

POPULAR PARRAKEETS

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POPULAR PARRAKEETS

THEIR BREEDING AND MANAGEMENT

. BY AMATEURS

BY THE LATE

W. T. GREENE, M.A., M.D., F.Z.S., ETC.

AUTHOR OF "PARROTS IN CAPTIVITY," "BIRDS I HAVE KEPT,"
"FAVOURITE FOREIGN BIRDS," ETC.

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PREFACE.

“As I am constantly receiving queries respecting the most elementary details of Parrakeet keeping, I thought it would be a good plan to prepare a small book dealing exhaustively with a few of the species that more usually come under the notice of amateurs, and the result is the volume which is now offered to the public. In addition to advice intended for beginners, I have included a considerable amount of matter which will, I hope and believe, interest those who have already graduated in the science of keeping and breeding these most fascinating birds.

The Introduction (Chapter I.) also contains some instructions as to the best methods of combating the assaults of certain predatory animals, which, I believe, are now for the first time introduced into any book, and will, I trust, be of use to many a worried aviarist.”

Since the late Dr. W. T. Greene wrote the above, the practical extinction of one species of parrakeet dealt with (the Turquoise), and the extreme rarity on the market now of another (the New Zealand), coupled with the stringent regulations of the Australian Government regarding the exportation of birds, have made a revision of the book necessary. In carrying this out I have altered the original text as little as possible, and have substituted chapters on the Red-rump and Quaker Parrakeets for those on the species above-mentioned that appeared in the original edition of “Popular Parrakeets.”

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POPULAR PARRAKEETS

CHAPTER I.

INTRODUCTION.

WHEN the late Dr. Greene wrote this manual the following note appeared in a metropolitan weekly journal: "We understand that an attempt is about to be made to breed parrots in hot-houses." This proved that the writer of it was unacquainted with the fact that several species of these favourite birds have for a considerable time past been bred in the open air in this country, and that that practice is now very general. As it appears, however, that a good many people unacquainted with the details of this novel industry are, nevertheless, desirous of embarking in it, it has occurred to the author that a brief summary of general directions, followed by more detailed particulars, might not prove unacceptable to them, but would enable anyone who decided upon starting a parrot-house to do so with a minimum of risk and a maximum of profit no less than of pleasure.

For their own sake we most sincerely hope that no one, however much interested in parrots, will be likely to embark on such a wild-cat scheme as a parrot farm, for nothing but failure could result. Indeed, it would be even still more bound to do so if attempted on an extensive scale, for the supply would quickly outstrip the demand, and the producer would have his "goods" left on his hands, to eat not only their own heads off, but himself out of house and home. However,

no such ambitious project as a parrot farm is at present contemplated by the author, whose design is rather to assist fanciers in making a very pleasant hobby at least self-supporting, or, at the outside, to enable some of his young friends to keep themselves in pocket-money after defraying all the expenses connected with the undertaking.

A certain outlay of both money and time is, of course, unavoidable in every enterprise, but a considerable saving of both may be effected by judicious management and taking advantage of every existing circumstance that will further the object in view. In order to breed parrots—parrakeets, rather, for the former cannot be included within the scope of the present work—there must be, not a hot-house, but an aviary, and a suitable one cannot be built for nothing, for boards cost money, and so do bricks and mortar and wire netting, as well as zinc or tin, felt, tar, and other indispensable items, not to speak of workmen's wages, an important factor in the formulation of a bill. But the total expended need not amount to an extravagant sum, for the aviary constructor must cut his coat according to his cloth, and regulate his disbursements in proportion to the means at his command.

If he can utilise an old summer-house or shed, or some unused brick building, for his purpose, well and good, for by so much will his expenses be curtailed; but if much structural alteration is required to make the old premises available for the new use to which they are to be put, it might be better to commence at once with an entirely fresh erection. Supposing, however, that the fancier has leisure and ability to effect the transformation, he will do well to include the ancient summer-house, or what not, in his plan. Under these circumstances, of course, it is impossible to lay down any hard and fast rule for procedure, as everything will necessarily depend on a variety of data in every instance, so that the better plan will be to suppose a case in which nothing of the kind is to be had, but everything must be brand new. How is the aviarist, then, to set about the construction of his parrot-house?

If he has a wall about 9ft. high or so available, facing

south or south-west—that of the house will do—he holds the key of the situation in his hand, for more than half of the difficulty is overcome at the outset; he can set up his aviary against that. If not, he must build one, or at least put up a solid background of stout matchboarding; but the brick or stone wall is in every respect preferable to wood. Very well; the aviary should consist of three parts, though on a pinch two will do, namely, a roosting house, a shed, and an open flight, and it is for the first of these that the old summer-house comes in so handy; but the middle shed may be dispensed with, though it possesses many advantages.

Quartering may be used for uprights and rafters, but if readily obtainable stout iron rods are better, for they last longer than wood, which soon becomes rotten in some soil. It may be here remarked, once for all, that all iron and wire work, or wooden uprights and rafters (except such as are covered by boards and so out of sight) should be given at least two good coats of black paint. Some of the so-called enamels in the market are poisonous, but the paint sold at oil shops under the name of Brunswick black can be strongly recommended, for it is lasting, does not change colour, dries quickly, and is perfectly innocuous. Some amateurs may be clever enough to mix their own paint, using drying-oil, turpentine, and lampblack in suitable proportions; but notwithstanding the slight saving in cash that might thus be effected, it is the author's deliberate opinion that the Brunswick black will, in the long run, be found to prove the cheapest. No other colour than black should be used for wire work, as it forms little or no obstacle to the sight, and birds, etc., when behind it are as plainly visible as if nothing intervened between them and the spectator; but it is far different with other colours, as practical experiment will quickly demonstrate.

If it be desired to keep mice out, although this is not so necessary in an aviary devoted to parrakeets as it is in one where smaller birds are kept, all boards or wire netting that are let into or touch the ground must be protected by

a sheet of tin or zinc bent into the form of the letter L, the upright arm of which must rest against the board or wire, and the horizontal arm be buried at least a foot deep in the ground in front or at the back of it, as the case may be, but always on the outside, otherwise the wire netting must be the kind known as mouse-proof, which is rather expensive. Half-inch mesh is necessary with Budgerigars, which can squeeze through a very small hole, but for Cockatiels and parrakeets of the same size, or larger, $\frac{3}{4}$ in. or even 1 in. mesh will do, and will be cheaper than netting with a mesh of less size. Uprights fastened to a cross-bar by means of binding wire are to be deprecated, for the latter quickly rusts, even when well coated with paint, snaps, and leaves the upright wires loose.

For the roof of the shed and that of the roosting house feather-edged boards will be required, and each plank must overlap the one below it by at least an inch. When they have been nailed or otherwise secured in their places, they must be covered with felt, and two coats of tar evenly applied all over the surface. When the second coat has been given, which must not be, of course, until the first has thoroughly dried, some coarse sand is usually scattered loosely over it, although the object of so doing is not quite apparent, but it is believed that the sand keeps the tar from being washed away by subsequent heavy rain.

The roosting house must be provided with a window, opening from the outside, and must be protected by a piece of wire netting securely fixed to the frame on the inside, so as to answer the double purpose of keeping the birds in, and strange cats, those dreadful plagues of every aviarist, out.

As the engraving (Fig. 1) shows the aviary as it appears when finished, nothing would be gained by entering into the minutiae of construction, and saying the uprights are to be so long and so far apart, and details of that kind, for the plan shown can be modified to suit every particular requirement. It may, however, be mentioned that a good home for a couple of pairs of Cockatiels or eight Budgerigars should be at least 16ft. in length from end to end, that is to say, the roosting house should be 6ft. long

and the flight 10ft., for in one of this small extent the middle, or feeding shed had better be omitted; and a good general width is 7ft. Of course, if expense is a secondary consideration, the roosting house can be 7ft. or 8ft. in length, the feeding shed the same, and the flight as long as possible, say, 20ft., 30ft., or more from end to end, when the inmates may be increased in proportion.

But the larger parrakeets breed best when allowed a separate aviary per pair. Cockatiels and Budgerigars are

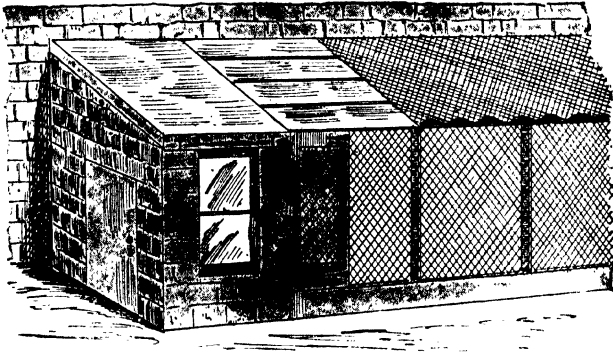


FIG. 1.—AVIARY FOR PARRAKEETS.

very often kept together, and do not interfere with each other; but it is different with some of the other parrakeets, as will be gathered when the various peculiarities of the different species are described in detail. The great fault, however, of beginners is crowding; they want to make the most of the space at their disposal, and often sadly overdoing it, wonder why their efforts have not been crowned with the success they anticipated.

The nests and perches for the birds to sleep on must be placed in the roosting house. Branches of trees suspended from the roof will answer admirably for the

latter purpose, and look better than straight sticks; also being of different thicknesses they will be more comfortable for the feet of the inmates, which are apt to be cramped if they always have to rest on a piece of wood of uniform width. For the nests, or nesting-places rather, coconut husks (not shells) will do nicely for Budgerigars, but are too small for Cockatiels, or birds of the same size or larger, for which hollow logs or small barrels must be provided; and both should be hung up sideways so as to present a concave surface for the reception of the eggs, which are apt to roll about and to take cold on the flat bottom of an ordinary wooden box.

A glance at the illustration (Fig. 2) will tell the budding aviarist more about the sort of thing that he requires than he would gather from many pages of description. It may, however, be mentioned that suitable barrels are somewhat difficult to obtain, now that tin has so generally superseded the use of wood for packing various comestibles, such as mustard, etc.; a $4\frac{1}{2}$ gallon keg will do, but is needlessly roomy for a pair of Cockatiels. Oyster barrels, however, are still to be had,

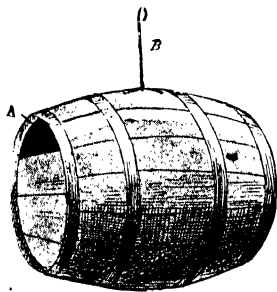


FIG. 2.—BARREL NESTING BOX.

A, Entrance-hole; B, Suspending Wire.

and butter tubs will serve on a pinch, but will need much scalding and purifying before they can be used, as will also the little barrels in which oysters have been packed. Boiling water in which soda has been freely dissolved will remove all traces of grease, etc., and after it has served its purpose, plenty of pure boiling water must be had recourse to so as to get rid of the alkali; then, when thoroughly dry, the barrels may be hung up sideways either in the roosting house or in the shed part of the aviary, but an entrance must be left at one end, which is readily effected by taking away one of the small boards

or staves of which it is composed (*see A*, Fig. 2). Some fanciers put sawdust in the barrel, but this only gives the birds unnecessary trouble in clearing it out again.

A very good nesting-place for a number of Budgerigars can be made with a log of some soft wood, such as willow, poplar, lime-tree, or something of the kind, the thicker the better; it may be 8ft. or 9ft. long, and if set up on end under the middle shed of the aviary, or failing that, in the roosting house or even in the open part, makes an ideal retreat. It should have a number of holes bored in it with a $1\frac{1}{2}$ in. augur to a depth of 8in. or 9in., or to the middle of the log, and these holes should have a slight upward tendency. They may be disposed at intervals of 6in. or 8in. in a spiral round the log, taking care that the termination of any one does not encroach on another, for when the birds take possession of one of the holes they will proceed to excavate a nesting-chamber at the end of it, and if they were to break into another, of course the two would be spoiled, and a commotion would ensue. The drawback to this arrangement is that the aviarist cannot see what is going on in the nest-chambers, and cannot remove young that die, for the safety of the survivors.

A similar device would be equally available for larger parrakeets, but there would be the initial difficulty of getting a thick enough log, and that is not easy, so that for them a barrel or a single hollow log of suitable size will be the better plan. A good nesting-place can also be made by cementing half a coconut husk in a wooden box and filling up the space with cement or plaster of Paris; the half husk must be fastened by a couple of nails driven through it near its upper part into the side of the box before the fluid plaster is poured in, or it will rise on the latter and the object intended will not be secured. The lid of the box can have hinges attached to it, and a little button and hook in front to keep it closed, entrance to be through a corner cut on the top of the box itself (*A*, Figs. 3 and 4). As there must be room for the birds to move inside, the box may be 10in. or 12in., and should not be less than 8in., deep.

The communication between the roosting house and the rest of the aviary is conveniently effected by means of an opening in the wall, or partition, of the size provided in a dovecot for the accommodation of the pigeons, and should be similarly provided with a ledge on either

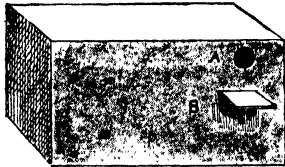


FIG. 3.—OUTSIDE VIEW OF NEST-BOX.

A, Entrance-hole; B, Little Platform for Birds to Stand on.

side on which the birds can rest when passing from one apartment to the other. This arrangement also affords a good way for catching them, for when they have been driven into the roosting house, the aviarist can take his stand in the shed, and hold a butterfly net over the opening; someone then makes a noise at the outer door of the roosting house, and the birds rushing out are caught in the net, without any bother whatever. It is a good plan to have a curtain of net or of some light material hanging in the aviary at the back of any door or doors communicating with the outside, for sometimes, if no such obstacle is in the way, birds will make a dash out over the head of the aviarist when he is entering, and be lost.

Seed-pans should all be kept in the covered shed, suspended by a single wire from the roof, and further protected from mice by means of a piece of tin strung on the wire at the junction of the four wires that suspend the box (see Fig. 5).

Plenty of water for drinking and bathing purposes must always be at hand either in the flight or in the shed; but neither food nor drink should be placed in the roosting house, so as to give the mice as little excuse as possible for entering it.

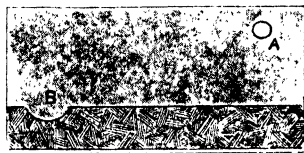


FIG. 4.—INTERIOR OF NEST-BOX.

A, Entrance-hole; B, Concave Receptacle for Eggs.

If the flight of the aviary is of considerable area, say at least 30 ft. by 12 ft., it may be turved with grass which serves the double purpose of a green food supply and a dew or shower bath for the smaller birds. But the grass must be thoroughly established before the birds are turned in. Parrakeets will soon destroy bushes. Branches from non-poisonous trees firmly secured into the ground with their tips well clear of outside wire-work make the best perches.

A trained cat is useful in catching mice that venture outside the aviary, but strange cats are as bad as mice, and when the two enemies join their forces, it is a bad time for the birds. Many a poor bird has had its feet gnawed, or torn off, by the former, when clinging to the wires during a nocturnal panic created by the latter; and where the cats are numerous it may be necessary to protect the aviary by stretching an outside wire net along it at a distance of about 6 in., both in front and on the top. This piece of protective netting may be of coarse mesh, 1½ in. or 2 in. wide, and if painted black will not form much impediment to free vision; at any rate it is preferable to having one's birds mutilated by the predatory brutes.

There is another way of keeping cats out of a garden, but if the latter is large it becomes expensive, though where the area is small it answers very well. Get a number of iron rods, a little thicker than ordinary stair-rods, and not more than ½ in. in diameter, although ¾ in. would be better, and fix them at distances of 10 ft. or so along the top of the wall, with an inclination into the garden of 45 deg. or so. When they have been placed in position, stretch along them a roll of wire netting about 2 ft. 6 in. or 3 ft. high,

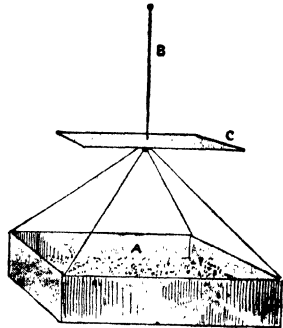


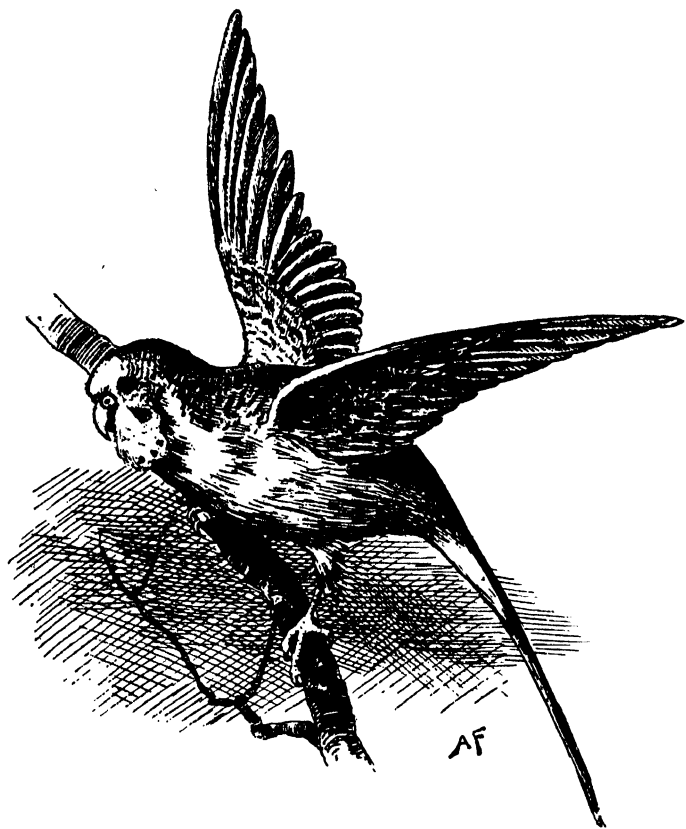
FIG. 5.—SEED-PAN PROTECTED FROM MICE.

