BELFRY.



THE THRUSH.

and the rain pouring in torrents, the missel may be seen perched on the swaying branch of a tall tree, exercising its vocal powers in the maddest way; nor is its bold nature defiant only of storms. The dishonest magpie dare not go "nesting" about the missel's abode, and even the sparrowhawk is anxious to steer out of reach of the long sharp beak, ever ready to defend its eggs or naked little family.

While, therefore, I recommend the missel thrush to the reader's respect, I by no means advise him to take the bird to himself as a "pet." Large as its house may be, it will inevitably manage to grind off its tail to the very stump against the bars of its prison, an achievement, as the reader will easily understand, by no means conducive to personal improvement. Still, however, as there may be those who are inclined to keep a bold "storm-thrush," it may be as well to mention, as regards their food, that as a staple diet wheat-bran, made into a stiff paste with water, will serve very well, though they will sing all the better on a more generous diet,—such as is allowed the blackbird suiting it admirably.

An eminent naturalist speaks of the missel thrush in highly flattering terms:—"The storm-cock," says he, "warbles nearly



THE MISSEL THRUSH.

the year throughout. I have often heard him pour forth his wild and plaintive notes in the months of August, October, November, and December, and in every following month, until the sun has entered into Cancer; at which period he seems to unstring his lyre for a few weeks. Towards the close of December his song is

perfectly charming; and it becomes more frequent as the new year advances. I remember well (indeed I noted down the circumstance), that on December the 21st, 1827, his carol was remarkably attractive. He warbled incessantly from the top of a lofty elm, just as the poor from a neighbouring village were receiving corn under it, in memory of St. Thomas the Apostle."

Of its extraordinary pugnacity during the breeding season, there exists abundant proof. "Often," says Mr. Thompson, "have I seen a pair of these birds driving off magpies, and occasionally fighting four of them. The pair to which the first-mentioned nest belonged attracted a kestrel, which appeared in their neighbourhood when the young birds were out, although, probably, without any felonious intent upon them. One of these thrushes struck the hawk several times, and made as many more attempts to do so, but in vain, as the latter, by suddenly rising in the air, escaped the blows. These pair of birds followed the kestrel for a great way, until they were lost to our sight in the distance."

"At the end of June, 1846," says another authority, "a friend brought from Scotland to his residence, near Belfast, four young peregrine falcons. The first day that these birds, then full-grown, were placed out of doors, upon their blocks, contiguously, four in a row, they were assailed by a missel thrush, which, for several hours, continued dashing down at them, and all but, if not actually, striking them occasionally. No reason, such as having a nest in the vicinity, &c., could be assigned for the thrush's inhospitable welcome to the Scotch falcons."

From the last-quoted anecdote, it will be seen that the missel thrush is not always actuated by love of home and family in his encounter with other birds. He is, indeed, at all times a very courageous bird; but his attachment to his mate is very extraordinary, and Mr. Waterton relates a story in which a missel thrush actually fought a magpie to rescue his mate, whom the predatory and mischievous bird had carried off. "One year there was a storm-cock's nest within fifteen yards of the place where the masons were at work. Our tame magpie, which was allowed its freedom and the use of its wings, seized the female, and brought her close to the masons. The male bird instantly came up, and rescued his mate by fighting the magpie, until he made it let go his hold. It was to save his female that he advanced so undauntedly into the midst of his mortal enemies. Nothing else could have induced him to face the danger. * * * This loving couple retired triumphant to their nest; but the female lost half of her tail in the fray."

The nest of the missel thrush is one of the most extraordinary that can be conceived. It is frequently composed of a dozen different substances, such as hay, straw, moss, dead leaves,

THE THRUSH.

grass, shavings, rags, paper, &c. The inside of it is lined with mud, carefully plastered, and over this is placed some soft grasses. White, of Selborne, says he has seen the nest of the missel thrush as large as an ordinary hat, and very scientifically made; and another well-known naturalist makes mention of one of these nests he saw in the body of an old hat, that had probably been flung into the tree by some traveller. "At first," says he, "it hardly looked like a nest; but there were a few bits of grass lying over the brim that had a very suspicious aspect, and, on climbing the tree, the old hat was found to have been made the basis of a warm nest, with the proper complement of eggs." The nest of this bird is easily attained, as it is generally built in conspicuous places. The missel thrush lays four or five eggs; they are of a greenish white, spotted with dark reddish brown.

THE REDWING THRUSH.—The redwing thrush has been treated by most writers as a very inferior song-bird. Bechstein, a reliable and accurate naturalist, in speaking of this bird,



THE REDWING.

says:—"They make, indeed, a twittering noise, but this cannot be called a song. It is scarcely for the sake of its song that it would be kept; but in other respects they are very tame and pleasant birds." It would seem, however, that the above authority did not catch the redwing doing its best (as its song is vari-

egated, and often, as he says, little better than "a twittering"); for another eminent naturalist remarks of this bird, "It is one of the finest songsters even among its own melodious group, rivalling the nightingale in the full sweet tones of its flexible voice. Sometimes the bird sings alone, seated on a favourite perch, but it often prefers lifting up its voice in concert with its companions, and fills the air with its harmonious sounds." Another good authority, Mr. Hewitson, describes the song of the redwing as "a loud, wild, and delicious melody." Like the nightingale, this bird frequently sings long after sunset.

It is a native of Northern Europe; to be found principally

THE FIELDFARE.

in Sweden, Norway, and as far north as the cold and inhospitable wilds of Iceland. It visits this country about October, and stays till March or April. During these months the redwing is plentiful throughout nearly all parts of Great Britain. It is rather a handsome bird, about nine inches long; the upper parts of its body are of a light brown; the chin, throat, and breast are of a greyish-white colour, spotted with black and brown spots. The feathers on the sides of the body, when the wings are expanded, are seen to be orange-red, whence it derives its name of redwing.

The redwing thrush is not so inclined to vegetarianism as the others of his species, but lives principally upon snails, slugs, and worms, and other insects. It very rarely builds a nest in this country, although one or two have been occasionally found; it is built somewhat like that of the blackbird, and is usually placed in the centre of some thick bush. It lays from four to six eggs, which are of a blue colour, spotted with black.

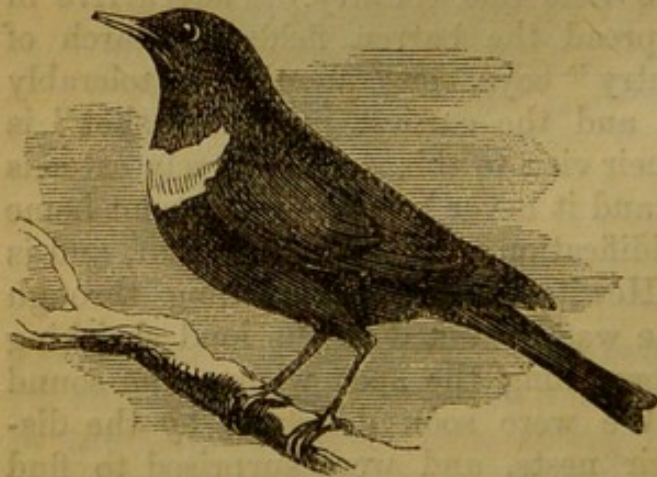
THE FIELDFARE.—The fieldfare is another important member of the thrush group. Like the redwing, it dwells, during the greater part of the year, in the northern latitudes; and is even found in Siberia. Not until the great annual festival of Christmas is beginning to occupy the minds of the English people does the fieldfare visit this country. They arrive in great flocks, and overspread the barren fields in search of provender. Most "country" boys, consequently, are tolerably familiar with this bird, and the earliest juvenile "shot" is often at the fieldfare. Their visit to this country rarely extends over four or five months, and it never builds a permanent home here. Their system of nidification is somewhat singular, and is well described by Mr. Hewitson. While travelling through Norway and Sweden, he was attracted by the loud shrieking of these birds, and, approaching the spot whence the sound proceeded, he says:—"We were soon delighted by the discovery of several of their nests, and were surprised to find them (so contrary to the habits of other species of *Turdus* with which we are acquainted) herding in society. Their nests are at various heights from the ground, from four feet to thirty or forty feet or upwards, mixed with old ones of the preceding year. They were, for the most part, placed against the trunk of the spruce fir; some, however, at a considerable distance from it, upon the upper surface, and towards the smaller end of the thick branches. The outside is composed

THE THRUSH.

of sticks and coarse grasses, and weeds gathered wet, matted together with a small quantity of clay, and lined with a thick bed of fine long grass. * * * * The fieldfare is the most abundant bird in Norway, and is generally diffused over that part which we visited; building, as already noticed, in societies, 200 nests or more being frequently seen within a very small space."

As a home pet, this bird has few commendatory qualities. It is rather a large bird, and consequently requires plenty of room, and must have a large cage, something like that of the missel thrush. The song of the fieldfare simply consists of a few not over-melodious twitterings. It must be kept in a cool room, as the bird is a native of northern latitudes.

THE RING-OUZEL.—The ring-ouzel is another large species of the genus *Turdus*. In its habits it closely resembles the preceding. Its arrival in this country, however, is directly contrary to that of the redwing or fieldfare, the latter birds arriving towards the beginning of winter, and the ring-ouzel about the approach of spring. It is not a familiar bird in this country, being particularly shy of human dwellings, and only affecting certain solitary regions, and rarely to be met with elsewhere. The ring-ouzel is not important as a songster; its song is very loud and sonorous at times, but generally harsh,



THE RING-OUZEL.

and anything but soothing. It is fond of building its nest in mountainous districts, where bushes, more especially juniper, abound. In a wild state it is a very artful and wary bird, and often entertains the falconer with the adroitness and cunning with which it allures the hawk. Says a well-known naturalist,

"It will quietly suffer the bird of prey to approach quite closely, screaming a defiance to the enemy, and flitting quietly along a stone wall or rocky ground. Suddenly the hawk makes its swoop, and the ring-ouzel disappears, having whisked into some hole in the stone, squeezed itself into a convenient crevice, or slipped over the other side of the wall

just as the hawk shot past the spot on which it had been sitting."

Towards the autumn the ring-ouzels assemble in large flocks, and prepare for their departure to northern climes. At this time the orchards and gardens suffer considerably from their depredations. The total length of a full-grown ring-ouzel is about eleven inches. It derives its name from the broad white band that partially surrounds its throat, and, with this exception, the general colour and plumage of the bird greatly resemble that of the blackbird. It lays from three to five eggs, which are of a bright blue colour, variegated with dark-brown spots and dashes.

THE WATER-OUZEL, OR DIPPER.—A somewhat domesticated member of the thrush group is exhibited in the water-ouzel, or dipper. This tiny bird is neither remarkable for gay plumage nor elegant shape; still it is one of the most amusing little creatures when its habits can be observed in its native home. It is extremely fond of diving in the water, from which habit it derives its name. In the "Annals of Sporting" a capital account of the habits of these birds is given. The writer says:—"About four years ago, when on a shooting excursion in the Highlands, I embraced the opportunity (as anybody else who has it ought to do) of visiting the deservedly celebrated falls of the Clyde, and here it was, while nearing the fall of Bonnington, that, happening to cast my eye down below, a little beyond the foot of the cascade, where the bed of the river is broken with stones and fragments of rocks, I espied, standing near each other on a large stone, no less than five water-ouzels. Thus favourably stationed as I was for a view, myself unseen, I had a fair opportunity of overlooking their manoeuvres. I observed, accordingly, that they flitted up their tails, and flew from one stone to another, till at length they mustered again upon the identical one on which I had first espied them. They next entered the water, and disappeared; but they did not all do this at the same time, neither did they do it in the same manner. Three of them plunged over head instantaneously, but the remaining two walked gradually into the water, and, having displayed their wings, spread them upon the surface, and by this means appeared entirely to support themselves. In this position they continued for some time, at one moment quickly spinning themselves, as it were, two or three times round, at another desisting, and remaining perfectly

THE THRUSH.

motionless on the surface; at length they almost insensibly sunk. What became of them then it is not in my power to state, the water not being sufficiently transparent to enable me to discover the bottom of the river, particularly as I was elevated so much above it. Neither can I say that I perceived any of them emerge again, although I kept glancing my eye in every direction, in order, if possible, to catch them in the act of re-appearing; the plumage of the bird, indeed, being so much in harmony with the surrounding masses of stone, rendered it not very easily distinguishable. I did, however, afterwards observe two of these birds upon a stone on the opposite side of the stream, and possibly the other three might also have emerged and have escaped my notice." If the above authority could have witnessed the water-ouzel while under the water, he would have seen them, probably, scrambling and scratching about in a very queer manner, seeking for food, eagerly searching among the stones for the insects and animalculæ there abounding. The bird keeps itself under the water by beating its wings upwards, something after the fashion of human beings, with their hands and feet.

The dipper is rather a lively songster, and is heard to the best advantage on a cold frosty morning. "Sometimes," it is said, "it will stand upon a stone when singing, and accompany its song with the oddest imaginable gestures, hopping and skipping about, twisting its head in all directions, and acting as if it were performing for the amusement of the spectator."

It usually builds its nest near some river or piece of water, and in shape it resembles that of the wren, being built of moss, dome-shaped, and having only a single entrance in the side. It is generally built in a hole in the bank, or under some stone. Mention is made of a water-ouzel which built its nest near a rivulet, so that the bird had to pass under the falling water to enter its nest. It lays from four to five eggs, which are pure white.

In a wild state, the dipper feeds principally upon animal food, such as water-beetles, caddis-worms, various insects, and the frog spawn of certain species. It does not generally seek its food under the water, but, sometimes perching upon the water's edge, picks up its prey from the muddy soil. The upper parts of its body are of a brown colour, the throat and breast pure white, and the abdomen brownish red. The length of a full-grown dipper is about seven inches.

There is another specimen of the thrush family found in

America, the cat-bird. It is a very singular and amusing bird, and derives its name from the great resemblance its notes bear to the mewling noise made by a cat. It is a very affectionate little creature, and evinces considerable care and solicitude for its young. The American naturalist, Wilson, gives us some interesting particulars concerning this bird. He says:—"In passing through the woods in summer, I have sometimes amused myself with imitating the violent chirping or squeaking of young birds, in order to observe what different species were around me; for such sounds at such a season in the woods are no less alarming to the feathered tenants of the bushes than the cry of fire or murder in the streets is to the inhabitants of a large city.

"On such occasions of alarm and consternation, the cat-bird is the first to make his appearance, not singly, but sometimes half a dozen at a time, flying from different quarters to the spot. At this time, those who are disposed to play with his feelings may almost throw him into fits; his emotions and agitation are so great at the distressful cries of what he supposes to be his suffering young.

"Other birds are variously affected, but none show symptoms of such extreme suffering. He hurries backwards and forwards with hanging wings and open mouth, calling out louder and faster, and actually screaming with distress, till he appears hoarse with his exertions. He attempts no offensive means; but he bewails, he implores, in the most pathetic terms with which nature has supplied him, and with an agony of feeling which is truly affecting. Every feathered neighbour within hearing hastens to the spot to learn the cause of the alarm, peeping about with looks of consternation and sympathy; but their own powerful parental duties and domestic concerns soon oblige each to withdraw. At any other season the most perfect imitations have no effect whatever on him.

"It is a most courageous little creature, and in defence of its young is as bold as the mocking-bird. Snakes especially are the aversion of the cat-bird, which will generally contrive to drive away any snakes that may approach the beloved spot."

THE SONG-THRUSH.—ITS HABITAT.—We now come to the prince of thrushes, our own native "song" thrush. This jovial musician of the woods is, without doubt, one of the most popular. There is no disputing that the song of the nightingale—dissected, and its various ingredients separately

weighed—is of superior quality to that of the thrush. The former, however, is a melancholy bird,—a bird whose discourse makes you sigh rather than rejoice, a bird to be listened to by poets and swains and damsels crossed in love. Besides, I am by no means better pleased with the nightingale, that he sings when the owl flies, when nobody is about but the thief and the policeman, and when the world is shrouded in gloom and darkness. Of course, it is rank heresy to say a word against the king of songsters, but I fancy I could point to more than one bird, whom, if he had uninterrupted possessions of a glade,—if he were allowed to sing a song amidst the solemn and impressive stillness that reigns in the woods at midnight,—would so acquit himself, that “Philomel” might quake for his throne.

However, “comparisons are odious.” There is plenty of room in the world for all the thrushes and nightingales that bless it, and for ten thousand more, should it please God to send them. Besides, they are not “in the same line,” as say human singers and actors. The one is refined and romantic, the other is bluff, hearty, and rustic. As says a popular writer, “There is a bold, natural, and free feeling of rustic vigour, endurance, and enjoyment about the thrush, which gives it a more true and hearty interest in all parts of the country than can be possessed by any mere bird of passage, whatever may be its charms while it stays. The thrush is especially one of the birds of plenty; its blithe and varied song is never heard amid desolation, and if you hear a thrush, you have not far to go before you come to a human dwelling.”

The song-thrush is extremely fond of snails, which he will devour with great avidity. These he breaks with his beak against a stone, and then the snail is easily disentombed and devoured. In alluding to this habit of the thrush, a popular naturalist says:—“When a thrush has found a stone that suits the purpose particularly well, he brings all his snails to the spot, and leaves quite a large heap of empty snail-shells under the stone. One of the best examples that I have ever seen was a large square boulder stone, forming part of a rustic stile in Wiltshire. There was a large pile of shells immediately under the stone, and the ground was strewn for some distance with the crushed fragments that had evidently been trodden upon and carried away by the feet of the passengers.”

The thrush's nest is thus prettily described by Clare:—

THE SONG-THRUSH.

“ Within a thick and spreading hawthorn-bush,
That overhung a mole-hill large and round,
I heard, from morn to morn, a merry thrush
Sing hymns to sunrise, while I drank the sound
With joy ; and often an intruding guest,
I watched her secret toils, from day to day,
How true she warped the moss to form her nest,
And modelled it within with wood and clay.
And by-and-by, like heath-bells gilt with dew,
There lay her shining eggs, as bright as flowers,
Ink-spotted-over shells of green and blue,
And there I witnessed in the summer hours
A brood of nature’s minstrels chirp and fly,
Glad as the sunshine and the laughing sky.”

Doing good service to the agriculturist by clearing the orchard of the snails and other vermin visiting it, when the fruit-trees are loaded with their luscious produce, the thrush, probably, thinks he has a legitimate right to a share of the good things which he does so much towards preserving. Certain it is that the thrush commits terrible havoc in the autumn months, and devours berries and fruits in great abundance, having a decided partiality for cherries. But he is not without his defenders. Says a well-known naturalist, “ In no case, indeed, does it become us to be over chary of admitting our fellow-creatures to a share of the good things, which are in reality no more the property of the man than of the bird ; remembering, that although to man has been given the dominion over every inhabitant of the earth, yet the beasts, the birds, the creeping things, have also received the gift of every green herb from the same Divine hand which intrusted man with an authority higher in degree, but not more authentic in origin.” Although this philosophy would hardly expect to meet a hearty response on the part of the market-gardener—and it is rather annoying to have your choicest plants destroyed by the caterpillar—still it is true in the main. What right has man to churlishly deny the fruits and flowers of the earth to bird or insect ? Are they not their inheritance ? and all equally share the love of Him who sent them, as Coleridge, in his beautiful poem, has told us :—

“ He prayeth well, who loveth well
Both man, and bird, and beast ;
He prayeth best, who loveth best
All things both great and small :
For the dear God who loveth us
He made and loveth all.”

The time to go nesting for the thrush is about the second week in April. It is as well to put on a pair of stout gloves

THE THRUSH.

before you start, as it is the bird's habit to build in a hawthorn, holly, or some other bush with sharp-toothed leaves. Bear in mind that the thrush generally builds in the neighbourhood of a pond or brook. As it is almost impossible to distinguish the male from the female nestlings, you had better take nest and all. Keep them in the nest till it gets foul, then take them out, and place them in a basket warmly lined with hay. Every two hours give them a moderate meal of the following mixture: the crumb of bread soaked in fresh milk, crushed hemp-seed, and raw beef-steak shredded very fine. When they are five weeks old remove them from the basket, and put them in a large cage that has two or three perches in it. Gradually wean them from the sopped bread, and feed them entirely on scraped lean beef and crumbled bread. Make the following paste, and let them have it by way of variety: half a pint of oatmeal, the white of a hard-boiled hen's egg, two ounces of sweet almonds, a spoonful of hemp-seed, and half a gill of rape-oil; unite well together, and run through a sieve.

So constantly does the thrush tune his merry pipes at the approach of genial weather, that he has been dubbed by the poets the herald of spring; but by none of them has he been more prettily addressed than by a lady poet, Mrs. Charlotte Smith. She says:—

“ Oh ! herald of the spring ! while yet
No hare-bell scents the woodland vale,
Nor starwort fair, nor violet,
Braves bleak gust and driving rain ;
'Tis thine, as through the copses rude
Some pensive wanderer sighs alone,
To soothe him with thy cheerful song,
And tell of hope and fortitude.

“ For thee, then, may the hawthorn-bush,
The elder and the spindle-tree,
With all their various berries blush,
And the blue sloe abound for thee !
For thee the coral holly grow
Its armed and glossy leaves among ;
And many a branched oak be hung
With the pellucid mistletoe !”

ITS POWERS OF IMITATION.—Well known as the thrush is, a description of him is necessary, if it is only to put ignorant purchasers on their guard against the fraudulent machinations of bird-sellers. From tail to beak, the full-grown cock-thrush is nine inches long. The wings, back, and tail of an olive-brown,

and the neck and breast dingy yellow, spotted with triangular dark-brown spots. A black stripe extends down each side of the throat. The only difference in the appearance of the male and female birds is, that the latter is somewhat smaller, the brown of the upper parts of the body is not so deep, nor so glossy.

If you wish to teach a thrush to "pipe," you must begin as soon as he is fledged, taking care even that during the first few weeks of his life he is not allowed to hear the voice of one of his own species; for, if he once acquires his natural note, you will find considerable difficulty in making him discard it for the sake of your artificial music. A flute, or an ordinary tin whistle, is the best instrument with which to teach the thrush. You need not, however, as in the case of the bullfinch, blackbird, and some others, rise at daybreak to give your pupil his lesson; a bright warm afternoon will do very well, only it will be as well to cover up his cage, so as totally to exclude the light, for an hour before you begin.

Some thrushes possess imitative powers to a marvellous degree; tunes played on wind instruments, or whistled by the mouth, they will catch up and learn with a precision that is astounding. I have read and been told many stories, some ludicrous, some grave, concerning this faculty of the thrush; but the most curious and interesting is the following, furnished me by a friend at Manchester, a person on whose veracity I can rely.

There lived, on the skirts of the city, a thriving wood-chopper; he had a capital business, employed several hands, and his workshop adjoined his dwelling-house. He was a particularly cheerful man, and from morning till night the din made by his chopper, and by the choppers of his boys, was rivalled by his incessant singing and whistling. Well, one day, in spite of his thriving business, in spite of his cheerfulness and singing and whistling, the wood-chopper committed suicide. To the surprise and dismay of his wife and his workmen, he was found hanging to a beam.

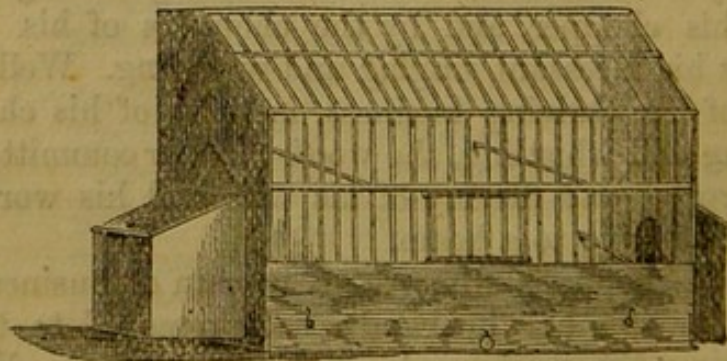
The wood-chopper's wife was a woman of business; therefore, after having her husband's body removed to the house, and allowing the workpeople an hour or two to discuss the calamity, she set them to work again. It was a sultry summer afternoon, and, what with the heat, and the sight of the ugly beam, and the thought as to what had so shortly before been hanging there, the choppers rose and fell very

THE THRUSH.

languidly indeed, and the men and boys spoke to each other in whispers. Suddenly every mouth was ajar with terror, all the hair in the wood-shed rose on the heads of its owners, for, peeling through the place, was heard the familiar tune "William at the Garden Gate," in the unmistakeable whistle of the dead wood-chopper! The men and boys rushed from the place, and went and told the widow; then they returned all together, and, just putting their heads inside the door, listened. With the exception of blocks, and choppers, and billets, the shed was empty; still, from invisible lips, issued "William at the Garden Gate," clear, shrill, unearthly! Neither for love nor money would man or boy venture within the shed to split another billet.

The place was haunted. Sometimes the most profound silence would reign in the shed for hours, and then would come a sudden burst of the ghostly whistling, scaring away listeners from chinks and keyholes. The widow advertised the business, but no man was found bold enough to buy it. So passed on three months, and the poor woman was fairly on the road to ruin. One day, however, while seated at her window, she saw a bird fly from a neighbouring copse, alight on the roof of the deserted wood-shed, and immediately pipe up the now dreaded tune. Thus the mystery was cleared up. It was a thrush, who, attracted by the wood-chopper's music, had listened until he had learnt it, and, proud of the accomplishment, returned to the same spot every day to publish his scholarship.

THE THRUSH'S CAGE.—A lark-cage of the largest size is best for the thrush. Always take care to have the floor of the



THE THRUSH'S CAGE.

cage well strewn with coarse sand, and never neglect the water-glass for his drink, nor the water-pan for his bath. Bear in mind how constantly the thrush exhibits his love

for plenty of clear water by always pitching his nest near a stream.

THE THRUSH'S FOOD.—The food of the thrush should mainly consist of barley-meal, made into stiff dough, with equal quantities of milk and water. Twice or three times a week you may mix with this a little lean beefsteak, finely shredded. If he is a strong healthy bird you need not scruple to give him a morsel of any lean meat, except pork, that you may have on the dining-table, or a bit of boiled potato or carrot; but the greatest delicacy with which you can supply him is a snail. When you put a snail in his cage, put also a smooth stone, and you will see him take the testaceous dainty in his beak, and bang it about on the stone till he has broken it to pieces.

DISEASES OF THE THRUSH, AND HOW TO CURE THEM.—Generally, the thrush is a healthy bird; still he is sometimes afflicted with illness, and chief among his ailments is constipation. This will occur when he is fed for a long time on solid food alone. You cannot mistake this disease, as, when the bird has it, he is constantly drooping his tail, turning round and round on his perch, and exhibiting general uneasiness. Give him a large spider (one of the safest laxatives for a bird), or make a large pill of barley-meal, kneaded with a mixture of saffron-water and linseed-oil. If this is ineffectual, the only remaining remedy is to dip the head of a large pin into linseed-oil, and insert it in the bird's vent. This last, though generally effectual, is a delicate operation, and one which it will be better to pay a fancier sixpence to perform than to do it yourself.

Atrophy is another disease to which the thrush is subject. This malady manifests itself by a wasting of the bird's body, and a deplorable raggedness of his plumage. I have particularly noticed that this is a disease most prevalent among town birds, and would seem to be nothing but a pining for the sight of green leaves and a mouthful of pure air. To town boys who have consumptive thrushes, I say,—let them have what they want; send them for a month a few miles into the country, and, take my word, they will come back well and sprightly, and so full of joyous recollections as to take more than a month's hard singing to relate.

THE BLACKBIRD.

ITS HABITAT.—I earnestly advise everyone who has the chance, to keep a blackbird. He is such a jovial, jolly fellow. His whistle is so free, so hearty, so mellow. Captivity has no bad effect on his spirits; indeed, to judge from his behaviour, he is very glad to be saved the trouble of providing for himself, and happy to pay you for his board and lodging with whole sheaves of musical notes. Bear in mind, however, that the blackbird is a songster who knows his value, and is not to be imposed on. You stifle him up in a mite of a cage, in which there is so little room to turn, that his tail (he is particularly proud of his tail) is scrubbed all to rags against the bars, and it is but little music you will get out of him; but give him a big house, with nice white wicker bars, and plenty of space between each, and he will show his appreciation of your kindness. I have heard it asserted that this daybreak music of the blackbird's is a nuisance, that it disturbs the slumbers of good folks who love to lie abed; but, for my part, I have no sympathy with such sluggards. Let such fogies pull their bed-curtains about them, and fill their ears with wool, while you and I, boys, vote for blackbird music and early rising.

The blackbird, in a wild state, is a very cautious and wary bird, and exhibits considerable cunning in luring the sportsman or bird's-nest hunter from the vicinity of its home. It will lead you a long chase over hedgerows and fields, until it imagines you are at a safe distance from its home, and then, suddenly and unperceived by you, darting through some hedge, swiftly returns to its nest.

This denizen of the woods, in common with the rest of the thrush family, begins to build its nest and breed at a very early season of the year. So early in the year as the middle of February, the bird's pleasant notes may be heard echoing through the bare leafless woods in all parts of the country; of which a well-known writer on natural history remarks: "The power and quality of tone of the blackbird is first-rate, and for these he is justly more celebrated than for execution or variety of notes. His clear, mellow, fluty pipe is heard first in the

early spring, and his song is continued far into the year, till the time of moulting."

A most remarkable trait in the blackbird is his exceeding fondness of damp weather; and its silence during very hot and dry seasons has been noted by Jenyns, who says:—"During the fine and very dry weather which prevailed over a great part of June, 1844, the blackbirds hardly sang at all; but when the rain came in the last week of that month, they resumed, and continued to be heard until after the middle of the month following. July was hotter even than June, but then there was much more wet: this it was that seemed to make the difference. I also once noticed, quite late in the summer, and when no blackbirds had been heard for some time previous, that one evening, after the occurrence of a violent thunderstorm, several were heard singing, but for that evening only. The atmosphere at the time was calm, and the air mild, but extremely damp."

The blackbird usually builds its nest in some thick bush,—the holly-tree is much affected by this bird for that purpose. It builds a tolerably large nest, cup-shaped, and composed of grass, roots, and stems externally, coated inside with a layer of mud, and the whole lined with fine grass. It lays five eggs, which are of a light blue colour, sprinkled with brown of various shades. There is sometimes, however, so little difference between the eggs of the blackbird and those of the thrush, that the most accomplished ornithologist would be puzzled to decide on their respective origin.

This bird is very courageous in defence of its home and family, and, totally regardless of the size and strength of the depredator, will always attack any animal that ventures too close to the sacred spot. A wonderful proof of its temerity is related by Jesse, a naturalist whose authority cannot be questioned:—"A cat was observed on the top of a paled fence, endeavouring to get at a blackbird's nest, which was near it; the hen left her nest on her approach, and flew to meet her in a state of great alarm, and placed herself almost within her reach, uttering the most piteous screams of wildness and despair. The cock-bird, on perceiving the danger, showed the greatest distress, and uttered loud screams and outcries, sometimes settling on the fence, just before the cat, who was unable to make a spring in consequence of the narrowness of its footing. After a little time, the cock-bird flew at the cat, settled on her back, and pecked her head with so much violence

that she fell to the ground, followed by the blackbird, who succeeded in driving her away. A second time the scene occurred; the blackbird was again victorious, and the cat became so intimidated at the attack made upon her that she gave over her attempts to get at the young ones. After each battle, the blackbird celebrated his victory with a song, and for several days afterwards he would hunt the cat about the garden whenever she left the house. I also knew," continues the same authority, "an instance of a pair of blackbirds following a boy into a house, and pecking at his head, while he was carrying off one of their young." No more conclusive evidence could be adduced to prove the courage of the blackbird, and its indomitable love for its young: nor does it rest on the evidence of a single witness; the above-quoted anecdote is corroborated by an equally respectable authority—the Rev. Mr. Wood. Mr. Thompson, also, in his "Natural History of Ireland," relates a singular anecdote of the blackbird's attachment to its offspring. It affords one of a myriad of illustrations proving how fine must be the thread that divides instinct from reason. The bird in question was remarkable for the precision and dexterity with which it imitated the crowing of a bantam cock. "A man, wishing to have some of his breed, robbed the nest, which contained four young; two he left, and the other two he put into a large cage, and removed them to his house. The old cock came constantly with food for the young in the cage, going into it and feeding them. The man, watching for such an opportunity, made a run at the cage and secured him; but, when carrying it into the house, the bird made his escape through a hole in the wires. It was supposed he would not come back; he, however, returned to feed the young as usual, but, instead of going into the cage, he went to the outside, and put the worm through the wires. It may have been instinct that prompted him to find food for his young, though removed to a distance, and in an unusual place; but, when he found there was danger in feeding them in the old way, it certainly showed calculation to find out a way of doing it equally well without running risk. It was also very curious to see him going to feed the young when any person was watching; the cage was in a potato garden, and he would fly to the low end of the garden and creep up the furrows, so that it was impossible to see him, until he had finished his duty, when he flew off with great noise. The hen never appeared, and it was supposed she had been killed."

