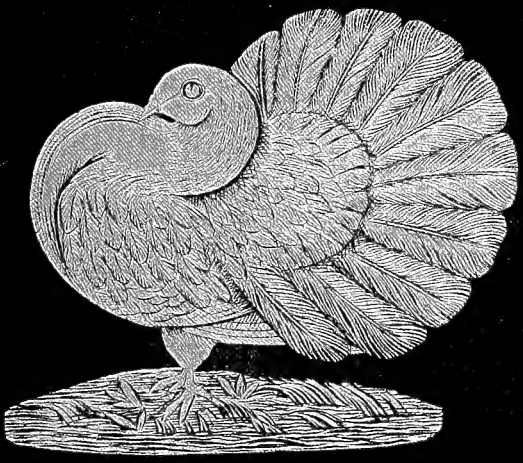

THE

PRACTICAL PIGEON KEEPER.

BY

LEWIS WRIGHT,

AUTHOR OF "THE ILLUSTRATED BOOK OF POULTRY," "THE PRACTICAL POULTRY KEEPER," &C.

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CONTENTS.

LIST OF ILLUSTRATIONS.

PREFACE.

THIS work has been chiefly written because such a book was repeatedly asked for. No apology is therefore needed for its publication.

In preparing it the writer has endeavoured to preserve the same plain and practical character which obtained for the "*Practical Poultry Keeper*" such a wide popularity. Theoretical discussions have been eschewed except in a very few cases, where a few words seemed likely to throw practical light on questions of deep interest to pigeon fanciers, such as the origin of Tumblers and of Tumbling, and the true ideal standard for Owls and Jacobins. The object has been to get the greatest amount of practical information on practical points into a small space. How far that object has been attained must be left to the judgment of the reader.

THE

PRACTICAL PIGEON KEEPER.

CHAPTER I.

THE PIGEON-LOFT.

IT may appear strange, but is nevertheless true, that the pigeon is a much more domestic bird than the fowl. In other words, although a bird of flight, it spends much more time in the spot which it regards as its home; and success in pigeon-keeping will therefore depend very much on that home being properly proportioned to the number kept, and fitted up in a judicious manner.

As with nearly all pets kept in this climate, it is better, if possible, that the loft should have a somewhat southerly aspect; but if that cannot well be managed there is no need to be anxious over it, provided it is a good open situation. Proper space is of far more importance. Old Moore himself, the first writer on pigeons, is very strong upon this point, and relates that he knew a gentleman who could not raise three young ones all the spring from nine pairs of breeding birds; whereas, even in the autumn, when moved into a larger place they bred freely. Every experienced fancier can corroborate this; and it is of such importance that, if only a very small space can be secured, we would strongly advise that only one good pair of birds be kept. From that one pair, well looked after, more

young will be reared than if any attempt be made to crowd the birds.

Few people, however, are reduced to this; and for a modest but efficient loft we can strongly recommend a wooden building, twelve feet by six feet, divided by a partition into two houses, each six feet square. If a handy place offers, this can, of course, be reared against the wall of a house or garden, and the floor boarded or asphalted; concrete does not answer, from the propensity of pigeons to pick it to pieces. But it will do just as well, and is often more convenient, to make the wooden building detached in the garden. In such case it may be framed with "quartering," and the floor should be tongued with hoop-iron, raised about a foot from the ground, and well-smoothed, which will make the house dry in any situation. For the walls good match-boarding, about an inch thick, answers admirably; and only where the breeds to be kept are very delicate—as, for instance, foreign Owls—or the climate is very severe, may it be advisable to nail an inner skin of thinner match-board to the inside of the frame. Such an inner skin, however, with the layer of air between, makes a very warm loft, and adds much to neatness, and where a little expense is no object, is worth its cost. For the roof we prefer ordinary rafters, covered with loose tiles, and lined *inside* with match-board. At the highest part of each house, just under the roof, should be adequate holes for ventilation, which can be covered with perforated zinc.

For pigeons allowed to fly at liberty no further space or accommodation beyond what is contained in the loft will be required; it will only be necessary to provide a safe means of entry and exit, which will protect them from thieves and cats, and which will be described in the chapter on "Homing Pigeons." In the country, where the neighbours are honest, it will answer best to let nearly all varieties fly in this manner, and birds so happily circumstanced will maintain themselves in

admirable condition. But nine-tenths of fancy pigeons are kept in towns, or too near questionable characters to be thus risked; and for all such must be provided an exercising place or aviary, or "flight," as it is usually called, entirely enclosed with wire netting. This should be in front of the enclosed loft, of good height, and as long as can be afforded. For the loft we are describing, six feet of flight in front may be made "to do," but is very cramped; twelve feet is far better, and will keep the birds in perfect health: such a loft thus occupying in all a ground space of twelve by eighteen feet, arranged as in Fig. 1.

In this figure, A A are the lofts, B B the flights, or aviaries, belonging to them. Unless the loft is reared against a wall, we should prefer the highest part of the roof to be in front, which allows a small window over each door, and a good height —say eight feet—for the wire enclosure. At the far end of this, at the height of five to six feet from the ground, a shelf (*f*), about five inches wide, should be fixed, but taking care to place it a few inches clear of the netting, in order that in turning round the pigeons may not damage their tails; on the doors and front of the loft, also a few inches clear, should be fixed other shorter shelves (*e*), arranged in a manner that allows one to pass over the other when the doors are opened. The pigeons will, in a flight arranged like this, take much exercise and pleasure in flying from one shelf to the other; and if the aviary be much over twelve feet in length, it is a good plan to provide another shelf across the middle, about eighteen inches below the wire at the top. The floor of the aviary, on the whole, is best laid with concrete, or hot lime and sand, as what the pigeons eat of this will do them good, and their dilapidations can easily be plastered over every two or three years.

The entrance holes should be cut in the door, that there may be only one locality for draught; and there should always be *two* in each door, some birds being very dictatorial over these places. A good size is four and a half inches wide, by about

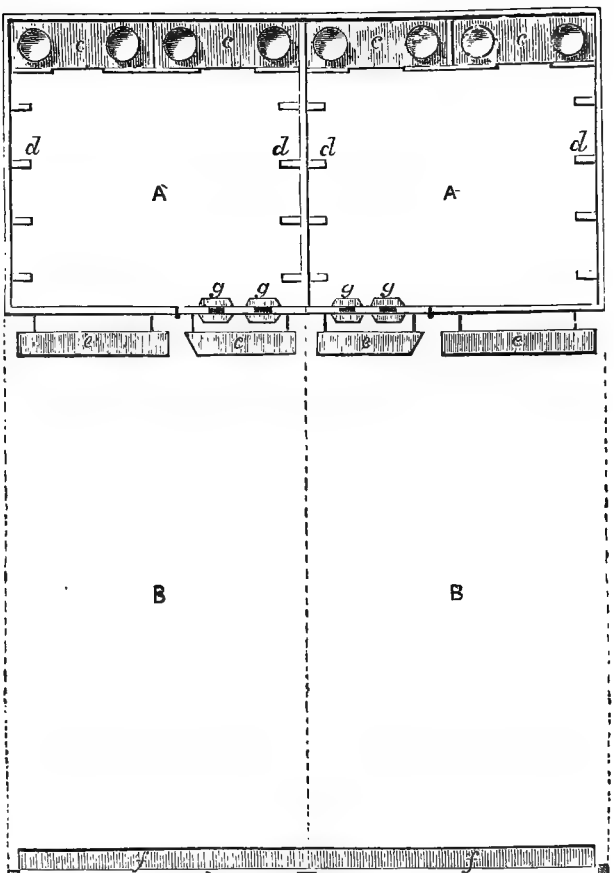


Fig. 1.—PLAN OF LOFT.

A A, Lofts or pigeon-houses.
B B, Open flight or aviary.
c c, Nesting places, with pans.
d d, Perches for roosting.
e e, Shelves, attached by iron brackets to doors and front of lofts. Those on doors bevelled towards the hinged side, and set one inch higher than the others, to allow door to swing.
f f, Shelf at further end of aviary.
g g, Holes with traps, and small landing each side of the door.

seven inches high, and there must be a small alighting stage or shelf, level with the bottom, projecting, say, three inches from each side of the door. We prefer the holes about a foot clear from the floor of the loft, and each should be furnished with a trap-door, for many obvious reasons. At *c* and *d* are the nesting places and perches to be hereafter described.

It will readily be seen that a loft and aviary thus constructed are perfectly secure against cats, and when built with a raised floor are practically so against rats. It is often well worth while to enclose the aviary with netting small enough in mesh to be also proof against small birds. Otherwise, it is really astonishing what a quantity of food these petty marauders will eat in the course of a year. Omitting this precaution, we once found no less than seventeen sparrows in a loft six feet square. Such a number of visitors must needs make a serious difference in the corn-merchant's bill; and in our opinion Master Sparrow is in this way not altogether blameless for the generally assumed voracious appetite of the pigeon.

More extensive lofts can, of course, be erected on the same general plan as that above described; but we would strongly recommend in all cases, unless unusually ample space be at command, that the *number* of separate rooms be added to rather than their *size*. Every additional means of dividing the pigeons will, as the breeding season comes to a close, be found of inestimable benefit, and will greatly promote the amateur's convenience, comfort, and success. So true is this, that we are acquainted with one most successful breeder who divided his lofts and aviaries into sections only *three* feet wide, in each of which he put two pairs of birds; and he told us he had never had such success in rearing young ones as since he adopted this plan.

It will very often happen, however, that some existing accommodation has to be made available, and the very word "loft" points to what has most often been pressed into the

service from all time. Where the top rooms of a house are ceiled over, there is generally a good space left between the top ceiling and the actual roof; and when this is accessible it can readily be made a home for the pigeons. First of all, a good tight floor—tight and close, however thin—must be laid over the rafters. This, and a window, and ready access, are the

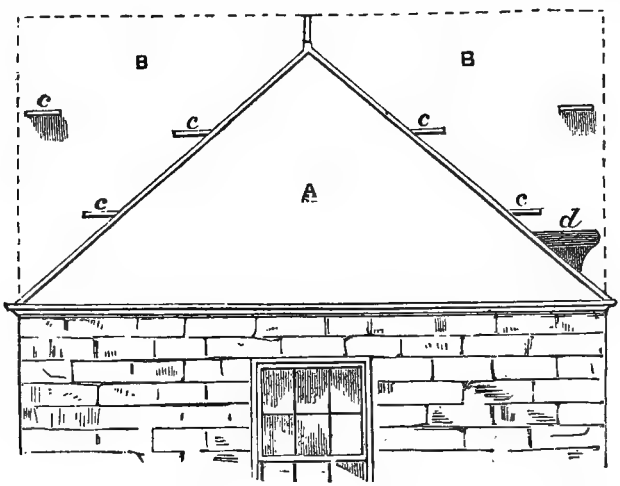


Fig. 2.—Loft on a House.

A, Loft inside roof.
B B, Aviary, or flight, enclosed with netting.
c c, Shelves.
d, Bath.

great points; with them and decently good management vermin need not be feared: but where the loft is left dark, rough, and unfloored, to collect filth unseen for weeks together, it need not be wondered at should there be annoyance. A smooth floor that can be well scraped, and light to scrape it by, easily prevents all this, and disinfectants will do the rest. Such literal "lofts" have been most usually used for flying pigeons, which, of course, only further need a proper entrance, such as will be hereafter described; and where fancy pigeons are kept in them,

it has been usually in close confinement, the birds never being allowed outside. Pigeons *can* be kept even like this; but they are always liable to disease, and can never enjoy existence as all pet creatures should do. And it is quite easy to make even the top of a house all that can be desired in any way. We give a sketch which will show at a glance what we mean, and the idea of which is taken from the well-known loft of Mr. Wallace, of Glasgow. The plan (see Fig. 2) consists simply of carrying wire-work square up to the level of the apex of the roof and to the extent of the walls, and needs no further explanation. A few shelves, such as already described, will make a roof so furnished a happy abode for any pigeons; and as in the former case is perfectly secure, or is easily made so, from any form of depredation.

So much for the outside of the loft; we must next turn to the inside. The great thing to be here studied is proper breeding accommodation; and here again it is singular, and speaks volumes for his thorough practical knowledge of the subject, that the very first writer on pigeons—old Moore before mentioned—describes the arrangement which is still by general experience pronounced best. "To make your breeding places," says he, "you may erect shelves about fourteen inches broad, allowing eighteen inches between shelf and shelf, for otherwise your tall Pouters, by being forced to crouch for want of height, will get a habit of playing low, and spoil their carriage. In these shelves erect partitions at about the distance of three feet, fixing a blind by a board nailed against the front on each side of every partition; by this means you will have two nests in the length of every three feet, and your pigeons will sit dark and private." In Moore's time it seems to have been usual for fanciers to keep a few of almost all varieties, and hence his dimensions are, unless for Pouters, unnecessarily large; but his general arrangement is admirable, and we proceed to show clearly its application to our supposed loft of six feet square.

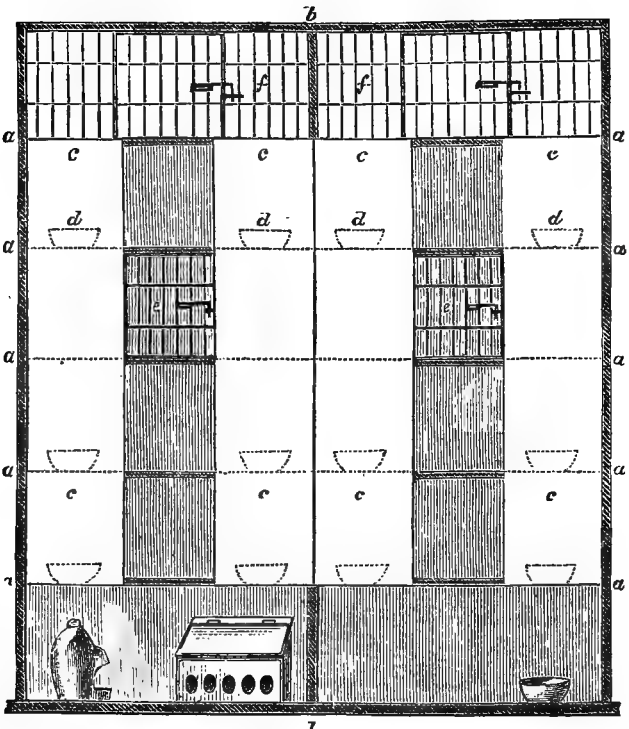


Fig. 3.—INTERNAL FITTINGS OF LOFT.

a a, Shelves.
b b, Partition.
c c, Perpendicular boards, sheltering nest pans.
d d, Nest-pans.
e e, Wire-fronted pens.
f f, Open wire-fronted pens.

We will suppose the height of the back part, opposite the door, to be seven feet (we most strongly advise ample height in all cotes or lofts specially constructed, which will promote ventilation, and tend to counteract canker, diphtheria, and numerous other diseases). The back of the loft will then appear as in Fig. 3. Here *a a* are the shelves, which for all varieties but Pouters will be sufficiently roomy if made twelve inches wide and about fourteen inches apart. At *b b* is the perpendicular partition dividing the whole into two widths, or ranges, of three feet wide each; and *c c* are the perpendicular boards, also twelve inches wide, nailed bodily over the ends of each range. All is in this way put up in the simplest manner, and without an inch of waste. Behind the covering boards, in the sheltered recesses thus formed, are placed the nest-pans (*d d*), to be further described in another chapter.

In such a loft as here described, we strongly advise leaving the top ranges open, to be fronted with wire as in the figure at *f f*. These pens will be most useful for the temporary confinement of strange pigeons, received, perhaps, on approval; or for hospital purposes when any ailment to be treated is not contagious; or to confine birds it is desired to stop breeding. It will also be well to fix double swing wire fronts to the open part of another shelf, as at *e e*. These will answer the same purpose; and by providing wire partitions, which can be slid in between the front wires, they will make most excellent "matching" pens, the use of which will be seen presently. The bottom range of all, on the floor, had better be left clear, and will come in handy, either for young ones or an occasional ground nest, as will be seen by-and-by; or when not wanted for such purposes, the water-fountain can be placed under the shelf on a raised stage, and the gravel-box or salt-cat can also be placed there, or even the food-hopper. They will be out of the way, and leave the floor clear, and the shelf above will keep all from being fouled by the birds. For this latter part of the

arrangement we are indebted to a hint from Mr. Hallam, of Birmingham. There will still be left double sets of nests for six pairs of birds, which in our opinion are all that should be kept in such a loft; but if more must be accommodated, the wire-fronted pens and the floor are also available.

We can thoroughly recommend this size and plan for a loft, which is drawn from our own experience; and the same plan can be followed at the top of a house by nailing the shelves to the rafters, and the partitions at the proper intervals to their sides. In one or two Scotch lofts we have seen a very broad

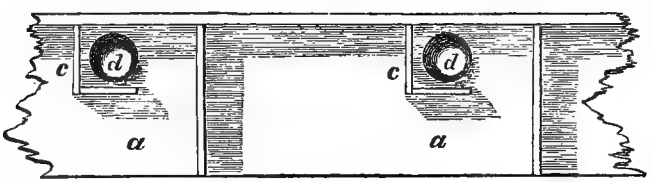


Fig. 4.

a a, Shelf. *b b*, Partitions. | *c c*, L-shaped Screens. *d d*, Nest-pans.

shelf—two feet wide or so—fixed against the wall, with a partition here and there, and no other fixtures at all, each nest-pan being simply sheltered by two pieces of board nailed together like an L, or the two sides of a box, and stood up on end close to the wall, so that the pan lies in the angle, as shown in Fig. 4. We, however, prefer the foregoing.