A, Seed-box; B, Suspending Wire; C, Piece of Tin.

bind it securely to the rods and also peg well down to the wall. No cat can enter a garden so protected, for these brutes never make a direct jump down from a height, as an honest dog would, but always creep down as far as they can go, and then spring; but here, owing to the inward slope of the wire, they find no foothold, and have to content themselves with pacing along the top of the wall of the garden into which they long, but, like the Peri at the gates of the Mohammedan Paradise, are unable, to enter.

If convenient, a room in the house overlooking the garden may be utilised for a roosting house, if the intervening space is covered in with wire or glass, and forms an admirable adjunct to an aviary, for the birds soon get into the way of using it at night, and by closing the window they can be kept in during inclement weather if it is thought desirable. There are many other ways of protecting birds and making them comfortable that will suggest themselves to the thoughtful aviarist, and providing cats, rats, and mice can be excluded, a great deal of anxiety will be removed from the mind of the owner, and the birds will also be happier.

It has been suggested that a little dog of the terrier kind might be left in the garden at night, in order to keep off the cats; but the remedy, it is to be feared, would be almost as bad as the disease. Cats, moreover, calmly walk about on the top of the aviary while the dog is barking himself hoarse at them on the ground, the combined efforts of the two animals effectually, and too often fatally, disturbing the sleeping birds, not to speak of interrupting the slumber of the human beings in the neighbourhood.



THE BUDGERIGAR.

This charming little bird is perhaps the most popular of all the Parrakeets, by reason of its pretty green and yellow colouring and in its affectionate manners. It is a native of Central and Southern Australia, where it is found in immense flocks.

CHAPTER II.

THE BUDGERIGAR.

(*Melopsittacus undulatus.*)

THIS general favourite is so well known that it seems, at first sight, almost superfluous to describe it ; but as there are, undoubtedly, a good many people who are not acquainted with its appearance, it will, perhaps, be better to append a detailed description of it here.

It is, of course, a member of the parrot family, and of that section to which the name of parrakeets has been given in order to distinguish them from the parrots proper, from which they differ in several respects, but more especially in having pointed tails : these in some instances are longer than their bodies, while the tail of the true parrot is short and broad, and more or less rounded off at the sides.

In total length the Budgerigar measures 7in. or 8in., of which 3½in. or 4in. is included in the tail. The general colours are yellow, green, and grey, distributed as follows : the top of the head and a band round the bill, primrose yellow ; the back of the neck, cheeks, scapulars, upper back, wings and wing coverts, grey, every feather marked with crescentic alternate narrow lines or bands of yellow and grey ; on the wing coverts the latter predominate, and the impression conveyed is that of greyish black edged with yellow ; the outer margin of the primaries and secondaries are greenish, and the inner is black ; along the centre of the wing is a broad line of pale greenish yellow, visible during flight or when the bird stretches out its wing ; the lower back and upper tail coverts are vividly green ; the two central tail feathers are blue, and the

others are bluish green, with a broad yellow middle to each, forming a conspicuous yellow band when the tail is expanded, as it is during flight. The outside pair of tail feathers measure $1\frac{1}{4}$ in. in length. On each side of the face is a patch of bright blue, followed lower down by about three round black spots about the size of a grain of millet; the throat, breast, and abdomen are yellowish green, and the under tail coverts are green with a slight shading of blue. The bill is horn colour, and the cere, or naked membrane in the centre of which the nostrils are placed, is bright cerulean blue in the male, and cream with a tinge, more or less distinct, of blue in the young of both sexes; but in the adult female it is brown, and instead of being smooth becomes rough, or corrugated, when she is about to nest. An experienced eye can always detect the young males by the bluer appearance of the cere, but the difference is slight and it is easy for a beginner to make a mistake. The bill itself is light horn colour, and the legs and feet are grey in wild-bred birds, but more of a flesh tint in aviary-bred ones.

The undulating marks extend all over the head of the young, and reappear in very aged females, perhaps also in old males, and there is no doubt that old hens when past laying, revert to a second childhood, so to speak, but seldom live long afterwards.

The first authentic record of the importation of the Budgerigar from its native Australia is to be found in Gould's "Handbook to the Birds of Australia," published in 1863, wherein he relates a private importation, "having succeeded in bringing home several on my return in 1840."

But it was not till about fifteen years later, apparently, that the bird was bred in Europe, the first success being achieved in Germany, by the Gräfin von Schwerin. Now the bird is as plentiful and as domesticated a cage bird as the canary, although the reliable variations from the type are much fewer than in the case of that bird.

One of these varieties, the yellow with striations on the upper surface to correspond with those found on the green

type, is said to be found in a wild state also; and at least to be found in Australia. The ground colour is pale yellow, which may account for the striations being discernible.

There is another and larger variety of yellow Budgerigar which is, or should be, nearly a clear rich yellow throughout excepting for the cheek markings.

The most beautiful variety of all is the Blue, which has been known to aviculture for about thirty years. It is at present exceedingly scarce, although some ten years or so ago (1914-5) it frequently appeared at shows. The ground colour is a beautiful clear blue, the freer from whitish tinge the better. Experiments in breeding in this country and Belgium indicate that shaded breeding aviaries are desirable to preserve the delicate pigmentation; and the birds should not be bred from until quite two years old. Males are exceedingly scarce.

Albino Budgerigars have occurred, as sports; Mr. C. P. Arthur bred some in 1887, and Russ records them. Blue-green birds have also been bred; and Dr. Greene mentions a pure green bird in the original edition of this book. This, like the variety which he describes below, is unknown to-day; but these, and other varieties, might be obtained from selective matings.

A very curious variety has been brought under the writer's notice, and may be thus described: The undulations on the head, back, and wings, instead of being grey, are black; the rump and upper tail coverts are blue, and the tail is black, as are also the flights; the crown of the head and the whole of the face are bright yellow, and the neck and remaining under parts yellow, very slightly washed with green. Two birds like this have come under the writer's observation, but their history is unknown; as they were decidedly handsome birds, though rather small, there is no doubt the strain would be popular if it could be perpetuated, and improved upon.

The Budgerigar, as this little parrakeet is now generally called in this country, is also known, especially in older works on natural history, as the Undulated Grass Parrakeet, the Warbling Grass Parrakeet, the Shell Parrot,

the Australian Lovebird, and the Zebra Parrakeet; but the native name of Budgerigar seems to have "caught on" and to have superseded all others in popular estimation, which, as it is distinctive, for it signifies "pretty little bird," is certainly an advantage. It is found in Central and South Australia, travelling in immense flocks from the former to the latter part of the great Island-Continent to breed, and returning to the central plains when the function of reproduction has been fulfilled. It is quite unknown, except as a cage bird, in Eastern or Western Australia.

It was while on its migratory journeys from north to south, and *vice versa*, that the trappers took it in large quantities, and it is conceivable that the multitudes captured must have appreciably affected its numbers. At any rate the exportation of this and several other species has been prohibited by the Australian Government, so that the condition of affairs that obtained in the sixties when imported birds were procurable at 20s. to 30s. a couple no longer obtains. However that is really unimportant, for hundreds are bred annually in aviaries in this country, and in addition, since the return of peaceful conditions, Budgerigars are reared by the thousand on the Continent, in France, Holland, Belgium, and Germany, so that it is not exactly a misdescription to say that they are "imported" when brought over here. The term, however, is misleading, and it is as well to bear in mind that many of these continental birds are afflicted with various disorders, which would render them dear as a gift, and so-called "imported" birds should therefore be most carefully examined when bought to ensure change of blood to see that they are in perfect plumage and health.

In confinement Budgerigars have a decided preference for the seeds of the sorghum or white millet, though they will also eat, nearly as readily, the spray or French millet, and, more sparingly, canary-seed; but for other "bird-seeds" they do not care, and would soon starve on a dietary of rape, maw, flax, and niger or hemp that might be offered to them. When breeding it is as well to supply them with some oats, or a handful of coarse oatmeal, for

five or six young Budgerigars take a deal of feeding, and to supply them with properly prepared small seeds only often taxes the strength of the old birds very severely.

Grit, that is, coarse gritty sand, Budgerigars, as well as all other birds, require to enable the gizzard to fulfil its natural function adequately; but it is as well, at first, to limit the supply for newly imported birds, which, having been kept without any for a longer or shorter period, are apt, sometimes, when they find the opportunity, to take more than is necessary for them, and so actually impair instead of aid their digestion.

That the Budgerigar can exist for a surprisingly lengthened period without drinking, is undoubted, though at what cost of suffering to itself we cannot, of course, tell; but the fact remains that in their wild state they resort in companies to the water-holes for drinking, morning and evening, and then it is that they are usually trapped. But it should also be remembered that in the regions they frequent there is generally a heavy fall of dew during the night, and that, no doubt, the birds sip the drops that depend from the leaves of the vegetation around them; therefore, it seems cruel to deprive them of the opportunity of quenching their thirst if they want to do so, and the writer has never noticed any bad effect result from offering them a free supply of pure water. This, unlike many other birds, they seldom, if ever, defile by washing in it, for although, when unable to "tub" in their natural fashion, Budgerigars may stand on the edge of the water-dish and taking up a few drops of fluid in the mouth sprinkle it over their backs, they very rarely step down into the pool and wallow about in it after the fashion of so many other birds. The way they perform their ablutions is peculiar, and, as far as the writer knows, unique: when the long grass is heavily wet with dew, they roll in it, and having in this manner thoroughly damped their plumage, they fly up on the nearest perch or bough and preen their feathers in the sunshine. So thoroughly do they enjoy their own mode of taking a bath, that the thoughtful aviarist will give them the opportunity of doing

so at least once a day in fine weather, by pouring water over some long grass from the rose of a garden watering-can, and the slight amount of trouble caused him will be more than compensated for by the pleasure he will afford these most interesting and beautiful little birds.

With regard to the use of green food for these birds some discretion is necessary. If they are kept in an outdoor aviary, the open or flight part of which has been laid down with grass, they will not require anything else in the shape of green meat; but if it has not been so planted, from whatever cause, it will be as well to introduce a sod of grass into it occasionally, or some canary-seed may be sown in shallow pans, and when it has grown to the height of 3in. or so, it may be placed at their disposal. When they have mown it down it can be removed and its place supplied by another, and when that and a third have shared the same fate the first will be ready for use again, and so on. No other green food is advisable.

A handful of hay-seed may be occasionally scattered over the floor of the bird-room or aviary, and will give the Budgerigars both employment and amusement in turning it over; but it should not be resorted to too frequently, for, for some reason or other, the seed of our native grasses does not seem to agree with foreign birds if supplied in any quantity, the effect is too relaxing. A little now and then does no harm, or may even become useful as a temporary laxative or alterative.

We now pass on to the extremely important function of reproduction, or breeding, which may be successfully carried out in this country in three different ways, or perhaps it would be better to say in three distinct situations—in a garden aviary, in a bird-room indoors, or in a cage.

Of these three methods the first and second give the best results, and as the Budgerigars are extremely gregarious, their numbers need only be limited by the size of the enclosure they inhabit. Thus, in an aviary 16ft. in length and of corresponding height and width, eight pairs will do very well; a similar number may be put in a room of, say, 14ft. by 9ft. by 7ft., and so on in proportion.

The number of inmates having been settled, it will be necessary to provide at least two nesting-places for each pair, and great care must be taken that there are not any odd hen birds in the flock; an odd cock will not signify so much, but if there is an unmated hen present she will set the whole community by the ears, quarrels will be of continual occurrence, and it will be well if they only end in damage to nests and mutilation of other birds, for sometimes the combatants fight until one is killed. If the pairs are happily mated, however, all will go on as peaceably and happily as a marriage bell, and broods of young will follow in due course, to gladden the heart of the aviarist, not to speak of the old birds, and by selling the new-comers, or some of them, the fancier will be able to recoup himself at least in part for his expenditure.

Budgerigars use no lining in their nesting-holes, and some of them do not much admire coco-nut husks, on account of the fibrous interior, which they keep on scraping at until they work a hole through the bottom; some, however, do not mind, but set to at once, make the inside as smooth as they can, lay their eggs, and bring up their broods without fuss or trouble.

The hole is best arranged at one end of the coco-nut husk, rather than in the middle, as more room is thus available in the inside; husks can be bought suitably prepared, but can be easily made ready by splitting or sawing them in two, removing the shell and its contents, and then fastening them together with clamps of iron or copper wire—the latter, being more pliable, is the more easily managed. The entrance having been arranged, a little peg may be driven in by the side of it, and will serve as a perch for the male to sit on, when he comes to see how the female is getting on; but they are very expert, and will dash into the opening in full flight.

It is generally better to sling the husk by a wire to the ceiling or roof of the bird-room or aviary than to hang it against the wall; but the latter position may, under certain circumstances, be advisable, and the aviarist must be guided accordingly. Always let the aperture face the light.

Logs and boxes will answer the same purpose as the coco-nut husks provided they have an inner concave surface, for when the inside is flat the eggs are apt to spoil by rolling about and getting chilled. It is more convenient to affix boxes and logs against a wall than to suspend them, but here again circumstances must decide the position.

Having got the nests, coco-nut husks, or what not, in their proper places, and introduced the birds, these must not be interfered with, and natural curiosity to see how matters are going on must be suspended, or at least indulged in as little as possible, for although Budgerigars, as a rule, are not easily scared, some of them are nervous, and a little fussy interference on the part of the aviarist may frighten them into a fit, or even cause them to forsake the nest—a contingency, however, that is of infrequent occurrence.

The season for breeding varies. Some birds, following the habits of their progenitors in their native country, begin in August or September, continuing their labours until December or January, when they fall into moult. Nowadays most Budgerigars, content to accord with our customs, commence to nest in April, and keep on until July, others, again, are to be met with that are more industrious, and continue to produce brood after brood throughout the year, without even taking a rest while moulting. It is quite certain, however, that such excessive reproduction is very weakening, and it is much better not to allow it, but to force the birds to take a holiday by removing every available nesting-place. Even then some of these birds are so prolific that they will actually lay their eggs in a corner on the ground and proceed to incubate them there, if permitted to do so; but this must be strictly put a stop to by separating the sexes for a time.

The number of eggs varies, but rarely exceeds six, and that total is not often reached, five being the more usual complement. Incubation lasts seventeen days, and as it commences with the first or second egg, it follows that the youngest member of the family is sometimes nearly a week

younger than the eldest, for some mother Budgerigars only lay every second day. The male takes no part in the hatching, but is very assiduous in feeding his partner while she is on her eggs; when the young have arrived, however, the greater task of providing for them falls to his share.

Occasionally, the mother is so prolific that she will begin to lay again before her first brood has left the nest, and in that case the second hatch is rarely a successful one, for it can be readily understood that five or six young Budgerigars put a log or a husk into a state that is not conducive to the health or welfare of their successors, unless it is thoroughly cleaned out, which the old birds always do after the little ones have flown; but when the hen lays again prematurely it is among the dirt, and she does not then attempt to purify her dwelling.

As young birds go, youthful Budgerigars are not dirty, unless the old ones have had access to sop while rearing their progeny, in which case a nest is soon in a terrible plight, for which reason the writer much prefers dry food—the usual seeds, some oats, or a handful of coarse oatmeal.

The young, of course, are readily distinguished from their parents until after the first moult, when it is extremely difficult to tell one from the other, so that, unless they are to be disposed of while yet in their nest feathers, it will be advisable to mark them either before or just after they have flown. This is readily enough done by slipping a little ring over the foot on to the leg. This ring (which can be obtained from any ironmonger) should be of steel or copper, it does not much matter which, and must not, of course, be heavy enough to gall the leg or ankle. As it is not easy to get at young Budgerigars in their nests and husks, this is usually done after they have taken wing and before they moult. As the little birds bite severely, the operator must first put on a stout pair of gloves. Then, taking the young bird carefully in his left hand, he slips the ring over the two front toes, which he presses together between his thumb and forefinger, and when he has got as far as the ball of the foot, with his next finger he must press the hind toes up against the shank, when the ring

will slip over them too, quite easily; when it has been pushed up beyond them, he will let the hind toes slip back to their place by simply releasing his hold of them, and the ring will remain on the leg, from which no effort of the bird itself can remove it. If thought desirable, a mark to denote the date may be cut or filed on the ring, and the aviarist will then be able to tell to what brood a particular bird belongs, which is undoubtedly a great advantage sometimes, so as to prevent in-breeding, which occasionally has very disastrous results.

Where the birds have been breeding in a big log, such as we have described in the Introduction, the marking can, of course, only be done after the young have flown; but where at all practicable, it is better to do this before they leave the nest. It necessarily upsets the youngsters somewhat, and they often make frantic but unavailable efforts to get the ring off; but where it is put on before they are able to fly they do not appear to notice it at all. The rings may be made of bone as well as of metal, but wooden ones would be of no use, for the birds, with their powerful bills, would very soon cut them to pieces.