Like the song-thrush, although of incalculable worth for its destruction of caterpillars and insects that infest the fruit garden and orchard, it makes the agriculturist pay for its services by its depredations when the fruits have ripened into maturity. An eminent writer says: "To the earlier fruit in a friend's garden near Belfast, these birds were so injurious in the summer of 1833, when they were particularly abundant, that he had recourse to the common rat-trap for their destruction. It was baited with currants, cherries, and early peas, and, although exposed to view, *forty* of these birds soon fell victims to it, three thrushes at the same time sharing a similar fate. When a cherry and peas were placed on the trap, the former was always preferred. All of these birds but one were caught by the neck, thus proving that they were secured when in the act of pecking at the fruit."

It has many social qualities, even while in a wild state, and, like the redbreast, the blackbird will often, during frosty weather, approach the dwellings of man for a few crumbs of bread; and I remember that, while stopping at a friend's house at Kew during part of a severe winter a few years back, I was frequently amused in the early morning by a blackbird coming right up the garden of the house, almost directly under the window of my apartment, busily searching for any crumbs of bread, or other scraps, that might be thrown out.

The blackbird frequently lives to a good old age; one belonging to a friend, and who is still a jolly, vigorous-looking bird, has been in his possession fourteen years. In an Irish newspaper I some time ago found the following paragraph:—

"A VENERABLE BLACKBIRD.—There is at present in the possession of Mr. John Spence, of Tullaghgarley, near Ballymena, a blackbird that has arrived at the wonderful age of twenty years and nearly eight months. It was taken by him from the nest when young, and ever since has enjoyed the very best of health. It still continues to sing, and that well. He feeds him on potatoes, baked up with a little oatmeal, of which he is uncommonly fond. He is, however, beginning to show symptoms of old age; his head is getting grey, and a number of white feathers are springing up on his neck and breast."

Such of my readers as aspire to the possession of a blackbird might, perhaps, do well to imitate the owner of the Tullaghgarley veteran with respect to its diet.

BLACKBIRD NESTING AND TRAPPING.—He is rather an expensive bird to buy when in full song, because, being a very

THE BLACKBIRD.

cunning and suspicious bird, it is very difficult to take him when he has attained his full growth, and the fancier has consequently the trouble and expense of rearing him from the nest. But what is trouble to the dealer is mere healthful amusement to the bird-keeper; and as, if sought for in the right spots, blackbirds' nests are easily procurable, there is no reason why a person so inclined should not possess a good bird of his own breeding.

Country folks will need no directions as to where the blackbird's nest is to be found; but to their city-bred brethren,—some of whom, poor fellows, never have seen an egg but in company of a spoon and egg-cup, and never a nest at all,—a little instruction will not come amiss. Dulwich is a fine place for blackbirds; so are Highgate and Hornsey, so is Epping Forest, so is Wimbledon. About the end of the first, or the middle of the second week in April is the time to go nesting for this bird. Search near the bottoms of close bushes, and search diligently, because the nest is built before the bush is in leaf, and, by the time the eggs are hatched, the foliage has become so dense, as to make it appear impossible that anything larger than a mouse is concealed beneath. It is rather difficult to distinguish the male from the female nestling; but you cannot do wrong in picking the birds that are smallest, blackest, and have the rims of their eyes of the brightest yellow. Five or six is the number of fledglings. If five, you may almost safely conclude that three are cocks, and two hens; but, if six, probably not more than two will be cock-birds. Be careful to keep the nestlings warm, and feed them every two hours, from sunrise till sunset, with sop made with stale white bread and milk. They are large eaters; but you must not give them at a meal as much as they would like. The quantity must be regulated. For four nestlings a quarter of a pound of bread (weighed before it is soaked) will be enough for a day. It will be best, however, to prepare this food twice a day, as, if the victuals are in the least sour, it will kill them.

In places where they abound, the old birds may be snared in the winter, when the snow is on the ground, with the robin-trap, especially if the board and net are concealed by a sprinkling of snow, and the vicinity of the spring well surrounded with hawthorn berries, better known as "haws." They may likewise be taken by planting hazel twigs thickly together in the snow, attaching service berries or haws with pins to the

twigs, and smearing the twigs well with bird-lime. The blackbird is, however, a strong bird, and, unless the quality of your bird-lime be first-rate, you will have the mortification to see him return again and again for your haws, laughing your snare to scorn. Make your bird-lime yourself, and make it as follows: Get half a pint of mistletoe berries, put them into a pint of cold water, and simmer them by the fire till they begin to break. Turn the mess into a sieve, so that the water may drain well off; then mash up the berries with an iron spoon in a basin; then fill up the basin with cold water, and work up the mashed berries gently with your hand. This will separate any dirt that may remain; let it settle, pour off the water, and the lime is fit for use. Always keep your bird-lime covered with water, otherwise it will harden and become useless.

HOW TO TEACH THE BLACKBIRD.—The blackbird will learn any easy tune that is played to him on a flute or other wind instrument, and whistle it accurately. If, however, you wish to give him this sort of education, you must prepare yourself for some little trouble. You must begin with the bird when he is two months old, and give him a lesson, all alone in a room, in the dusk of the evening and at daybreak in the morning. Some birds learn better while their bellies are empty, but the blackbird will not stand this treatment. Give him a moderate breakfast or supper, and then before you begin the lesson hang in his sight a lively worm. This is to be a reward for good behaviour. Then slowly and distinctly play a few bars of the air you wish the bird to learn. He will pay great attention while you are playing, with his head on one side and both ears evidently well open. After you have repeated the lesson, say twenty times, leave off, and keep quiet, giving the bird an opportunity to try the air if he has a mind. If he should attempt it, instantly give him the worm, caressing him and making a great fuss the while. Do not fear but that in a few days he will understand all about the worm, will look out for it, and do his best to earn it.

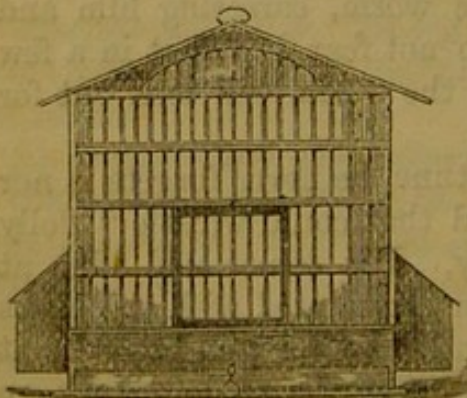
When a blackbird once learns a tune, he never forgets it nor any part of it. I once knew a bird that could whistle "Polly Hopkins" with wonderful accuracy. His owner sold him, at the same time making the purchaser acquainted with the bird's favourite tune. As soon as the gentleman got him home he at once hung up the blackbird, and, going to the piano, struck up "Polly Hopkins." The bird's new master, however, introduced

parts into the tune that he had never heard before; so, after listening awhile, he began hissing, fluttering his wings, and otherwise signifying his distaste of the entire performance. Much surprised, the gentleman left off playing, and then the blackbird opened his throat, and favoured his new master with *his* version of "Polly Hopkins," nor would he ever listen with any patience to any other version.

This same blackbird, after staying in the service of the above-mentioned gentleman for two years, was adopted by a serious family, where "Polly Hopkins" and all such profanity were sedulously avoided. Whenever poor "Joe" (the blackbird's name) attempted to strike up the old tune, a cloth was thrown over his cage, and he was silenced. The family consisted of an old lady and her two daughters, and every night, at seven o'clock, prayers were read and the "Evening Hymn" sung, and Joe, who was an obedient bird, and anxious to conform to the habits of the house, speedily learnt the tune, and regularly whistled it while the old lady and her daughters sang it. This went on for six or seven years, when the mother died, and the daughters separated, and Joe, now an aged blackbird, fell into new hands; but to his dying day he never gave up the "Evening Hymn." Punctually as the clock struck seven he tuned up, and went straight through with it with the gravity of a parish clerk.

The polylogistic powers of the blackbird are such that it can imitate almost every inhabitant of a farmyard,—the gobble of the turkey, the crowing of the dunghill cock, and the "cluck" of the hen to her chicks. Some naturalists even go so far as to assert that it may be taught to utter words; but it would require the evidence of my own ears to induce me to give credence to the assertion.

THE BLACKBIRD'S CAGE.—The best sort of cage for the



THE BLACKBIRD'S CAGE.

blackbird is the round wicker one with the dome top. He does not require a perch. The cage should at all times be kept scrupulously clean, especially in the winter months, when he is to be kept in the house. Recollect he is a large bird, and if at all neglected his cage will smell offensively. No bird is more fond of bathing than the blackbird; therefore, let him

have his bath regularly every afternoon through the summer, taking care that the cage hangs in the heat of the sun the while. A quart of water will not be too much for a blackbird's bath.

HOW TO FEED THE BLACKBIRD.—The natural food of the blackbird in its wild state is worms, insects, and caterpillars of all kinds, and fruits, particularly currants, cherries, and gooseberries; indeed, there is no denying that the blackbird is a terrible fellow in the orchard. When caged, the staple of its food should be raw or cooked lean beef, shredded very fine, and mixed with bread. Whenever opportunity serves, to this may be added any sort of grub or insect. He is very fond of the large smooth green caterpillar. A paste, composed as follows, is good food for the blackbird: half a pint of oatmeal, two ounces of sweet almonds, a tablespoonful of rape-oil, a teaspoonful of brown sugar, and a teaspoonful of carraway seeds. These ingredients should be beaten up together before the fire, and then rubbed through a sieve. When the bird is out of condition, a tablespoonful of the above may be taken, and with it may be mixed the white of an egg, cut up very fine, and a pinch of hemp-seed. You need not be afraid to give the blackbird a morsel of any sort of vegetables that come to the table; but it will be as well to avoid salt.

DISEASES OF THE BLACKBIRD, AND HOW TO CURE THEM.—One of the diseases to which the blackbird is most subject is that known as the pip. It is a small bladder, which forms near the bird's vent, and, if not seen to, will speedily kill him. You may know when a blackbird has this disease by the feathers beneath the tail becoming brown instead of yellow. Besides this, the bird will carry his tail much drooping, and be continually pecking at the affected part. The little hard bladder may sometimes be softened by the frequent application of a salve composed of one part fresh butter and four parts sugar. If this does not speedily have the desired effect, you must carefully prick the bladder with a fine needle, and drip some salad oil on the wound.

If you observe that he becomes mopish and melancholy, sitting with his head on his shoulder and his feathers ruffled, put a few grains of cochineal in his drinking water. If he should be scoured, put a pinch of magnesia in his water every morning till the scouring ceases. Some dainty added to his customary food will not fail to raise his spirits—a few hog-lice for instance. You must, however, be careful not to pamper

THE BLACKCAP.

him too much in his diet when he is unwell, or he will grow to dislike and sulk over his ordinary and proper food.



THE BLACKCAP.

It is no uncommon thing for the song of the blackcap to be spoken of as rivalling that of the nightingale. There are writers who even go the length of asserting, that between the melody of the two songsters it is next to impossible to distinguish. In my opinion, however, this is giving the blackcap greater praise than is his due; for although his song is melodious, varied, and particularly distinct, it does not possess, or nearly, the softness, the luscious ripeness,—full, fragrant, and teeming with sweetness like a well-hung nectarine,—that characterises the nightingale's song. Nevertheless, the blackcap is a splendid songster, and a bird to be desired. He is about the size of the chaffinch, and derives his name from the black cowl-like patch that extends from the base of his beak over to the nape of his neck. The prevailing colours of the bird's plumage are olive-green and grey. About the throat the grey merges into dingy white. The tail is dark brown, margined with olive-green.

The female differs from the male, inasmuch as she is larger, and, instead of the black hood, has a cap of rusty red. Besides this distinction, the belly of the hen blackcap is white, while that of the male bird does not become so till after his second moult. You will find many fanciers who will assert that the red-hooded bird is not a blackcap at all, but quite a distinct species. This, however, is not the only blunder indulged in by the birdsellers. It must be admitted, however, that an ignorant person might be deluded into the belief that the redhood was a cock-bird, by the sweet twittering she makes,—similar, indeed, to that made by the hen-canary.

While on the subject of black poles and red poles, I may mention, that previous to the first moult the pates of both sexes are of the same colour,—a sort of brownish-grey,—so that there seems nothing left but to take the birdseller's word as to the sex of the bird you are about to purchase. However, the blackcap buyer need not be so utterly at the birdseller's mercy; there is one way to tell the cock from the hen fledgling, and

this is it: the belly-feathers of the hen are many shades lighter than those of the male bird. Bechstein and others recommend that a few feathers be pulled from the head of the young bird. If it is a cock, the new feathers will be black; if a hen, rusty red. In buying a bird of a dealer, however, this test seems almost impracticable, for it will seldom assort with a purchaser's convenience to take a seat till the new feathers sprout, nor with a birdseller's temper to see his bird's feathers plucked before his eyes. Besides, the trouble (to say nothing of the cruelty) is quite unnecessary, as the difference in the colour of the belly-feathers of the young birds will speedily settle the question of sex. Those of the hen bird are many shades lighter than those of the cock.

HABITAT OF THE BLACKCAP.—“Amongst all the variety of birds,” says Jesse, “there are few which give me so much pleasure as the blackcap. It sings in good earnest, and nothing can be sweeter than its melody. Its notes previously to the arrival of the female (for the male is the first to migrate) are very different from what they are after she has paired with him. Before that period, the male exerts all the power of his song as if to invite her to join him. This has been called the ‘love-laboured song.’ After the pairing has taken place, the male bird does not sing as before, nor is his voice heard so frequently or so loud. While the female is searching for a place in which to build her nest, the notes of the male are peculiarly soft. When the young are hatched, his song entirely ceases, as, if it were continued, it might expose them to the danger of being discovered; and, besides, his time is employed in procuring food for them.” Gilbert White, of Selborne celebrity, also speaks of the blackcap in highly flattering terms, and he says that in Norfolk it is known as the mock-nightingale.

The blackcap is not a thorough-bred English bird. He leaves us in September, and during the winter months takes up his residence at Madeira and other snowless climes. He returns to us at the end of March, and immediately begins the process of nest-building and egg-laying. The nest is composed of stubble, grass, and leaves, and lined with hay and the hair of animals. It is a neat specimen of bird architecture, being in shape like a ball cut in two, and as smooth and compact as though turned in a lathe. The hen lays from four to six eggs, of a mottled yellow appearance, spotted sparingly with brown.

The season to go nesting for the blackcap is during the first

THE BLACKCAP.

two weeks in May. The nest must be sought for in the same places as you would seek the blackbird's nest—among stunted bushes and dense underwood. The nest would be almost as difficult to discover as that of the blackbird, but for one circumstance. The blackcap is a good-natured husband to his little redhood, and is always willing to take a spell at the nest while she is away. Whether his object is to keep the children quiet is not known, but it is true that he invariably treats them to a song, which, although it may tend to soothe the nestlings, has the unhappy effect (for the blackcap) of directing the nester.

Young blackcaps are as delicate as young nightingales, and must be treated with the same tenderness. Feed them on the crumb of white bread, moistened with boiled milk, and sprinkle on the sop thus made a few ants' eggs.

THE BLACKCAP'S CAGE.—It should be a foot and a half long, a foot high, and nine inches deep. It should be furnished with two perches, which should be covered tightly with fine green baize, as the feet of the blackcap are very tender. The perches should be made moveable, or else when the bird takes his bath, he will speedily saturate the baize with his wet feet. He is a bird that prefers shade to sunlight, therefore have his cage solid at the top, or, better still, have a case of the lightest green gauze, ready to throw loosely over his cage during the brightest and hottest parts of the day. More than others the blackcap has a habit of pecking at the bars of his cage, therefore they should be simply of white tin wire, or if you prefer to see them coloured send the cage to a japanner, who will decorate it with a glazed colour, and bake it on, so that it will be harmless. Let the food and drinking vessels be hung outside the cage, or if inside, have both vessels provided with a lid, in which there is a round hole, as the blackcap has a habit of scattering and wasting his food. He is particularly fond of bathing.

FOOD OF THE BLACKCAP.—Like the nightingale, the food of the blackcap should be much varied. A paste composed as follows will do very well for its staple food:—Soak a crust of white bread in cold water for half an hour, squeeze it dry, put it in a pan, add half the weight of the crust, of fine barley meal, scrape up the weight of the meal of carrot, and pound the whole together till it is like a paste. They should be given ants and mealworms. Almost all insect-eating birds will relish a mealworm occasionally, so I will give you Bechstein's receipt for breeding those interesting creatures.

"Nearly fill a gallon jar with wheat-bran, barley, or oatmeal, sugar paper, and bits of old leather. Put into the jar a pint of mealworms, tie a woollen cloth over the mouth of the jar, and let it stand for three months. The cloth must be occasionally wetted with beer. The mealworms propagate very rapidly, and at the end of the time specified, your pint of mealworms will have increased to half a gallon."

A little crushed hemp-seed will do the blackcap no harm, and, during the summer, he should never be without a morsel of sweet ripe fruit between the bars of his cage. Nothing comes amiss to it, currants, raspberries, cherries (without the stones), or ripe apples. Of course, in giving him fruit, you must observe moderation. In the summer take the precaution to spread out some ripe elderberries in the sun to dry. If in the winter you soak a few of these in water for a few minutes and give them him, he will devour them with wonderful relish. He is very docile, and may be easily taught to eat from the hand. Speaking of this, a celebrated naturalist says:—"A young male which I had put into the hot-house for the winter, was accustomed to receive from my hand a mealworm; this took place so regularly, that immediately on my arrival he placed himself near the little jar where the worms were kept. If I pretended not to notice this signal, he would take flight, and passing close under my nose, resume his post; and this he repeated, sometimes even striking me with his wing, till I satisfied his wishes and his impatience."

DISEASES OF THE BLACKCAP, AND HOW TO CURE THEM.—Consumption is the chief malady by which the blackcap is attacked. To cure this, extra attention must be paid to the bird's comfort. He must be kept very warm, or rather he must be preserved from sudden alternations of heat and cold. If he require a purgative give him a spider. Let his diet consist chiefly of mealworms, ants' eggs, and hemp-seed, and put a rusty iron nail in his drinking water. Bechstein appears to think that there is no better cure for consumptive birds than a plentiful supply of watercresses. I never had an opportunity of observing the effects of the plant so administered, but I know no reason why it should not be beneficial.

The blackcap is liable to almost every ailment that affects the nightingale, and I can give you no better advice than to follow the directions already furnished as regards the latter bird.

THE REDSTART.—The dazzling plumage of this bird alone would recommend it to special notice. However, besides a

THE REDSTART.

handsome appearance, he possesses a good temper, an active disposition, and a pleasing song; so that it must be allowed he is deservedly a favourite.

He is about the same size as the linnet. The sides of the head are black; the throat black, speckled with white; the back and belly a mixture of lurid red and grey, like the clouds at sunrise; the wings dark brown, and the tail red. The hen is smaller than the male, and generally of a dull ashy grey, instead of red and grey; her breast is rust brown, speckled with white.

Sometimes the redstart will build her nest beneath the eaves of houses, but more frequently in holes near the summit of trees. The nest is principally composed of grass, feathers, and hair, and is very loosely put together. The eggs are from five to seven in number, and of a pale sea green. If you want to secure redstart nestlings you must be at the nest within a fortnight of the hatching, for as soon as the tail feathers make their appearance the little things leave the nest and perch on a neighbouring branch, where they are attended to by the parent birds till they are able to shift for themselves. The nestlings should at first be fed on chopped mealworms and ants' eggs, mixed with bread and milk.

They may be captured with the same trap you would set for the nightingale. There is no better bait for the redstart than mealworms. In a wild state, they feed upon grubs, caterpillars, earthworms, &c. Soft berries of all kinds are much sought after by them. When the old birds are taken, they should be fed for the first day or two on elderberries, with a few mealworms, and gradually introduced to the following mixture, which may be considered to be their principal food ever afterwards. Take six ounces of carrot, grate it fine; add to it a quarter of a pound of French roll that has been soaked for half an hour in cold water, and squeezed as dry as possible; then add six ounces of wheat-meal. Bray this well together in a mortar, or, what is the same thing, mash it very fine in a basin, with an iron spoon. Mealworms may be mixed with this paste.

THE REDSTART'S CAGE.—A "pagoda" cage is best for the redstart, as in it his plumage may be seen to greater advantage than in any other.

DISEASES OF THE REDSTART.—Dysentery is a disease common to the redstart. It may be known by the chalky tenacious excrement adhering to the feathers beneath its tail. This excrement is of so acrid a nature as to inflame the surrounding

THE MOCKING-BIRD.

parts, and give them an appearance of having been scalded. The best remedy is to place a large and *very* rusty nail in the bird's drinking-vessel, and to clear away the feathers from the inflamed region and anoint the same with unsalted butter.

The redstart is subject to fits. When this is the case, take him out of his cage, and, holding him by the feet, dip him entirely in a pan of cold water. Open his beak gently, and put a few drips of cold water into his mouth. If he recovers, put a pinch of nitre into his water-pot, and renew the dose twice a week for a month. Besides the maladies here mentioned, the redstart is subject to many others, and under the most favourable circumstances it is rare that a bird survives longer than four or five years.

THE MOCKING-BIRD.

This transatlantic member of the Merulidæ is, without doubt, one of the most wonderful of feathered wonders. Its imitations are not mere burlesques, and it will render the melodious notes of the nightingale not less clearly than the bray of the jackass. The Mexican name for this little creature is "the bird of four hundred tongues." "In extent and variety of vocal powers," says Wilson, "the mocking-bird stands unrivalled by the whole feathered songsters of this or perhaps any other country. Its plumage, though none of the homeliest, has nothing gaudy or brilliant in it, and, had he nothing else to recommend him, would scarcely entitle him to notice. But his figure is well proportioned, and even handsome. The ease, elegance, and rapidity of his movements, the animation of his eye, and the intelligence he displays in listening to and laying up lessons from almost every species of the feathered creation within his hearing are really surprising, and mark the peculiarity of his genius. To these qualities we may add that of a voice full, strong, and musical, and capable of almost every modulation, from the clear and mellow tone of the wood-thrush to the savage scream of the bald eagle. In measure and accent he faithfully follows his originals; in force and sweetness of expression he greatly improves upon them. In his native groves, mounted on the top of a tall bush or half-grown tree

THE MOCKING-BIRD.

in the dawn of the dewy morning, while the woods are already vocal with a multitude of warblers, his admirable song rises pre-eminent over every competitor."



THE MOCKING-BIRD.

Nothing comes amiss to the mocking-bird, the bark of a dog, the tremulous quavering of the canary, the creak of a wheel-barrow, or the soft cooing of the wood-pigeon. Southey well describes the marvellous bird:—

That cheerful one who knoweth all
The songs of all the winged choristers,
And in one sequence of melodious sounds
Pours all its music.

In a domesticated condition, however, the mocking-bird's chief characteristic renders it impossible that he should be

regarded as a sober chamber musician. For awhile he will be content with his own natural melody, which consists of from two to six short full notes, but the least noise is sufficient to disturb the flow of his natural melody, and one suggestion giving rise to another, you presently hear a Babel of bird music almost impossible to bear. "His imitations of the brown thrush," says a well-known naturalist, "are frequently interrupted by the crowing of cocks; the exquisite warblings of the blue-bird are by no means improved by the screaming of swallows or the cackling of hens; the shrill reiterations of the whip-poor-will are introduced into the simple melody of the robin. The uninitiated look round for the original, and then find that what appeared to be the product of a number of performers is really that of the single bird before us."

So jealous is the mocking-bird of its nest, that should it be too closely approached, it will destroy the entire structure, and at once forsake the neighbourhood. It is even asserted that if the eggs should be hatched, the hen will, under such circumstances, kill her naked little brood and then decamp. However this may be, it must not be regarded as arising from want of affection, as no bird is more courageous than the mocking-bird in defence of its young. Should a boy attempt the nest, it will attack his face and hands with the ferocity of the hawk; and even its enemy, the black snake, is not always victorious in its burglarious onslaught in a mocking-bird colony; fearless of the reptile's nimble fang, the birds will press about it, and, with the swiftness of an arrow, dart at it with their spear-like beaks.

The eggs of the mocking-bird are four and sometimes five in number, and of a deep blue blurred with irregular brown patches. Two broods are usually produced each year, though should the bird be robbed or disturbed during incubation, she will build and lay a third time. It should be stated, however, that Bechstein is of opinion that the parent birds rear only one brood in a season, which would tend to account for the scarcity of this curious bird. In its first plumage the young mocking-bird is of a dull yellowish-grey on the upper portions of the body, while the under portions are yellowish-white, the centre of each feather being streaked with brown. After the first moult, however, the bird's plumage assumes a blending of brown and brilliant yellow, which it wears ever after.

Audubon gives a most interesting account of the loves of these elegant birds, which, though we have not space to quote, we shall embody in our narrative. They often select the vicinity

THE MOCKING-BIRD.

of the planter's house, where, surrounded by the richest scenery, and embowered amidst thousands of beautiful flowers, they build their nest. The female selects the spot, the male the while attending and aiding her in her choice. The golden orange, the beautiful magnolias and bignonias, the fig and the pear trees are inspected, and these quite close to the house; for the birds know that, while man is not a dangerous enemy, his dwelling is usually protected from strong winds, and therefore they fix their abode in its vicinity, perhaps in the nearest tree to his window; and so little suspicious are they of interference, that they often build them so low that you can see into them as you stand.

"The hogs," Mr. Gosse tells us, "are the creatures that give him the most annoyance. They are ordinarily fed upon the inferior oranges, the fruit being shaken down to them in the evening: hence they acquire the habit of resorting to the orange-trees to wait for a lucky windfall. The mocking-bird, feeling nettled at the intrusion, flies down, and begins to peck the hog with all his might. Piggy, not understanding the matter, but pleased with the titillation, gently lies down and turns up his broad side to enjoy it; the poor bird gets into an agony of distress, pecks and pecks again, but only increases the enjoyment of his luxurious intruder, and is at last compelled to give up the effort in despair."





THE FINCHES.

CHAFFINCH AND OTHER BIRD-TRAPS.

THE trap represented in the accompanying illustration is that most commonly used by the professed "catcher." The net is a cumbrous machine fixed in a wooden frame, and hinged in the middle. Round about the net (a "snap" net it is called) are placed any sort of singing-birds in cages, or, better still, braced and attached to sticks thrust in the ground. The centre of the net is pegged securely to the ground, and the catcher attaching to the sides the strings that work the snap, retires with them out of sight, and, lying down, holds the said strings in hand as warily as does a coachman the reins of his restive horse. The tiny decoys in the cages and attached to the sticks, forgetful of their captivity in the presence of the green grass and the rustling trees, or, more probable still, joyfully hailing them as dear friends met unexpectedly, utter such glad music that all

the little wild birds in the neighbourhood come to see what good thing can have happened. In quite a mob, chaffinches, and linnets, and goldfinches flutter about the decoys, when click go the strings of the "snap;" swift as an arrow the ugly net rears its broad sides, and, meeting at the top, a great bag is formed, and in it are imprisoned as many of the inquisitive creatures as failed to take alarm at the first creak of the machine. Enough, however, of the snap-trap. To teach the wholesale snaring of birds with a view to trafficking in their bodies for a profit is certainly not the object of the author of "Home Pets."

To descend at once from the wholesale to the decidedly retail—from dabbling in gold-mine shares to the obtaining of two farthings for a halfpenny,—we will next describe the boy's first bird-snare, the trap of bricks.

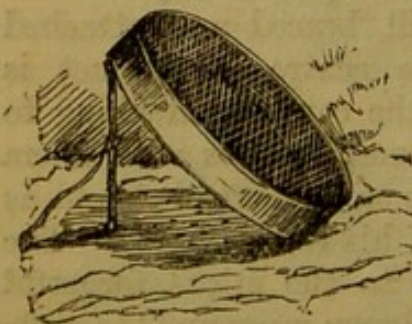
Simple as is this trap, unless it be accurately adjusted, it will certainly fail; therefore, and especially as it can be done in a few lines, a hint as to its structure may be of service. Place



two bricks lengthways upon their narrow sides, a third across their extremities, and the fourth at the opposite end, so as to make a kind of lid. Then drive into the centre of the enclosure a stout piece of stick, and between this and another similar bit supporting the cover, place horizontally a well-forked twig. Strew some seeds or crumbs within the trap, and at the base of the

supporting twig; then you have done all that you can, and must trust to your good luck for the rest.

If in lieu of four bricks the young bird-trapper can obtain a sieve, he will, by following the subjoined instructions, find his



chances of a "catch" considerably augmented. Having selected a favourable spot, prop up your sieve, as shown by the accompanying woodcut, at an angle of something like forty-five degrees. Throw some crumbs of bread or seeds under the trap, then take the unattached end of the string, and conceal yourself at some distance.

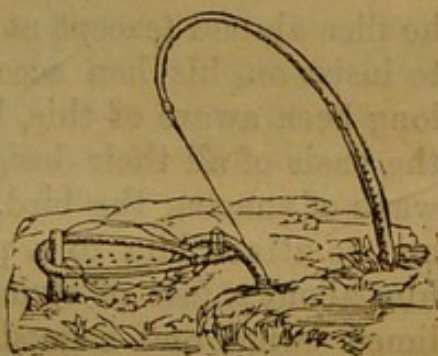
When the birds come to peck up the bait, and you see they are exactly under the sieve, pull your string, and the sieve will fall

over them. When you remove it, in order to get at the spoil, great care should be taken, or away to their homes in the trees will fly your little friends. A small net is the best thing to use, so that when you lift the sieve at one end, the birds may fly into it.

The little machine known as the "springle" has been the means of arresting the liberty of many a good songster. It is a much more dignified contrivance than either the bricks or the sieve, and requires some little amount of tact and ingenuity in its construction. The following directions, culled from the "Boy's Own Book," will, however, if faithfully attended to, make the job an easy one.

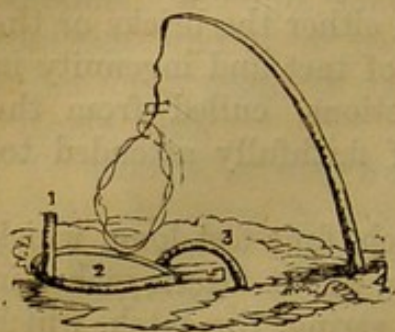
"At the smaller end of a hazel switch, four feet long, which is called the spring, tie a piece of string, about fifteen inches in length; nearly at the other end of this string, the catch, which is a little bit of wood, half an inch long, about half as broad, and one quarter as thick, is fastened; a little bit of the wood must be shaved off on the flat side of one end of it, to adapt it for a notch in another part of the springle; a loose slip-knot, made of a couple of long, stout horsehairs, is then to be fastened to the end of the string below the catch, and thus one part of your springle is complete.

"Next procure a smaller switch, about a foot and a half in length, bend back the smaller end, and fasten it within an inch or so of the thicker end, in which a notch must be cut to receive the thin end of the catch, this is the spread; a stump and a bender, which is another pliant bit of switch, each a foot and a half in length, will complete the springle. It is set in the following manner:—Thrust the stump No. 1 into the ground; place the bow of what is called the spreader over it, as No. 2; then about the length of the spreader from the stump push the two ends of the bender securely into the ground, as No. 3; next, plant the thick end of the long switch or spring at a convenient distance from the bender; bend it down until you can put one end of the catch upward, on the inside of the bender; then lift the spreader an inch from the ground, place the smaller end of the catch in the notch, and thus the spreader will be supported, and the springer retained from springing up. Now lay the hair slip-knot round the spreader and stump, and scatter such grain



THE CHAFFINCH.

or seeds as are fit for the bird you wish to catch, inside it. Scatter also a small quantity of the same sort of grain or seed with which your trap is baited, lightly and sparingly, for some distance around the springle, so as to attract and lead the bird by degrees to the principal bait within the spreader of the trap. Your springle is now complete, and will appear as above. The



bird, attracted by the bait, approaches by degrees, and at length perches upon the spreader, which falls with its weight; the catch is thus released, the springer flies up, and the bird is caught in the hair noose by the neck, wing, body, or legs. You must take care to remain within sight of it, and as soon as a bird is noosed, run

quickly and take him; otherwise he will either be strangled, or beat himself to pieces in attempting to escape."