The nesting place preferred by Mr. Fulton is shown in Fig. 5. Each half of the nest is a foot square, and the hinged cover is made slanting, so that the pigeons cannot perch upon it. Its advantages are three. The first is that the nests being upon the ground, delicate or weakly hens have no difficulty in reaching them; the second is that the pans are very dark and private; the last is that the partition in the middle prevents young birds from going to the hen, and teasing her while she

is sitting upon her next batch of eggs. On the other hand, as such nests can only be made upon the ground, the plan limits the accommodation very much; they are difficult to clean thoroughly out, and are thus apt to become infested with vermin; and most pigeons prefer a higher situation. A shelf is also much more convenient for inspecting what goes on, or for feeding a young pigeon; and, on the whole, after trying both plans, we prefer that of old Moore for general use, movable fences or partitions being easily placed against any

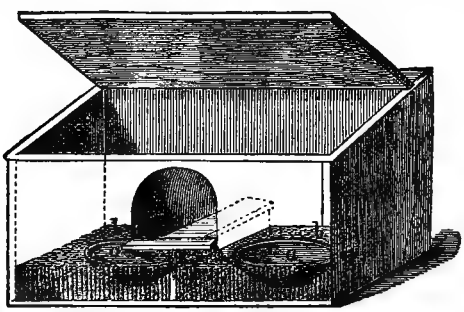


Fig. 5.

nesting-place to prevent the young ones teasing the hen or getting into danger. The nest just figured, where room can be given, is useful for Short-faced Tumblers and such weakly birds; but these can also be accommodated on the floor range of the plan figured at page 8.

We have not yet done, however, with the fixtures of our loft. Nothing more seems to have been usual in Moore's time; but in one respect later experience *has* improved upon him. If nothing more is provided, the pigeons will have to rest at night in their nesting places, and these will receive a very unnecessary amount of excrement, which is objectionable in every way. We therefore provide roosting perches at the sides of the loft,

as shown at *d* in Fig. 1. A very usual form for these is that in Fig 6, where the top or perch itself is a slip of wood, about an inch and three-quarters wide and six inches long, nailed over the top edges of two pieces of board the same length and about six inches wide, arranged in the form of a triangle. These perches are fixed about twelve inches apart, projecting end out from the side of the loft, which is easily managed by nailing a strip of board to their ends, and fixing that to the wall. The use of the triangle is to catch the droppings of the birds, and throw them off from any bird that may be on a perch exactly underneath, on to the floor. As pigeons have scarcely any oil in their plumage, such a precaution is very necessary to save serious damage to it; but this form of perch is most objectionable, the birds being very apt to knock themselves in flying against so many sharp angles, giving rise to many cases of wing disease. We mention the plan only because it is so frequently employed, as one to be carefully avoided; an infinitely better one having been devised some years since by Mr. Caridia, of Birmingham, a fancier to whom we have been indebted for many a practical hint respecting the management of our pigeons. These admirable perches are shown in Fig. 7, representing two rows, one over the other. Here *a a* are strips of board the length available for a row of perches, and *b b* are short lengths of broom-stick or other round poles, either screwed or glued into holes made at the proper intervals, so as to project about five inches. The right distance is about sixteen inches for long-reaching birds like Carriers, down to twelve inches for smaller breeds. Underneath these are nailed to the

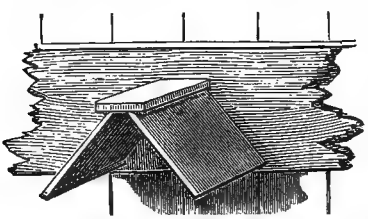


Fig. 6.—Triangle Perch.

same boards, in a slanting direction, other boards (*c c*), about eight inches wide, to throw off the droppings, the lower edge of this board being supported by one or two stays in any convenient way. It will be obvious that all the projecting perches are guarded, as it were, by the slanting board; and that instead of having a lot of single perches to keep clean, this same board

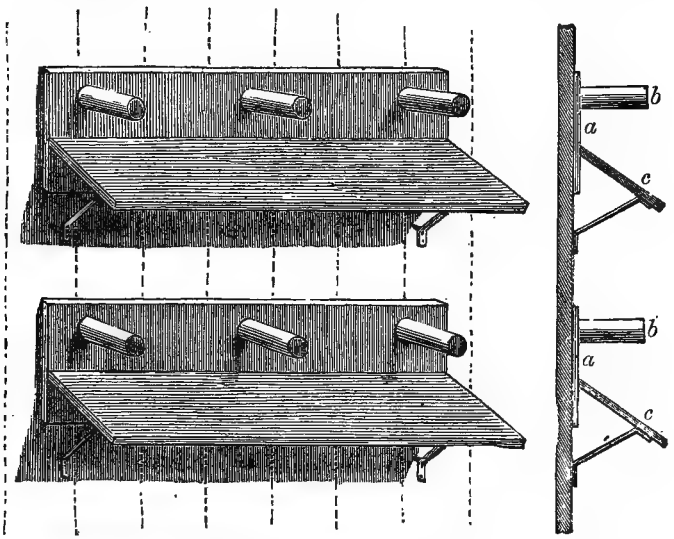


Fig. 7.—PERCHES FOR PIGEONS.

can be cleared of all matter in an instant by one stroke of the scraper, while the regularity and neatness of appearance, and ease of construction, are also infinitely superior.

With the perches the fixtures of the loft are complete. The details we have given can readily be applied to any special case that may occur, or to any shed or outhouse that may be available. Whatever these may be, the nest places and perches we have given are in our opinion the best; and it only remains to

add that either the whole should be well painted, and afterwards periodically scrubbed with carbolic soap, or thoroughly whitewashed inside with hot lime about twice a year. We may, however, repeat in stated terms an opinion we have virtually expressed already, to the effect that, were unlimited space at our disposal, we should prefer to add to the number of six-feet divisions than to increase the size. A number of moderate-sized compartments are superior to one or two large ones in every respect, as well as infinitely more convenient.

CHAPTER II.

FOOD AND FEEDING.

PIGEONS have one great advantage over other pets, that they give less trouble than almost any, with the exception of a few of the most highly artificial varieties. They need no particular delicacy in handling, as small birds do; and as the old ones can, and do in most varieties, take the entire care and responsibility of the young ones till these are old enough to feed themselves, they do not demand the constant care and attention necessary with rabbits or chickens. It is only needful to understand their nature and habits, and the *reasons* which make certain simple matters necessary, to have very little trouble with them.

We will begin with the food; and as we have to start by advising different diet for summer and winter, it is well to explain *why* this is so. In winter the birds are not breeding, and the principal dangers to be guarded against are colds and diarrhœa. It will be readily understood, then, that at such a time of year solid, rather heating, and slightly constipating diet may act as a safeguard; and that, moreover, the food of

birds passing at first merely to a receptacle, from whence it goes to be digested at leisure, food that does not digest too fast, but *lasts* some time, will better support the bird during long and cold nights. And so we find to be the case. In winter, sound tick beans or good old grey peas, with a few of the finest tares, make the best of food for ordinary pigeons, to which may be added a proportion of barley. But in summer the case is very different. At this season a large part of the food has to go to the young in a partially digested state; and hence we want naturally a *softer* food, which can be rapidly converted into pap. The process of feeding also absorbs so much moisture that there is very little danger of scouring. In summer, therefore, beans should be exchanged for grey peas, and these largely mixed with such soft grain as wheat, small maize, or dari. This last is a grain much resembling pearl barley in appearance, and is occasionally called Indian millet. There is sometimes difficulty in getting it; but we can say from experience that in the breeding season it is a most valuable aid to the pigeon fancier. The birds seem to prefer it to almost any grain; its small size enables it to be fed to the young with ease even by small-gulleted birds; and it tends also to an abundant supply of soft food or pap. In making these changes, however, and especially in adding softer grain to the staple of beans or peas, there is one simple precaution to be taken, viz., to make all such changes or additions *gradually*. The most valuable food may entirely upset the digestive system through a whole loft, if suddenly given in exchange for a different food far inferior. With this caution we may add to the list of useful food during the breeding season a grain otherwise dangerous, viz., raw rice, which seems to have an extraordinary effect, given in moderation, in assisting some birds to feed their young.

There are some pigeons, such as Short-faced Tumblers or foreign Owls, too small in the gullet to swallow beans or even full-sized peas. Such must be fed on the smaller grey peas in

winter, with a few tares; adding dari, wheat, or rice in summer with great discretion.

Hempseed is bad for all pigeons as regular food, being too oily and heating; but a handful now and then amongst the occupants of a loft acts as a gentle stimulant; it is also useful in matching birds, and as an occasional restorative. Pigeons prefer it to nearly anything, and careful use of hempseed is, therefore, an excellent means for those who desire it, to make their pigeons tame. By its use the wildest may be taught to eat on the hand. Other small seeds, such as canary and millet, are very useful as a relish now and then, to tempt appetite in sick birds, or to old birds in breeding time; for instance, if young ones seem badly fed on any particular occasion, a supply of small seeds will often cause the parents to give them a bountiful meal. Mixtures of such smaller grains are often sold by corn-merchants for pigeons, and when all the kinds are of good quality, are very useful in these ways.

We have just spoken of quality, and should here add that this is of the greatest importance for all pigeons. Beans are sometimes sold (to any one who will buy them) so old and hardened with age as to be almost impossible of digestion; and we have also seen peas and tares so old, dry, and worm-eaten as to be equally worthless. Both peas and tares should be a certain age, new ones being apt to scour the birds; but they should be sound and unshrivelled. We may also remark that the ordinary white peas, such as are used for soup, are not, as a rule, so good for pigeons as the grey or dark peas. They seem to suit some birds very well, especially the hardier sorts which can be allowed to fly at large; but other pigeons are scoured by them, and they should therefore be always given at first with very great caution.

Much dispute has taken place concerning the quantity of food a pigeon eats in the course of a year, and very exaggerated statements have been made on the subject, with very little

foundation. A few years ago, however (in 1873 and 1874), Mr. Harrison, Secretary of the London Amateur Pigeon Society, made very careful actual experiments to solve the point, and the results are sufficiently important and interesting to be put on permanent record. In 1873 account was kept for thirty-eight weeks, and when the figures came to be worked out, it was found that each pair of birds, on an average, consumed one pound thirteen ounces, or rather over a pint, per week. The pigeons were Homing birds, and the grain used in this experiment consisted solely of tares, purchased at 17s. per sack, thus bringing the cost per pair per week to little over one penny. Tares are scarcely ever so cheap as this, of course. In 1874 another experiment was made for twenty-eight weeks on the same food, with a result of $1\frac{1}{8}$ pints per pair per week. Later experiments made with grain at higher prices showed that, at 49s. per quarter, the pigeons cost about 5s. per pair per annum, and at 60s. per quarter, about 6s. per pair per annum, or say $1\frac{1}{2}$d. per week. It must, however, be remembered, on the one hand, that Homing pigeons are generally fed at stated times, and then by allowance; and on the other, that few pigeons eat tares so readily as other grain: at least, our own experience has invariably been that tares, however good, are left to the last. We never kept any detailed account; but our general experience has been that pigeons kept confined cost us a fraction over $2\frac{1}{4}$d. per pair per week, though some of this may have been owing to the sparrows before mentioned.

We strongly advise that the birds be fed from a hopper, and have the food always by them; except where—as with Flying Tumblers and Homing birds—stated feeding times bear an important part in their training. It does not very much matter how the hopper is constructed, so long as it is impossible for the birds to stand upon or foul the feeding apertures. Fig. 8 shows Mr. Fulton's hopper; Fig. 9 are two forms devised by Mr. Allen; and Figs. 10 and 11 Mr. Battye's. Each

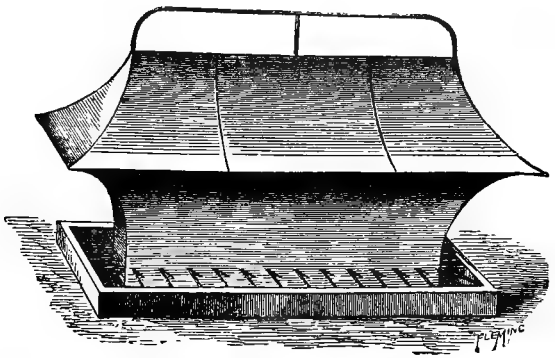


Fig. 8.

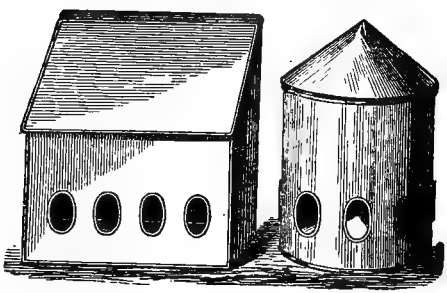


Fig. 9.

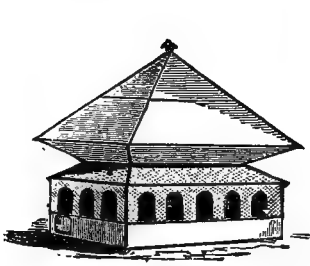


Fig. 10.

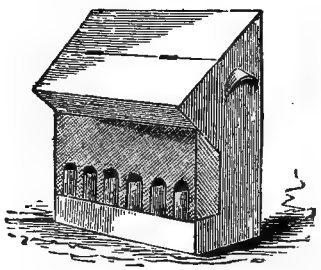


Fig. 11.

PIGEON HOPPERS.

of these latter hoppers, it will be seen, are made in two forms—one for the centre of the room or loft, and the other to be placed against a wall. Mr Battye has also invented a hopper, shown in Fig. 12, so contrived that each feeding aperture is closed by a swing door, and only opened when the pigeons step upon a lever. They readily learn to do so; and this hopper has, therefore, one advantage in lofts which are not sparrow-proof, as the weight of the small birds is not sufficient to expose the grain. On the whole, for small lofts or divisions

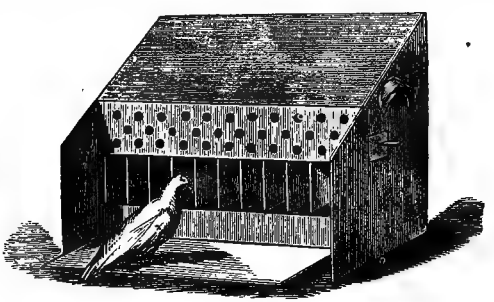


Fig. 12.

such as we have described, we prefer the second form shown in Fig. 9.

Where sheds have been converted for use as lofts, there is often trouble from mice, which, if allowed, will eat a great quantity of grain. Not only so; but their excrement, and the "mousy" quality of what is left, seem to exert an actually poisonous effect upon many pigeons. This is unnecessary, being avoidable by very simple means. We have tried the plan of suspending a board by four wires from the roof, at a certain distance from the ground, and this is quite effectual as regards the mice; but unfortunately the pigeons are very apt to injure themselves against the wires, which they do not appear ever to get accustomed to. A better plan is to make a small table, the

top large enough to hold the hopper, supported by one single central leg of smooth brass pipe, about eighteen inches high.

We are very much inclined to think that pigeons would thrive better in confinement if they could have a *regular* supply of green food of the right kind. They certainly eat it largely in a state of nature; and though we are aware that to give it is often followed by bad results, this is only too easily accounted for by the intermittent nature of the supply. We know several fanciers who find benefit from hanging a fresh lettuce to the outside of each aviary every day throughout the breeding season; and we believe much other garden stuff might be found beneficial in the same way, or an occasional turf of grass. We think it extremely likely that "Canker" and kindred diseases may be largely caused by the almost utter absence of the cooling diet so largely provided by nature; and though we would strongly advise that all such experiments be made with great caution, we do feel persuaded that careful and persistent experiment in this direction would be followed by general benefit to many lofts, and in particular by a fresher "condition" of the birds.

Water should be provided in a fountain, and renewed daily. However true it may be that most of the pigeons will drink from the bath, there will often be a few that do not bathe, or the bath may now and then be forgotten. The common poultry fountain, with a hood over the drinking part, will answer very well for small lofts, and may be put under the lower shelf if fitted up as in Fig. 3. Where more birds are kept, an all-round trough is better, however, some pigeons being very quarrelsome when eating or drinking. The pattern shown in Fig. 13 is very good, as it is in two parts, and can be thoroughly cleaned. It is made by Messrs. Crook. Fig. 14 shows another useful all-round fountain, made in metal by Mr. Battye, of Leeds.

Pigeons are very fond of washing or bathing, and for this

purpose a broad shallow pan or dish should be provided. It may be of zinc or galvanized iron, and a good size for a smallish loft is about two feet square by three or four inches deep, filled with water to the depth of about two and a half inches. We strongly recommend that the bath be *always* allowed, except in freezing weather; and if so, it must be renewed at least every two days, as it becomes rapidly fouled by a kind of floury "bloom," which comes off the bird when

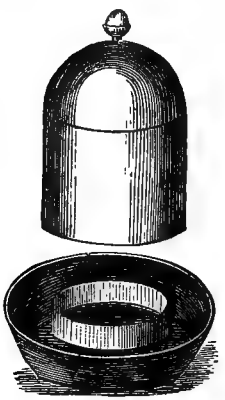


Fig. 13.

