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COTTAM'S

NEW ILLUSTRATED BOOK ON

CAGE BIRDS

THEIR NECESSARY FOOD AND CARE.

TOGETHER WITH VALUABLE FORMULÆ, FOR BIRD
FOODS, TREATS, MEDICINES, ETC.

... BY ...

BART. COTTAM,

LONDON, CANADA.

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PREFACE.

IT IS, perhaps, unnecessary to preface the matter contained in the following pages; but an apology is due to the bird-loving public for the late appearance of this long promised pamphlet. For years I have felt the great dearth of practical information on the subjects herein discussed, and long ago determined to publish the results of my own experience in this form, but not until now have I managed to get the copy into the hands of the printer.

Born and bred in a country where the Lark, the Nightingale and other charming songsters are found on the wing in their native element; where cage birds, especially Canaries, are developed to their highest perfection through the keenest competition, created by large sums of money offered annually as prizes at bird shows or exhibitions, held under the auspices of societies organized for the sole purpose of attaining in every respect the most healthy and most perfect birds; I naturally imbibed a taste in this direction, and for many years was actively engaged in the bird business, carrying at times perhaps the largest and most expensive stock in Canada; so that under these circumstances, apart from my taste and disposition in the matter, I have been compelled to make a careful study of our little feathered friends, their habits, foods, and diseases, as well as the methods most suitable for keeping them in health, song, and beautiful plumage, or suffer as a consequence great loss by deterioration of stock, by epidemics, and foreign diseases frequently introduced by new importations. Therefore it will be readily seen that I speak on this subject, not from the standpoint of a novice, but from a long and extensive experience very often dearly bought.

The question has often been asked, is it not wrong to keep birds in cages. I reply that it is no more wrong to keep birds in cages than it is to keep horses, cows, poultry, dogs, etc., under sufficient restraint to be of service to man. The wrong comes in *only* when these creatures are neglected or abused. Birds resemble human beings much in physical structure and mental development. They have their feelings, and are in every way entitled to our tender care. Most people care only for their bodies, shape, color, general appearance, etc., and neglect to study their little ways and needs, consequently these creatures often suffer through our ignorance. "Consider the Ravens," and "behold the fowls of the air," said our great Exemplar, and "are not two sparrows sold for a farthing, yet your Heavenly Father feedeth them." Each bird has its peculiarities of disposition and character, as well as each member of the human family, and only by watching them closely can we discover these peculiarities, and thoroughly understand how much they know. Their language to each other is wonderful; and if we would "consider the lilies of the field" and "the fowls of the air" more, it would be much better for our systems than medicine, for music, birds, and flowers bring health and happy hours.

Judging from the numerous oral and written expressions of gratitude I have been for many years receiving, my services have been appreciated, and many "sweet little pets" have been restored to health and song; and, as a matter of course, their lives made pleasant, for, like ourselves, a bird will not be disposed to sing if not happy and in health. It is the knowledge of this fact, together with a desire to place my services at the disposal of all, that induces me now to write.

Truth relating to cage birds and other household pets, however, like truth in general, is too great to be seen by one individual in all its aspects. I have, therefore, not confined myself exclusively to my own experience, but have, when I thought it desirable, given the experience of such men as Dr. Bechstien and other celebrated ornithologists and bird fanciers.

I have not written at this time for those who know all about it; and, though not at all formidable in appearance, nor claiming comprehensiveness from an ornithological point of view, the following pages contain ample directions for the proper care of Canaries and other cage birds, and, I trust are, so explicit that the most inexperi-

enced may grasp and turn them to a practical account. Technical terms have been purposely avoided, so that all, from the child-owner of a feathered pet, to the gray haired grandfather who used to catch them with the snare or lime in the old land, may have no difficulty in understanding my meaning on every point.

And now with the hope that my efforts may result in a more tender care and better treatment of our feathered pets, who have so often cheered us in times of depression, I ask for my little work the careful perusal of all who love the birds and appreciate their sweet song, and who does not?

BART. COTTAM.

London, Canada, August, 1894.





ILLUSTRATIONS.

African Parrot.
American Blue Jay.
Australian Paroquet.
American Robin.
Author's Photo.
Brazilian Cardinal.
Baltimore Oriole.
Birds and Nest.
Blackcap.
Belgian Canary.
Blue Jay.
Blackbird, English.
Bobolink.
Bullfinch.
Cardinal, Brazilian.
Cardinal, Virginia.
Cuban Parrot.
Copsy, Lancashire.
Chaffinch.
English Skylark.
English Woodlark.
English Robin.
English Blackbird.
English Thrush.
European Nightingale.
Fancy Scotch Canary.
Gray Linnet.

Goldfinch.
Green Canary.
Grosbeak.
Jay, American, Blue.
Japanese Robin.
Lancashire Copsy.
Linnet, European.
Minor, Talking.
Mocking Bird.
Nightingale, Virginia.
Nightingale, European.
Norwich Canaries.
Oriole, Baltimore.
Parrot, African.
Parrot, Cuban.
Paroquet.
Robin, English.
Robin, American.
Robin, Japanese.
Skylark, English.
Scotch Fancy.
Starling, European.
Thrush, English.
Tropical.
Virginian Red Bird.
Woodlark, English.
Yorkshire Canary.



CANARIES.



S WELL known and so universally admired throughout the world, there is probably no bird beloved and esteemed to the same extent by all classes, from the humblest cottagers to royalty on the throne, as the subject of this chapter. It is a well-known fact that our beloved Queen Victoria takes a great interest in these charming little choristers. The Canary is certainly one of the most charming pets a person can possess. No bird is more engaging, more gay, happy and cheerful in

confinement, and, withal, so harmonious. Its powers of imitation and memory are wonderful, and the attachment of many of these birds to the individuals who attend their daily wants and treat them kindly is remarkable. To those in pursuit of a harmless and innocent amusement, there is none promising more gratification and enjoyment than the study and care of Canaries.

There are many varieties of the Canary, differing widely in size, shape, color of plumage, and song; but as songsters there are none to equal the German imported birds. The best come from St. Andreasberg, a village in the Hartz Mountains, Germany, famous for its clear air, pure water, and for the celebrated songsters bred there. These Canaries are taught to sing, and are carefully trained by the English Lark, the Nightingale, or the Mocking Bird, and have a long, sweet, silvery trill, with the bell and flute notes, which contrast very pleasantly with the short, choppy notes of our domestic Canaries. While other breeders in England and elsewhere try to excel in size, shape, color of plumage, etc., the German breeders aim chiefly at developing the vocal powers of their birds; and their success in this line has given them a world-wide reputation. As the songs of Mme. Patti are superior to those of an untrained soprano, so are the warblings of a well-trained German bird to those of other varieties; and, if for its song a Canary is kept, a German bird is by far the most satisfactory. To be sure, these imported

birds are somewhat expensive, but after the first cost it takes more to keep a bird that will be a credit to the taste and judgment of its owner, than one that will be otherwise.

CAGES.

Next to the choice of a bird, the selection of a cage demands a great deal more consideration than it usually gets. A cage may be too small, or too large, too ornamental, or too plain. If it is too small, its poor little inmate is condemned to a life of unutterable misery; if too large, the bird is simply lost in the immensity of



NORWICH CANARY.

space, dwarfed in fact, and as an ornament to an apartment, nowhere. If the cage is too ornamental, it enters into competition with the bird for the admiration of visitors; and if too plain, it looks shabby.

Then, there are so many varieties to choose from that they keep the judgment in suspense. There are passed in succession before the gaze of intending purchasers a bewildering variety of candidates

for his or her favor. The eyes wander from the simple beauty of the Swiss cottage to the fantastic Chinese pagoda ; to the mystic grandeur of the gothic church ; to the stately Grecian temple ; and the Indian temple with its gorgeously painted domes and minarets. Truly, in the present day, workers in wire and tin are worthy to be placed on the roll of artists.

Taking all things into consideration our experience leads us to pronounce the japanned 10x10 square cage to be the best. Japanned cages, being so easy to keep clean, are much more desirable than wood or brass, the latter being very liable to create verdigris, which is exceedingly injurious to the bird. Preference should always be given to cages with false bottoms that will draw out, as they are more convenient, leaving the least chance of losing or disturbing the bird when being cleaned.

In removing the top of a cage always take hold of the lowest point ; the bird will then fly to the upper part of the cage and there will be no danger of its escaping when the top is lifted. If, however, you get hold of the highest point the bird will naturally fly from the hand and probably escape when the top part is raised. These experiments are easily tried, but, if you make the latter one first, be sure the bird is your own.

BIRD GRAVEL.

We will now presume that you are the happy possessor of a genuine St. Andreasberg Canary, imported direct from the Hartz Mountains, with its low water-bubble, flute and bell notes, long, sweet, silvery trill, etc., and have him placed in a suitable cage.

A supply of gravel should always be kept strewn over the bottom of the cage and renewed at least twice a week. Birds like to flutter and clean themselves in gravel ; it also keeps their feet in better condition and tends to health and general cleanliness. Moreover, gravel is absolutely necessary for the health of birds, without which they cannot digest their food properly, as, having no teeth, that operation is performed by the gizzard, where it is ground and reduced to nourishment, much in the same way as corn is ground between the stones in the mill.

Find sand is frequently used, but it is not sharp enough for the purpose, and often very impure.

Gravel that is dug from the streets of our cities cannot be used with safety, as it is generally impregnated with various gases that are positively destructive to health. That which has been purified by exposure to the oxygen of the atmosphere is most healthy. Gravel from the sea shore is the most acceptable to birds, on account of its saline taste ; and it contains in the highest degree every qualification that is necessary. Cottam's Bird Gravel consists of imported re-cleaned silver sea gravel and cuttlefish bone mixed, put up in 2½ lb. boxes, and for sale by all grocers, druggists and seedsmen.

SEEDS.

If it be important that your bird should be well supplied with gravel, it must be admitted that its food is of still greater importance. In the great majority of diseases to which birds are subject the cause may very frequently be traced to the use of bad or indifferent mixtures of seed. Hemp is frequently mixed with bird seed; but fed in this way it is exceedingly injurious to the birds. If given at all it should be fed separately and sparingly, for several reasons. When it is mixed with other seed

**THE YORKSHIRE FANCY.**

it causes much waste, as the birds turn out the other seeds and scatter them over the cage, that they may obtain the hemp, of which they are passionately fond, and on this account are induced to eat more than they should and otherwise would. The oil contained in the hemp seed, being very rich, soon has a serious effect on them, and in many cases their vocal powers are entirely destroyed. The Germans never feed a grain of hemp, or to that extent would consider their birds injured.

Many people whom the writer has tried to convince on this point have argued, "Why, hemp seed must be good for my birds, because they are very fond of it, and it makes them look fat and slick." That Canaries like hemp is granted; but this is hardly proof sufficient that it is good or beneficial. Because they like it so well is one, but not the principal reason why they should not have it. Hemp seed fed to Canaries has the same effect on them that pie and rich cake have upon children; it destroys their digestive organs, and produces and promotes various diseases. That children are fond of pie and rich cakes, and candy, is not to us a sufficient argument for their eating them freely. Birds, like multitudes of the human family, often starve to death amidst plenty. Their digestive powers having been destroyed through abuses of the stomach, are no longer able to extract nutriment sufficient to nourish the various organs of the body, although the amount of food they eat is enormous.

The best seed mixture for Canaries is composed of four parts choice Sicily or Spanish canary, two parts French or German millet, and one part German sweet summer rape, all thoroughly re-cleaned. Cheap English rape is very often substituted for the German, but it is not so good; it is easily detected, as it is much larger than the German, of a darker color, with a bitter pungent taste; whereas the German rape is rather small, of a bright maroon color, and sweet to the taste. This summer rape is fed almost exclusively in Germany, but it does not produce sufficient warmth to warrant its being used quite as freely in so cold a climate as ours.

For further information in regard to proper foods for Canaries, etc., see Part Three.

A MIXED DIET.

Experiments and experience prove that a mixed diet is necessary. Observation shows an habitual excess of any one or more of the great divisions of food over and above the wants of the body will result in the production of a constitutional derangement, and these derangements or diseases often become chronic.

Man and every other creature, in order to be healthy, useful and happy, must have food in variety properly proportioned. How often is even good seed spoiled and made injurious by being badly mixed and in wrong proportions.

For many years we were in business as importers of all kinds of cage birds, and constantly had on hand a large stock, principally Canaries; consequently, we were compelled to make them and their little wants a study in order to keep them in health and song.

In using Cottam's Bird Seed, the public have the benefit of our long experience in this line. If you really want healthy birds, with beautiful plumage, and choice song, use only Cottam's Choice Imported Re-cleaned and Well-mixed Bird Seed.

COTTAM'S BIRD SEED.

In introducing to the trade, and public generally, Cottam's Bird Seed, an apology is hardly needed, as in the interest of

our feathered tribe a better class of seed had long become an absolute necessity; and necessity is said to be the mother of invention. After long and careful examination, we failed to find in the market one single brand of bird seed in packet that could be honestly recommended, or even considered safe for birds; but, on the contrary, we found most of the mixture extremely bad, and positively destructive, both to health and song. That the public should have lost confidence in all bird seeds put up in packets is not to be wondered at under these circumstances. In the numerous cases where we have been consulted in regard to the ailments of birds, loss of song, etc., we have invariably traced the cause of such disease to the use of bad or indifferent mixtures of bird seeds. Good seed is just as important for our birds, if we want to keep them in health, song and beautiful plumage, as good hay is for horses, or sound bread for the human family, etc.; and yet, good seed is not all that is necessary to keep birds in a desirable condition, a proper mixture of seed is just as important. Beef, mutton, cheese, etc.; may be all good in their respective places, but let man feed exclusively on any one of these articles, and health will soon be impaired, and life made miserable and short.

Distinguishing Marks—Cottam's Bird Seed is distinguished from inferior and cheaper grades by having a four colored label with "Cottam's Bird Seed" in white letters, four birds, apple blossom, scenery, and Bart Cottam's photo. A five cent cake of our patent Bird Bread is also enclosed in every ten cent package of Cottam's Bird Seed. None genuine without these distinguishing marks. Beware of imitations. If you really desire healthy birds, with choice song and beautiful plumage, use only Cottam's Bird Seed, which has been awarded first prizes and diplomas. For sale by all druggists, grocers and seedmen. *If you send us thirty cents in stamps we will send you, post-paid, six cakes of our patent Bird Bread.*

GREEN FOOD.

Green food, such as lettuce, ripe plantain seed, chickweed, groundsel, water-cress, or a little sweet apple, is very wholesome for Canaries as well as other birds, especially in hot weather, when cooling or relaxing food is much needed; but it may do considerable mischief when given where there is a tendency to diarrhœa. Green food is very necessary when feeding egg food, and also with Saffronitus or coloring food.

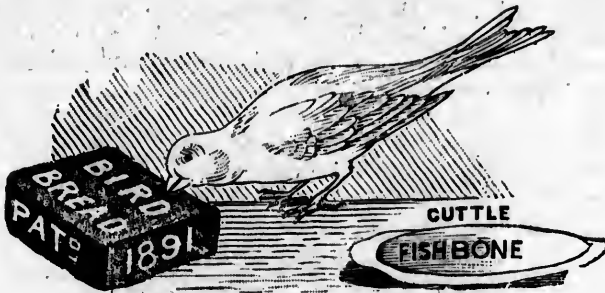
See Part Three for further particulars on this subject.

EGG FOOD.

This is a very useful article of diet, and is, in some cases, absolutely necessary. It is made as follows: Take the yolk of a hard-boiled egg chopped very fine, Zwieback (stale bread crumbs desiccated and powdered), maw or poppy seed, all in equal proportions; thoroughly mix together with a sprinkling of Cayenne pepper. This will be found a very nourishing and strengthening food in cases

of debility, during moulting season, previous to, and after incubation; and it is especially commendable as food for young birds. It is, however, too stimulating as a regular article of diet; and a little green food or sweet apple should always be fed with it.

BIRD BREAD.



THE WONDER OF THE AGE.

Cottam's Bird Bread, protected by letters patent, is manufactured by combining honey, poppy seed and cuttlefish bone, together with twelve other ingredients, each of which have been tested by experienced bird fanciers, and proved to have been, for many years, most serviceable in the aviary.

These fifteen different ingredients are compounded in such proportions as to insure the most beneficial results on the vocal organs and general constitution of cage birds, but more particularly on Canaries.

No birds should be without this excellent preparation, especially during sickness, moulting or incubation; as it improves the vocal organs, increases song, makes brilliant plumage, eradicates disease, promotes the healthy operation of the gizzard, strengthens and sharpens the beak, gives tone and vigor to the whole system and is strongly recommended for birds troubled with mites.

Cottam's patent Bird Bread is sold at five cents per cake; but a cake is given away with every ten cent package of Cottam's celebrated choice re-cleaned and well mixed Bird Seed.

WATER.

A daily supply of pure water for drinking purposes should be given in a thoroughly clean receptacle; and in very hot weather its renewal at least twice each day would be of considerable advantage.

BATHING.

The bath should be given daily in warm weather, and occasionally in winter, care being taken at all times that the water given for the purpose, and the air of the room are at the right temperature, and that there is no tendency to chill the bird. Not only as

a luxury, but also as a necessity the bath should be given, and nothing tends to keep down parasites, with which most birds are troubled, or is more conducive to the general health. Some birds like the bath, and will immediately go into it when placed before them; on the other hand, many only care to wet their head and dress down their plumage in this way. Some birds will take a tepid bath when they will not take a cold one, and vice versa. Others prefer a sand bath to the water, and are fond of fluttering in a dish of clean sand. This desire should always be gratified, as it is in many ways most beneficial.



BREEDING CANARIES.

Almost everyone who takes an interest in birds has a desire to breed them, and the temptation is great along this line; but for one amateur who is successful in the business twenty make a lamentable failure of it, and give up the idea in despair. Why? Simply because they go about it in the wrong way. And should fortune favor them so far, that one or two of the expected brood come forth alive from the eggs, there are a thousand chances to one against their living.

Now, breeding Canaries will be found very easy if the following directions on the subject are only carefully followed: First—Pair only such birds as are likely to produce good results. Second—Select the proper season for pairing. Third—Take the necessary pains in the preparation of the nest, and see that it is kept in order. Fourth—Provide proper food, both for the old birds and for their newly hatched young. Fifth—Avoid meddling or interfering with them more than is necessary, especially during the period of incubation.

Pairing should not be set about too early in the year. A popular, though in our opinion erroneous, idea exists that Saint Valentine's day is, of all days in the year, the one looked upon by the feathered tribe as sacred to the worship of Hymen, and many of those who hold in their hands the lives and fortunes of captive birds insist on pairing them on that particular anniversary. But, in this country, according to the opinion of experienced and successful breeders, this is too early. By having the young birds hatched too soon they are sure to be delicate; they require much warmth, and the heat of the sun is to be preferred, for the absence of which any amount of artificial warmth will not compensate. Usually the middle of March, when they say in Ireland that Saint Patrick turns the warm side of the stone, or the beginning of April, is soon enough. The young birds have then the summer before them wherein to acquire strength and get properly on their legs, or wings perhaps.

For some time before putting the birds together for breeding purposes, the cages in which they are kept should be hung close together, so that they can see and become familiar with each other before mating; and during this period they should be supplied with hard-boiled eggs chopped very fine and mixed in equal proportions with desiccated stale bread or bun rolled into a powder, together with a little maw or poppy seed. In addition to their general diet, at this time they should have a few heads of fresh, ripe groundsel, ripe plantain, water-cresses, radish tops, mustard, cress or small salad fresh every day, if at all procurable. Any of these will have a tendency to make them mate sooner than if fed only on their ordinary food. If this advice be carried out the process of pairing will be expedited and made easy.