The nesting-log with the augur holes that has been already referred to is an admirable arrangement where it can be had recourse to, and is, perhaps, preferable on the whole to single nests, the great difficulty, of course, being to get a suitable one that the birds can work in to their liking. A deal of amusement can be derived from watching their antics, as the aviarist will soon be able to ascertain when he commences to keep these most interesting little birds.

As a rule, they have three nests in the season, but sometimes only two; occasionally, though, they may have four or more; and the writer has had young hatched at Christmas as well as at midsummer in an outdoor aviary in London, and both broods were successfully reared. Sometimes newly imported birds are very shy of going to nest, but others do so directly.

When Budgerigars nest, especially in London, during the dark, cold winter days, it is advisable to provide them

with a light, for the young cannot get enough feeding to make them strong and healthy during the few hours of daylight that are available at that time of the year; and sometimes they get so hungry that they crawl out of the nest and are killed, or become so weak that the old ones forsake them, for few birds will feed a sickly offspring. If, however, they have a lamp for a couple of hours, both morning and evening, they will do much better than if left to the unassisted light of a short winter's day.


Some amateurs have recommended rolls of virgin cork as suitable nesting arrangements for Budgerigars, but the writer has not found it answer, for two reasons. In the first place it is very apt to be infested with vermin, which may multiply to such an extent as to make it highly uncomfortable for the birds, or even to compel them to abandon the premises altogether. The second reason is that in cutting wood, etc., it seems highly probable that a certain proportion of the fibre is actually swallowed by the birds, and cork has a bad effect on their economy, for it is very astringent, and may even produce fatal complications, so that it cannot be recommended for use in the aviary. This is somewhat unfortunate, for it is readily obtainable, and lends itself to the formation of nesting-places much more easily than wood; but it is little short of poisonous for the birds, and all thought of using it in the case of parrakeets had better be abandoned.

Small barrels may, of course, be used for Budgerigars as well as for larger birds, but are unnecessarily roomy for the former; still, if the aviarist has a number of them at his disposal they may be utilised and will answer very well, but must be hung up sideways and not on end. One advantage they possess over nesting-places of smaller size: it is very easy to put the hand in to clear out the interior, especially if the front is arranged so that it can be slipped off, or made to revolve on a pivot. The entrance, however, should be made smaller than in the case, say, of a Cockatiel, and should be either at the upper part of the end, or in the middle, like a bunghole, if preferred. In this case, too, it is a good plan to fasten a little perch for

the male by the side of the entrance, and a little sawdust in the interior will do no harm, but will give the birds something to play with, the wood of the barrel itself being, as a rule, too hard for their bills to make much impression on it.

Breeding in cages is the least commendable way of multiplying the Budgerigar, and is one cause, the writer believes, of the deterioration of many of these birds. Should the aviarist, however, have no other means available, it may be done, and successfully, too, if certain necessary precautions are adopted.

Some Budgerigars are so ready to nest that they have been known to lay in an ordinary canary-breeding-cage, using one of the little recesses, with or without a nest-box, with which these sort of cages are, with strange disregard for the habits of the canary, usually provided; but the little parrakeet has even been known to nest on the ground and to incubate her eggs in a corner on the floor of the cage.

Suppose, then, the aviarist has no better accommodation than the cage in question, he had better affix a little piece of soft wood hollowed out into the form of a shallow cup, thus , in each of the recesses, and fix a bit of board or tin over the outside wire, so as to make the place more private, and the parrakeet will soon take possession of one of them; the door of the cage should then be opened for a certain time every day, so as to let the bird take exercise by flying about the room, or she will be very liable to become egg-bound (for the treatment of which distressing complaint full directions are given on pp. 27, 28).

If a larger cage is at the disposal of the amateur, so much the better: he can hang up a coco-nut husk in it, and that will soon be accepted by the parrakeets, or he can fix a box on the outside, suitably prepared, of course, with a concave interior, and press a couple of wires apart opposite the opening in the box, when the birds will promptly avail themselves of the accommodation.

As soon as the young are fledged and able to feed themselves, which usually happens in two or three days after

they come out of the nest, they should either be removed to more commodious quarters or be permitted to take a daily flight about the room, for exercise is of the utmost importance if the youngsters are to grow up strong and healthy.

These birds are extremely precocious and are quite ready to become parents in their turn when they are no more than three months old, and before they have moulted their nest feathers. This, needless to remark, must on no account be permitted, and on the least sign of courting among them the sexes must be separated and placed not only in different cages or aviaries, but even somewhere where they can neither see nor hear each other. Nothing is so conducive to loss of stamina as this premature exercise of functions that should be kept in abeyance as long as possible, or at all events until the system has become mature, which in the case of the Budgerigar cannot be said to be the case until the birds are nearly a year old. Otherwise French moult may set in (*see* p. 30). It may seem to a beginner that this is losing time, but we need only direct attention to the well-known proverb, "The more haste, the less speed," to prove that our contention is the right one in this case; and, we may add, the conclusion we have arrived at has not been reached without treading the rough and thorny path of actual experience.

As a rule, these little parrakeets are very healthy, "but all birds are more tender than four-footed animals, and on passing from a condition of perfect freedom to one of, at least, partial confinement, in which they are deprived to a greater or lesser extent of the means of exercise and of their natural food, they often become afflicted with various forms of disease occasioned by these changes alone, not to speak of others that follow directly in their wake. These, or some of them, it is now proposed to point out, with a detailed statement of the treatment suitable for each; but, it must be admitted, this is a very unsatisfactory part of the work we have taken in hand, and we can only wish that it had fallen to the lot of some abler pen than ours."

The foregoing paragraph is the substance, rather than the translation, of one that appears in the Introduction to Bechstein's "History of Chamber Birds," which was written more than a hundred years ago, and still remains one of the most faithful guides in bird matters which the aviarist can consult when he finds himself in any difficulty. The Budgerigar, however, had not then been discovered, nor was it until a good many years afterwards that it was added to the still expanding list of cage- or chamber-birds, or even mentioned in the lists of museums and learned societies.

It is of a nervous and timorous disposition, so that a sudden alarm is often sufficient to throw it into a fit, from which recovery is rare, particularly if the bird has for some time been confined in a narrow space and has, in consequence, become rather fatter than is good for it. If death does not immediately follow in such a case, recovery is seldom perfect, the bird remaining with more or less impaired use of its legs or wings, or of one leg or wing. The less it is interfered with and the quieter it can be kept the better, but it must be borne in mind that the best chance of recovery rests in the recuperative power of nature, to which the safest plan is to entrust it altogether.

Occasionally the fit is the result of the excitement consequent upon a fight, or duel, between two of these excitable little creatures, and here again a masterly inactivity on the part of the owner offers the invalid the best chance of recovery.

Should the fit, however, not be due either to a quarrel or to some sudden alarm, it may be due to constipation, the bird when straining to relieve itself rupturing a blood-vessel within the skull, when, if the vein that has given way happens to be a main one, death is inevitable in a few minutes; but should it chance to have been one of the minor arteries or vessels and the resulting clot be consequently a small one, there is a possibility of its being absorbed in time and of complete recovery taking place. In a case of this kind a drop of oil—castor or olive, it does not greatly matter which—will do good if administered carefully, or a

teaspoonful of fluid magnesia may be put in a couple of table-spoonfuls of water for the bird to drink ; but as the Budgerigar is very abstemious in this respect, it will be better to administer the oil, which must be done in this way : Take the bird in the left hand, steady its head with the forefinger and thumb, and having taken up a drop of oil on the end of a pencil or a little brush, apply it to the corner of the bird's mouth ; it will immediately be sucked in by the patient and the plumage will not be soiled in the least, as inevitably happens when an attempt is made to give oil in any other fashion. Needless to remark, the head must be held sideways (*see* Fig. 6).

Whatever the cause of a fit, the best chance of a Budgerigar's recovery from it is perfect quiet and rest, undisturbed by its own companions and uninterfered with (except as stated) by its owner. It should be put in a small cage with plenty of food and water within easy reach of it, and the cage must be put in

some quiet place, where the bird will not be disturbed for a day or two, and especially where there are no mice.

Another complaint to which Budgerigars are very subject is egg-binding, but this, of course, only affects the females. It may be due to several causes. For instance, the bird may be so fat that the accumulation of adipose tissue in her interior may form an actual mechanical obstruction to the passage of the egg ; or the latter may have no shell, in which case there is always a difficulty in passing it ; or the bird may happen to be a weak one, and lack the necessary power to get rid of her burden.



FIG. 6.—METHOD OF ADMINISTERING OIL.

The treatment of this complication is not exactly the same in each case ; for example, if the retention is due to obstruction by an undue development of internal fat, not much can be done, and, as a rule, the poor bird's condition is not even suspected until she is found either actually dead or past all hope of recovery. If still alive, a drop or two of spirit, brandy or whiskey, administered in the same way as recommended for the oil, may have a good effect ; and if any inflammation is present, which can be ascertained by blowing aside the feathers on the lower part of the body, and noticing if the abdomen looks red and swollen, a strong purgative, consisting of three drops of castor oil, will most likely help. If this does not produce its effect within a quarter of an hour the bird should be given a hot bath, that is, she should be held for two minutes with the lower part of her body immersed in water as warm as the hand will bear comfortably, when she must be put in a small cage—the smaller the better—near the fire, or in some warm place, where she may thus be enabled to overcome her difficulty ; but too often all attempts to relieve are futile, and the poor creature dies.

The utmost care must be taken to avoid breaking the egg internally, an attempt at affording relief that almost invariably has fatal results. Very often cases of egg-binding will yield to continued heat, such as placing the bird in a small covered cage on some warm flannel, after a little vaseline or warm olive oil has been put up the rectum with a feather.

If a bird shows signs of being about to lay, and yet no egg makes its appearance, the probability is that she is unable to get rid of a soft egg ; and if inflammation has not set in, she will be benefited by eating some finely crushed egg-shell, or drinking some lime-water, but the egg-shell is better if she will take it. The way to prepare egg-shells for use in the aviary is extremely simple : save those of eggs that have been used in the house and dry them thoroughly, either in the oven or on top of the kitchen range, crush lightly, and then roll with an ordinary rolling-pin until the fragments are reduced to a coarse powder.

This should be liberally scattered about the floor of the cage or aviary, and if the bird picks some of it up, as she will usually do, she will lay a shelled egg a few hours afterwards, and have no trouble with the rest of the batch ; but, unfortunately, birds do not always know what is good for them, and some hens will not touch the shell, so that it is a good plan to have a supply of old mortar where such birds can easily peck at it, as that answers the same purpose.

Occasionally the application of a little oil to the vent does good, but it is better not to handle the invalid if possible ; still, if it must be done, she should be held in the hand (the left one), with her back resting on the palm, the feathers of the lower part of the body must be blown aside (when the vent, or anal aperture, will be seen), and a drop of oil applied by means of a small hair pencil, the point of which may be advantageously introduced a little way within the orifice. Steaming, too, is useful sometimes, and the way to do it is to hold the abdomen over the steam of hot water as it issues from a jug into which some boiling water had just been poured, but not if the steam is coming from a kettle on the fire, for that would be too severe, and would scald the sufferer, as well as the hand of the person who held her.

Prevention, however, is vastly better than cure, and egg-binding will rarely occur in birds that have access to plenty of lime, and are not too fat. In the latter case they should be caged alone for a time, and be dieted sparingly, so as to get rid of the superfluous adipose tissue they have developed.

Budgerigars are rarely troubled with colds, and if they are, these must arise from one or other of two causes, the first of which is curable and the other not. For example, if the cold is due to a draught, the crevice through which the latter gains admission to the aviary must be carefully stopped, and the cause being thus removed, the consequence will promptly disappear ; but if the cold, or catarrh, is merely a development of a scrofulous diathesis, that is, if the bird is constitutionally

affected, it is incurable and not worth bothering with; the sooner it is mercifully put out of its misery by means of an anæsthetic—chloroform or ether—so much the better for itself and its companions: it is not a bit of good trying to “doctor” it.

Sometimes a bird will be injured by fighting, or may get a leg or wing accidentally broken; such cases are much better left to Nature, for all attempts at surgical interference irritate the sufferer and only serve to make matters worse by leading it to peck and nibble at the affected part in order to get rid of the splint or other appliance with which the owner may have sought to afford alleviation. The injured bird may be put in a small cage by itself—must be, if its companions appear to molest it—but otherwise it is much better not to interfere, and in two or three weeks there will probably be little or no trace of the accident left.

Constipation and its opposite, diarrhœa, rarely trouble the Budgerigar, but may supersede upon improper feeding, that is, giving seed that is old and stale, or that has been kiln-dried, neither of which, it is almost unnecessary to remark, should ever be used. The remedy will be a free supply of grass, or a lettuce leaf or two, or, in extreme cases, a dose of castor-oil. The last always does good in the diarrhœa, unless this is a sequel to scrofulous disease, when it is incurable and an evidence that the end is near. As this complaint is propagated by the excrement of an affected bird, the latter should be at once taken away from its companions when its condition has been diagnosed.

Diarrhœa, however, is very apt to affect birds, adults and nestlings, that are allowed to eat sopped bread; if soft food of this kind is given—and it is not at all necessary—biscuit is far preferable to bread.

Diseases of the feet can only arise from inattention to cleanliness in the cage or aviary, and all that need be said upon this point is that if the cause does not exist there will be no reason for bemoaning a diseased condition of the feet of a Budgerigar.

French moult is rather the manifestation outwardly of

the scrofulous taint in the system, than a disease by itself, and such being the case it will be readily understood that, unless in very slight cases, it is useless to expect a cure. As a rule it manifests itself from the first, and the afflicted bird issues from its birthplace destitute of tail and wing feathers, or even occasionally without a feather of any kind on its body, though such extreme instances as the last are rare. Instead of improving, these wretched creatures generally get worse, and may even attain to a condition of perfect nudity. All kinds of treatment have been tried but without avail. Plenty of fresh air and exercise afford the best chance of improvement in very slight cases; but bad ones are hopeless. If a bird affected with French moult is fully feathered with the exception of the primaries, there is just a possibility that it may recover if placed in a large flight cage with plenty of twigs to climb among, and cuttle-bone to nibble. Even then such birds are worthless, and should not be allowed to breed.

This tiresome complaint has received the name by which it is now generally known, French moult, on account of the disease having* originally manifested itself in some Continental aviaries, whence it was introduced into this country by the importation of some of the afflicted birds, which were offered at a low figure and described as "moulting"; but it is a moult that does not improve, and must by no means be confounded with a somewhat similar affection called "soft moult," which is common in canaries and other finches, and is the direct result of errors in diet and of keeping the birds too hot. Soft moult can be usually remedied by correcting the causes that have given rise to it, for it is not constitutional, but French moult is strongly so, and practically incurable.

Another cause of French moult is in-breeding among immature birds, for even at three months old they are quite ready to assume parental responsibilities on their own account, and although no apparent harm may result from their precocity, the offspring of these immature unions are nearly always affected with French moult to a greater or lesser degree. When the disease first

appeared and young Budgerigars began to come out of the nest with few or no feathers on them, it was thought that the old birds plucked them, and that the lost plumage would be restored; but proof that this is a mistaken idea is afforded by the fact that the feathers are not replaced.

In addition to their want of feathers, these miserable little creatures are often subject to tumours in various parts of the body, and to ulcerations of the bowels, which give rise to diarrhœa; and they seldom live long, nor while they are alive are they anything but most pitiable looking objects. So the commencing aviarist must beware of them, and not be deluded into buying on the representation that the birds are moulting, and are consequently offered cheaply.

Although so very affectionate and fond of company, a solitary Budgerigar will do very well by itself and become great friends with its owner; but if it should mope and look heavy and dull, alternately with excessive fits of restlessness and calling, it is suffering from what is called pairing fever, and should be provided with a mate of its own kind but of the opposite sex, or it will very likely have a fit and die.

Sometimes a hen Budgerigar is seized with what can only be described as an attack of mania, or madness, and will rush about the aviary screaming wildly; or she will fall upon one of her companions and maltreat the latter even to the point of death; or she will forcibly enter the nests and throw out the eggs and young, savagely biting and mutilating the latter. Fortunately such attacks are of rare occurrence, and the only thing to be done is at once to catch and remove the offender, who will generally be found to be an unmated female.

If it is desired to catch any of these birds, a butterfly net should be held over the opening of communication between the roosting-house and the rest of the aviary, when they can be taken without any difficulty; but to chase them about till they fall exhausted on the ground is very much to be deprecated. Or a trap cage may be

introduced, which the birds will, out of curiosity, presently explore; the door can then be pulled to with a string, and if a dark cover is drawn down over it, they may be taken without any difficulty. It is here that the marked rings on the legs are so useful, for the aviarist on examining them will know at once what birds he is handling.

Everyone who has tried the Budgerigar as a pet must be fond of it, for it is a most charming one. Quite independently of its lively and vivacious manners, which in themselves are sufficiently delightful, the male can lay some claim to the faculty of song; and as his imitative powers are by no means small, there is little doubt that his natural warbling notes might be very considerably improved upon by a little careful tuition. That he will copy the song of the canary and the wood-lark, is undoubted, as also is his power of reproducing articulate sounds, for many instances have been recorded of a bird of this species surprising his owner by suddenly repeating the inconsequent chatter that it had been in the habit of hearing addressed to it; and if it will pick up such nonsense as "Was it booty, den?" or "A tootsey, wootsey, icky ting!" it is reasonable to suppose that it would have no more difficulty in saying "How do you do?" or any little phrase of that kind that it was in the habit of hearing; but it is a pity to make it waste its talent in learning sheer nonsense.