Fig. 14.

bathing, and which readily rubs off even on a dry coat-sleeve. It is much the best if the bath can be placed in the outside aviary, as it can in nearly all cases; but if any peculiar circumstances make this inconvenient, a special pattern should be made, with extra or outer sides, some six inches distant from the inner pan which holds the water, and which will catch the splashing. A bath in the loft is, however, such a constant nuisance, that it should always be avoided if possible; in fact, we are convinced that even the mere presence of so much evaporating surface of water is distinctly injurious, and causes many attacks of cold or roup. When small and weakly

birds are kept, there should either be a ledge at the side of the bath or a piece of brick in the centre, else an unusually weakly bird may be unable to get out of the water, and be drowned.

There is yet another requisite, however, and that not the least important. Almost every one has noticed the propensity of pigeons left at liberty to peck at old mortar, and their inordinate fondness for salt. The last circumstance makes it extremely probable that the *original* Blue Rock, or wild pigeon, was an inhabitant of the sea-cliffs; and the salt no doubt plays an important part in keeping their blood and digestive system in proper order. The old fanciers used to make what they called a "salt-cat." This was composed of equal bulks of brick clay, coarse gritty gravel, and old pounded mortar. To about a gallon of this mixture was added half a pint of cummin seed and the same quantity of coarse bay salt, and the whole mixed up with urine into a stiff mortar. Strange to say, this nauseous compound is preferred by all pigeons to more cleanly substitutes; and since few people now like to dabble in such messes, there are almost always dealers who find it answer to make and sell salt-cat, and of whom it may be bought without asking awkward questions. It should be placed in a covered box, pierced with holes round the sides through which the birds can put their heads to peck at it, and not exposed to the rain, which washes the salts away. Many people prefer a mixture of mortar, sandy gravel, and earth, with a portion of bay salt, not mixed up at all, but given as a loose, dry mixture; and this will answer very well for all practical purposes. Such a mixture should be kept in a box, with a long horizontal slit in one side wide enough for the pigeons to put their heads through, but not large enough for them to get in, as they would soon tread the contents firm and solid. When old mortar cannot be had, old slaked lime will do instead. We have, however, found that pigeons certainly are, as the old fanciers believed, ex-

tremely fond of cummin seed; and may suggest as a compromise that a salt-cat containing it may easily be mixed with brine so as to answer all needful purposes.

The proper supply of these last necessaries is of great importance to the health of a loft; and to some want in this direction, as well as of the green food already mentioned, *must* be traced the heated, corrupt condition of blood that manifests itself by many diseases. Some diseases are common to animal life, but canker and its allies are unknown to wild birds; and experiment with some cooling salts, such as carbonate of potash, or with some others found in sea-water, might be probably rewarded by great benefit. One hint in this direction we may give, for which we are indebted originally to a German friend unrivalled in his success with aviary birds generally. He found that pigeons shared with many of these birds a greedy appetite for *scraped cuttle-fish bone*, and appeared greatly benefited by it. Now this substance contains many of the salts spoken of, and we are strongly inclined to believe that it acts as a cooler and purifier of the blood in default of more natural means. We can recommend it strongly, and believe further investigation might find other valuable prophylactic agents of the same class. Meantime, however, let the gravel-box or salt-cat never be neglected.

It may be noticed finally, that while pulse or other grain forms the most natural food of pigeons, they will often eat various kinds of soft food with relish. Crumbled oatmeal cake is eaten greedily by many; also boiled potato and sopped bread, rice boiled in milk, &c. There is also no doubt that when at large they will eat grubs or small worms; and it has been found that cold bacon fat, minced into small bits, will be eaten. We cannot recommend any of these things as regular diet; but some of them are useful occasionally for birds feeding young ones, while others may sometimes, as a total change and stimulus to the appetite, be the means of saving a sick pigeon.

CHAPTER III.

BREEDING AND GENERAL MANAGEMENT.

As a basis for all successful management of pigeons, it must be remembered that they are *pairing* birds, and, as a rule, maintain a union once formed with considerable fidelity. They *can* be parted and re-mated; but it is difficult to do this if the older partner be within sight or sound. Hence it is very necessary to see that the birds are really pairs (of cocks and hens), and then not to disturb them during the breeding season if it can be possibly helped; and in case a bird dies another mate should be supplied, if possible. An odd hen will do little mischief; but an odd or unmated cock will very often upset a whole loft, and cause the loss of many eggs or young ones by his quarrelsomeness. Such a bird should be provided with some mate, therefore, even if a proper one cannot be found for him.

This makes it rather important to be able to distinguish between cocks and hens; but for this purpose *no* infallible rule can be given. The sexes are naturally very much alike; but, in addition to this, all fanciers have for generations endeavoured to breed the hens as much like cocks as possible. As a rule, cocks are more thick and massive about the head and beak, thicker in the neck, and stouter built in all respects; but, as these terms are comparative, a fully developed and vigorous hen may easily surpass a naturally smaller cock. Again: as a rule, the cock's breast-bone is rather larger, and the two bones near the vent are in the hen set wider apart; but these signs also may fail, owing to the general make of the bird. The voice of the cock, again, is most powerful. Upon the whole, however, the most trustworthy test is to observe the behaviour of an unknown bird with one or another whose sex is known, when the peculiar and appropriate gestures will in almost all

cases reveal the sex. We say in "almost" all cases, however, advisedly, since we can state positively that even this test is not infallible. Some few masculine-looking hens will "play up" to other birds, and behave in *all* respects like a cock; and people have been unjustly suspected of fraud on this account who have acted and given assurances according to the best of their real knowledge and belief. We remember one young Barb which puzzled us for over four months after it attained full growth. From its progress, as a nestling, we had every reason to believe it a hen, when its sudden boldness and change in demeanour compelled a reversal of that opinion. Still later, we saw reason to return to the first impression; but after that, the bird's behaviour respectively to two strange pigeons turned into the loft placed the matter, as we considered, beyond any doubt, and we had virtually sold the pigeon as a promising young cock, when all doubts were set at rest by the naughty bird laying. We have known more than one case of the same sort, and so does almost any fancier of practical experience. In such cases the actual laying of eggs is the only decisive test; but they are, after all, very rare and exceptional, and we only cite them to inculcate caution before giving utterance to what may prove an unfounded suspicion.

Even "matching up" is no conclusive test of the sex of pigeons, since it is no uncommon thing for two cocks to pair and sit with the greatest assiduity; nay, if eggs be supplied them, they have been known to hatch and rear the young in the most exemplary manner. Much more frequently will two hens pair if they find no proper mates; but in this case they lay eggs —sometimes two, and sometimes four. In the latter case the four will be in the same nest, and occasionally those of one hen or both may hatch, from a chance connection with some cock in the loft. The strangest thing is that occasionally even proper matches have been abandoned for these strange unions, which are probably due to the great resemblance in pigeons

between the two sexes. We may also remark in this place that on rare occasions a cock has been known to pair with two and even three hens, taking his turn in sitting with them all.

When pigeons are left unrestrained it is a pretty sight to see them courting; and no one can better the description long ago written by Mr. E. S. Dixon. "They begin," he says, "to go together in pairs, except when associated with the flock at feeding times; and when they are resting on the roofs or basking in the sun, they retire apart to short distances for the purposes of courtship, and pay each other little kind attentions, such as nestling close, and mutually tickling the heads one of another. At last comes what is called 'billing,' which is in fact a kiss, a hearty and intense kiss: as soon as this takes place the marriage is complete, and is forthwith consummated. The pair are now united, not necessarily for life, though usually so, but rather *durante bene placito*, so long as they continue to be satisfied with each other. If they are Tumblers, they mount aloft and try which can tumble best; if they are Pouters, they emulate one the other's puffings, tail-sweepings, circlets in the air, and wing-clappings; while the Fantails and Runts, and all those kinds which the French call *pigeons mondains*, walk the ground with conscious importance and grace. But this is their honeymoon—the time for the frolics of giddy young people. The male is the first to become serious. He foresees that 'the Campbells are coming' better than his bride, and therefore takes possession of some locker or box that seems an eligible tenement. If it is quite empty and bare, he carries to it a few straws or light sticks; but if the apartment has been already furnished for him, he does not at present take much further trouble in that line. Here he settles himself, and begins complaining. His appeal is sometimes answered by the lady affording him her presence, sometimes not; in which case he does not pine in solitude very long, but goes and searches out his careless helpmate, and with close pursuit and a few sharp

pecks, if necessary, insists upon her attending to her business at home. Like the good husband described in Fuller's *Holy State*, 'his love to his wife weakeneth not his ruling her, and his ruling her lesseneth not his loving her.' And so the hen obeys, occasionally, however, giving some trouble; but at last she feels that she must discontinue general visiting and long excursions, and enters the modest establishment that has been prepared for her performance of her maternal duties. A day or two after she has signified her acceptance of the new home an egg may be expected to be found there. Over this she (mostly) stands sentinel till, after an intervening day, a second egg is laid, and incubation really commences: not hotly and energetically at first, as with hens, turkeys, and many other birds, but gently and with increasing assiduity.

"And now the merits of her mate grow apparent. He does not leave his lady to bear a solitary burden of matrimonial care, while he has indulged in the pleasures only of their union. He takes a share, though a minor one, of the task of incubating; and he more than performs his half share of the labour of rearing the young. At about noon, sometimes earlier, the hens leave their nests for air and exercise, as well as food, and the cocks take their place upon the eggs. If you enter a pigeon-loft at about two o'clock in the afternoon, you will find all the cock birds sitting—a family arrangement that affords an easy method of discovering which birds are paired with which. The ladies are to be seen taking their respective turns in the same locations early in the morning, in the evening, and all the night. The older a cock pigeon grows, the more fatherly does he become. So great is his fondness for having a rising family, that an experienced unmated cock bird, if he can but induce some flighty young hen to lay him a couple of eggs as a great favour, will almost entirely take the charge of hatching and rearing them by himself. We are possessed of an old Blue Antwerp Carrier who by following this line was, with but little

assistance from any female, an excellent provider of pie materials, till he succeeded in educating a hen Barb to be a steady wife and mother."

The fancier cannot, however, afford to let matters settle themselves in this way. He insists on controlling his "matches" with as much stolid determination as a French papa and mamma devote to the "arranging" of a marriageable daughter, and he fortunately finds his materials about as tractable. If matters are to go thus easily, however, the sexes must, as a rule, be separated during the winter; for birds left together for long may acquire an attachment it is exceedingly hard to break up. Here, then, is found the advantage of having the loft in at least two divisions. As the pairing season approaches it will be sufficient in nearly all cases to put the two birds it is desired to pair into a matching cage for a few days. A regular "matching pen," as it is called, is a large cage which has a wire partition that can be slid in so as to divide it into two parts, the hen being placed in one, and the cock in the other. When they have had a couple of days to get used to each other the partition is withdrawn; they usually settle down at once, and may be turned into the loft a couple of days later with safety. The partition is often not necessary, especially if the birds have been long unmated. If, on the other hand, they have been previously mated in a union it is necessary to dissolve, it is generally necessary to keep each bird by itself for several days, and always needful to keep them from the sight of the former mate; otherwise it will be difficult, if not impossible, to form a fresh union. For the same reason, when any bird's mate has died, it should be kept for a few days *alone* before being introduced to a fresh one.

It is sometimes needful to dismatch birds already breeding. The owner may have procured a better match, or found from the early young ones that the match is a failure, &c. In that case, again, the birds should be kept alone for a week at the

very least before being re-mated, and care should be taken that the old companions are placed in separate lofts. For all these purposes, and as "matching pens," nothing can be better adapted than the wire-fronted shelves already described in our first chapter.

When there is any difficulty in matching it usually comes from the hen. A strong bold bird will, especially if she has been matched previously, often thrash the husband proposed to her most severely, and, if left to herself, defeat in this way all proposed arrangements. This is, however, only where the birds come together on equal terms; and can be overcome by taking advantage of the fact that a pigeon most at home in any given place is nearly always master of it. In such a case, therefore, the cock should be left alone in the matching pen, with only a daily fly of an hour to keep him vigorous, and given a little hempseed; while the hen is kept in a small and rather dark pen quite away from him, also with a little hempseed every day. After a few days' close confinement, about the middle of the morning turn the hen in to the cock, and he will almost invariably reduce her to submission.

Another precaution is very necessary to avoid trouble and loss, and that is, never to turn a lot of newly-matched birds into the loft together. If this is done they will all be quarrelling for choice of nesting places; and besides the general hindrance to breeding and damage to eggs, the result will probably be several cross-matches, or divorces and new unions. Turn one pair in by themselves, or two pairs if the loft is clear. They will soon choose a home; when another pair can be turned loose, and so on till all are settled. Here, again, will be found the great use of the portions of the shelves which are fronted with wire in the plan already given. Pigeons once thoroughly matched, and turned in judiciously, will generally remain faithful throughout the season.

For the actual nests we strongly advise earthenware pans

There are various patterns of these, but most of them resemble one or other of the patterns shown in Fig. 15, and the exact shape is really not very material. They should not, however, be too deep, or the parents will find a difficulty in getting gently on to the eggs. They are usually to be had at pigeon-shops in large towns, but if unobtainable in this way, a few dozens can always be ordered at the nearest pottery. They should be made thick and heavy, so that they will not overturn with the weight of a pigeon on the edge; and the size across will vary from seven inches for small pigeons up to ten or eleven inches for Carriers and Pouters. The large sizes are better made rather shallow in proportion. Common unglazed red ware is

Fig. 15.

the usual material. In these nest-pans should be placed coarse pine sawdust, an inch deep—such sawdust as emits a strong odour of turpentine is what we mean. If this cannot be obtained, any *coarse* sawdust may be made to do by sprinkling a little turpentine upon it, and kneading well with the hands so as to spread the spirit evenly through; but fine dust is objectionable, and liable to get in the eyes of both young and old birds. The advantage of this material is a thorough immunity from insect vermin. Similar sawdust should be laid thickly on the floor of the loft, and will keep all clean and tidy. If laid thinly it will blow up by the action of the wings, but this is not the case if laid down an inch deep. The droppings can be raked off once or twice a week, and the whole renewed, say, once a month. If this plan is pursued there will hardly ever be occasion for complaint or annoyance.

Some people use birch twigs for the nests, such as are cut off by besom makers in trimming their work. The pigeons seem to prefer these to anything; and as they also have an aromatic smell which seems to repel vermin, where they can be obtained they make an excellent material, but the sawdust is most generally at command. The hopper and fountain will of course be raised on a piece of wood, so as to be above the sawdust on the floor.

Another efficacious plan of keeping insects from the loft is to suspend a few bottles, open at the mouth, and filled with bi-sulphide of carbon. The smell is very disagreeable, and seems to keep all insect vermin away, while the pigeons appear not to mind it in the least; but as the vapour is highly inflammable, those who have to visit their lofts by candle-light must take care not to bring the light near the mouth of any of the bottles. The use of sawdust will answer most purposes. If the proper kind cannot be procured in quantity sufficient to cover the floor, coarse sand or gravel is the best substitute, but the loft must then be cleaned oftener, and it is advisable to keep turpentine, paraffin, or carbolic acid sprinkled about, or to use the bi-sulphide as above mentioned.

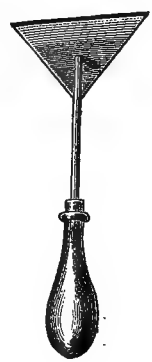


Fig. 16.

In any case the slanting boards under the perches, the shelves, &c., must be kept clean by being well scraped at frequent intervals. This is facilitated if they are painted. Much the best form of scraper is the triangular one shown in Fig. 16. It has not only three working edges, but will scrape out corners which a square form cannot reach.

We purposely describe none but the earthen nest-pans, from a conviction of their infinite superiority to all others. The only substitute we would admit is a wooden nest-pan, *well painted*, so as to leave no chink or aperture of any kind. We

have seen straw nests made as bee-hives are; but any such receptacles would swarm with vermin, and are most objectionable on that account. Two nest-pans should be provided for each division of the shelf or nesting place.

With the exception of the very hardiest varieties, pigeons should not be paired till March, early or late in the month, depending on the weather; and they should be separated as soon after the end of August as they have fairly done with their then pair of eggs. Hardy flyers will take no harm if left to themselves, but most fancy pigeons are much weakened by being allowed to breed for more than the above period; and birds bred earlier or later rarely survive, or come to much good if they do. It may of course be worth while for a fancier to run risks for the sake of getting early birds forward for the autumn shows; but if he does so he must be very careful. Some persons take away the pair of eggs and give them to other birds to hatch, by which means the first hen will lay again much sooner. We have known this plan carried through a whole season. But it is a cruelty, and the hen is almost invariably ruined by it; in fact, she is generally sold after such a process of "pumping," the seller knowing—what the buyer does not—that the apparently fine-looking hen is past breeding anything good again.

Barren hens are very frequent among the more high-class pigeons. We have just alluded to over-breeding as one cause of this; but it occurs in so many other cases, that there can be little doubt the highly unnatural developments of the fancier tend to check reproductive power. Such barren birds can sometimes, if in good health generally, be brought into breeding. They will go to nest like other pigeons, and by giving them a couple of eggs from common hardy birds their soft meat will come on, and they will feed as usual. If this is continued a few times, especially if they can have a fair amount of exercise, the result is very often a success. Even if not,

these barren birds can often be made very useful; for a couple of dummy eggs will tempt many of them to sit almost at any time, if put in the pan at the right intervals; and they thus become very handy as feeders, since they will, when the time is up, take young ones and feed them as if they had hatched themselves.