It is, also, very desirable that the birds should know and become familiar with the person who is to have the care of them. To this end it will be well for that person to occasionally give them little dainties; such as small pieces of sponge cake, sweet biscuit, or bun. If they can be induced to take it from the hand, so much the better.

See hints on training birds in Part Three.

There is no small amount of amusement to be derived from endeavoring to produce birds of a certain type, color or shape; but the majority of amateurs are content to pair their birds haphazard, and let the results be what they may. For the benefit of those interested, we herewith intimate the young that may be expected from pairing certain birds.

JONQUE (a deep yellow bird) with JONQUE does not do so well, but they are all right if more delicate colors are preferred. A JONQUE cock and a MEALY hen should be matched for definitely marked and high-colored birds. When high-colored splashed or pied Canaries are paired there is a very good chance of their throwing green birds. Again, two green JONQUES often produce clear birds. PIED birds are produced by matching a GREEN JONQUE cock with a CLEAR JONQUE or a MEALY hen. A TURNCREST must, on no account, be matched

with another TURNCREST, as the offspring will, in that case, inevitably be bald or semi-bald headed. A young male and an old female will produce mostly male birds, and those of about the same age will generally throw nearly equal proportions of males and females.

BREEDING CAGES.

For one pair of birds, a breeding cage should be at least twenty-four inches long, twelve inches wide, and eighteen inches high. Each pair of birds require two nest boxes; a basin or bath of fresh water in the cage is also indispensable.

Before turning the birds into the cage, great care must be taken to thoroughly clean it, as the birds are very apt to be infested with vermin, or with the eggs of minute insects that are certain to prove a source of torment to the mother. The cage should be well washed with strong soft-soap, or with C. W. C., which is far better, and boiling water, both inside and out; the joints, crevices and corners receiving extra attention. In addition to this, if the cage is not put together with glue, it is well to let it stand for four or five minutes in a tub of boiling water. This is the old-fashioned plan for clearing a cage of insects, and, in our opinion, the best. Some breeders, now a-days, use carbolic powder to dust the birds, but these methods are more or less injurious. To get properly at the joints, etc., a painter's stiff hog-brush can be used with advantage. When the cage has been thoroughly washed the cracks and corners should be well saturated with Cottam's Mite Exterminator. This, if well done, will prevent vermin from breeding in the cage again that season. Some experienced breeders recommend white-washing the cage within and without.

Make it a rule, before retiring, to put a white cover over your cage, when you suspect insects; the red mites will, during the night, crawl upon it from the cage or bird; it should, however, be removed every morning at daylight and thoroughly examined for vermin. If this be done your bird and cage may be kept tolerably free from the pests.

The location of the breeding cage is important. It should be placed in a light and airy room, and if the morning sun shines therein so much the better. Drafts should be avoided, for young, callow birds are tender and must be treated accordingly. When the weather is balmy, and the sun shines, the windows may be allowed to remain open for an hour or two in the afternoon, and if the weather be very hot it may be best to leave them open all day. Even then, however, the cage must not be exposed to a draft. An even temperature in the bird room is indispensable. Too much heat is as injurious as too little; it makes the old birds sickly, produces weakening perspiration, under the influence of which they are likely to produce very weak young. The cage should not be hung too high, as the atmosphere is the more impure the nearer you get to the ceiling. It should so be placed as to be conveniently

reached for any legitimate purpose, though, if possible, at the same time in a retiring position. On no account must the breeding birds be subjected to the annoyance of being inspected by every person so inclined. If possible, only one person should attend or go near them, otherwise they may desert their eggs or young.

Nest Boxes should on no account be fixed to the corners or any part of the cage, but be hung on hooks or nails, because, despite the utmost precaution, insects will endeavor to harbor themselves. Nest boxes of wicker-work, tin, or of wood, can be procured ready-made from any bird dealer. Many fanciers, however, assert that a wooden nest box should not be used, it having a tendency to harbor insects. This may be so, but the objection can be obviated by having it made of box-wood.

Many and serious are the controversies that have from time to time arisen on the subject of nest-making: Some breeders insist that the bird should be merely supplied with material, and then left to construct the nest for themselves; while others dogmatically maintain that the nest should be made for them, and in such a way that they can neither improve nor spoil it. Both theories may have something to recommend them, but it must be remembered that Canaries differ as much as people. As a rule, tame Canaries are very clumsy upholsterers and not at all as apt in nest making as are wild birds, yet some Canaries are capable of attending to this kind of work satisfactorily, and the breeder must be guided in his course by the manner in which the birds are observed to act. The following are the best methods for providing a nest: Heavy woollen felt, cotton batting, wool, cow's hair or moss are the most suitable materials. If a ready-made nest is given the birds, the material should be stitched in so that they cannot pull it to pieces, if they are so disposed. As before stated, however, all that is necessary with some birds is to simply hang in the breeding cage a small bundle of nest making materials and leave them to build their own nest.

In making a nest of cow-hair, moss, batting or wool, great care must be taken to tuck in the material so that it will not get entangled in the hen's feet, for in such an event she is liable to drag the eggs or the young birds out of the nest in endeavoring to free herself from it. The materials of which the nest is made should also be sprinkled thoroughly with sulphur that it may not harbor vermin.

A nest box should be round and concave, three inches and three quarters in diameter, and about two inches deep.

Some birds have a rather sportive propensity for tearing up their nests and scattering the material over the cage. For these birds the felt and cloth nest is the most suitable. Others are so difficult to please in regard to their nest that they will lay anywhere else in the cage but in it. In this case they should be supplied with extra wadding or cotton; but if they will not use it the only recourse is to watch them and lift the eggs into the nest, by means of a spoon, immediately on being laid.

HATCHING.

Canaries generally have three nests of young every season, and lay from four to five eggs, seldom more. When they do lay a greater number it is no advantage, for five are as many so small a bird can conveniently cover. Some hens will break and suck their eggs as soon as they are laid, in which case means should be adopted to prevent their so doing. One method is to give an abundance of palatable food every evening, that the hen may feed early in the morning. Should this not succeed, stronger measures must be resorted to; a little mustard or bitter aloes put into an empty egg shell and placed in such a position as will be likely to attract her attention will, when she has tasted it, in all probability act as a deterrent in the future. Some hens, on the other hand, are too careful of their eggs, and will, if allowed, begin to sit on them as soon as they are laid, thereby hatching them irregularly.

The regular time for incubation is fourteen days. Birds are usually hatched one each day, as the eggs were laid, until all of them are hatched. If it should happen that one or more eggs remain in the nest, and do not hatch at the proper time, they should be taken out of the nest carefully—using a teaspoon for the purpose, so as not to handle them—and hold them before a strong light. If there is the appearance of blood, place them back carefully, for they may yet be hatched. If, however, the egg be transparent, it may be thrown away worthless. Eggs should not be thrown away until they are three weeks old at least. When hatched, the young birds remain blind for seven days. When from eight to ten days old, they should be provided with their last fresh nest, as after that age they are disinclined to change, and, in fact, will not stand it; but will leave the new nest in which they are placed, thereby exposing themselves to the cold before they are prepared for it. So essential are warmth and perfect quiet to them at this time that their obstinacy in the matter of nests in many instances results fatally.

When the young birds are from twelve to sixteen days old, the hen will give evidence of her intention to go to nest again by picking up bits of moss and depositing them in another box; indeed, at this time, she is by no means scrupulous, but will, should she find herself short of materials, pluck the feathers from the back and breast of the nestlings. Hens have been known at this time to denude their young of every feather except those of the tail and wings, and this generally causes the death of the young birds.

Some hens lay their eggs in the nest along with their fledglings. This, however, seldom occurs when two nests are provided, and must not, on any account, be permitted, for both the young birds and the eggs are then in great danger; and, although instances are on record where this procedure has not met with serious results, they are very rare. One inconvenience of having young birds and eggs in the same nest is that the hen is so much occupied with the eggs that she neglects to feed the fledglings. The safer plan is to transfer the young birds along with the cock to another cage as soon as new eggs are laid. He will generally feed them; but,

should he refuse, they must be fed by hand. This may be done by feeding them with a small straw on hard-boiled eggs, chopped very fine. Occasionally the old birds will entirely desert their young and leave them to starve. This will seldom occur if strict attention is paid to directions for treating the breeding birds. As a rule, this desertion is brought about by the old birds being disturbed too much. The young birds may, in these cases, easily be brought up by hand. The egg food should be given until they can crack seeds for themselves. It may be fed with a quill, from the side of which a small piece has been cut, thereby forming a small spoon.

When from a month to six weeks old, the young birds ought to be able to eat without any assistance, and by this time the old birds will most likely have another family to attend to. It is time, also, that they should be weaned from soft food, and put on a diet of canary, maw or poppy, and sweet summer rape, which it is best to feed crushed until the young birds are able to crack it for themselves.

VARIETIES OF THE CANARY.

Buffon enumerates twenty varieties of the Canary; but that was a long time ago and many more have since been added to the list, for by crossing and re-crossing varieties may be, and have been, produced *ad infinitum*. Furthermore, when prominence is given to from twelve to sixteen varieties, the number which the majority of exhibitions admit to the honors of competition is exceeded. The number of varieties is generally limited to eleven with *their* subdivisions or classes.

The True Canary, the original of all the varieties, and native of the Canary Islands and Madeira, has a greyish brown body, merging into yellowish green in the under parts; the beak and legs are of shining black. Of a stouter build than the golden yellow Canary, it has more of the fullness of the Linnet. Its song is also different, being its own wild native notes, unmixed with those acquired by training when in captivity. The Canary was first domesticated in Italy in the 16th century. During the 300 years of its domestication, it has been the subject of careful selection and of crossing with allied species, the result being the production of birds differing widely in the color of their plumage, and, in a few of its varieties, even in size and form from the original wild species. We herewith give a description of the principal varieties.

The German Canary as already mentioned, is unrivalled as a songster, but that is the gift of education. Its head is flat and its throat like all good vocalists, well developed. It is small in size, with belly rather flat, and short legs; in fact, it is not by any means, the most attractive of Canaries. Its form may be pronounced stumpy and ignoble in its general appearance. In color, it is generally of a greenish or mealy yellow, irregularly marked with patches of black or chestnut. For excellence of song, the Germans leave other breeders far behind. They are constantly endeavoring to improve the natural vocal powers of the bird, and such has been

their success, that as songsters, their birds have been given an increased value of more than one hundred per cent. above all other varieties. The birds most in favor are those that have learned the song of the Nightingale, Skylark or Mocking-bird, with water-bubble notes, long trills and variations. Some of these birds will sing or whistle complete tunes, and, of course, are valued according to their ability as musicians. They are, however, as we have already stated, when compared with the Belgian or English breeds, small and stumpy in size and wanting in elegance of shape and color. They are the hardiest of all the Canary breeds, and pair well with a Belgian or Yorkshire hen. As the Germans are valued solely for their superior vocal powers, the hens of this variety are seldom, if ever, imported.

The Belgian is a bird remarkable both for beauty of color and extraordinary form. It is, taken altogether, a strikingly handsome bird—larger in size than the ordinary Canary, and has an elongated figure, a snake-like head, and the shoulders are set very high—so high in fact, that in a perfect bird a horizontal line struck through the eyes should strike the top of the shoulder bone; a perpendicular line from the shoulder should pass down through the legs to the perch. Its plumage is clear and of the richest golden color—the breast being prettily tufted. In addition to the general type, fanciers frequently divide the Belgian into as many as six classes—an arrangement which only complicates classification, besides being of no practical utility. For all purposes—even of exhibition—two, or at most, four, classes are sufficient, namely: Clear yellow, clear buff, variegated and ticked yellow, and variegated and ticked buff. Many judges insist on the ticked birds forming distinct classes of their own. Birds of this variety are held in high esteem by fanciers, for the reason that crossing them with birds of a more compact and robust form, produces young birds of a very beautiful type. The Belgian possesses a fairly good singing voice, which is the more remarkable on account of the narrowness of his chest.

The Glasgow Don is the pride and joy of Scotch fanciers, and it is, indeed, a bird of attractive appearance. The Don, or Scotch Fancy (by which latter name it is generally called), is from six to seven inches in length. A vertical line from the tip of the beak is supposed to strike the end of the tail—the bird forming a perfect segment of a circle, of so slight a build that a well-bred bird can be passed through a lady's finger ring. They are bred for beauty of form and plumage, rather than for song, although some of them have very good voices.

The Turncrest is a variety of the Belgian crossed with other birds, having, with the exception of its crest, no special feature of its own. It is, however, much esteemed by some fanciers. It derives its name from its crest, which is inverted, and looks not unlike the headgear of a Skye Terrier. This class of birds is to be found more among the Norwich or Manchester Coppys than any other, and in some birds of this breed the crest is seen to perfection.

The Lizard, though deriving its name from some supposed resemblance in plumage to the markings on the reptile of that

name, reminds one most of the gold and silver-pencilled Hamburg fowl. They have the crown of the head either pure white or yellow, and the upper part of the body covered with black spots, or sometimes a clear grey or bright orange. The tail, wings, and



THE BELGIAN.

feet are of a dark hue ; the throat and breast of a lighter shade, approaching, more or less, the color of the head. The golden or silver-spangled Lizard Canary is about five inches long, and is most difficult to breed perfect in all points. Every time a Lizard moults it becomes paler, and its colors begin to run into each other, so that it is as difficult to maintain the points as to breed them. A hen of a

grey or green plumage will be best to pair with a cock of this breed. Like other varieties, when the Lizard is intended for exhibition, it is sub-divided into classes, generally four, according to the marking and colors; the most pronounced, however, is the Silver-spangled.

The Cinnamon or Quaker is, as its name implies, a bird of unpretentious appearance. It is of a uniform fawn color, the shade more generally worn by Quaker ladies in days gone by. It is, however, a somewhat handsome bird when evenly marked on its head, back and wings, with reddish fawn and white body, set off with patches of golden-yellow on its cheeks, throat and rump. These birds are of German origin but very extensively bred in England.

The Yorkshire Fancy is a bird originally developed and bred extensively in the north of England. They are fine, strong specimens of canarydom, robust and vigorous, like the people among whom they are bred. Many persons, however, consider them wanting in color. They are of a pale buff color, blending into white towards the back, the hinder part of the thighs, the head and the rump; the head is brown capped, and the wings terminate with the same color. Not at all lively, they have a solid appearance, and go about their singing in a thoroughly business-like way. Their principal attraction being their size and shape, the longer a bird can be bred, provided it is in proportion, the more valuable it is. Large numbers of this variety are bred to be sold in London, England.

Manchester Coppies are divided for exhibition purposes into two classes, Yellow and Buff, although committees will not acknowledge two distinct varieties; and, when admitted to a show, the extra class is simply included in the programme with "Any other Varieties." The Manchester Copsy Canary is about seven or eight inches in length, and very substantial in appearance. The principal points for which these birds are admired are size, contour and crest. This particular breed had its origin in Manchester, the cotton metropolis of the world, from which city it takes its name. The word "Copsy" is a provincialism for crest.

The London Fancy.—For beauty of form and color, no other breed is comparable with this, and so highly are they prized that it is difficult to obtain a well bred bird out of the great metropolis. These birds are probably the most expensive of the Canary tribe. A rich golden yellow or deep orange is the predominant color in the London Fancy, the flying feathers of the wings and tail being a jet black; the plumage being generally as brilliant and shining as if it had just come from the hands of a skilled burnisher. Perfect birds of this breed are most difficult to produce, and as before stated, command accordingly high prices. The immediate offspring of a London Fancy may not have a single black feather, without which a bird is of no value; and none but breeders of great experience meet with much success in producing them.

The Norwich Fancy ranks high in the estimation of connoisseurs. This variety is divided for purposes of exhibition into from twelve to sixteen classes. The leading ones, however, are the Clear Yellow, and the Evenly-marked Yellow; Clear Buff, and Evenly-

marked Buff; Ticked, Variegated, and Evenly-marked Yellow; Evenly-marked Crested Yellow; Evenly-marked Crested Buff; Clear Yellow with dark crest, grey or clear; Unevenly-marked Crested Yellow, and Unevenly-marked Crested Buff. The evenly-marked birds as may naturally be supposed, are very rare; for to



LANCASHIRE COPPY—CRESTED.

come under that head they must have the marks equally distributed on each wing, eye, and on each side of the tail. Ticked birds are often so slightly marked that they would easily pass for clear. The grey and clear crested birds are not very highly esteemed. The dark crested, if perfect in every other respect, are always awarded the highest prizes. The Norwich Fancy has a somewhat slender body, with very full neck and chest; the latter, in the crested

classes, being tufted. In color it is of a rich yellow, of golden hue. They are lively and active birds, but of somewhat delicate constitution.

The **Green Canary** derives this name from its color. Generally speaking, this breed is plentiful, though well-bred birds are not often found. Too many of them approach a faded brown color rather than a true green. The shape also of the greater number is objectionable, having more the appearance of the house sparrow than the graceful form of the canary. A well-bred bird should be a very brilliant green, with snake like head, lengthy and tapering in shape. Those most highly prized are from five to six inches long, very slim, of a grass-green color, and standing very erect. A good specimen should be free from dark marks on the back and breast, and from that cloudy or dusky slate color hue so commonly met with in this class of birds. If a bright green cock of this variety be paired with a dark grass-green colored hen a fine brood of strong young birds may be expected.

Mule Birds or Hybrids are the product of a cross between different species of the Canary and a male Bullfinch, Linnet, Chaffinch, Goldfinch or Siskin. Our native Bobolink, the Indigo bird and other birds of a similar size have also been successfully crossed with a female Canary. The Mule birds are said to have a song peculiar to themselves, for which they are highly prized. It is the female Canary which is almost invariably employed in crossing, as it is very difficult, if not impossible, to get the females of the allied species to sit on the artificial nests used by breeders. It is affirmed by some authorities that Mule birds will propagate their own species, but I have never known a single instance of it yet, neither have I heard of the existence or seen a living proof of the reproductive powers of the Mule bird, which should and would undoubtedly exist were the assertion to be relied upon.

W. A. Blackstone, in Cassell's Book on Cage Birds, says:—
 "Hybrids are one of those perversions—we use the word for the want of a better—of nature's arrangements which remind us, after taking one step, how futile are our efforts in the direction of a new creation, and well it is, no doubt, that they cannot reproduce themselves. Touching this latter point, there is some contradictory evidence to be obtained; but in the face of the most trustworthy of it (and the most trustworthy generally has a broken link in the chain) there exists the fact that nowhere do we see the living proof of the reproductive power of the Hybrid."





SCOTCH FANCY.





Miscellaneous Cage Birds.



PARROTS.



PARROTS are among the most interesting of cage birds. The magnificently colored plumage of some varieties, together with their ability to imitate the human voice make them, perhaps, next to the Canary, the most popular birds. The home of the vast majority of parrots is unquestionably within the tropics, but the popular belief that parrots are tropical birds, is a great mistake. In South America, at least four species of parrots are found in Chili or La Plata; one even being

common on the bleak coast of the Strait of Magellan. The most beautiful of these birds, however, are found principally in the countries between the tropics, both in the old and new world.

Those which inhabit certain parts of Asia and Africa, were known to Europeans two thousand years ago, and some of them were kept as pets among the ancient Greeks and Romans. The parrot is generally considered a handsome bird, and the air of intelligence they carry, indicative as it is of their powers and capabilities, give them precedence over others of the feathered race.

A Parrot's tongue is a miniature resemblance of the human tongue, thick, fleshy, soft, and rounded at the extremity; and it is owing to this formation of the tongue and the structure of the wind-pipe and the various muscles by which it is moved, that the Parrot is capable of imitating so closely the voice of man, the cries of brute animals, and other sounds and noises.