Then it can be taught to perform a great variety of tricks, such as telling fortunes by pulling out a card, climbing up a pole and bringing down a little flag in its bill, drawing a carriage, pretending to be dead, drawing up water from a fountain, and even firing a miniature cannon, if anyone chooses to be at the trouble of teaching it such things.

It is very funny, too, to see a Budgerigar cock, while the hen is sitting, talking or singing to a post, and the amount of earnestness put into the performance is not the least remarkable part of it. For instance, say there is an upright in the aviary with cross-bars attached to it for the birds to

perch on. He will run along one of the horizontal perches chattering volubly the while, and when he has reached the post he will pat it right and left with his bill, run away, come back again, and so on a dozen or twenty times. At last he will bring up food from his crop and try to feed the upright post, which seems to remind him that he has a duty to perform toward his patient partner in the hollow log, and he darts off to pay her a visit. She may meet him at the door, or he may pop down into the interior, but in either case he feeds her with much mutual chattering, and then away he goes to lay in a fresh stock of provisions.



THE COCKATIEL.

This charming Australian Bird is considerably larger than the Budgerigar, and its peculiar crest resembles that of a Cockatoo. Its prevailing colours are grey and white.

CHAPTER III.

THE COCKATIEL.

(*Calopsittacus novæ-hollandiæ.*)

THIS very charming bird is much larger than the last, and measures about 12½ in. in total length. It is generally classed with the cockatoos, but except that it is adorned with an upstanding crest it has little or no affinity with them, and is best described as a Crested Ground Parrakeet.

The sexes can be distinguished at a glance in the case of adult birds, but as all the young when they leave the nest resemble their mother, it is not then so easy to tell which are hens and which are cocks; the latter, however, show even then more yellow about the face than their sisters, although not so much as may be seen on some old females, so that it is almost necessary to wait until they have moulted their nest feathers before being too positive about the sex of a given bird. If no change takes place, the bird may be safely written down a hen, for if a cock, the crest and the face will be primrose yellow, excepting, of course, the round patch of brick red that appears on the ear coverts of both sexes from the very first.

The female has her face grey, with a very faint tinge of yellow towards the root of her crest in front. Her tail, however, is unmistakable; instead of being dull black on the under surface, as happens in the case of her mate, it is barred with black and spotted minutely with yellow, and the upper surface of the tail and the tail coverts are also faintly marked with the same colour; until the cocks

moult, all the young are like her in this respect also. The outer wing coverts are pure white, and form a broad band on the side of the wing; the remainder of the plumage is grey, and the bill and feet and legs are coloured in the same way. The shanks are long—for a parrakeet—so that the bird can run about very nimbly on the ground. It is a swift and strong flyer, like the Budgerigar in that respect, and if one escapes from the aviary, it is off like an arrow from a bow, to be seldom seen again by the regretful aviarist.

It is, however, a very docile bird, and does not usually try to get away, even when the door of its abode is incautiously opened; and should one of them get out while there are young in the aviary, it will quickly return to them, but that is the only inducement that will make it come back, for eggs are abandoned without the slightest compunction.

Like the Budgerigar, the Cockatiel is of migratory habits in its native country, travelling south to breed, and then returning to its northern quarters for the remainder of the season. It frequents the same parts as the Budgerigar, and it is not unusual to find it in company with the latter. In the aviary the two species may be kept together, and agree very well, providing they have a reasonable amount of space to fly about in. They are very peaceable with other birds, and not nearly so fussy and impudent as the Budgerigar. In fact, during the many years he kept Cockatiels, the writer cannot recollect a single instance in which any of them disagreed with their companions, whether of their own or other species.

In its wild state the Cockatiel subsists on the seeds of the native grasses and seldom touches anything else, and in the aviary it will do very well on canary and millet, though it will also eat hemp freely, which does not seem to do it any harm. If, however, there are any young ones to be fed, it is advisable to add oats or boiled maize or crushed biscuit to the dietary, as the old birds have a difficulty in supplying their young with small seed, and have to be continually eating, for five or six young Cockatiels take a wonderful

amount of feeding, and would fairly exhaust the cock if he only had canary-seed or millet to give them. Some fanciers supply bread sop, but it is scarcely advisable to do so, for the reason already stated, though good plain biscuit is not so objectionable.

In the matter of green food the Cockatiel is omnivorous, practically, and will eat cabbage, turnip tops, lettuce, groundsel, chickweed, grass, plantain, marigolds—in a word, everything that grows, unless it be of a directly poisonous nature, when, of course, it should not be offered.

They cut up a good deal of wood, too, and there should be always some about for them to exercise their bills on.

They drink freely, and are fond of bathing, not hesitating to break a thin film of ice in order to enjoy their daily "tub," nor do they seem to mind the severest cold.

In their breeding habits, the Cockatiels offer some peculiarities. In the first place, the male does not feed the female, but he shares with her the duties of incubation, sitting from about ten in the morning till about four in the afternoon, when he comes off and the hen takes his place in the nest.

The eggs, like those of all members of the parrot family, are white; they are about the size of those of a Barbary Dove, which they much resemble in shape and texture. Incubation lasts about seventeen or eighteen days, and the eggs vary from five to seven or even nine in number; but if they exceed the latter they are barren, for it is curious that a hen whose eggs, from whatever cause, are unfertile will keep on laying until she has deposited twenty eggs or more.

The young, at first, are covered with yellow down, but the quills soon make their appearance, and the young birds, with their big heads, fat, shapeless bodies, and bristle-like covering, are very hideous little monsters. They grow quickly, however, and in a month or so are able to come out of their native barrel and fly about. When first hatched the mother stays with them nearly all day, but after that their parents do not brood them much, though they feed them for a long time, so that it is no unusual

sight to see the old ones feeding two different broods at the same time, even though the elder children are perfectly able to cater for themselves.

The best nesting-place for a pair of Cockatiels is unquestionably a small barrel hung from the roof or against the wall, it does not much matter which, and in this they will rear a brood without fuss or difficulty if supplied with the food already mentioned.

One feature in the character of the Cockatiel is apt to disappoint the aviarist: it is very rare for a pair of them to breed in a strange place, so that, as a rule, it is not until the second season that they reward their owner for the trouble he has taken with them, by presenting him with a brood of young Cockatiels. The best way to manage is to buy them at the beginning of the winter, or the end of the autumn, so that when summer comes round they may have got over their shyness, and having become used to their new abode, they may set to and nest without further delay; but if they are acquired in the spring they will not breed for the next twelve months.

There are usually three and sometimes four broods in the season, which extends from April or May to September or October, for it is very rare for these birds to nest here during the winter months as their fellow-country-birds the Budgerigars are so fond of doing. One pair that the writer possessed for about fourteen years annually brought up twelve young ones, and one year they reared eighteen, with far less bother than if they had been either pigeons or canaries. The wonder is that the Cockatiel is not more generally kept than it is, but possibly its rather sombre appearance is against it; yet, when examined minutely, it is far from being a plain-looking bird, for its colours harmonise well, and its figure is decidedly elegant. It has a shrill scream, however, which certainly militates against keeping it indoors; but outside, the noise it makes is not of any consequence.

Logs may be used for nesting-places for the Cockatiel, of course, if they can be procured of suitable size; but coco-nut husks are much too small, and should not be

offered to them, while a flat-bottomed box is inadmissible, seeing that the eggs are so apt to roll about and get spoiled. Half a coco-nut husk, however, cemented into a box of suitable size, will do very well, and in such a contrivance many young Cockatiels have been successfully reared.

Any nesting-place, however, that is intended for these birds should have a removable lid, so that when the young ones are about half-grown the interior can be cleaned out: if not, particularly if there are many of them, the excrement accumulates and the smell of guano becomes overpowering, while maggots are often bred in it. Although the young birds do not seem to thrive any less well for the dirt, it seems more wholesome to clean the place out, and of course while this is being done there is a row; the young ones squeal horribly all the time, and their parents fly frantically about the aviary, shrieking their shrillest and loudest. But that does not matter, for they don't mind really, and as soon as the cleansing operation is complete, and the barrel is restored to its place, they immediately visit it, and finding their young uninjured and their habitation a good deal cleaner and sweeter than it was, they settle down at once, and all goes on as before.

When the nesting-places provided for them have not been quite to their liking, the hen Cockatiel has been known to deposit her eggs on the floor, sometimes behind a brick or a piece of board, and sometimes quite openly, so that some writers have asserted this to be their natural habit; but it is a mistake to say so, for in their native country they, as well as the Budgerigars, always nest in the hollow branches—"spouts," of which gum-trees are full—and never on the ground, as some other species, when they inhabit a place where there are no trees, are in the habit of doing. Still, should one of the Cockatiels in an aviary evince any disposition to nest on the ground, she should not be lightly interfered with, for she has her own reason for the eccentricity, no doubt, and knows what she is doing.

It is not at all unusual for the mother to begin laying

again before her brood have left the nest, but she generally does so in another nesting-place. Sometimes she will deposit her second clutch of eggs among the children, who then practically hatch them, or at least in part; and it is strange that the eggs are seldom, if ever, broken, though the shells, as might be expected, are terribly soiled and beplastered with dirt.

If it is of some importance to mark young Budgerigars with rings it is still more so in the case of Cockatiels: otherwise accidents of a most vexatious kind are bound to occur when sending off the young birds, especially if these are kept until they have moulted and assumed the full adult plumage, a valuable old bird being occasionally confounded with a young one and sent off in lieu of the latter. It is no more difficult to ring the leg of a young Cockatiel than it is that of a Budgerigar—indeed, less so, for the former is so much bigger and consequently easier to handle. The rings should be put on before the squabs leave their birthplace, and a good time to do it is when the nest is being cleaned out.

The Cockatiel is a very hardy and healthy bird, and the only ailment to which it appears to be subject is egg-binding, which only affects the females, of course, but is, unfortunately, rather frequent and fatal in their case. The worst of it is that the poor bird's condition is seldom suspected while she is alive, and the first intimation the owner has of her trouble is finding her stretched dead on the floor, with her mate near by shrieking wildly.

If the birds have been nesting for some time and no eggs have been laid; the aviarist had better watch the hen narrowly, and will probably then be able to detect some uneasiness. Either she looks more swollen than usual, or she pecks herself behind, or she flies more heavily than is her custom: if so she had better be enticed into a trap cage, or be caught in the butterfly-net, when an examination will reveal her egg-bound condition, and a dose of oil, or a hot bath in extreme cases, will in all probability afford relief.

However, if supplied with plenty of crushed mortar and

egg-shell, she will most likely not be troubled with this complaint, but will deposit her eggs easily, and all will go on naturally.

Sometimes a late-hatched youngster will develop rickets, in which case a little chloroform will end and mend matters speedily and painlessly, for such poor things are not worth bothering with.

Cockatiels are very long-lived birds; the writer once had one, a male, for fourteen years, but does not know how old it was when it came into his possession.

The writer always kept his Cockatiels out of doors summer and winter, with excellent results, but if caged in the house, and especially if in a close room, they develop digestive and other troubles just the same as other birds, but may be restored to health by putting them out as soon as the weather permits, unless, of course, they happen to be too far gone for recovery.

The Cockatiel is a great favourite wherever he is known, and he improves on acquaintance, so that an aviarist who has once kept these birds is unwilling, as a rule, to go long without them. One great recommendation they have is their gentleness: they never fight among themselves, no matter how many of them may be kept together, nor do they interfere with others, no matter how these may torment them.

They are also hardy and frugal, do not eat much for their size, and live principally on canary-seed and oats, but the latter diet is too fattening for them without an admixture; they are absolutely regardless of the weather, but are wise enough not to attempt to breed until the days are at least moderately long and warm.

The affection of the couples for each other is touching; they do not demonstrate so much as the Lovebirds, it is true, but their union is for life. They are excellent parents, too, and never fail to rear their numerous progeny, with whom they always remain on terms of perfect good-fellowship.

Strictly gregarious, their numbers need only be limited by the space at the aviarist's disposal; occasionally two

hens will lay together in the one barrel and sit together, and the two cocks will replace them on the eggs at the usual time without so much as a murmur; in fact, there is no more amiable bird living than the Cockatiel.

The Budgerigar pretends that he can sing, but the Cockatiel is too modest to do so, except when he is quite young and has not yet cut his wisdom teeth: the immature birds of the year make a great pretence of warbling as they sit side by side in a row on one of the straight perches in the aviary, but the noise is not unpleasant out of doors. In the house, it must be admitted, and when confined in a small cage the Cockatiel screams and cackles and makes a very unpleasant disturbance at times, but who can blame him for evincing his displeasure at being confined in such very unsuitable quarters.

Without being boisterously lively, the Cockatiel enjoys a romp with his companions at times, and then, if the neighbours (the human neighbours, that is to say) are captious, the aviarist may receive a more or less civil intimation to mitigate the nuisance. Fortunately, these merry-making bouts are of infrequent occurrence, but, strange to say, they nearly always presage rain, and do not last very long.

Cockatiels, if taken indoors, kept singly, and petted and made much of, will get very tame and even learn to say a few words in a small voice, as well as to whistle a short and simple air; but notwithstanding their many merits and amiable qualities, they can scarcely be voted clever. Cleverness, however, is a word that includes degrees of comparison, a relative quality, in fact, and the most accomplished of these birds had better be described as "clever for a Cockatiel," than be credited with accomplishments, even by implication, to which it can never attain.

But when everything has been said, he is a nice bird, a very nice bird, and his still more plainly dressed partner is worthy of him. Then there is always a ready sale for the youngsters, at prices varying from 7s. 6d. to 10s. each, while a breeding hen is not accounted dear at 20s: and

as they cost little to keep, it follows that breeding them is a very paying pastime; and it is safe to say that two pairs of Cockatiels will not only keep themselves, but all the other inmates of the aviary, and leave a profit over.

The Cockatiel needs no puffing or advertising to recommend him to those who have the pleasure of his acquaintance, for he is the very *beau ideal* of an aviary pet, and has, moreover, sufficient attractions to establish himself very firmly in the house.

CHAPTER IV.

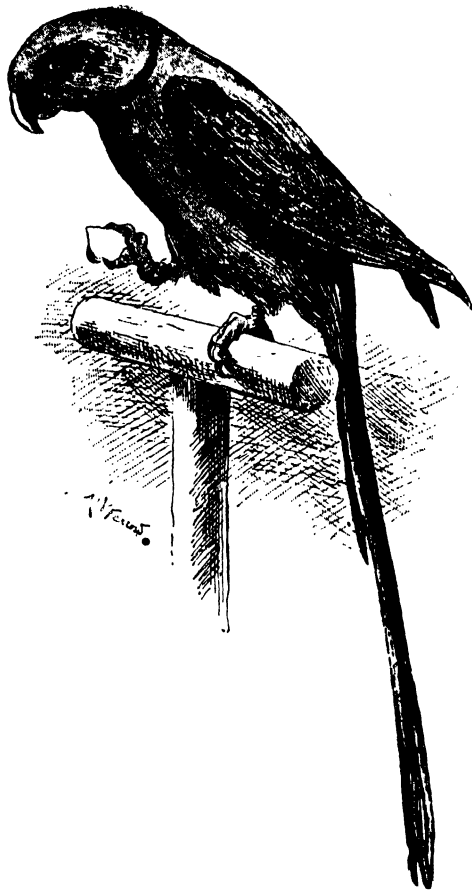
THE RING-NECKED OR BENGAL PARRAKEET.

(*Palæornis torquata.*)

THIS well-known bird is a general favourite and is very often kept in cages, but it will, no doubt, be a surprise to many people to hear that it is perfectly hardy and may be left out-of-doors all the year round, where it will do as well as either of the species mentioned in the preceding pages. It is the common "Green Parrot" of India, and is looked upon as a pest there rather than otherwise, on account of the harm it does to the crops.

However, it is pretty, and some members of the family develop no inconsiderable talent for speaking, so it is often imported into this country; but as a rule its management is grievously misunderstood.

The male is distinguished at once from the female by having a ring round its neck; this ring is in two colours—one black, the other reddish. The black starts from the chin and runs nearly to the middle of the neck, but the two extremities do not quite meet in the centre; and the reddish ring starts from the sides of the face, is thickest on the back of the neck, and its extremities also fail quite to meet under the chin. The black line is above the red one. The general colour of the plumage is green, shaded with blue on the top of the head, and with yellow on the sides, the under tail coverts, and the under surface of the tail; the latter is blue above, and the flights have a brownish shade.



THE RING-NECKED OR BENGAL PARRAKEET.

A perfectly hardy species, although a native of India. Its plumage is green, with blue and yellow markings. The black and reddish neck-ring occurs only in the male.

In total length the Ring-necked Parrakeet measures about 14½ in., of which nearly 5 in. belongs to the tail, but these birds vary a good deal in size. The bill is dark red in the Indian birds, and darker in the sub-species that comes from Africa, for the Ring-neck is found on both continents, and not in South America, as Bechstein imagined. The lower mandible is black in the African bird.