Soon after matching—generally ranging from one to three weeks, according to age and time of year—the cock will begin to drive the hen towards her nest, and seem uneasy whenever she is away from it. That is a sign laying is near, and in fact the eggs generally appear in from two to five days after. Two are laid; the first usually about five or six o'clock in the afternoon, the hen standing more or less over it all the next day and night, and laying the second egg about two o'clock on the third day. The young hatch on the eighteenth day from the laying of the second egg. Very rarely three eggs are laid, and we have heard of one or two cases in which four have appeared, but the rule of a pair is rarely broken. These two are in three cases out of four a cock and hen, but by no means always so, as usually supposed; about twenty-five per cent. being pairs of one sex or the other. When one is a hen it is generally the last of the two, and as such likely to be stunted in growth from the earlier hatching of the first, which has had a start by the hen standing over it before the other was laid, and thus gets fed and becomes larger and stronger before the hen is hatched. To avoid this, laying should be watched for every evening, and the first egg taken away and replaced by a nest-egg of bone or a waste pigeon's egg, to be replaced the evening the second is laid. This plan will save or improve many a hen that otherwise would be dwarfed in rearing. It may here be noted that pigeons never eat their eggs, so that the breakage of a waste one, should it occur, need cause no fear of bad habits in this respect.

Weakly hens are liable to be egg-bound or have difficulty

in laying. In such cases the cock gets very anxious, and worries and drives the hen to an extent that makes matters far worse. He must, therefore, be shut up, when a drop of oil applied to the hen's vent will often produce the egg. If not, the best assistant that we know of is a tea-spoonful of *warm* treacle mixed with chopped groundsel (rather less for a small pigeon), which we have repeatedly known to be successful, especially if the bird's vent be held for a few minutes over the steam from a jug of very hot water. After giving these remedies, the hen is best shut quietly in her own shelf, with thick sawdust all over, in case she lays on the shelf instead of in the pan. If she seems recovered in the morning, the cock may be set at liberty; but if not, he must be kept shut up till the second is laid, which usually gives no difficulty.

The laying of the eggs brings us to a very important point —the essential difference between the management of pigeons and of fowls, which it is well to understand thoroughly. Once understood, no creatures are more manageable than pigeons; but they have their "ways," which must be studied. You can, with a little management, set a fowl at any time, on any nest, keeping her waiting for weeks if convenient, or giving her eggs due to hatch in a few days. On the other hand, when she does hatch you must look after her, or her brood will perish. Now it is just the contrary with pigeons. You provide all the nesting conveniences as above described, rather more than sufficient to give a home to each pair of birds; and most of them will take up with one or other of the compartments so provided, if they have been gradually turned into the loft as before advised. But some may not. Now, however this may be, each pair *must be allowed to sit and hatch in the place they have chosen.* The hen may lay on the floor, possibly; in that case, all you can do is to provide a little more privacy by placing a brick or board, or something, so as to afford a little screen, and give her a nest-pan. Even this should be done at

night, carefully and quietly, as much in the dark as possible; done so, such little additions to comfort will generally be accepted, and all will go well enough if care be further taken not to intrude more than absolutely necessary upon those birds which have chosen such an inconveniently public domicile. In fact, in the breeding season only the regular attendant—owner or otherwise—should enter the loft. If he throws down at first a very few grains of hempseed on each visit, the pigeons will soon get to know him, and allow him—or her—to come quite close to the nest-pan without rising, unless of a peculiarly wild disposition. Many will allow the nest-pan to be even lifted and examined without leaving, if care is taken never to startle them by too sudden movements. All "wild" catching must be avoided; when catching is necessary, it should be done with one quiet but sudden dart, which makes no mistake and causes no disturbance. Treated thus, most pigeons soon get not to mind being caught; but wild attempts which miss, and send all the birds flying round in terror, may cause the loss of a whole round of eggs. Such inconsiderate treatment also causes disease of the heart, and not a few cases of rupture or displacement of the intestines. We have often found the last in birds submitted to us for *post-mortem* examination, and feel sure it has been caused by violent catching.

It may be well here to explain the proper way of *holding* a pigeon. It can be in either hand; but in each case, it should be with the breast in the palm (Fig. 17), the head towards the little finger, the legs going through between the first and second fingers, and the thumb across the back. Held firmly, but lightly, in this position, a bird is helpless, knows it is, and never attempts to escape. It can be examined thus in all parts and in all directions, and soon becomes used to being handled. To say the truth, we believe a great deal of the charm of the pigeon fancy lies in the facility with which a bird can be thus held *in the hand* and examined. A fowl cannot be so; and

the facility with which pigeons can, as apart from the cumbersome bodies of poultry, and the fragility and wildness of smaller birds, we suspect gives a sense of *personal* possession and enjoyment which counts for much in the long-run.

The hen sits all night, usually coming off about ten in the morning, though the exact time depends a little on the amount

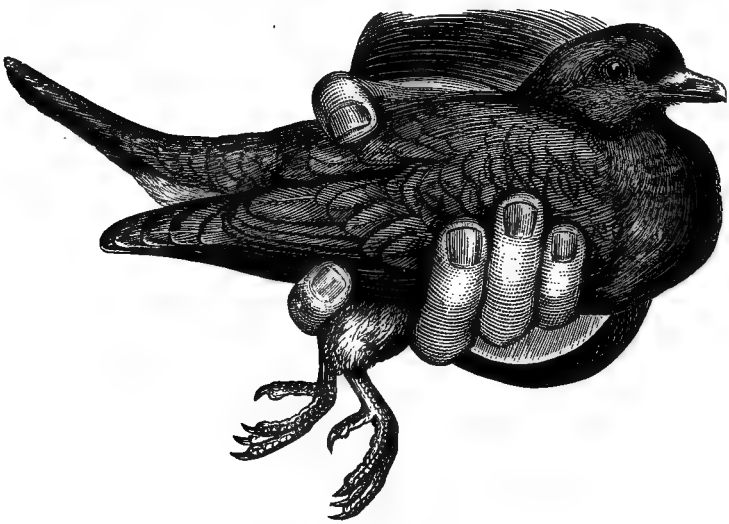


Fig. 17.—Holding a Pigeon.

of light. She generally stays off till two or three in the afternoon, during which period the cock takes her place. Not the slightest anxiety need be felt about the eggs being allowed to chill.

Many pigeons would die in the shell if not assisted, particularly among the very short-faced birds, whose beaks, when of the quality desired, seem sometimes too short to pierce the shell. When the time is fully up, therefore, and hatching has not begun, if the young one can be heard inside, it will be well

to crack the shell with a pin as near the point of the beak as can be guessed; or, if after the shell is sprung no progress seems to be made for some time, the crack should be gently extended round the egg. This will save many a young one; and if, on the other hand, they really should die in the shell, it is very desirable to know it, in order that another young one from some other pair, or a pair, if any want shifting, may be given the parents to feed off their soft meat, and save them from "going sick" with it, which is apt to disorder the whole system, and will sometimes upset their breeding for the entire season. Fortunately, most pigeons will take to either a single young one or a pair under such circumstances, whether newly hatched or a few days old.

In very hot or dry weather it will be desirable to sprinkle the shelves on which the nest-pans stand with water, in order to keep the eggs from becoming too dry; though pigeons are not so subject to this mishap as poultry, nor is it proper to sprinkle their eggs, as is usual in summer with those of the latter. The fertility of the eggs can be ascertained after a few days in the same manner as usual with those of fowls, by holding them before a candle, when the fertile ones appear dark, the barren eggs as clear as at first. The eggs very rarely perish from cold. When eggs are found barren under valuable birds, it is best, if possible, to exchange them for fertile eggs laid within a day or two of the same time by coarser birds, and thus avoid disturbing the system of the more highly-bred ones. If none such can be had, it is best to take the barren eggs away when sat upon about ten days, before the soft meat comes on, and to keep the birds separate for about ten days more, to keep them from going to nest so soon; they will then gladly pair again, and generally go on with little or no harm. Or they may be allowed to sit out their time, and a young one, a few days old, given them at the proper time to feed them off.

For pigeons differ further from fowls in that they feed their

own young, beginning with a kind of pap, or soft food, which is secreted by the crops of both parents at the date of hatching. It closely resembles curd in both appearance and composition, so that the "pigeon's milk" so often ridiculed is no myth, but a veritable product. It is pumped up by a kind of vomiting action, and greedily swallowed by the young, who insert their beaks into the mouth of the parent for the purpose. A young pigeon's beak, by the way, is thick, soft, and fleshy in appearance so long as the soft food lasts. By degrees half-digested peas or other grain are mingled with the curd, until at last the grain is fed pure, and only a little soaked in the crop. Here will be seen the reason of a somewhat softer diet during the breeding season, very old beans or peas obstinately refusing to dissolve, and thus starving the young. If all goes well, however, the diet gradually becomes harder and harder, until the young pigeon is able to pick up for itself.

When the young thrive, they grow with a rapidity which is amazing. You can in simple truth almost *see* the daily increase; and if you cannot, something is wrong. The growth of a chick is nothing to it. Mr. Dixon found a young pigeon to weigh as follows :—

When hatched	½ ounce.
Sixth day	4½ ounces.
Seventh day	5¾ „
Ninth day	8¼ „
One month	12¼ „

The last weight exceeded that of the parent, and the figures are very significant if we compare them with the weight of a chicken of the same ages. Mr. Dixon accounts for such extraordinary growth by the fact that the young pigeon is so helpless as to be quiet all the time, and has *two digestions* at work for it besides its own—a reason which is no doubt true. Any way, the fact leaves the fancier in no doubt how his birds are getting on : they are either *galloping* on, or likely to "go home."

Very little trouble is likely to happen with most varieties of pigeons, which, if only provided with proper food for themselves, will take the sole responsibility of the young ones. For this reason we strongly advise that, whatever the preference may be, every beginner should only keep such birds for the *first season*, during which he will gain experience of their ways and habits. There is a wide variety of such breeds in Jacobins, Dragoons, Antwerps, and any of the so-called "Toy" pigeons, except the short-beaked Turbits and Owls; the pretty Fantails also feed well. But some varieties, either from being very highly in-bred (such as Carriers and Pouters), or some mechanical difficulty in their very short beaks (such as Barbs and Tumblers), are "not good feeders," and require coarser birds as nurses. Flying at liberty very much mends this state of things; and Dr. Ginsburg once told us that he found his Carriers, which were first-class in quality and points, though only kept for private recreation, fed their young with no difficulty, being left to fly round a country house. But in the aviary help is needed for such birds after the first week or so, during which nearly all pigeons can feed their young. Here, however, we are met by another distinction between the management of pigeons and of poultry. A fowl will be a good mother to a brood that hatch the very day after the eggs are given to her; but it will readily be understood that if you give pigeons eggs which are due to hatch too soon, a supply of soft food will not be secreted, and the young must perish if left to unassisted nature. On the other hand, if eggs were exchanged which were not due till some days *after* the nursing pigeons would have hatched, the birds would in most cases go "sick," as it is called, for a few days at the proper time, after which the supply would go off. For these reasons it does not answer, as a rule, to exchange the *eggs*, unless those of both the breeding birds and the nurses hatch within a day of one another. It is also better, as a rule, for the squeakers to have the food of their own

parents at first; and hence it is usual to exchange the young birds themselves a few days after hatching. It will readily be seen that with pigeons which require nurses it is highly desirable to have at least two pairs of such for every pair of breeding birds, in order that nurses may be ready at the required date. For, as will again be readily understood, the valuable young ones should be transferred to birds which have hatched a few days *after* themselves, by which they get a larger supply of softer food, and grow the better for it; whereas, if given to parents that hatched earlier, it would be too hard for them. The common squeakers are usually destroyed, but are often, being coarser and hardier in constitution, successfully reared by the more valuable parents; and it is better for the health of these, and gives the hen more rest, if they can be. This is easily ensured by helping them to feed.

Though such, however, must be the general rule in "shifting" pigeons, as it is called, a fancier who knows his birds can now and then take liberties. We have *occasionally* kept birds we desired as feeders as much as seven days *on eggs* (in one case eleven days) beyond the proper time of hatching, and then given them young ones only two days old. And we have also given some birds eggs which hatched several days *before* their own would have been due. In neither case was the proper supply of soft food or pap ready for the first day or two; but by helping the young over this stage, in a little time the strong parental instinct has made things right. Such liberties can only be taken with birds *proved* to be quiet and good nurses, in which point there is a great difference in pigeons, some being wild and skittish, while others allow almost anything to be done with them or to them. Such quiet feeders are invaluable; and in studying the birds, and getting to know their dispositions, lies much of the success in pigeon management. Some fanciers will value a proved pair of quiet and good feeders at £5 per pair, and breed them as

sedulously as their high-class Carriers, though quite worthless from any other point of view.

When feeders are required, they should be chosen with some reference to the kind which has to be fed. Thus, for long and heavy-beaked birds like Carriers, Dragoons make the best feeders, having a similar *kind* of head on a more moderate scale. They will also feed well any pigeons with average heads, like Pouters, or even Barbs, which have large heads and beaks, though short. But for Barbs, shorter-headed birds, like the weedings of exhibition Antwerps, answer better; while either would be too coarse in beak for fine-headed young pigeons like short-faced Tumblers. For these, common Jacobins, or most common Toys, or long-faced Tumblers make good feeders. In all cases the *quietest* birds should be selected. The transfer should be made in the dark, if possible, and before the plumage is so far grown that the cheated birds can discern any startling difference in colour. With this precaution there is scarcely ever any difficulty; but we repeat our advice that every beginner should confine himself for the first season to birds which can bring up their *own* young, that he may grow accustomed to them before attempting more difficult tasks.

But we have alluded to "helping" the young while the natural food from the parent was not forthcoming; and this may be necessary for several reasons. The parents cannot make the soft food *without having food themselves;* and the accidental omission to replenish a hopper may cause the evening or morning supply for all the young squeakers to fail. Or there may be no nurses for the young of bad feeders, whose food has failed after a week or ten days. Must the young ones die in such a case? Not a bit of it. Nothing is more easy than to feed young pigeons artificially after, at least, a day or two. The simplest, easiest, and quickest way is to chew small mouthfuls of some plain *milk* biscuit into a smooth pap, to take the little squeaker in hand, and feed from the lips, into

which its beak must be inserted. It will feel for the food greedily enough, and the process is easy if it be remembered that the mandibles must be taken *sideways* between the lips, so as to open between them; the tip of the owner's tongue then pushes the masticated food between the open mandibles. We see nothing more objectionable in this than in a young lady feeding a canary; and by this method a young pigeon can be "filled up" almost instantly. Those who are so fastidious as to dislike such a proceeding can get a small glass syringe with a large aperture; mash the biscuit up with hot milk, and feed by inserting the point of the syringe into the throat. This is equally effectual, but more tedious; and should a lot of birds be found starving from such an accident as is hinted at above, time lost may mean several deaths. It is well to examine all the young ones every night, to see if the crops are empty or full; if empty, they should be filled up in one of the ways described.

The same failure to feed may occur at a later stage, when the pap has gone off, and the old birds should be feeding with peas or grain only just softened in their crops. In this case, peas must be soaked all night in cold water, to swell and soften them. Before feeding, pour sufficient *hot* water on them to make them lukewarm, and opening the mandibles of the squeaker between the thumb and forefinger of the left hand, with the second or third finger behind the neck, pass soaked peas down the throat with the right hand till the crop is very loosely filled. The young ones will, after a few meals, eagerly welcome their feeder, and it will, in fact, be almost impossible to drive them away till satisfied. They should always be put back in their own nest-pan till strong enough to leave it of their own accord. Feeders may be dispensed with, and pigeons brought entirely up in this way as soon as their natural food fails, if the old birds sit on them. When thus reared they often become so tame as to be actually troublesome. And it will be seen that

there is very little need of loss under any circumstances, if only a little attention can be given regularly morning and evening. A great deal of pleasure is to be found in all this, and in watching the produce of each pair grow up to maturity. No such care at all will be needed with hardy birds, except in case of some accident or previous neglect. All *they* need is to have their hopper properly supplied, and they will bring up their own young ones without troubling anybody.

Some young ones are slow to learn to peck for themselves, though this is seldom the case. The difficulty is more often found with birds fed by hand, which sometimes seem to have little idea of even attempting to feed themselves, long after others of the same age are doing so. Much help in inducing birds to peck may be got from mixtures of *smaller* grain, such as canary-seed, dari, rape, and hempseed. A handful or two of such mixtures, thrown down twice a day, will often induce the young ones to peck, whilst it also helps old birds which are nursing to give a good evening meal to their young ones. When this is not sufficient, a little starvation should be tried: taking care, however, that the young bird is not kept more than twenty-four hours without food.