We must not miss this opportunity for protesting against the erroneous and most cruel notion that some people entertain, viz., that it is necessary to cut a bird's tongue in order to make it talk. If a bird of any description will not talk it is because nature has not endowed it with the power or disposition to talk, and slitting its tongue will not tend in the slightest degree to bring about the desired end. The practice is worse than useless, besides being a dangerous and brutal operation. Parrots, no less than other pets,

should be treated with the greatest kindness, and the most satisfactory results will invariably follow.

In order to teach a Parrot to talk it is best to *place the bird where it is likely to have absolutely nothing to distract its attention*; he is then more likely to attend to what you wish him to learn. Some recommend covering the bird up, others putting it down a dry well, and these, as well as other methods, have their advantages. A good time to teach Parrots is at dusk, either in the morning or evening, as at this time they are disposed to be more loquacious. Birds learn to talk more quickly from children than from adults, and from women more than from men. The reason is that the pitch of children's voices being generally in a high key and nearer that of the Parrot.



CUBAN PARROT.

The African Grey is considered the most intelligent of Parrots. His voice is the nearest approach to the human voice, and he is capable of whistling whole tunes and mimicking other sounds very closely; on this account it is usually the greatest favorite of all Parrots. The African Grey is from nine to eleven inches long, of a general pearl grey or slate color, shading lighter about the eyes, with a black beak and short, red tail.

The Mexican or Double Yellow-Head is to be classed next to the African Grey as a favorite, and his ability as a singer, together with his powers of talking and whistling, general intelligence and gorgeous plumage, bring him into close competition with the latter. He is much larger than the Grey, measuring from fourteen to sixteen inches in length, and of a more hardy constitution. The

plumage of his body is generally of a beautiful bright green, with orange forehead and scarlet tipped wings, the shades of orange deepening in color and extending with the age of the bird ; his beak, tongue and feet are nearly white.

The Amazon, the White-Fronted, the Half-Yellow Head, the Maracaibo, the Brazilian or Blue-Fronted Parrot, the Cubans, together with some of the Paroquets, make nice talkers and very interesting birds, but are not to be compared with the Double-Yellow Head and African Grey for general intelligence and ability. Good talkers and intelligent birds may be found in all classes, but those of the two first named breeds are, as a rule, much superior in ability and general intelligence.



GRAY PARROT.

The writer has at present in his possession a Rose-Ringed Indian Paroquet which will say the following words distinctly, viz :

"Three cheers for the Queen. Hip, hip, hurrah." "Draw words; quick march; D 18 canter." "Oh, dear, what's up? Wide awake the Brigadier. Wide awake, old boy." Whistles a single call, and in a very pitiable voice it will say: "Polly is sick; call the doctor;" then, with all the gusto imaginable, "Hang the doctor, call the cook; hang the doctor, call the cook." "Waiter, waiter, polly wants some beer; quick, quick, and bring it here, wide awake old boy." "Tea and toast for the ladies, and wine and cake for polly." "Tommy, get up, it's six o'clock; Tommy get up and kiss the poor baby." "Who are you, eh? What do you want here? Go away, you dirty quack." "Twenty guineas for the

pretty green bird; take her away, quick, cage and all—well worth the money." "Cuckoo cherry tree catch a bird and give it to polly," etc. In all it will say over one hundred and twenty-five words; besides whistle and dance, dance and sing, but this is however, an exceptional bird.

In teaching a parrot to talk, articulate distinctly always in the same tone of voice the words you wish him to say, keeping to one sentence until he has mastered that. Do not let him hear "Polly wants a cracker," or other undesirable language, and he will never make use of it.

THE AUSTRALIAN PAROQUET.

This is a beautiful bird, very much like a parrot in appearance, though smaller, and with a tail longer in proportion than that bird.



THE BUDGERIGAR, OR AUSTRALIAN PAROQUET.

It is of a pretty shade of green, with dark feathers interspersed on the back, the head being a bright lemon color. They never talk, but are very desirable pets. These birds seem to stand our cold climate remarkably well. They should be fed on canary seed only, with an occasional bit of green food. Very fond of water, they will bathe as often as given the opportunity, which habit conduces greatly to their maintenance in health. They become very tame, and may be taught many amusing tricks.

THE TALKING MINOR.

This bird—sometimes called the Musical Grakle,—is about the size of a dove, his color a glossy black, tinged with purple and other colors, there being a conspicuous white stripe on each wing; his feet, legs and beak are of a rich yellow. A yellow membrane extends from each side of the head down over the neck, there being also a smaller one under each eye. The Minor, an East Indian, is a soft billed, or insectivorous bird, and will thrive well on Cottam's Universal Insectivorous Bird Food. As a talker some of these birds are unsurpassed; they also learn to whistle accurately any tune they may be taught. They should have a cage at least twenty-five by thirty inches, and about twenty inches high. The bath should be given daily.

PARROT FOOD.

The Parrot is not naturally a great eater, but if tempted by dainties he will eat to gorging; stale bread crumbs steeped in water, unhulled rice, crushed corn and a little hemp seed may be given him as common food, with occasionally dry cake crumbs, a piece of apple and carrots, either cooked or raw. If attacked with fits sprinkle his head and shoulders with cold water. For sore feet bathe them in warm rum and water, and put abundance of sand in the cage; if he pecks his feathers his food should be confined to cooling dry articles such as will not excite skin humors; avoid the use of salt; always provide him daily with fresh water; if vermin appear, a little of the Persian insect powder blown in among the plumage will soon rid him of these pests.

Many varieties of food are recommended for Parrots; but that suitable for one will not always do for another, though perhaps of the same class. Cottam's Parrot Food which is composed of canary, hemp, sunflower seed, paddy, cracked corn, etc., will answer the best in most cases, and rich and greasy food such as bones, flesh, sugar, candy, cake, etc., should always be avoided. Birds fed on the latter variety of food will often be troubled with an irritation of the skin, and pluck themselves bare in the attempt to gain relief. If given plain wholesome food and ordinary care and attention, however, little difficulty will be experienced in keeping Parrots healthy and hearty. Occasionally a little green food may be given with great benefit, provided there is no tendency to diarrhoea. A crust of stale bread is very acceptable to most Parrots, and they enjoy munching it very much. Occasionally a crust that has been soaked in tea or coffee may be given; a roasted peanut, small onion, or piece of sweet apple will also be appreciated.

For drinking purposes, cold tea or coffee is much safer than water for Parrots to drink, but their desire for drinking is not very great. Some Parrots will bathe freely on their own accord; and those that do will enjoy an occasional sprinkling with tepid water. Very great care should be taken to keep them warm and free from draughts until they have got thoroughly dry after bathing.

Where water, or coffee or tea is not kept in the cage for drinking purposes, it is necessary to feed more moist food, such as boiled corn, stale soaked bread pressed nearly dry.

GRAVEL.—The bottom of the cage should be sprinkled with gravel, which should be removed two or three times a week; it greatly tends to health and cleanliness, and is excellent for the Parrot's feet.

DISEASES OF PARROTS.

Birds of all kinds in confinement are more liable to disease than those living in their natural state. This is due, chiefly, to a lack of exercise, and their inability to procure proper food, together with those remedies which God has doubtless provided for the use of all His creatures, and which their natural instinct has taught them to seek and obtain.

Diarrhœa, the disease to which caged Parrots are most subject, is generally caused by colds. It often results from rich and oily food; sometimes, also, by a sudden change of diet, improper food, etc., which is almost sure to bring on this disease. In cases of diarrhœa, laudanum, paregoric prepared chalk, etc., are all excellent when administered with discretion. Costiveness is cured by green food, and exercise outside the cage. Gout, shown by swollen feet and closed claws, may be cured by immersing the feet in warm water twice per day, letting them soak for 10 or 15 minutes, dry thoroughly, and in a week or so the bird will be all right, but in chronic cases it may take longer. Some Parrots are troubled with fits of various kinds. These are generally brought on by feeding too rich food, dainties, etc., and even, sometimes, proper food in excessive quantities. In such cases put the bird on plain food, as corn, paddy, etc., for a time, and it generally will be relieved. Occasional sprinkling with *cold* water is also recommended. The bird must, however, be kept extra warm after it.

A regular temperature free from draught is absolutely necessary for all birds, and this more particularly during the season of moulting. The various hints and suggestions in the last part of this book should be read over by every parrot owner, as many of them apply forcibly to these birds, and by attending to the advice given on cleanliness, food, etc., diseases will be prevented, which is much better than the cure.

THE MOCKING BIRD.

The Mocking Bird, classed by ornithologists in the family of Thrushes, and regarded as forming a distinct section of that family, is undoubtedly the king of songsters. These birds are found in the greater part of the United States, being in the north only a summer visitant; but though breeding yearly in New England it is not common there, and migrates to the south in winter, passing that season in the Gulf States and Mexico. It appears to be less numerous on the western side of the Alleghanies, though found in suitable localities across the continent to the Pacific Coast. It is rarely found farther northward than Wisconsin, and very seldom reaches Canada.

Of the abilities of this wonderful bird so much has been written by various authors that we are tempted to quote them here, and simply add that we believe that they in no way exaggerate the power of mimicry and song possessed by the Mocking Bird.

Webber, speaking of this bird's song at night, says it represents all the notes of the songs'ers: "Yes, they are all here! Hear them each warble, chirp and trill! How they crowd upon each other! You can hear the flutter of soft wings as they come hurrying forth! Hark, that rich, clear whistle! Bob White, is it you? Then the sudden scream! Is it a hawk? Hey! what a gush, what a rolling, liquid gush! Ah! my dainty Redbreast, at thy matins early! Mew! what, pussy? No, the Catbird; hear its low, liquid love notes linger round the roses by the garden walk! Hello! listen to the little wren, he must nearly explode in the climax of



THE MOCKING BIRD.

that little agony of trills, which it is rising on its very tiptoes to reach! What now? Quack, quack, quack! Phut, phut, phut! Cock-a-doodle-doo! What, all the barn yard? Squeak, squeak, squeak! pigs and all! Hark! that melancholy plaint, Whip-poor-will, how sadly it comes from out the shadowy distance. What a contrast—the Redbird's lively whistle, shrilly mounting high, higher, highest! Hark the Baltimore Oriole's gay, delicious, roaring, run-mad, ranting-riot of sweet sounds! Hark that! it is the Rain Crow, croaking for a storm! Heyday! Jay, jay, jay! It is the imperial dandy Bluejay; hear, he has a strange, round, mellow whistle too! There goes the little throated warbles, the Woodpecker's sudden call, the Kingbird's woeful clatter, the Dove's low, plaintive coo, the Owl's screeching cry and snapping beak, the Tomtit's tiny notes, the Kingfisher's rattle, the crow, the scream,

the cry of love, or hate, or joy, all come rapidly and in unexpected contrast, yet with such clear precision, that each bird is fully expressed, to my mind, in its own individuality."

Wilson says: "In measure and accent the Mocking Bird faithfully follows his originals; in force and sweetness he greatly improves upon them. In his native groves, mounted on the top of a tall beech or half-grown tree, in the dawn of day, while the woods are already vocal with a multitude of warblers, his admirable song rises pre-eminently over every other competitor; the ear can listen to his music alone, to which that of all other birds seems a mere accompaniment. Neither is this strain altogether imitative. His own native notes, which are easily distinguishable by such as are well acquainted with those of our own various song birds, are full, and bold, and varied, seemingly beyond all limit. They consist of short expressions of two or three, or at the most four or six syllables, generally interspersed with intonations, and all of them uttered with great emphasis and rapidity, and continued with unlimited ardor for half an hour or an hour at a time, his expanded wings and tail glistening with white, and the buoyant gaiety of his actions arresting the eye, as his cry most irresistibly does the ear, he sweeps round with enthusiastic ecstasy as he mounts or descends, as his songs swell or die away, and, as Bartram has beautifully expressed it, 'he bounds aloft with the celerity of an arrow, as to recover or recall his very soul expired in the last elevated strain.' While thus exerting himself a bystander, destitute of sight, would suppose that the whole feathered tribe had assembled together on a trial of skill, each striving to produce his utmost effects, so perfect are his imitations. He many times deceives the sportsman, and sends him in search of birds that are, perhaps, not within a mile of him but whose notes he exactly imitates; even birds themselves are imposed upon by this admirable mimic, and are decoyed by the fancied call of their mates, or dive with precipitation into the depths of thickets at the scream of what they suppose to be the Sparrowhawk."

The male Mocking Bird measures about nine and a half inches in extreme length, and is very slender in proportion, the tail being long, narrow at the base, rounded and somewhat spread at the extremity; the body color a dull, ashen brown throughout, inclining to ashen grey upon the throat, breast, and abdomen. No less than nine of the principal wing feathers are white at their base, thus making a bold, white patch, forming the segment of a wheel when the wing is spread out and examined from the inner side. The white wing feathers of the female Mocking Bird never extend over seven or eight feathers, and her back is of a light ashen brown. This, apart from the song, is the principal feature of distinction between the male and female. The lower portion of the back in the male is also much darker than it is in the female. The two outer tail feathers of both sex are white, and the rest are white only on their lower halves, the upper side being dark brown, edged with white.

The Mocking Bird is never bred in captivity, the young birds

being taken from the nest before being fully fledged. Being an insectivorous bird it requires a great quantity of insects to keep it in health, more, perhaps, than any other bird. Cottams' Universal Insectivorous Bird Food, being made from ant eggs, beef heart, poppy seed and other ingredients of the very best quality, constitutes one of the best foods for all insectivorous birds, and upon which they all do remarkably well. Proof—The writer never had a single Mocking Bird die on his hands. Meal-worms, flies, spiders, and grasshoppers are most acceptable, and tend to keep him in the best condition. The daily bath and plenty of fresh drinking water are very necessary in order that the Mocking Bird be kept in perfect health.

THE AMERICAN ROBIN.

No book on ornithology would be complete that did not say something about our familiar and welcome favorite, the American Robin. The good will and almost sacred deference manifested towards the little English Robin Redbreast seems to be shared in a great degree by our own Robin. This almost pious regard for these birds appears to have existed for ages, and has been handed down for generations, so that even pilfering boys, who, with little compunction of conscience, chase and kill other birds and rob their nests, are more favorably disposed towards them.



THE AMERICAN ROBIN.

The Robin is with us here in Canada the greater part of the year, making his appearance very early in the spring, and not leaving until late in the fall. Often before the winter storms have left us, and while the ground is yet carpeted with snow, this harbinger of spring can be heard from the chimney top, or from the branches of the tallest tree, piping out in the most animated manner his own peculiar "pretty dick, pretty dick, pretty dick," thus giving notice of the early advent of that most joyous season. Everybody is on the lookout for "the first Robin," and if the phrase, "as welcome as the flowers in May," be applicable to anything at all it

is to our own big Robin Redbreast. Right in the depth of our long and severe Canadian winter, the blessings of spring are often anticipated when we hear our children singing, with its peculiar charm, their school song, "Springtime brings the Robin and the Bluebird home." It does not, at such times, require any great exertion on the part of the most sluggish imagination to picture to the mind's eye the early return of these birds, with their yellow beaks sparkling brown eyes, and beautiful chestnut colored breasts, hopping over our lawns like so many game chickens, as if they claimed a right to the situation, with the full assurance that the claim would be granted.

The American Robin is about nine inches long, the top of his head and tail are a dusky black; the remainder of the upper part of his body is of an olive green, while his under part is a beautiful shade of chestnut. The feet are inclined to be dark, while the soles of the same are a light yellow. The beak is very strong, and generally of a deep yellow color, darkening towards the base. The female Robin is not so brilliant in color as the male, being more of an ashen shade; and their beaks have a dusky tinge.

The Robin is a very prolific bird, generally raising two or three broods each year. Their nests, which are a rather bulky structure, built of mud and lined with grasses and other vegetable fibre, are generally found in trees, shrubs, and bushes near the dwelling of man. There is one in a tree opposite the writer's house at this present time, and many more in the same neighborhood. The eggs are from four to five in number; in color, a blue with a greenish tinge, and occasionally inclined to be speckled. Being an insectivorous bird and a hearty eater the Robin consumes an enormous quantity of grubs, bugs, beetles, and other insects infesting our fields and orchards, which prove so destructive to the various crops. We should not, therefore, begrudge them a few cherries, raspberries, or other fruits which they may need, and take from time to time, and which, as a matter of fact, are well earned, for "your Heavenly Father feedeth them" as well as you. Matt vi. 26.

There is something very interesting in the manner in which the American Robin goes about our lawn at dusk on a summer evening, pouncing upon the great dew worms from six to nine inches long, drag them from their holes, and, after killing and breaking them up, devouring them.

The Robin is undoubtedly a great friend to farmers, market-gardeners, and to all who are trying to raise crops, and, also, of incalculable benefit to the country generally. He is very hardy and is easily kept, requiring a large and roomy cage, and about the same food and treatment as the mocking bird; but, being so common, he is greatly undervalued as a cage bird, but should not be on this account. Very easily tamed, he can readily be taught to pipe and whistle tunes, perform tricks innumerable, and will generally be found an apt and interesting scholar. Cottam's Universal Insectivorous Bird Food will be found just the thing to keep the Robin in health and song.

THE BLUE JAY.

The Blue Jay, in striking contrast with the jay family of Europe and other American Jays, is perhaps one of the most conspicuous birds in our woods. In size somewhat larger than our Robin. His prevailing color indicated by his name He is too well known to need any detailed description. We may say, however, that he makes an excellent cage bird. His great ability as a mimic, and his handsome plumage of sky blue, intermixed with bright violet and white, together with his very ornamental crest of light blue and purple feathers, which he can elevate or depress at pleasure, make him a very desirable pet. One of these birds, which the



THE BLUE JAY.

writer had in his possession, was a most amusing fellow. So tame he would allow you to fondle with him, though always ready for a tussle. He would grasp your finger with his beak and wrestle with your hand with surprising energy and vim, till they ached with pain, eventually compelling you to desist.

These birds should be taken from the nest or caught when very young. Being a soft-billed bird they do well on Cottam's Insectivorous Bird Food, and should also have a large number of worms, in-

sects, etc. They are very fond of bathing. Their general treatment should be the same as the robin, and the remarks in the preceding chapter apply equally to the Blue Jay.



THE BLUE ROBIN.

THE BLUE ROBIN.

The American Blue Robin, sometimes called the "Bluebird," the "Blue Nightingale," and the "Cottage Songster," deriving the last name from his habit of building his nest close, and loving to be near the dwellings of man, is a very beautiful bird. His beautiful

plumage, the sweetness of his song, and the sociability of his nature, to say nothing of his great cuteness, afford plenty of scope for praise and admiration. He is a true Robin in shape, make, habits and general characteristics, and his mode of living in a wild state is identical with that of the English Robin Redbreast. He is one of the first of the migratory birds to appear amongst us in the very early spring, and one of the last to leave in the fall. As soon as the trees and shrubs begin to bud, the Blue Robin builds its nest. It lays from five to six eggs for a sitting, and hatches out two or three broods each season.

Being an insectivorous bird, it requires an abundant supply of bugs, grubs, beetles, caterpillars and other insects, and, like the American Robin, is very destructive to these pests, which so often cause great trouble and loss to farmers and market gardeners and others; it is generally regarded as their ally and friend, and receives much consideration and protection on this account.

The Blue Robin is about six and a half inches long—the male being easily distinguished by the rich azure blue tinge of the upper part of his body—the throat, neck, breast, sides and under part of the wings, are a pale chestnut color, and the belly is dusky brown. The female is distinguished by the paler shades of color all over the body. The Bluebird requires much the same food and treatment as the American Robin and the Mocking Bird.

THE VIRGINIA NIGHTINGALE.