The chaffinch is a terribly jealous fellow. It is seldom that he will tolerate another male bird of his own species in the same tree with himself and spouse, and whenever he flies abroad (except at such times as she is sitting), he seems to insist on his hen accompanying him. Bird-catchers have long been aware of this, his great weakness, and have made it the basis of all their designs for his capture. There are many ways of snaring the bird. One is to brace a male chaffinch, and to attach him to a peg driven into the ground, allowing him about a foot of string. He is surrounded by a circle of limed twigs, and a good singing chaffinch is concealed in its cage and placed under an adjoining hedge. The bird in the cage sings his natural song, and the jealous wild finch, espying the braced bird, and thinking he is the sweet-voiced intruder, darts down on him, and is caught in the limed twigs. This plan, however, is not always successful, as the wild bird will sometimes swoop down with such unerring aim as to strike the poor braced bird, and up again, without touching the twigs. On such occasions I have known the braced bird to be seriously maimed, and on one occasion killed outright. Another way is to clip the wings of a male finch, and with a well-limed twig tied to his tail, to set him hopping about where chaffinches abound. The decoy bird utters his "pink, pink," and down pounces the jealous little creature from the tree. This mode, however, is not without a very serious objection. It should be recollected that the syllable "pink" repeated once or

GERMAN CHAFFINCHES.

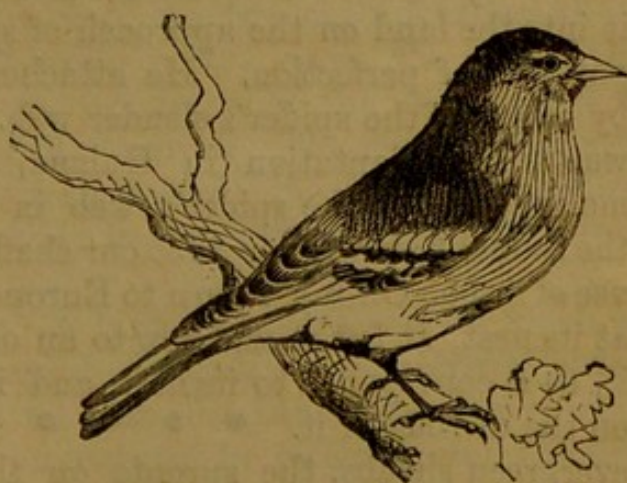
even twice is the love-call of the cock-bird to the hen; but when an extra "pink" is added it then becomes a note of alarm, and as the poor clipped decoy with the twig at his tail is much more likely to utter three "pinks" than two, instead of alluring the wild birds it warns them off. Besides, by this plan, as by the first quoted, your decoy is liable to injury, and that alone is sufficient reason for not adopting either one or the other.

THE CHAFFINCH.

No bird of the Finch tribe is better known than he whose prefix is "chaff." Many birds, more splendid in appearance, more efficient as songsters, are less favoured by mankind, and the secret is this; there are two little words which comprehend the whole art of getting on in the world, applying as well to human beings as to birds,—cheerfulness and industry. To parents and guardians plagued with a morose and sulky boy, my advice is, buy him a chaffinch. If the company of the blithe, bustling little songster does not cure him, you may as well at once apprentice him to an undertaker, with the special understanding that he be thoroughly taught the duties of a "mute."

The chaffinch is one of the most popular birds in Europe. In the mouths of our neighbours the French, he is a "household word."

A handsomely dressed person, or one remarkable for his vivacity is said to be "as gay as a chaffinch." As to the Germans, their enthusiasm concerning this finch is almost alarming. There it is taught to sing as great a variety of songs as there are



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days in a month, songs,—the bare names of which no tongue less flexible than a German's can pronounce. There is the "Shwartzgabeer," the "Keeneuyl," the "Ritcherzoog," and

THE CHAFFINCH.

a host of others. Bechstein informs us that in Thuringia, especially in a knife-making village called "Ruhl," the inhabitants are such great chaffinch fanciers, that they will go sixteen miles to catch a bird, and that no sooner is the voice of a wild chaffinch heard, than the bird-catchers of the neighbourhood turn out as one man, and return not till they have effected his capture. "This chaffinch is worth a cow," is a frequent proverb at Ruhl, and originated in the fact of a poor inhabitant of that place having bartered his only cow for a genuine "Ritcherzoog."

Says Waterton, "Amongst all the pretty warblers that flit from bush to bush before me as I wander through the flowery fields, next to the robin, the chaffinch is my favourite bird. I see him almost at every step. He is in the fruit and forest trees, and in the lowly hawthorn; he is on the housetop, and on the ground close to your feet. You may observe him on the stack-bar, and on the dunghill, on the king's highway, in the fallow field, in the meadow, in the pasture, and by the margin of the stream. If his little pilferings on the beds of early radishes alarm you for the return of the kitchen garden, think, I pray you, how many thousands of seeds he consumes, which otherwise would be carried by the wind into your choicest quarter of cultivation, and would spring up there, most sadly to your cost. Think again of his continual services at your barn door, where he lives throughout the winter, chiefly on the unprofitable seeds, which would cause you endless trouble were they allowed to lie in the straw, and be carried out with it into the land on the approach of spring. * * * His nest is a paragon of perfection. He attaches lichen to the outside of it by means of the spider's slender web. In the year 1805, when I was on a plantation in Guiana, I saw the humming-bird making use of the spider's web in its nidification; and then the thought struck me that our chaffinch might probably make use of it too. On my return to Europe I watched a chaffinch busy at its nest. It left it and flew to an old wall, took a cobweb from it, then conveyed it to its nest, and interwove it with the lichen on the outside of it. * * * The thorn, and most of the evergreen shrubs, the sprouts on the boles of forest trees, the woodbine, the whin, the wild rose, and occasionally the bramble, are this bird's favourite places for nidification. Like all its congeners, it never covers its eggs on retiring from the nest, for its young are hatched blind.

"There is something particularly pleasing to me in the song

of this bird. Perhaps association of ideas may add a trifle to the value of its melody, for when I hear the first note of the chaffinch, I know that winter is on the eve of his departure, and that sunshine and fine weather are not far off. * * * The chaffinch never sings on the wing, but it warbles incessantly on the trees, and on the hedgerows, from the early part of February to the second week in July; and then (if the bird be in a state of freedom) its song entirely ceases. You may hear the thrush, the lark, the robin, and the wren, sing from time to time in the dreary months of winter; but you will never, by any chance, hear one single note of melody from the chaffinch. Its power of song has sunk into a deep and long-lasting trance, not to be aroused by any casualty whatever. * * * We are told that in the winter season, the female chaffinches separate from the males, and migrate into distant countries. I have not been able to ascertain that so ungallant a divorce takes place in this part of the country (Yorkshire). The chaffinches assemble here with their congeners, during the period of frost and snow, and you may count amongst them as many females as males."

It may be mentioned that the chaffinch's scientific appellation is *cœlebs*, meaning bachelor.

TO JUDGE THE HEN FROM THE COCK-BIRD.—The plumage of the chaffinch is invariable in colour. The fore-part of the head is black; the back part, and extending over to the nape of the neck, blue. The blue shades off into olive-tinted chestnut, and again to a grey-green to the stump of the tail. The tail itself is black and grey, and on each of the two outer feathers there is a peculiar wedge-shaped white spot. From the root of the lower half of the beak to the extremity of the under part of the body the colour is reddish chestnut. The male is easily to be distinguished from the female bird; the latter is smaller, and the under part of its body is very different in appearance from that of the male.

NESTLING CHAFFINCHES.—A bird-dealer will ask as much as six or seven shillings for a good chaffinch; but the boy of enterprise will save his money and, at the same time derive considerable instruction and amusement in catching and training one for himself.

In the first place, he can go nesting for chaffinches, which, by-the-bye, is a sport that requires much tact and patience to be practised successfully, as the cunning little fellow so matches the colour of the outside of his house with the bough on which it

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is built as to be safe from discovery from any save the most keen and diligent eyes. The woods and thickets of Essex are considered the best chaffinch districts, but you may depend on finding them in every secluded wood throughout the country. The very best time of year to go nesting for chaffinches is from the end of the *last* week in April to the end of the *second* week in *May*: for this reason, the eggs are laid at the beginning of April, and are hatched about the twentieth, so that by the second week in May they are pretty well fledged, and enough of their feathers have made their appearance to enable you to distinguish the cock from the hen. In mercy to the poor mother you should endeavour to learn this, as then you can leave her the hen birds, and take only the cocks.

The male nestling may be distinguished from the female by these peculiarities. His belly is red, while that of the hen is a dingy green; he has more white in the wing, and the yellow circles round the eyes are much brighter in the male than in the female. Feed your nestlings on soaked hemp-seed, and the crumb of white bread.

You cannot start too early in the morning (after daybreak, of course), when you go chaffinch-nesting. The best way is to proceed quietly among the trees till you hear a sharp "pink, pink;" then endeavour to trace the position of the nest by the sound. It is worth discovering, for apart from the treasure of chaffinches you may reasonably expect to find, an inspection of the marvellous nest itself will more than repay you for your trouble. It is shaped like a ball, slightly flattened on the upper part, and is as compact and solid as though cast in a mould. The materials used in its construction are spiders' webs, wool, cow-hair, and fine twigs. Within it is beautifully lined with the softest wool and thistledown. Moreover, it is lashed to the limb of the tree with strands of wool, as securely as though it had been nailed there.

PEGGING FOR CHAFFINCHES.—The most successful, and certainly the most humane method of snaring the chaffinch is by the process known as *pegging*. It is extremely interesting, and so profitable that a morning's good sport will enable you to bring home ten or a dozen cock chaffinches, all of the boldest and best. A friend of mine (mind you, he has had years of experience, and possesses, without exception, the best decoy bird in England), has caught, in Epping Forest, *forty* chaffinches from five o'clock till ten on a May morning.

In the first place you must have a good decoy, or "pegging"

finch. That is to say, you must have a caged chaffinch who will sing under almost *any* circumstances—night or day, candle-light or sun-light, stationary and while his cage is being carried—none of these things should stop his singing. For such a bird a fancier will have no difficulty in getting a guinea. However, if you have the patience you may train him for the “pegging” business yourself.

Choose from among your nestlings the largest-limbed and strongest-voiced cock-bird, and take especial care of him till moulting time. By taking especial care, I mean, don't pamper him: feed him simply on rape-seed, and when about to moult, a few meal-worms will cheer him up wonderfully. Cover his cage completely with a dark cloth, so that not a glimmer of light can reach him, taking care at the same time that he has plenty of fresh air. When he has recovered from his moult, don't remove the cover from his cage, keep him still in the dark; but hang in the same room with him a chaffinch that can sing well, that the bird in training may be encouraged to sing. Every other day you may give him a thimbleful of crushed hemp-seed. In a few weeks he will sing as well in the dark as does his companion, who has the advantage of daylight. You may now, by degrees, take the cover off his cage, and at first you will find that he is as shy of the daylight as an ordinary bird is of the dark. However, he will soon show himself indifferent to light or darkness, and his ideas of propriety will get so confused that he will as soon strike up at candle-light as at daybreak. It is astonishing what odd sounds will set him off singing—the frizzling of meat in the frying-pan, or the rasping a tobacco-pipe along the back of a knife.

To teach him to sing while his cage is in motion, the best way is first to suspend his cage from the ceiling, close to the wall, by a piece of elastic, such as is used for garters. The motion of the bird will keep the cage constantly on the swing. When he has got well used to this, you can tie his cage in a handkerchief, and very early in the morning carry him about the same room in which is hung your singing chaffinch. He may be a considerable time before he gets used to this,—a fortnight or three weeks, perhaps,—but when he has—when he continues singing while swinging in your hand—his education may be considered complete, and you are in possession of that first essential to chaffinch-catching, a clever “pegging-finch.”

You will want some bird-lime, which you can either buy at

the bird-dealer's or make it yourself. I make my own, and I can buy none to equal it. I pick the berries off mistletoe, and boil them in a little water till they begin to break; then I put them in a sieve to drain, and while they are still warm bray them in a mortar. To be good, bird-lime should be capable of being pulled out in a thread three feet long without breaking. Keep the bird-lime in a little tin box, and, until you want it, stand the box, with the lid off, in clean water.

You will want a stuffed chaffinch mounted on a stick, in the end of which is a sharp spike. However, it is by no means worth while to make this yourself, as you can buy sticks already prepared and mounted at the bird-shops at sixpence each. These stuffed birds are called "stales" by the "trade." Choose a "stale" with the best and freshest plumage. All you want besides the "pegging finch," the "stale," the bird-lime, and a store cage, in which to put your captives, is some sprigs of whalebone, eight inches long and thin enough to be moderately pliable: at one end of each of these sprigs tightly bind the pointed half of a pin.

But after the trouble I have been at to instruct you in the art of pegging, the chance is that I have succeeded in nothing else but in offending you, O respectable boy. You fancy, you say, that you see yourself coming home (going out, as nobody is up, *might* be tolerated) with a chaffinch tied in a handkerchief in one hand, a store cage, containing sundry newly-caught and savage birds in the other, and your pockets bulging with the mounted dummy,—whose tail is exposed to public gaze,—the whalebone twigs, and the bird-lime box. You picture yourself, so equipped, coming down the street, and encountering your irascible Uncle Sleektop.

But know, my dear boy, that it is possible to indulge in the pretty sport of pegging for chaffinches without outraging your very proper pride and self-respect,—without risking the displeasure of Uncle Sleektop. Although, thank goodness, I have neither friend nor relation who would take the trouble to feel shocked at anything I might do, still I confess that your ideas of propriety correspond exactly with mine own, and it was the terrible fear that I might be mistaken for a professed "catcher," that led to my invention of the "pegging-bag." True, it is nothing more than an ordinary carpet-bag, the upper portion of the sides cut away, and replaced with fine wire-gauze, but it quite answers the purpose, and with the whole of my apparatus packed therein, were you to meet me, the very worst

you would think, would be that I was hastening to catch the parliamentary train.

I will assume, then, that you have adopted my plan. You pack your traps in the bag (together with a few sandwiches maybe), and, setting out at daybreak, make your way to the hunting-ground. As soon as your trained chaffinch hears the "pink, pink," about him, he will at once reply. Proceed slowly among the trees, till you hear the sharp pink, pink, of a chaffinch overhead; then unpack. Take out your trained finch, put his cage in a dark coloured bag or handkerchief (dark green is best), and place him at the foot of the tree. Then in the trunk of the same tree, about five feet from the ground, and, if possible, beneath an overhanging bough, stick your stuffed chaffinch by the spike in the end of the stick on which it is mounted. Then take a couple of the whalebone twigs, smear them well with bird-lime, and stick them about six inches *above* the stuffed bird. There should be a foot of space between the twigs, and the "stale" should be at an equal distance from each. Now you may retire a short distance and leave the rest of the business to the bird at the foot of the tree.

"Pink, pink!" says the bird in the tree: "pink, pink!" replies your trained finch; and this will be repeated perhaps half a dozen times, and if you look sharp you will have no difficulty in discovering the jealous little creature with his hen at his side, with his crest erected, and hopping from spray to spray in the most uneasy manner.

Presently your trained bird gets tired of sparring, and suddenly breaks away with a rattling "toll-loll-loll-chickweedo!" For an instant the jealous husband is mute with rage, and then his voice actually trembles with passion as he plumes himself up, and boldly replies to the challenge. "Toll-loll-loll-chickweedo" shouts he, and gives his strong beak a whet on the bough on which he is sitting. Again your bird raises his voice, louder than the first time, and again the wild bird replies, and leaving his hen's side, darts here and there to discover the intruder. Once more your bird makes the woods echo, and at the same instant the wild chaffinch spies the stuffed bird. He is the stranger,—he is the bold singer who has come there to captivate the wild chaffinch's lawful hen! With a harsh cry down he sweeps, but his vengeful designs are frustrated, the artful twigs have caught his outstretched pinions and either there he hangs, or there he runs, screaming with fear and baffled rage, his wings still distended by the piece of whalebone.

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There you have him, his beak as blue as a bilberry, and as stout a singer as the woods contain. Be careful how you detach the tenacious twig from the captured bird. Then tie a bit of thread round his wings—or, better still, take with you a few India-rubber bands that are sold at the stationers, and pass one over his body, so that he may not flutter about in the store cage, and perhaps do himself an injury. The advantage of placing your snare beneath an overhanging bough is, that the wild bird will perch on it before he strikes at the dummy, and thus have a fairer chance than if his swoop is in any way impeded. However, where they can strike they will. I once, for experiment sake, stuck the snare in the trunk of a poplar tree that was destitute of foliage for at least thirty feet up. My decoy had not uttered three notes, before down came the wild finch like a stone, with such force as to break his way through the whalebones to the stuffed bird, into whose head he drove his bill deep enough to have killed him on the spot if he had happened to have been alive.

When you get home, put your captives in separate cages, and for the whole of the first day cover them over so as to exclude the light: the bird will thus be induced to go to roost and sleep away his grief. Take care, however, to remove the cloth from the cage before you retire for the night, and to hang his cage (well supplied with seed and water) in such a position that he will receive the comfort and warmth of the morning sun. If he should mope a little, don't be alarmed; indeed it is better to see him creep into a corner and appear very miserable at first, than that he at once greedily eats all that is put before him. These latter symptoms indicate an unnatural indifference to the loss of liberty, which is frequently ominous of an early death.

The following is Bechstien's recipe for taming a chaffinch in half an hour:—"Let the nostrils of the bird be smeared with the essence of bergamot (or with any other essential oil), by which it is rendered for a short time so insensible that it can be subjected to the training, which consists chiefly in accustoming it to sit tranquilly upon the finger, in teaching it to hop from one finger to the other, and in preventing it from flying away. It may, it is true, fly away a few times, but this it will not continue to do, especially if taken into a dark place, behind a curtain, and it is thus also secured from the mischance of flying against the walls and window-frames, and thus injuring itself. If it at once sit quiet, the finger of the other hand is held beneath

it in front, and it is made to step from one to the other, when, the distance being gradually increased, it will speedily hop to it. This being accomplished, the chief difficulty is over, for if once the bird hop quietly from one finger to the other, it will, on recovering from its insensibility, upon observing that its trainer does it no harm, speedily familiarise itself with all kinds of tricks, such as the firing of pistols, and flying to and fro."

CHAFFINCH SINGING-MATCHES.—Among professional bird-catchers and dealers, much money is lost and won by matching one chaffinch against another to sing. It is a remarkable fact that chaffinches of different countries sing different songs. That it is the same throughout Europe is verified by Bechstien, Jesse, and other celebrated naturalists. For instance, the song of the Essex finch is "Toll-loll-loll-chickweedo," while that of the Kentish warbler is distinctly "Toll-loll-loll-kiss-me-dear." Some time ago there appeared in the "Welcome Guest," an article in which was given some information concerning a chaffinch singing-match, and as it may probably be interesting to such readers of "HOME PETS" as are not already acquainted with it, I shall take the liberty of transcribing it.

"Alighting at Church Street, Shoreditch," says the writer, "I found Hare Street the second turning on the right, and the 'Queen of Spades' towards the further end. My friend was waiting for me on the 'Queen's' steps, and I was presently ushered into the parlour. I was not the first arrival; I should say that in the long, narrow room there were at least forty men present, and every one of them smoking, so that the apartment was literally choked with tobacco-smoke. Nevertheless, the twenty or thirty birds that hung in cages round the room hopped about as busily, and sang as merrily, if not as sweetly, as though it were a summer morning, and they were free in the merry green-wood. I inquired after the famous bird I came to see, and was informed that he was upstairs in the landlord's bedroom, that being the most secluded part of the premises; but I was shown the bird's owner, who sat up in a corner, anxiously turning to the door every time it opened, and nervously wiping his forehead with a corner of his neckerchief.

"The Kingsland Roarer was late, but presently he made his appearance, in company of an oily-looking man, with perverted side-locks. He was greeted as 'Meatey,' and the company asked him 'What cheer?' and offered him their liquor. My friend the birdcatcher informed me that 'Meatey' was a cat's-

meat man, and that the Roarer had not got a chance against the other bird, which my friend, moreover, opined was a good job too, for, whereas the cat's-meat man earned lots of money, and kept two ponies, his opponent was only a market porter.

"‘Now, gentlemen,’ said the landlord, bustling into the room, ‘I’ll thank you to clear your birds out, the match is on in ten minutes.’

"The company took down their birds, and placing them in safe keeping outside the house, returned to their seats. Pots and pipes were replenished, and, amid a dead silence, the birds were brought in, each cage being tied up in a black bag.

"‘Now you know, Meatey,’ observed the market porter, as the former produced his bird, ‘don’t let’s have no tricks, that’s a good fellow, let it be a square (fair) match.’

"‘Me?’ replied the oily man, with the most edifying innocence. ‘Why, you knows me, don’t yer?’

"‘I do so,’ responded the porter, with most uncomplimentary emphasis; ‘that’s what made me make the observation.’

"My companion informed me at this juncture that the admonition of the porter was not altogether uncalled for, it being the meat man’s boast that he could set any of his birds singing, or stop them while in full song, either by his voice or a motion of his hand.

"The men now tossed up for choice of position, an advantage, as I understood, of considerable importance, the aim being to secure the snuggest and warmest corner, or the one farthest removed from door or window. The bird who loses the toss is bound to take up his position opposite the window. This being the case, the winner will not always take full advantage of his privilege, but will choose an inferior position, if by so doing he can throw his adversary into a very undesirable part of the room. The advantage, in this case, was gained by the Kingsland Roarer.

"‘There he is, sir,’ exclaimed the old birdcatcher with rapture, as the birds were uncovered; ‘there he is; and a bigger beauty never sang atween wood and wire!’

"I must say I was not dazzled by the ‘beauty’s’ appearance. For, to begin with, he had no tail, which gave him the appearance of being much too tall on his legs; his head, unrecovered from the last moult, was entirely bald and white and shiny; and of eyes he had only one, which, I suppose, induced him to carry his head all on one side, in so queer a manner. I never saw any one thing in my life that he could be compared

with; but if I were permitted to mention what three things he most reminded me of, I should say a raven, a ticket-of-leave man, and a recruiting sergeant. The Roarer, on the contrary, was a decent-looking finch, had both his eyes, sufficient tail to save him from perjury if he swore by it, and, indeed, seemed altogether much the bald-head's superior.

"The conditions of the match were, that the bird who delivered the greatest number of notes in fifteen minutes was to be declared the winner; the birds being left entirely to themselves, and to receive no encouragement from their owners. A perfect note, according to bird-keeping phraseology, is a perfect and complete *toll-loll-loll-chickweedo*: if this phrase is a syllable short, it counts for nothing.

"The umpire now placed himself midway between the birds, with a stop-watch in his hand, while the 'scorers' took their positions, each before a bird, with a slate and chalk before him. A scorer cannot take a note till he has the umpire's nod of approval. 'Off!' says the umpire, and the match has begun in earnest. The Recruiting Sergeant unlimbers his artillery, and fires salvoes of 'chickweedos' thick and fast at the enemy, in hopes to bully him into subjection; but the Roarer does not belie his name, and stands it like Gibraltar. It is as much as the umpire can do (and very interesting he looks, gravely wagging his head, first to one scorer then to the other) to get through his business; for the birds keep time as evenly as a pendulum. Presently, however, the Recruiting Sergeant changed his tactics; he ceases singing, and takes to seed and water, whereat everyone looks annoyed save the porter, who has an insight into that bird's character almost amounting to inspiration. The Roarer, observing the indifference of his opponent, delivers another note, and then he also descends for refreshment. Now, with a burst echoing through the room, the Sergeant begins again. This *coup* evidently astonishes the Roarer, who affects not to hear the challenge, and quietly goes on with his repast. One, two, three notes ahead. The meat man grows excited, he bites his lips, and looks savagely towards the victorious Sergeant. Four, five notes ahead. The meat man absolutely goes wild, and, spasmodically jerking his nose, mocks the Roarer quietly picking up seed. Six, seven, eight notes ahead! With a desperate lunge the meat man takes his handkerchief from his pocket, and blows a violent blast. In an instant his bird begins again.

"'Now, Meatey,' says the porter, 'cut that, you know.'

“‘Cut what?’ replied the injured Meatey. ‘Musn’t a fellow wipe his nose? Well, I’m blowed!’

“‘Not with the hanksher you carries him about in,’ responded the porter. ‘I knows yer.’

“Meanwhile, the Roarer, who seemed to understand he had incurred his master’s displeasure, tried hard to make up for lost time. He tried too hard. He galloped over his notes so furiously that one out of every three was imperfect. He would get as far as “chickwee” and utterly lose sight of the “do;” whilst the old soldier, with a steady tramp, marched in double quick time through every note he uttered. The fifteen minutes passed over, and the Sergeant won the match by ten notes.”

THE CHAFFINCH’S CAGE.—No bird-cage is so modest as the one proper for the chaffinch. It should be oblong, nine inches across, seven inches deep, and seven high. It is useless to put him in a larger cage—that is, if you want him to sing, and not merely to look at. If you give him sufficient room, he will do nothing but hop to and fro from one perch to another. The top of his cage should be flat and solid—not dome-shaped and wired—as, if placed in a cage of the latter sort, the chaffinch would at once acquire the disagreeable habit of “twirling,” that is, looking over his head, and so twisting his neck as to overbalance himself. All seed-eating birds are addicted to this tiresome habit, and the only way to cure them is to shut out the light above their heads. One side of the chaffinch’s cage should also be of wood, so as to hinder his seeing any other bird there may be in the room, otherwise he will probably sulk, and do nothing but utter the unpleasant hiss by which he expresses his displeasure. Let the food trough be placed on one side of the cage, and the water glass at the other, with a perch opposite each. Take the precaution of fitting his trough with a lid in which two or three holes are bored, as, if he is allowed an open trough, he will be found a shocking fellow to waste his seed.

HOW TO FEED THE CHAFFINCH.—The chaffinch’s staple food should be rape-seed. Some people give their birds equal quantities of rape and hemp, but I never yet knew an instance where a bird was so fed, that he did not go blind by the time he was six years old, or die of consumption even before that time. Notwithstanding, in moderation, hemp-seed is a good thing to give to chaffinches. It is good when they are about to moult, when you wish them to sing particularly strong, and when they have colds. Five parts rape-seed, and

one part canary-seed is wholesome diet for a chaffinch. A little bruised rice is good occasionally, as it prevents looseness of the bowels. In summer, let him have a moderate supply of green food, and in winter a piece of sweet apple. Mealworms and ants' eggs are particularly relished by the chaffinch. Should your bird get too fat, and consequently lazy, put dry ants' eggs in his water, and feed him partly on Swedish turnip till his corpulency is reduced.

Meyer, the naturalist, gives the following hint how to treat a bird who refuses his food. "Let it be placed in a cage in the room where it is purposed to be kept. Give it freely appropriate food and drink in open vessels; leave it thus undisturbed for several hours, then dip it in fresh water, and again place it in its cage. It will sit for some minutes thoroughly exhausted, but will soon recover, and begin preening itself, and in the course of a few minutes become extremely animated, and then it will certainly eat the food placed before it. Doubtless the bathing produces an appetite in birds as in man."

As I have before observed, avoid as much as possible artificial food; still, as I am aware that the various compositions known as "German" pastes are much patronised by bird-keepers, I append a few recipes for making "universal food" for all the smaller birds—chaffinches among the number.

1. Take a Swedish turnip (which can be kept through the whole year by burying it in sand in a cool place), grate it fine, immerse the crumb of *best* white bread in water, squeeze it dry, add a handful of barley meal, and mash all together with a pestle and mortar. This is a *genuine* German paste, and one that is strongly recommended by the most famous of German bird-breeders.

2. Take the crumb of stale white bread, soak it for half an hour in water, squeeze out the moisture, add to the bread its weight in wheat meal, moisten with milk, and beat well together.

3. Crust of white bread, two ounces; carrot, one ounce; flour, five teaspoonfuls. Pound the whole into a paste with water.

4. Oatmeal, twenty-five parts; sweet almonds, six parts; rape-oil, two parts; sugar, one part; carraway-seeds, one part. To be put altogether in a sieve, and rubbed through.

THE DISEASES OF CHAFFINCHES AND HOW TO CURE THEM.—Dysentery is a disease to which chaffinches are very liable, especially when they are first caught, and before they get

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used to the cage food. Their evacuations are white and tenacious, sticking to the tail feathers, and from its acrid character inflaming the surrounding parts. Apply linseed-oil to the parts affected, and put a pinch of iron rust in the drinking-vessel every morning. Try and procure him a little of his natural food—the seeds of the fir, oats, linseed, mustard-seed, &c. Mix these with soaked rape-seed. Or, clear away the feathers beneath the tail, and anoint with fresh butter, mixing hard-boiled yolk-of-egg with the food.

The chaffinch, in common with others of the tribe, is subject to “snuffles,” which is a fever produced by cold. The complaint may be recognized by the root of the beak growing yellow, and a frequent gaping which reveals the tongue dry and parched. Administer a pill as big as a peppercorn, made of equal parts of butter, pepper, and garlic. If not speedily relieved, the consequences of this disease will be fatal.

If the chaffinch be afflicted with mites, syringe him with water in which quicksilver has been steeped, bathe him frequently, give him fresh sand daily, and be particular in keeping him exceedingly clean.

Chaffinches as they become old are frequently lamed by the accumulation of scales upon their legs. The upper ones should in the most careful manner be removed by loosening them from time to time with the point of a penknife. Cut his claws every six weeks, not too close or they will bleed. If, however, you hold them up to the light, you will be able to see how far the veins extend, and to regulate your scissors accordingly.



THE BULLFINCH.

AMONG the whole tribe of singing-birds, there exists no better illustration of the truism “give a dog a bad name, and hang him,” than the bullfinch. Ask the gardener, ask the florist what sort of a character the bullfinch bears, and when they have recovered from the indignation the mere mention of the bird’s name has created, they will tell you he is a robber, a devouring dragon at fruit-tree buds, a pilferer of peaches and other luscious wall-fruits; and if you shake your head incredulously, the florist and the gardener can quote old naturalists by the score in support of their opinion.

A fig for the gardener, a fig for the old fashioned naturalist, and,—as he likes them, and as some sort of compensation to the little bullfinch for the unjust persecutions he has long suffered—a fig for the hero himself. Alas! how many poor birds have fallen victims to the errors promulgated by book-learned fogies who, instead of repairing to the woods and groves, there to gain their bird-knowledge from the mouths of the songsters themselves, are content to shut themselves in their dusty libraries, there to weave afresh the threadbare information compiled by fogies of another age. Take, for instance, the case of the unfortunate rook.

But there is no necessity for me to enter on a defence of the feathered tribes. Rooks, sparrows, and bullfinches, take heart. Those doughty champions, Jesse, Bechstien, Adams, and Kidd, have entered the lists on your behalf, and in their hands I am content to leave you.

Simply, then, I assert that the bullfinch is not nearly so bad a fellow as he is reputed. A friend of mine who owns one of the best fruit-gardens in Kent, who, moreover, is noted for the perfection of his annual crop of peaches, apricots, &c., *encourages* bullfinches, about his grounds. I must say that at first I thought their behaviour in the fruit-trees suspicious, but my friend, to settle the point, so far outraged his better nature, as to fetch his gun and shoot down a full-grown able-bodied bullfinch. We dissected him, and, to my surprise and pleasure, his stomach was found to be filled almost entirely with grubs and insects. By-the-bye, I wonder if the bullfinch's rakish appearance first put it into folks' heads that he was a robber? In the "good old times," you know it was not uncommon for masked and handsomely-dressed thieves to stop and rob honest folk on the highway: "Bully," with his jet-black mask, his hawk-beak, bold eyes, and dashing crimson waistcoat, must have much resembled one of these gentry.

BULLFINCH NESTING.—Seek either in the lower branches of trees or in the tops of tall bushes—especially the whitethorn—for the bullfinch's nest. It is a very simple affair, being composed of twigs, fibres of root, and moss, carelessly wove together. They breed twice or three times in the course of the year, laying each time four or five bluish-white eggs, speckled with red and purple blotches, mostly at the larger end of the egg. As the bird begins to build at the end of April, or the beginning of May, the best time to go nesting is from the 10th to the 20th of June, when the nestlings will be from a week to a fortnight

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old. Unless you want them for "piping," never take them from the nest till they are tolerably well feathered, as before that it is difficult to rear them. If, however, you want them for training, they should not be more than six days old when you take them in hand.

HOW TO CATCH THE BULLFINCH.—If it is summer time, they may be taken with a decoy-bird and limed twigs. Have ready a singing bullfinch in a cage. Procure some willow twigs, about eighteen inches long, and slender enough to be very pliable; warm them before the fire, and anoint three inches of the top of each well with birdlime. Plant your decoy in the vicinity of the bushes the birds frequent, and encircle your decoy's cage with the daubed twigs. If, however, you have bushes only on one side, a semicircle of twigs will be better, open to the bushes. Your decoy will soon be surrounded by curious wild finches, and if you have good fortune you may catch a dozen birds in almost as many minutes.