The female and young have no ring, but are green all over, and the latter may be known, as a rule, by their smaller size. The males are about two years old, or two and a half, before they assume the characteristic mark of their sex, and until then it is almost impossible to tell to which one of them belongs, but the ring settles the matter beyond a doubt.

Bengal is the head-quarters of the species in India, but the bird is nevertheless found in other parts of that country, as well as in Africa—that is, in Cape Colony, where it was probably introduced, and in Egypt, possibly, too, in other parts. In Mauritius there is a variety called *Palæornis docilis*, or the Lesser Ring-necked Parrakeet, which is considerably smaller than the Indian or Cape kind. It has a decided bluish tint on the head, and measures about 12 in. in length, nearly half of which is included in the tail. It deserves its name of *docilis* as a rule, and is more tameable and gentler than the ordinary kind. Whether it is a distinct species, or a local variety merely, is matter for conjecture at present.

The Ring-neck is quite as hardy as any of our own native birds, but of course, must be acclimatised when it first comes over. The best way to do so is to turn it out-of-doors in May, and then it may be left outside altogether—at least in such an aviary as the writer has described in the Introduction.

There is a very pretty variety of this bird, of a rich canary colour throughout, but as it is rare it is, of course, very valuable. It is a true albino, notwithstanding its bright yellow colour, for it has pink eyes, and is value for £20 or thereabouts, so that it is worth while breeding the common sort on the chance of getting one of these rarities.

The food of the Ring-necked Parrakeet in confinement should consist of bird-seed, hemp, canary, millet, and so on, also oats and maize, and green food of any kind going, with the exception of watercress, which is best withheld altogether unless the place where it was grown is known to be absolutely free from sewage. Fruit may be given occasionally, and a bit of plain biscuit now and then, but no animal food, not even milk, *and this applies to all parrots and parrakeets.*

Being large birds (nearly half as big again as a Cockatiel), the Ring-necks require a good big nesting-place, and a two gallon keg is none too roomy for a pair of them, but a four-and-a-half gallon cask would be better still; this should be fastened up somewhere securely on its side, and the entrance may be at the end or through the enlarged bung-hole. Like most of the parrots, these birds do not line the interior of their dwelling, but lay their eggs on the bare wood, though they are not very particular in this respect, and if some saw-dust has been introduced into the barrel they will not take the trouble to throw it out.

In their native country they nest in holes in trees, or buildings, or anywhere where they can effect a lodgment; and in the aviary, if they have no accommodation to their taste elsewhere, the hen will lay her eggs in a corner on the ground and hatch them in that position.

The eggs are always four in number, white, and the size and shape of those of the Wood-pigeon; incubation lasts about eighteen days, and is performed by the female alone, but while she is sitting the male feeds her very attentively, as he also does the young ones when they are hatched. As a rule, they make very good parents, but here and there a hen may be encountered that will mutilate and even kill her offspring. This unnatural conduct, however, is the outcome of inexperience: she does not know what the funny little bare things that suddenly make their appearance under her instead of eggs can be, and so she attacks them and turns them out as intruders; but this only happens once, for when the next lot of young appear she seems to realise what they are, and is as tender with them

as a mother should be. There are two broods each season.

No additional food need be provided for the young, and if they are left strictly alone, they will do much better than if interfered with in any way, except for the purpose of marking them before they leave the nest with a metal or bone ring as recommended for the preceding species.

They do not appear to have any diseases, not even egg-binding, but are as hardy as pigeons, and it would be quite easy to acclimatise them here, were it not for cockney "sportsmen," who cannot catch sight of a strange bird without trying to kill it immediately. Whether it would be desirable to add them to our avi-fauna is another matter, for they are very destructive in an orchard, and among timber generally; but aviary-bred specimens can always be sold for at least twice the price asked for newly imported ones, and if kept till full-grown there would be no difficulty in getting 22s. or 30s. apiece for them, though it would probably pay better to sell them for 15s. or even 10s., as soon as they were able to take care of themselves which is when they are about two or two-and-a-half months old.

The attractive qualities of these birds consist in their susceptibility of being educated and their tameness, the cocks evincing more capacity as linguists and tricksters than the hens, but the sex is a matter of speculation until the ring develops, or does not, when the bird is about two years old—in the latter case the parrakeet may be safely put down as a female.

Many people who keep these birds in cages treat them very erroneously, under the impression that as they come from India they must be delicate and extremely sensitive to cold; but there could not be a greater mistake. When kept in an outdoor aviary the Ring-necks during very cold weather will generally sleep in their barrel, but not always, and even when they roost outside they seem to suffer no inconvenience from the exposure.

There is also a notion abroad that they should not have water, which is cruel as well as absurd, for they love a

drink and a bath, and will take the latter freely when the pan is covered with a thick coating of ice, which the birds break up and chew with evident relish.

Imported specimens, nestlings, are frequently offered for sale at 10s. or even 5s. apiece, but a good many of these poor creatures die, partly from mismanagement by their new owners, and partly from the consequences of the indigestion that has been induced by improper feeding before they were sold. Biscuit sop is permissible for quite young birds, but they should be gradually weaned to seed, hemp and boiled maize, canary-seed and "parrot mixture," as sold by Spratt's Patent, Limited, afterwards, and on this they will thrive and grow up strong and handsome.

If it is wished to tame one of these aviary-bred birds, it should be taken in as soon as it can properly feed itself, and be kept at first in rather a small cage, for in a bigger one it would be apt to dash about when anyone went near it, and so spoil its plumage, especially the tail, which, unless the stumps were drawn (a cruel proceeding), would not be reproduced until the moult in the following autumn. It should be fed as advised above, kept where it would see people about as much as possible, and be talked to and noticed when convenient, the oftener the better. By degrees it would cease to squeal when approached, and get quite gentle and familiar.

As soon as it has become sufficiently tame to take a tit-bit from the fingers it may be moved into a larger cage, from which it is then desirable to entice it occasionally by opening the door and offering it a grape, or a morsel of sugar. After a while it may be permitted to ramble out of doors, and if not frightened will always return to its cage to be fed. A bird thus treated will be much handsomer and healthier than if it were always kept shut up in its cage, and in time it will grow so tame that it will follow its owner anywhere, and come when called by name like a dog.

The Mauritius Ring-neck being smaller, decidedly prettier, and more docile than its larger relative, is better worth breeding than the latter, for it fetches more

money ; it is equally hardy, and requires exactly the same management.

The Ring-neck will form an alliance with any other parrakeet of its own size if unable to find a mate of its own species, but no hybrids have so far, at least to the writer's knowledge, been obtained, and that notwithstanding the fact that the ill-matched pairs were most devoted to each other. In one case a union took place between a male Crimson-wing and a female Ring-neck, and in another between a male Ring-neck and a female of another species, but the result was the same in both cases, namely, addled eggs—not unfertile eggs, but addled, showing that impregnation had taken place but lacked the potentiality of life.

Though scarcely to be expected, it is nevertheless a fact, that if a Ring-necked Parrakeet that is able to speak a few words is turned out into an aviary, not only will he not forget there what he has learned, but he will add other words and sounds to his repertory, so that no owner of one of these birds need hesitate about turning out his pet.

These birds have a "song" of their own which they do not often, fortunately perhaps, indulge in when kept in a cage ; but when the hen is sitting, the cock will perch for an hour at a time at no great distance, and keep on warbling a disconnected ditty consisting of a variety of shrill cries and squeaks, which he, no doubt, considers to be a song, and one of no mean merit, to judge by the self-satisfied air with which he pours it forth. When the music has come to an end, he dashes off to the seed-pan, helps himself liberally, and then goes into the barrel to impart a share of the good things of which he has just partaken to his better-half, who seldom leaves her eggs for more than two or three minutes or so, once or twice during the day. At such times he usually pops in to see for himself how the treasures are getting on, but she quickly turns him out, and then he sings another song.

Say the result of the breeding of a pair of Ring-necked Parrakeets is eight young ones per annum (which seems to be the usual number), and they are sold for 15s. each,

it follows that a very fair profit is left over, for their keep is not expensive, and would not be likely to cost more than 30s. or 40s. at the outside ; from which it would appear that they are by no means unprofitable birds to experiment with.

In conclusion, it may be stated that two or more pairs may be kept together without, as a rule, interfering with each other, providing the space in which they are confined is of sufficient extent to keep them from treading, so to speak, on each other's heels ; nor do they usually interfere with other parrakeets, as the writer can testify, for he has kept them along with Budgerigars, Cockatiels, Bloodwings, Red-rumps, and other species, of not one of which the mated Ring-necks ever took the slightest notice.

As regards the foregoing paragraph, the editor of the present book cannot unfortunately endorse the late Dr. Greene's opinion of the innocence of the Ring-necked Parrakeets towards smaller or weaker species. Doubtless much depends upon the temper of individual birds and whether or not their companions happen to go near to their nesting log. But it would be wise to keep a strict watch upon the birds until their amiability is proved, for their ability to inflict serious injury by means of their strong beaks is unmistakable.



THE ROSELLA OR ROSE HILL PARRAKEET.

This handsome, many-coloured Australian species is not only very hardy, but also sweet-tempered, and can be taught to pipe a tune.

CHAPTER V.

THE ROSELLA OR ROSE HILL PARRAKEET.

(*Platycercus eximius.*)

THIS bird is also known as the Rose-hill Parrakeet, or Rose-hill Broadtail, and must not be confounded with the Rosy-breasted Cockatoo, which is often spoken of as the Rosella, or the Rosella Parrot, and sometimes as the Rosella Cockatoo. This is rather a pity, for the birds are quite distinct, and the name Rosella should be restricted to the smaller of the two, the Rose-hill Broadtail, as it is called by the London Zoological Society, which is the better entitled to it, and by far the more desirable bird in every respect.

The Rosella is a trifle larger than the Cockatiel, plumper, but not much longer, and is difficult to describe; the bill is white or very light horn-colour. with a yellowish tip to the upper mandible; the top of the head, face, breast, and under tail coverts are bright red; the chin and throat are white; the lower part of the back of the neck, the scapulars and inner wing coverts are black, broadly edged with green; the back and upper tail coverts are vividly green; the two central tail feathers are dark green, and the others lilac; the outer wing coverts are darker lilac than that of the tail, and the primaries are dark blue, faintly edged on the outer aspect with green; the lower breast and the vent are yellowish green; the legs and feet are grey and the nails black.

It is a handsome bird, and there is very little difference

between the male and the female; the latter, however, is decidedly smaller than the former, is thinner about the neck, and her colouring is less brilliant than his; but it is difficult to determine the sex of a single bird, though much less so when a couple of them are compared.

No varieties of the Rosella have so far been reported, but it has not been much bred hitherto, chiefly owing to the difficulty of getting a reliable pair. Two of them the aviarist may buy, but somehow or other these usually turn out to belong to the same sex, either male or female, and hopes of multiplying the species are for the time being frustrated. The best plan is to keep on acquiring new birds from time to time until at last a suitable pair has been obtained, when the surplus stock can be disposed of, usually at a slight profit, but never at a loss.

This handsome parrakeet is found on the south-east coast of Australia, but at no great distance inland, and in Queensland it is replaced by a somewhat similar bird known as the Mealy Rosella, or Pallicept, which is a distinct species. The Rosella is also abundant in Tasmania and in the islands of Bass's Straits: it is very hardy and as indifferent to the cold of our severest winter as any of the preceding; it is also quite as ready to breed in a well-appointed aviary, and has even done so in a cage more than once, but repeatedly in a bird-room.

Its natural nesting place is a cavity in the branch or trunk of a gum-tree, and in confinement it is content with a hollow log, or a small barrel, but coco-nut husks are too small for it, and only tantalise the bird if offered to it; nevertheless, half of one cemented into a box will do very well, and the birds will take to it as freely as to the log or barrel. They use no lining for their nest, but lay their four to seven roundish white eggs on the bare wood, and these take about eighteen days to hatch; but as incubation commences with the first or second egg, the young make their appearance on successive days, and the eldest has attained a considerable size before the last emerges from the shell. But no mishap ever takes place if the birds are not interfered with, although at first sight it would

appear not unlikely that the youngest would be smothered under his bigger brethren; no such thing, however, happens, and, strange to say, notwithstanding the disparity between their ages, the whole brood usually make their appearance outside the nest together, and sit side by side on a straight perch blinking in the unaccustomed sunshine, where they are fed in turn by the delighted parents for a day or two.

When they forsake the nest, the young Rosellas are not as large as their parents and are much duller in appearance, but they soon grow and assume their adult plumage, and then are absolutely indistinguishable from the old ones, so that it is necessary to mark them as soon as possible. The ring on the leg is the best way of doing so; but the tips of the tail or of some of the wing feathers may be clipped, or, as some amateurs recommend, a slight notch may be cut or filed on the bill or a toe-nail. But the ring is much the better plan, for it is not disfiguring, causes no inconvenience, and if put on before the birds leave the nest is never noticed by them.

Two broods, but sometimes three, are produced each season, which may be conforming to the usage of this country; but sometimes the birds will nest in winter, though with less successful results than if they paired in the summer time as we understand it.

As many as seven young are occasionally produced in one brood, but five is the more usual number. They do not leave their native barrel until they are about eight weeks old, and in a couple of days or so afterwards they are able to feed themselves. It is then quite impossible to distinguish the sex with certainty, but the young cocks are somewhat bigger than their sisters.

It is not advisable to permit consanguineous unions to take place among aviary-bred birds of any kind, and especially among the young Rosellas, for the offspring of such are apt to be small and dull in colour, as well as decidedly subject to French moult. A cross with an aviary-bred bird of another stock will, however, cause no deterioration in the progeny, and where an outcross

can be obtained it is better to avail one's self of the chance.

The Tasmanian Rosellas are bigger than those that come from Australia, as usual in everything connected with our Antipodes, reversing the rule that insular birds are smaller than those of their congeners that are continental—for example, goldfinches and bullfinches, which are smaller in England than they are on the Continent. The Tasmanian Rosellas, however, are not any hardier than their Australian relations, so that it does not much matter to what nationality the birds belong; but European-bred examples are seldom so strong as imported ones, probably on account of the restricted size of the aviaries in which most of them are brought up.

The best food for the Rosella consists of canary seed, white millet, oats, and maize, the last cooked when there are young birds to be fed in the nest, but bread and biscuit are to be avoided, as they give rise to diarrhoea. Green food of all kinds, except watercress, is allowable and conducive to the welfare of the birds. They should have a liberal supply of water and grit placed at their disposal; a small piece of rock-salt in the aviary is beneficial, and a free supply of crushed egg-shells must not be forgotten.

With the exception of French moult and egg-binding, the Rosella does not seem to be troubled with any tendency to disease. The first cannot be cured when it has manifested itself, but it can be prevented by attention to the several points already mentioned. The second is not likely to occur if the birds have free access to lime in some form or other; but if it should set in, the sufferer must be treated with a dose and clyster of oil, be kept warm, and not allowed to nest again until she has recovered her strength.

The price of these birds is higher than it was a few years ago, ranging from 30s. to 40s. apiece, though should a large consignment chance to arrive, the dealers will advertise them at a lower rate in order to clear out their stock as quickly as possible, and the thoughtful aviarist will seize the opportunity to buy, whether as a beginning

with this species, or to replenish his aviary, or to add new blood to the race he already possesses. When convenient it is a good plan to purchase half a dozen head, in order to make sure of getting one or two pairs among them, and when observation has enabled the owner to determine the sex of the different birds, the surplus ones can generally be got rid of without difficulty, and, as a rule, at an advance on cost price.

The Rosella is undeniably a very handsome as well as an amiable and sweet-tempered bird, though now and then a cross-grained specimen may be happened on; but such are rare, and their soured disposition is, as a rule, the result of indisposition. It seldom interferes with other parrakeets and may be kept in any numbers compatible with the size of the aviary, for it is naturally of gregarious habits and breeds in little flocks of ten or a dozen pairs in its native country.

In the house it makes a very nice pet, for it is not noisy, and the male has a naturally pleasant warbling song; he will also learn to repeat many words and short sentences in a small but distinct voice, and will become very tame and confiding. When given any tit-bit, such as a grape or a bit of sugar, he will hold it up in one foot and suck it after the manner of most of the large parrots: this is not usual among the ground parrakeets, than which the Rosella is much more arboreal in its habits; consequently its tarsi are short and it progresses badly on the ground, to which it does not often pay a visit, as it lives for the most part on the seeds of the various gum trees that form the great bulk of the forest vegetation of its native land.

When pairing, the male Rosella dances round his mate with head and neck erect and expanded tail and wings, piping the while a very pleasant song. The female is not at all a demonstrative bird, and gives utterance to two sounds only—a soft, low call, and a clear and loud note of alarm—both of which the male also possesses, but his love song is varied and agreeable.

Dr. Russ, on the authority of a Professor Bargheer,

gives this bird rather a bad character, and says that it cannot live peacefully with its equals or with other birds: this is not the writer's experience, and he thinks the Herr Professor must have been rather unfortunate with his Rosellas.

The flight of these parrakeets is very rapid and graceful and their movements among the branches are very vivacious. Although in a cage they may appear to be dull and uninteresting, they are by no means really so, but only cramped and weary for want of room in which to exercise freely, as happens with so many kinds of birds; so that even when kept as a pet in a cage, the Rosella should be let out for a fly round the room every day, for his health, as well as his temper, will be greatly benefited by the exercise.