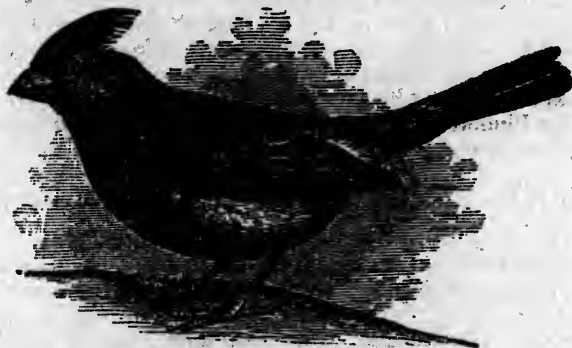
The Virginia Nightingale, sometimes called the American Redbird, Red Cardinal, Cardinal Grosbeak, etc., is a native of the Southern States of America and a great favorite amongst bird fanciers throughout the world. Large quantities of them are annually shipped to Europe. The male bird is undoubtedly one of the most handsome birds of the New World, and is about eight inches in length, of a brilliant red color, including the beak, but excepting the throat and parts around the beak which are black. On the top of its head is an ornamental crest, which, when angry or excited, the bird raises, much after the fashion of Cockatoos, giving it a very commanding appearance. The female is the counterpart of the male bird in size, but her plumage is of a sombre russet brown with a slight tinge of dull red relieving the principal wing and tail feathers, and her beak, like that of the male bird, is red.

The Cardinal, of necessity, loses some of its brilliant color in confinement, but this can be prevented to a considerable extent by giving them roomy cages; they are very active birds and require plenty of exercise, plenty of pure air, and a liberal supply of pure water for both drinking and bathing purposes daily. A little salt and chalk is often kept in their cage; the salt helps the bird to retain its color, and the chalk to keep its system regular.

The Cardinal has a very sweet and pleasing song or whistle. When enjoying freedom they delight in frequenting the thick foliaged bushes which border streams, and there build their nests of slender sticks, grass, etc.; it is here the bird's song is heard in perfection.

The crest of red feathers before referred to, which the Cardinal can raise and lower at will, gives it a fierce aspect ; but this is not indicative of its nature, as is shown by the affection which these birds exhibit towards their keepers or anyone who is kind to them. Their tender disposition is also invariably shown with other birds, especially toward the young, which they will often feed ; and it is said they invariably make good foster parents. And yet, while noted for their affection towards other birds, strange to say, they are very fierce and show no mercy toward their own species. This antipathy toward their own kind is more remarkable in view of the fact that they agree well with the Grey Cardinal, and have been known to build their nests in the same bush with them, not appearing to be the least affected by their presence or movements.

The Cardinal is remarkable for its strength of beak, and is capable of giving a very ugly bite. It can crack the stones of almonds, and Indian maize very expeditiously with its beak ; in



THE VIRGINIA NIGHTINGALE.

some parts of the country it is known by the name of "Corn Cracker." In its wild state, Indian maize and other grain are their principal food, but they will eat pears, cherries, apples, bees, grubs, beetles, butterflies, in fact, a little of almost anything eatable.

When kept in a cage the Cardinal does uncommonly well on Cottam's Parrot Food, which is a mixture of cracked corn, canary seed, hemp, unhulled rice, sunflower seed, in almost equal proportions, with an occasional supply of Cottam's Universal Insectivorous Bird Food. Fruit and green food of any kind, meal-worms or insects are excellent, but when these cannot be obtained, dried currants, apples, and a little lean beef chopped up fine are good and acceptable substitutes.

DISEASES.—The Cardinal, being a hardy bird, is easily kept in health and song with ordinary attention ; but if neglected, like other creatures, he soon shows it by loss of song and general dejected appearance. The Gapes is perhaps the principal disease to which these birds are subject, and is caused by their being kept on wrong food, in vitiated air, with impure water to drink. The symptoms of the Gapes are so apparent no one can mistake it,

as the bird is caused to gape with each breath he takes. A cure is generally effected by saturating a camel hair brush with turpentine, and putting it down its windpipe. The small worms which are the cause of the trouble are thus destroyed. One application is generally sufficient. Five or six hours after, however, if the bird continues to gape, a second application may be necessary.

THE BRAZILIAN CARDINAL.

The Brazilian Cardinal, also known by the name of the Crimson Crested, or Grey Cardinal, is a very pretty and lively bird. His glossy gay coat and brilliant crimson crest, always well kept, together with his hearty, mellow whistle and lively carriage, bespeak



THE BRAZILIAN CARDINAL.

the possession of a healthy constitution and contented disposition, which make him a general favorite, and entitle him to rank second only to his gaily colored next of kin, the Virginia Nightingale.

The bird is a native of South America, and may be seen in flocks in various portions of Brazil. When so many are seen together, their grey plumage surmounted by crimson crests giving them a uniform appearance, they are a very beautiful sight. The Brazilian Cardinal is about seven inches in length, not quite so long nor so robust as the Virginia Nightingale, though not unlike that bird in some respects. The upper part of its body is of a dusky grey, the lower part of a lighter shade. The head and crest are of a brilliant scarlet. The beak is conical in shape, and of a coral red color. The pointed crimson crest and gay body gives the bird a very smart appearance. The crest of the Brazilian Cardinal, the Virginia Cardinal, and the Green Cardinal are very much alike, but the grey bird does not appear to have control of his gay head-dress as do the other Cardinals, and it is seldom raised.

The sexes are nearly identical in plumage, and are distinguished with much difficulty by those who have had little experience with them. The song of this bird, while not so loud as that of the Virginia Nightingale, is every bit as sweet. When in confinement they require a large cage, the same food and general attention as the other Cardinals, with the addition, perhaps, of a somewhat more liberal supply of insects or insectivorous bird food.

THE GROSBEAK.

The Rose Breasted Grosbeak, belonging to the same tribe as the Virginia Nightingale, is one of the domestic birds of our neighbors across the line, occasionally coming into Canada, but comparatively



THE GROSBEAK.

seldom caged. Much rarer than his red kinsman, his beautiful plumage and sweet mellow song do not seem to be appreciated as much as they deserve. He sings by night as well as day, and when caged becomes very tame. Canary is the only seed they require, though an occasional allowance of hemp and unhulled rice may be given; so fond are they of these two last named seeds that they will eat of them until unable to jump on their perch. With their body of jet black, relieved by snowy white, and a bright carmine breast, these birds are indeed a picture.

THE GREEN CARDINAL.

The bird, sometimes called the Black-crested Cardinal, is also a native of South America. Its plumage is of a dark olive green above, merging to yellow on the breast and abdomen; the primaries of the wings and tail are black, fringed with green on their outer edges; and, like the Grey and Red Cardinals, he possesses a crest, which he can raise or lower at will; while the crests of the other Cardinals, however, are of a brilliant crimson color, his is of a rich, clear, coal black.

The sexes of this variety are, like the Grey, nearly identical; and in size and general characteristics he very much resembles his grey kinsman; but it is considered superior to that bird as a songster. In the matter of food, large roomy cage, and general treatment required by him, the advice given in preceding chapters are applicable to these birds.

THE BALTIMORE ORIOLE.

Among those fond of amusement with cage pets, these birds always become great favorites, for they are exceedingly active, tricky and intelligent; while the vivid colors of their plumage, their ability as whistlers and their interesting manner, make them objects of great attraction. Varieties of the Oriole family are very numerous, (our Meadow Lark belongs to the same class—*Icterus*) and are found in all parts of the globe.



THE BALTIMORE ORIOLE.

The Baltimore Oriole, known also as the Golden Robin, is supposed to have obtained its name from its highly colored plumage of brilliant orange and black, which colors composed the livery worn by the dependents of the Calverts, Earls of Baltimore, the original grantees of the State of Maryland. The bird is about eight inches long, thin in proportion and somewhat high on his legs. Its beak is horn colored, long, and very sharply pointed; the head, neck, wings, and tail are of a velvet black; the outer feathers of the tail yellow; the whole body being a brilliant orange. The wing coverts are fringed with white, forming a bar that is very striking in contrast with the prevailing color of the bird. But the most remarkable feature of the bird is his eye, which is white with a black pupil, and this contracts when the bird is excited, either with pleasure or anger, and expands when at rest, its movement forming an index to the temper of the bird.

The Baltimore Oriole does not attain its full plumage until the third moult. Until then its head and wings are rusty, and the breast has a dull greenish tinge, and at this period the male and female look so nearly alike that it is very difficult to distinguish them. These birds are most skilful architects, suspending their nests from the extremities of the highest branches, using long pieces of hemp attached to two forked twigs as stringers, and interweaving other material so as to form a pouch hanging down seven or eight inches, then interlacing this outer frame-work with fine grass fibre, raw cotton, horse-hair, etc., finally downing the top and leaving a round aperture at the side, somewhat like the opening in the nest of the titmouse.

The food suitable for these birds is much the same as that for the Mocking Bird and other soft-billed birds.

THE BOBOLINK.

Merrily swinging on briar and weed,
Near to the nest of his little dame;
Over the mountains, river and mead,
Robert of Lincoln is telling his name.
Bob-o-link, bob-o-link,
Spink, spank, spink;
Snug and safe is that nest of ours,
Hidden among the summer flowers.
Chee, chee, chee.

—Bryant.



THE BOBOLINK.

Very few American birds are detested more heartily by the farmers in some parts than the Bobolink. They are said to come in large flocks from the south every spring, doing immense damage to young corn and grain of every description, upon which they descend in thousands. We have no doubt, however, that their presence on the farm is productive of some good, for they feed principally on insects, which would certainly do great harm to the crops, if not considerable more than the Bobolinks themselves.

A male Bobolink is about seven and a half or eight inches long. His plumage changes twice every year. His summer suit, which comes at the approach of spring, is jet black upon the head, neck, and all the lower portions of the body; the nape of the neck is crossed by a patch of yellowish white, and the black feathers extending from the collar half way down the back are edged with yellow; all the rest of the back to the tail being white. The tail itself is black, each of the feathers in it being curiously pointed; the wing coverts are white, and the black feathers of the wing are also edged with white. The beak, feet and legs are of a slate blue, and when the bird is out of color the beak becomes flesh tinted. The winter plumage of the male is similar to that of the female, the white back and wing coverts giving place to rusty black, and the whole of the under part of the bird changing to a dirty yellow.

They are, like the rest of their species, pugnacious in confinement, and not suitable for aviaries; although occasionally they will live harmoniously with other birds. Their song is varied and rather pretty, and the Bobolink will be found a hearty and cheerful pet, always alive to everything that affects his own interest, especially in regard to matters of food.

His principal food in confinement should be canary seed, unhulled rice and millet seed; and, as he is a great feeder, care must be taken that he does not get too fat, which he is very liable to do from want of exercise. The daily bath is to Robert of Lincoln both a luxury and a necessity.

THE ENGLISH BLACKBIRD.

Methinks, methinks, a happy life is thine,
 Bird of the jetty wing and golden bill!
 Up in the clear, fresh morning's dewy shine
 Art thou, and singing at thine own sweet will;
 Thy mellow voice floats over vale and hill,
 Rich and mellifluous to the ear as wine
 Unto the taste; at noon we hear thee still;
 And when grey shadows tell of Sol's decline.
 Thou hast thy matin and thy vesper song,
 Thou hast thy noontide canticle of praise,
 For Him who fashioned thee to dwell among
 The orchard-grounds, and 'mid the pleasant ways
 Where blooming hedge rows screen the rustic throng;
 Thy life's a ceaseless prayer, thy days all Sabbath days,

—H. G. Adams.

The English Blackbird, a variety of the Thrush, has a rich, mellow song, a golden chain of melody, which binds into one harmonious whole the warblings and strains of several of the sweetest songsters. It is a very noble bird, and being a lively, joyous creature, is peculiarly desirable as a cage bird. The Blackbird is never bred in confinement, but is very contented in captivity, provided it be in a large cage. In England they are generally kept in cages of wicker or some hard wood, one side of which is open, the opposite side and ends boarded, and the top shelving down like a penthouse. Any cage, however, providing it be large enough, may be used, though one with a hardwood frame is preferable. The food should be placed into boxes outside the

cage. The Blackbird is fond of bathing, and should have water placed in a sufficiently deep receptacle, at least three times a week, particularly in the summer ; but his cage must not be suffered to remain long wet, or he will be attacked with the cramp, to prevent which, strew plenty of dry, coarse sand or gravel on the floor or false bottom of his cage.

Blackbirds are usually reared from the nest, which are to be found with the nestlings about the end of April or the middle of May, in a thick bush or cluster of boughs not far from the ground. The nestlings are taken just as the wing feathers have begun to appear. Even at that early period the males may be known by their darker plumage, by their being the smallest in size, and by the yellow rim round their eyes being brighter than in the females.



THE ENGLISH BLACKBIRD.

They are kept warm and fed upon roll or white bread, not too stale, steeped in milk ; they soon become accustomed to their diet, and thrive well on it, but being very free eaters, they must not be overfed at any meal ; one ounce of bread is enough for three or four nestlings for one day. They are at first fed every two hours, from sunrise to sunset, and the food mixed twice a day, for, if it be the least sour, it will kill them. When sufficiently grown to be separately caged, they are shipped to all parts of the world.

The best food for Blackbirds in this country is Cottam's Universal Insectivorous Bird Food, together with raw or cooked beef, shred finely, and mixed with bread crumbs, German paste, stale bun, hard-boiled egg, and occasionally a meal-worm, small snail, worm, earwig,

spider, or other insects as a treat. These birds are very fond of ripe fruit, which is excellent, and a little variety in food will help to keep them in health and song, and preserve their life for years; Blackbirds will live in captivity from ten to sixteen years. If treated with kindness and properly attended to, they become very familiar, and are sometimes exceedingly amusing.

A story is told of a tame Blackbird, brought up from the nest, that used to awaken his mistress soon after the dawn of day, by flying out of his cage, sitting on her pillow and singing. If she did not then open her eyes he would peck gently at her eyelids until she looked up at him, when he would sing on again, apparently with the greatest delight. Another story is told of a bird that had been taught to whistle a certain air. He once heard it played on the pianoforte with variations; and the variations so offended him that he hissed and fluttered his wings till the performance stopped. He then he gave his version of the air, whistling it all through as he had learned it. This same bird fell into the hands of a lady, whose custom it was to have the evening hymn played and sung at the conclusion of family prayers. He caught the tune, and always accompanied their voices, and from that time regularly whistled it every evening during the rest of his life.

Some Blackbirds also learn to imitate very correctly the songs of other birds. They sing in confinement nearly the whole of the year, with the exception of moulting time. At this period they require to be kept warm and to be carefully attended to; otherwise their song and beauty of plumage may be seriously impaired, the former perhaps entirely destroyed. Their song is cheerful, but at times too loud to be agreeable in a room; in this case, the cage may be placed outside the window in suitable weather, when the bird will delight and enliven the whole neighborhood.

The disease to which the Blackbird is most subject in confinement is a stoppage of the oil gland, which is situated on the root of the tail, which, when so affected, merely requires to be carefully opened by a needle, and the part anointed with a mixture of fresh butter and sugar.

THE ENGLISH THRUSH.

"A flute-like melody is thine, O Thrush!
 Full of rich cadence, and clear and deep;
 Upon the sense it cometh like a gush
 Of perfume, stolen from the winds that sweep
 Where spice-isles gem the bosom of the deep:
 At early morn, and 'mid the eve-tide's hush,
 Pouring thy mellow music thou dost keep,
 From out the lilac tree or hawthorn bush:
 I love thee for the love thou bear'st the lowly,
 The cottage garden is thy fav'rite haunt,
 It ever is thy pleasure forth to chant
 Those blithesome peans, seeming as it were
 Thy wish to make all happy dwelling there."

—H. G. Adams.

The English Thrush, Throstle, or Mavis, as it is variously called, is one of the most familiar and deservedly admired of warblers. In its native land, and on migrating to other countries

on the continent of Europe, it pours forth its full, rich flood of melody long before the leaves are on the forest boughs; and certain it is, when this leader of the woodland choir is heard caroling its wild, sweet strains loudly and continuously, it is hailed as a sure indication of coming spring.

Generally in the neighborhood of water the nest of the Thrush is found, and a very singular piece of architecture it is. Made in the shape of a deep cup, it is lined with a thin, but stiff coating of fragments of rotten wood ingeniously spread and plastered, so as to present a smooth interior; the eggs are sea-green in color and spotted with black. The Thrush is never bred in captivity, and the young are taken from the nest before they are fully fledged, and fed with white bread soaked in warm milk, with now and then a little maw or crushed hemp seed. When fully grown they are exported to different countries, where they are very much esteemed for their song and appearance.



THE ENGLISH THRUSH.

In this country the Thrush will do best when fed upon Cottam's Universal Insectivorous Bird Food. German paste, barley meal, or wheat bran moistened with water, a small earthworm or two may occasionally be given, or a small bit of cooked meat finely shred, together with plenty of ripe fruit. Thrushes require plenty of water, both for bathing and drinking; their cage, however, must always be dry, and a daily supply of clean gravel should be kept strewn over the floor. They are very fond of insects, small worms, slugs, and snails, of which, when at liberty, they destroy vast numbers. A few of any of these, now and then, will be greatly appreciated as a treat, as will also a few dried berries in winter. It is a very restless bird, constantly in motion, and

requires a good sized cage, otherwise it will be likely to injure itself. If hung out of window it will be heard for a long distance, and delight its hearers with its rich, melodious song.

These birds can be kept for eight or ten years in this country if properly fed and carefully attended to. If neglected and suffered to get dirty they are likely to be seized with cramp and lose control of their legs. When troubled this way a little fresh hay should be kept at the bottom of the cage, and the bird fed by hand if unable to feed himself. A change in food, of a nourishing kind, as shred meat, boiled egg chopped small, barley meal mixed with a little crushed hemp seed, and plenty of ripe fruit will soon effect a cure.

The male Thrush can be readily distinguished by the black lines running down the sides of the throat being broader than in the female; the reddish yellow on the breast of the latter is much paler, approaching nearer a white hue.

THE NIGHTINGALE.

The voice so touching and sublime,
So far too pure for this gross earth;
Surely we may deem the chime,
An instinct which with God has birth.

Thy warbling and thy murmurs sweet,
Into melodious union bring
All sweet sounds in nature meet,
Or float from Heaven on wandering wing.

—Lamartine.

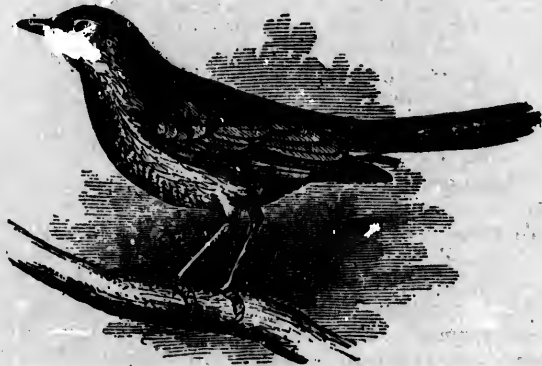
The Nightingale, literally "singer of the night," is a soft-billed bird, found in various countries in Europe. It is justly celebrated beyond all others by European writers for the admirable vocal powers which, during some weeks after its return from winter quarters in the South, it exercises at all hours of the day and night. In great contrast to the Nightingale's pre-eminent song is its plain and homely plumage, which is alike in both sexes. It is of a reddish brown above and a dull grayish white beneath, the breast being rather darker; the tail also is of a reddish brown, large and somewhat rounded.

The male Nightingale is distinguished by the power and brilliancy of his song; the muscles of his throat being more robust than those of any other singing bird. It is not merely the strength of voice, but the variety and agreeable transitions, together with the beautiful harmony of his song, for which the Nightingale is so highly prized. He begins by warbling a succession of low plaintive notes, commencing very softly and gradually increasing in volume and strength; and eventually commencing a long diminuendo which is so gradual the listener is often unable to distinguish the actual termination. Then follow a variety of sharp notes, interspersed with a few ascending tones, with which his lays usually conclude.