While the young squeakers remain in the nest-pan the sawdust should be renewed from time to time, taking care to perform this, like all operations, so as not to startle the old birds. With this attention, and an examination every night after the first day or two to see if they want any artificial cramming, they should get on. Especially look after the *smaller* bird of the two, since if one gets much behind the other it is apt to be more and more elbowed aside, "the survival of the fittest" being a rigorous law in the pigeon world. By judiciously cramming the smaller bird *only* of a pair, in addition to what it gets from the parents, it may often be brought up to the originally finer one, and both thus saved. Under no circumstances, however, must *hard* grain be given till the young

can peck for themselves: they cannot digest it; and the soaking is also needed to supply them with liquid before they can drink properly.

In the autumn early-hatched pigeons moult. A partial moult begins as early even as April or May; but about September the quills in the wings and tail are renewed, and the moult of the whole plumage is gradually completed. It is to be specially noticed, that at this first moult the original flight-feathers (called by naturalists the primary quills) of the wing, and which are ten in number, are replaced by others considerably longer and broader. The tail feathers and secondary quills also are usually replaced by larger ones, but the difference is not so marked as in the primaries, which are therefore taken as the usual test whether a bird is hatched the same year or the one before. If any of the nestling feathers are left it is presumed the bird is a young one, the difference being very marked; and as many breeds "make up" a great deal with age, this matter is of much importance—perhaps most so in Carriers, Barbs, and Antwerps. The flight feathers being dropped gradually, it has been proposed that every pigeon intended to be shown as a young one should have one of the new flights stamped whilst some of the old ones are left, which would then stamp it as genuine through that winter's show season, and tend to prevent the frauds which a few unscrupulous exhibitors sometimes perpetrate. As a rule, the plan would do so; but there are some late-hatched birds which only moult one or two flights, or even none at all, the year they are hatched. Such will not moult any more till the following autumn; and if they are of a young-looking sort, which some Carriers are, it has been objected that they might be stamped as young ones the second year, the flights after one moult never increasing in size. Whether owing to this danger or not, the plan has never come into use for public exhibitions, though employed by several private societies. Such exceptions

to the general rule are, however, few, and confined to late-hatched birds; and an amateur may generally conclude, if a bird offered him has in the wing some of the smaller nestling flights along with larger ones of the new growth, that it has been hatched the same year.

CHAPTER IV.

PEDIGREE BREEDING.

It is impossible to produce pigeons (or anything else) which shall year after year come up fairly to exhibition standard, without understanding something of the meaning of the words at the head of this chapter. The reader must, for instance, purchase some stock to commence with. He will constantly see advertised birds from some one's "prize strain," what is meant being that they are the produce of certain other birds which have won certain prizes at certain shows. Now the question is, what these birds are really worth to him; and it may be that they are worth no more than common price, while, on the other hand, they may be worth a great deal. The immediate reason for such difference in value is, of course, that one set of birds are likely to produce the desired class of young ones, while the others are not; and this every one can understand. But since the comparatively worthless and the valuable birds may be apparently alike, and also bred from parents of equal merit (we are putting an extreme case, for there is generally more apparent difference than is here described; still, the case supposed does occur), the question is, *why* it is so.

The first reply that will probably be elicited by inquiry respecting this important point is that the valuable birds—valuable in spite of their comparatively plain character, perhaps—are from "Mr. A's strain" or loft. Observe, not a "prize"

strain vaguely, in the sense that they are from *some* birds which have won prizes, but of *Mr. A's* strain; and we italicise this, because it is the working out of what it means that is the clue to the matter. There is no charm, of course, in Mr. A's name merely; it is something he has *done* that has made his strain thus valuable. What is it? For what one man has done, another may do.

What is known as the "family likeness" of children to their parents is familiar to all, as is also the fact that in degree it differs very widely in different individuals. Sometimes it cannot be traced to any one feature particularly, but is due to an undefinable general impression the whole person somehow produces; in others, some strongly marked feature can be clearly discerned; and in yet others no visible likeness can be traced at all, while there may or may not be evident mental and moral resemblances. If, for instance, the father has a well-marked Roman nose, it is likely this feature may be recognised in at least a portion of his offspring; while it possibly fails in others whose faces, nevertheless, show other traces of his lineaments, complicated perhaps with those of the mother or of other members of either parent family. Again, in numerous cases where no resemblance at all can be traced to the parents, there is often a very startling one to the grandparents, or even to ancestors still further back. Hence it appears that features have a more or less strong tendency to be transmitted to posterity, even beyond the next immediate step in the pedigree; and peculiar or extraordinary features, such as the possession of six digits at each extremity, instead of five, are often thus transmitted very strongly. Many facts of this class, which we need not specify in detail, have well established the general law that every feature in every animal has *some* tendency to repeat itself, and would do so more or less, were that tendency not counteracted by others of a different character. Thus, if one of two parents has black hair and the

other brown, the black-haired parent has a tendency to transmit that feature to the offspring, but it is counteracted or modified by the tendency of the other to transmit brown, and by the colour of the hair in ancestors further back.

Now the kind of breeding which is necessary to form a really valuable strain, consists in throwing the effect of *all* these tendencies into one selected direction; or, in other words, causing the tendencies of great-grandparents and grandparents, as well as of the immediate parents, to combine and unite towards the desired object. Let us go to the pigeon-loft for an illustration. It is by no means uncommon to find a Fantail, through some remains or cross of a strain now nearly extinct, with a crest or peak at the back of the head. Strictly speaking, this is inherited from some ancestor; but for present purposes, we may consider it an accidental variation: any way, it occurs only rarely among common Fantails. If only one such bird be bred from, say a hen, it is probable one or two of her progeny will exhibit the crest, the greater part reverting, or "throwing back," to the usual type in the loft. If a cock can be found—also of the ordinary strain—showing the same peculiarity, the number of progeny exhibiting it will be somewhat increased; but still, supposing the taint or trace in the strain to be very minute, they will probably not be many, and such *plain*-headed birds as are produced will not show much tendency to produce crests.* But now suppose we can select from this first progeny a pair both crested, and breed *them* together. We shall now find the tendency vastly increased, so much so that very likely a good half of the next progeny may be crested, and even those which are not will show some marked tendency to produce crested birds. If we breed from this third generation again, still selecting crested birds, the

* We are speaking of general average results; occasionally a bird will manifest a power of reproducing his or her own characteristics of an extraordinary degree, but this will not affect our explanation.

tendency to produce crests will have been increased enormously; and in a generation or two more it will be so strong that a bird not crested will be as rare as a crested one originally was.

We have now what is called a "strain," so far as regards our one point of crest or peak. We have accumulated into one direction—that of breeding a crest—the transmitting powers of many successive generations, and we have thus produced a race of birds which we can *depend upon* with almost absolute certainty to produce none but crested birds. Suppose, now, that we have been able to keep alive for ten years (not at all an impossible thing with pigeons) the pair of birds with which we started in the series of operations above described. It will be readily understood that they may be almost exactly similar in appearance to a pair of birds we might select from the tenth generation of the progeny; the closest ocular examination might fail to detect any important difference; and yet it will now be clearly seen that the difference in breeding value would be tremendous. The one pair have, or had—for most pigeons would be past actual breeding at the age supposed—scarcely any tendency to produce crests; the other pair can be depended on to do so as regards nearly every bird. One pair would represent to a breeder nothing save some foundation on which he *might*, with care and patience, found a structure hereafter; the other represents work done, qualities fixed, and a "strain" which only demands ordinary care to preserve in perfection.

So far the matter is simple enough; and breeding would be equally simple did every race possess only one point to breed for. But it will readily occur to most that this is not the case; that each race is bred for several, if not for many points; and here the difficulty begins. It is, for one thing, impossible to say *when* the tendency to revert to past faults is—for practical purposes—lost. As to being *absolutely* lost, it never is; a point being known to crop up unexpectedly after twenty generations of freedom from it. Hence it will appear that every time a

bird is purchased to cross with, it may introduce tendencies towards features which are not wanted; and not only such as itself possesses, but others which, not appearing in it, are not known. If we consider, therefore, the average mode of proceeding of a young fancier, we shall be at no loss to account for his ill success. As each fault becomes apparent to him, he is apt to purchase a bird to correct it, as he thinks. Each time he does this, some influence really is exerted upon the fault, and if it were followed up, the ground might be secured; but only little is gained by each early step, and by going off after some other point as soon as the first *appears* right, he drops the next link in the succession, and nearly all is lost again. But now let him consider this fact: that while there are many faults he knows too well may appear in his pigeons at any time, there are other points he *never* expects to find, and which, if he did find, he would at once consider proof that he had been swindled into purchasing absolutely impure blood. Suppose he breeds Barbs. He knows too well that he may get at any time a narrow or wedge-shaped skull, or a great deficiency in eye-wattle, or a nearly straight face. But does he expect ever to see a frill on the breast? No; though this point is found in many other pigeons. Or a crest? No again; though there is much reason to believe that the Barb was actually bred at one time as a crested bird. Whence the difference?

The answer is again obvious if we reflect. A clean breast and a plain head have been regarded for generations as essential features of a Barb, and birds which possessed frills and crests have *never* been bred from. So far as regards these points, *not one single link in the chain of succession* has been dropped, and thus every generation has added to the stability of the breed. The result is that those points are sure; and we learn from it that uncertainty is not a necessary thing as regards any point. It can be overcome, and to overcome it is the work of every fancier who founds a "strain," and whose birds acquire any

special value. We also learn, again, that the one necessary point in forming such a strain is never to lose a link in the process, or ground already gained; but to keep definite objects steadily in view.

This, however, brings us back again to the difficulties of such a course; and, first of all, it is impossible to follow out such a methodical system without very considerable in-breeding. It is always found, practically, that a man who is constantly buying other birds to cross with rarely succeeds. We have seen the reason why: he is constantly introducing into his strain tendencies which, being unknown to him, he can take no account of, and which crop up in the most unexpected manner. Therefore, successful breeders always depend mainly upon successive generations of their own stock. But unfortunately this method has *its* limits, which cannot be passed over, on account of the physical deterioration or weakness which results from too close breeding of the same strain. This may be carried very much further, with care, than some authorities are disposed to allow, without any perceptible injury; but sooner or later symptoms occur which warn the breeder of the necessity for "fresh blood." It may be he finds perceptible loss of fertility, or his young ones often fail to break the shell, or there is a marked increase of liability to disease, or some other evident falling off in vigour or in size. Hence an occasional cross from at least another family becomes a necessity; and this at once brings us back again to the old difficulty of developing not one only, but all the various points which the breeder has in view. The problem may be briefly summed up as follows: We have seen that any given point can be bred with a certainty few beginners have any idea of; but that the means to this end are the concentration towards it of all the transmitting powers of many successive generations, and *never* losing any step once gained by going off in some other direction or after some other point, inasmuch as any such step must undo more or less of what had

been done. The difficulty is, first, to pursue such a course without extreme and injurious in-breeding; and secondly, to harmonise it with the claims of the *several* points or properties which are so very seldom found together in perfection.

The very first step, then, is to consider the various points required in special relation to the difficulty of obtaining them. Directly this is done, it will be found that some points are obtained much easier than others, a single cross often being enough to impart one property, while generations of careful breeding may be necessary to secure others. Where this seems not so, and the difficulties are more equal, it will still be found that some points are of more value than others, though we suspect that value is determined by difficulty in most cases. This comparative appreciation being arrived at, then, any reader who has followed us will see the conclusion to be arrived at. Picking out one or two of the most difficult points, fasten attention on that one, or at most two, and *keep it there*. In selecting the first stock, and ever after, pay such heed as possible to other points, but *never* lose sight of these.

Again, at the outset, at least two, and where possible more pairs should be provided, in order to avoid any necessity for a cross until the new strain is *thoroughly* established. This is all-important to any one who means to have a strain of his own. We have already seen that there is a tendency in all animals to throw back to long-lost characters; but Mr. Darwin has clearly shown that this tendency is tremendously developed by the mere act of crossing, whenever the cross is real and thorough. Thus it is that when two distinct races of non-sitting fowls are crossed the progeny often recover the long-lost faculty of incubation, and more or less of the colour of the wild jungle-fowl. Suppose, therefore, A has been breeding Carriers with chief reference to size of beak-wattle, whilst B has been attending more particularly to the form of that point, and to the development of eye-wattle. A finds his birds have plenty

of beak-wattle, but very irregularly put on, and with little "eye," and resorts to B, whose birds show great beauty and regularity of eye, though they have much less beak-wattle than he approves of. He obviously runs two risks. If B can spare him a bird large enough in wattle to "pass" with him, it may be that one is the *only* one B has anything near the mark; and if so, he loses more than the bird itself appears to justify, since the progeny will tend more to the *average* size bred in B's loft. And, secondly, because the two have pursued different lines and sought different points, the mere fact of *crossing* such distinct strains may of itself develop the old and almost forgotten faults of either or both.

From this we see why a cross should not only be good in itself and "well bred," but the produce of a similar *course* of breeding to the birds which are crossed; and the only sure way of securing this is for the same individual to have bred both, when he can tell the latent tendencies of each. Two fanciers, who have an acquaintance of years, and know each other's lofts thoroughly, can, for the same reason, often be of the greatest assistance to each other, especially if their opinions pretty nearly correspond. Help of this kind would be more common but for a foolish jealousy which is too frequently found, and which leads each to expect *all* the benefit from a proposed exchange. In all such matters there must be give as well as take; and if this were clearly recognised much more mutual help might be found than is at present common. Meantime, if three separate families, say, can be started from three related hens, the chief advantages of a cross can be enjoyed for many years without its evils, by keeping a record of pedigrees in any effectual manner that may be preferred. Where another person must either breed together a brother and sister or obtain a cross, a breeder thus provided can take a bird from one of his other families, which in the course of breeding has reached about the same point by the same means, and will thus produce

similar effects. He thus keeps his strain in his own hands, and can carry out all those further details of selection which have constantly to be attended to if any high standard of excellence is to be maintained.

With the produce of the first birds selected as above described, the first year's breeding comes to an end. As that produce comes to maturity, or approaches it (different varieties are very diverse in this respect, some taking several years to mature, while others are as good the first season as ever after), they will, of course, be carefully scanned. If the proportion of satisfactory birds is good, it shows that the pair have not only been of good breeding themselves, but have "hit" well together, in which case both should be kept, unless too old for further breeding. In selecting the progeny, that selection should be first made for the same one or two points before decided upon as hardest to produce. *Next to these*, but *never superseding them*, let selection be made for other points in order of their presumed value, and paying little heed, if necessary, to such points as can be gained at any time by a single cross. If one or two birds should happily appear which not only show the first one or two points in degree approaching perfection, but the other desired points also, let them be treasured accordingly. Some people are, when thus fortunate, tempted to sell by a good price; but this is short-sighted policy. At such a stage in the history of a strain, the owner cannot *afford* to sell such birds; later on, and when he has the reasonable prospect of producing more of the same sort, he may, but he should not now. Having selected, then, the best of his first year's produce, there are several ways of proceeding. (1.) They may be matched for next year with their own parents; and if these are of good quality and suit them fairly, this is a very good plan. (2.) They may be matched with adult birds other than their own parents; and if these also have bred really well, and are somewhat related in blood, this plan

may answer; but, for reasons already seen, it is not advisable when the other pair is a total cross. (3.) They may be matched *inter se*, brother to sister; and this answers well when there has been no previous inter-breeding. (4.) They may be matched with young birds from another pair. If there are good birds enough, and there is room in the loft, we advise all these plans being pursued, by which all degrees of temper in the strains first started with may be secured, and enough crosses obtained at once to last for many years. But in all cases, whenever any pair of birds has been found to breed extraordinarily well, it is best to keep them together as long as they will breed. The birds themselves will thus get thoroughly settled together, which facilitates successful rearing of young.

The second year's breeding should show some advance, not, perhaps, in the actual development of the most desired points in any one bird, but rather in the *proportion of birds* which exhibit a satisfactory development of them. It cannot be too well remembered that this—the proportion of good birds—is the real test of progress in a strain. What is called "good blood" is now so widely distributed by sales from various lofts, that extraordinary birds sometimes occur by what can—so far as any human skill or method is concerned—only be called chance. We have already seen that such are of little comparative value in reproducing their like; but any perceptible increase in the proportion which show fair quality, represents real ground gained and real work done, and there is the greater probability that birds showing more than fair quality will appear. Further advance still will be made the third year; indeed, it will now be found that (in all but one or two of the most "high-class" varieties) the one or two cardinal points have become, to a very fair extent, certain in the new strain. And now mark the result. The proportion of birds which show these will be now so large, that out of them there will be little difficulty in selecting for breeding those fairly perfect in the *next* most important points.

And so the process will go on; but we need not follow it further. The principle of action, it will readily be seen, is as simple as can be. Every variety has some point or points which above all others demand the longest breeding and patience to acquire; and on these should attention first be fixed, and kept there, gradually giving attention to others, *not by turns*, but just as fast as (and no faster than) the *increased number of birds good in the first points*, and therefore so far admissible to breed from, enables selection to be made for the next point desired. In this way every year will show a sure and steady increase in quality; and, after the first two years, that improvement will be so rapid as to be almost beyond belief; provided, of course—what is clearly implied—that the best birds, *from the breeding point of view*, are never sold, but kept for the loft. A man cannot reasonably expect to make any marked progress, who constantly sells what really represents all the ground he has gained. On the average, however, this proviso will not be found to sacrifice much in the shape of sales; since it will often be the case that the most valuable individuals for sale or exhibition are not those most valuable for breeding. For the latter purpose we have seen that we must choose, especially in the earlier stages, the most marked excellence in one or two points; but for show (and therefore for sale) the best are usually those which exhibit the best average of all points, though they be somewhat inferior in those specially sought. Later on the best for breeding will be also the best for show purposes; but by that time the amateur will be enabled both to breed and sell also. Many are, however, too impatient thus to *wait* for results. For such impatience there is no remedy; those who do not patiently wait and work in the manner described, will assuredly never create a strain, or learn what skilful breeding really means.