It may here be stated that, like all the parrots, especially those of arboreal habits, the Rosella is a born carpenter, and is as fond of wood-cutting as was an eminent statesman, so a piece of soft wood should always be affixed across the upper part of its cage, in order to afford the bird an opportunity of following its natural instinct.

As the Rosella has a naturally pleasing warble, it should be possible to teach it to pipe a tune if its education were taken in hand from the earliest possible stage of its existence; in fact, there is scarcely any limit to the extent of its accomplishments and their marketable value in such circumstances.

Professor Bargheer's birds annually reared several broods of from three to five nestlings each, and always began to nest in our spring. Are all good things to be made in Germany?

Hybrids have been obtained between the Rosella and Pennant's Parrakeet, although the latter is a much larger bird than the former; and a cross has also been bred with the Mealy or Pallicept, which is said to have proved fertile. If so, that would demonstrate the identity of the species, and show that Pallicept was merely a local variety of the ordinary Rosella; but the point wants clearing up a little, and perhaps some aviarist will undertake the task.

The hybrids and crosses referred to are certainly less beautiful than the parents from which they derive their misbegotten being, and so have no real right to existence, for even as curiosities they are a failure. However, some people have a fancy for such things, hence the fact of their being mentioned here, but rather as a warning than an encouragement.

There are several allied species the management of which is exactly the same as that recommended for the Rosella. Although these are less frequently seen in the hands of the dealers and in aviaries, they are equally desirable, and there is no reason why they should not receive the same notice as the better known species. The birds now referred to are the Mealy Rosella, or Pallicept; the Blue-cheeked Parrakeet; Brown's Parrakeet; the Stanley Parrakeet; the Yellow-rumped and the Yellow-bellied Parrakeets. The Stanley is a native of Western Australia, and the Yellow-bellied one hails from Tasmania; the others are found in New South Wales and Queensland.

CHAPTER VI.

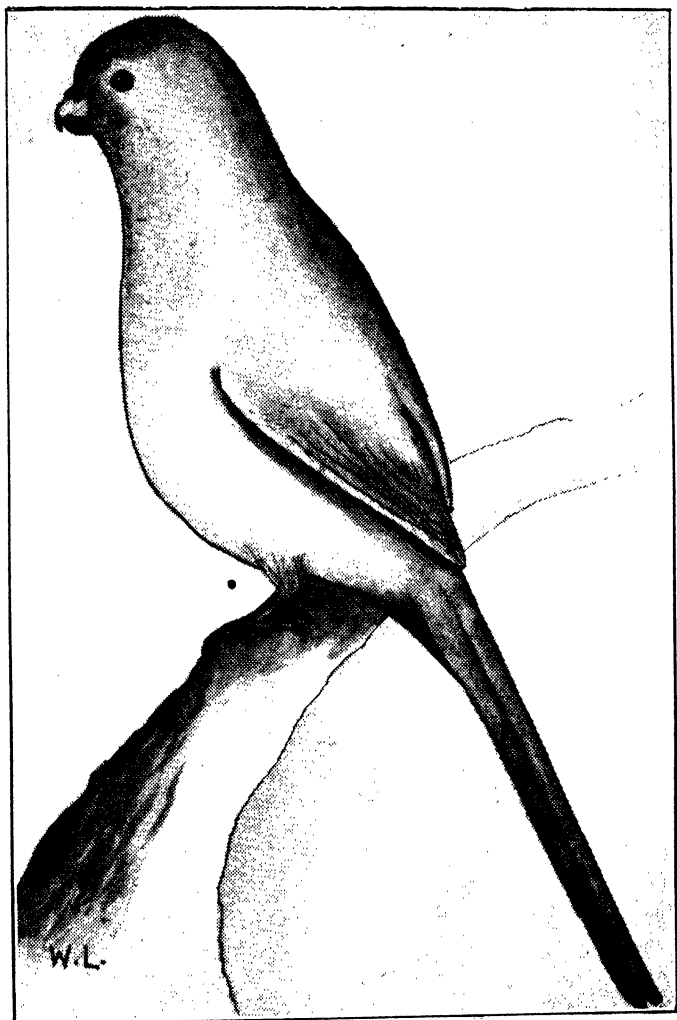
THE RED-RUMPED PARRAKEET.

(*Psephotus haematonotus.*)

THE Red-rumped Parrakeet possesses a great advantage either as a cage or an aviary pet in the fact that ordinarily it is not a noisy bird and its natural calls are rather musical than otherwise. The majority of parrakeets share, with their larger relations, the square-tailed parrots and the macaws, an ability to create noise of a most objectionable character either because of its volume or because of its monotonous reiteration.

In keeping Red-rumps in a garden aviary in the vicinity of other houses, one need not therefore fear querulous complaints from neighbours with sensitive aural faculties. There is also an iridescent beauty on the plumage of a Red-rump in perfect condition that transforms the not unusual greens and greeny-blues of its coat into a strikingly beautiful dress. Even the modest little hen, easily distinguished by her lesser size and paler colouring is a decidedly pretty bird. In young cocks the red on the lower back is less conspicuous and the plumage is much mixed with brown until after their first moult. But they are quite easy to pick out from their sisters in nest feather, and the young of both sexes leave the nest with distinctive colouring, unlike so many young birds, parrakeets and others.

To the beginner this clearness of sexual distinctions is a decided advantage of course, for it enables him to dispose of his young stock practically as soon as they leave the nest, when he has neither the space nor the time to attend to many birds.



THE RED-RUMPED PARRAKEET.

Because of this, however, it is necessary to mark all the birds retained for breeding purposes by means of metal rings on their legs as advised by Dr. Greene on p. 21. Rings of larger size will of course be necessary for Red-rump Parrakeets than for Budgerigars. It is a good plan to mark the cocks and hens of each pair in a distinctive manner so that pairs do not get mixed up in shifting from one aviary to another. For instance, one pair may be marked with copper rings on the right legs; the young bred from them with copper rings on the left legs; another pair with iron rings on their right legs, and their young with the same kind of rings on their left legs; whilst for a third pair and their progeny steel rings may be made similar use of. That assortment will, I imagine, supply the needs of most aviarists.

The Red-rump does not appear to be subject to variation in plumage but it has bred hybrids with the Common Rosella (*Platycercus eximius*) and with the Beautiful Grass Parrakeet (*Psephotus pulcherrimus*). The former hybrid, being with a member of a distinct family, is of course the more interesting. Hybrids with the nearly allied Many-coloured Parrakeet (*Psephotus multicolor*) ought to be easily obtained; but of their occurrence I can find no authentic trace.

After the Cockatiel, the Red-rump is probably the most freely bred of all parrakeets, and the most prolific too, although broods of more than four are exceptional.

The larger Australian Parrakeets, unlike the Budgerigar, are more adaptable to our seasons. Most of those obtainable now are aviary bred and may be depended upon to nest from April to September. Normally the species is double brooded, but three and four broods may be reared in the year, moulting time excepted.

This little parrakeet cannot be described as a particularly peaceable inmate of a mixed aviary. When breeding they are apt to become pugnacious and will lord it over larger and more powerful species, such as the Common Rosella, with ease. Although their beaks are small (comparatively) they are strong and hard biters and it is folly to think of associating them with the usual type of finch or weaver.

Indeed, it is better not to risk housing them with any but parrakeets, or lovebirds that they can fight but not damage, or be damaged by, seriously.

If breeding results are aimed at, by far the best plan is to devote a small aviary to each pair of Red-rumps (or the like). This need not be an elaborate structure, merely a small shelter and nesting shed, with about four or five feet floor space and a flight the same width, and six to eight feet long. A grassed floor to the flight is very desirable, and fitting up should be on the lines described in the Introduction.

When constructing small aviaries of this kind, it is rather important to arrange that the door giving access from the outside opens inwards; or else that there is a service passage or double doors. Chances of escapes will then be reduced to the minimum even when there is no service passage, etc.; for when the door is opened the body of the person entering the aviary fills in the opening until he turns round and closes the door behind him. Whereas, when the door is made to open outwards, the birds inside may easily fly past the attendant before he can step into the doorway and bar their passage.

Nowadays, small nesting barrels suited to the needs of parrakeets of this size are procurable from most of the large wholesale dealers, or stores in London and the provinces. Sloping gradually from all points to a given centre, as they do, they are infinitely preferable to the hollow made by a coco-nut shell cemented into a box with which aviculturists of less than a decade ago had to rest content. They are superior to even large coco-nut husks because they provide ample room for the long tail of the sitting bird; and it is really distressing to find that breeding, or rather cramped nesting quarters, spoils the appearance of one's choicest parrakeets six or seven months out of the twelve.

The eggs, which as usual are rounded and white, are laid on the bare wood and are incubated steadily by the hen for eighteen to twenty-one days, according to the state of the thermometer and the weather conditions.

Though free breeders, Red-rumps are shy over their domestic arrangements, and the less the aviary is entered or

the nesting barrel approached during breeding operations the greater will be the prospects of large broods being reared.

A well-turfed or grassed flight helps towards success in breeding, because it supplies the birds with a constant stock of green stuff, and that of a perfectly harmless kind; and during dry weather the birds love to roll about in it in the early morning whilst the dew is still on it. By this means the requisite moisture is provided for keeping the membrane on the inside of the eggs pliable and easy to cut through by the pre-natal tooth on the beak of the hatching bird. All Red-rumps will not bathe freely in a shallow pan of water, but the majority are unable to resist a roll in dewy grass at the commencement of a hot day.

By the way, when a small aviary is given up to a single pair of parrakeets for breeding purposes, there is really no reason why a trio of Golden or other comparatively nonpugnacious fancy pheasants, or a pair of Californian or other Quail, should not also inhabit the enclosure if it is of the maximum size stated. In a small flight these gallinaceous birds, are, of course, apt to eat up all the grass. It then becomes a question whether the eggs and young they produce, and the waste seed they devour, thus removing temptations from mouse and rat, compensate for the inconvenience of their presence and the necessity for frequently re-turfing the enclosure.

Red-rump Parrakeets are most affectionate towards each other when nesting is not actually in progress, or rather when there are no young in the nest. Probably this very affection, at other periods indicative of a natural capacity for "loving," explains the differences that often arise between the couple when the brood is hatched. Each appears to be keenly anxious to have the sole work of feeding and cleaning out the nestlings; and bitterly to resent the other taking any share whatever in these parental duties.

Sometimes it is the cock, and sometimes the hen, usually, indeed, it is the lady, which adopts this uncompromising attitude. When disputes arise the best plan is to remove one of the old birds until the young can look after themselves and have been removed to another aviary, leaving to rear them, of course, the parent which is the more attentive.

Usually it will be found best to remove the cock, as the hen will brood the young, as well as being equally capable of attending to their feeding. Warmth is as essential as regular feeding for their growth.

The young begin to appear outside the nesting place at the age of five to six weeks. They may, or they may not, return to it each night to sleep for some time. If the weather is warm they will probably soon begin to roost outside. But in any case the parent, or parents, will continue to feed them for a week or two. Where the pair live happily together throughout the whole period of nidification the hen will usually begin to lay again soon after the young leave the nest, and the cock will continue to feed them, more or less regularly, until occupied with the cares of a new brood. But when it has been necessary to remove the cock the young should be encouraged to look after themselves as soon as possible by hanging up millet sprays and so forth for them to nibble at. By this means the hen is relieved as far as possible of the strain of rearing her family alone and the brood may be removed to another aviary or cage to admit of the reintroduction of the cock. If he is kept away too long the chances are that the hen will go to nest by herself and lay a clutch of infertile eggs, which of course means an additional drain upon her vitality.

If the hen should get into a debilitated condition from irregular egg-laying of the kind referred to or owing to the work of rearing her brood unaided, the nesting barrel should be removed for a spell and a nourishing diet, such as she has had when rearing the young, continued until she is thoroughly fit once more. Parrish's Chemical Food stirred into the drinking water, in sufficient strength to tinge it the colour of claret, is very helpful in such cases. A very little hemp seed may be added to the seed diet, although ordinarily it is far too fattening a food for daily use.

When not breeding, Red-rumps will do well on a mixture of canary and white millet seed, plus a few oats or safflower seeds occasionally. Unfrosted green-food, such as flowering groundsel and chickweed, seeding dandelion heads and Shepherd's Purse, may be given in season. In winter a

small cube of apple or a piece of boiled carrot provides a handy substitute for these things, and will tend to prevent constipation, which may easily arise from a diet restricted to dry seeds.

When there are young to feed, oats and coarse oatmeal, given separately to the usual seed supply, should be offered daily. During the earlier stages of rearing, and indeed, throughout, if the brood is numerous and one parent is doing all the work, a piece of soaked bread may be given daily. That used should be quite stale and of the white household kind. Soak enough for the day only in cold water until soft, then squeeze out as much of the water as possible so that the bread is crumbly and easily picked up. If care is taken to supply it in this condition and all that remains uneaten is removed each night, considerable benefit will follow its use in the direction of lightening the parent bird's work and increasing the size and stamina of the brood.

If however the bread and green-food supplies are permitted to become at all stale, diarrhoea and divers other troubles are sure to occur.

Before removing the young from parental care entirely make quite sure that they are eating enough food to sustain themselves. They may appear to be feeding alright but if watched closely very possibly it will be found that they are really only nibbling at the millet sprays, etc., and not swallowing much at all. If taken away before they are eating heartily themselves a serious check will take place in their growth, from semi-starvation, until they have reached the stage of complete independence, and in these circumstances it is not unusual for the younger and weaker birds to die.

If the reintroduction of the cock seems expedient before the young can properly care for themselves then they may be put into a cage, some at least of the bars of which are wide enough to permit the mother to continue feeding them when the cage is placed on the floor of the shelter. Food and water should of course be put inside this cage to encourage the youngsters to feed as soon as possible.

When the brood is removed from the care of the old ones

they do better, I think, if kept in a large box cage until thoroughly strong and fit to fly about and look after themselves. Besides if any one of them ails and requires special attention it is handier to get at, and sooner noticed, in a cage than in an aviary. Attention to such little details as these go far towards complete success in rearing birds of all kinds in confinement.

Adult Red-rumps cost about £3 per pair. Young ones from 30s. to £2, and as the cost of feeding is not great and the demand for young is fairly steady, a pair by no means eat their heads off even when the young have to be cleared at a lower rate wholesale. The young are quite willing to start breeding the summer following their birth, but it is best to prevent them nesting until the following year at least, when they are about eighteen months or two years old. Parrakeets, more than most birds, appear to lack stamina when bred from too youthful parents.

Red-rumps have repeatedly bred indoors when a large box cage has been given up to a single pair. In these circumstances, however, the eggs are frequently infertile, especially where the birds are constantly deprived of flying exercise. If a flight round the room can be allowed twice or three times weekly sterile eggs are less likely to occur. The best results in breeding are obtained in outdoor aviaries, as already described, where the birds may constantly indulge in flying exercise in the open air.

The Red-rump is perfectly hardy when acclimatised to outdoor life. If the first stock obtained has been bred or kept indoors they should not be put outside until fine weather in May. After that they may be left out summer and winter provided there is a dry and cosy shelter to their aviary, and that the exposure is any save N. or N.E., on which sides there should be some protection from the biting winds in winter. A few grains of small red maize may be added to the diet at that season. The birds love to nibble out the soft mealy part and it is warmth-giving. Being also very fattening, of course it may only be allowed in strict moderation, or shell-less eggs, due to an over-fat state of the internal organs, will be the result the next breeding season.

A cock Red-rump, hand-reared, or caged and petted soon after fledging, becomes an interesting and affectionate little pet. With care and persistence he may learn to repeat an odd word or two. The main thing is to continue the repetition of the word or words selected until the bird is found trying to imitate them—usually at first when he imagines himself alone. As soon as one word or phrase has been learnt others may be tried, but one must not expect the Red-rump Parrakeet to speak so freely as the Ring-necked, or Blossom-headed, for instance. The gentleness and affectionate disposition of the bird, together with its beauty and comparative noiselessness, are its chief recommendations as a caged pet.

The cage in which a pet Red-rump is kept must be large enough to enable it to use its wings in flight, *i.e.*, the cage will have to be at least three to four feet long and with perches fairly near to each end only so that the bird must fly if it wishes to move from one perch to another. The cage need not be either very high or very deep, and it should be of the box pattern, *i.e.*, wood all round, excepting for the wire front which should be easily removable to facilitate a thorough cleaning out and repainting once yearly. Such a cage can be enamelled, or painted a suitable shade outside and enamelled very pale blue inside. The wires are better left unpainted in case the bird should nibble at them and poison itself. All projecting corners and edges of wood-work inside the cage should be covered over with strips of zinc or tin to prevent the bird gnawing at them and rendering the interior of the cage unsightly. The door, in the middle of the front, should be about six inches wide to admit of the easy insertion of a small pie-dish filled with water for bathing purposes. A zinc or wooden false bottom or sand drawer facilitates the weekly operation of cleaning out the cage. On these occasions, this drawer should be covered with gritty river or sea-sand, from a clean source, before replacing it in the cage. There should always be a piece of cuttle-bone between the wires of the cage for the birds to nibble.

Where the time can be spared broods of Red-rumps might

be wholly or partially hand-reared, tamed, and taught to repeat a word or two. They would command much higher prices as pets than untutored birds, and would be worth a couple of pounds each, upwards, according to capabilities and condition.