In the winter months, while the snow is on the ground, good sport may be had with the horse-hair noose. Drive into the ground, in various positions, short wooden stakes; let the stakes be six yards or thereabouts from each other, and stretch from one to another fine twine. Make nooses of horse-hair, and fasten them to the twine, so that they be six inches apart and four inches from the ground. Then scatter all about holly-berries, haws, &c. The birds, in pecking about, will get their heads in the nooses, and in struggling to free themselves will be held fast. If the ground is white with frost or snow, it will be better to use white horse-hair.

A summer or two ago I saw a birdcatcher at Enfield taking birds at a wonderful rate with a trap, such as I never saw before or since. It happened to be in a neighbourhood where bullfinches abounded, so that was the sort of bird he principally caught; but I see no reason why it might not be used with equal success with other kinds. Upon a light square frame of wood, about four feet long and three wide, and a foot deep, was stretched a fine net. Driven into the ground were four slight, round rods, perfectly smooth, which worked in grooves at each corner of the netted frame. The rods were about six feet high, and by a little peg the frame was supported on the top of them. One end of a long piece of twine was fastened to this peg, and the other end was held in the catcher's hand. Fastened to stakes in the ground beneath this four-legged awning were two braced bullfinches, and the ground itself was strewn with seeds. The

decoy-birds pecked up the seed and sang, and to all appearance were as free and happy as birds could be; so at least certainly thought the confiding wild birds, and, allured by the call of the treacherous braced birds, came down in dozens to partake of the ample spread. Now was the birdcatcher's time. He gave a jerk at the twine, out came the supporting peg, and down slid the netted frame, swift and noiseless as an arrow.

HOW TO TEACH THE BULLFINCH TO "PIPE."—The vast importance of the subject must be my excuse (and I trust the readers will deem it a sufficient one), for constantly recurring to the necessity of *tenderness* and *patience* in all our dealings with our prisoner pets. Allow me here to observe, that in whatever degree the caution may apply to the treatment of other birds, towards the one now under consideration, it is applicable before all others.

The natural song, if song it can be called, of the bullfinch is extremely simple. Indeed, it is a mere twitter, consisting of three notes, neither of which is particularly melodious; but it may be *taught* to do wonders—to whistle "God save the Queen" or "Rule Britannia" as lustily as any boy ever whistled those loyal tunes to keep up his courage as he trudged along in the dark. An untaught bullfinch may be bought for fourpence, an accomplished one is worth as many guineas! Think of this, boys, whenever you tire of playing schoolmaster, or your pupil is dull or obstinate.

Your pupil must be a nestling, otherwise he will have acquired the discordant twitter of the parent bird, which will never leave him. Let nobody tend him or supply him with food and water but yourself. Be *very* particular about this. When he is about two months old he will begin to twitter. Now it is time to commence the lessons.

I am very sorry to be obliged to inform you that your bullfinch must take his music lessons on an empty stomach. Supposing you to have made up your mind that the lessons shall commence on Wednesday, the whole of Tuesday must his seed-box remain empty. Then *as soon as the day breaks* on Wednesday morning you must visit your pet. I admit it is rather unpleasant turning out of bed at three o'clock in the morning; nevertheless, if you are earnest in your intention to possess a piping bullfinch it must be done. The bird should not hear the least sound except that made by his teacher, and under such circumstances he will learn more in a week than he would in many months if taught in the middle of the day. If

the room in which the bird is has shutters, don't open them till the lesson is concluded.

If you are capable of whistling clearly and sharply, you need no instrument ; if you can sing nicely, it will do as well ; but if you can do neither one nor the other, you had better learn to play the tune you wish to teach to the bird upon a tin whistle. Do not give your little scholar too much of the lesson to digest at a time. If "God save the Queen" is the tune, play as much music as goes to the first line. Play it over and over and over again, in exactly the same time, and without the slightest variation, else you will confuse him. While you are playing, the bird will remain so remarkably quiet as to lead to the unpleasant supposition that he is fast asleep ; but patience, my boy. Forty-nine times you have played that first line, till the music has become melancholy and detestable. For the fiftieth time you play it, when, with a suddenness that electrifies you, the little prisoner, with more or less success, echoes it.

Now for his reward. Fling open the shutters, let in the sun, and pile up his food-box, taking care to crown the banquet with two or three—just two or three—delicious hemp-seeds.

Let that be an end of the day's lesson. Let him peg away at his seed for one hour, then take it away and let him eat no more that day. Don't imagine that you will be troubled to play as long unanswered to him the next morning ; indeed, don't be surprised if he greets you with the result of yesterday's teaching as soon as you enter the room. If, however, he should be so very rapid in learning, you must go on with the next line of the song, and make him repeat it before you give him his breakfast. No doubt he will try all he knows to coax you out of your determination ; he will sing you the first line *very* nicely indeed, he will peck at his empty seed-box in a remonstrative way, but you must be inexorable, stern and harsh as a drill-sergeant. If your bird is obstinate, as a punishment you may *blow him up*, not figuratively but actually. Walk sharply up to his cage, and blow at him with your mouth. He will relish this so little, that after a few applications a sharp step or two towards his cage will be sufficient to put him on his best behaviour.

If your bullfinch is a timid bird, and plainly shows that the necessary harshness of the treatment is almost too much for him, you may comfort him by putting a little cochineal, or even port wine, in his drinking-vessel. Indeed, a celebrated bird-

trainer, Lewis de Berg, whose tiny pupils were sold for their weight in guineas, makes the following remarks on this subject:—

“I feed the smaller birds with rape-seed, and a very little canary with it, the latter being apt to make them grow fat and dull. I give them, likewise, at times, a little bruised rice, which does abundance of service, and assuredly prevents them falling into a scouring, which has been the death of many a fine bird. Birds accustomed to this way of feeding are seldom troubled with what is called the pip, they shed their feathers with much more ease than do birds that are otherwise fed, they are much more prone to singing, and acquire a more agreeable note than birds who are otherwise trained. The bruised rice, however, should first be soaked in canary wine, and afterwards dried carefully for use, though giving the bird a few grains while wet with this excellent liquor does mighty well, but it is not to be constantly practised.” One can imagine the jolly German among his feathered pets, each singing a stave in his turn, while they all tiddled canary wine. I wonder if bold Lewis de Berg himself “practised it constantly.” Upon my word, I’m half inclined to think he did.

Once, on passing a bird-fancier’s, my attention was arrested by a most extraordinary noise emanating from a bird that was hung up for sale. It was a bullfinch, and as near as I can express it in writing this was his lay, “Chuff-chuff-chuff-chuff-creak-creak-chuff-chuff-chuff,” and then a sort of “cluck, cluck,” such as a nurse makes to a baby. The bird-fancier could not account for the extraordinary music; indeed, he had only bought it of a friend of his a few days before. I was curious enough to make further inquiries, and discovered that the bullfinch had belonged to a person who lodged at a tobacco manufacturer’s at Bermondsey, and that the discordant noise made by the bird was an exact imitation of that which was going on from morning to night at the tobacco-mill. The “chuff-chuff” was the noise of the cutting-knives, the “creak-creak” the uncoiled crank turned by the horse, and the “cluck, cluck,” the sound made by the horse-driver when he wanted his animal to go faster.

Be quite sure that you thoroughly know the tunes you attempt to teach your bird, as he will follow you to the minutest turn or quaver. Indeed, the exactness of the bird’s imitative powers once occasioned the detection of a thief in a rather extraordinary manner, and as the circumstance came

under my personal knowledge, and has never yet been printed, I will tell it you.

A musician employed at one of the London theatres possessed an ebony flute with silver keys. He seldom used it, however, in consequence of one of the upper notes being defective. The musician had for a lodger a young man, a theatrical tailor, and between the two there existed considerable friendship. Well, one night, while the musician was away at his business, some one stole the flute with the silver keys, and suspicion fell on an old charwoman who used to come to do the housework. However, nothing tended to show that the old lady really was guilty, and the affair was shortly forgotten. In a few months the tailor left the house of the musician, and went to live in a town a few miles off; but as the friendship between the two men still existed, they occasionally visited each other. Near a year afterwards, the musician paid the tailor a visit, and was pleased to find him in possession of a splendid bullfinch, who could distinctly whistle three tunes. The performance was perfect, with this exception: whenever he came to a certain high note, he invariably skipped it, and went on to the next. A very little reflection convinced the musician that the note in which the bullfinch was imperfect was the very one that was deficient on the ebony flute. So convinced was he, that he at once sharply questioned his ex-lodger on the subject, who at once tremblingly admitted his guilt, and that all the bird knew had been taught him on the stolen flute.

Supposing that I chose to trespass on other folks' preserves, I could fill you a hundred of these pages, with wonderful stories and anecdotes of the bullfinch; indeed, some of them are so very wonderful as to require a much greater share of credulity than I possess, to be believed. Nevertheless, there are stories well authenticated, and true beyond a doubt, that tend to prove that in that flat head of his, the bullfinch possesses an amount of intelligence, rarely displayed by another bird.

Gilbert White, of Selborne, tells us of a bullfinch that flew on to the window-sill of a lady's chamber, and remained there fluttering his wings, pecking at the glass, and altogether exhibiting great distress. He allowed the window to be opened, and himself to be handled, gaping, and fluttering his wings, but making no effort to escape. Presently the lady discovered the cause of the poor bird's tribulation, a large seed sticking crosswise in his throat. This she removed with the head of a needle, and the bullfinch was at once well. However, eased

of his pain, he had no longer any taste for captivity, or the company of his fair doctor; indeed her service did little towards prolonging his life, for while a cage was being prepared for his reception, he flew anxiously about the room, and at last dashed against the window with such violence as to kill himself.

More than one naturalist with whom I am acquainted asserts that a tune once learnt by a bullfinch is never forgotten. This is not altogether correct, as during a bird's moult, it certainly will *entirely* forget its lessons, unless during that period they are frequently played over to him. If you neglect this, and he *does* forget his "piping," you will find it much less trouble to teach a young bird than to re-teach the old one. People who in the summer buy German bullfinches in full pipe, will do well to bear this in mind, it will save them much disappointment and no little money. While he is moulting, keep a clove constantly in his water, and at *all* times observe the directions I have already given respecting freedom from draught, fresh air, a clean and well-sanded cage, and the bath.

FOOD OF THE BULLFINCH.—As regards nestlings, for the first two or three weeks they should be kept *particularly* warm. A big-bellied pint jug well lined with flannel, makes a good artificial nest. Bruise old rape-seed, scald, and strain it. Soak bread in warm milk, squeeze it tolerably dry, and beat it and the bruised hemp seed together. Give them five mouthfuls of this diet every two hours from six in the morning till dark.

Old birds, when newly caught, may be fed on a German paste composed of the soaked upper crust of white bread, grated carrot, and flour brayed together in a mortar. With this paste may occasionally be mixed a few rape-seeds. After the first week gradually reduce his quantity of German paste, substituting rape that has been soaked for a few hours, till he uses himself to it, and goes without the paste altogether. You may feed him solely on this, or may give him equal parts of canary or rape-seed, with once a week a pinch or two of maw-seed. As a rule, never give him hemp-seed, it tends to make him corpulent and lazy, induces blindness, and gradually turns his pretty plumage first dingy brown, and then black. For his health's sake, occasional green food is necessary. Let it consist of lettuce, chickweed, or watercress.

With the exception, perhaps, of the goldfinch, no songbird is more docile or tractable than the bullfinch. He may be very soon taught both to eat and drink from its owner's mouth; but, in my opinion this trick is best left alone, as it is without doubt a

very nasty one. I am surprised to find it patronised by the most popular of our modern bird-breeders. Apart from other considerations, I object to the practice on sanitary grounds, and I have not the least doubt that unless a person be in the most perfect health, food or water confined for a minute in his mouth and then administered to a tiny song-bird would, if the trick were persisted in, infallibly poison it. If any one imagines that the poor little creatures derive any pleasure from imbibing water by this means—tepid and unwholesome as it must be—they may take my word that they are utterly mistaken.

Besides, if properly trained, there is no end to the diverting tricks he will perform for your amusement with his drinking apparatus. He will draw up his water in a tiny bone bucket from a cistern, hauling in the well-rope with his beak, and securing every fresh haul with his feet till the bucket reaches the surface. Indeed, a lad of my acquaintance taught his bullfinch to perform a much more ingenious trick. He manufactured a liliputian pump (extremely simple), the tube of which penetrated the bottom of the bird's cage and lodged in a vessel containing water, while the upper part stuck upright within the cage. At the end of the handle was a ring, and whenever the little creature wanted water, he would mount his perch above the pump-handle, hook his claw in the ring, and work away till he had filled his cup. Then he would descend and quench his thirst. Nothing could more convincingly show the fondness of little birds for bathing than the behaviour of the bullfinch in question. No sooner was his empty bath put into his cage, than he would commence pumping away till the bath was half full; then he would hop down, have a refreshing plunge, then up again, and pump, pump, till the bath was full. Then he would get in up to his very shoulders, and testify by his behaviour how much he enjoyed it.

DISEASES OF THE BULLFINCH, AND HOW TO CURE THEM.—Bullfinches caught when full grown, if carefully fed and kept perfectly clean, may almost be said to be exempt from disease. If, however, he should get a surfeit, either from a pernicious indulgence in sweets, or from a cold, treat him pretty much as I have given you directions how to treat the canary under the same circumstances. If his bowels are loose, give him a little bruised rice; if they are hard and inflamed, a pinch of magnesia in his water every morning till he is relieved. If the surfeit arises from a cold, give him a few drops, say six, of

THE SISKIN.

port wine in a quarter of a gill of water, and let it be with him all day.

Bullfinches brought up from the nest are as subject to disease as other cage birds. If your bird has a fit, cut the tip of the under claw so that it bleeds a little, bathe the legs in white wine, and put a little nitre in his water. The "husk" is another complaint to which some bullfinches are subject. It is as troublesome to them as asthma is to our own species, and almost as incurable. The only cure is to keep them as much as possible in one atmosphere, and comfort them with warm food. As soon as ever they show symptoms of being unwell (you will soon know it by their bunchy appearance), diet them for a time on canary, hemp, and rape-seed. Be sure, however, to return to simple rape-seed as soon as they get better.

THE SISKIN.

ONE would hardly suppose that our little feathered minstrels were so plentiful that we could afford to neglect, nay, almost to ignore the very existence of one of the blithest and best. How many folks residing in or near London know anything of the siskin, or "aberdevine," or "black-pated thistle-finch," or "bastard goldfinch" (for by each and everyone of these various names is the bird known)? I would wager that not ten in the hundred of our London boys ever saw a siskin.

"Then," says the boy whose range of vision is bounded by his nose, "there can be little use in speaking about it. I would much rather, if you please, that you go on with the well-known finches, and leave this and such like outcasts alone."

One moment, O short-sighted boy! take this doctrine and apply it to your own case. Suppose you grow up to be a man of note—a mathematician, a philosopher, or a poet,—one of those human songsters who carol so sweetly, and whose music, caged in leather and burnished gold, sells for vast sums; suppose, I say, that you should discover, or, better still, that the world should discover, that you were a poet; would you think it just for somebody to exclaim, "Oh, bother! what do we want with more poets? Haven't we already got those human larks and nightingales Tennyson and Browning? Haven't we

scores and scores of second-raters, the tits and buntings of the craft, who twitter prettily? Haven't we no end of bullfinch poets, who, though they can't sing, have an amazing aptitude for imitation? No, no more poets."

At the same time I have no doubt that, did siskins generally know of my intention, they would think me an officious meddling person, who might find something better to do than to persuade people to rob them of their liberty! But why should not the siskin be as popular as any other finch? He is more handsome than the linnet, hardier than the chaffinch, as good a singer as the redpole, and quite as capable of mimicry as the bullfinch. Then they are cheap. Every autumn siskins, in flights a thousand strong, leave their native northern homes and visit England, and from October till February they may be bought at most bird-shops for ninepence or a shilling. Judge from the following description if he is not a handsome fellow. He is, perhaps, a trifle less than the goldfinch; the neck, back, tail, and wings are of a delicate olive green, which grows paler and shades off to yellow at the extremity of the tail; over each eye is a streak of orange; the crown feathers are jet-black (hence one of his names) in the spring, but in autumn, after the bird has moulted, the black-cap is prettily fringed with grey; the beak is a chestnut brown, and darker at the tip than at the stump. The character of the bird's markings much resemble those of the redpole, but the colours are different. You may know the male from the female from the latter having a brown instead of a black poll; still some discrimination is necessary, as the bird does not acquire his brightest plumage till after his *third* moult.

As the siskin's proper home is in the northern parts of Europe, I will have no more to say about its nest than that it is a carelessly-built affair constructed of long grass and root fibres, and lined with any soft substance that grows handy. As in the case of the chaffinch, the nest is generally built at the top of the tree, and attached to a branch with cobwebs, &c. Twice a year it lays five or six tiny grey eggs, splashed with purple at the larger end.

During its winter sojourn in England it invariably seeks a neighbourhood where the alder-tree abounds; so boys who are lucky enough to live near the alders may obtain almost any number of siskins, as of all birds he is easiest to catch. You may have either a redpole or a linnet for a decoy, and by surrounding his cage with limed sticks take siskins by the dozen;

you may even smear the end of your fishing-rod, provided it be a long one, and take them off the branches as they sit feeding.

SISKIN MULES.—The song of the siskin is similar to that of the goldfinch, with this difference: it is rather sharp and piercing, than soft and sweet, and invariably finishes with an abrupt jarring note. Nevertheless, it is a good bird to keep among others, as, from its being ever on the alert, and *continually* singing, it tends to keep its companions in captivity cheerful. But, above all, it is specially prized by the bird-fancier because the canary will breed with the siskin more readily than with any other. Mated with the lizard, or bronze canary, the result is the very handsomest mules, the strongest birds, the best behaved, and the choicest singers. The common grey canary finch and the siskin produce hybrids less handsome, but stout singers, and stronger and larger-limbed than any others. He is a kind father and an affectionate mate to his hen, whom he will assist in all domestic and family matters with the most praiseworthy assiduity. Goldfinch and linnet mules are apt to be sulky, but the progeny of the siskin is certain to inherit its docile, obedient, and familiar habits. As regards the management of the breeding-cage and its belongings, the same directions given concerning goldfinch mules may be followed. I may as well here mention a disease peculiar to breeding-birds,—egg rupture. From some trifling disease or malformation the hen may have a difficulty in laying her eggs. A little salad-oil applied beneath the tail and a warm bath is the best remedy. Be sure, however, that while you are operating on the bird you handle her just as gently as you would a newly-laid egg, or the result will be instant death. If the salad-oil and bath does not effect the desired object, put five drops of castor-oil in her drinking-pan. She will take it that way quite as well as through a quill; indeed, I don't see how, in this case, the latter and more common mode could be adopted without fracturing the confined egg, and at once causing the bird to die.

Don't try to breed from mules. The result will certainly be a failure. The eggs won't be much larger than a big pea, and by no means worth the hatching.

THE SISKIN'S CAGE.—It should be shaped like a linnet cage, that is, open at all sides except the back. There is one thing, however, which I have myself practised as regards my linnet cages, and which I may as well mention here, so that the

siskin may be advantaged by its adoption. Attached to the ends of my linnet cages are two small hooks. Then I have pieces of wood (stout cardboard will do nearly as well), which I hang on the hooks. The cage is thus made snug and comfortable for the poor bird in *very* cold, windy weather, or when he happens to be poorly. Recollect how fond we are of creeping close to the fire when anything ails us. In consequence of our indisposition to bustle about, we are chilly and miserable. Pity poor little "Dick," then, and when he is not well try and make him as comfortable as possible,

The siskin's cage, however, should be larger than the linnet's, he is altogether a more lively and vigorous bird, and requires more "elbow room." Let there be eighteen inches of space between the ends of his house, and ten inches from back to front. He will climb all round the top and sides of his cage, and hang swinging by one leg from the roof; he will turn summersaults round his perch; indeed, altogether, he has a deal of the acrobat in his composition. If you give him the kernel of a Barcelona nut or an almond (he is particularly fond of almonds), he will stand on one leg, and, taking the dainty between the toes of the other, nibble away, twittering gratefully all the while. Let his food and water vessels be suspended *outside* the cage, and take care he is well supplied with coarse sand. By-the-bye, there is something I had nearly forgotten. The siskin rarely sleeps on his perch, he tucks his head behind his wing, stands on one leg, and grasps the bars of his cage with the other, so that of all birds he should be the least exposed to the attacks of rats, mice, or cats.

HOW TO FEED THE SISKIN.—He is a dreadful glutton. In one part of this book I think I lay down as a rule that two teaspoonfuls of seed is enough for the daily consumption of any one of the finch tribe. I should have said "excepting the siskin." Give him three spoonfuls, boys; don't keep him short of victuals, or you will never get on together. It is the bad quality of having so large an appetite that makes him an objectionable companion in an aviary; he will get into the seed-box, and stay there for hours, eating all the while, and abusing in the most scandalous way every bird who dares to remonstrate. Indeed, unless you happen to have a stout robin or an able-bodied chaffinch among the company, there will be continual rioting. In the society, however, of either of the above-mentioned little pugilists the siskin is wonderfully civil.

You may feed him on rape-seed (which, as his digestive

organs are very powerful, you need not soak), mixed with canary,—three parts of the latter with one of the former. Hemp-seed (the bane of most songsters) will, if given in moderation, do him no harm. A little mace or poppy-seed occasionally will agree with him. The siskin requires plenty of water. He is as hearty a drinker as he is an eater, and *particularly* cleanly in his habits. It is seldom that he will get into his bath, preferring to fill his mouth and syringe his feathers from his beak. It is curious to watch the little fellow after he has washed, combing and brushing and arranging his plumage.

DISEASES OF THE SISKIN.—Diarrhoea is one of the few diseases which attack the siskin; you may know it by the bird's constantly voiding a white tenacious matter that adheres to the tail feathers, and inflames the surrounding parts. To cure this, put a rusty nail in his water, and a small lump of chalk between the wires of his cage. Or you may mix bruised rice with a little sifted chalk, and put the mixture in his seed trough. If he should get so bad that you fear he will die, well rub his belly with oil of sweet almonds, and immerse him up to the shoulders in a tolerably hot bath. If he gets better put a little cochineal in his water every morning for a week.

Epilepsy, arising from the bird's greedy habits, will sometimes attack him. He will fall to the bottom of the cage, with his mouth agape, and lie as if dead. Pull out one of his tail feathers, and immerse him suddenly in cold water. This will revive him; then pour into his open mouth five or six drops of sherry, and if he means to recover at all he will be all right again in a few minutes. If you find that your bird is subject to these fits, always keep a little spirits of nitre in his water.

If this bird or any other of your songsters should have the misfortune to fracture a limb, the best thing you can do is—to leave it alone. Take out the perches and make a nice soft bed of wool or wadding over the bottom of the cage. Take care that his food and water are within easy reach (be sure that his food is of the simplest), and leave the rest to nature.

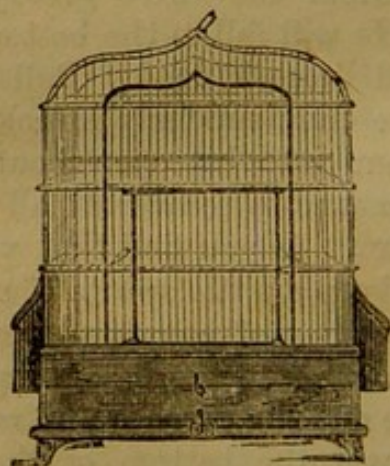
THE HAWFINCH.—This is the largest of the finch family, and is peculiar to the southern parts of Britain. It has a very large and strong bill, shaped like that of the greenfinch, to which, indeed, except as regards marking of plumage, it bears

THE HAWFINCH.

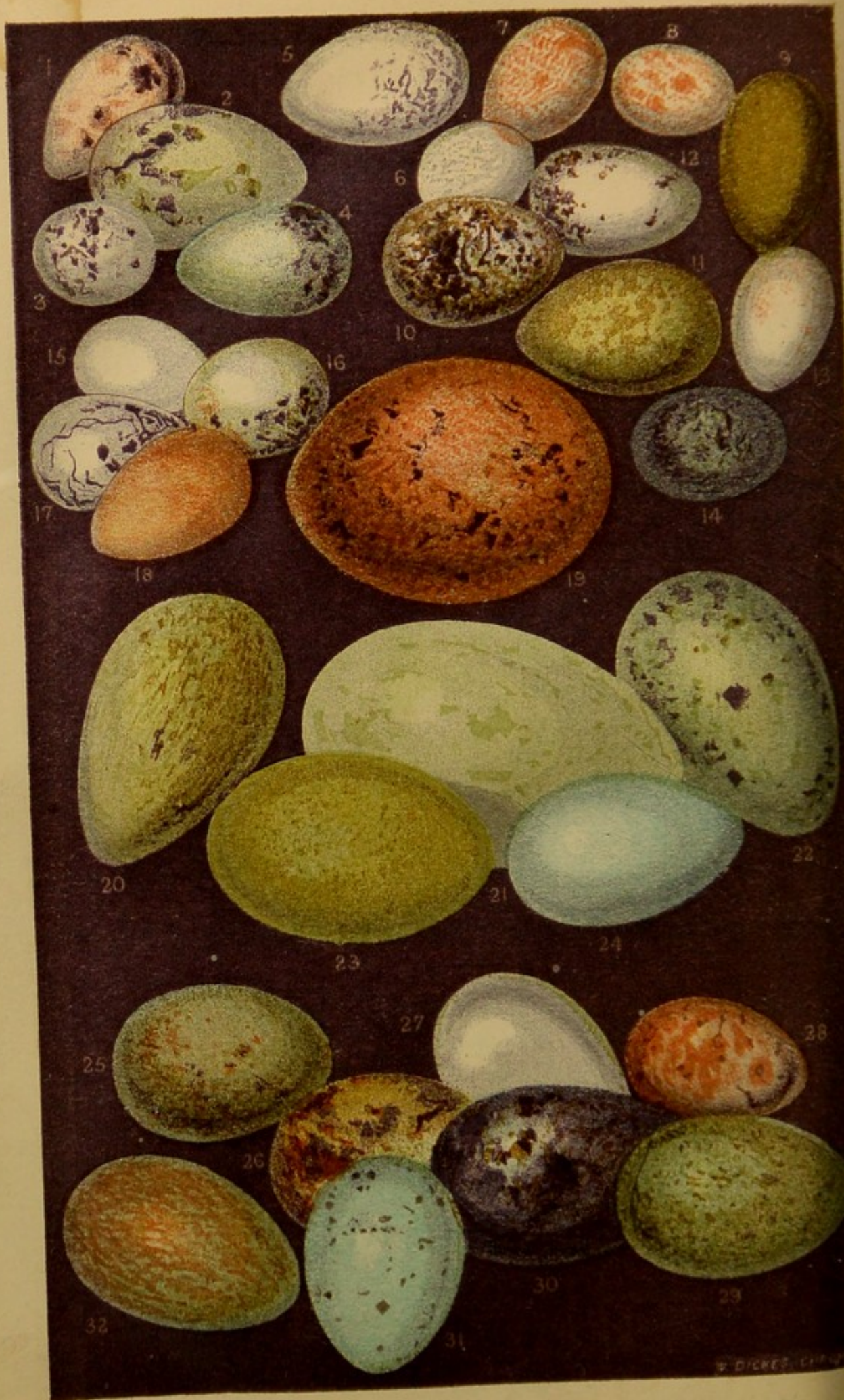
considerable resemblance. The hawfinch, however, is more a woodland bird than the greenfinch, and feeds chiefly on the seeds and kernels of wild fruits.

It is by no means an unhandsome bird; the leaden-coloured beak is rather too prominent on its jet black face, but the broad collar of delicate blue that partly encircles its neck is very pretty, as are its wings of mingled chestnut brown and grey. The tail, which is not very large, and terminates somewhat bluntly, is black and white, the breast and belly pale purple, and the under tail-coverts white.

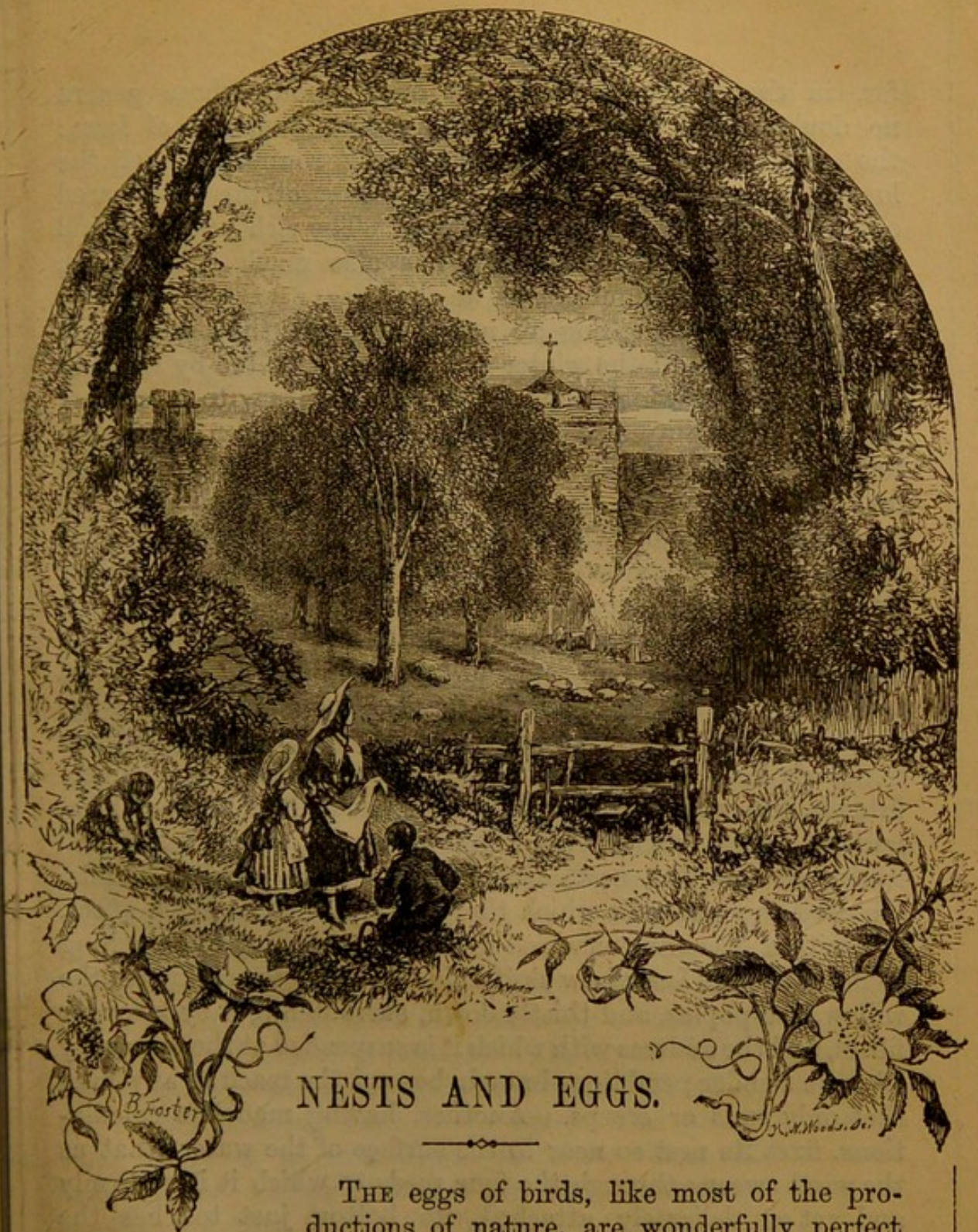
The hawfinch's nest—which has been found in Epping Forest—is always built in a secluded spot, and is a shallow fabric, formed with sticks and lichens, and lined with fibres of roots. It lays from four to six eggs, which are greenish white, mottled with green and brown. It is not a particularly brilliant songster, but what melody it is capable of is of a soft and pleasing quality. It is rather a tender bird, and very apt to catch cold if his cage be left out till late in the evening, or if a bleak wind should be blowing. Its treatment generally should be the same as that of the goldfinch.







W. DICKER, CHICAGO



NESTS AND EGGS.