When the most cardinal points are thoroughly secured, a little may occasionally be risked. Here, indeed, is one great

advantage of such a course of breeding as that described. Those cardinal points become at last so *fixed*, as it were, that a bird a few degrees worse in them may occasionally be bred from for the sake of other points which may be wanted. The nature of such a proceeding must, however, be clearly understood. It is simply that the point so fixed is probably only accidentally deficient in the chosen bird, which is therefore *trusted* to "throw back," or revert to it. Obviously such a step should only be taken with great caution, and never repeated through two following generations; neither should a bird really bad in such a point be ever employed. But a bird not quite so good in the first points may be occasionally risked, though the fact that it *is* a risk should be clearly understood.

It may sometimes help to decide such doubtful questions as to the propriety of any given procedure, if we bear in mind that pigeons, on the average, show a decided tendency to revert to the points of the third previous generation, or their *grandparents*. We have found what seemed to us evidence that some other animals show a similar tendency to revert to the fourth generation, or great-grandparents; while the majority, perhaps, follow the immediate parents. This subject is interesting, and at present rather obscure; but many practical breeders have noted the tendency in pigeons here described, and the knowledge of it may occasionally be of considerable value in determining a match.

One thing more has to be said. After all, and with every desire to avoid it, crosses are sometimes necessary. When this is felt, care must obviously be taken to avoid too "sudden" a change of blood, which *always* brings with it more or less tendency to—the breeder never knows exactly what. If, therefore, he can obtain a suitable pigeon from a loft which has a good fraction of the same blood as his own, that will be best. When he cannot, he should pair a selected bird with a good one of his own, the furthest removed his loft can furnish from the family

it is desired to refresh. Then the best bird *of the produce* should be selected for the actual cross. By this means much risk is avoided, and much time may eventually be saved, since it may take years to finally get rid of the results of any rash experiment which turns out badly.

The method of breeding which has been here described has been more or less followed by all practical fanciers, though it is doubtful if the reasons for it have been clearly understood. One quotation will suffice to show this, from Eaton's well-known reproduction of the "Treatise on the Almond Tumbler." This bird, as is well known, is bred for five main points or "properties," viz., head, beak, eye, shape or carriage, and feather; without all which no pigeon is perfect. But observe what is said in the Treatise:—"There are young fanciers who are over-covetous, who go for *all the five properties at once; they have their reward by getting nothing.*" The reason is not explained; but the fact had been discovered by repeated experience, and such a statement of it may fitly close our own remarks upon the subject. We trust these may have made clear what an amount of intellectual gratification is to be derived—quite apart from any mere success at exhibitions—in watching the steady progress of a strain towards a determined point; and how the individuality of a breeder must ultimately become stamped upon it, so that *his* birds, or other animals, can, by intangible but perceptible features, be distinguished from those of others, and become known as his own. The strange power man possesses of thus moulding other animals to his will, is a mysterious approach, though in lower degree, to the divine operation shown in the creation of species; and a similar, though lower example of the power of intelligent Will to modify, not only the inorganic world, but actual forms of life.

CHAPTER V.

EXHIBITING PIGEONS.

It is almost impossible to make any real mark in the pigeon-fancy without exhibiting in some form; by which we mean simply producing one's own birds in company with others of the same variety for comparison, and exposing them to the more or less free comments of other fanciers. Birds of a very respectable class may of course be produced without this; but birds of the front rank—such as are fit to hold their own in good competition—scarcely ever, since without actual comparison the amateur can never know how his own stock really stands. It may be asked, Will it not answer the same purpose to carefully compare *other* birds when thus shown, and then judge how they rank towards his own? Certainly not. Did ever any mother think her own child ugly? and she is not more blind to its defects than a fancier to those of the birds he has bred. He cannot but exaggerate in his own mind their good properties and tone down their bad ones; and so much is this the case that, even if his birds *at* a show are far apart from others, it is almost impossible for him to judge them fairly. No; he should see them *side by side* with others, and thus only can he learn how they really stand, till years of experience have put him quite beyond our teaching. At most shows there is sufficient good feeling and freemasonry to allow of any birds being thus taken out of their pens and compared with others—of course, under proper supervision—and in this way much may be learnt; whilst personal conversation will bring to light points the owner never dreamt of.

The money consideration is also important to most people. Good birds can only be procured at good prices—rather large prices in some varieties—and unless some can be sold also at

good prices it is impossible breeding them can pay. Shows are the greatest help towards selling really good birds; and a really first-class price now and then is a wonderful help towards expenses. We give the following as prices which have been realised during the last few years within our own personal knowledge; and it is worth noting that in most cases they were reaped by genuine private breeders, and not by the leviathan dealers who are sometimes supposed to monopolise this sort of thing. Carriers, £100 (twice) and £60; Pouters, £55, £50, £48; Barbs, £30, £25; Dragoons, £25 (three times) and £20; English Owls, £50, £40; Turbits, £35, £30; Antwerps, £50 (twice) and £35. These birds were of course the pick of their several varieties, and in some of the cases the above prices were given *by* dealers for their possession. Fair prices would be reaped much oftener by young breeders did they have the modesty to confine themselves to one sort, or at most to two, the second of which was either useful as a "feeder" for the other, very similar to it in character, or *very* dissimilar. Such a limited field of effort may be mastered, as has frequently been done; and a second variety, selected as above, will not spoil the inexperienced eye, as any other choice is almost sure to do.

The exhibition so necessary need not necessarily, however, be at public shows or for money prizes. In nearly every large town there is now a respectable Columbarian Society, holding monthly meetings; and at these meetings the amateur can exhibit his birds without the fatigue of long journeys and long confinement, taking them himself, and returning them after a very few hours to their loft, thus getting their merits canvassed in the freest and most friendly way possible. This will answer every necessary purpose if the birds shown by other members of the society *are good enough*—a fact that can readily be ascertained. Really first-rate quality can be sold by this kind of exhibition as readily as by the other; and there are

certain well-known breeders who are scarcely ever known to exhibit in any other way.

Exhibition at public shows is a severe tax on most birds, and they should not be too often exposed to it. Hens of many varieties are speedily rendered useless by over-showing; and well-known show hens should therefore only be purchased with extreme caution for the breeding-loft. The evil is made worse very often by neglect of proper attention. For instance, heavily-wattled breeds need a trough, which must be *inside* the pens, since they can neither see to feed properly from the floor of a pen or get their heads through to the outside; the latter disability also applies to water. These matters are, however, improving, and it is not our purpose in this work to give any details as to the management of shows.

Pigeons are sent either in boxes or baskets. For a single bird or a pair, any box, not less than six inches deep and of a suitable size—such as grocers have by scores—will do, boring a few half-inch holes round near the top. If such a box is for a pair of birds a thin partition must be fixed in, not square, but *slanting*, as at A B in Fig. 18, so as to fit the general shape of the bird and keep it from turning round. For a larger number of birds Fig. 19 is the best box with which we are acquainted, and is the result of many trials. The wood for the outside is made as thin as consistent with strength, the upper edges being scolloped out for ventilation. The partitions and inner lids are not only very thin—$\frac{3}{16}$ of an inch is sufficient—but are pierced with *large* holes as thickly as can be arranged. This plan promotes ventilation, as well as saving weight. Near the bottom

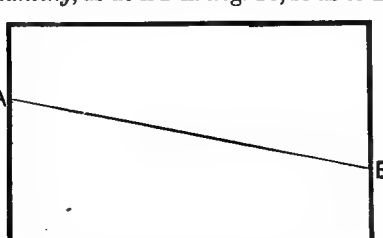


Fig. 18.

of the large end of each division of the box two or three holes are bored to *admit* air, which passes out through the perforated lids and scolloped outer edges. In the box here figured the inlet holes were made *in* the bottom; but this plan is objectionable for two reasons—(1) It necessitates

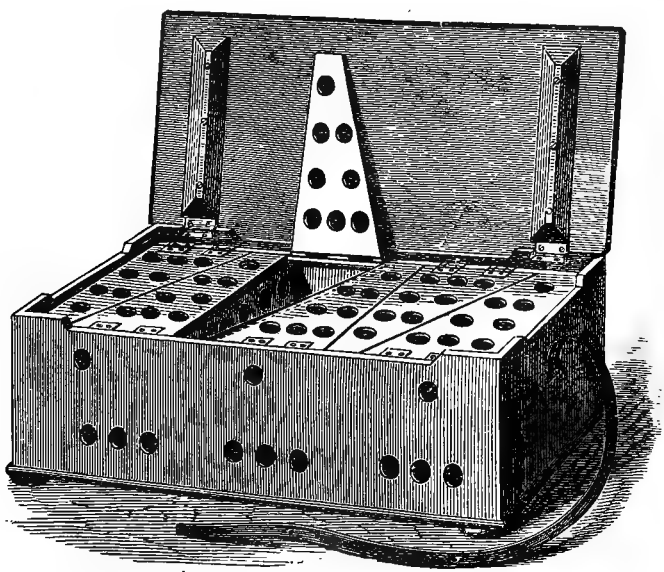


Fig. 18.

straw at the bottom, anything else shaking through the holes; and (2) whenever the box is set down, unless raised from the floor by knobs or feet as shown in the figure, all inlet of air is stopped altogether, except through the top, and consequently the birds are often taken out reeking with perspiration. The use of feet to some extent avoids this, but not altogether, and weakens a thin box considerably; while by making the holes near the bottom, but in the sides, all difficulty is avoided. The

box here figured was smaller than usual, being made for six Almond Tumblers; it measured $20 \times 9 \times 7\frac{1}{2}$ inches, and weighed only 4 lbs. 9 ozs. The cover is kept down by a buckled strap, which must be fixed lengthwise to give any comfort in carrying. For larger birds, such as Carriers, a different arrangement would be better if the box is meant for hand-carriage to society meetings, *width* being more awkward in carrying than length. Instead of putting six birds across, we should prefer to arrange a Carrier-box for four birds, arranged lengthwise as two pairs. For railway use width is of less importance, and the plan figured is simplest; but it should not be forgotten to adjust the height so that the box will go under the seat.

A Scotch friend of ours strongly advises home-made *papier-mache* for boxes, as both stronger and lighter than wood. Those who wish to try this mode of manufacture should dissolve one ounce of Scotch glue in twenty ounces of boiling water, and the last thing before using stir into it, a little at a time, twenty grains of chrome alum dissolved in ten ounces more of hot water. This will entirely prevent the glue being ever affected by damp, and keep the whole manufacture hard and stiff; but no more must be prepared than can be used at a time; as when once cold and stiff, no amount of heat will re-dissolve glue to which chrome alum has been thus added. Sufficient sheets of any waste paper can be glued together with glue thus prepared, and left to dry in a press.

As a rule, baskets are however most used, and are on the whole preferred by the most experienced exhibitors. They are light, strong, and afford good ventilation. The square-made, oblong butter-baskets do excellently, fitted up as follows. Line the sides only with unbleached linen or calico. Across the middle, a very little below the tops of the two longest sides, fix a strip of wood about three-quarters of an inch wide and half an inch deep, and stitch to the inside of the sides one straight partition of the linen. Stitch other partitions of the same material

diagonally (all pigeon compartments should be wider at the shoulders of the birds), according to the size; for our illustration we have taken a small basket, and only made one diagonal in each half, the whole thus taking four birds. Now make two *open* flap doors, either of light wire or wicker, just large

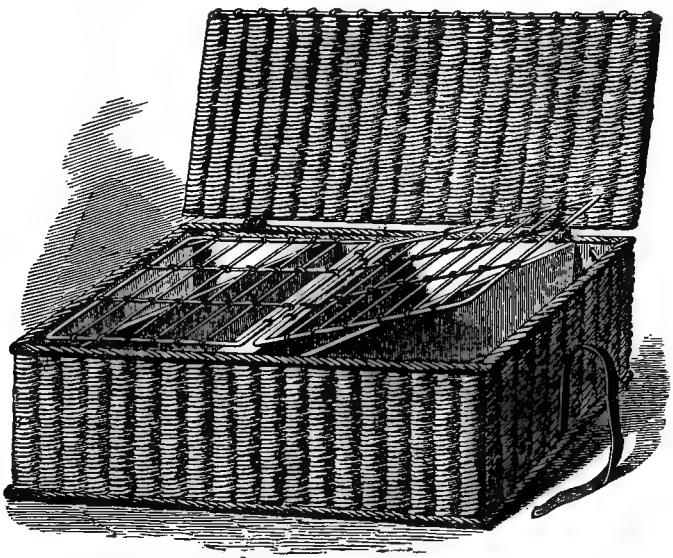


Fig. 20.—Pigeon Basket.

enough to lie, their inner sides on the middle piece of wood, and their outer corners on small supports fixed in the corners of the basket. Drive in small staples over the inner wire or piece of wicker into the wood, and these will form hinges. A better basket than this cannot be had, such *open* flaps having not only the advantage of allowing freer ventilation than more elaborate baskets afford, but making it impossible for any bird to be overlooked, as very often occurs when close lids are employed. The same plan may be applied to a basket of any size. Bare wicker

is apt to catch and ruffle the plumage, as well as giving too much draught in bad weather. Fantail cells should be "shaped" very carefully; and even then it is almost impossible to get this variety to a show without some damage to the tails.

A basket should never be lined at the top or bottom—only at the sides, to keep off wind. For the bottom, we infinitely prefer *tan* to anything else: it is clean, very conducive to health, a natural antiseptic, and keeps the birds in good condition. Where they can be got easily, hops are also good for the same reasons. Next we prefer *cut* straw; long straw makes pigeons dirty on a long journey.

White pigeons sometimes require to be washed. In that case use soft water at 90°, with good curd soap, and a *very* little blue—just a shade. Use the soap freely, and wash *well;* after that, the great secret is to wash every particle of soap completely out, and to dry *by hand.* That is, hold the bird, turning it about, a moderate distance from the fire till it is nearly or quite dry. Light Silvers often look dirty, but cannot be washed so well, the process taking off the peculiar powder called "bloom," of which pigeons have so much, and thereby spoiling the effect completely.

On the other hand, the removal of that same bloom will considerably improve a poor bluish-black. Faulty colours are *oiled* by some people, but such tricks are so evident as to be more disgusting than anything else. The best that can be done for any faulty-coloured bird capable of being improved by more richness is done as follows, which is not considered unfair. Work the palms of the hands violently together (or adopt any other mode of exercise) till they perspire pretty freely: then take your bird and stroke it persistently with the moist hand. In this way the bloom is removed, and an imperceptible "polish" given, which in some cases is very remarkable for such simple means. A judge who gives a prize to an "oiled bird" never ought to be asked to judge again. Perhaps some little exception

may be allowed as regards the *heads* of some black pigeons, such as Barbs, which often have to be washed, and would then look very dry if shown in such a state. When such washing is necessary, therefore, some people think it no wrong to put a small particle of butter on the still wet head, and wipe thoroughly in with a damp towel. This process restores the brilliancy of look, but requires great care not to overdo it; the secret is to put the butter on *while wet*, and then with the wet towel endeavour, as it were, to get it *all* off again. It is perhaps fortunate that the process is only capable of being successfully applied to the fine short feathers of the head, and we have seen it overdone even there. Strictly speaking, it is an artificial improvement; but it is generally done by people who know how, and is at all events a comparatively innocent kind of thing. We hold, however, that if any grease be *apparent*, even on the head, it ought to disqualify.

Pigeons shown in pairs should be separated a few days—and only a few, say two or three—before the show. When they come together in the show-pen, their mutual gratification will cause them both to show to the best advantage they are capable of.

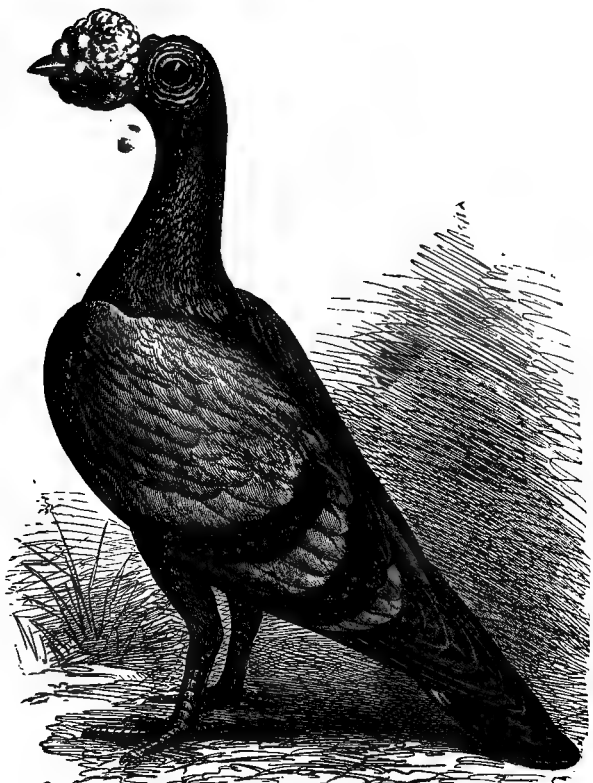
Never return a pigeon to the loft after exhibition till you have given it a most careful scrutiny. If the crop is empty and it seems "done up," *see* that it both eats and drinks, and only moderately at first. If anything seems the matter, keep it apart till you *see what it is*. Attention to these simple instructions may save many birds and much trouble.