On the cocks being joined by their partners, the work, for which the long hazardous journey of both has been undertaken, is speedily begun, and before long the nest is completed. This is of

rather an uncommon kind, being placed on or near the ground, the out-works consisting chiefly of a great number of dead leaves, ingeniously placed together, so that the plane of each is almost vertical. In the midst of the mass is wrought a deep cup-like hollow, neatly lined with fibrous roots. But the whole is so loosely constructed that it depends for lateral support upon the stems of plants among which it is generally built, and a very slight touch will disturb its beautiful arrangement. Herein from four to six eggs of a deep olive color are duly laid and the young hatched. Towards the end of summer the Nightingale again goes south; but little, if anything, is known of its winter quarters, which are presumably in the interior of Africa. It has been said to visit the Gold Coast during this season. It lives in its wild state almost entirely on insects, and is, therefore, very difficult to rear in a state of captivity.

The best food for them in this country is the Universal Insectivorous Bird Food, ants' eggs, with crumbled white bread moistened with warm milk, and hard boiled egg, and occasionally a little white bread soaked with milk. Meal-worms, spiders, and other insects are very useful with these birds, and bird-gravel



THE NIGHTINGALE.

should be kept strewn over the floor of their cage, and plenty of fresh water given to them. A gentleman, who was very successful in rearing Nightingales from the nest, gives the following as a good food for them: three ounces of beef dripping, twelve ounces of peameal, four ounces of coarse Scotch oatmeal, one pint of hemp seed, two ounces of honey, two ounces of moist sugar, one ounce of maw seed. The dripping and honey are melted together in a saucepan, and the meal and sugar well rubbed in, so as to leave no lumps in the paste. Then the hemp seed, well crushed, and the maw seed added to it, and, when cool, it was put into an earthen pan. A small teacupful of this paste was mixed every morning with half of a hard boiled egg, white and yolk, press through a wire sieve. This was sufficient for four birds, and on this paste his Nightingales flourished.

Another food is made from peameal, hard-boiled egg, maw seed and sugar made as before mentioned. Beef shred very fine, and a meal-worm or two should be fed every day. Boiled turnip, carrot, and beet root may also be given occasionally. A little grated bread and dried ants' eggs—the latter being considered a specific for most of their ailments—with a spider, earwig, and meal-worm, now and then make an acceptable change. Ants' eggs can be obtained in summer, and they may be fried in a frying-pan on sand over a slow fire, and kept in a jar of sand until wanted.

Nightingales should not be kept in cages less than eighteen inches long, eight to twelve inches wide, and twelve inches high. The cage must always have a soft roof or covering inside the ordinary one, to protect the bird's head when it flutters and springs up, which it is very prone to do. It is, also, advisable to cover the perches with green cloth, firmly sewn on, to give a soft perch. These birds require fresh water daily, not only for drinking purposes, but to bathe in. The cage must not, however, be suffered to remain wet, or their feet, which are very tender, will soon be injured. It is necessary to remove the scales which form upon their legs and feet about every three months. When the scales become loose and horny, the legs must be soaked in warm water, till they can be removed with the point of a penknife, after which the feet and legs must be well dried and anointed with fresh butter or cold cream.

Should your Nightingale be observed to tremble and grasp with his feet spasmodically, he is probably suffering from cramp. In this case a foot-bath of Sherry wine for three or four minutes is recommended. Warmth is very necessary, particularly just before and during moulting; at this time a spider or two, or a few small green caterpillars should be given occasionally, and a few drops of Cottam's Bird Tonic put into his water-glass each morning.

THE STARLING.

The Starling is a well-known, good natured and merry bird. In its wild state it is an inhabitant principally of Europe. It is about the size of a Thrush, and though at a distance it appears to be black, when near at hand its plumage is seen to be brightly shot with purple-green and steel-blue, most of the feathers when newly grown being tipped with buff. These markings wear off in the course of the winter, and in the breeding season the bird is almost spotless.

A more engaging bird scarcely exists, for though its song has but little melody to recommend it, its sprightly gestures, beautiful plumage, tractability, cunning and amusing antics make it a great favorite. The male is cheerful and lively, readily domesticated, and soon becomes one of the family with whom he dwells, and will accommodate himself to them to an amusing extent; he seems to know when they are angry with him, and then walks about with a peculiar waddling gait. He will even learn to repeat a few words, and can be taught to pipe a song or tune; but in this case it is

necessary to place him where he can hear no other sound than the tune he is to learn, otherwise he soon forgets what he has learned, or blends it with other sounds.

Starlings are not bred in captivity. When taken from the nest the young birds are fed every two hours on roll steeped in warm milk. When they can feed themselves they are given meat shredded very fine, insects, crumbs of bread, cut bits of cheese and the German paste.

In this country they do well on Universal Insectivorous or Mocking Bird Food ; there are, however, few articles of food that



THE ENGLISH STARLING.

they will refuse. Nothing too stale, mildewed or sour must be offered him, or he will speedily fall a victim to the disease it will be sure to produce. Meal worms he is very fond of, and one or two may be given occasionally. He is exceedingly fond of bathing, and therefore requires plenty of water ; but on no account must his cage be suffered to remain wet. They will live ten to twelve years in captivity if properly fed and carefully attended to ; cleanliness for the

bird, and particularly in his cage, is most essential. Starlings should be kept in large cages, at least two feet long, and twenty inches deep. Round-domed ones are preferable, as in them their plumage is not so liable to be injured.

THE SKYLARK.

"From his low and grassy bed, see the warbling lark arise!
By his grateful wishes led, through the clear, bright morning skies;
Songs of praise and thanks he pours, filling all the arch of space,
Singing as he higher soars, toward the throne of heavenly grace,
Small his gifts compared with mine; small my thanks with his compared,
Yet I have a soul divine; angel's gifts with me are shared."

The Skylark, called also the Field Lark, Laverlock, etc., holds, perhaps, of all birds the foremost place in literature, there being hardly a poet or poetaster who has not made it his theme, not to mention the many writers of prose who have celebrated its abilities as a songster, in passages that will be remembered as long as our language lasts. It is one of our most favorite cage birds, as it will live for many years in captivity, and, except in the season of moulting, will pour forth its thrilling song many times in an hour for weeks and months together, while its affection for its owner is generally of the most marked nature.

The Skylark frequents most, if not all unwooded districts in Europe, parts of Asia and Africa, and has been successfully introduced on Long Island, in the State of New York, and into New Zealand, in which latter country it is reported to have given some little trouble by reason of its rapid multiplication. They make their nests chiefly among growing grain—sometimes in a hole in the ground, or in a natural hollow between the furrows—and its eggs and young are thus protected in a great measure from molestation; and, as each pair of birds will rear several broods in a season, the eggs in each nest varying from three to five, they will, after all losses, considerably increase their stock each season.

The majority of young Larks seem to leave their birth-place as soon as they can shift for themselves, and what becomes of them is one of the mysteries of bird life. They do not seem to remain long in one place, the approach of severe weather always being a signal for them to change quarters. On the east coast of both England and Scotland, they have been observed to cross from Europe in a constant stream for days at a time. On such occasions the bird catchers are busily engaged with their snares or traps, and twenty to thirty thousand of them have been known to arrive in London, England, within a very short time; it is estimated that at least two thousand pounds worth of these birds are annually sold in that city. So many of them being trapped each year, the species has been thought to be threatened with extinction; and on this account, together with the seeming cruelty of the practice, measures for their protection have been adopted. When, however, it is considered that, if these birds were left to continue their wanderings, a large proportion of them would die of hunger before reaching a

place that would supply them with food, and that of the remainder an enormous proportion would perish at sea, it must be acknowledged that the fate of the larks thus entrapped, is no worse than what they would otherwise encounter.

Lovely and delightful as is the song of the Lark, it is in appearance a very plain bird. It has a brownish plumage, the plainest, perhaps, except the sparrow, of all the feathered race. It is, however, the largest of the Lark species, often measuring seven inches from the beak to the tip of the tail, and despite its insignificant plumage is a sprightly looking bird; it has a smart silky crest which it can erect at pleasure.



EUROPEAN SKYLARK.

They are, on first being taken from the nest, fed with crumbs of white bread soaked in warm milk, crushed poppy seeds, scalded rape seed and crushed hemp seed, with now and then a few ants' eggs. They require feeding every two hours from early morn till dark at night. The Skylark must have a roomy cage, at least eighteen inches wide, to allow him a run, and rather high. The roof should be lined with green baize or cloth, that the Lark may not hurt his head in attempting to soar, which he is very much in the habit of doing, and the back should be boarded. It should be without perches, and the floor must be strewn with red gravelly sand and powdered chalk, or old mortar well bruised, in which he delights to roll. It should be provided with a projecting window, on the bottom of which a fresh green turf should constantly be kept. By having two pieces of turf, and keeping the extra one thoroughly watered, the Lark may be kept supplied with fresh turf all the time, and should be changed two or three times each week.

The Lark thrives best in this country on Cottam's Universal Insectivorous Bird Food mixed with equal quantities of fresh grated carrot and boiled mashed potatoes on alternate days. Occasionally the yolk of a hard boiled egg mixed with grated white bread crumbs may be given, together with a meal-worm daily, ants' eggs, German paste, a small piece of lean beef shred very fine, water-cresses, lettuce and chickweed. A little poppy seed, crushed hemp seed and barley meal or a little ripe fruit may also be given to vary his food.

Great attention must be paid to cleanliness, as the Skylark, being so much at the bottom of his cage, is likely to get his feet very dirty, and unless kept thoroughly clean, he is apt to contract disease. The claws of the feet are remarkably long; but this, according to some writers, is a wise provision of nature to enable the bird, whose nest, as before stated, is always on the ground, to remove its eggs or young, should any cause arise to induce it to do so.

Skylarks in confinement are especially liable to diarrhœa, for which a little saffron or tincture of iron, put into their water-glass, will generally be found a specific. They also suffer from yellow scurf, the skin at the root of the beak becoming yellow and scabby. Cooling food, as water-cresses, chickweed, or lettuce, and meal-worms or ants' eggs, spiders, etc., will prove the best remedy for this disease, and will generally be effective.

THE WOODLARK.

“Dost thou love to hear the song-birds of Spring?

Are their notes as voices of joy to thee?

Then fly to the grove where the woodlarks sing,

Rejoicing once more in their vernal glee.

The Springtime is come, the Winter is past,

And the Woodlarks' songs are cheerful once more;

Their sorrows are fled with the wintry blast,

And soft-flowing lays through the woodlands they pour,

Forgetful how lately the wintry winds blew,

When they sung the sad notes of their plaintive lu-lu.’

—Anon.



THE WOODLARK.

The Woodlark is much less in size than the Skylark; it is, like that bird, crested, and has a short tail and long hinder claws; but it does not appear to soar and sing far up in the bright sunshine,

preferring to dwell amid the shady umbrage of leafy bushes, and there pour out those strains that, for sweetness and richness, are hardly inferior to the Nightingale. For one thing, indeed, it is unrivalled; it usually retains in confinement all the brilliancy and richness of its natural song, and will sing in the dark as well as day, often continuing its strains far into the night.

The directions as to foods, etc., given in the preceding chapter, on Skylarks are thoroughly applicable to the Woodlark, so we need not repeat them. The cage for this bird requires to be at least eighteen inches wide, other dimensions in proportion, and should be often placed outside the window, but never between the open window so that the draft or current of air will strike it, that the genial sunshine may inspire the warbler and put him in good humor. He will then probably be very amusing, stopping abruptly, erecting and depressing the feathers of the head and neck, and evincing in various ways a turn for drollery. Unlike most other birds, the female Woodlark sings, though, perhaps, not quite so well as the male; her song consists of a few strophes, and these usually somewhat interrupted and irregular.

THE ENGLISH ROBIN.

“Art thou the bird that man loves best,
 The pious bird with scarlet breast—
 Our little English Robin—
 The bird that comes about our doors
 When Autumn winds are sobbing?
 Art thou the Peter of Norway boors,
 Their Thomas in Finland
 And Russia far inland:
 The bird who by some name or other
 All men who know thee call thee brother—
 The darling of children and men?”

—Wordsworth.

Robin Redbreast is the name of a bird little known in this country, except by those, perhaps, in whose memory it is associated with many dear ties which still bind them inseparably to the “old land,” which, by reason of its manners, no less familiar than engaging, has for a long while been a favorite among all classes in the old world. There are, however, few descriptions or representations of the bird which give an adequate notion of its characteristic appearance and gestures—all so suggestive of intelligence. Its olive-brown back and reddish-orange breast may be easily imitated by the artist; but the faculty of tracing a truthful outline, and picturing the peculiar expression of this favorite bird, has proved to be beyond the skill of almost everyone who has attempted it.

The Robin exhibits a curious uncertainty of temperament in regard to its nesting habits. At times it will place the utmost confidence in man, and again, at times, show the utmost jealousy. The nest, though generally pretty, can seldom be called a work of art; it is usually built of moss and dead leaves, with a moderate lining of hair. In this are laid from five to seven white eggs.

sprinkled or blotched with light red. In winter, when his favorite food, such as berries and insects, are scarce, he will become very sociable, approaching the habitations of man, timidly at first, but bolder after a time, and at last, if encouraged by a few crumbs of bread, will venture into the door or fly in at the window, and he has even been known to reward his entertainers with a song. But no sooner does spring approach, than he returns to his seclusion and seeks a mate. The Redbreast, so far from being a tractable bird, is, as a matter of fact, a quarrelsome and pugnacious fellow, and very difficult to rear in confinement. If caught in spring, before pairing, there is a chance of its living if carefully fed upon bread steeped in milk and a few ants' eggs, meal-worms, with occasionally a little maw seed and crushed hemp seed; but if taken in winter, and put in a cold room, he is likely to die almost



THE ENGLISH ROBIN.

Immediately; if, by degrees, however, he is moved into a warm room, he may eventually thrive. After a time, if he can be kept alive, he will become quite tame, and, if allowed, be a regular attendant at the breakfast table, picking up the crumbs and eating bread and butter with activity, often singing a merry song of gratitude in return. If thus rendered tame, his pretty colors and great docility recommend him as an interesting pet. He sings best in the cage when in confinement, and will then pipe very beautifully. As before stated, these birds are seldom seen in this country, there being some little difficulty in getting them acclimatized. Being a soft billed bird, they thrive on Cottam's Universal Insectivorous Bird Food better than anything else, and with much the same general treatment as the Mocking Bird.

THE GOLDFINCH.

"Goldfinch, pride of woodland glade, in thy jet and gold array'd;
 Gentle bird that lov'st to feed on the thistle's downy seed;
 Freely frolic, lightly sing, in the sunbeam spread thy wing!
 Spread thy plumage, trim and gay, glittering in the noontide ray!
 As upon the thorn-tree's stem perched thou sipp'st the dewy gem,
 Fickle bird, forever roving, endless changes ever loving.
 Now in orchards gaily sporting, now to flow'ry fields resorting;
 Chasing now the thistle's down, by the gentle zephyrs blown,
 Lightly on, thou win'st thy way, always happy, always gay."

—Anon.

The Goldfinch is found over the greater parts of Europe and North America, and eastward to Persia and Turkestan. Its gay plumage is well matched by its sprightly nature, which, together with its song, make it one of the most favored of cage birds. It is a granivorous or seed-eating bird, and, as such, may be kept with less trouble than any of the soft-billed species. "Of all cage birds," says Bechstein in his handbook, "this is the most delightful, alike for the beauty of its plumage and the excellence of its song, its proved docility and remarkable cleverness."



THE GOLDFINCH.

As a matter of fact, however, this bird is surpassed as a songster by many other species, but its docility and ready attachment to its owner make up for any defect in its vocal powers. Its song, however, is somewhat sweet and sufficiently varied to make its notes agreeable to the ear, being mellow in tone, and, perhaps, plaintive. He soon becomes familiar and attached to his feeder, and may then be safely allowed a flight about the room while his cage is being cleaned. As he is very docile he may be taught many amusing tricks, which he will learn very readily, and, if properly managed, without the least coercion.

The Goldfinch is seen in his glory on a bright autumnal day or some common where thistles plentifully grow. There he will be seen feasting on the downy seeds, flitting about in the sunshine, every now and then twitting out his lively song, and as happy as a bird

can be. You may, perhaps, approach very near to the bird as it clings to the rough stem of its favorite plant, intent on taking its morning meal; but the moment you are discovered the pretty feeder, with a startled and offended air, retires into some neighboring thicket, warning his feathered companions, as he flies, to follow his prudent example.

A Goldfinch, being a sprightly bird, should never be confined in a small cage, although he may often sing the best in it. He is very restless and scarcely ever still, continually fluttering and springing about as if trying the strength of all the wires of his cage. Nor ought he to be put into a bell-shaped cage, for he will probably jump round it so rapidly as to become giddy. The best sized cage is about ten inches wide by eight inches deep, and not less than twelve or fourteen inches high, and should be made of mahogany or other hard, close-grained wood.

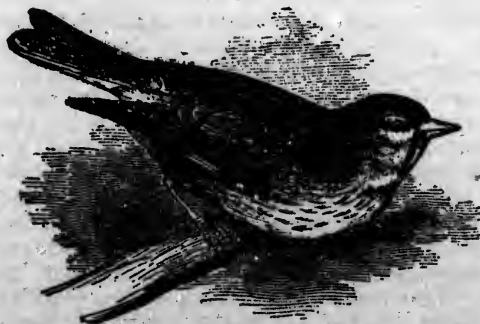
A Goldfinch should be fed on canary, sweet German rape, maw or poppy seeds, in about equal proportions. It also requires a little green food now and then, as water-cress, lettuce leaf, chickweed, plantain, or the like, and is delighted by an occasional feed of the whistling seed, which it prefers to pick out of the head for itself, and is a hearty feeder.

If a Goldfinch be placed near a German Canary, it will catch many of the notes of the latter, which will tend to improve its song. The Goldfinch, when properly taken care of, will often live from ten to fifteen years in confinement.

THE LINNET.

I wadna gie the Lintie's sang,
Sae merry on the broomy lea,
For all the harps that ever rang
In all the halls of minstrelsie.
Mair dear to me, where bush or breer
Amang the pathless heather grows,
The Lintie's wild, sweet note to hear,
As on the ev'nin breeze it flows.

—Burns.



THE LINNET.

The Linnets is a song bird, frequenting almost the whole of Europe, and in Asia extending to Turkestan. It visits Egypt and

Abyssinia in winter, and is abundant at all seasons in Barbary, the Canary Islands and Madeira. According to its sex or the season of the year, it is known as the Red, Grey or Brown Linnet. By many English writers on birds these names have been held to designate at least two species; but there is now no question among ornithologists on this point, though the conditions under which the bright crimson-red coloring of the breast and crown, of the cocks' spring and summer plumage is donned, and doffed, may be open to discussion. The Linnet has a very agreeable and flute like song, that consists of many connected stanzas, which is the more beautiful the oftener it utters its high-sounding notes; it is sometimes soft and mellow, prettily varied and remarkably sweet. The natural song of this bird, as learned from its parents, is rarely forgotten, so that to teach the Linnet the notes of the Nightingale, Lark, or other bird, it is necessary to take it while very young, otherwise it is seldom accomplished. The Linnet is a very shy bird, but when tamed it becomes attractive and much attached to those who treat it with kindness.



THE SISKIN.