THE eggs of birds, like most of the productions of nature, are wonderfully perfect in the symmetry of their form, as well as beautifully rich and harmonious in their colouring. In form, they range in every curve of the line of beauty, from the round and almost spherical egg of many owls to the acutely pointed oval of the blackbird and most of the small birds. On this diversity of form in the eggs some authorities, thinking they had discovered the order of nature, have attempted to form a system of classification; but a very brief examination dissolves this dream,

for, in the single family of the owls, about whose genera no doubts can exist, we find the widest diversity of form; the egg of the eagle-owl being nearly round, that of the long-eared owl an obtuse oval, while that of the short-eared owl presents a perfectly ovate shape. The rich and beautiful colouring of many of the eggs has also much engaged the attention of some inquirers, as we shall see.

With returning spring all nature revives; the birds which remain with us all the winter seem restored to life by the first fine day; those which departed on their journey to a warmer climate in the autumn return from their migration; and once more the woods and fields re-echo with their song. The rook and the crow give the first intimation that the pairing season is at hand. Their cawing is incessant, as is also the industry with which twigs and branches are conveyed to their intended dwelling-place in the tree-tops.

A little later, and the smaller birds make the grove sound musical, as their several songs of love are poured forth. From this time the male becomes the slave of the female. He sings to charm her; he labours incessantly to aid her; he gathers materials for the nest; he assists her in building, and superintends the workmanship; and marvellous it is to see them, without other instruments than beak and claws, build and weave or sew the nest, according to their peculiar habits. Observe the materials which they employ with so much effect, and with a discernment which indicates something approaching to intelligence. Look how skilfully one weaves the catkins of the willow, the poplar, and thistle down, surrounding it by stronger fibres, and the address with which it is suspended at the extremity of some slender pendulous branch, beyond the reach of anything that only runs or creeps. Another, having made its calculations, fixes its nest so near to the surface of the water, that as the wind sweeps through the four reeds to which it is so firmly and yet so delicately attached, its bottom just touches the water without being immersed, even in the most violent storm.

The eggs of birds vary again according to the species; not only in respect to their colour, but in their form also. They are white, blue, grey, green, red, or ash-coloured; and, besides the general predominant colour, they are covered with spots, dashes, or streaks of darker shades, which are regularly or irregularly grouped, sometimes towards one end, sometimes the other. Dr. Carus attempts to explain this diversity of colour: he considers it to be the result of a process of decomposition of

the blood in the ovary, mixing with the calcareous salts of which the shell is composed. "It results not only from an excretion of the calcareous salt," he says, speaking of the shell; "for the blood of the oviduct, being in a sort of inflammatory state, mixes itself with these salts, forming certain products, to which may be attributed the divers colours of the eggs of birds. All these varied tints are the result of the decomposition of the blood." It is possible that the colour of eggs may be due to some such cause, but the subject is open to doubt; for if the source of the colour and spots is in the blood mixing in the uterine vessels with the salts of the shell, it is difficult to conceive why all eggs are not spotted, and why those that are spotted vary in tint. Besides, the colour, whatever it may be, is only external, forming a thin coating only; whereas, if it had been produced by a mixture of decomposed blood and the component parts of the shell, the whole shell would partake of the prevailing colour. In the meanwhile, the question is still one of doubt; a doubt, perhaps, which chemical analysis would easily solve were the question one of any moment.

It has been observed that eggs laid in cavities or dark places, where light is altogether absent, are generally white and free from spots; such are those of the several species of owls, the kingfisher, the wood-pigeon, which builds its nest in the depths of some deeply-shaded wood, and some others which might be named. Those, on the contrary, which are laid exposed to the light, are generally more or less richly coloured. Might we not conclude from these facts that light has a marked action upon the colouring of the eggs, as it has on other productions of nature? The flower which blooms in shade and obscurity, is it not pale and shrivelled, like everything denied the vivifying rays of the sun? The birds themselves being a proof of this simple fact; for those of the most brilliant and varied plumage are the inhabitants of inter-tropical countries.

Now, as eggs are generally spotted, and as the notion prevails that the stains increase not in size but in intensity, in proportion as the embryo develops itself, some ornithologists have thought they could trace a resemblance between the spots of the eggs, the nest of the birds, and their plumage. All application, however, of a rule, which would deduce the colour of a bird from the colour of the eggs, appears to be unsupported by any number of facts; on the contrary, all the facts are opposed to it. Thus, the golden pheasant, a bird so

richly marked, produces a pale-coloured egg. The colour of eggs has, therefore, no connection with the plumage of the bird.

Whatever may be the explanation, it is obvious enough, of course, that the pigment is animal matter; but it would appear, from the investigations of M. Geoffroy de Saint-Hilaire and other scientific men, that the egg, immediately before it is deposited, is white. The colour may also be scraped off partially immediately after it is laid; and when "blown" for preservation, that is, when deprived of its albuminous contents, the colour fades when exposed to the sun, as any one may satisfy himself by glancing at the collection of birds' eggs in the British Museum, where the efforts of the obliging curator have altogether failed in devising means for preserving their markings; so that the rich ruddy blotches of the peregrine and other falcons' eggs, which are the most striking in their markings, as may be seen on our plate, are there reduced to a sober grey. The vividness of the colours also appears to depend on the bird being in a healthy state. Many variations are found in the colour of eggs of the same species, and the eggs of birds disturbed in the act of laying are always deficient in their markings; the animal economy seems to be disturbed by the alarm, and imperfect colouring is the result.

As to the form and size of eggs, nothing is more variable; from that which the ostrich deposits in the sands of the desert to that of the wren, or the still more minute humming-bird, what a difference in size, and, above all, what variety in form! Some experiments, undertaken by M. Geoffroy de Saint-Hilaire in Egypt, and by M. Florent-Prevost in France, enable them, as they assert, to declare, on seeing an egg, the sex of the bird which it contains. After numberless observations, they conclude that the globular eggs, that is to say, those whose extremities are nearly round, are females, and that males come from those more pointed. It appears also, that if the void which appears on looking at an egg across a luminous body occupies one of the ends, the sex is male; but if situated on either of the sides, it is a female.

The great variety in their markings has given rise to another notion, that the colour of eggs accords with the locality as well as the materials of which the nest is composed, and that it is intended as a provision for their concealment from those animals which prey upon them. This is not supported, however, by observed facts; nothing can be more in con-

trast with the brown clay and withered grass and moss of which the nest of the blackbird is composed than the light blue colour and brown spots of its eggs. Again, the brilliant white and delicate pink spots of the wren's or bottle-tit's egg would at once attract attention were the nests of each less carefully concealed. The idea is, besides, at variance with the more rational doctrine, that the birds themselves are, like all other creatures, gifted with an instinctive power of selection, which is employed in securing the safety of their offspring. This faculty it is which leads them to build their nests in obscure and sometimes inaccessible places, and to cover them with materials calculated to conceal their stronghold from the prying eye of curiosity. If the doctrine receives any support from the facts of natural history, these facts are found connected with those birds whose nest-building scarcely deserves the name. Those familiar with the haunts of the golden plover will have no difficulty in discovering the slight hollow which it has scraped in the wild moorland, but the colour of its four pear-shaped and grey-spotted eggs, the narrow ends of which all meet in the centre, will certainly not assist their search. Nevertheless, as a generally observed fact, the egg presents a decided contrast to the surrounding colours of the nest.

If anything were wanting, indeed, to enhance the pleasure of egg-hunting, it would be found in the wonderful skill which many of these little creatures exhibit in the construction of their nests, in the choice of situation, and in the choice of the materials employed. We recognize a provident instinct, which almost amounts to the higher intelligence usually termed reason, in the care with which they guard themselves and their young from the assaults of their enemies and from the weather. It exhibits the hand of the Creator giving its first direction to the art, which results in providing for the perpetuation of their species. It marks the all-pervading fiat which has declared that not a sparrow falls to the ground but with His permission.

Among our home birds remarkable for the architecture of their nests, we may mention the magpie. As we have already seen, this bird's nest is quite an aerial fortress. Built on some tall tree, whose large and branchless stem renders it inaccessible to the most daring of school-boys, the magpie's nest is a conspicuous spheroidal mass, composed first of a layer of twigs, curiously interwoven and crossed, on which is spread a quantity of mud; then is formed a dome of twigs of the sloe or hawthorn, loosely

but securely interlaced, while the bottom of the interior is lined with soft fibrous roots, an aperture being left in the side of the nest, which is barely sufficient to admit the bird. Why this bird should find it necessary to render its nest so defensible, has been a mystery to the naturalist; but it is probably explained by the fate of an unhappy colony of magpies, whose story is recorded in the *Magazine of Natural History*. The birds in question had built their nests on a lofty grove of trees, in the neighbourhood of which a pair of tawny owls had also established themselves. To feed their young, the parent owls had made several desperate assaults on several of the magpies' nests, which had been gallantly defended; the assailing owls had been repeatedly repelled; but at last the remains of young magpies were observed under the favourite perch of the young owls, an indication not to be mistaken that the stronghold had been successfully stormed. One morning appeared there the head and feathers of an old magpie, which must have been dragged from the nest while roosting.

After this, a sort of truce would seem to have been concluded, and for a whole year the owls remained quiet; but in 1845 the same pertinacious attack upon the nest of a pair of magpies, built on the very highest branch of a sycamore, near to their eyrie, commenced. One day Mr. Carr, who records the event, was roused by a shriek of agony like that of a hare caught in a snare; he rushed to the spot, and arrived just in time to prevent another murder! One of the owls was in the act of drawing the old magpie out of her nest by the head. By striking the trunk of the tree violently, he succeeded in separating the combatants for the time. In revenge, before the next morning, his only pair of young rooks had disappeared from their nests, and a decree of doom went forth,—the young owls forthwith paid the penalty of their voracious appetites! It is thus not without reason that the magpie fortifies her nest, and surrounds it with palisades; for, besides the owl, it is subject to visits from weasels and other prying quadrupeds.

The nest of the long-tailed tit (*Parus caudatus*) is extremely beautiful, being of a very regular oval form, six to seven inches long and three and a half to four and a half broad; it is usually composed of moss and wool, crusted externally with grey lichens, the whole kept together by means of the flaxen fibres of plants, some wool, and delicate filmy shreds interwoven in a transverse direction. It is usually attached to, and supported by the twigs of a branch of a tree.

The small grey lichens with which it is covered all over form so close an incrustation with the branches of the tree from which it is suspended as effectually to conceal the numerous eggs it contains, for this little creature lays and hatches as many as sixteen eggs. The aperture is round, and only an inch and a quarter in diameter, with an inch and a half of dome above the opening. The outer shell of the nest is an inch and a half thick; its inner surface is stuck all over with feathers, being not only lined but nearly filled with similar materials; one nest, described in some MS. notes of the lamented Mr. Macgillivray, now before us, containing no less than six hundred and eighty-nine feathers, three-fourths of them large ones, being those of the domestic fowl, pheasants, turkeys, rooks, and other birds.

But the most artistic specimens of nest-building among British birds are greatly exceeded by some of the tropical birds. The nest of the tailor-bird of Africa and Asia, so called from the skill with which the nest is constructed, is sewn together by the long fibrous filaments of various plants; the materials being selected with a wonderful degree of intelligence. In form it is not unlike the bottle-tit's nest, but infinitely more elaborate. Even this edifice is far exceeded by that of some of the toucans of the Philippine Islands, whose nest, suspended at the extremity of the most slender and flexible branches, and beyond the reach of any beast of prey, consists of a series of chambers, one built above the other, with an entrance from below; the same nest being used by several pairs of birds, all of whom have either laboured simultaneously at its construction or added to it subsequently.

The pensile grosbeak, another of these gregarious African birds, makes a basket-nest of straw and reeds, interwoven into the shape of a bag, with the entrance below, the top being fastened generally on trees that grow on the borders of streams, or on those which impend over precipices. On one side of this hanging edifice is the true nest. The bird does not build a distinct nest every year, but fastens its new basket to the lower end of the old one—a very singular arrangement. The object in choosing this position over a precipice or stream for the nest is obviously to secure their offspring from the assaults of their numerous enemies, particularly the serpent race. To increase the difficulty of access to these tree-rocked cradles, the entrance is always from below, and frequently through a cylindrical passage, of twelve or fifteen inches in

length, projecting from the spherical nest exactly like the tube of a chemist's retort. The whole fabric is most ingeniously and elegantly woven of several species of very tough grass; and the wonderful foresight displayed is calculated to excite the highest admiration. Twenty or more of these beautiful nests have been observed hanging from a single tree.

Another species, the baya, or bottle-nosed sparrow, is remarkable for its pendent nest, uncommon sagacity, and brilliant plumage—the head and breast being of a bright yellow, giving it a splendid appearance in the rays of a tropical sun. They associate in large numbers, and cover extensive clumps of palmyras, acacias, and date-trees, with their nests. These are formed by long grass, woven together in the shape of a bottle, and suspended by one end to the extremity of a flexible branch, the more effectually to secure the eggs and young from serpents, monkeys, squirrels, and birds of prey. The nest contains several apartments, appropriated to different purposes; in one the hen performs the office of incubation; another, consisting of a little thatched roof, and covering a porch without a bottom, is occupied by the male.

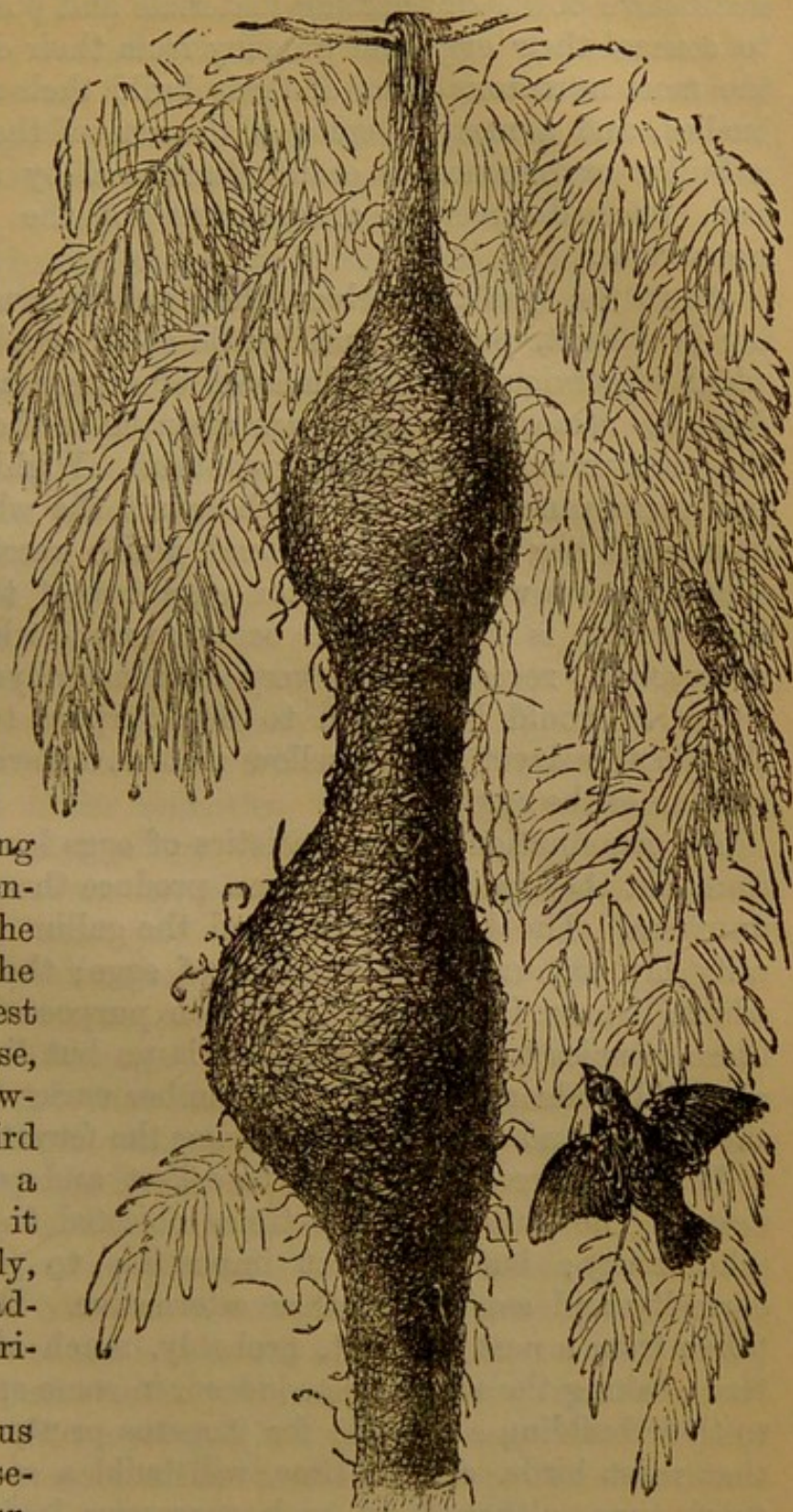
The real nest is concealed from exposure by a covering of hay, to secure itself and young ones from their deadly enemy, the squirrel, as likewise from injury by the weather, which it escapes by making the nest like a steeple hive, with winding passages, and before which hangs a penthouse for the rain to pass down. It is suspended by so slender a thread that the squirrel dares not venture on it. Hundreds of these pendulous nests, it is said, may sometimes be seen on the same tree.

“The industry of these birds,” says Paterson, “seems almost equal to that of the bee. Throughout the day they seem to be busily employed in carrying a small species of grass, which is the principal material they use for their ordinary work as well as for addition and repairs. Though my short stay in the country was not sufficient to satisfy me, by ocular proof, that they added to their nests as they annually increased in numbers, still, from the many trees that I have seen borne down by the weight, and with their boughs completely covered, it would appear that this is really the case. One of these deserted nests I had the curiosity to break down. There are many entrances, each of which forms a regular street, with nests on each side, about two inches apart. The grass with which they build is called Bushman's grass, and I believe the seed of it to be their principal food,

though I found the wings and legs of several insects in the nests. From every appearance, the nest which I dissected had been inhabited for several years, and some parts were much more complete than others."

The weaver-bird of India constructs a nest of vegetable fibres, which it interlaces in such a manner as to form a sort of purse, as represented in the engraving. It is suspended from the higher branches of trees overhanging rivers, and the entrance is at the lower end. The first year the nest is a simple purse, but in the following year the bird attaches to this a second, and so it proceeds annually, with a similar addition to the curious fabric.

This marvellous association of several pairs labouring together is particularly apparent in the species to which the French naturalists have given the name of the republican gros-bec, the approaches to their nest being of the most artful description, while the nest is, externally, only one mass of



vegetable fibre. These are only a few of the facts which may be adduced to prove that birds are gifted with an instinctive power of selecting materials and positions calculated to conceal their eggs and progeny from their enemies. By far the most numerous class of birds build their nests in trees or bushes, and a nest, in spite of the arts of the builders, being a bulky excrescence, is easily discovered by a practised eye, and, once discovered, concealment of the eggs would be impossible.

As to the eggs themselves, their well-known external covering is a light, porous, and brittle shell, of chalky formation, which is pervious to the admission of oxygen and carbonic acid from the atmosphere, which are essential to the development of the vital principle which they contain. Within the shell is a thin membranous lining, which covers the whole, terminating in a small bag at the obtuse end, which receives the air and communicates with the interior organism of the egg. Within this lining is the white, or albumen, which, under the microscope, reveals some very curious physiological forms, which it would be foreign to our purpose to enter on here. Within this layer is the yellow matter, known as the yolk or vitellus of the egg.

An examination of the statistics of eggs leads to the conclusion that the birds useful to man produce them in the greatest numbers. The domestic fowl and the gallinaceous tribes generally lay an unlimited number of eggs; those smaller birds which live on insects, as if for the purpose of keeping down these enemies to vegetation, lay a large but limited number of eggs. In falcons and owls the number varies from two to five, the largest and fiercest birds having the fewest eggs.

But our present object is to collect and prepare eggs and nests. The pursuit is sometimes objected to on the score of inhumanity; but it is not impossible to gratify a rational curiosity and avoid the other alternative. One or two eggs taken from a nest does not, probably, much affect the mother bird: taking the whole nest, indeed, in some species, only leads to their building a second; for it seems pretty well ascertained that most birds, after a time, will build a second and even a third time, although at each successive laying the eggs are said to be smaller and less numerous. We cannot, then, advise our bird-nesters to take more than one or two eggs from any one nest, and the only excuse for taking the nest itself is when a collection is being formed; even then, if possible, let the nest

remain till the young fledglings have left it on their own independent career.

A collector can rarely pick up, with his own hands, any large proportion of even a small collection. "How many, for example," asks Mr. Macgillivray, "have robbed the eagle's or the osprey's, or scaled the magpie's nest, or laid their grasping hand on the eggs of the raven (which command half-a-crown apiece among the London dealers), or even the hooded crow or the chough? Nevertheless, let him who can, search for himself, otherwise he will miss much knowledge." It is told of the Abbé Manesse, who rendered great service to science by his observations on birds and eggs, and their manner of laying, that the whole of his superb collection was collected by himself; he confided in no one, and added no egg to his collection which he had not verified with his own eyes. His practice was to prepare himself for climbing by putting two spikes on his boots, and encircling the tree as well as his own body with a strong girth, and with this apparatus, when he was far on the shady side of forty, did the good abbé scale the loftiest tree that magpie, or rook, or wood-pigeon, chose for its castle. One of his rules was, to admit no nest or egg into his collection until he saw the bird in or flying out of the nest, thus identifying the species. His home career was cut short by the French Revolution, but, as an emigrant, he took every opportunity of enlarging his collection, which became the most perfect in Europe, and was presented, with his MSS. and drawings, in 1817, to the French Institute.

The egg collector must pursue his task under many difficulties. In robbing the nest situated on lofty trees he will probably have to descend with the treasure in his mouth, for the fewer incumbrances he ascends with the better. On reaching the ground the eggs should be carefully marked, and placed in one of the tin boxes he should carry in a bag. In order to preserve them, drill a hole near each end with a triangular needle, twirling the needle gently between the finger and thumb; then apply the mouth to one of the holes, and blow out the contents at the other, washing it afterwards with a solution of gum and water, gently injected from a syringe; this gives strength and solidity to the shell, and preserves the membrane; the holes may afterwards be filled with wax or covered with thin paper, but no gumming, varnishing, nor washing outside. When thus prepared, and perfectly dry, the eggs may be fixed upon pieces of cork, or, better still, in small boxes, just large enough to contain them, having glass tops, or they may be kept in

NESTS AND EGGS.

drawers, having cotton or chopped moss for them to rest upon; but in whatever mode the collection is arranged, the eggs must be excluded from the light, otherwise the colours will inevitably fade. The names and description should be written on the box or a slip of paper, and not on the egg itself.

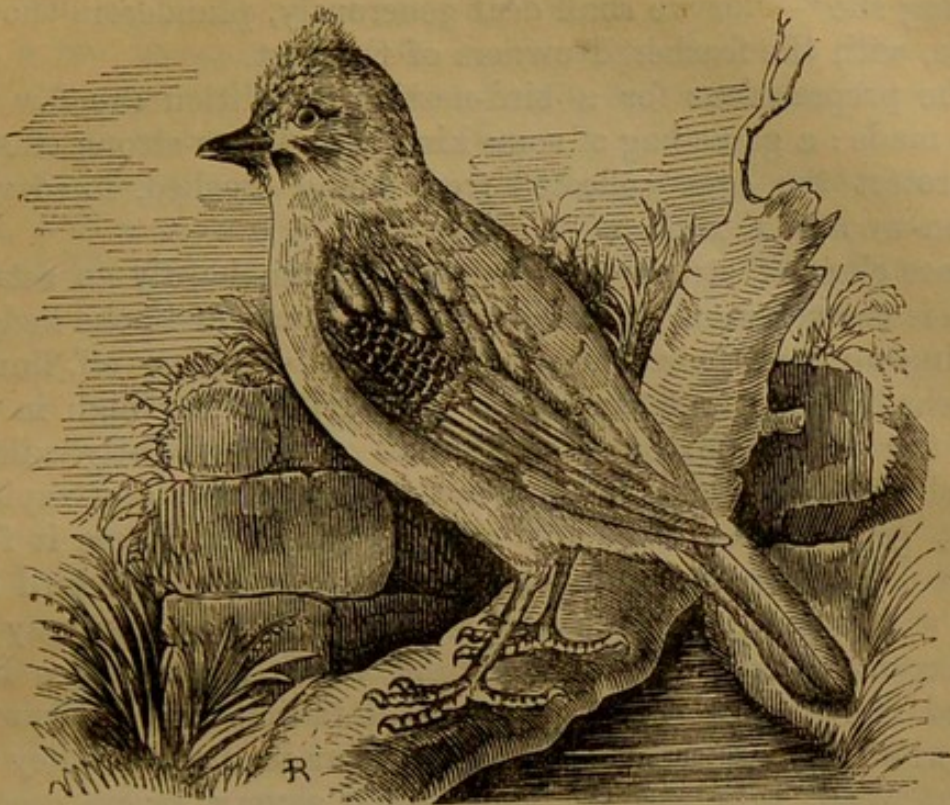
Where there is a glazed case or case of drawers available, sufficiently large, and capable of having the light excluded, the most useful arrangement would be to place the eggs in the proper nest; but this could only apply to the smaller species of birds' nests.

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The following eggs are represented in the plate, and are described in the succeeding pages:—

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|-----------------|-------------------|--------------------|
| 1. Chaffinch. | 12. Greenfinch. | 23. Jay. |
| 2. Hawfinch. | 13. Goldfinch. | 24. Starling. |
| 3. Siskin. | 14. Titlark. | 25. Redwing. |
| 4. Bullfinch. | 15. Wren. | 26. Missel Thrush. |
| 5. Red Shrike. | 16. Linnet. | 27. Water Ouzel. |
| 6. Bottle-tit. | 17. Yellowhammer. | 28. Blackcap. |
| 7. Blue-tit. | 18. Robin. | 29. Fieldfare. |
| 8. Cole-tit. | 19. Kestrel. | 30. Ring Ouzel. |
| 9. Nightingale. | 20. Magpie. | 31. Song Thrush. |
| 10. Woodlark. | 21. Raven. | 32. Blackbird. |
| 11. Skylark. | 22. Jackdaw. | |





BIRD-NESTING IN FIELDS AND COMMONS.

Away from the busy haunts of town-life, every hedgerow, field, and common, is alive with the song of birds; the familiar sparrow chirps on the housetops; a thousand songsters pursue their busy avocations in the garden, the orchards, and the hedgerows; some searching, like robbers as they are, for the seeds just sown in the ground, but the majority of them aiding the cottager to subdue the larvæ of insects, which would presently, without this help, overwhelm him with their ravages. It is a bright April morning. All the birds which breed with us are either building their nests, or, that office past, they are engaged in laying or sitting on the eggs, which it is our object to collect. It is to be feared that this our intention is not to be defended on any fair principle of *meum* and *tuum*; on what ground, then, can it be defended? On scientific grounds surely, for it is one of the records of creation, which it is the object of science to preserve. In our case, let us call it the indulgence of a rational curiosity, which may serve the

useful purpose of training some future Cuvier or Linnæus to enlighten the world; and let us add, we shall endeavour to attain our object harmlessly—"the act shall please we without hurting she"—for we shall deal generously, plunderers though we be, with the feathered owners of the nest.

The preparations for a bird-nesting expedition are few and soon made: a game-bag of some kind, with boxes strong enough to protect the eggs collected from being crushed, lined with cotton-wool or moss.

Once clear of streets and houses, we can hardly go astray. Here is the common; flocks of sparrows harbour in the hedges, keeping up their incessant chatter; a little farther off, linnets and chaffinches; and the lark is already carolling high in the air; the hedge-sparrow also shuffles along; slightly raising and shaking its wings, it hops away very quietly and rapidly, till it gets among the roots of the brambles, where it feels secure. There is a nest in that bush, from which the bird has gone with such a sudden rush; it is a linnet, as you may see by her rapid and undulating flight, which she executes in a curved line by alternate risings and fallings. You want a LINNET's egg; and as there are only four in the nest, they are fresh. Well, take two of them,—not a very severe case of robbery, and the alarmed mother evidently dreads greater ravages. The nest is very neatly constructed of blades and stalks of grass, mixed with moss and wool, and lined with the fur of various animals, sometimes mixed with thistle-down, the breadth being about four inches. The eggs (fig. 16), of which there are usually five or six, of an oval form, three-quarters of an inch long, and about half an inch in their thickest part, are of bluish white, slightly spotted with brownish grey and red, the spots thickest at the larger end.

It is a gratuitous piece of cruelty to rob the bird of all the eggs, and usually leads to the nest being deserted. It is a still more barbarous practice to shoot these small birds, except when they are wanted for some useful purpose connected with science, or at least with the rational intention of making a collection; and it may be doubted if a jury of birds would accept even that excuse for murdering one of their number.

The YELLOWHAMMER is widely distributed, and especially abundant in wooded districts, although it does not usually select the thicket for nidification; for the nest is usually placed on the ground, under a bush, or among the roots of the willow, overhanging a brook, or among its twigs. The nest is

composed, externally, of coarse grass and twigs, neatly lined with finer grass-fibres and hair of the horse and cow, well matted together. The eggs (fig. 17), four or five in number, are oval in form, of a purplish-white, marked with streaks and a few irregular dots of black, together with some faint purplish-grey markings; their length about ten-twelfths of an inch by eight-twelfths in diameter.

The GREENFINCH, sometimes called the green linnet, is a timid bird, but more easily approached than the linnet. It pairs and builds its nest in April, choosing the roots of a furze bush, a close hawthorn hedge, the lower fork of some bushy shrub, or even the ivy on a tree or wall, for its future habitation. The nest is formed of hypna or other vegetable fibre, which it interweaves neatly with fibrous roots and straws mixed with hair; the external walls are strengthened with slender twigs; and the lining is a mixture of hairs and fibrous roots and wool, felted together; the whole forming a compact, well-constructed nest.

The eggs (fig. 12), from four to six in number, are oval, about three-fourths of an inch in length, a little over half an inch in diameter, of a bluish or purplish white, spotted with purple and grey and blackish brown, more or less streaked with black: two broods are sometimes reared in a season.

The REDPOLE, like its congeners, nestles among the brush-wood of the common, on the margins of streams, in rocky dells; but the nest is not common. Mr. Selby describes it as built in a beech or low tree, and formed of moss and the stalks of dry grass, intermixed with the down of the catkin of the willow, which also forms the lining, a soft and warm receptacle for the eggs and young. The birds brood late in the season, the young ones not being fledged till the end of June. The eggs are four in number, of a pale bluish green, spotted with orange-brown towards the larger end.

Early as we are, the LARK is before us with his matin carol. There it is, rising against the wind, and pouring forth its song without intermission; and there it shoots away to the left, in a wide curve, round the wind as it were, and whirling to the right again before it begins its descent into that cornfield, which it does floating, and with expanded wings. Its note is prolonged and more steady;—now it closes its wings, and down it comes with great rapidity, with the body slightly declining; and now its wild fantasia ceases, as it drops on the ground, after hovering a moment in the air. In the long grass near to the spot where

it has dropped, or very near to it, keen eyes will find its nest; and there it is. Among the young blades of corn, which is its favourite nesting-place, the lark scrapes a hollow in the ground; in pasture-ground or common, it selects a place among the long grass, where it builds a nest of stalks and blades of withered grass, rather loosely put together, lining them with softer and finer fibres. The eggs (fig. 11) are four or five, broadly oval in form, and over three-quarters of an inch in length, by about two-thirds in diameter; they are greenish grey, irregularly freckled with a darker shade of brownish green, most densely at the broader end. The lark usually breeds twice in the season,—in June and September,—and the female sits so closely on her eggs that she has been taken there.

The WOODLARK is smaller than the skylark, while it closely resembles it in other respects; but it is observed to sing while perching on trees and bushes, which the skylark never does. Like the skylark, it may be observed to spring with the dawn from the field or pasture-ground in which it has reposed during the night, ascending perpendicularly, while it pours forth its cheerful song, which is even more melodious than its congener. The nest is generally placed in a cornfield, common, or pasture-ground, near a wood. It is composed of blades of dried grass, loosely put together, lined with finer blades, mixed with hair and wool. The eggs (fig. 10), four or five in number, are smaller than the skylark's, and more elongated, being three-quarters of an inch by four-sixths, of a pale yellowish brown, freckled with umber or greyish brown, with dusky irregular lines at the larger end.

The TITLARK, or meadow-pipit, as it is more commonly called, is universally diffused from one extremity of the island to the other, sometimes perching on bush or tree, more commonly on a wall or stone, reposing at night on dry grass. The nest usually occupies a grassy bank or grassy turf, or is so sunk into the ground as not to be easily observed. It is a neatly-constructed nest, formed of stems and blades of grass, lined with finer kinds and tender fibrous roots and hair. The eggs (fig. 14), four to six in number, are of an oval form, three-fourths of an inch by four-sixths in diameter, varying considerably in colour, but generally of a light grey or brownish white ground, dotted and freckled with a purplish grey, especially at the larger end, where they entirely conceal the lighter ground.