Hand-rearing is not a very difficult matter. After the first few attempts the youngsters will learn to take the food from between the fingers of one hand whilst they are held in the other hand. Later they will take the food from a small teaspoon if the tip of it is pressed between their mandibles and the bill gently levered open in that way. Birds that are being hand-reared must be kept snugly covered between meals, and it is a good plan to keep them in a hay nest in a covered-in box, in which are ventilation holes, with a hot-water bottle in the box to maintain an agreeable temperature until they are sufficiently feathered to withstand the cold at nights. Softened Melox or Spratt's Puppy Food, made fairly sloppy with warm water, is a suitable food. Later, soaked millet and canary seed may be mixed with it and gradually used to replace it as the birds near the age when they commence to feed themselves. At that stage of rearing a small quantity of grit should be mixed with the soft food, and a little cuttle-bone should be scraped over the food occasionally to assist in the development of the frame and growth of the quills. The food must always be fresh and free from sourness and the nestlings must be cleaned from accumulation of excreta.

Partial success has attended efforts to breed these little parrakeets at liberty in this country. In this connection I cannot do better, I think, than quote from *Bird Notes* for January, 1916, when an aviculturist (the Marquis of Tavistock) who has had more experience probably than anyone else in this direction tersely sums up the conclusions he arrived at after repeated experiments.

Lord Tavistock writes: "Two obstacles have always interfered with the success of my experiments (at liberty) with *Psephotus* Parrakeets—septic fever and owls. The first of these might be overcome, or rather averted, by rigor-

ous measures of quarantine, but the second would be likely to trouble almost anyone who cared to risk his birds by following in my footsteps. This is unfortunate, for if you except the Blue-bonnets, which have practically none of the manners of the typical *Psephoti* (nor indeed any manners at all to boast of) there are no other Australian Parrakeets so attractive, so harmless, or so easy to start with, and what is far more important, to keep, as the beautiful, swift-flying members of this section of the *Platycercinæ*. First get your birds into show condition and properly paired up—not a difficult matter with ordinary care and attention—then release the cock on a fine still day, and be sure that his mate remains in full view, in a place where he will not be afraid to visit her. Finally, a few days later, let the hen then go quietly out to join him. After that, provided you allow them a constant supply of seed the pair will give no further trouble so long as they are both alive; and whether they are feeding on the lawn, or sunning themselves on a tree-top, or darting through the air with musical whistles, they will be a constant source of beauty and interest, strangely in harmony with their alien surroundings.”

One must remember, of course, that experiments of the kind outlined by Lord Tavistock can only be made where the experimenter has extensive grounds, woods and parkland, for his birds to wander over; otherwise, if they stray on to somebody else's property, they are liable to be shot or caught.

CHAPTER VII.

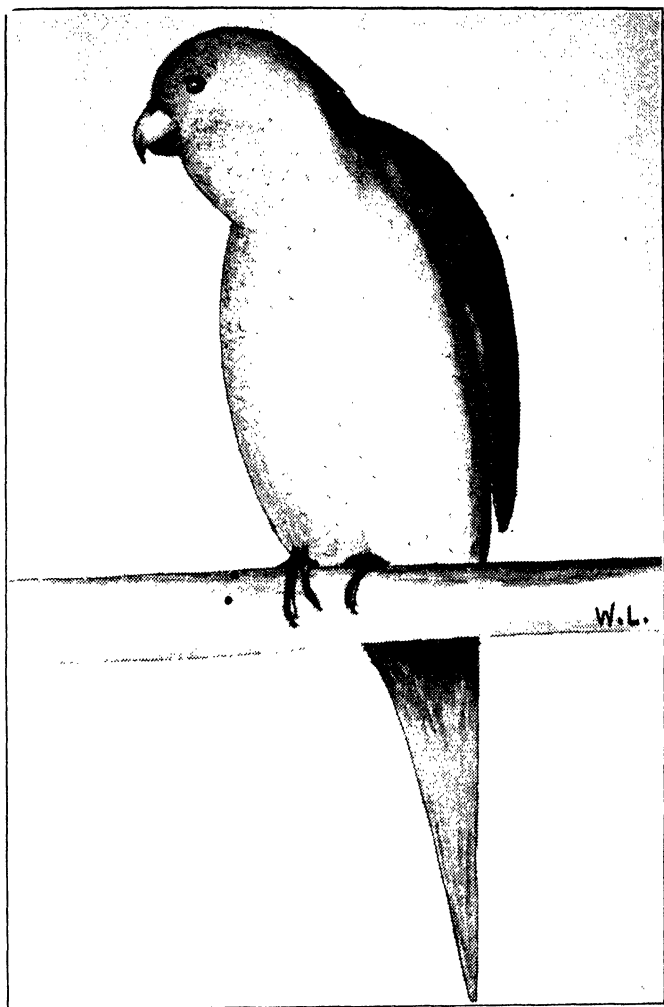
THE QUAKER PARRAKEETS.

(*Myopsittacus monachus*).

THIS commonly imported South American parrakeet, known to aviculture in Europe from the days of Bechstein who writes of it as the Grey-breasted Parrot (really a more accurately descriptive popular name, than that now in vogue), represents in its nesting habits the sole exception to the general rule of nesting in holes holding good amongst parrots of all kinds, from the huge macaws to the Guiana Lovebird—a small bird of the size of a linnet. Certain of the Lovebirds use linings of bark strips, rotted wood and the like as a bed whereon to lay their eggs; but that is the nearest approach to nest-building that one meets with amongst the parrots, with the exception of the species under notice.

The Quaker Parrakeet constructs for itself a huge domed nest of twigs and sticks. The same nest will be used season after season by the pair who, each spring, repair the ravages due to the weather in winter before again commencing to rear their noisy brood.

The Quaker Parrakeet is a sizable bird, about as large as the Indian Ring-necked Parrakeet but with a shorter tail and stumpier body. The sexes are practically alike, *i.e.*, grass green above and grey beneath, the feathers having a queer, scaled appearance. Demeanour alone, in both adult



THE QUAKER PARRAKEET.

and immature birds, is the surest guide to sex. They belong to the family of South American Parrakeets designated "Conures" and are the most freely imported of that noisy and hard-biting clan.

Once acclimatised, the Quaker Parrakeet is as hardy and difficult to kill as the proverbial cat; it is therefore an excellent species for the budding parrakeet keeper to try his 'prentice hand on—be it understood that this language is strictly figurative! A literal interpretation of it would be apt to involve the 'prentice in one or more, nasty bites from the resentful conure; and when it becomes necessary to catch or handle one of these birds, two pairs of stout leather gloves should be worn by the inexperienced person. Those experienced in handling parrakeets can manage quite well with their bare hands by manipulating the head so that it is held between a thumb and fore-finger. The exact knack is rather difficult to describe in writing; but it is known to most aviculturists and dealers.

It is folly to think of keeping this bird with weaker species; and it will even attack the Rosella and others of the Broadtails and bite them into subjection. It is well able to look after itself in a large aviary given up to the larger parrots, macaws and cockatoos. It is, indeed, in such a place that its vivacity and odd appearance (another not inapt popular name for it is the Owl Parrot), are noticed to most advantage; and its big nest, with loose ends of sticks projecting in all directions like an enraged porcupine, fastened up in a topmost corner of the flight, is a never-ceasing object of interest to visitors.

All projecting woodwork and corners of posts in the aviary for this and other stout-billed parrakeets, must be covered over with strips of zinc or tin, or else by two-ply stout half-inch mesh wire netting; and the flights must also be covered in with two-ply of netting of a stout gauge. Ordinary light wire netting can be cut through by the beaks of the birds much as one would use wire cutters. They will soon cut their way out and fly off, shrieking with excitement, probably never to be seen again. Being exceedingly mischievous towards trees and other vegetation their life at liberty

is usually exciting and comes to an end with the shot of some outraged gardener's gun.

On this account, and also because the birds seldom stay more than a few weeks in the vicinity of the place of liberation, even when they are daily fed and have been let out with all due precautions as described in the last chapter, the Quaker makes a bad subject for naturalisation. Otherwise it would be very suitable, for it is, as already pointed out, exceedingly hardy when acclimatised, and well able to defend itself against squirrels, weasels, and the like.

The eggs number three to five, usually four, and incubation lasts three weeks. A couple of broods may be reared in the season. There is a fair degree of amity between the pair during the whole process of breeding, and pairing is apparently for life, although, of course, if one of a pair dies the survivor may be quite willing to accept consolation from another mate in due course. Unlike the Red-rump, and like most of the larger parrakeets, the Quaker cannot be expected to settle down to the business of reproduction until the second season in a new place. But when once started they keep steadily on each season if left in undisturbed possession of their quarters. The young should be removed from the breeding aviary as soon as they are *completely* independent of their parents, as advised for young Red-rumps. If thought worth the trouble they may be hand-reared for sale as pets in a similar manner to the Red-rumps.

A rough foundation of branches should be fixed up in a corner of the flight or shelter, about two feet from the roof, on which the birds can build their nest. Scatter a supply of branching twigs in lengths of six to twelve inches for building purposes. If the nest is built in the open flight, as is usually the case, it is a good plan to fasten some water-proof material over and round the ends of the flight at that part before the birds commence building, to protect the nest from wet in case it should be insufficiently roofed over.

Wheat, canary and millet seed makes a good staple diet with the addition of oats and soaked bread, as advised in the

last chapter, when there are young to be fed. Also, of course, green food, etc., in season and a turfed flight.

The Quakers will thrive in a similar aviary to that described in the last chapter.

If kept as cage pets they must be allowed frequent flights around the room (where they are apt to be destructive) or else have a very roomy cage; for they soon fail in health if unable to exercise their wings in flight.

They are cheap, as parrakeets go. A pair can be bought for as little as 20s. to 30s. On the other hand 10s. to 15s. is as much as one can expect for the young in nestling feather. However, they are hardy and easily reared.

CHAPTER VIII.

THE BLOSSOM-HEADED PARAKEET.

(*Palæornis cyanocephala.*)

THIS is a very delightful little bird, not very clever, or even intelligent, perhaps, but extremely charming nevertheless, docile, frugal, hardy, and long-lived, and breeding, moreover, very freely in the aviary, or even in a good-sized cage.

It is a native of India, and is also found in Ceylon; in the former country it is met with at a considerable elevation on the Himalaya Mountains, which explains its indifference to temperature. It is very often imported in a terrible state, without tail or wing feathers, and the remainder of its plumage so clogged with filth that many feathers have to be cut close to the skin to free the poor bird from its encumbrance; but in spite of these drawbacks, coupled with bad and dirty food, crowding, and deprivation of water on the voyage, not to speak of the changes of temperature, it usually recovers and in a few months shows no sign of the perils and discomfort it has undergone, but, clad in a new suit of feathers, is as placid and good-tempered (if a little dull) as ever.

The sexes are easily distinguished when adult, but as all the young resemble their mother for two or even three years, it is by no means easy for the aviarist to determine whether he has got a young cock or an old hen in his possession. If he should be fortunate enough to possess the latter and an adult cock at the same time, he will not



THE BLOSSOM-HEADED PARRAKEET.

A charming, hardy little Indian bird. Its plumage is green, with varied markings. The male has a black ring and reddish-purple head; the female a yellowish ring and a lavender head.

long be kept in doubt, for the latter will quickly begin to caress and feed the hen ; but should his companion be a young male he will take no notice of it, for in this respect he is utterly unlike the Budgerigar and the Love-birds, and will leave the stranger strictly alone, or perhaps peck sharply and viciously at him should he presume to come too near, which, however, the young gentleman is not at all anxious to do, but avoids his elderly relative as assiduously as the latter shuns him.

The adult male is known by the rich reddish-purple or plum colour of his head, the red predominating in front and the latter behind. A black semi-lunar band, or ring, thickest under the chin, gradually tapers off at either side, and almost meets in the middle of the back of the neck ; a bright green semicircle follows below the purple cap and is thickest at the back of the neck, but the circle is completed on the throat ; the rest of the upper surface is dull green with a shading of yellow on the wing coverts, where there is also a small dull red patch. The rump is bright green, and the inner webs of the wing feathers are black ; the long narrow tail is bright blue, the two central feathers being tipped with whitish blue ; the rest of the tail feathers are green with yellow ends ; the middle breast is dark green, and the sides and abdomen are yellowish green ; the legs and feet are grey ; the upper mandible is red, and the lower black ; the eye is hazel, darker in the male than in the female.

The female bears a general resemblance to the male, the points of difference being a lavender-coloured head, a greenish-yellow ring, and the red mark on the shoulder absent. The young all resemble her, and the difference between them can only be determined by watching the deportment of the birds towards each other.

The best food for the Blossom-heads is canary-seed and millet, to which dari and rice in the husk, or "paddy" rice, as it is then called, may be added by way of a change now and then. Hemp must only be given in cold weather, and oats when there are young ones in the nest to be fed. Green food of all kinds will be relished, even parsley,

which was long supposed to be as deadly for a parrot as prussic acid for most animals, but it is harmless, and, what is more, is enjoyed by the birds as much as by a rabbit. Of course, care must be taken not to supply "green meat" too bountifully at first, for the birds would be almost certain to take too much of it and make themselves ill; but if it is administered in small quantities, beginning with the flower-buds of groundsel, they will soon get used to it, and not take more than is good for them. Fruit, too, they are very fond of—grapes, banana, figs, and raisins—and when given any of these things, the Blossom-head will take them up daintily in its foot, generally the left, and eat them leisurely like any other big parrot or parrakeet. Oatmeal or groats may be substituted for oats in the husk.

Bread, biscuit, and sugar, or nuts, had better be avoided, as the first is apt to give rise to diarrhœa, the second to produce constipation, and the last to cause indigestion. Chillies and hot condiments also of all kinds these birds are much better without. If kept in a cage, which is a pity, they should be supplied with grit, not on the floor of the cage, which is best covered with perfectly dry coco-nut refuse or saw-dust, but in a tin; it should, like the green food, be given very sparingly at first, or the bird, long deprived of this most necessary adjunct to digestion, may take too much of it and do itself harm. The same remark applies to water, which, in the first instance, had better not be left in the cage; the bird should be offered a drink three or four times a day, a few beakfuls at a time, and in about a week or so may be trusted not to drink to excess when the water-pot is left in the cage.

The Blossom-head is very fond of wood-cutting, and should be provided with a piece of soft or semi-decayed wood to bite and play with; any that splits up into sharp splinters had better be avoided, as one of the latter might wound the tongue and do a lot of harm, besides giving rise to considerable suffering, before the cause of the complication could be discovered.

Water for bathing should be regularly provided, for these birds are very fond of washing themselves, and will even take a cold bath in the middle of winter without suffering any appreciable injury.

The Blossom-head breeds in hollow branches of trees, like most of the parrots, and in the aviary should be provided with a roomy log or box, fitted up with half a coconut husk; but it must be remembered that the beautiful tail, which is rather longer than the body, will be either broken or twisted out of shape, unless the bird has plenty of space to turn about in.

The eggs are four in number as a rule, and are laid on the bare wood. To the female is the task, or duty, of incubation reserved, and as this lasts three weeks—eighteen or nineteen days in very warm weather—the aviarist must not interfere too much, or the nest may be forsaken. As a rule there is only one brood in the year, but occasionally a very ardent and prolific pair will have a second one. The eggs are laid every second day, sometimes every third day, so that there is a good deal of difference between the size of the eldest and youngest for a time, but the latter soon pulls up, and by the time they leave the nest, five or six weeks from the birth of the first, is little, if at all, smaller than its senior.

Dr. Russ has recorded in his "Hand-book for Bird-lovers, Breeders, and Dealers," that he bred the Blossom-head to the third generation, and with some young that had not long been fledged gained the gold medal at the great Bird Show held in London (Crystal Palace) in 1877.

Several other amateurs have also been successful in breeding these very attractive little birds, and even at the London Zoological Gardens a pair nested in their cage in the Parrot House, but were not successful in rearing any young, the reason probably being that as they were debarred from taking exercise, they were not in good condition, and so the eggs came to nothing; for to attain the pink of condition birds must be able to fly about freely, and to take the amount of active exercise for which Nature has expressly fitted them.

With regard to diseases, Blossom-heads only seem to suffer from two—old age and egg-binding. The first is bound to attack them sooner or later and is incurable, but some of them manage to stave it off for twenty, twenty-five, or more years. Fortunately the second is of rare occurrence, and as the treatment has already been detailed, it is unnecessary to enlarge upon it again; however, it may be observed that if the birds have access to lime and enjoy the means of free exercise, there is not much fear of their being attacked by this insidious and most regrettable complaint. One old specimen that was in the writer's possession for a long time, but with whose age he was unacquainted, as the bird was adult when he acquired it, at last grew both blind and deaf, but still lingered on in that condition for a couple of years, eating heartily almost up to the last moment. For the last two years it did not moult, and when the end came it was a most ragged and deplorable looking object, fully justifying the nickname of "Misery" bestowed upon it by the children.

Almost every writer who treats of the Blossom-head enlarges on its amiability and beauty, but almost all unite in giving it rather a negative character for intelligence. To cull a few opinions, Mr. Dutton writes: "This is a charming parrakeet, if it has been properly tamed; lovely, affectionate, and not, I think, unbearably noisy. The cock birds are often taught to say a few sentences and to whistle tunes. They are tamer and more attractive than the hens." Mr. Wiener, on the contrary, is of opinion that the Blossom-head is gentle but not particularly talented; but his countryman, Dr. Karl Russ, is enthusiastic, and says: "This (the bird under notice) is one of the most beautiful, most charming, and most love-worthy (*liebenswürdigsten*) of all the parrots." But probably the excellent doctor had that big gold medal ("*die grosse golden Medaille*") before him as he wrote, and felt correspondingly grateful and enthusiastic.