The Linnet in its wild state feeds on all kinds of seed, and its fondness for flax has given it the name it bears; in common with most birds, it is very partial to hemp seed, but in confinement it ought not to have much of either flax or hemp, for their oily nature will cause it to become too fat. The best food for the Linnet in this country is German sweet summer rape, and good Canary seed, with now and then a little green food, as water-cress, lettuce, chickweed, or the like. A pinch of salt mixed with its food occasionally will be found beneficial. They require a large, oblong cage, as they become restless and uneasy; but the objection to the bell-shaped cages is not so great in their case as with the Goldfinch. They must have plenty of fresh water for drinking purposes; and are fond of bathing both in water and sand. The duration of their life is much the same as that of the Goldfinch, from ten to sixteen years.

Linnets are very liable to surfeit, particularly when they are kept in a small cage and take little exercise; warm bread and milk,

lettuce seed, or two drops of castor oil put into their drinking water, together with liberty to fly about the room frequently, are remedies for this trouble.

THE SISKIN.

This is another European bird of the Finch tribe. A yellowish green is its predominant color, interspersed with black markings; its beak and tail are both very short, and the top of the head is altogether black, owing to which fact it is sometimes called the Black headed Thistle Finch. Its song is agreeable, though short and somewhat low. In Europe the Siskin is a favorite cage bird. In this country it should be fed on maw seed mixed with crushed hemp seed; care being taken not to overfeed for they are inclined to be greedy. Their treatment in every respect, except as to food, should be the same as the Canary.

THE CHAFFINCH.

List, to the merry shilfa! on the air
 It sweetly trills a morning song of praise,
 And flits from bough to bough, now here, now there,
 Not long in any spot or posture stays;
 A lively bird, that in early days,
 When only fitful gleams of sunshine break
 Athwart the leaden gloom, and misty haze,
 That veil the infant year, will frequent make
 The leafless woods re-echo to its call.
 Treef, treef! a low sweet note, and then a shrill,
 And sharp fink, fink! upon the ear doth fall
 Like speech expressive of a sentient will;
 As brisk, as merry and as loved a bird,
 As auy in the fields and woodlands heard.

—H. G. Adams.

The Chaffinch is a very lively bird, found in various parts of Europe, brisk and quick in its movements, of good vocal powers, and one of the most prized of cage songsters; it is very docile and teachable, and of great aptitude for acquiring musical proficiency. In its natural or wild state, its food in winter consists of seeds and grains, and in summer of insects and larvæ. Like the Finch tribe generally, it is very expert in picking out the kernel of the seeds from the husks, and it is indeed a pleasing sight to see the bird thus employed. The male bird may be distinguished by the deep greyish-blue of its crown feathers, the sulphur-yellow of its rump, the white of the wing coverts being so arranged as to form two conspicuous bars, and the reddish-brown passing into vinous red of the throat and breast. The female is less conspicuous in its coloring than the male, though the young males resemble the females until after the first Autumn moult, when they gradually assume the plumage of their sex. Persons wishing to be certain as to the sex of this bird sometimes pluck a few feathers out of its breast, and the new growth, which takes place in about two or three weeks, shows by the absence or presence of the red color whether it be male or female.

Chaffinches are seldom bred in confinement, the young males

being removed from the nest as soon as the tail feathers begin to grow, and fed upon soaked rape seed, mixed with crumbs of bread softened with milk. They are not difficult to manage until the moulting time comes on, but then they require much care and attention. Insect food is essential at this time, and ants' eggs, meal-worms and maggots of some kind should be given; warmth and quiet are also to be especially studied for a few weeks. Chaffinches become very tame, and will obey the voice of their owner with but little training. If kept in covered cages, or in the most shaded part of the room, and not permitted to have the full sunlight until they are perfect in their lesson, they will readily and correctly catch any air or tune that may be whistled or played to them. They soon drop their wild notes when they take up the new melody.

In Europe, young Chaffinches are caught in great numbers in the spring and early part of the summer, and shipped to the various bird markets. Those caught at this time are usually found to be hardy and more easily trained than the birds reared from the nest; it being said that birds caught before Whitsuntide



THE CHAFFINCH.

will, when caged, sing before the end of the year; but, if taken after that period, they will most likely pine away.

The best food for the Chaffinch, when kept caged, in this country, is soaked rape seed, with very little hemp seed, about once a week, and occasionally a small quantity of green food, as water-cress, lettuce leaves or chickweed, varied now and then with a little ripe fruit. The cage should be twelve inches high, and at least eight inches wide. It is not advisable to place this bird in a bell-shaped cage, as it hops forward and not upward, and soon learns the habit of twisting, thus being liable to get dizzy. Two Chaffinches, if kept in the same room, must not be permitted to be in sight of each other, or they will interrupt each other's singing; whereas, if they can only hear, and not see each other, they will try their utmost to outvie one another in their song.

Chaffinches are very subject to the stoppage of the rump gland and dysentery. In the former trouble, the gland—a small protuberance above the tail designed by nature as a store-house for the oily secretion with which the bird's feathers are softened—must be carefully opened with a fine needle, and afterwards anointed with fresh butter and sugar, mixed together as an ointment. In cases of dysentery, two or three drops of tincture of iron or a sprig of saffron is often sufficient. Too much hemp seed with them is a source of trouble (and this applies, also, to other birds). A little sweet apple, ripe fruit or green food will be found very beneficial when the bird is out of condition.

THE BULLFINCH.

Better I love thy wood-no'es wild to hear
 Than all the melodies that art can teach ;
 Those untaught strains, so simple, soft, and clear,
 Seem ever near akin to human speech,
 And greater power have they the heart to reach.
 To please, to soothe, to animate, and cheer ;
 Sweet lessons of content, and hope to preach,
 And waken holy thoughts, and memories dear.
 Still in thy woodland covert, then, sweet bird !
 Utter thy low sweet call-note to thy mate ;
 Ne'er by the spoiler be the green boughs stirred,
 Which shelter thee in thy most happy state ;
 Ever may thine be liberty and love ;
 A green world all around, and azure skies above.

—H. G. Adams.

The Bullfinch is a bird of a bluish-grey color above, and generally of a bright tile red beneath, the female differing only in having its colors somewhat duller than the male, and a most docile and tractable bird. It has a peculiarly short, full appearance, with a well set-up, portly body, and a large, roundish head joined to it by a very stout "John Bull" sort of neck. The beak is thick and short, and the eye full and round. Its general rotundity of form might be called clumsy, but that its sprightly motions and richly-tinted and glossy plumage give to its whole appearance a graceful dignity most pleasing to the eye.

The natural song of the Bullfinch is soft and pleasant, but so low as to be scarcely audible ; it has a plaintive melody about it which is exceedingly touching. It is very pleasing to watch the male bird and hear him pour forth his warblings to his mate sitting in her nest. If, directed by the call-note, you can make your way noiselessly to some hiding place near to the nest, you will see Mr. Bull sitting on a branch, making the strangest contortions, while he pipes his song of domestic affection—now bowing his head gravely to his partner, then puffing out his neck and ruffling the feathers all over his body, until he looks twice his natural size ; now jerking his tail up and down, and spreading it out like a fan, he exposes a fullness of delight which swells his broad and brightly-tinted breast. Meantime, there sits my lady Bull, to whom all these expressive motions are addressed, in her nest, within which

are four or five eggs of a pale blue color, speckled with greyish or reddish brown. The slightest stir or noise stops in a moment, this pantomime of love, and off flies Mr. Bull to hide himself from apprehended danger.

The manner in which Bullfinches are trained in Germany is thus described in "Bechstein's Handbook of Cage Birds :"

"No school can be more diligently attended by its master, and no scholars can be more effectually trained to their own calling than in a seminary of Bullfinches. They are divided into classes of six each, and kept in a dark room, where food and music are administered to them at the same time ; so that when the meal is ended the birds most inclined begin to tune up, naturally induced to copy the sounds so familiar to them. As soon as they have initiated a few notes light is admitted, and this at once stimulates their spirits and urges them to sing. In some other training seminaries the birds are not allowed food or light until they have begun to sing.



THE BULLFINCH.

When they have been under this course of instruction for some time they are placed singly under the care of a boy, whose sole business is to play his organ from morning till night, for the instruction of the birds committed to his care, while the class teacher goes his rounds, superintending the progress of his feathered pupils."

The round of teaching goes on continuously for a period of nine months, by which time the birds have acquired firmness, and are not likely to forget or spoil the air they have learned by leaving out parts or giving them in the wrong place.

At the time of moulting the best instructed birds require to have the tunes they have learned repeated to them frequently, or all their previous learning may be rendered useless.

Bullfinches are not bred in confinement, most of them being

taken from the nest when very young. To train a young Bullfinch it is essential that he be removed from the nest before his tail feathers are full grown, or has had time to learn his father's song. He is then fed on bread moistened with milk and scalded rape seed. In the spring and summer, Bullfinches, in their wild state, feed on the buds of trees and bushes, choosing only, it is said those containing the incipient blossoms, thus doing immense injury to orchards and gardens. In autumn and winter they feed principally on wild fruits and seeds. The best food for the Bullfinch, when caged, in this country, is German sweet summer rape, with a little canary seed added. Hemp seed must only be given occasionally, and then sparingly, as it is too heating and nourishing to be allowed freely.

If any consequence of such over-feeding be observed, a few warm baths and plenty of green food will generally effect a remedy. Bullfinches are very partial to water-cresses, and a little lettuce leaf, chickweed or groundsel is acceptable. During the moulting season a rusty nail should be put into their water. A little hard-boiled egg and bread crumbs, a small piece of ripe fruit, or a few ripe berries may be given now and then. If they get over-fat, dieting them on scalded rape seed and green food will soon reduce their flesh.

The Bullfinch is a very shy bird, not associating with other species, and frequents low, wooded districts, being very rarely seen in open country. The young remain with their parents during the Autumn and Winter, and pair in the Spring, but not building their nests until May. In captivity, however, Bullfinches are usually good-tempered, and often exhibit a strong attachment to their feeder. They are occasionally capricious, and when in this sulky mood can only be prevailed upon to sing by being tempted with a bit of sponge cake, a little water cress, or some other delicacy.

THE BLACKCAP.

"Come ye, come ye, to the green, green wood,
Loudly the Blackbird is singing;
The squirrel is feasting on blossom and bud,
And the curled fern is springing.
Here you may sleep in the woods so deep,
When the moon is so warm and so weary,
And sweetly awake, when the sun through the brake
Bids the Blackcap and White-throat sing cheery."

—Anon.

This esteemed songster, a native of various European countries, has a hood or cap, black in the male, and brown in the female, which covers the top of the head. The length of the bird is nearly six inches, the tail measuring two and a half inches. Its song is second only to the Nightingale in power and sweetness, and it is an admirable mimic, readily picking up the notes both of the Canary and Nightingale, imitating the latter so exactly as to be easily mistaken for that bird. It is easily tamed in confinement, and often evinces great attachment to its feeder. One which was kept in a hothouse soon learned to take meal-worms from his master's hand, and would fly to the jar where they were kept as soon as he saw

him approach, striving to take his attention by flying before him, or striking him with his wing if he did not notice him as usual.

The Blackcap can be kept the best in this country upon Cottam's Universal Insectivorous Bird Food, a few meal-worms or ants' eggs may be added, and he will thrive well when fed thus. A paste made of barley meal, ants' eggs, meal-worms and other insects may be given, together with crushed hemp seed and ripe fruit, as apples, pears, raspberries, elderberries, currants, or cherries, as an occasional treat; a little boiled milk now and then may be given. If allowed to fly about, which it may be permitted to do, it will pick up anything that comes to the table in the way of bread, vegetables, meat, etc. It is a greedy eater, and swallows everything whole. In winter, dried elderberries soaked in water, when fed occasionally, tend to preserve its health. It is fond of bathing, and requires fresh water every day, but the bath should not be left too long in the cage.



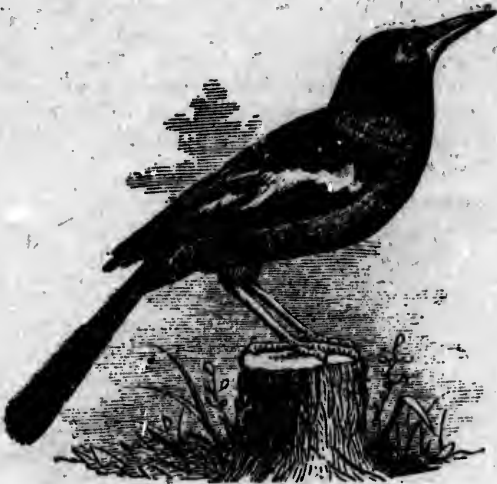
THE BLACKCAP.

The Blackcap requires a cage about the same size as the Nightingale, and prefers being placed in the shade to full sunlight. As he has a habit of picking at the wires of his cage they must not be painted or lacquered or he may be seriously injured thereby. The vessels in which his food is put should be placed outside, so as to prevent his scattering it about or wasting it, which otherwise he will do. The Blackcap together with all other birds, must be kept warm and free from cold draughts of air and sudden changes of the atmosphere.

The diseases to which these birds are most subject are consumption and swelling; or warts upon the feet, which are very tender. For the first trouble water-cresses are an excellent specific, and when used in conjunction with ordinary care and attention will do as much good as anything. For the tender feet a little cold cream occasionally applied, after carefully cleansing them, will be found very healing.

THE TROOPIAL.

The Troopial is a native of South America. He is not at all unlike the Baltimore Oriole in appearance, though of much larger build, and the yellow of his body is of a somewhat lighter shade than that of the Oriole. A splendid songster, he will learn to pipe tunes with remarkable fidelity. The Troopial is a very active and graceful bird, and when caged becomes very tame. Being a soft-billed bird they will do well when caged on Cottam's Universal



THE TROOPIAL.

Insectivorous Bird Food; they also require a generous supply of insects, and should be given a teaspoonful of scraped raw beef occasionally, and treated in all other respects as the Mocking Bird.

THE NONPAREIL.

This bird, sometimes called the Painted Bunting or Painted Finch, is certainly "without an equal" as regards beauty of plumage. Buffon refers to him as "The Pope," presumably on account of his handsome violet hood. The Nonpareil is about the size of the Robin Redbreast, and resembles that bird in many of its characteristics. They have no song, however, but are caged principally for their docility and beauty. The cock, when in full plumage, which is not until it is two years old, has the head, neck and lesser wing coverts of bright blue; the upper part of the back yellow, deepening into green; and the lower parts, generally, together with the rump, bright scarlet, tinged on the latter with purple. The hen is green above and yellow beneath; and the young cocks present an appearance intermediate between the

matured of both sexes. When caged, these birds ought to be fed on canary and millet seed, with plenty of flies and spiders, of which they are very fond. So much does the Nonpareil like to bathe that they have been known to drown themselves by attempting to bathe in a water pitcher or other receptacle too deep for them, when allowed the liberty of the room. He should be daily provided with the means of gratifying this desire for bathing.

THE JAPANESE ROBIN.

The Japanese Robin, sometimes called Pekin Nightingale and East Indian Sun Bird, is a most beautiful cage bird, having a sharp sweet song, and being a very desirable cage pet, varying from five and a half to six and a half inches in length. The upper parts of its body are of a brownish olive. The wings and tail feathers are jet black, the former with stripes of gold and white, and the latter with white alone. Its head is of a deep green, with the beak yellow;



THE JAPANESE ROBIN.

eyes black, circled with white; throat yellow shading to orange lower down. He whistles every month in the year, and his song is very sweet and attractive. Tame and docile, he is always very active and of a cheerful disposition. He does well on Cottam's Universal Insectivorous Bird Food, mixed on alternate days with grated carrot and mashed potato. He has few diseases, and may be treated much the same as other soft-billed birds. He requires a fairly large cage, as he is a very active bird.

THE JAVA SPARROW.

The Java Sparrow is a native of the country whose name it bears, and where they abound in immense numbers, being as common there as our ordinary sparrow is here. They do not, however, sing, and are kept, generally in aviaries, for the beauty of

their plumage. Of a light slate or ashen grey body, their head is a glossy black with clear white cheeks. Their bill is of a delicate rose color, and might be taken for wax-work. Their plumage is remarkably beautiful, not only as regards color, but also in the arrangement of the feathers, which fit into each other very closely, presenting a very smooth appearance. Some of these birds are white or of a cream color; rather scarce and more expensive. Usually sold in pairs, they become very much attached to each other. Being very tractable birds they will readily learn to perform tricks of various descriptions. They should be fed on canary seed, millet and rice, upon which latter grain they feed almost exclusively in their wild state.

AFRICAN FINCHES, ETC.

The following is a description of a number of small Finches which are mostly very suitable for the aviary. They are not kept for their song though some of them have very sweet voices, but for their beauty and agreeable disposition. All these we mention will do well in an aviary, being thoroughly happy in each other's company. The writer has had specimens of nearly all of them in a large aviary at one time, and to see them cluster together on one perch, hugging up to one another as closely as possible, caressing and pluming each other is indeed a very charming sight. If a small box containing some soft material, as cotton batting, etc., be placed in an aviary they will make a nest for themselves, and cuddle away in it two or three at a time for hours together. To a person confined in the house these little pets will prove a source of endless amusement. These Finches should be fed on millet seed, and a very few of them will eat rape or canary seeds. Coming, as they do, from a warm climate it is advisable to protect them from severe weather. They will, however, do well in the same temperature as Canaries, providing it is kept clear of drafts and sudden changes. Give them as much sunshine as possible and the bath daily. If properly attended to they will keep in good health with little trouble. Their general treatment should be about the same as the Canary, except in the matter of food.

The **Cut-throat Sparrow** or **Ribbon Finch**, as it is sometimes called, is a native of Africa, where it is as common as the Sparrow in England. In size it is a little less than the Sparrow, but resembles it very much in its habits and principal characteristics. Its prevailing color throughout is a salmon fawn, each feather finely edged with a whitish tinge that gives a shell-like wavy appearance to the plumage, which is really very pretty when examined. The male bird has, also, a red band across his throat. These birds are, however, very pugnacious for the aviary and should be kept by themselves, or with birds they cannot injure.

Cordon Blue Finch, or **Crimson Ear Wax-bill**, is a most charming little fellow. The male bird has a low pleasing song, and spends the most of his time cooing, apparently for his own amuse-

ment. Give him a match with the brimstone broken off, or a small twig, and he will jump about his cage holding it in his bill, singing as merrily as possible.

The Avadavat. These birds come from Africa and from various parts of Asia. They change plumage yearly until the third year, when the lower parts of the body and head are a bright red shaded with black. The beak is red, and the feathers round the eyes are black, tail black, and wings a reddish-brown color. Nearly all the feathers are tipped with white giving the bird a very pretty appearance.

St. Helena Wax-bill. Its general color is a greyish brown with the tail a little darker, and a tinge of red on the underparts. Its beak is a deep red. All the feathers have dark irregular lines across, giving them a very curious appearance.

The Saffron Finch is nearly as large as a Canary. It is a lively bird, of a bright plumage—a very desirable addition to an aviary.

The Magpie Finch has a light green head, with brownish back and white throat and breast. His plumage is always neatly arranged, and he is somewhat of a songster.

The Silver-bill, or Quaker Bird, has a very pretty habit of dancing on his perch, and singing away all the time. Generally kept in couples, they are very affectionate, caressing each other constantly.

The Zebra Finch, or Orange Breast Wax-bill, is an exceedingly small bird, but of a very amusing manner. Being very small, he is a decided novelty.

The Grey-Blue Finch has a very nice song, though very low in tune. Unlike nearly all foreign birds, these Finches will pair and hatch their young in confinement. They will not, however, hatch their young in the spring, but bring them forth in the midst of our winter.

The Chestnut Finch is another small bird of chestnut-brown color, the tail being black and the coverts of the same being white.

The Orange Cheek Wax-bill is a very neat little bird—its plumage always being neatly arranged. Its beak is of a light red color; its head grey, with throat and neck brown.