On the verge of the common there is, sometimes, a narrow belt of young timber-trees, with a thick hedge beneath, enclosing a large growth of underwood; on the skirts of the

village green we find, occasionally, a venerable clump of trees; sometimes a great extent of wall or paling incloses some richly-wooded domain, where the trees skirt the highway; or, in default of better accommodation, there is a tall hawthorn hedge. On each and all of these, in many parts of England between the Trent valley and the south coast, the NIGHTINGALE may be heard, night and morning, pouring forth its joyous song from the lower branches. Beyond these limits, the appearance of the nightingale, if not denied, is, at least, rare; for, although it has been frequently heard as far north as York, and, in very mild summers, even in Mid-Lothian, as a rule these are its limits.

When the nest is sought for, keen eyes must be made use of, as the bird displays great sagacity in its concealment, choosing the root of the thickest and most impenetrable hedge for building and placing it, besides which it is completely surrounded by a clump of leaves and bushes similar in colour to those of which it is formed. The foundation of the nest is usually loose grass, rushes, or dry leaves; the walls of the nest, which is large, and loosely put together externally, are a thick matting of leaves of the neighbouring trees, lined with a thin covering of fine grass, and, in many respects, resembling the nest of the robin. Here the nightingale lays its five or six broadish ovate eggs (fig. 9), three-fourths of an inch in length and seven-twelfths in diameter. They are generally of a brown uniform colour, but occasionally slightly mottled all over with reddish-brown spots.





BIRD-NESTING IN WOODS AND HEDGEROWS.

Let the reader imagine the verge of a young plantation of some thirty years' growth, to which memory calls us back after more years than we like to think of. In this plantation, which had been planted by a retired physician, a keen botanist and a lover of science, the rarest trees known eighty years back were intermingled with the ash, the elm, the birch, and a sprinkling of spruce and other pine-trees. A limpid brook, just large enough to ornament the hanging woods and mingle its murmurings with the song of birds, traverses the wood in a meandering course for upwards of a mile, skirted by the once trim and still pleasant walk, although its gravel is now covered with weeds, and its shrubbery a tangled thicket; but all the better for its feathered inhabitants. Crossing the stile and penetrating the thicket, we are landed in a small triangular meadow, through which the brook meanders, after tumbling over

a rugged cascade, worn in the bed of the river into a deep black pool, where a handsome trout may always be found. Here, in the days I speak of, a pair of WATER-OUZELS had built their nest in the crevices of the crumbling rocks which overlooked the pool. The nest is bulky and arched, composed externally of various species of moss, firmly matted together with mud, not unlike the swallow's nest, with an aperture in front, of oblong form, three inches and a half wide by one and a half high. Within this is contained the nest itself, a hemispherical mass of soft grass-moss and water-plants, lined with leaves of trees. The eggs (fig. 27) are five or six in number, of an oval form, and rather pointed, about an inch in length and three-quarters of an inch at their thickest end, and of a cream-coloured white. When these little birds have attached themselves to a locality, they are known to return to it for many years in succession, and the pair in question had built here for several years.

This plantation is so favourably situated in all respects, that every songster of the grove may be found in it. And here, in this high copse, we have a JAY's nest, occupying the lower branches of a young oak. It is formed of sticks, lined with fibrous roots, on which it deposits five or six eggs, broadly oval (fig. 23), of a pale bluish-green or grey colour, obscurely marked with a darker shade of yellowish brown and pale purple, but varying much in colour. The jay is an object of dread to some of the smaller birds; for, although not exactly a bird of prey, opportunity offering, it does not hesitate to attack them, and they shun its neighbourhood accordingly. Mr. Durham Weir, a close observer, whose MS. notes are now before us, "trapped one in January, 1837, which he placed with some other birds in his tool-house; but was astonished to find two of them destroyed in the morning. He soon had proof against their destroyer. A linnet alighting on a branch of a tree on which the jay was sitting, he caught it by the throat with his bill and killed it in a few minutes. Half an hour after, the jay seized upon a green linnet in the same manner, plucked off the feathers, and devoured it bit by bit, all except the head."

The MISSEL-THRUSH has, however, no fears of this showy bird, but builds his nest where he lists, in the forked branch of some low branch of a tree, generally at some inconsiderable height,—the nest, a bulky mass some six inches and a half externally, and three inches and a half internally. The external walls are composed of twigs, straws, and grasses, intermixed

with leaves and mosses, and flattened patches of mud, between three and four inches thick, with a lining of grass and a few large feathers; the mouth firmly constructed of interwoven panicles of hair or grass, mingled with twigs, root-fibres, and wool. In this nest the missel-thrush generally lays three to five eggs, of an oblong-ovate form, an inch and a quarter long, by a little over three-quarters thick (fig. 26), of a purplish-white or flesh colour, marked with blotches of light brown and obscure purplish red.

The song-thrush and blackbird both abound in plantations of this description; but neither of them confine themselves to the woods,—a hedgerow or rough bank with moss, or the roots of a hedge, even a hole in a wall or the crevices of a rock, being selected, occasionally, in localities where there are no plantations. The THRUSH's nest, which is bulky, is composed externally of various kinds of grasses and long tough roots of various plants, tufts of poa and stellaria, mosses, and other substances. Within this is a more elaborate structure of fibrous roots, tufts of straws, and beech leaves, interwoven with clay, or some other binding substance, the whole lined or plastered with a thin compact lining of some substance, supposed to be horse-dung, on the surface of which is a coating of chips of straw and slender grasses. The eggs (fig. 31) vary from four to six, of a broadly ovate shape, and of a bright bluish green, with scattered blackish-brown spots, more thickly placed towards the larger end, measuring about an inch and a sixth in length by ten and a half lines thick.

The nest of the BLACKBIRD is scarcely to be distinguished from that of the thrush, and the locality is nearly the same. The eggs (fig. 32) are also from four to six, of a bluish or grey green, freckled with pale umber-looking or reddish-brown markings, denser towards the thick extremity, where the spots sometimes form a sort of ring, slightly longer than the eggs of the thrush, but of the same thickness.

The FIELDFARE is found in these plantations in great numbers in the season; but they do not breed with us. In a paper in the *Magazine of Botany and Zoology*, on "Birds of Norway," Mr. Hewitson describes them as breeding by hundreds in a very limited space, the nest being placed in the forks of spruce firs, some forty or fifty feet from the ground, the eggs (fig. 29) much resembling those of the blackbird, and being five and six in number.

The REDWING closely resembles the fieldfare in many of its

habits, and especially in its nest and mode of breeding, the egg (fig. 25) being about the size of the blackbird's, of a pale greenish colour, slightly purplish toward the smaller end, with reddish brown spots at the other extremity.

Let us skirt the plantation, and listen to the strains which issue from that sycamore; they are loud, clear, and surpassingly melodious; the notes gush out with rapidity, but always clear and distinct. It is the BLACKCAP warbler, and the nest is not far off,—and there it is, in the fork of that bay-tree. It is composed of dried stalks of the goose or some other grass, woven together with tufts of wool and moss, lined with fibrous roots and long hairs. The eggs (fig. 28) are four or five, of a broadly ovate form, three-quarters of an inch long by seven-twelfths thick, of a greyish-white colour, faintly mottled with purplish grey, with streaks and marks of blackish brown.

A little further on, a clump of wild birch and hazel overhanging the brook gives shelter to a whole colony of the titmice, wrens, redpoles, siskins, and other songsters, whose notes, more or less musical, fill the air with an harmonious hum, as they mingle with the murmurings of the brook and with the harsh *chir-r-r-ik* of the ox-tit, the *twink-twink* of the chaffinch, and the alarm note of the robin and the wren. Here, also, is the more familiar blue-tit, or tomtit, as he is more commonly called, skipping about with a frisking motion, as he peers into every chink and cranny, or behind every leaf, now hanging back downwards, now at the topmost branches, head-feathers erected, and *chur-chur*-ing with his petulant cry.

The TOMTIT is the constant denizen of such localities as this; but in the spring it also makes excursions into the neighbouring gardens, where it is a good friend to the gardener, devouring the larvæ of many an insect which would otherwise destroy his hopes of fruit or flower, although John does not always know it. At this season Tom is noisy and vociferous. The nest is built in the chink of a wall, under the thatched roof, in a hole in the trunk of a tree, or, indeed, in any, even the most unlikely localities. In the manuscript notes of Mr. R. D. Duncan, a good ornithologist and close observer, now before us, is described the nest of a pair which had been built in the shaft of a pump-well, at the bottom of his garden: "Although the nest was drenched and partly carried away every time water was drawn, still they persevered in building there, endeavouring to fix their nest near to the piston. Gladly

would we have suffered them to remain, had they not kept the water in a continually muddy state by the materials they used. After their expulsion from the well, which was not very easily effected, they made choice of a hole in an old wall at the back of the house. One day, when passing the place," he says, "attention was attracted by a loud hissing, somewhat like that emitted by a cat, an adder, or a weasel. On looking at the little crevice in the wall, I soon discovered whence the sound proceeded; there sat the agitated Tom, employing this vociferous method of ridding himself of my presence. The nest was composed first of a layer of mixed moss, grass, and wool, with a lining of hair and feathers. The eggs (fig. 7) were very numerous, but I did not count them—some authors say as many as twenty, of a regular oval form, five-eighths of an inch long, and half an inch thick, white, slightly tinged with red, and marked with irregular spots of darker red. When a family made its appearance in this dwelling, the parent birds were so anxious in supplying the wants of their little ones, that I have frequently stood so near, as the birds entered and left the nest, that I might have caught them by stretching out my hand. In the following year they again attempted to build in the well, renewing their efforts for four successive years."

All the tits are, more or less, birds of a social habit, the ox-tit being the most retiring, as it is the largest; the ox-tit mixing freely, not only with its own species, but with the blue-tit and cole-tit. A cole-tit's nest sent to Dr. Robertson from Perthshire is thus described in a note from that gentleman:—"It is rather loosely constructed, and of considerable size, measuring internally two inches and a quarter, externally four and a quarter. The outer part is composed of chips of decayed wood, small larch-twigs, fibres of various plants, and moss, then a thick layer of finer moss and fibre; the inner layers are more compact, and formed of fibres intermixed internally with downy feathers, the fibre being the softer part of the bark of trees, and of the stems and leaves of herbaceous plants. The eggs (fig. 8), six or eight in number, four-sixths of an inch long, and three-sixths thick, white, thickly dotted with light red spots at the larger end, a few similar spots being scattered over the other parts. The nest is usually constructed in the hollow bole of some tree, or in the crevice of an old wall."

But the most singular of this family is the BOTTLE-TIT, or long-tailed muffin, poke-pudding, or mum-tuffin, and long-tailed mag, to all of which names it hails in different localities.

Except the gold-crested wren, it is the smallest of British birds; at the same time, its frame is nearly buried in a mass of soft and bulky feathers, which are left loose and tufty, so that it seems to be muffled to the chin, the eyes and nostrils being nearly concealed by the bristly feathers at the base of the bill, while the tail is full six inches long. In such spots as we have described, that is, in plantations and straggling birch and hazel woods overhanging a brook, the long-tailed tit flits along the tops of the taller bushes, searching the leaves and twigs, restless and ever in motion, streaming along in undulating and rapid flight, in which it has been compared to a flying arrow or dart, to which its small body and long tail gives it the appearance. The nest has already been described; the foundation is laid in the cleft of a tree, after a careful examination of the situation, and trying the hole they have chosen by flying in and out again several times. The foundation is formed of moss; the walls are built up of small portions of lichens, white and grey, mixed with fine green moss, feathers, and the softer leaves of deciduous trees, intermixed and woven with wool and spider's webs, giving them consistence by pressing the whole with their breast, and by turning themselves round repeatedly in all directions. They are very jealous at first at being watched, but soon get tame and accustomed to the observer; the male bird watching on the branch of a tree, as close to the nest as possible, while the hen bird is building; when she has disposed of her contribution to the nest, the other goes in while she watches: when both have finished, they fly off together to collect materials. Sometimes the nest is placed in the fork of a tree, a long pyriform, six inches long, formed externally of lichens, bound together with blades of grass, downy filaments, and cotton threads, and lined with feathers. In this nest they lay as many as a dozen of the smallest of eggs (fig. 6) of an oval form, rounded at the smaller end, and about half an inch long and five-twelfths broad, of a colour white, marked with numerous faint-red dots at the larger end.

Pursuing our walk, we soon come across the nest of the ROBIN-REDBREAST; for, although Robin is a very domesticated sort of fellow when the snow covers the ground, and even earlier in the season, when the wild flowers have faded and the trees in the woods become bare, and the evenings chilly,—with the first glimpse of spring he disappears from the haunts of men, betaking himself to woods and thickets, where, doubtless, his pert, forward, and pugnacious character does not fail to exhibit

itself. Towards the end of April, and even so early as March in some well-sheltered places, young birds have been found in their nests. Robin is by no means particular where he builds his house; under a hedge or bush, on a mossy bank, in a ditch, even on the ground, but not in tree, shrub, or hedge. It is a bulky nest, rather loosely constructed; in fact, Robin is not so skilful an architect as poets and naturalists have painted him. Its foundations are a layer of moss and decayed leaves of trees, with broad blades of grass, mosses of several species loosely interwoven with a few skeleton leaves; the lining is of hair and wool, a quarter of an inch thick, so that it appears Robin is partial to a soft bed. The eggs (fig. 18) are five or six; they are of a regular oval form, about three-quarters of an inch long and four-sixths broad, of a delicate reddish white or brownish tinge, fading into a brownish white at the small end, and faintly freckled with palish red, the brownish markings sometimes forming a belt there.

In our wood the GOLDFINCH is an habitual resident, but is by no means so plentiful as "in the days when we were young;" for improved agriculture, whose aim is to root out weeds and thistles, from which the smaller birds draw much of their support, has not tended to their increase. They nestle in woods, in orchards, in gardens, and in hedgerows; sometimes in the tops of tall timber-trees. The nest is composed of grass and moss, with an external covering of lichens elaborately interwoven with thread, twigs, and other substances, and lined with wool and hair, the down of various plants, and other delicate filaments, and will be ready for the reception of the young pair by the middle of April, or thereabouts. The eggs (fig. 13) are four or five, about three-fourths of an inch long, and half an inch thick, of a bluish-white, or rather pale bluish-grey colour, sometimes tinged with brown, and marked with a few spots of greyish purple and brown, and occasionally having a dark streak or two.

Having traversed about half of the plantation, we reach a spot where the little river issues from a sort of defile and passes outside the wood, under the retaining wall which supports the pathway. Under the banks of this wall, just on the edge of the wood, at the time I write of, Jenny (English) or Kitty WREN (as the Scotch say) had built her nest, and in trees overhanging it a whole colony of wrens made the woods re-echo again with their incessant roundelays as they flitted from branch to branch, or frisked about among the topmost

boughs, with their chirping and not over melodious note. This becomes a sort of prolonged *chirr*, as you approach nearer, while the bird hops from one bush to another, jerking its tail, which it keeps nearly erect, hopping about with great alacrity, continually uttering its rapid *chit, chit, chirr*:—

“Thou fairy bird, how sweet to trace
The rapid flight of thy tiny race;
For the wild bee scarcely waves its wing
More lightly than thine, thou fairy thing.”

In liveliness and activity, indeed, it rivals all its congeners, which has originated a pleasant little fable among the inhabitants of the distant Hebrides:—“The birds are all assembled, and the eagle is boasting of his strength. He can mount higher in the air than any other of earth’s inhabitants, but is flatly contradicted by the wren, which challenges him, and a trial of their powers ensues. Eyeing his puny rival with great contempt, the majestic eagle spreads his huge wings, in sign of acceptance of the challenge, rises up into the air with rapid gyrations; not so rapidly, however, but that the wren has nimbly perched on the eagle’s back, where it concealed itself among the feathers. Up rose the royal bird, high above the mountain; up beyond those cloudy streaks of grey vapour; up beyond cirri and cirro-cumuli that float in the blue ether; up till he seems a mere point to goshawk and peregrine; up till he is at last compelled to stop for breath, gasping with swollen eyes and palpitating heart; he can rise no farther, and, spreading wide his wings and tail, he floats in the dazzling light; he is satisfied the little vain-glorious thing which had defied him is left a mile behind at least. But lo! up starts the wren from its concealed perch; with a hop and a jerk of its tail, and with a glance of pride, it springs up into the regions, higher still, where it floats for a moment, and sings its song of triumph; it seizes a feather from the eagle’s neck, and descends to receive the prize,—‘for strength is no match for cunning.’” Such at least is the Hebridean moral, as related by Macgillivray.

In this “bosky dell,” just under a mossy bank, which formed a coping to the wall, where a stone had given way, the nest was placed. It was large for so small a bird. Outwardly, it presents the appearance of a mass of decayed vegetable fibre, of an irregularly rounded form; its foundation is a layer of decayed ferns and other plants, herbaceous and woody. The outer wall of the nest is of the same kind of

material, interwoven with mosses of several species, which are fresh and green, curiously interwoven with fibrous roots and hair of various animals; the inner surface is spherical, and smooth as a piece of felt, some three inches in diameter, and it is arched over with fern leaves and straws. To the height of two inches there is a lining of soft large feathers, chiefly pheasants and wood-pigeons' with a mixture of ducks' feathers. The oblong aperture in front is low and arched, two inches wide by one and a half in height; its lower edge formed of slender twigs, herbaceous stalks and grasses, the filling or plastering being "made good," as a workman would say, in a very workmanlike manner.

Some wren's nests are without the internal layers, and entirely of the hypna moss, others have the lining of the feathers of the domestic fowl; and far away from human habitations, in the wild glens of the Grampians, the nest is found, in some rocky chink, in which an Alpine torrent flows between rough heathery banks, with overhanging blueberry twigs. Nor does the wren disdain altogether the haunts of men for its nest: a hole in a wall, in the thatched roof, in a tree, in an ivy-covered wall; in fact, it is not capricious in its choice, but readily adapts itself to circumstances.

The eggs (fig. 15), five or six in number, are extremely delicate and pretty, of a rounded oval form, four-sixths of an inch in length and half an inch in thickness; pure white, with some scattered dots and streaks of light red at the larger end, but varying in number of dots in different eggs even of the same nest.

The CHAFFINCH is a constant resident on the skirts of such plantations as we have been describing; avoiding the depths of the woods, and especially fir-plantations, orchards, and hedges—rows,—the outskirts of copses and groves are its most favoured haunts. In the fork of a shrub, often on a tall tree, on the ivy-covered wall, or in a thick hawthorn hedge, its nest will frequently be found. Externally, it is composed of moss, covered with ashy-coloured lichens and interwoven with hairs and woolly fibres; its interior is lined with feathers, mixed with cow and horse's hairs, and the seed-down of such plants as the thistle.

The eggs (fig. 1) are four or five in number, of a regular oval form, about three-fourths of an inch long and half an inch thick, of a purplish-white or rather a reddish-grey colour, slightly spotted with reddish brown, with a few irregular lines of the same hue.

The HAWFINCH, or grasbeak, is becoming a rare bird in this country, being shot down by collectors for stuffing wherever it is seen, and naturalists have expressed great doubts of its breeding in this island. It has, however, been not unfrequently found of late years in the hornbeam pollards of Epping Forest, and also in Lord Clifden's grounds at Roehampton, where two nests were seen in 1835. The nest was built at the extremity of the branch of a horse-chestnut tree, near the lodge, and was composed chiefly of the twigs of privet and birch, and lined with hair and fine grass; the nest is shallow, and the twigs loosely put together.

The eggs (fig. 2) are three to five, of an ashy-grey colour, tinged with green, and marked with brown spots and bluish-black lines.

The nest of the BULLFINCH is found in similar localities, but later in the season; about the beginning of May it begins to build its nest, being a loosely-formed fabric of dry twigs, placed at no great height on the fork of a spruce-fir tree, or hawthorn-bush, lining it with fibrous roots of small plants. It is a denizen of the woods, and rarely found where roots are absent, for it lives the greater part of the year in thickets and hedges, only betaking itself to the fields in search of seeds, and to the gardens in search of the seeds of flowers and fruits. The eggs (fig. 4), four or five in number, are of a broadish oval form, of bluish or purplish-white colour, spotted and streaked with purplish grey and reddish brown, about three-quarters of an inch long and a little over half an inch in greatest width. The bird is remarkable for its undulating flight, occasionally protracted, as it flits along from the hedges and roads; it is an active, lively bird.

The SISKIN, while it is found among us in considerable numbers, does not seem to breed south of the Tweed; at least none of our naturalists have recorded more than an occasional pair. Macgillivray and his correspondents were more fortunate; Mr. Weir, of Boghead, having observed the small nest of a pair built in the fork of a spruce fir. It was built on a branch, about four feet and a half from the ground, one side resting against the stem, and one of the best concealed nests he had seen. The nest is cup-shaped, with walls an inch and a half thick, and the interior of the nest an inch and a quarter in diameter, formed, externally, of hypna moss, held together by hairs and fibrous roots interwoven; the edges interlaced with grass and root fibre; the lining, half an inch thick, formed of seed-down and hairs densely matted together.

The eggs of the siskin (fig. 3) are five or six in number, of an oval shape, five-eighths of an inch in length and half an inch in breadth. They vary considerably in their colour and markings, but the prevailing colour is a pale bluish-white, shaded at the thick end with purple and a few reddish-brown dots.

ROCK AND WALL-BUILDING BIRDS.

There are some birds whose breeding-places are neither woods nor commons, but wild rocky places, old ruins, walls near dwelling-places, and lofty trees near to houses. Most of the falcons and the raven belong to the first of these; jackdaws and owls belong to the second; starlings, redwings, sometimes the robin and the whitethroat, belong to the third; the magpies and others of their congeners to the fourth.

A vision of the past rising before us, presents the ruins of an old sixteenth-century castle, with pointed turrets; the ancient "pleasaunce" has returned to a state of nature, overgrown with thickets; a grove of ancient plane-trees, of the largest dimensions, occupy one of its sides. The castle is the haunt of the barn-owl, the jackdaw, and a colony of pigeons, which have almost become wild from the deserted state of the place. Among the trees a colony of magpies had established their home, as long as we can remember, and many a fruitless effort had been made to scale the trees, but their girth was all too large and the branches too high for tiny limbs to accomplish the adventure. In the mean time, from this vantage-ground, Mag, watching her opportunity, had pounced upon and carried off to her castle many a young chicken, almost from beneath their owner's eye. At length the depredations could no longer be borne; a war of extermination was declared, which only terminated when the last of the magpies was destroyed.

The nest of the MAGPIE has been described at page 293. The eggs (fig. 20), from four to six, although differing greatly, are generally oval in form, an inch and a half long, rather pointed, and about an inch in diameter. They are frequently of a pale green, freckled all over with brown and purple, rather a dusky looking egg, but handsomely shaped.

The JACKDAW as well as the owl was a constant inhabitant in the ruins we have indicated. The former's nest is built in some dark recess, but generally beyond the reach of the curious, under

some projecting coping or ancient waterspout. On a foundation of sticks a quantity of straw is laid, and a lining of feathers and other softer materials; here are deposited from four to seven eggs (fig. 22), of a broadly oval form, an inch and a half long and an inch in diameter, of a pale greenish blue or bluish white, with small round spots of dark brown or purple at the larger end, laid about the middle of May.

The JER-FALCON never having been known to breed in this country, its nest is only known to us by description, and the eggs by imported specimens; they are, in size and shape, like those of the domestic fowl, of a reddish brown, dashed over with irregular markings and spots of a darker shade. The peregrine falcon is becoming very rare with us, but breeds on many parts of our shelving rocky coasts, from the Isle of Wight to the Murray Frith, and at many intermediate stations. It is by no means particular as to its nest, and very commonly appropriates one deserted by the raven, or some other bird, in which it lays its three or four eggs, of a deeper reddish brown than the jer-falcon; two inches and an eighth in length, by an inch and three-quarters in diameter, blotched with a deeper brown and in larger blotches than the former.

The elegant *Falco Æsalon*, or MERLIN, haunts the heaths and moors which abound in the North of England and in Scotland. Some authors say it builds a nest of sticks externally, thickly lined with wool, in the pine woods of Norway, which is at variance with the habits of the bird, as far as is known in this country, where it lays its four or five eggs in a hollow in the ground, without further preparation. Of the same reddish-brown with those of the peregrine and jer-falcon, but without the blotches, being slightly dotted over with greenish-black spots, the egg is about an inch and a half in length by an inch and a quarter in diameter.

The KESTREL, which is the only falcon's egg our space permits us to illustrate, is more widely diffused, and better known than any of the other hawks. Breeding in rocks, in some old crumbling ruins, or in the trunks of hollow trees, and generally appropriating the deserted nest of the jackdaw or the magpie, it lays four eggs (fig. 19), smaller than any of those previously described, being only an inch and a half long and an inch and a quarter in breadth, but strongly resembling that of the peregrine falcon in colour and markings. The eggs vary from three to five, are of a broadly elliptical or roundish shape, of a pale reddish-orange, patched all over

with a dull brownish-red. The GOSHAWK has the largest egg of all the falcons, being in shape and colour as well as size very much like that of the common duck; it is scarce with us, but common in the North of Scotland, breeding, as Mr. Low informs us, on the rocks of the sea-coast, on the rocky Grampians, and on the wooded banks of the Dee. In the forests of Germany it builds in a high tree on the outskirts of the forest, laying three or four eggs of a bluish-white colour, two inches and a quarter in length by an inch and a quarter in diameter, and without spots.

The egg of the SPARROW-HAWK is the most marked of all the falcons' eggs, but remarkable also for its variations; it forms a roundish oval, an inch and four-eighths long by an inch and three-eighths broad, of an ashy-grey colour, covered at the larger end with brown blotches and streaks. The sparrow-hawk is most frequently found to appropriate the deserted nest of a crow or magpie. Sometimes the eggs are found on the ledge of a rock or some lofty cliff. Mr. Selby says it also builds a shallow nest in some low tree or thorn-bush, the material used being slender twigs, on which it lays.

The OWLS make little preparation in the way of nests; a hollow in the ground, lined with the compressed castings of the birds, or a similar accommodation in the hollow of some tree,—the ledge of a rock or a hole in the wall of some ghostly ruin, seems all the preparation to which they have recourse; on this bed, sometimes so shallow that the wind would seem able to roll their eggs away, the owls lay their two or three eggs, which vary much, both in size and shape, but are almost invariably of one colour; a whitish blue, without spots, some of them round, others oval, more or less acute.

He who would find the nest of the RAVEN must now follow him far from the abode of men, scale the rocky cliffs of the seashore, or the shelving rocks of remote hilly countries, the centre of a grove, or some ancient oak; for persecution has driven this "bird of evil omen," as it is sometimes considered, away from its old haunts, the ruined tower or ancient steeple. Sometimes, however, it is still known to build its nest in some lofty tree, and if left undisturbed it will return successively for many years, refurnishing its nest annually with a lining of the fur of the rabbit and other animals. The nest is large, composed of a foundation of sticks crossed and plastered together with clay, with a lining first of fibrous roots, and inside a carpet of fur, wool, or hair. The eggs (fig. 21) are four, five,

or six in number, two inches in length and an inch and five-twelfths in diameter, of a dirty greenish brown, with thick blotches on the larger end, but with several important variations, from a greenish grey with streaks of reddish brown, up to greenish brown in different eggs.

The STARLING builds its nest early in May or towards the end of April, in the crevices of rocks, in caverns, in holes under grassy banks, in holes in a wall, or in the trunk of trees. It is a bulky structure, composed of grass and other plants, with a rough lining of hair and feathers. The eggs (fig. 24) are five or six, of an elongated oval form, of a delicate feeble greenish blue, and about an inch and a quarter long by three-quarters in diameter.

The REDSTART, like the starling, places its nest in the cavity of a wall or the trunk of a tree, in the chink of a rock, or among stones. The nest is bulky, composed of fibrous roots and moss, plentifully lined with hair and feathers; the eggs, six or seven, of an oval form, three-quarters of an inch long by half an inch in diameter, and of a light greenish-blue, and the favourite locality which it affects for nidification is the old wall of a garden.

The RING-OUZEL, on its arrival in April, betakes itself to the open hilly country, sheltering itself in the furze and juniper bushes, if within its reach, in preference to any other. In this situation its nest is usually found; sometimes also under the face of a rough bank or in fragments of rock. It is composed of rough coarse grass, plastered internally with mud and lined with finer grasses. The eggs (fig. 30) are from four to six, of an oval form, about an inch long by over three-quarters in diameter, of a pale bluish green, freckled all over with pale brown.

The red-backed shrike BUTCHER-BIRD, or fly-catcher, as this bird is sometimes called, is common enough round London, and in the western counties, especially among the orchards of Gloucestershire. It frequents the margins of woods, thickets, and tall hedgerows, furze-covered commons, and open downs in the north as well as the south, being, in fact, very widely diffused. About the middle of May,

When buttercups and daisies deck the ground,
And blackbirds whistle clear,

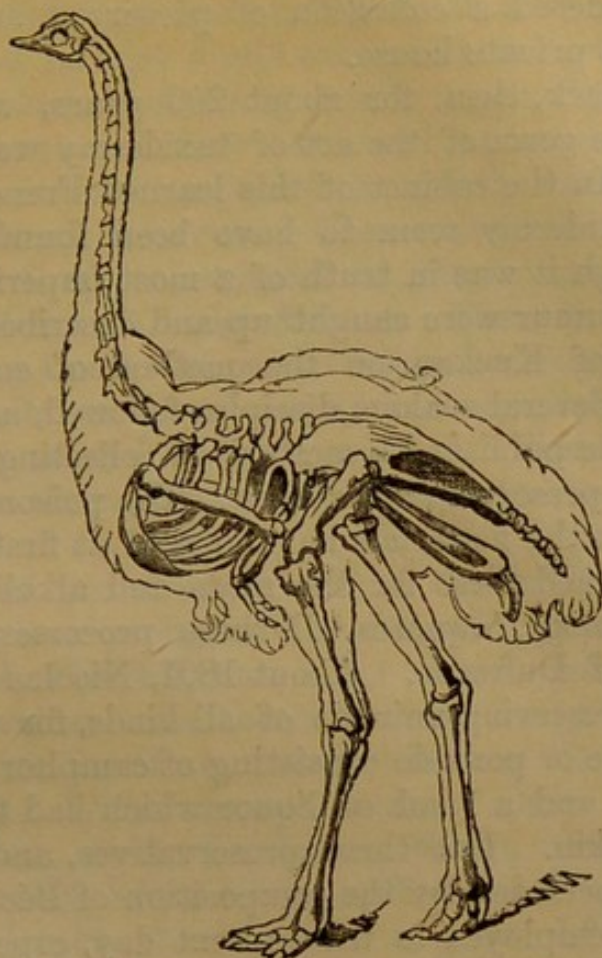
by the borders of some grassy meadow, ere the oak or the ash have yet unfolded their buds, when the apple-blossom and the

pink-eyed florets of hawthorn rival each other in the hedge-rows, the sparrow-like note of the shrike may be heard, and the bold black head seen, as he perches, sentinel-like, on some twig or spray. The nest is also found in some shady locality, —a large mass of twigs on the outside, with fibrous roots of plants and green moss, with an internal lining of hair, put together in a somewhat slovenly manner, not very unlike the nest of the missel-thrush, is the butcher-bird's performance.

In this nest the red shrike lays four or five eggs, of an oval shape, about an inch in length by about five-eighths in breadth, of a reddish white, covered with brown spots, which form a band round it at the thick part.

The nest is sometimes selected to receive the egg of the cuckoo, and the bird even bestows its paternal care on the young cuckoo when hatched. In the *Linnean Transactions* for 1861, a paper states that a pair of red shrikes were observed feeding a young cuckoo which was perched on the branch of an oak, a fact which has been confirmed by Temminck, who says that the cuckoo will sometimes lay its egg in the nest of this bird.





SKELETON OF THE OSTRICH.

PREPARING AND STUFFING ANIMALS.

THE art of preserving objects of natural history, to which the name of taxidermy is sometimes given, from the Greek word implying the arrangement of skins, is of French origin and of recent date, probably not later than the present century; the more ancient collections, including the celebrated one of Réaumur, having been only a simple collection of dried skins suspended on the walls of the saloon. The Germans appear to have been the inventors of a mode of preparing and setting up birds by placing feather over feather upon paper so as to imitate nature; but they were very imperfect imitations, scarcely conveying an idea of the bird represented. In our day the taxidermist rivals Nature herself, studying the passions as well as the attitude and shape of the object he wishes to preserve. At the same time he has, by the use of scentless disinfectants, overcome much of the disagreeable smell which

formerly rendered a collection of preserved animal forms so offensive in a private house.