CHAPTER VI.

CARRIERS.

THE Carrier seems to have been the most esteemed pigeon in Moore's time, and it is, upon the whole, the most popular pigeon still; twice the amount of money, at least, being annually spent upon this bird that is expended on any other variety. From an anecdote quoted by the old writer just named, it would appear that the original progenitors of the breed really obtained the name by carrying messages; and when we consider that Moore only describes the eye-wattle as the size of a shilling, and the beak as an inch and a half in length, there is nothing incredible in this. It is plain, in fact, that Carrier, Horseman, and Dragoon were allied names given to closely allied races, and that the whole were bred up from one original stock. Some Dragoons of the exaggerated London type prevalent some time ago would closely resemble Moore's description of a Carrier, and that this pigeon is a fair homing or message-bearing bird is well known. In the process of development the Horseman has naturally disappeared, being of that medium type fanciers never care much about.

Still it is remarkable how little, as regards head-points (the principal properties of a Carrier), we can improve upon Moore's description, which is still, of all we have seen, the best adapted for explaining to a novice what is desired. It must first be explained generally that the Carrier is a long-headed pigeon, having the cere round the eye developed into a broad circular surface of whitish naked substance, called by Moore the "eye," and by modern fanciers the eye-wattle. The warty substance visible on the beak above the nostrils in all pigeons is also enormously developed into a large, whitish, cauliflower-looking substance, called the wattle, or beak-wattle. Moore then



BLUE CARRIER.

describes the Carrier as having twelve points, or "properties," viz. :—

1. Three in the beak;
2. Three in the [beak] wattle;
3. Three in the head;
4. Three in the eye [wattle];

which are further particularised as follows :—

1. The properties of the beak are to be (*a*) long, (*b*) straight, and (*c*) thick.

2. The wattle ought to be (*a*) broad across the beak, (*b*) short from the head towards the apex, and (*c*) tilting forward from the head.

3. The properties of the head are (*a*) its length, (*b*) its narrowness, and (*c*) its flatness.

4. The eye (or eye-wattle) ought to be (*a*) broad, (*b*) round, and (*c*) of an equal thickness. To these, Moore remarks, "some add the distance," or space between the hinder part of the wattle and front edge of the eye-wattle; but as this disappears with age when the development is large he will not allow it to be a property. On this point see our remarks further on.

The length of beak is now measured from the point to the centre of the eye itself, as the only certain method; and Moore's length has been increased to two inches, or even occasionally more, though an eighth less is very good if the head be well proportioned. Formerly the length was often taken from the nearest corner of the eye-lid; but as some eye-lids are much wider across than others, this method gave some birds considerable advantage, without any really greater length of "face," as it is called, and has been practically abandoned. It is not difficult to procure birds that will breed mere length of beak; but it is difficult to procure length combined with the other properties, and a good head and beak $1\frac{7}{8}$ in. measure are infinitely to be preferred to a face over two inches which is deficient in other points.

Straightness of beak is a rare point. The growth of the peculiar substance termed the beak-wattle seems to have a natural tendency to both shrivel up and *curl* the upper mandible, so as to leave a space between the upper and lower. This fault is increased in some birds by the neglect of the owners, or their desire to boast of the length of the face. When pigeons are fed from a hopper the upper mandible always has a tendency to overgrow, which is not the case when the food is pecked from the ground; and if Carriers are left to this tendency unchecked, the result may be a two and a quarter inch face. But such a beak is worthless, being excessively curved, and tending ever to get worse and worse. The beak should rather be trimmed back occasionally to little more than the length of the lower mandible, and keeping the lower edges as straight as possible, and in this way the length lost is more than compensated by the improved appearance and health of the bird. The last consideration is very important. The mouth of every creature is intended to be moist internally; but when the upper mandible becomes so curled as to leave a space between it and the lower, an unnatural dryness of the mouth is produced, which not only causes canker and other affections of the mouth or throat, but, indirectly, other diseases. Young birds which require it are often manipulated while the mandibles are soft, to straighten the beak; but such "made" faces can almost always be detected, and not much is gained by it, as it depresses the beak-wattle just where convexity is most desired. In straightness of beak Carriers have improved considerably of late years.

The beak should also be thick, *and blunt at the point*, to give the best effect. It is particularly esteemed if the lower mandible be as thick as the upper. When all the points as here described are fairly combined, we have the "box-beak," so much valued. Any strain that produces long, straightish, and thick beaks *is of value;* and it may probably be found far easier to graft other desirable points on these than to add

good beaks to a strain which wants them, however good otherwise.

It may be noted here that a straight beak is not to be confounded with a straight "face," to be noticed presently. It is also noteworthy, that while old fanciers preferred it black, moderns prefer pale or flesh-colour.

The beak-wattle is perhaps, by many people, the most valued point in a Carrier. The day has, however, passed when mere size of wattle is worth everything, for birds can now be readily found with any amount, owing to the long efforts of many fanciers. Mere size is valueless without shape; and here, perhaps, is the greatest change since Moore's time. Taking his first property, a wattle may be wide from side to side, but if flat or hollow on top would be worth little, unless for some particular cross (and very few crosses could do much good with it). His second point, that the wattle should be rather short from front to back, still remains true. This enables the bird to show a good beak in front of the wattle, which adds to the apparent length of face and general "style" of the bird, and is less likely to spoil the beak. A shortish wattle is also less liable to crowd the eye-wattle behind. The third point is to be "tilted," by which Moore means that the posterior end be arched well away from the eye, the two wattles going off in two opposite, nearly similar, circular curves. This remains one of the chief points in a good wattle. There are various shapes admired by different fanciers, but they chiefly resolve themselves into two types. One resembles an ordinary peg-top, the steel peg standing for the point of the beak; the other more resembles a walnut, or even a sphere. But the essential points in all are that the wattle be symmetrical, with no great inequalities anywhere or any preponderance on one side, and that it be rather *convex* in every direction, with no flat, much less hollow, places. Our engraving of a Blue Carrier will illustrate one type of wattle, and Fig. 21 approaches

the other, but has also some tendency to the peg-top shape. To make symmetry complete, the wattle (technically called "jewing") on the under mandible must so harmonise with the portions which overhang the lower jaw from the upper, that the upper and lower halves of the beak-wattle seem to balance each other. In these respects the head here shown is a model.

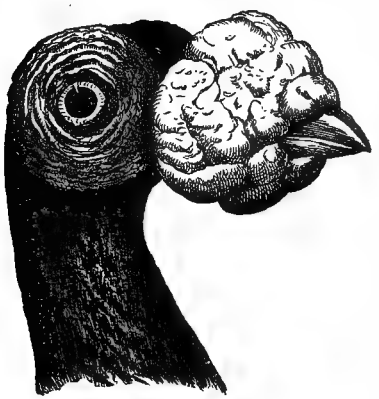


Fig. 21.—Head of Carrier.

We have seen very good wattles of the walnut type which came very forward on the beak. In some cases this makes a bird look uncommonly well, owing to the wattle keeping well away from the eye. It has, however, two objections. The first is that its weight, being so far forward, has a tendency to drag the point of the beak down, which is called being "down-faced;" whereas one great beauty of a Carrier is to carry the beak horizontally, which is being "straight-faced." All very large wattles are apt to cause this fault, by the way; but, of course, the more the weight is forward the more it operates. The second evil is that a forward wattle generally impairs the beak, as already seen; and this fault makes such birds dangerous matches. They can, in fact, only be safely used for birds which, with plenty of wattle behind, are rather short in front, and have massive, blunt-ended beaks.

We may remark also on the "distance" referred to by Moore. As a Carrier ages its beak-wattle grows backwards, but not forwards. It therefore approaches the eye-wattle; and

if there was not at first a good "distance" between them, one will obviously crowd up the other, and spoil the beauty of the circular curves, which are replaced by a more or less straight line at the junction. Hence this is a very important point to consider, both in judging and selecting breeding stock; and more attention to it would do more than anything else to check the abuse which has lately grown up in some quarters, and which demands a few words, of *cutting Carriers' wattles.*

Even in Moore's time it seems the Carrier wattle was the subject of fraud, cork being then squeezed underneath by sharpers to increase the apparent size. The process now is the exact opposite of this. The birds, having been bred for many years for as much as possible, frequently now develop *too much*, but of a bad shape; and hence some act upon the simple plan of breeding for mere quantity, and then *cutting* into the proper shape. The operation is perhaps not so cruel as some may imagine, the substance operated upon differing from flesh materially; but that very considerable pain is caused can scarcely be doubted, independent of the fraud. It is usually necessary for those who act thus to cut away a large quantity behind in particular, to clear the eye-wattle; and even the latter has often to be trimmed a great deal at the front edge for the same reason, thus losing the circular shape so much admired. Much indignation has not unnaturally been expressed that the judges "do not disqualify" such birds; but the fact is that absolute proof (which ought always to precede penal proceedings) is very difficult. For some time, of course, the cut surface is obvious as such; but after a few months, when the cauliflower surface has re-grown, this test fails. A suspicious contour in the region of the "distance" is a more certain and permanent test; but even this is not infallible, for we have known a remarkably honest-looking bird which, to our certain knowledge, had been "cut" severely; whilst we can recall others of most suspicious appearance that, to the best of our belief,

grounded on very frequent inspection from the nest-pan, had either nothing at all or very little done to them. While, therefore, it cannot be doubted that judges should keep a keen look-out, and often act with more stringency, it is quite possible to do injustice in this respect; and we do not think the practice will ever be put down in this manner.

A surer remedy for this and many kindred evils in other varieties would be found, did judges attach more weight to a proper *balance or proportion of properties.* The evil in question has obviously arisen from attaching overmuch importance singly to size of wattle. Now any property is good, *with the other properties;* but we hold that when it destroys other properties it is no longer a merit. In this case, exaggerated beak-wattle spoils the beak, causes down-face, makes a thick and coarse neck, and is too often accompanied by a thick and coarse eye-wattle. All these are serious faults, which spoil the beauty of a Carrier, and are contrary to every old tradition. It is easy enough to get one point, such as beak-wattle, if others are allowed to be overlooked for it; but it is impossible to go beyond a certain point with due attention to all. That other points *have* been neglected in judging Carriers is notorious; and in returning to a more healthy standard will, we believe, be found the true remedy for abuses of this kind.

The head needs little detail. It should be as long as possible from back to front, as flat on top as possible, and as narrow from eye to eye as can be got. In this latter respect, coarse thick eye-wattles quite spoil an otherwise good head. We may add that a very important point, not mentioned by Moore, is *parallelism* of the head; that is, the space between the back edges of the eye-wattle should not be greater than between the front edges.

Clever sharpers occasionally practise great cruelty on a fine bird which may be too broad in the skull by cutting out a strip of skin from the middle of the head and sewing the two

edges together. This process has been detected on one occasion by the thread used for the purpose being left in, through an oversight; but it may generally be detected by the *unnatural* drawing together of the top edges of the two eye-wattles. We say "unnatural," because several types of eye-wattle naturally roll over towards the middle of the skull, and must not be confounded with the appearance described, which shows that the tops of the eye-wattles have been actually *pulled* over by the stitches into a position unnaturally near each other.

We have lastly (as regards Moore's scale) to consider the eye-wattle. In his day this had attained the size of a shilling, or nine-tenths of an inch; but good birds are now often shown which measure an inch and an eighth across, and an inch and a quarter or more is not rare, taken alone, though rare enough in conjunction with the other good points already described. Fraud is sometimes employed to increase the apparent diameter of wattle in exhibition birds. It will be found that the surface can readily be increased for a few moments by spreading out the cere with the fingers; and hence some unscrupulous persons endeavour to make the temporary extension sufficiently permament by a wash of gum, which, when dried on the wattle, keeps it stretched to the artificial dimensions. It is, however, a clumsy proceeding, which can only deceive a culpably careless judge, and can be detected in a moment by applying a moistened handkerchief.

The wattle must also be round, by which is meant that the eye itself should occupy the true centre of a nearly true circle. This property is apt to fail in two ways. The first has always been a difficulty, and consists in a strong tendency to fail behind the eye, the wattle growing more to the front; the top also tends to grow heavier than the bottom. A bird that thus fails in the posterior part is termed "pinch-eyed," and not one-eighth of the Carriers shown are free from some slight appearance of this inequality. But the neglect of general harmonious proportion has

produced another fault of late years. There has not been *room* for the immense wattles produced, and the eye-wattle *cannot*, therefore, grow circular in many birds, but is much deeper from top to bottom than it is in width from side to side: in fact, what should be a circular curve in front becomes a near approach to a straight line. This fault has become so common that many judges as well as exhibitors condone it, and are satisfied if the perpendicular oval thus produced has as much behind the eye as in front. But we must contend that the standard thus set up is a false one, which destroys all æsthetic beauty in a Carrier, and is yet another example of the evil of developing any one property so as to impair others, or out of due proportion.

Lastly, the eye-wattle is to be as nearly as possible of equal thickness all over. Obviously, as we want the head to be narrow, this uniform thickness should not be great, or the character of the head is destroyed; and this brings us to a very important question in Carrier breeding. There are totally different classes of eyes. The best is a thin type, but full of small wrinkles, arranged nearly in concentric circles, like the petals of a flower, and which, on this account, is termed by some fanciers a "rose" eye. It occurs of different sizes, and of slightly harder or softer texture; the former kind, when large, standing up high above the skull, like pieces of thick cardboard; the latter having more tendency to roll inwards towards the median line of the head. All eyes of this kind, however, are of harder texture than those to be presently described, and are therefore comparatively free from the "spouts" which are so troublesome in the fleshy eyes. For the same reason, however, it is very difficult to get them very large without a *falling-off in beak-wattle*, no bird appearing able to develop above a certain total quantity of this more solid material, and any great excess in either being, therefore, counterbalanced by deficiency in the other. But we have seen many birds with an inch of this kind of eye which had splendid beak-wattles; and as an

inch is as much as there is *room* for to be truly circular, we must consider this kind of eye to be the true Carrier type, and the only one which preserves *all* the acknowledged characteristics of the bird. It is usually of a slight pinky or flesh colour; and we have heard a judge object to this, but never when he had any pretension to a practical knowledge of the pigeon he was judging, the thinner and harder eyes being preferred by all Carrier breeders of whom we have ever asked a question on the subject. On the other hand, this kind are far more liable to be "pinch-eyed" than those next to be described.

This is what is known as a thick or "fleshy" wattle—a kind that has greatly increased of late years. There can be no doubt that this formation has sprung up from the long-continued breeding for immense development, which has produced a more soft or spongy kind of the peculiar formation of which wattle consists. This kind of eye is usually whiter than the other, and has much less of lacing (or fine wrinkles) in it; it is also much less liable to grow "pinched." For these reasons such soft and fleshy wattles often appear exceedingly attractive in young birds; indeed, prizes are generally given to them the first season, since they alone usually have sufficient development to contend in the show-pen. But as they get older their beauty is almost always lost in various ways. There is no "distance," or not enough; so that as the beak-wattle makes up, both eye and beak-wattles are crowded together; and they grow at last so thick that we have measured many birds which were over an inch and a half from outside to outside of each eye. Some of these birds had been great prize-takers, and the best of them had enormous beak-wattles of excellent shape (though some of this had been got by cutting); but such a width is, in our opinion, contrary to the whole character of the bird. No doubt the eye-wattle had rolled over the skull, so as to make the width of "feather"

between eye and eye very little; but the effect of the whole head was thick and chubby, and so far quite contrary to the Carrier type.

But there are other disadvantages of this kind of eye wattles. They are a constant source of misery to the bird. The wattle, being so thick and soft, as the bird gets old often falls down more or less over the eye. This has to be cut off, and the bird is then relieved for a time; but the wattle grows so fast that the process has often to be repeated a second or even a third time. Still more constantly, however, these fleshy wattles form under the eye what are known as "spouts," or, in other words, a groove or gutter, from which fluid constantly flows. This is generally supposed to be caused by the thick wattle pressing on the eye-ball, and thus causing irritation, the resulting fluid causing the spout; but we are inclined to think the usual cause is precisely the opposite, and that the heavy wattle draws the lid *away* from the eye. If the reader pulls his lower eye-lid away from the eye-ball for a few moments, the irritation felt and the secretion of fluid which follows will show at once what we mean; and in no other way can we explain the constant occurrence of small pimples on the inside surface of the eye-lids in these cases. Any large eye-wattle is rather subject to form a spout, which may also follow a peck from another bird, or any other injury; but the fleshy-eyed birds are far the most subject to it; and as the constant discharge from the eye is very weakening, this is a very serious consideration, and a strong reason for preferring thin-eyed birds.