The Diamond Sparrow, sometimes called the Spotted Side Finch, is an Australian bird. It is of a short and rather stout build; the under part of the body being white and the sides black, relieved with white spots. They are very easily tamed, and will create much amusement, if allowed their liberty, by catching flies, of which insect they are very fond.

Black and White Capped or Tricolored Nuns, so called from the color of their heads—known also as the African Manikins—are very pretty birds. The rich color of their chocolate-brown and coal-black bodies contrasting very greatly with the color of their caps.

Japanese Nuns present a very beautiful appearance. They are bred in cages, and are usually very tame. In color, they are pure white, marked more or less with a salmon shade, and have also a very pleasant song.

The above named birds are but a small selection from the Finch tribe. We have merely mentioned those most frequently found in small aviaries.



THE ROCK MINOR.





Moulting Season, Diseases, &c.



THE MOULTING SEASON.



THE moulting season is perhaps the most critical period in bird life, and more birds die, or are permanently injured, at this time than at any other. Their future health, and, as a matter of course, their plumage and song depend mainly on the care and attention bestowed on them, together with the food with which they are supplied. Moulting is particularly trying to young birds

passing through this experience for the first time; and foreign birds, not yet acclimatized, are liable to suffer most. It is at this period that many charming songsters lose their vocal powers, never to find them again, as in others they are seriously impaired. While passing through the moulting season, therefore, the greatest care should be exercised, and the chief object should be to hasten the process of moulting, and get it over while the weather is warm, as rapidly as possible; but more particularly so in dealing with those birds whose color and plumage is the leading attraction. To accomplish this every means likely to bring it about must be adopted; but this can only be done by assisting nature, and keeping the birds warm, in a regular temperature of about seventy degrees, free from a draft, and on the most nourishing food. Cheap foods, to which, we regret to say, many fanciers have a leaning, must be eschewed; in short, birds at this time must be treated with as much care as would be bestowed on human beings when sick.

See chapter of useful hints on food, etc.

Strong birds get through their moulting much quicker and with more ease than the weaker ones. The best period for moulting is from the beginning of August to the middle of September, while the weather is warm. In a healthy bird, moulting really begins early in July, though it is not perceptible for some time after to the general eye; long before the bird begins to shed its feathers, nature is at work mustering her resources and supplying the bird with strength to throw off its old plumage, and materials out of which to furnish the new.

Never, on any account, keep a bird outside in chilly or windy weather, or after sunset, during the moulting season; for if, as a result, you do not lose your bird, you will probably lose his song and good looks. I have known many people who have left their birds out all night under the verandah during the moulting period; of course the weather was warm, but the sequel a few days later has been a funeral; and they have come to me afterwards, in surprise, wanting to know the reason for such an issue.

Canaries generally moult when from nine to twelve weeks old, some a little sooner, others a little later; degrees of health and strength causing these variations. In their first moult, they are more susceptible to disease than at any other period. Colds contracted at this time bring on swelling and inflammation of the bowels, and frequently, if not promptly dealt with, terminate fatally. During the first season, they only cast their down feathers; but every year after they throw off their entire plumage. As a rule, the young birds do not moult their wing and tail feathers until they are a year old, and the new ones are usually much longer than the old ones.

Egg food and bird bread will be found particularly beneficial while the moulting is going on; and if it be desired to have the plumage of ye'low birds a deep and brilliant orange, plenty of saffronitus or coloring food should be fed; it should also be given to the birds for one month previous to moulting taking place.

Many fanciers moult their birds, especially those for show purposes, in a dark apartment curtained off from draft, and feed saffronitus or coloring food almost exclusively at this time.

See article on saffronitus.

DISEASES.

Inflammation of the Bowels is the most serious ailment to which birds are subject. It generally occurs immediately before or during the season of moulting, when the birds are in a weak and debilitated condition, and is often brought about by keeping the bird in a room where there is a fire during the day time, but which is allowed to go out during the night, and when the temperature falls the bird receives a chill. Sour food, decayed vegetables or fruit, and inferior bird seed and non-nutritious food of any kind, especially just before and during moulting, is the cause of the worst form of the disease. It is, however, easily cured if the proper means are resorted to; but if permitted to run too far, the bird will most likely be sacrificed; or, if it does survive the attack, it will probably remain a miserable, dejected creature for the remainder of its life at all times liable to a relapse.

The principal symptoms of this disease are a dull and heavy appearance, feathers much disarranged, a restless movement of the eye, roosting on both feet—contrary to the manner in which birds generally roost when in health (i. e., on one leg)—and a swelling of the body, together with the head being kept under one wing, and sometimes there is a perceptible shiver. When these symptoms are observed, the bird should be taken in the hand and gently ex-

amined. If it is suffering from inflammation of the bowels the belly will be much swollen, of a dark red color, and when the feathers are blown aside, the veins will appear full to bursting. Should the bird appear attenuated, there is but scant hope; but if it has not fallen off in flesh, usually it may be cured speedily. The excretions of a bird suffering from this disease are small in size, hard and black, accompanied with but little white discharge. In health, they should be large and moist, though firm. Inflammation of the bowels, however, is often accompanied with a relax, which is frequently mistaken for diarrhœa.

As soon as possible, after the attack, the bird should be placed in a cage by itself, and unless it be of the long breed, or is already very much reduced in flesh, purgatives should be at once administered. A very small drop of castor oil put down the throat will generally produce the desired effect, and allay the inflammation at the same time. If the bird be very much reduced, however, castor oil is too powerful, and in any case the remedy must be used with the greatest discrimination and care. It is best to feed a preparation of lunch biscuit boiled in milk to the consistence of a thin paste, to which add a very slight sprinkling of cayenne pepper, the whole being sweetened with coarse brown sugar, and from four to six drops of black molasses put in the water each morning. This should be fed exclusively for several days. It will gently move its bowels, and, if the bird is not too far gone, will rapidly restore it to health. A few drops of spirit of sweet nitre should also be put in the drinking water, and the bird kept in a very warm and regular temperature until better. The cage should be thoroughly cleansed, and fresh gravel given every day.

Diarrhœa or Dysentery is a disease to which Canaries and most birds are subject, particularly in cold weather. It is frequently caused by a sudden change of temperature, or food, sour or unripe food, decayed vegetable, hemp seed, dirty or improper mixture of seed, and often by impure water. The presence of diarrhœa or dysentery soon becomes evident, and a remedy should be speedily applied. The most successful is alternate doses of rheum and mercurius, mixing four or five drops of each in two separate vases of water. (See remedies). The bird should be kept warm and supplied with nourishing food. Biscuits boiled in milk is about the best. A little tincture of camphor dropped into their water, or a lump of sugar will also be useful.

Constipation. The symptoms of this disease generally are a puffed and swollen appearance about the body, and apparent difficulty in evacuation. It is usually brought on by over feeding, especially stimulating food. Hemp seed, fed to some birds, even in small quantities, is likely to produce this complaint. The best remedy is one drop of castor oil a day, until the bird is in health again; a little raw, moist sugar, mixed with soft food or milk and bread, should also be given. Sometimes a little black molasses, with a very little bicarb of magnesia, added daily to the bird's drinking water, is sufficient to effect a cure. Green food is very beneficial in constipation. (See remedies).

Bad Feet. This disease is generally the result of a bird being kept in a dirty cage. Very often one perch is placed over another, so that the droppings from the bird on the perch above falls on the perch below, in which their feet become clogged. Neglecting to give the bath regularly, and leaving them without fresh gravel, wherein to scratch and dust themselves, is another cause. When found in a clogged or inflamed condition, the bird's feet should be bathed and washed several times a day in warm water, and then dressed with glycerine. If the swelling and inflammation does not readily subside, a dressing of arnica, in the proportion of four or five drops to half a teacup of warm water, may be tried. This mode of treatment, if persevered in for a few days, will, in most cases, effect a cure.

The Claws and Beaks of birds confined in cages require to be trimmed occasionally. This should be done carefully with a pair of sharp scissors. Too much must not be cut off or the bird may be considerably injured, and possibly permanently crippled, instead of helped. By holding up a bird's claws to the light, the point to which the blood circulates can be easily seen, and if care be taken not to cut so close to this point as to draw blood, no harm will result. We have known birds to get their claws entangled in the wire and to be so injured that they had to be destroyed. A case of this sort has been brought under the writer's notice within the last few days. If the bird's bill be not cut occasionally, the top beak may grow so much over the under one as to prevent the bird from eating. The claws and beaks should only be cut, however, when it is absolutely necessary, *which is very seldom.*

LOSS OF VOICE.

All birds, especially Canaries, are liable to lose their voice occasionally, more frequently during moulting than at any other time. We do not now refer to their ceasing to sing during moulting time, for most birds stop singing at this season of the year, but to their being unable to chirp "Pretty Dick" or "Pete, Pete," and even when moulting is over, and when they should begin to sing again they sometimes remain mute. This trouble generally arises from colds, which may have produced inflammation of the respiratory organs or larynx, or it may originate from weakness, cramps or paralysis. A little gum arabic and a few drops of paregoric, say twenty to thirty drops put in the drinking water twice or thrice a week, and a liberal supply of lettuce and linseed mixed, often removes the complaint. Some bird fanciers hang a piece of fat pork in the cage for the bird to peck at. When a bird is suffering from this affection, he will distend his throat to the utmost of his power, although otherwise in good health, throw back his head, opening his beak to the widest extent, and go systematically through all the various movements usually made when singing, with all the energy he can muster, but not a sound can be heard.

See article on Patent Bird Bread and Song Restorer.

VERMIN.

Parasites are said to be curses on legs, and most bird fanciers have an idea what this means.

Canaries, as well as other cage birds, are often infested by small, red lice, which are so minute as to be nearly invisible to the naked eye, and their presence remains frequently undiscovered until the poor little sufferer not only becomes thoroughly wretched and emaciated, but frequently dies under the suffering inflicted by its tormentors. Every bird is more or less troubled with vermin, but they generally manage to keep them under, when in health and when given the opportunity, by frequent bathing and dusting themselves with sand. Hens, especially, are the victims of these tormentors while sitting, and many broods of young birds have been destroyed by these pests immediately on being hatched.

Cottam's Bird Protector and Mite Exterminator are sure and never-failing remedies for the mite pest, which often is so troublesome and even destructive to cage birds and poultry, particularly in hot weather or during the period of incubation. At the same time, these articles are harmless to the youngest or smallest of birds when used according to directions.

COTTAM'S BIRD PROTECTOR.

How to Rid a Cage of Mites is a question we are frequently asked, and the answer is as follows :

1st. The cage should be thoroughly cleaned after of course, the bird is taken out ; the perches must be rubbed with the "Bird Protector ;" also the joints, cracks and crevices, where vermin are likely to lodge, should be painted with the same. This method will be found effectual, and the same treatment applied once every three months will generally be sufficient to keep a clean cage and protect the bird from vermin.

2nd. After the operation described above, put one drop of the "Bird Protector" on the finger and rub it under each of the bird's wings. The Mite Exterminator should be puffed into the bird's plumage, by the aid of a powder puff, once a day until every vestige of mites are destroyed. Covering the cage with a white cloth each night will often attract the mites from the bird and cage, and the end desired will sooner be attained. Examine, of course, the cloth each morning for the cause of trouble.

The above treatment applied to poultry of every description will be found effectual. Cats, dogs, etc., may be rid of fleas, etc., by putting a few drops on their skin, all along their back, from head to tail.

"Mite Exterminator" is sold in 10c. and 25c. packets. "Bird Protector" is sold in 10c. and 25c. bottles.

For sale by all druggists, grocers and seedsmen.

Lice are a great annoyance to birds, and sometimes do serious injury ; not so much by sucking their blood, as some people suppose, but by harrassing them in the night so as to prevent

sleep, which is more important to all animals than food. Sleepless nights produce weariness, loss of voice, disease, and eventually death.

The writer, however, never had much trouble in keeping down parasites, as they come and accumulate with dirt and neglect, but soon disappear before systematic cleanliness. This is the *only* reliable and permanent cure. Washing the cage in strong alum water will assist in keeping vermin away. In preparing the nest for the breeding cage, the material of which it is made should be thoroughly sprinkled with sulphur, or Mite Exterminator, which is far better, so that it will not harbor vermin.

EGG BOUND.

This trouble proceeds from cold, together, perhaps, with feeding the hen on food of a very heating and binding nature, and is also one of the consequences arising from breeders pairing their birds too early in the season. It may arise from want of sufficient exercise, the hens being frequently kept in too small a cage. Should the symptoms be observed in time, the remedies are simple enough, and no apprehension need be experienced. Hens, when laying, generally appear dull and heavy; but if observed to crouch on the floor of their cage, or sit all of a heap on the perches, and take to sleeping in the nest, an egg should be looked for, and if it has not come to hand, the hen should be examined. If the bird is found swollen, it may be taken for granted that she is egg bound. In most instances it will be sufficient to dip a small camel-hair pencil in castor oil, and insert it gently and gradually into her vent, applying a little around the outside to allay inflammation; a drop or two may also be inserted in the beak. She will then be almost certain to lay the following morning.

Very often, holding the hen with her vent over a narrow-mouthed jug full of boiling water, and steaming her well, will give immediate relief; *but it requires great care that she does not get cold after it.*

As a preventive a tablespoonful of salt, mixed with twice the quantity of mortar, and made into a hard ball, may be placed in the cage—indeed, a breeding cage ought, at all times, to be furnished with this article for the birds to pick at. Many breeders place great faith in change of diet in cases of this nature; but mere change of diet alone is of little avail. In cases of emergency, prompt measures are required. It can, however, do no harm to put the hen, for a day or two, on a regimen of relaxing food, including boiled bread and milk, sweetened with moist sugar.

ASTHMA.

Some Canaries are very subject to Asthma; others are never affected by it. In some, the disease is easily brought under, while with others it is very obstinate. Medicine gives but little relief in this disorder, and that only temporary. Change of food is the only chance the little sufferer has. Hemp seed must be entirely cut off,

if fed at all, and the bird fed on rape seed only, soaked in water ; but a little should be soaked at a time, as it soon grows sour. Lettuce, chick-weed, groundsel or water-cresses, in season, may be fed with advantage. Twice a week, for a change, it may have the boiled bread and milk made solid. When the case is far advanced, it is almost impossible to effect a permanent cure ; the disease has its seat in the delicate organs of the throat and chest, and, though sometimes relieved, almost invariably ends fatally. A good paste for asthmatic birds may be made by thoroughly desiccating good wheat bread, and then soaking it with just enough milk to make a thin or solid paste ; a little choice summer rape may be added. German paste is an excellent food for birds suffering with this disease. (See remedies).

MATING FEVER.

Many cage birds, especially those trapped or taken from the nest, will, in the spring months, evince much uneasiness, sometimes growing melancholy, neglecting to dress themselves and cease singing entirely ; some will even pine away and die. This is caused by their ungratified sexual desire. The remedy in some cases is simple—changing the bird to another cage, in a new location where its attention will be diverted to the new surroundings, will often be effective. Place the cage in the cheerful sunlight, indulge him with an occasional dainty morsel, talk and whistle to him. If you usually have no other birds it would be well to place him in company with one for a short time, and he will in all probability, regain his wonted cheerfulness.

USEFUL HINTS ON FOOD.

Insectivorous, or more commonly called soft-billed birds, as the Mocking Bird, Robin, Thrush, Skylark, etc., whose natural food is insects, and therefore require such food when caged or a substitute for it in some form or other, if we are to keep them in health and song. We herewith mention the insects, etc., most suitable for those birds, together with the best methods of obtaining them.

Meal Worms. These are invaluable to all soft-billed or insectivorous birds, and also to many of the omnivorous class. They are considered very nutritious and invigorating. Meal worms, sufficient to supply any ordinary aviary, may be easily bred without much trouble or expense. Two tins, not less than say fourteen inches square, and twenty inches deep, with a circular hole in the top about ten inches in diameter, are required. In one of these place a number of pieces of old shoes, small pieces of carpet or sacking, a few biscuits, with bran or meal sufficient to three-parts fill the tin, and then put in from fifty to a hundred meal worms, which can be obtained from any miller or flour dealer. The top of the tin must be covered with a piece of thick cloth or carpet, which should be moistened each day. The worms will multiply very fast, and if the tin be kept in a warm place and is not disturbed for a few months the colony will have become sufficiently strong to keep you well supplied for a long time.

The worms, after being put in the tin, soon turn into chrysalides, from which ultimately emerge beetles of a dark brown color, and of an elongated shape. The beetles lay an amazing number of eggs in the corners and folds of the sacking, leather, etc., after which the beetles die. From these eggs come forth the meal worms. Thirty or forty of these beetles will produce a sufficient number of meal worms for any ordinary aviary. Care should be taken to retain sufficient worms to start a fresh stock, which may be breeding in the other tin while the first lot is being used. It is necessary, in order to maintain a constant supply, to resist the temptation of using any of those reserved for stock breeding until they have actually gone through the above stages in breeding.

Spiders are an excellent food either for insectivorous or omnivorous birds. They have great medicinal properties, and will sometimes quickly restore a sick bird to health and vigor when nothing else will; two or three fed each day for a short time will often make a marked change in a sick bird.

Gentles or Maggots are a very nutritious and stimulating diet, in some instances especially; and most birds are very fond of them. A piece of meat hung in some out of the way place will yield an unlimited number.

Ants' Eggs are very useful in the aviary, especially when they can be obtained fresh. They can be obtained dried from any bird store. Before using the dried ones pour boiling water over them, though not more than they will absorb, and let them soak for about a quarter of an hour, covered with a saucer to prevent too rapid evaporation. When cold they may be fed either by themselves or mixed with other food. If they can be obtained from the ant hills in summer they may be fried in a frying pan on sand over a slow fire, and kept in a jar of sand until wanted.

Zwieback, or Desiccated Food, should always be kept on hand, being used as it is in the preparation of so many foods for birds. It is prepared as follows: Stale bread crumbs should be thoroughly baked until all moisture is evaporated, then powdered in a mortar and thoroughly dried again. In this state it may be kept in a bottle or jar for months. Zwieback may be used in a variety of ways. A spoonful added to a little scraped carrot or sweet turnip, together with a few shop currants, or mixed with egg and boiled potatoes, makes very acceptable food for some insectivorous birds; many of them will live entirely on it.

Eggs form a very nutritious and invigorating article of diet when properly prepared. The egg should be boiled for about one hour, afterward chopped fine or grated. Portions of egg, Zwieback and maw seed, together with a sprinkling of pure cayenne, should be thoroughly mixed, and if the bird is any way costive a little raw brown sugar may be added. This is an excellent food for weak birds, especially just prior to breeding, and for the fledglings.

Ox Heart is used largely in making insectivorous bird food. It is prepared as follows: Thoroughly boil the heart, after which remove every particle of fat; chop the lean meat into small pieces, then place it in an oven until dry enough to grind or reduce to

powder. Place in close jar or tin ready for use. Beef liver is sometimes substituted for the hearts, but it is not so nutritious.

German Paste No. 1. To a pint of fresh pea meal and two or three ounces of maw seed, add two new laid eggs, previously well beaten, and mix all thoroughly together; then add about two ounces of treacle or, what is far better, honey, and sufficient *beef* dripping to just moisten the whole; when thoroughly mixed and free from lumps, place it over the fire in a frying pan or kettle, stirring briskly until the food is thoroughly scalded, taking care that it does not burn or become smoked. When done, run it through a fine wire sieve into a sheet of paper, allowing it to remain untouched as it falls from the sieve until cold; then put it lightly, as loosely as possible, into a glass bottle, and it will keep for months. This is highly nutritious, and an excellent food for insectivorous birds.