Looking back, then, for about 200 years, we come to the age when the germ of the art of taxidermy was practised by Réaumur. In the cabinet of this learned Frenchman the first traces of taxidermy seem to have been found as now practised, although it was in truth of a most imperfect kind. The ideas of Réaumur were caught up and described by Manduyt. The letters of Kuckau on the method of embalming birds succeeded. Several zealous disciples followed, and in 1797 the Abbé Manesse published a method of collecting and arranging animals, and preserving their skins. The poisons and aromatic products were the materials he employed at first, but he afterwards abandoned these for the acids and alkalis. Daudin, in his "Ornithology," quotes all these processes, and adds to them those of Dufresne. About 1801, Nicolas published his method of preserving animals of all kinds, for which he made use of a paste or pomade consisting of camphor, potash, alum, oil of petral, and a kind of liquor which had the property of tanning the skin. But these preservatives, and many others, have been superseded by the composition of Bécœur,* which is the only one employed in the present day, especially for large animals.

The art of preparing and stuffing any animal is one of great simplicity, but requiring clever manipulation, good taste, and habits of observation so as to note the attitude assumed by the different animals. Every one can, with a very little preparation, be made to perform the process; but this is not sufficient; as in painting and other fine arts, so there is an immense gulf between the mere mechanical process by which a bird or animal is set up and mounted, and another in which the exact form and attitude is imitated, and the divers colours which ornament it are preserved. In order to imitate its attitude, the manners and habits of the species must be

* The arsenical soap prepared by Bécœur was as follows:—Five ounces of camphor, two pounds of arsenic (in powder), two pounds of white soap, four ounces of white chalk (in powder), and two ounces of salt of tartar. Mix the ingredients by melting the soap, previously cut into thin slices, in a pipkin, with water, and over a gentle fire. When melted, add the salt of tartar and chalk, and withdraw the pipkin from the fire; now add the arsenic, stirring it in by degrees with a wooden spatula; then, having reduced the camphor to a powder in a mortar, add it to the mixture, and stir till thoroughly incorporated, adding spirits of wine, till it is of the consistence of a thick paste; pour it into jars, and cover, when cool, with a bladder, and put it away for use, marking it "Poison."

studied profoundly ; not less so, indeed, than is required from the painter ; and he who would succeed in the art of mounting animals, must have something nearly approximating to the painter in his powers of observation and representation.

Some writers have attempted to reduce the various attitudes assumed by animals to a rule. Conventional arrangements of this nature have no counterpart in nature, and must result in abortions outrageous to good taste. There is only one rule to be followed by those who would follow and represent nature. Study the habits of your model, and understand well the anatomy of the animal to be reproduced. Then only can you hope to impress the natural and life-like character which really belongs to it.

The means of preserving the skins of vertebrated animals from insects is now pretty well understood. The Memoirs of Duhamel, Pinel, Chaptal, and some others, possess information of great value. To these Dupont has added his own practice, to which Swainson, the Bowditches, the late Captain Brown, and Mr. Waterton, and some of their more humble practical followers, as the Gardeners, Wilson, Cooke, and some others, have scarcely left anything undiscovered. And now taxidermy, in the hands of many men of great ability and observation, has reached a point of great perfection.

I must not forget, in my enumeration of artists, the admirable collection of life-like animals which ornamented the German section of the Great Exhibition of 1851. Those remarkable specimens of the taxidermist's art were exhibited by H. Ploucquet, of Stuttgart, and represented a boar-hunt and a stag-hunt of the natural size, and the same in miniature ; groups and nests of different birds of prey ; several hawks pouncing upon their prey ; numerous groups, in which stuffed animals are made to imitate the attitudes and actions of men, with such an expression of comic intelligence as will not soon be forgotten by the spectators who gave their attention to the subject. They were, perhaps, the most beautiful specimens of the art ever produced ; at the same time, the mirth-exciting groups owed quite as much to the comic invention of the artist as to the taxidermist's art.

It is almost impossible to estimate the extent to which a taste for natural history has been promoted by this art ; for if, at first, curiosity has been the chief motive which led to its pursuit, that motive has been inevitably followed by a higher one, namely, the study of the habits and actions of animals, which

PREPARING AND STUFFING ANIMALS.

leads to other habits of observation; and many a collection commenced from motives of mere curiosity, as it increased in extent, has of necessity led more or less to the study of comparative anatomy. The art which brought the facts together, and which necessarily leads to analysis, conducts insensibly to synthesis—to tracing effects to their cause. Even the capture of the animals makes the collector acquainted with the peculiar habits of different species. The chase makes him acquainted with the instinctive shifts by which animals of all kinds evade their pursuers.

HINTS TO TRAVELLERS.

An internal decay, named putrefaction, tending to separate, and resolve the components of the body to its elements, attends all animal and vegetable substances immediately after the vital principle ceases; and unless this tendency to decay is counteracted, the form and characteristics of these bodies would soon become valueless, either for the investigations of science or as the objects of a rational curiosity. There are various processes by which this is accomplished. In the case of birds, and most animals, this is done by removing the skin and drying it, after purifying it by preservatives. Others, as serpents and smooth-skinned animals, are preserved by being plunged in liquids which have the power of checking this tendency to decomposition.

Water dissolves divers parts of certain bodies, not by checking decomposition, but, on the contrary, by accelerating it in some cases. Water charged with alum acts as a preservative on skins of animal fibre, but in so weak a manner that it cannot be relied on for any constant results, especially when the skin is charged with common salt; its use is limited to fruits, which it will preserve for some time. The spirits of turpentine, sometimes employed, damages the tissues, and has a tendency to become thick and viscous, and should be avoided. Oil may preserve some animals, as mollusks and certain fish. Sea-salt, or muriate of sodium, presents no advantages as a preservative; it alters both the form and colour of objects submitted to its influence. Some fishes with very thick and hard skins are subjected to it with advantage; however, in such cases it should be frequently changed and fresh salt added. Employed with care, it may be used when arsenical

soap or paste cannot be obtained in sufficient abundance. A solution of the finest table-salt in water is even recommended by some as a substitute for alcohol; but it is doubtful if this has been yet sufficiently tested. Corrosive sublimate has been proscribed by Péron, the French naturalist, who enumerates its defects; but, carefully employed, and taking proper precautions to avoid its poisonous effects, it is highly effective in a variety of cases. The sublimate salt operates as a rapid, enduring, and energetic desiccating medium, reacting powerfully upon all animal matter, modifying its character in a peculiar manner, and rendering the matter subjected to it unalterable when it has been sufficiently saturated. Exposed in the open air, it facilitates drying and prevents the slightest movement towards decomposition in the skins. The sublimate seems to combine entirely with the air; the liquor, which contains only a weak proportion of this very insoluble salt, is soon exhausted unless the precaution is taken to add fresh sublimate from time to time, as the process of saturation goes on. Finally, when the skins will no longer absorb the liquor, the preservative process is complete; they are then laid out to dry.

But the medium for preserving on which we may rely most securely is alcoholic liquors, especially brandy or spirit distilled from the vine. Arrack, rum, and spirits distilled from grain, while they serve the purpose, are less adapted for zoological preparations than the spirits obtained from the vine; and where it is necessary to employ the alcohol of the country, the most highly rectified spirit will be found best adapted to the purpose. Nevertheless, alcohol has the disadvantage of deteriorating the tissues as well as disfiguring them, and the strength of the liquor should be reduced in order to avoid this. The more perfect the transparency of the liquor the better is it adapted for the purpose. Pure alcohol destroys the colour of animals immersed in it; much concentrated, it destroys the animal tissues. Alcohol united with acids has been very successful, when diluted with water. For larger animals, however, the strongest alcohol may be used. In the absence of pure alcohol or spirits of wine, add to the spirits of the country some dissolved camphor, which, without adding to the strength of the liquor, is found to be sufficient for the preservation of most animals; while the camphor protects the colours from change. A mixture in the proportion of two parts distilled water and one part alcohol, adding two ounces of sulphate of aluminum to every quart of the liquid, is recom-

mended; but the liquor prepared by M. Guyot, having a high reputation in France, is made as follows:—Take twenty pints of the best Cognac brandy, and withdraw by distillation five pints; add to what remains equal parts of well water and a pound of the green flowers of lavender, and again distil them to dryness. This done, take twelve parts of the spirits of wine which has been distilled. Mix them with sixty-nine pints of well water, and add to the mixture equal parts of the liquid furnished by distillation. This is the Guyot preserving fluid, which is perfectly pure and limpid, and of a bitter taste and slightly aromatic smell, containing only one part of alcohol to thirty of water. Monro adds small doses of nitric or muriatic acid to this liquor. Ruysch used spirits of wine distilled with the black powder of cardamine and camphor.

Before immersing objects of natural history in this liquid, they should be carefully washed in many baths of pure water at a moderate temperature, more especially all marine animals and crustacea, which would be destroyed without this precaution. When immersed they require to be watched, and the liquor rendered weaker or stronger, as may be required.

“The spirituous liquor,” says Dufresne, “is still preferable to all other modes of preservation.” We recommend to travellers to put into the spirit all the fish they preserve; but let us indicate the precaution to be taken for their transport. In long voyages furnish yourself with little barrels, holding from thirty to sixty pints, with iron hoops. At one of the ends make a species of valve, with a bevel about six inches long, fill the cask with the liquor to about two-thirds. When you have a fish to preserve, and having taken note of all connected with it, roll it up in a piece of linen and tie it, attaching to it a piece of wood on which a figure has been carved corresponding with that in the note-book, and plunge it into the liquor through the valve, which is again hermetically closed. Should the fish show by the swelling ovarium that she is full of eggs, they should be removed by an incision in the anus, plunging the knife towards the anterior part of the ventre, and extracting the eggs, which would soon escape, and reduce the liquor below the required strength, if left in the fish.

As a layer of fish is deposited in the barrel, a layer of cotton should follow, so as to prevent them from shaking with the motion of the ship. The barrel should not contain more than two-thirds of fish, the remainder being made up with cotton and liquor.

PROCURING SUBJECTS.

The preservation of serpents requires still fewer accessories. Smaller species are usually plunged at once into a bottle of spirits, previously making a cut in the abdomen, by means of which the spirits can be introduced so as to preserve the intestines from decay. In the larger species skinning becomes necessary, when great care is required to avoid injury to the scales, as much as must be taken with the tails of lizards. The head also requires some care, being the most valuable characteristic of its zoological character.

PROCURING SUBJECTS.

He who would be his own procurator as well as his own curator must rise with the sun, or, rather, before it. The equipment required, supposing the locality fixed upon to be within walking distance, is a warm rough coat, which is not too cumbersome and which will not be damaged by brushing through the underwood, for the objects of our search lie in the depth of the woods; strong boots and leather gaiters, for he will have to dash the early dew from many a blade of grass; a game-bag well furnished with inside-pockets, in which the smaller birds or animals may be placed when secured, and subjected to such necessary preparation as can be bestowed on them on the spot. Besides these, a box or boxes in which such eggs as fall in his way can be deposited.

He has next to provide himself with a gun,—that indispensable object of the fowler's occupation. My own practice is to keep a gun at two or three farmhouses in the country where I am known, choosing the best localities I can conveniently select, and when I require specimens or my leisure permits, I can either slip down by a very late or very early train, and be on the ground I have selected by early dawn. My gun is a double-barrel, 13 bore. I load one barrel with two drachms of the best powder and an ounce and a half of No. 8 shot; the other with the same quantity of powder and No. 6 shot. I am thus prepared for whatever may turn up: with the smaller shot I can bring down any of the smaller birds without injury to the plumage, and should any of the larger kinds come in my way, I am also prepared for them—advantages which are obviously unattainable with a single barrel; for, to shoot a small bird with the larger shot would be to tear it all to pieces, and render it quite unfit for stuffing. The bird being shot, I

have found by experience that it is best to let it lie until the blood round the wound has coagulated, and then, carefully pulling the surrounding feathers on one side, I remove it with a penknife, put a little cotton-wool into the wound and also into the mouth. After this I smooth down the feathers, wrap it carefully in a sheet of soft paper, and place it in one of the pockets of my knapsack, while I pursue my sport.

I am quite aware that some fowlers prefer the smaller dust-shot; and for some of our more delicate birds, as the golden-crested wren, the bottle-tit, and some others even in our own country, and the humming-birds of the tropics, I believe that the concussion of the powder and wadding is enough to bring them down. But I think less damage arises from No. 8 than even the smaller shot, inasmuch as the latter is thrown in a denser mass against the bird, and does infinitely more damage to the plumage.

Having provided himself with the necessary appliances of his intended sport, the young naturalist has next to consider the character of the object of his pursuit. All animals have their assigned place in creation. Some are only to be found in the corn-fields; others haunt the woods; while others again abound in rocky and mountainous districts, on the sea-shore, or on the river's bank; and he who has set his mind on any particular object must acquaint himself with the locality which it affects most. It is equally indispensable to know the best season for its capture or destruction; that is, the season when its fur or plumage is brightest, or when the skin is in the most proper state for preservation. Nor is it unimportant, in anticipation of a successful search, to know the hour of the day at which it is abroad. It has been attempted to construct a floral time-piece; another might be constructed of greater exactness, calculated upon the basis of the regularity with which animals pursue their avocations: some creatures are only abroad at noon-day; others, like the lark, are abroad with the dawn. At night the nightingale becomes the most prominent songster of the grove:—

“ An April night

Would be too short for him to utter forth
His love-chant, and disburden his full soul
Of all its music ! ”

Accordingly it is pretty well established that the nightingale, if it does not sing all night, sings late in the summer evening and early in the dawn. Farther on in the night the owl is

heard—haunter of ancient ruins—he flits about with melancholy, sepulchral sounds, with his Too-who, too-who!—fitting sounds for the “ivy-mantled tower,” his usual abode. Some knowledge of the animal or bird which is to be the object of pursuit is thus indispensable. In the season of reproduction, when incubation has made some advance, it would be both wicked and cruel to destroy the female. Again, in the moulting season it would be waste of time as well as cruelty to attack them. The best season, perhaps, is the early pairing season: the plumage or fur is then most brilliant; the migratory species have recovered from the effects of their long journey, and their lives are redolent of hope and joy. It is, perhaps, a piece of cruelty to intercept so much happiness; but then how are collections to be made without exposing collectors to the charge? In my own experience I have found the best localities to be some one or other of those long green lanes, between high hedgerows, which form the charm of our rural scenery. If an occasional clump of young plantations intervene, there will be found the titmouse, chaffinch, yellowhammer, and most of our songsters, in great abundance; and should there be a watercourse by the side of the hedgerow, blackbirds and thrushes will be found. For larks you must look in the open grassy fields, or among the waving corn in summer; in winter they nestle and shelter themselves under the broad leaf of the turnip and other green crops.

Magpies, jays, woodpeckers, and the wood-pigeon haunt the more densely-wooded districts; and there also must the owls and the falcon tribes, which breed with us, be sought. Rooks, as is well known, affect some ancient grove near some ancestral home, the loftiest branches of which they colonize, hundreds of them together; whilst the carrion crow, often confounded with the rooks, builds in some solitary tree in a hedgerow. Starlings are found in short decayed trees and deserted towers, when not assembled in flocks. I have a kindly recollection of one of these amusing birds which I once possessed. His usual morning’s salutation to me was a “Good morning, sir. Pretty creature. Jacob’s mistress pretty creature,”—Jacob being his own name. He would then imitate the canary so closely as to render it nearly impossible to distinguish one from the other in the lower notes.

The haunts of the moor-fowl, dabchick, and coot, and other fresh-water birds, are, of course, widely different from these localities. Among the flags and reeds by the river-side their

nests will be found. There also the reed-warblers build a nest, which they suspend by means of a glutinous clay to the stumps of four reeds, adjusted to it so exactly, that while it almost touches the water, the most boisterous wind rarely immerses it. The water-ouzel builds a nest and lives in it under some old mossy bank overhanging the water of some running stream, and in similar situations the kingfishers are found to nestle under the bank—sometimes in the hole of a water-rat.

Nests and eggs are somewhat foreign to my present pursuit, but I cannot avoid giving a word of advice on this subject. Both are important accessories to mounting birds, and I find great advantage in using the real nest and eggs in that way; unfortunately the nests are generally too bulky to be easily moved. I find the most convenient way of preserving the nest is to wrap cotton round it until I get home. As for the eggs, I dispose of them for the moment in round wooden boxes filled with cotton-wool, which I provide myself with for the purpose. On reaching home, I take the eggs and bore a small hole at each end with a small drill, which I make myself by filing a piece of wire to four square sides, and then to a sharp point; having drilled a hole with this point, I blow out the contents of the egg with a small pointed blow-pipe and place a label over the hole containing the name of the bird. I recommend the young collector to do what I did.—place the eggs back in the nest until he gets perfectly acquainted with it. In this manner I preserved, and made myself acquainted with a large collection of good eggs.

While on this subject I may mention some of the various places in which many birds construct their nests, so that the learner may have some idea where to look for such birds or eggs as he may require. The kestrel and sparrow-hawk usually build in trees in woods, or they take the deserted nest of a rook or crow; owls, woodpeckers, titmice, wrynecks, nuthatches, and starlings, frequently build in the hollows of old trees; blackbirds and thrushes in old stumps, a little above a bank near to some watercourse; nightingales nestle among the dead leaves at the bottom of a thick hedge, requiring sharp eyes to distinguish them from the mass of leaves; the missel-thrush, or storm-cock, as he is sometimes called, chaffinches, goldfinches, and greenfinches, build in orchards, near dwelling-houses; while the larger falcons and eagles build on precipitous and nearly inaccessible rocks.

The kind of cabinet I would recommend for eggs is a stout

case, three feet high, a foot and a half wide, and a foot deep, the four top drawers two inches deep, with twenty-seven divisions for eggs, the fifth drawer three inches deep, with forty-five divisions, the bottom drawer four and a half inches deep, with six divisions: in all making nine drawers. A small piece of wadding should be put into each compartment, to keep the eggs from contact with the wood, and cracking. I have already said that winter is a good season for procuring birds in fine plumage.

On the approach of winter those birds that remain the whole year with us assume their thick wintry garb; but except in very severe weather most animals are difficult to discover at this season. The animals which hybernate have now sought refuge in their holes; the mice and reptiles are concealed in the bosom of the rocks and crevices of walls; nature has sealed up in her frozen caves the fish and other inhabitants of the deep. The season of love, therefore, is the most favourable one for the naturalist, as the moulting season is the worst. The sexes have then assumed the nuptial robe. They are more easily approached at that season also; there is, therefore, reasonable hopes of a successful expedition.

With the exception of the hare, fox, and rabbit, there are hardly any of the mammiferæ of this country on which it is necessary to hunt with the gun; and to shoot a fox is, in most English counties, a high crime against the social laws. But if Reynard is wanted he must be found. His den is in hilly countries crowned with copse wood, over the bank of some stream or under a bank of furze, and, ten to one, if there is a retired hen-roost within a reasonable distance of it, he will not require to be sought, but may be met prowling about it half way, at early dawn; in this case he is fair game, at least to the naturalist who wants a specimen! We need hardly tell where a hare or rabbit is to be found; in a corn or turnip field, or in young plantations and grass meadows, they will be found gambolling about at early dawn, from September to March, after which they are sacred till the season rolls round again. Mice, rats, weasels, and other mammiferæ, may be taken in traps, or destroyed in many ways when found. Some of them, however, as the weasel, are difficult to find when wanted. It is generally during the night or evening such creatures venture abroad.

There are a few precautions to be taken with skins of animals. To prevent damage to the fur large shot is used, as we have seen. Spots of blood may be washed from the fur either

before or after skinning, and generally the same steps may be recommended for the feathers of birds.

It sometimes happens that after death a viscous humour issues from the beak and nostrils, moistening and injuring the head feathers. It also happens that some of the birds of prey, and certain water-birds, will disgorge portions of the food which remains undigested in the crop, and this is calculated to damage their plumage. To prevent these accidents, the fowler, as soon as the bird falls, should either proceed to arrest the flow of blood, or leave it to congeal, and then proceed to stuff the beak with cotton, and tie the upper and lower mandibles together by means of a thread, the object being to prevent the plumage from being soiled by any evacuations whatever. After this, if the bird is a large one, dispose of it in such a manner that the feathers are not disturbed; if, on the contrary, it is small or of middle size, and delicate plumage, slip it head foremost into a paper bag, or cornet, such as grocers use for small packages, and place it in the pockets or boxes in the bag. Birds taken in the snare require the same care; they are easily killed by pressing the sides of the breast opposite the heart, or even the throat, between the finger and thumb, and placing them in the paper-bag when dead.

Birds taken by means of limed twigs generally have the plumage much soiled by the bird-lime, which it is necessary to remove before it gets hard. It is removed by using a little fresh butter or olive-oil, rubbed on the feathers. When the lime and the butter are thoroughly mixed—which is indicated by the lime losing its adhesive power—scrape the feathers one by one with the edge of a scalpel, or knife, until every particle of the grease is removed, when it may be washed with water containing a strong solution of potash, and finally with pure water, drying them by dusting plaster of Paris over them. Soap lees or sulphuric ether are better adapted for washing feathers impregnated with fatty matter.

One thing the naturalist fowler should not forget is to note the colour of the eyes of the animal, in order to replace them in the stuffed specimens; for all species confined in cages lose part of their natural colours in confinement, and present little of the freshness either of eye or plumage which distinguishes the wild animal.

REPTILES are chiefly to be sought for in May and June; in these months they have generally just changed their skin. They require less care than either of the preceding class of animals,

as the glossy skin which covers them requires fewer precautions for its preservation. The species which can be captured with least injury, as the chelonians, or tortoises, have their softer parts protected by a special organization or shell. It is otherwise with the saurians and ophidians, or lizards and serpents. Here, to real danger in the pursuit, is added the difficulty of taking them without injuring the external skin. In the lizards, for example, especially those of small size, the skin is so delicate that the slightest blow damages it; and it is extremely difficult to procure them without such violence. Some persons recommend that they should be approached without being disturbed, and struck on the back by a slight blow with a small pliant twig or cane. This blow, could it be delivered, would suffice to break the vertebral column, and thus effectually prevent them from running away. But the first difficulty is to approach them unperceived. It is like putting salt on the bird's tail; and when they can be so approached, the blow must be very slight indeed, in order to avoid breaking the skin, and yet strong enough to accomplish the end in view, which requires discrimination. In fact, they are not easily obtained.

The spring is the period when it is most desirable to attack them. At the commencement of this season, the sun, for which they crave, leads them to issue from their winter retreat, while the heat in which they display themselves seems rather to render them torpid than to vivify them, as it does later in the season. Slow to move at this season, they will suffer themselves to be approached without stirring. In this state their hole may be covered with a handkerchief, and their retreat cut off. Having no place of refuge, they may now be caught by the hand without injuring them, taking care at the same time to avoid their bite; not that it is dangerous, but it causes a considerable bruise and a livid contusion. The tail is very fragile, and must neither be seized nor struck. Nevertheless, in spite of every precaution, if it is separated from the body, it should be secured, and, with a little ingenuity and care, it may be replaced in mounting.

The chase of ophidians is, without contradiction, a dangerous occupation, the bite of many of them being venomous, but their skin is less delicate than the lizard's. They are slower in their motion, and consequently more easily secured. Should any of my readers have a fancy for this pursuit,—which, I confess, I have not,—let them furnish themselves with a pair of long-handled pincers and a bag made of skin, with a mouth formed

with two semicircular rims attached, and tested and secured by a cord; the bag being sprinkled over copiously with snuff, the trap being laid and baited, when the reptile approaches it the pincers are employed, and if they are adroitly used, the serpent is introduced into the bag, which instantly closes, and the serpent soon dies, for snuff is a deadly poison to it.

BATRACHIANS, or frogs and toads, are neither dangerous nor difficult to take. They are cold-blooded, slow, and heavy, and cannot escape by flight. They haunt dark and humid places, and the safest way to take them, so as to avoid injury to the skin, is to seize them with the hand, either naked or gloved. With the exception of the larger species, reptiles are not usually mounted. The vivid and brilliant colours of the majority of them are extremely beautiful, and are best preserved in spirits of wine.

FISH are captured by many different processes: in soft water by line and bait of many kinds; in the sea these means are insufficient, but give place to other processes, on which we need not enter here. Fish are sometimes stuffed, but generally are only divested of the intestines, and plunged into alcohol; sometimes the dead skins are mounted on paper.

CRUSTACEA are preserved for a long time in salt water. After many years in this water their colours are only slightly altered. They may be transported to any distance in this preservation of colour. This process preserves the animal perfectly intact.

MOLLUSKS are procured with equal ease, but they are unfitted for mounting. The animal discolours, and even gets as hard as horn, without some means of preserving it in its natural state. They are generally sought for their shells.

INSECTS.—Among insects, butterflies and moths are the most attractive; and in indicating the locality in which they are to be found, I might content myself with the well-known advice of an eminent entomologist, in reply to a similar question, "Search everywhere." I will, however, specify a few places where I have found some of the most beautiful of them. The white admiral, distinguished by the silvery blue and brown markings below, with bands and spots of pure white, is found in June and July, its favourite haunt being oak woods in Kent, Essex, and Sussex, and, I believe, also in the north of England. The purple emperor, so named from the splendid purple of its wings, is also a denizen of the woods, being found near Colchester in the Great and Little Stone Woods, in the Forest of Dean, in Darenth Wood, and other and similar locali-

ties. Others, as the wood white, are found near fields of leguminous plants, and are very generally diffused. Another, which is often mistaken for it at a distance—the marble white—has, on a nearer view, streaks of black and a pale yellow, feeds chiefly on grasses, and is found in Sussex and Hampshire, and on the Surrey hills in July and August. But my space does not permit of my entering on this interesting subject further, and as I cannot return to the subject, I shall here say a few words on the best mode of killing and preserving insects. Some collectors carry chloroform in a small bottle. When an insect is captured, a little chloroform is dropped on the blotting-paper at the bottom of the box in which it is placed; this kills the insect; but the more usual way is to give it a quick nip between the finger and thumb just under the wing, which kills it instantly. It is then transfixed by passing a pin through the thorax, fixing the sharp point in the cork of the box.

On returning home set it out in the following manner:—Having provided yourself with a setting-board, which is sold at any of the naturalists' shops; place the body of the insect in the centre of the board in which there is a groove to receive it, so as to let the wings spread out smoothly without any curve. Having spread out the wings very gently, take four pins and four small pieces of cardboard of an angular shape, with the base rounded off; place the pointed end over the four tips of the wings just far enough to hold them down, and fix each down firmly to the board by passing a pin through the card into the cork. All the beauty of the preparation depends on the wings being evenly spread and lying smooth on the board, and care only is required to make them lie so.

SKINNING AND PREPARING BIRDS.

In skinning and preparing the animals whose capture we have been plotting, certain instruments are necessary. These are, 1. a case of scalpels; 2. a knife with toothed blade sharp towards the point, the other a straight blade; 3. two pairs of scissors of different sizes, one six inches long, another ten inches, and one with a short blade, the other straight and sharp-pointed; 4. two pairs of cutting-nippers; 5. two pairs of pliers for stretching wire, one stronger than the other; 6, a smith's portable vice for holding the wire; 7. a scoop for removing the

PREPARING AND STUFFING ANIMALS.

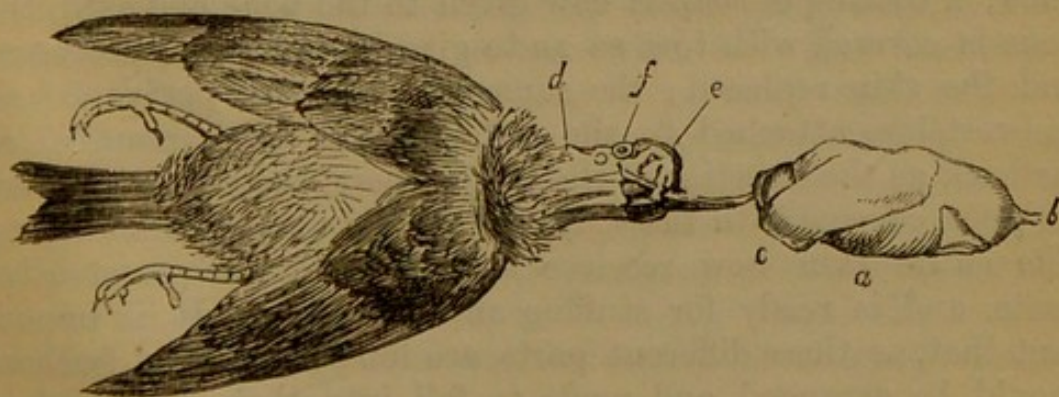
brains; 8. many files of different sizes and grains, from five to twelve inches long; 9. a quantity of iron wire of different sizes; 10. a hand-saw; 11. a small hammer and some nails of different sizes; 12. some flat files, needles of different sizes, bodkins with triangular blades; 13. pencils in horsehair and badger-hair, the one for spreading the arsenical soap, the other for smoothing the feathers; 14. thread and cotton for sewing up and stuffing the skins of animals; 15. three stuffing-wires about seven, twelve, and eighteen inches long; 16. a pair of caliper compasses; 17. several stilettos, or bodkins, varying in length, bradawls of different sizes, and a supply of arsenical soap or paste, which is prepared according to the following prescription:—To four pounds of white curd soap add one pound of arsenic and one ounce of camphor; cut the soap into thin slices and dissolve it in one pint of water. When melted, add the arsenic and camphor, stirring them well up together, and boil again until the substance of a thick paste is attained, and pour it into jars while hot. When cold tie it up carefully with bladder, and it will retain its qualities for years in any climate. A useful preservative powder is prepared as follows:—To four pounds of alum add one pound of arsenic and two ounces of the flour of sulphur; mix them well together and pound them in a mortar to break the lumps. The use made of this powder is to rub it into the skin during the process of skinning. The wire used in bird and animal stuffing varies from two sizes smaller than a pin, used for the smallest birds, as humming-birds; to two sizes larger than a pin, used for sparrows, canaries, and similar sized birds and animals. Black-birds, thrushes, oreoles, and others of the same size, require two sizes larger again; while squirrels, hares, and foxes among quadrupeds, and the eagle among birds, require a wire strong in proportion to their size.*

With these implements all kinds of animals may be skinned and mounted whose size does not exceed that of the wolf. Larger animals amateurs will probably be disposed to leave to professional hands.

In skinning a bird, having first provided all the articles for anointing the skin, a little fine tow cut short, a little cotton-

* Arsenical soap, preservative powder, boxes containing all the requisite instruments, corked boxes, and apparatus for butterfly collecting, and glazed cases of all sizes, may be obtained in great variety at Messrs. Buffon & Wilson's, Naturalists, 391, Strand, London.

wool, and some absorbing powder,—either burnt alum powdered, flour of sulphur, or plaster of Paris; and having stuffed a little cotton into the mouth, and tied or sewed the mandibles together to prevent the mucous discharge which sometimes takes place, to the great injury of the plumage, lay the bird on its back on a bench or table covered with a clean white cloth, with the head towards the left hand of the operator; part the feathers carefully on the breast, and with a sharp knife or scalpel, the handle of which it will be convenient to have with a spatula, make an incision from the sternum or breast-bone to the vent, just deep enough to cut the skin without penetrating the flesh or intestines. Raise the edge of the skin with the sharp edge of the handle of the knife, and turn it back, cutting with the knife where necessary, until the thigh-bone is reached. Having done so, seize the leg and foot with one hand and the skin with the other, and push the skin forward over the thigh until the middle joint condyles of the thigh-bone become visible; cut this through so as to leave the thigh-bone and leg attached to the skin. Having done the same with the other side, the lower part of the bird is entirely divested of its skin as far as the tail. Having introduced the blade of a small knife between the skin and the back-bone, under the root of the tail, draw it upwards so as to cut through the rump-bone, taking care that the skin is not injured in so doing. Now lay hold of the carcase by the rump-bone with one hand, or, better still, attach a hook to the rump-bone and suspend the carcase by it, and draw the skin gently but forcibly towards the head; the skin will readily peel off as far as the wings, the plumage being of course inverted. The wings are now separated from



the body by cutting off the humerus, or fore-arm, where it joins the body. The skin will now fall over the head, and, by gently pulling it over the vertebræ of the neck, the crown will be exposed. The bird is now as represented in the engraving; the

skin inverted and drawn over the head, the femur or thigh-bone attached as well as the first vertebræ of the tail *b*, the articulation of the humerus or pinion-bone *c*, where it was separated from the body, the membranes of the ear *d*, withdrawn from their cavities *e*, and the skin cut round the cavities of the eyes *f*.