The present writer's opinion is rather median between the two extremes, for without going as far as Dr. Russ in appreciation or Herr Wiener in depreciation, he is rather

inclined to agree with Mr. Dutton, that when "well tamed" the Blossom-head is a nice bird. One that he purchased for a hen, but which afterwards turned out to be a cock, had been kept for two years in a large garden aviary, and was consequently in very fine condition. It was sent to the Crystal Palace and took first prize in the class for Ring-necks; it was, however, purchased by some enthusiastic fancier at a stiff upset price, to be kept, no doubt, in a cage, for when shown again the following year it seemed in very indifferent plumage, and was not even "commended" by the judge. This was probably disappointing for its new owner, but was merely the natural result of the bird's altered surroundings.

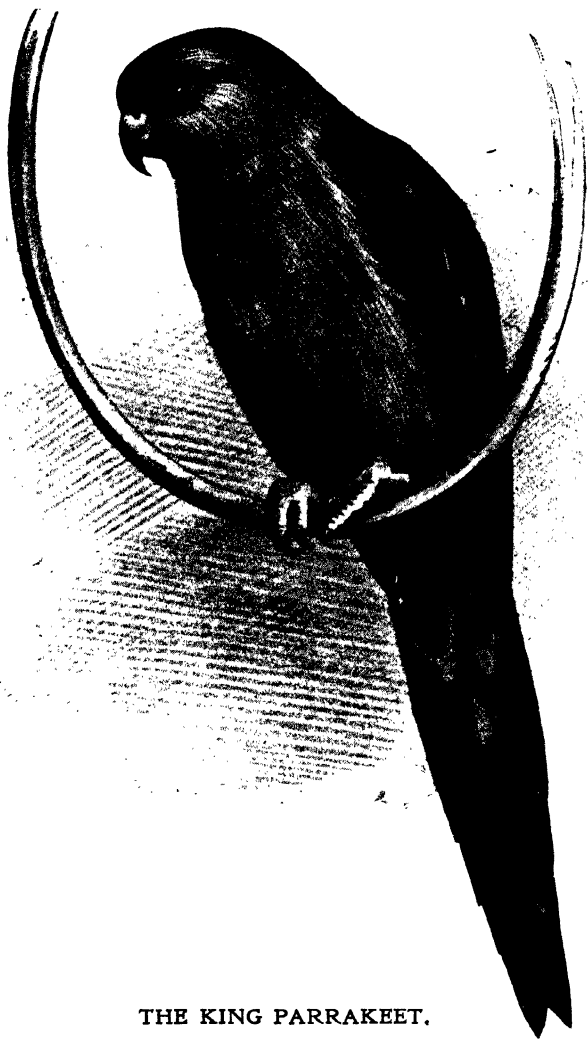
The natural warble of the Blossom-head is sufficiently agreeable, and if the bird really could be taught to whistle a tune, it would become very attractive; but no doubt its education should be taken in hand while it is still quite young, and it would have to be kept by itself and made much of, when it would in all probability become more attached to its instructor.

The price of the Blossom-head is always higher than that of the Bengal Ring-neck, and averages about 30s. But occasionally a large consignment arrives—Dr. Russ once saw four hundred head at Trieste, all males—and then the price is reduced, often greatly, so that the writer once bought two for 5s. apiece; they were supposed to be a pair, but turned out to be an old cock and a young one; however, they were wonderfully cheap at the money paid for them.

Of course, when these birds enjoy comparative liberty in a bird room, or, better still, in a large garden aviary, they never become as tame as they do when placed in a cage indoors; in the latter situation, however, they should always be let out for a fly every day, but should on no account be driven about, for after they have tired themselves flying, and begin to feel hungry they will go back into their cage of their own accord. The exercise, for a quarter of an hour or so, will do them a great deal of good. They must, however, be watched, for they are

fond of trying their beaks on any article made of wood that comes in their way, such as an over-mantel, or the top of a book-case or a picture-frame, and so forth, failing any of which they are not above tasting the back of a chair, and they are capable of doing a lot of damage in a very few minutes; but if they are kept under observation and made to "move on" when they show any disposition to whet the bill on anything, no harm will accrue to the furniture, and the gambols of the birds are really very diverting as they chase each other, screaming as loudly as they can meanwhile, all round and round the room.

A variety or a somewhat similar species has been spoken of, both sexes of which are said to have the lavender-grey cap of the female Blossom-head, but it is very doubtful if any such variety or species exists, except in the imagination of some dealer with a number of female or immature specimens of which he is anxious to get rid as speedily as possible. Such birds, at all events, have not yet come under the writer's notice: this does not, of course, prove them to be non-existent, but as he is in the way of meeting with pretty well all kinds of exotic birds imported into this country, it seems probable that he would have seen some of them before this if there really were such birds.



THE KING PARRAKEET.

This handsome, hardy species, found in New South Wales, is crimson on breast and head, deep green on back and wings, and has

CHAPTER IX.

THE KING PARRAKEET.

(*Aprosmictus cyanopigiis.*)

THIS exceedingly handsome bird is a general favourite when known. He is often wofully mismanaged, necessarily with disastrous results, and in consequence has the reputation of being delicate; but he is not, and can be kept in an aviary as easily as any of the foregoing species. Like those, he is absolutely indifferent to climatic influences, although he is a native of New South Wales, where the average temperature is considerably higher all the year round than with us.

A writer not long ago spoke of the King Parrakeet as too gaudy and "loud" in colour, but that is surely a mistake, for nothing can harmonise better than the rich crimson red of his head and neck, breast and under parts, the deep green of his back and wings, the dark blue of his long and broad tail, and the lighter blue of the lower part of the back and upper tail coverts. The upper mandible is dull orange with a black tip, and the lower half of the bill is black. The eye is dark hazel, and the legs and feet are grey. On the centre of the upper part of the wing is a small patch of light green, of the shade called verditer green, which is technically known as the "butterfly spot."

The female is all green with a faint reddish tinge on the head, breast, and belly, and the young are like her till they moult, which they usually do when from six to eight months old.

In total length the King Parrakeet measures about 14½ in., of which the longest tail feather takes up about 7 in., while the outside one is only 4 in. in length.

It is a native of South Eastern Australia, and is found in New South Wales and Victoria, where it frequents the neighbourhood of cultivated grounds; and as it certainly does a good deal of harm to corn crops, it is much persecuted by the settlers, so that of late years its numbers have considerably decreased. Since the farmers found out, however, that it is in great demand and a marketable commodity when alive, they take it in nets instead of shooting it, which is an improvement; but if they were to rear some of the young by hand from the nest and teach them to pipe a tune and to talk it would be still better, and the price they could easily obtain for these educated birds would far more than compensate the settlers for the damage done to their crops by the wild ones.

The King Parrakeet may, of course, be kept in a cage, but it does not look happy there, and probably is not, for after a time it seems to lose its appetite and fall into a kind of atrophy, or decline. In a good-sized garden aviary it will live for many years and even breed freely, though not always with success as regards the rearing of the young ones; still, this has been accomplished in a good many aviaries, and it only needs a little management for it to happen in all.

In Australia it breeds in the hollow boughs of the gum trees—"spouts" as they are called in the colonies. In the aviary it will nest in a hollow log, or in a square box in the bottom of which half a coco-nut husk has been securely fixed, or even on a shelf behind a couple of bricks, or a piece of cork or of bark, or a bit of board. The birds will usually scrape a depression in the flat surface of the shelf, so as to keep their eggs together; but as they sometimes work so earnestly as to go right through, it would be as well to make it of board at least 1½ in. thick, and arrange a cup-like cavity for them behind the screen. This could be very easily done with a gouge

or curved chisel, such as carpenters use; $\frac{3}{4}$ in. deep at the centre would be sufficient, the edges of the hollow, which might be 6 in. in diameter, to gradually slope up level with the flat surface of the board.

The eggs are white and rather round, about the size of those of a small pigeon, and take about three weeks to hatch; incubation is performed by the female alone, but the male is very attentive in feeding her while she is so engaged, and he also feeds the young with the greatest assiduity.

The female of the King Parrakeet is usually spoken of as the Queen, and the young are often familiarly termed Princes and Princesses, a kind of irreverence which it has been proposed to avoid by calling the bird the Scapulated Parrakeet, from the mark on the scapulars, instead of that by which it has been usually known. In the colonies it is usually spoken of as the Lory, but, needless to say, it has no affinity with the Lories, which are honey-eaters, while the King or Scapulated Parrakeet feeds on seeds.

Like the rest of the Broadtails, to which sub-family it belongs, the food of this bird in its wild state consists mainly of the seeds of the native grasses, except where it can raid the farmers' fields, and devour their crops of corn and oats, maize and millet, often paying for its thievish propensities with its life, or at least its liberty. Dry seed alone does not seem to suit it in the house: there it should have a variety of food offered to it, such as boiled maize, soaked canary-seed, some of Spratt's puppy biscuit, both dry and soaked, and plenty of green food, the best being canary-seed-grass grown to the height of 3 in. or 4 in. in pans, which can be made to serve for a long time if put outside and kept carefully watered when the birds have done with them. Fruit is a very necessary item of diet, and ripe apple, pear, orange, and grapes should be offered. Give oats also when the young are in nest.

In the house, in a cage, a bit of sponge cake will be relished, and will do good, and the food must be varied so that the bird's appetite may be kept in good order; and it

should be encouraged to come out of its cage and fly about the room. As it is an adept at cutting up wood, it should always be provided with a piece on which to exercise its bill and keep the mandibles in order: otherwise they are apt to grow too long, and not only do they look unsightly, but they interfere with the bird's taking its food. The perches in a cage should not be all of one thickness, but each of a different size, so as to rest the feet, which become cramped and sore if always obliged to rest on one perch, and that, as a rule, one that is much too thick for the bird's toes to grasp comfortably.

The diseases to which the King Parakeet are most liable are sore eyes and wasting, or atrophy. The causes of the first are obscure: the ophthalmia may result from a draught, or from the presence of insects which attach themselves to the eyelids. In the former case bathing them with a solution of one grain of sulphate of zinc in one fluid ounce of rose-water will have a good effect if the cage is removed to a more sheltered spot; and in the latter, a strong infusion of quassia, applied by means of a brush or a bit of cotton rag, will destroy the pests. The complaint does not usually attack these birds when they are located in an aviary out-of-doors, although one newly put outside from a warm place indoors may be attacked, and if so, had better be taken in again until it has recovered, when it should be gradually hardened off before it is returned to the outdoor aviary.

Mites in a cage are a great nuisance, for they weaken the tenant not only by the actual abstraction of blood but by preventing sleep: when the pests are not engaged in biting their unfortunate host, the wounds cause an intense irritation that renders rest impossible, and often gives rise to the habit of feather-plucking that is so disfiguring and intractable.

When a cage is found to be infested with vermin, it should be baked thoroughly, or boiled, or at least scalded freely with plenty of boiling water in which carbonate of soda had been plentifully dissolved, and afterwards be well rinsed with clean water. The best way, however,

of getting rid of mites in a cage is to have the latter stove^d, that is, exposed to the action of super-heated steam in a properly constructed disinfecting apparatus, the very best of which is the one devised by Mr. Washington Lyon, of the firm of Lyon Brothers, Leo Street, Old Kent Road, London, S.E.; in this steam is raised to a temperature of 219deg. or 220deg. Fahr., which is destructive not only to every form of life, but to germs of infectious and contagious diseases of every kind that attach themselves to clothing, articles of furniture, or cages. All these things are perfectly purified by the process.

No bird can be happy, or thrive, in a cage that is infested with vermin, and when it is observed to be restless, especially at night, and to be constantly pecking itself, red mites should always be suspected and looked for; and when found, stringent proceedings against them should be taken without further delay.

The King Parrakeet (to give the bird its best-known name) has usually two broods in the year, of two, three, or four young ones at a time; occasionally it is more prolific, and has as many as five, but three is the more usual number. The eggs take about three weeks to hatch, and the young leave the nest when about six weeks old; they are then rather smaller than their parents, and bear a general resemblance to their mother, but the young males can be distinguished by the ruddier hue of the breast appearing through the green feathers.

Boiled maize and oats make the best feeding for them at this period of their existence, and by degrees they may be accustomed to hard seed; but they should not have too much hemp at any time, and especially when nesting, for it heats them, and appears to have been the cause, in one or two instances, of the old birds forsaking the young ones before the latter were able to take care of themselves.

As a rule, birds that are bred one year are able to be parents in their turn the season following, but some do not breed until they are two years old, and this is especially the case if they have been themselves hatched in the

autumn. It is presumable that the older birds are more fitted to discharge their parental duties than others that are only one year old or even younger, and it would be as well not to allow them to nest until the second summer, or at least spring, after their birth; by taking this precaution there would be less danger of disease, French moult, etc., manifesting itself among the young parrakeets.

Naturally possessed of a clear, musical voice, and warbling a really passable song, there is no doubt that education, properly directed, might accomplish great things with the King Parrakeets, some of which (males only) have developed a considerable aptitude for imitating articulate speech—in a low, clear voice, certainly, but perhaps none the worse on that account. The male has a shrill cry at times, and both sexes utter it when alarmed, as when, for example, they are feeding on the ground, and suddenly take wing. It is probably a note of warning, and uttered to alarm the flock and bring all its members together.

On the ground they keep rather closely one beside the other, and do not scatter as much as pigeons and rooks are in the habit of doing, so that a shot discharged among them as they rise does terrible damage in their ranks; for the same reason, when they are captured in nets the whole tribe is usually taken, and it is rare even for one or two members of it to escape. In this country the King Parrakeet regulates its movements, as a rule, by our seasons, and does not insist on breeding at midwinter as sometimes the Budgerigar does.

One of these birds, known to the writer, was a most accomplished speaker, and could repeat quite a number of sentences, unfortunately of the most trivial and nonsensical kind (but that was the fault of the teacher), with a clear but somewhat rapid utterance that proved it to be a more than usually intelligent bird. It would also shake hands, kiss, dance on its perch, spread out its wings and tail, and turn a somersault round its perch, all at the word of command.

By-the-by, delicacies and tit-bits should be given, if at

all, with judgment, and only in small quantities: they are then useful, as satiety follows on confinement to any one particular kind of food for any length of time, and the bird, losing its appetite, falls into a languid condition that will end up in atrophy, or decline, unless quickly combated. In severe cases it may become necessary to force food on the patient, and sponge cake moistened with milk is then very useful; at the same time, all sorts of food that are suitable should be placed within the bird's reach, and, if not too far gone, it will quickly rally.

As the male is so gaudy and the female a comparatively dull-looking bird, it is the former that is usually kept, and it sounds very absurd when the affectionate owner persists in addressing him as if he were a female, as usually occurs; but, dull-looking as she may be, the Queen Parrakeet is a very nice bird, too, and if she is not as brilliant a performer as her mate, she can whistle a little, and even say a few words—if in a still lower tone of voice, and, perhaps, not quite as distinctly. Of course, if the object of the aviarist is breeding, he must have a hen, be she never so insignificant looking; and should he happen to buy a young cock instead, he will not have reason to complain.

No doubt these handsome birds could be acclimatised in this country, but it is to be feared that if they became at all numerous the farmers would quickly complain of their inroads on the crops, and the Kings would not be long before they were exterminated from the land of their enforced adoption. But the guns are the greatest obstacle to the acclimatisation of any new species of bird among us, whether it be imported, or come to us of its own account, as the hoopoe and the sand grouse have more than once essayed to do.

There is another bird that a good deal resembles the King Parrakeet, and that is the Red Shining Parrakeet of Fiji; but it may be easily distinguished, first by its jet-black bill, then by the absence of the butterfly mark on the scapulars, and thirdly by the metallic glossiness of the green portion of its plumage, and the much deeper

crimson of the head and neck and lower parts. The blue of the rump, too, has a purple shade and somewhat of a metallic gloss.

It is doubtful whether this bird or the King Parrakeet should be identified with the Amboyna Parrot of Bechstein and the older ornithologists, but probably it would be the latter, for "New Holland" was only opened a little over a hundred years ago, and its latitude and longitude were not very clearly understood by a great many people.

However, the Red Shining one is much more expensive than the King, being worth £5 or £10 apiece, while the price of a King in full plumage would be about 50s., and that of a young male and a hen about 30s. The dealers, or some of them, have a habit of placing young King Parrakeets in cages on a shelf close to the ceiling of a room in which several gas jets are kept constantly burning, and where the heat is of course intense: the consequence is that the poor birds, which are half asphyxiated by the fumes and the de-oxygenated air they breathe, are forced into premature moult, and so their unfeeling owners are able to realise the higher price for them several months before they could have done so had they let matters take their natural course. As it is the poor creatures that have been thus manipulated that suffer from ophthalmia and fall into a decline, let the aviarist see to it, when buying Kings, that the birds he is about to purchase have not been subjected to such cruel treatment.

Many other desirable parrakeets there are which, if better known, would be as popular as those that have been described in the preceding pages, but we have no room even to mention them in the present volume, and commending those we have considered to all aviarists, *in esse* or *in posse*, we cordially wish them success.

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