German Paste No. 2. Another paste may be made by bruising in a mortar eight ounces of genuine sweet German summer rape; blow away the husks, and add a small slice of wholesome stale white bread; roll these together, and thoroughly desiccate; reduce the mass to a powder, and keep it in a tin canister or glass bottle with a wide neck, tightly corked to keep out the air, otherwise the rape seed is liable to turn sour. A little of this paste, well mixed with a hard-boiled egg, together with a slight sprinkling of Cayenne pepper, will be found capital food for either young or old birds, and it will keep good for a week to fourteen days. This paste, moistened, will be found an excellent diet for birds suffering from asthma and also for young birds.

Saffronitus, or a **Coloring Food**, is extensively fed to Canaries at the time, and previous to their moulting, in order to give their plumage a brilliant orange color. For a long time the secret of coloring the plumage of Canaries by food was known only to one man, and was the cause of much bitterness among his competitors. He travelled from show to show throughout England exhibiting his highly-colored birds, carrying off prize after prize, to the astonishment of everyone, and to the mortification of his rivals, who steadily persisted in saying that the deep colored plumage was caused by painting or dyeing the feathers, and, on that account, he was not honestly entitled to the many prizes awarded to him. Finally they insisted on an investigation being made, but the microscopic and other tests to which the birds were submitted failed to reveal the secret, or prove that any trickery had been resorted to. The judges of the various shows, as well as his disappointed rival exhibitors, were bewildered, but they had to yield and give up the prizes which he had honorably earned, the chemists having failed to detect any fraudulent devices. Saffronitus can be bought from any grocer, druggist, or direct from the author.

Saffron Cake is made as follows: Fine flour, two ounces; sugar, three ounces; butter, two ounces; and the yolks of two fresh-laid eggs. Pour a teacupful of boiling water over a half ounce of saffron; beat the eggs and butter in a basin together; next add the sugar and flour, and form the whole into a mass with

the saffron solution and thoroughly bake. When cold it is ready for use. But this is not so good as saffronitus, neither can it be used as a substitute.

Mocking or Insectivorous Bird Food No. 1 is made as follows: Sixteen ounces crushed hemp seed, sixteen ounces pea meal, sixteen ounces cornmeal, six ounces maw seed, four ounces rice flour, eight ounces beef dripping, four ounces black molasses, thirty six ounces Zwieback or powdered crackers. Mix lard and molasses well into other ingredients. This is an excellent food when carefully prepared.

Mocking Bird Food No. 2 (Dry). Seven quarts maw meal, four quarts Zwieback, thirty-two ounces boiled ox heart, one quart crushed hemp seed, one quart ants' eggs. Mix thoroughly with these ingredients thirty-two ounces beef dripping. This dry insectivorous bird food may be made richer by adding shop currants and insects. Before using this food, it should have a little grated carrot, apple or boiled potato mixed with it.

Mocking Bird Food No. 3 (Moist). Seven quarts maw seed, four quarts Zwieback, thirty-two ounces boiled ox heart, sixteen ounces shop currants, sixty-four ounces beef dripping. All the above materials should be fresh and of the best quality. The first three articles to be ground in a mill after which melt beef dripping and mix thoroughly with the other ingredients. This can be made richer by adding insects, etc.

Bird Tonic. Ten drachms tincture of iron, ten drachms compound tincture of gentian, thirty drops of glycerine, thirty drops of paregoric, ten drachms extract of licorice, sixty ounces of water one pint of pure alcohol. The above ingredients should be well mixed before using. Dose: Five to six drops in a wineglass of water, for small birds every morning; and from ten to twelve drops for a large bird, such as Mocking Bird, Parrot, etc. The above will be found a most useful tonic for delicate birds, and also for birds with soft moult; that is, for birds throwing off their feathers at a time other than the moulting season.

MISCELLANEOUS

HINTS AND SUGGESTIONS.

Gaslight has a great tendency to destroy or dim the brilliant colors of a bird's plumage and injure its eyes, and interferes with its sleep.

Never hang a bird too high in a room, as the atmosphere is the most impure the nearer you get to the ceiling.

A Bird Room is the best when it has a window looking to the southeast, as it then gets the full benefit of the morning sun.

Never Keep a Bird in a Damp Room, or in a room the air of which is vitiated with gas of any kind. Such places cause birds to moult at unseasonable times of the year, and lose their voice, etc. No bird can thrive in a vitiated atmosphere, or in a room badly ventilated or frequently overheated.

In Removing the Top of a Cage always take hold of the

lowest point; the bird will then fly to the upper part of the cage and there will be no danger of his escaping when the top is lifted. If, however, you get hold of the highest point the bird will naturally fly from your hand and probably escape when the top part is raised.

Brass Cages are easily cleaned by soaking for an hour or more in rain water, afterwards washing them thoroughly with a soft sponge and drying them. Never use soap or any kind of soda or washing compound, as it will take the gold lacquer off and the cage will begin to corrode, and, unless polished frequently, it will produce verdigris, which is most injurious to the bird.

New Cages. In removing a German Canary from its little wicker cage, containing seed box and water mug with which it is familiar, to another cage where it is strange, be sure it can find the openings to the seed and water bottles in its new habitation; otherwise the bird may be starved to death, or be seriously injured. The writer has known many instances of this nature. In changing any bird from one cage to another great caution is very necessary.

Perches. Cage perches should always be made and arranged with the bird's health and comfort in view. If the perches are too thick the bird cannot grasp them, and if too thin there is not sufficient girth for the bird to grasp and keep itself erect, and from slipping. In either case the bird is very uncomfortable, but in the latter event when the bird's claws meet they are very often crippled by being gradually forced out of shape. Perches should always be made of pine or soft wood, and adapted to the size of the bird's claws. Any other arrangement would be a serious mistake, being detrimental to the bird. Perches should never be so crossed or placed so as to catch the droppings of the bird.

TAMING A BIRD.

Some people take great interest in taming birds, and accustom them to fly about the house from room to room, alight on the finger, head, shoulder, or any part of the person, eat out of the mouth or hands, and teach them little tricks, such as drawing their seed box upon wheels up an inclined plane, ringing a bell for his food, and hauling up water in a small bucket from a glass well underneath, and many others. Almost all birds are susceptible to training, and a little time spent with them daily may be made to yield much amusement and soon make them proficient. There are many methods of teaching the birds, but systematic kindness is the secret of success with any of them. It is astonishing how tame a bird may be made by giving it regularly, at each meal time, a little sweetmeat, or anything of which it is particularly fond. For instance, speak kindly to, and give a canary only one grain of hemp seed before or after every meal; he will soon begin to expect it, and after a short time will come and take it from your hands, and it will not be a long time ere he will come out of his cage for it, if the door be left open. It is well to get the bird thoroughly accustomed

to eat from the hand before letting it out of the cage. On first coming out the bird will very likely fly wildly about the house, and probably make direct for the window, coming against the glass with great force; but take no heed of this and allow him time to get accustomed to being at liberty gradually. Then place some tempting morsel in the cage, near the door, and he will soon go back in again.

Before you let a bird out of his cage see that the cat is out of the room; secure the windows, and see that the door is locked on the inside, so that no one opening it from the outside will give the bird a chance to escape. Never attempt to catch a bird or you will frighten him and make him still wilder; he will go back to his cage himself after he has been out a little while. Let him have his freedom unmolested. Reverse in this and other kind treatment and your bird will soon be as tame as you could wish.

Another method of quickly and easily taming birds is to keep them without food until it will eat from the hand or mouth. After the bird has been a few hours without anything to eat a dainty morsel should be offered it; if it is very hungry it will take it at once. You may, however, have to try several times before hunger will overpower its natural timidity and compel it to come to you for the food; but it eventually will, and when once it sees that there is nothing to be afraid of there will be no trouble in the future. As before stated, kind treatment, and constant attention, will do more toward thoroughly taming birds than any other method.

TO KEEP A BIRD IN HEALTH AND SONG.

Hang your cage in a bright and cheerful place. Sunshine is very necessary, but the bird should be sheltered during the hottest part of the day. Avoid drafts and, as much as possible, sudden and extreme changes of temperature. Never hang your cage too high, as the air is not so good towards the top of any room; about six feet from the floor is the best. Windows are dangerous places for birds, as few windows are free from drafts, and, in such places more than any others, extremes of temperature are encountered—too hot in the daytime and too cold during the night. Never hang or place your bird in an open window, as in such places the current of air is sufficient to play an Æolian harp, but it is sure to stop the music of your bird and prove extremely dangerous. Thorough cleanliness, pure air, good wholesome food, never giving bits of candy, sugar, or other luxuries, plenty of pure water for bathing and for drinking purposes, together with a liberal supply of good sharp gravel are absolutely necessary for health and song, and birds getting these attentions regularly seldom fail to have both in a liberal measure. Every bird should have a cake of Bird Bread stuck in the wire of his cage at which to peck. Patent Bird Bread, which supersedes cuttlefish bone, is supplied free to all who use Cottam's Choice cleaned and well mixed Bird Seed.

See Article on Bird Food.

PACKING A BIRD FOR REMOVAL.

In packing birds for removal great care should be taken that the cage is thoroughly protected with at least two or three thicknesses of stout wrapping paper allowing no apertures to be left, through which a draft might strike the bird. All the ventilation necessary may be provided by puncturing a few very small holes in the paper covering the top of the cage, *never, on any account, making or leaving holes in the paper covering the sides of the cage.* Paper is more suitable for this purpose than either woollen or cotton fabrics.



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COTTAM'S

.. BOTANICAL ..

Live Stock Food

FROM NATURE'S OWN LABORATORY,

.. CONSISTING OF ..

Herbs, Roots, Seeds, Barks, Etc., Guaranteed
free from all injurious ingredients.

THIS preparation must not be confounded with some other Foods, or Condition Powders now on the market, which represent little real value in themselves, and have to be boomed by fictitious awards, bogus testimonials, and purchased editorials and newspaper notices.

**Cottam's Botanical Live Stock Food stands alone upon its own merits, unrivalled, as
The Best Live Stock Food in the Market.**

Horses can now be kept in better condition. Cows give more and richer milk, from which better butter can be made. Sheep, Hogs, Poultry and all kinds of live stock can be restored to health, fattened and improved at a much less expense by the use of Botanical Food.

Costing Farmers and Stock Raisers Absolutely Nothing.

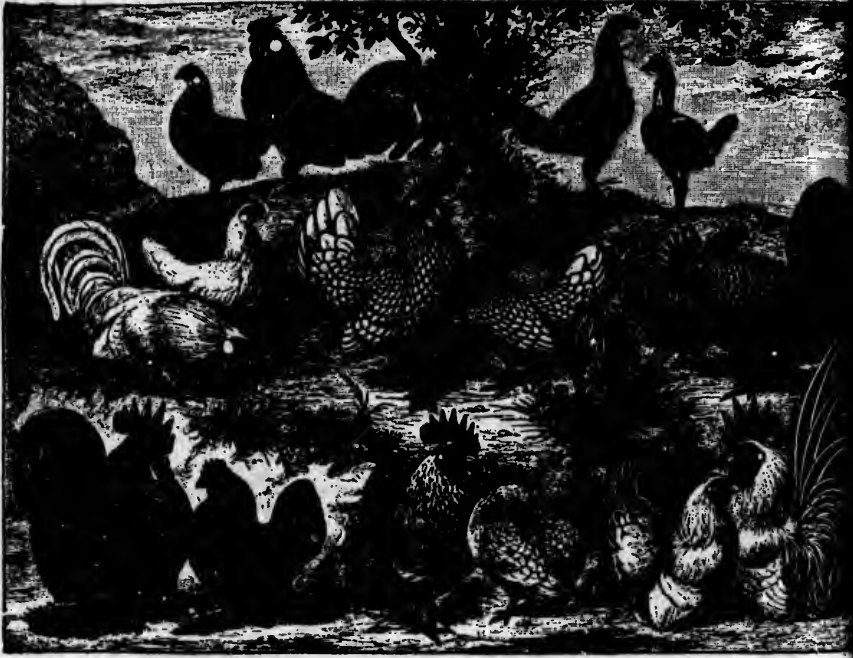
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FARMERS WILL HAVE IT, BECAUSE IT PAYS.

Thousands of testimonials can be given, but a single trial packet will be more reliable and give better satisfaction.

**ONE POUND TRIAL PACKETS FOR SALE BY EVERY
GROCER AND SEEDSMAN. PRICE, 10 CENTS.**

TRY IT!



COTTAM'S Magic Egg Food

... WILL PRODUCE ...

Plenty of Eggs & Less Disease.

The science of Poultry keeping is said to have established the fact, that Poultry are egg and flesh producing machines; and, under normal conditions, they cannot help being either the one or the other. That a hen for instance, in health, with proper food cannot help laying eggs, she must either lay or die for it. From this it is self evident that in order to make poultry-keeping more profitable, the birds must be brought to, and kept in this normal state, which can only be done by giving their food and sanitary condition proper attention.

All Poultry should be well housed, kept thoroughly clean, have plenty of pure air, free from drafts, together with a regular supply of fresh water, and proper food. Under these circumstances poultry keeping must pay, and give better satisfaction.

To restore poultry that are sick to health, as well as to keep those in health who are already there, mix with their ordinary food a little of Cottam's Magic Egg Food, occasionally in summer time, and every night and morning in winter, more particularly during the moulting season. For all kinds of poultry, particularly young turkeys in sickness and in health, there is nothing like

MAGIC EGG FOOD.

Do you want your Hens to pay,
Laying eggs every day;
Free from Cholera, Vermin, Roup,
Elegant chickens in your coop;
Cackling, crowing, running round,
Better than any that can be found?
Feed Magic Egg Food every day,
And don't forget it, this will pay.

For Sale by all Grocers and Seedsmen.



COCKATOO.

Cottam's Bird Food, Bird Medicines, Etc.

Before introducing our Bird Foods, Bird Medicines, &c, feeling the great responsibility of such an undertaking, we have spared neither time, money nor effort to procure the very best remedies that science and experience can devise for each particular disease.

Cottam's Poultry Tonic.

It is well known that birds of any description kept under restraint, will, from a variety of causes, become at times relaxed and out of condition, which may be noticed in the eye, the plumage, and in every movement, and in this state they are more susceptible to diseases of every kind. At this juncture, **Cottam's Poultry Tonic** will be found highly beneficial, and all that can be desired for combating diseases amongst Poultry and Pigeons; for invigorating weak and sickly birds; making them lay better; helping them through their moult; and also as an auxiliary to our Specific for Cholera, Gapes, Roup, &c., it is superior to anything in the market.

Cottam's Gapes Specific

Is a sure and immediate remedy for this painful disease, and can be relied upon with the greatest confidence when used according to directions. It will be found most excellent for colds and general indisposition, and a little given occasionally to healthy birds, especially in cold and wet weather, acts as a preventive and tends to general health.

Cottam's Cholera Specific, for Poultry, Pigeons, Etc.

Cottam's Cholera Specific has been pronounced reliable by those who have tried it, and seldom fails when applied in time. It has a magic effect in checking this dreadful scourge, which so frequently visits our poultry yards with such fatal results.

Cottam's Roup Specific.

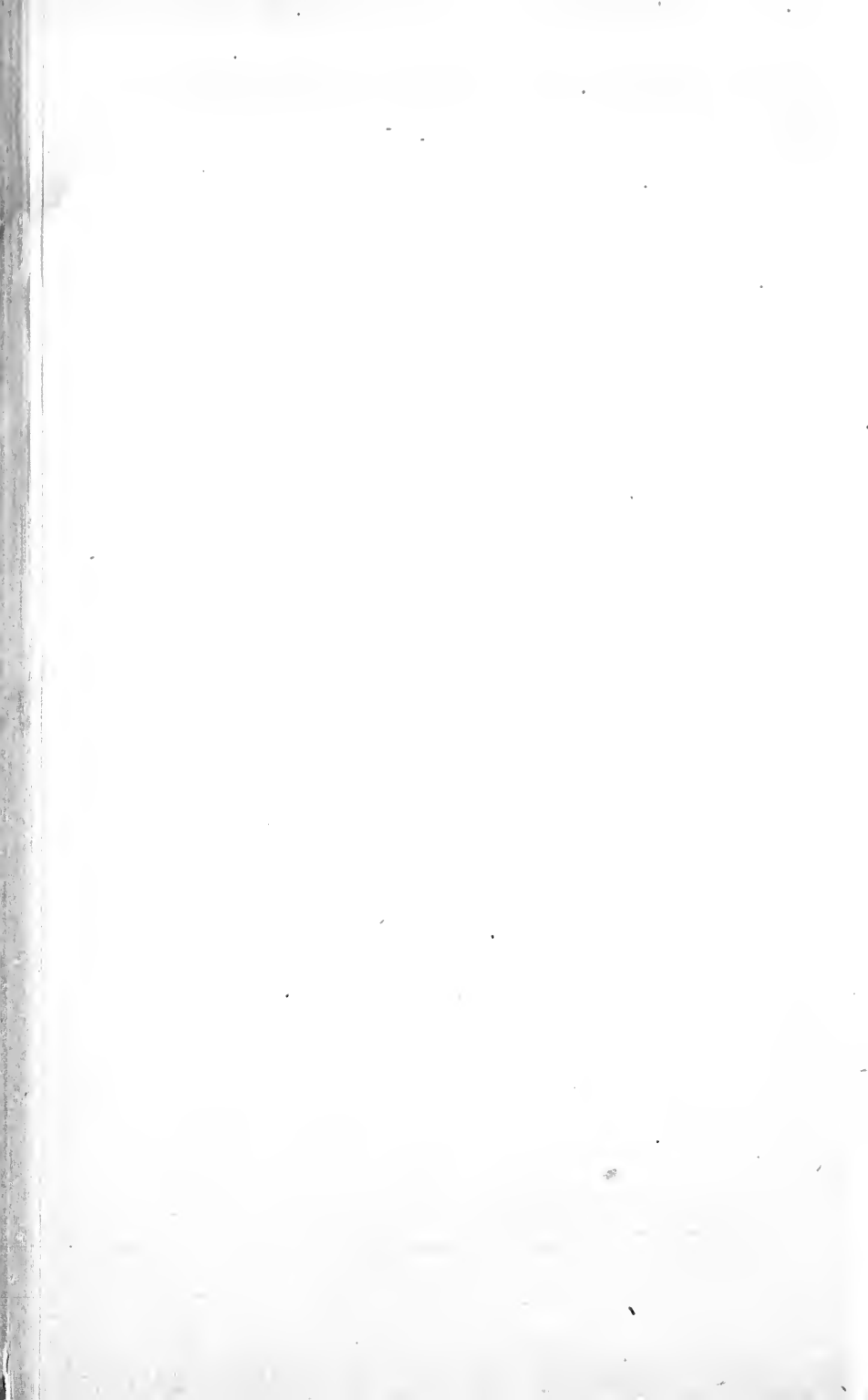
Cottam's Roup Specific will be found all that it professes to be, a No. 1 remedy, that can be relied upon every time when used according to directions. It has never been known to fail where a cure could reasonably be expected. It will also be found excellent in colds and general indisposition, and does good service when given occasionally to healthy birds, as a preventive,—building up the system, and fortifying it against diseases of all kinds.

Having made Birds, Bird Food, and Bird Medicines a study for many years, we offer to poultry keepers, and the bird-loving public, the benefit of a long personal experience in this line.

No poultry keeper or bird fancier can afford to be without Cottam's reliable remedies. Keep them by you for cases of emergency.

Advice Given Free.

Enclose Stamps for Reply



COTTAM'S DOG SUPPLIES



Dog Soap, - -	25c
Flea Wash, - -	25c
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Condition Powder,	50c
Mange, - -	50c

Before introducing to the Public our Canine Supplies, more particularly our medicines, feeling the great responsibility of such an undertaking we have spared neither time, money, nor effort, to procure the very best preparations and remedies that science and experience can devise in each particular case, so that the public may use them with the greatest confidence. No dog fancier should be without Cottam's reliable remedies.

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