The head is now separated from the body at the last vertebræ, or rather a little beyond, being cut through the occipital opening *a*, to facilitate the removing the brains, which are withdrawn through the opening. The carcass is now entirely disposed of.

The next operation is to remove the fleshy parts from the head and cheekbones, clean out the occiput or cavity, and fill the opening as well as the orbits of the eyes with cotton-wool, having first given them a good coating with the preservative paste. Having replaced the flesh removed from the cheeks and crown with soft tow, turn the skin back over the head. The wings are now to be skinned as far as the humeral bones by pushing the skin backward over them; the bones are carefully cleaned, all flesh, muscles, and tendons removed, the bones as well as the skin covered with the preservative paste, and tow or cotton-wool wrapped round them to replace the flesh and give the appearance presented in life; the skin is then replaced.

The legs and thighs now undergo the same process. Taking hold of the feet, the skin is gently pushed back over the tibia, or leg-bones, to the knee-joint, and the flesh and tendons removed; by passing the knife round the head of the bones, the flesh and tendons will be found to strip off cleanly from the bone; a coating of soap is now given to the bone and skin, the bone is covered with tow so as to give its natural appearance, and the skin replaced; the same operation is performed on the vertebræ attached to the tail, the flesh being removed as far back as the insertion of the tail feathers, the skin and bones stripped, covered with the soap, and the skin replaced as before. The entire skin now receives a coating of the preservative paste, and is ready for stuffing and mounting. It is important that, as these different parts are finished off, the feathers should be arranged and made to fall into their places while the skin is damp, otherwise it may be difficult to get them to lie smooth and in their natural order afterwards.

The process we have just described is applicable to all land-birds, and to most water-birds also; but there are some, as the

SKINNING AND PREPARING QUADRUPEDS.

penguin, dabchick, and some others, whose natural position is nearly upright, and their breast plumage thick, white, and feathery; from their upright attitude, sewing up the breast would leave a very obvious mark in the pure white plumage. To obviate this defect, the cut is sometimes made in the side under the wing; I myself prefer making it in the back, where I can rely on finding plumage to conceal the stitches. In other respects the process is the same; but all sea-birds being very oily in their flesh, it is more necessary with them to use some absorbent for the fatty matter and blood—a subject I have purposely avoided, in order to prevent confusion in my description of the different processes.

There are, indeed, several modes of performing the operation of skinning, differing in their details, but alike in all essentials, the object being to obtain cleanliness, and avoid soiling the plumage. Mr. Waterton employs for this purpose soft cotton-wool, with which he covers the carcase up to the knife, pushing it forward as the skin is raised; others use burnt alum pounded to a powder, and flour of sulphur. The French naturalists use powdered plaster of Paris. For my own part, from long practice, I can skin almost any animal without the slightest stain on the plumage; but to those who have not had my experience I would recommend plaster of Paris, as perfectly efficient, and being the least offensive powder. It should not be too copiously applied, but just dusted over the body as the skin is removed in sufficient quantity to absorb the moisture, and no more. It is also useful in removing any stain from the plumage, and is easily brushed off when dry.

Mr. Waterton also uses corrosive sublimate dissolved in spirits of wine as a substitute for the arsenical soap, and this composition is strongly recommended by other naturalists, but I have not found anything so perfectly satisfactory as M. Bécour's soap. At the same time let me remind the reader that it is a very deadly poison, and should be applied with great caution, with gloves, on the hands, kept for the purpose, to prevent its getting under the nails or other parts, and that it should never be suffered to be about within the reach of children or animals; moreover, that it should always be marked "poison" on the jars.

SKINNING AND PREPARING QUADRUPEDS.

The fox admits of most picturesque attitudes and accessories, and will admirably serve our purpose as an example.

Therefore, Reynard being procured, we need not say how, lay him on his back in the same position as before recommended; and, having first stuffed the mouth with cotton and tied it up, and measured his neck and body with rule and calipers, and noted them, proceed. Make an incision from the last rib nearly to the vent, but not quite up to it. Having done so, proceed to raise the skin all round the incision as far as the thighs, first skinning one side and then the other, using the flat end of the knife in preference to the blade to raise the skin. Having reached the hind legs, separate the latter at the femur or thigh-bone close to the back-bone, leaving the legs attached to the skin. Now skin the head-quarters close up to the tail, and separate it from the body at the last vertebræ, taking care not to injure the skin. Pull the skin over the heads of the hip-joints, and now the carcase may be suspended by the hind-quarters, while the skin is stripped by pulling it gently and cutting towards the fore-quarters. The fore legs are separated from the body, as the hind ones had been, close to the shoulder-bone, and the skin fairly pulled over the head and close to the nose, when the head is separated from the body by cutting through the last vertebræ of the neck. Reynard is now skinned, the head, legs, and tail being all attached to the skin, from which the carcase is separated.

The flesh is now cut entirely away from cheek-bones, the eyes removed, the brains taken out by enlarging the occipital opening behind the cranium, the whole cleaned and supplied with a coating of arsenical paste, and stuffed with tow or wool to the natural size.

The legs are now successively skinned by pushing out the bones and inverting the skin over them until the foot-joint is visible; every portion of flesh and tendons must be cut away, and the bone cleaned thoroughly, and a coating of arsenical soap laid over it as well as the skin. Wrap tow, or cotton, or any other suitable material, round the bone, bringing it to its natural shape, and draw the skin over it again. Do this to each leg in succession, and the body itself is ready for stuffing and mounting.

The utmost care will not prevent accidents: the fur and plumage will get sullied, and before stuffing it is well to examine the skin, for stains and spots are calculated to deteriorate its appearance. Grease or blood-spots may be removed by brushing over with oil of turpentine, which is afterwards absorbed by dusting plaster of Paris over; Macgillivray recommends

PREPARATIONS FOR REPTILES.

that all skins, whether they are to be put away in a cabinet or stuffed, should receive a washing of spirits of turpentine sprinkled on, and gently brushed in the direction of the feathers or fur. Not to trust too much to memory, it is desirable to measure and note the proportions of the animal before skinning, first taking the muzzle to the tail. Afterwards, from the junction of the tail to the tip. Secondly, from the middle of the shoulder-blade, or scapula, to the articulation of the femur, or thigh-bone. Thirdly, the animal being placed on its side, measure from the upper part of the scapula to the middle of the sternum—that is, to the spot where the two sides meet above, and finally from the socket of the scapula to the socket of the articulation of the femur or thigh-bone. In addition to these, note, by measurement with caliper compasses, the size of the head, the neck, the tail, and other points which affect the shape of the animal. These measurements will serve as a guide in stuffing, and for the size of the case and length of the mounting wires. In the process of skinning, it is important to avoid penetrating to the intestines, or separating any of the abdominal muscles which lead to the intestines: any such accident would be very disagreeable, as well as injurious to the skin.

PREPARATIONS FOR REPTILES.

In preserving reptiles, many different modes are adopted by different naturalists. The first and most simple of all usually employed by travellers, is to put them, when small in size, into a vase or bottle of spirits—of spirits of wine, for example—but before plunging them in, it is necessary to make an incision in the belly, so that the liquor may enter the interior of the body, and preserve the intestines. This may be employed for lizards, frogs, toads, serpents, and for all reptiles not too large. For the larger kinds, as the crocodile, for instance, it is necessary to skin them; and this is done in the same way as in the larger mammiferæ, only their skins being excessively hard and provided with scales, it is necessary to prolong the incision from the belly to the throat. Without turning the skin inside out, raise it from the body. For the turtles, it is necessary to have recourse to a hand-saw; their envelope, especially in the terrestrial species, being so hard that it cannot be cut. The plastron, or breastplate, is separated from the carapace by making an incision on each side, and cutting through the skin which surrounds the anterior and posterior members with a

PREPARING AND STUFFING ANIMALS.

scalpel, thus leaving the plastron free, and withdrawing all the intestines from the place. The skin is now removed from the other members, which are furnished with a paw so hard that it is necessary to cut it open from top to bottom in order to remove the fleshy parts beneath the shell. With regard to the head, the skin need not be completely inverted, because the plates or scales upon it can be detached from the superficies; it is only necessary, therefore, to scoop out the eyes without damaging the orbits and the brain, enduing all the parts thoroughly with arsenical paste before covering them with the tow on which the shell is to be replaced. The breastplate thus restored is held in its place by means of iron wire properly inserted.

Some serpents are so large that it is necessary to skin them in order to their preservation. This is sometimes done by making a cut round the neck immediately behind the head, raising the edge of the skin round the incision, and drawing the body through it, thus turning the skin inside out, a process which might, in some instances, be attended with danger as well as difficulty. A more convenient process is to make a longitudinal incision into the belly, but a little on one side, taking care to avoid damaging the large scales by cutting on one side of them. This done, the skin is raised by means of the scalpel, the head separated from the body at its last vertebræ, leaving the head attached to the skin. When entirely separated from the vertebræ, the brain removed, and the cavity cleaned out, cover the inside of the skin with a coating of arsenical paste, or wash it with spirit of turpentine and sew it up neatly, placing a layer of cotton-wool under the seam, taking care not to catch it up with the thread so as to prevent the stuffing from showing itself through the interstices. This done, fill it with dry sand, or, better still, with sawdust or bran. It is important in all instances to preserve the head of serpents as perfect as possible, as on its construction much of the zoological character of the animal depends.

PRESERVING AND SKINNING FISHES.

The same means applied to serpents may be employed for preserving fishes; but before putting it into practice the fish must be washed in a mucilage which prepares them for the spirit in which they are to be preserved. This is best done by

making an incision under the belly, a little on one side, so as to avoid cutting the fins; then, raising the skin from the sides by the handle of the scalpel, separate the body from the tail, and turn the skin towards the back in order to save the dorsal fin, detaching the body from the head near the occiput, and withdrawing the gills in order to wash and dry them. The skin is now ready either for stuffing, sewing up, and mounting, or for stretching between sheets of paper, which preserves its colours; in this process the fins are afterwards fixed upon plates of cork or cartridge-paper by means of pins. There is not much to commend in this last process, for the fins, which are the most striking characteristics of the fish, soon become defaced.

PRESERVING CRUSTACEA.—Small crustacea are easily preserved by plunging them into spirits, or even into chalky water, in which they may be preserved some time; after which they may be taken out and dried. Marine salt also preserves them; but for larger species other means must be employed, which approach to the skinning process although not quite belonging to it. In order to get rid of the fleshy matter and the gills, it is necessary to raise the shell which covers the back of most of the species. The carapace, as the shell upon the back is called, is replaced, after covering the bed with arsenical soap and stuffing with cotton to replace the flesh removed. The shell is held in its place by being gummed round the edges. When operating on species furnished with formidable claws, the smaller opposing claw may be removed, the flesh extracted through the orifice, and the claw restored to its place. Mollusks, as the occupants of these shells are called, are sometimes covered by a shell, in other species the body is always naked. Both the marine, fluvial, and terrestrial species, may be preserved in alcohol. The shellless mollusk may be otherwise preserved alive; but those with the shell, where it is desired to preserve that appendage apart from the animal, the only mode is to plunge it into some spirit in which it can only live a few minutes; when dead, it is easily withdrawn from its shell by means of a piece of wire. When it is wished to preserve the shell and bring out its fine colours, a weak solution of nitric acid is employed, brushing it with a hard brush; for a second washing use pure water. After which it is again plunged into fresh water to remove any of the acid which may remain, when it may be wiped dry with a soft rag, and a coating of oil applied which brings up its colours.

PRESERVING AND STUFFING ANIMALS.

There are some marine creatures, such as the star-fish, echinities, and some others, which are dried with very little preparation. The echinities are difficult to preserve, however, with their spikes, and the only certain mode is to place them in spirits of wine, and wrap them up in linen, which may be double or even triple when they are to be carried any distance. It is necessary first, however, to put them in fresh water in order to make them disgorge certain saline matters, withdrawing them afterwards and putting them into a dry place.

STUFFING AND MOUNTING BIRDS.

Skins are sometimes kept so long as to have become hard and dry; or they may be the skins of other climes which it is desired to stuff and mount. I have already given directions for preserving and moistening the skins of larger animals, but there are hundreds of skins of birds and small animals sent daily from India, Africa, America, and various other places, which require a different mode of treatment from those that are stuffed immediately after being skinned. These skins, by the time they reach England, are of course very dry, and require to be thoroughly relaxed before they can be brought to a fit state for stuffing. One plan is to get an earthenware pan with a lid, and put three quarts of silver sand in it; after well washing it, drain the water off and put a sheet of blotting-paper on the top of the sand, and on this place the dry skins, as many as will cover it without crowding, then put the lid on and allow them to remain several days, when they will be found quite fit for stuffing. Another method, which I find to answer very well in most cases, is to take the wadding carefully out of the skins, damp it, and replace it; then get a clean damp cloth and roll the skins in it; by this process, in the case of the skins of small birds, they will be ready in twenty-four hours, when they can then be stuffed in the manner I am about to describe. In the case of birds of paradise and humming-birds, whose skins are extremely delicate, it is found sufficient in practice to suspend the skins over damp tow or moss after unstuffing them.

The same remark applies to specimens requiring remounting, the old stuffing being drawn out with a hooked wire and replaced by wet tow, while a wet cloth is folded round, the skin soon becomes moist and pliable, unless they have become very hard indeed, when hot water, or the bath already described

might be used. I assume, however, that we have to do with a recently removed skin which requires no such preparation.

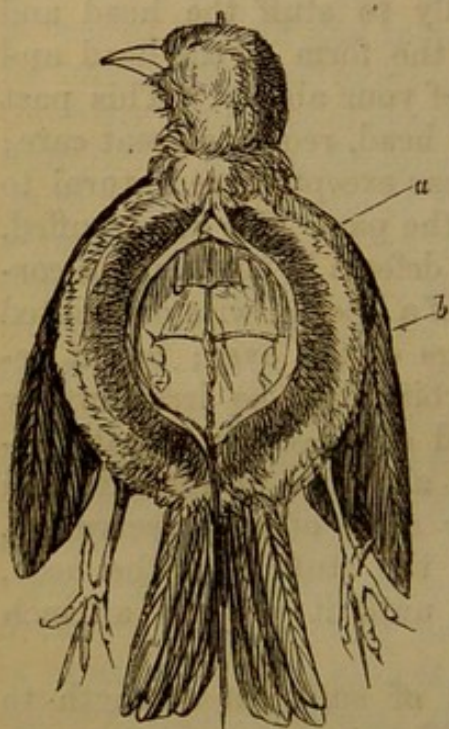
Having all the required materials at hand, which consist of some fine cut tow or cotton-wool, or both; suitable sized wires, a stuffing wire (which consists of a strong wire, one end of which has been beaten out into a spoon-like shape), a pair of cutting-nippers and pliers, and the other tools already described; lay the skin on its back, as before, with its head to the operator's left; take a piece of wire of suitable size, and of sufficient length to project an inch or so beyond the head and rump of the bird. Having filed both ends to a point, take a piece of cork long enough to reach from the rump to the side bones of the wing, pass the wire through this piece of cork and double up one end of it so as to form a loop or staple, the loose end of which is also fixed in the cork. Now proceed carefully to stuff the head and neck if not already done, imitating the form of the head and the muscles of the neck to the best of your ability. This part of the process, as well as stuffing the head, requires great care; no inequalities of surface must appear except those natural to the attitudes and natural muscles of the part. The head stuffed, let it be carefully examined, and any defects in the stuffing corrected; this may be done by means of a hooked wire or pointed bodkin inserted through the openings of the eyes; but it requires great care, otherwise the orbits may be irretrievably injured. Having arranged the head and neck in a satisfactory manner, bearing in mind that all parts of the skin and bone should be covered with soap or some other preservative, the pointed wire may be pushed up the stuffing of the neck, and through the crown of the head, until it projects an inch or so beyond the cranium.

Two other wires are now selected of sufficient strength to support the bird; these are also filed to a point at one end, and of a length suited to the legs of the bird, and are passed through the feet by the side of the leg-bone. One end of the wire is left projecting three or four inches through the foot; the other end, after being regulated to a suitable length, and bent so as to accord with the shape of the body, is pushed through the cork at the point where the legs were separated from the body, and firmly riveted into it, or at least twisted at the opposite side.

According to some methods, no cork is made use of, but a loop is formed in the body wire at this point, to which the wires of the leg are twisted on each side, and the place of the cork

supplied by stuffing; in either case the position of the legs is a very important element of success. In posing a bird, the talons should never extend beyond the rump-bone, but much will depend on the attitude the bird is to assume.

Where the tail is a small one, and is intended for a sitting or perching bird, the single wire loop attached to the cork will generally support it. But where the tail is long, or is intended to be expanded, a second wire of smaller dimensions is used; this wire, being filed to a point, is also bent in the form of a staple, with a broad or narrow exterior according to the shape of the tail to be supported. The sharp points of this staple are forced through the portion of the rump-bone left attached to the tail, and inserted into the cork, while the bone rests against the first wire, which thus acts as a fulcrum to the tail. The bird now



shows, as represented in the engraving, the body wire occupying the centre of the body, and coming out at the tail and through the cranium between the eyes, while the wires of the legs and wings are attached by a loop to the body wires.

The process of stuffing the body now commences; the tow or other material used being wound round the wires until something like the shape of the bird is attained. The legs and thighs claim particular care; the wires which represent the tendons may be twisted in any direction, but considerable skill will be required to represent truly

the form of the thighs and bend of the knees.

The set of the tail also requires much care; the flesh and bone removed are replaced by tow or cotton-wool, which is pushed in with the stuffing wire.

The operation of sewing up is now performed, during which the stuffing is completed, all vacant places being filled in with soft tow or cotton by means of the stuffing wire. As the work proceeds, the caliper compasses will now be found useful if the previous measurement of the dead bird were carefully made. The sewing should be very neatly done, with fine cotton-thread, taking care that none of the feathers are caught by the thread.

The stuffing and sewing up finished, and the feathers brushed and placed in their proper order, a perch is provided for the bird if it is a perching bird. Two holes are bored in the perch at proper distances, through which the wires of the feet are pushed and riveted on the other side.

The wings are the next consideration. Having fixed upon the position they are to occupy, cut two pieces of wire of sufficient length to carry out the design; if they are to lie close to the body, a small wire passed through the first pinion joint through the stuffing, and into the cork, will keep them in their position. When they are expanded as in flying, the tail must be expanded also; in this case the wire should be long enough to support both joints of the wing, through which it is passed into the cork in the body. I am not sure that one wire long enough for both wings would not be an improvement on this arrangement. Each end of the wire being pointed, it could be pushed through the joints and the wire twisted into the required form, support being given to the wings by cardboard, cork, or by double wire, as with the tail, where they were too heavy for one wire. And now, it is only necessary to fix the eyes, which is done in various modes: some eyes, being provided with a shank, are stuck into the matter used for stuffing the head, using a little gum round the edges; others fix them in with a little putty; the orbits are dressed and painted, the feathers neatly arranged in their places; and some naturalists wash the whole surface with rectified spirits of turpentine, both as a preservative and to give gloss and brilliancy to the plumage.

The operator's taste may now be displayed in giving the finishing touch to the setting of the bird. If the work has been well executed, and the wires firmly inserted and riveted, the neck, head, wing, feet, or tail, may be twisted in any direction without fear of dislocation, and a good memory will enable him to give it a natural and life-like appearance.

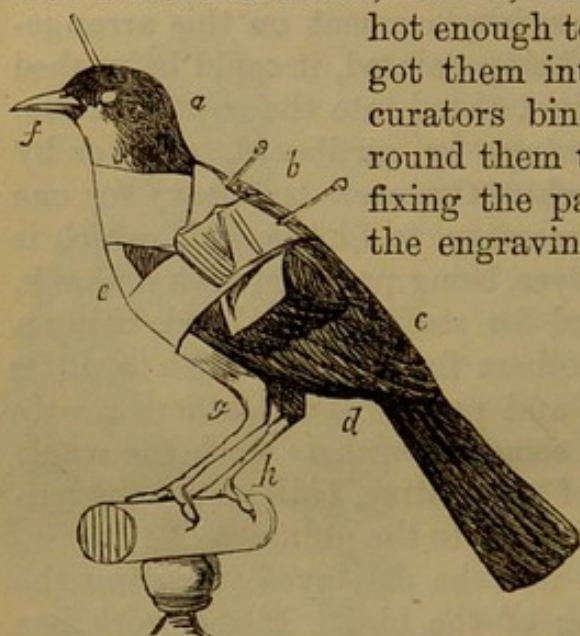
The attitude must of course rest with the operator; but a few words on the subject may direct his attention to certain anatomical results which should accompany particular attitudes. A bird seizing its prey, for instance, stretches out its leg with extended claw and with head and neck bent forward, wings raised in an arched form, and tail spread out vertically, and the body also bending forward. In flying, the wings are spread out to their whole extent, the tail in a line with the body and expanded, the claws closed, and the legs drawn close to the body. In a bird surprised, the side on which the alarm has originated

is raised, the wing on that side slightly elevated, the head turned in the same direction, and the foot advanced, the tail drooping, but raised slightly towards the point of alarm. Perhaps, however, the tyro will obtain a better lesson on this subject than we can give by studying the attitudes given to birds in the sketches of Mr. Harrison Weir, some of whose drawings illustrate the series of books to which this belongs. The Landseers, Ansdell, Wolff, and several artists of well-known repute as painters of animals, may also be studied with advantage.

But his task is not yet finished; however carefully the skinning may have been performed, there will be a difficulty with some of the feathers. In order to keep them in their place, and get them to be smooth, it is sometimes necessary to dress them with a modeller's iron, heated, taking care that the iron is not

hot enough to scorch the feathers. Having got them into a proper state, the French curators bind long bands of soft paper round them to keep them in that position, fixing the paper by means of pins, as in the engraving. My own practice, and, I

believe, that of most English naturalists, is to keep the feathers in their place and position by winding cotton-thread round them. By this means, having smoothed a feather into its proper curve at the hollows and twists of the neck, for instance,



by winding a thread round it in two or three places while it is damp, I can be certain that it will retain that position when dry; the thread wound round the body keeps every feather in its place. This, I think, cannot be accomplished by a paper band, however skilfully placed.

STUFFING AND MOUNTING QUADRUPEDS.

Before commencing operations, it is necessary to have the materials which are to form the carcase at hand, as well as the wires which are to form the framework, which must be proportioned to the size of the animal. Cut the wire into five pieces, of which four are for the limbs and the fifth for the body. This

last is the frame to which all the others are attached; for mammals which have a tail of any length, it is necessary to have a sixth wire, a little slighter than the others, to represent that appendage; each wire intended for the limbs and tail being, of course, as long as it is intended to make the member, with six inches over to insert in the board on which it is to be placed; the central wire or framework the length of the animal; and a third longer, for loops and projections.

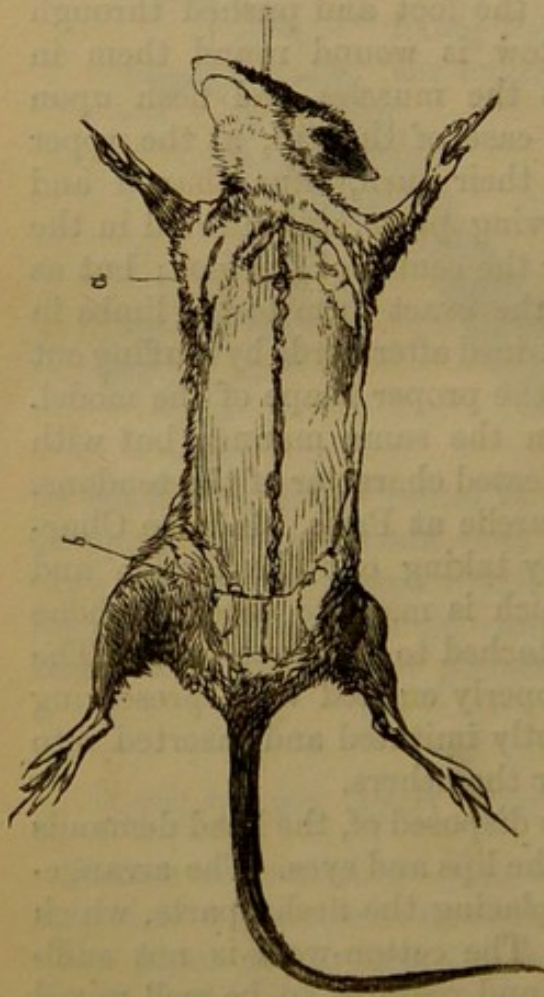
Commencing with the tail, which is made up of the vertebræ cleaned as far as possible from all fleshy ligaments, whose office is now performed by the wire which has been thrust through them; round these tow is wound in regular order, until it has acquired in its whole length the necessary degree of thickness: this done, cover it well with a coating of arsenical soap or corrosive sublimate, and, thus prepared, introduce it into the caudal envelope in such a manner as to resemble the natural tail of the animal.

And now the wires for the fore legs, being reduced to the proper length, are inserted into the foot and pushed through by the side of the bone, and tow is wound round them in such a manner as to represent the muscles and flesh upon the limbs, terminating, as in the case of the tail, at the upper part; the limbs, being each, in their turn, thus shaped and covered with a coating of preserving paste, are inserted in the skin, the wire projecting through the centre of the foot; but as it is not always possible to give the exact form to the limbs in this stage of the operation, it is attained afterwards by stuffing cut wool into the parts to fill out to the proper shape of the model. The hinder limbs are prepared in the same manner, but with greater difficulty, from the complicated character of the tendons. At the Musée de l'Histoire Naturelle at Paris, Madame Charpentier gets over the difficulty by taking out the tendon and replacing it by a second wire, which is made to enter the bone of the foot, and is afterwards attached to the knee-bone. The bones of the hind leg being properly endued with preserving soap, the form of the limb is exactly imitated and inserted into the skin, as we have indicated for the others.

The four members and tail thus disposed of, the head demands the utmost attention, especially the lips and eyes. The arrangement of the lips consists in replacing the fleshy parts, which have been removed, by stuffing. The cotton-wool is not sufficiently plastic for this operation, and requires to be well mixed with arsenical soap, so as to form a sort of thick paste of the

consistence of putty. With this the form of the animal's lips are moulded, or modeller's wax may be used for the same purpose, so as to fill up the more delicate fleshy parts, which have no hairy covering; the cheeks being stuffed with fine cotton-wool, retained in its place sometimes by a piece of fine calico, which surrounds the head, the whole being covered with soap. The skin is now drawn over the whole as far as the cartilages of the ears, which are sewed on and fixed in their place.

The sixth wire or framework is now fixed in the middle of the body, from the neck to the tail, penetrating the bones of the head between the eyes, as represented in the engraving, the wires for the four feet and tail being attached in the following manner, having previously surrounded the wire with tow approximating to the thickness of the neck of the animal: At the junction of the anterior members with the body, a loop is made in the body wire to which those forming the limbs are firmly attached; a cork is sometimes placed at the end of the body wire, to which the tail is attached, as in the case of



birds, but in general the wire which forms the tail is only twisted round the central wire in such a manner as to form a sufficient fulcrum for carrying the tail. All the wires being attached, and the members placed in the position they are to retain when the animal is mounted, the stuffing may proceed. We have now to do with the neck, which was roughly stuffed to receive the body wire. It now requires more careful stuffing with fine material to bring out the contour and muscular swellings. This should be stuffed with great care, first giving it a coating of soap; no void must be left near the head, nor must it be thicker than in nature. As the operator approaches the body, as much natural form should be

given as possible. In sewing up, also, the suture of the two

STUFFING AND MOUNTING FISH.

edges of the skin should be neatly executed so as to be covered with the hair, commencing at the breast, which permits the tow used to be more easily supplied when it fails, the stuffing should be finished as the sewing proceeds; using a stuffing-wire and fine tow or cotton-wool for the purpose.

The animal is now fixed upon the board it is to occupy, four holes being pierced in it at proper distances, the lower extremities of the wires, forming the limbs, are placed in them, and riveted beneath the board in such a manner as to render the figure of the animal immoveable. And now the eye of the artist comes into play; the attitude which is most natural to the animal when living is now to be imitated, and on the taste of the operator will depend whether the imitation is successful or not.

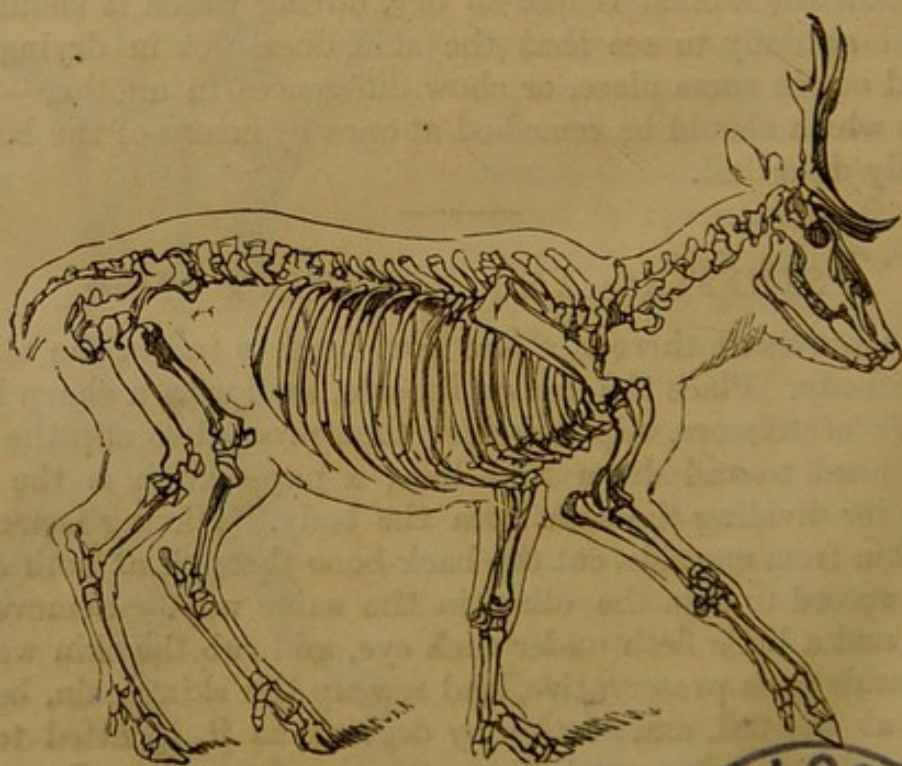
The mouth is now to be arranged, and the lips moulded into form, the nostrils reduced to order and filled with cotton to hinder them from shrivelling. Finally, the orbits of the eyes are put in proper condition to receive artificial eyes, which are held firmly in their place by an application of gum to the edge of the pupils, while the ears are held to their places by pieces of cardboard or linen, occupying the place of the cartilages. And now the animal is left to dry, during which it should be looked at daily to see that the skin does not in drying get puffed out in some place, or show differences in another—accidents which should be remedied at once by means of the bodkin already described.

STUFFING AND MOUNTING FISH.

In most fishes there is a line from head to tail in the middle of the body. Place the fish on its side, and, with a sharp knife or pair of scissors, clip the gills; then proceed to clip the skin from head to tail down that line; a paper-knife is the best thing for dividing the skin from the body. Having separated the skin from one side, cut the back-bone through at both ends, and proceed to skin the other in the same way. Remove the eyes, and a little flesh under each eye, and rub the skin well in the inside with preservative, and sew up the skin again, beginning at the tail, and sew up by degrees, as it is fitted to its proper shape, using wet bran, putting a flat piece of wood in the middle of the body, with two pieces of wire fastened in it, to support the fish. The wood must be the length of the fish. Be careful to mould the fish to its proper shape while it is damp; then let it dry.

PREPARING SKELETON LEAVES.

Gather the leaves from the middle of summer to September, put them in one gallon of soft water, let them soak for almost a month, and then take out a leaf and try it; if it is ready, the green coat will rub off directly and leave the fibre; some will take two months before they are ready; but you can always tell by rubbing the leaf rather gently. After obtaining the skeleton of the leaves, place them in one quart of water, with two table-spoonfuls of chloride of lime, well mixed; let them remain about twelve hours, and they will be perfectly white. Keep them in a close box until you want to use them. The best and most ornamental way to mount them, is to get either round or oval shades and gilt or black stands; cover the stand with velvet, black or coloured, according to taste, and then arrange the leaves so as to form a pretty group; when the shade is placed over it, with chenille, it will be a very handsome ornament.



SKELETON OF THE REINDEER