Besides the head-points which have now been described, Moore justly lays great stress upon a long and *thin* neck, which was even then beginning to be deemed a property. It is considered so now in the fullest sense, and it almost invariably carries other properties with it. For instance, a Carrier should have good length of thigh and leg, and be as long in feather

(*i.e.*, in wings and tail) as possible, without the end of the tail tipping the bird forward; but we have never found these properties fail when conjoined with a good neck, which therefore virtually includes them. The neck should be as thin as possible at both extremities — that is, thinning almost suddenly from the shoulders, and running up to a fine, clean-cut gullet; and a bird with these properties and their relatives —that is, with long thin neck, long limbs, and long tight feather—is said to be fine and "racy"-looking. It may be added that these latter properties have most of all to do with any real æsthetic *beauty* in a Carrier, and that they are rarely found in old birds. The fact is that the great weight of wattle puts so much strain upon the muscles of the neck and gullet, that it necessarily becomes coarse with the continued effort to sustain the loaded head, precisely as the blacksmith's arm thickens with exercise; and here again, therefore, we have a strong reason for insisting that certain points shall not be developed in mere size any further than is consistent with other properties.

Nine-tenths of the Carriers shown are black or dun, which are both self-coloured all over. The black should be a real black, and not a dull bluish-black tinge. Very good blues with black bars are also often shown, though they mostly fail in colour, being smoky or chequery, owing to the strong dash of black Carrier blood in them; but blue being one of the most natural colours in pigeons, this fault will doubtless be gradually bred out. Of late some fairish white Carriers have also been shown; but we cannot say we have ever yet seen a thoroughly good bird of this colour, and it will probably be some years before such are produced.

In breeding for colour, black is usually considered the superior, dun being really a kind of complementary colour to it. As long as blacks remain rich, with a metallic lustre, they may be bred together; but whenever the colour fails,

and becomes sooty, or bluish, or dull, it is necessary to refresh it by a cross with a rich dun. It unfortunately happens that the best duns for this purpose suffer most from exposure to the sun, becoming mottled and pale; but this cannot be helped. It has long been the custom to match black cocks with dun hens; and this has naturally resulted by degrees in a scarcity, comparatively, of dun cocks and black hens. For this very reason, it is well, whenever possible, to match the birds the other way; when, if the progeny is good, they can compete in the classes which show least competition. Blues have to be matched occasionally to blacks to keep up the head-properties, choosing for this purpose a black as blue in shade as can be found. The best match is to put a black hen to a blue cock. Blues may also be matched to those light-coloured birds called silvers, when such can be found good enough. One great difficulty in breeding blues is to get the lower part of the back, technically called the "rump," of a dark shade, the natural blue pigeon having that part of a very light colour. Various crosses have been tried to overcome this difficulty, and Mr. Fulton recommends, as one of the best, to match a light dun hen with a blue cock, which may probably produce one or two blue-chequers; when pairing such a bird back to the blue will probably produce what is desired. Whites have been, in our opinion, produced by matching pale blues to white Dragoon hens as stout as can be got. The produce is generally a splashed bird, and by choosing the most white, and matching them according to opportunity to pale light-rumped blues, silvers, or even the lightest-coloured duns, the colour is obtained. We should ourselves be very much inclined to try a cross with a white Scandaroon—a breed which we are certain is closely related to the Carrier, and which has already length of face, though with an ugly downward curve.

In breeding all colours of Carriers, there are several impor-

tant general rules to keep in mind. One of these is that this variety cannot be bred in-and-in so long as many other pigeons. It appears that vigour of constitution is necessary to keep up a good quantity of the peculiar growth which forms the "wattle," as is, indeed, natural enough; for this reason, while in-breeding will often improve shape and style of wattle, it almost always, after one or two generations, begins to diminish size. Hence an ocasional cross is absolutely necessary; but the breeder should endeavour, for reasons already given, to provide these as far as possible in his own loft. We have seen an extraordinary improvement in growth of wattle produced by one cross on a well-bred strain of birds which had thus been run "too fine."

A still more important thing for the Carrier breeder ever to keep before him is to keep up health and vigour *in his hens.* In a highly artificial breed like this, the natural difference in vigour of the two sexes is much intensified. Hens, as a rule, are hatched second in the nest; and as Carriers do not feed so easily as other pigeons (except short-faces), they are very apt to become stunted. It is ten times as difficult to procure a *large and strong* Carrier hen with good points as a cock; and such a hen is, therefore, always worth buying, whether immediately wanted or not. But what we would particularly impress upon the amateur is to *breed himself for strong hens.* Care should be taken to take away the first egg till the second is ready, as already mentioned, and thus prevent the (probable) young cock from getting the start; and especially, when it is believed a hen is hatched from the best birds, it may be given the whole food from an extra pair of feeders. If these cannot be had, it is well worth while sacrificing the young cock (unless unusually promising) for the sake of improving the hen.

Again, if the amateur lives in the country, and can manage it, it is an excellent plan to let the young hens fly at liberty for at least a few months. More than this can generally not be allowed, as liberty seems to check the growth of wattle, while it

hardens it. But unless the bird is wanted to show as a young one, it is not desirable the wattle should grow too fast in the early months, and liberty will do much, not only to strengthen the constitution generally, but so to harden the eye-wattle that it will be far less likely to run into spouts later on. Birds inclined to be fleshy-eyed are peculiarly benefited by such natural treatment; indeed, there can be little doubt that the soft and fleshy texture has been developed mainly by continuous breeding in confinement in a somewhat warm temperature, and that liberty tends to produce return to a harder and better condition. We therefore, wherever it can be done, strongly advise flying young Carriers, but breeding hens especially, up to the age of six or seven months; after that they must be kept to the aviary in most cases, or the growth of wattle will probably suffer, and the beaks become too dark.

Length of feather is kept up by breeding from birds hatched tolerably early in the year, late-hatched birds being nearly always short in quill, and transmitting the same quality to their progeny. As regards mere size of wattle, also, it is to be observed that this is often lost, in some degree, by breeding together young birds on both sides—*i. e.*, birds hatched the season before. On the other hand, these young ones are apt to produce the longest-necked and most "racy"-looking progeny; so that the breeder has in his hands considerable control over these points, apart from the properties of his strain. The most usual plan is to put a full-grown cock with a young hen, endeavouring thus to combine good development with fine neck and gullet, and also because cocks will generally breed long after hens are often barren. If, however, pains are taken to preserve the constitution of the hens, and, above all, if those found to breed good stock are *not shown* much, they can be preserved with their breeding powers unimpaired for many years. Nothing destroys the constitution of a Carrier hen more surely than often showing her; and it does not *pay* to exhibit one proved to breed

well at any but a first-class show. These are very few—only two or three in a season; and this a strong hen should bear without injury.

In commencing to breed Carriers, we strongly advise taking as primary points beak-wattle and beak, but laying as much stress on good *shape* of beak-wattle as its size. Eye-wattle can be got at almost any time by a cross from the large fleshy-eyed birds, which often make good matches for those which have otherwise good heads, but are wanting in eye. The beak-wattle should, however, be always kept in mind, and no marked fault in it on one side be left without a corrective. For instance, a wattle of the peg-top stamp may very likely run small and pinched towards the front, where it runs on to the nostrils; which is, indeed, one of the most common faults of any. Now if the breeder should have in his loft a bird, otherwise fairly suitable, of the walnut or spherical type of wattle, set perhaps too far forward, somewhat as if a large marble were threaded on the beak, such would make an excellent match, and be likely to produce some excellent beak-wattles: showing also good "distance" from beak-wattle to eye. Generally speaking, a hollow or flat place, either on the top or sides of the *middle* of the beak-wattle or towards the front part of it, are the most frequent faults; and a wattle well filled there, or showing a fairly symmetrical convexity all the way from back to front, is *always of high breeding value*. Such a bird, unless the whole wattle is enormous, will rarely be very crowded in the posterior portion; whilst those with large wattles, but rather hollow in the front or middle, often are, the wattle seeming to make its growth behind. Take it all in all, therefore, a tolerably straight and massive beak, with wattle well filled in the middle and front, are the chief points.

Great size of wattle alone, however, is always worth something. However hollow to the front, and correspondingly crowded and overgrown behind, by matching it to a smaller

harder wattle, well arched from the eye behind and full in front, there is a great probability of getting good progeny from it. And if a bird has both good size and shape of wattle, a comparatively short face need not hinder its being of the greatest value in the loft. For more detailed information on matching different types of Carrier heads, illustrated with diagrams of various kinds of wattles, we must refer to the "Book of Pigeons," by Mr. R. Fulton, where the subject is gone into with great minuteness, and where much other practical information on Carrier breeding can be obtained.

In selecting the young birds which are to be retained, the great point is to choose those which are well filled up in the middle and front of the wattle, and arch well away from the eye behind. Such are very unlikely to become really bad in shape; whereas any wattles which rise up high at the extreme back when young, or appear at all straight in their "lines" towards the beak, are almost sure to become more and more hollow with age. The eye will speak for itself when the strain is known. For exhibiting the first season, the soft-wattled strains, bred in confinement, are naturally the most successful; and such birds must be hatched early in the year, to give them time for making up before showing. There is, of course, great risk in this, and many such early-hatched young birds are lost; many good hens are also pumped out and rendered prematurely barren by such early breeding; but both are risks and losses that must be encountered if the object is to be attained. It will be particularly desirable to provide purposely young, vigorous, healthy hens, which have been flown when young, for such early breeding.

Carriers always flown will feed their young very well; but the majority fail after a week or so, and a staff of strong feeders is therefore very important. For this purpose nothing will surpass coarse-beaked Dragoons or long-faced Antwerps; but any hardy pigeon with a large beak will answer the purpose.

Small beaks, of course, will not answer so well, especially when the young ones begin to get rather large.

Carriers require particular care and watchfulness as regards cold in the eye, and canker in the ear, or in the mouth. They are also, as already observed, peculiarly subject to "spouts," and also to have the eye-wattle torn by fighting, being of a rather quarrelsome disposition. For all these matters see the chapter on diseases and ailments at the end of this work.

CHAPTER VII.

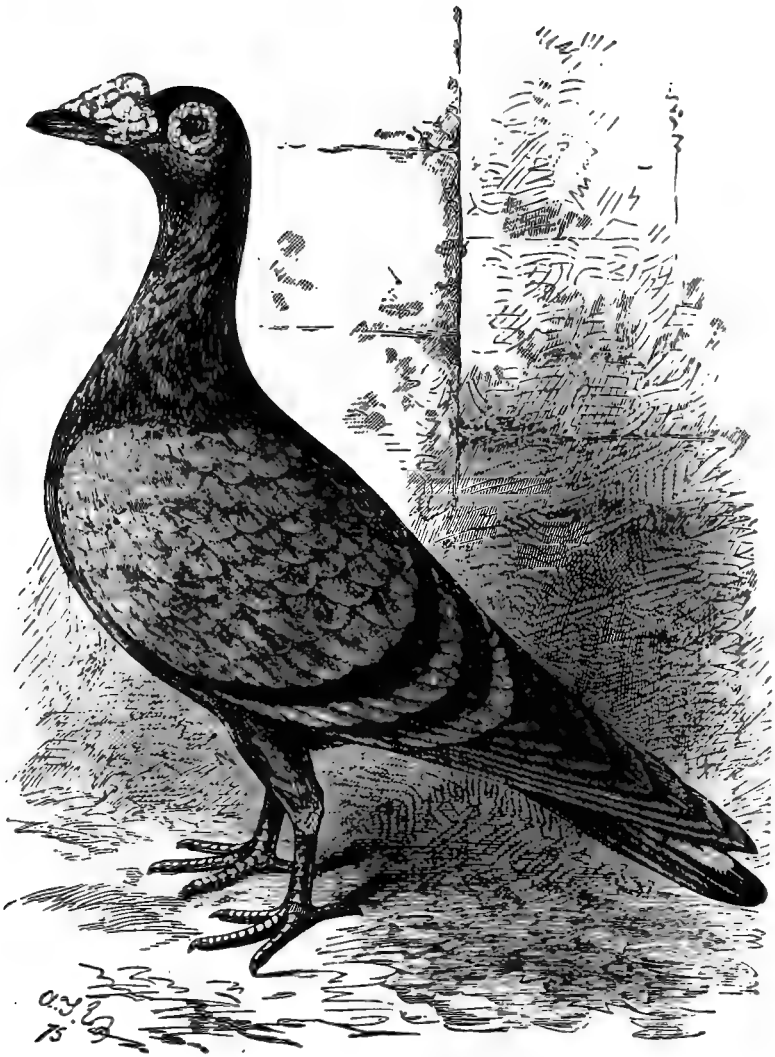
DRAGOONS.

THE Dragoon has long been called Dragon in certain London circles; but it is spelt by Moore as above, and, as we have already pointed out, the etymological connection with Horseman and Carrier is very clear. The word Dragon is clearly a vulgarism; and it is a matter for congratulation that with the spread of pigeon literature it has nearly disappeared amongst the more respectable ranks of pigeon-fanciers, the most successful exhibitors of late adhering to the original pronunciation of Dragoon. The pigeon is said by Moore to have been, "without dispute," bred originally by crossing Horsemen with Tumblers; the Horseman being itself, in his opinion, also a Carrier cross, and simply a bird with hardly good enough properties to show as a Carrier proper. Having nothing definite about it, the Horseman has naturally disappeared; but the Dragoon has been developed by careful breeding into a bird of singular beauty, which has of late years become as popular as any, and often realises large prices. We have heard people say there is "nothing to breed for" in it, but those who attempt the task

find this is a delusion. Besides its value in this respect, the Dragoon has the merit of a very high degree of æsthetic beauty, and is one of the best breeders and feeders known, so that the refuse birds may be made very useful. It is a good Homing Bird; and until the recent importations from Belgium, was the principal pigeon employed for carrying messages in this country.

Some years ago there was considerable difference as to the correct ideal of a Dragoon. Breeders in London and its neighbourhood showed a propensity to obtain as much beak-wattle as possible; while in the Midland counties a long and thin head, with little wattle, and a different type in some other important respects, generally prevailed, each party claiming to have the "original" type. These views have, however, gradually approximated, and the difference is not now very great; but as some still maintain the contrary, it may be well to place the truth of our statement beyond dispute, in order that beginners may not be misled by mere verbal disputes, such as are too common among pigeon fanciers.

That very exaggerated Carrier-like wattles were once shown in and about London we have never known disputed, and is established by Eaton, who relates how he has often seen indubitable Carriers shown as Dragoons—sometimes with success, and sometimes not. The gradual change from *this* false standard will need no further proof than the representation on the opposite page of a beautiful blue Dragoon which won many cups and other prizes a short time ago, and which, up to this day, we have seldom seen surpassed. We give it as the now accepted type of a London Dragoon. This bird had, in fact, only one definite fault, viz., a *little* "jewing," or wattle, on the under mandible, which we have erased. From this identical pigeon, then, we will describe the present moderated and now accepted type as follows. The length of face to centre of the eye, as nearly as possible, in a proper sized bird, $1\frac{5}{8}$ inches (the proper size being

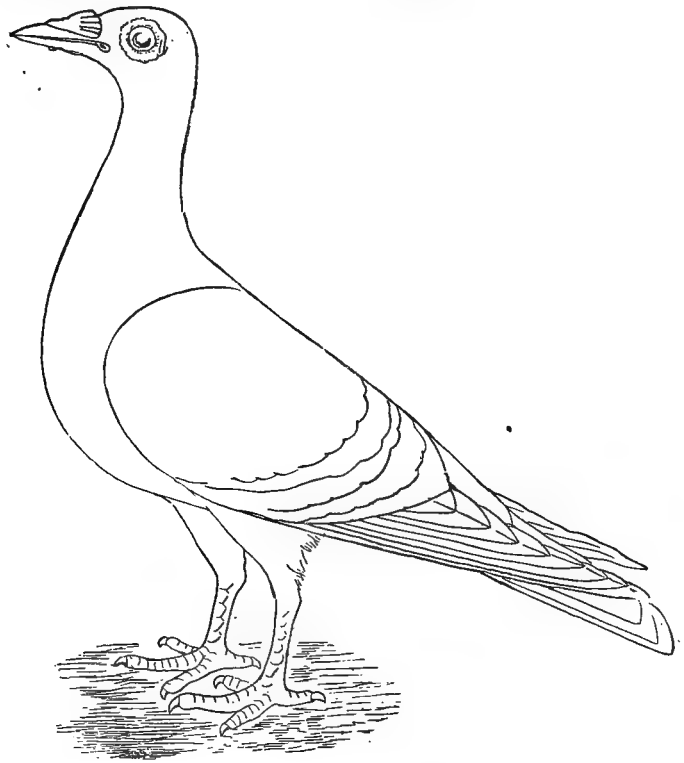


BLUE DRAGOON COCK.

rather smaller than a Carrier), and a very large or small bird being a shade more or less; but such variations themselves spoil this pigeon, which, in clean outlines, medium size, and exquisite symmetry, very much resembles a game cock amongst fowls. The beak-wattle should be of a fair moderate size, as shown in the engraving, neither much less nor much more; and its *ideal* of shape is quite different from that of a Carrier. While the Carrier wattle is generally convex and arched away from the eye, the Dragoon should have what is known from time immemorial as a "peg" wattle: that is, rising at once behind to its full height, and then coming down straight to a point. In the young bird it is almost smooth, and of course small, and it should be divided by a sort of line down the middle; but gradually the surface becomes rougher, though the regular build must be preserved to the last. The eye-wattle is about the size of a sixpence, and should not be more; it is circular when young, but becomes "pinched" behind with age; and as this marks the bird off from the Carrier, it is reckoned a good point. In *blue* Dragoons the eye-wattle becomes dark with age, especially round the inner edge; and without this sign of dark blood and a dark red eye, the colour of the feather is rarely good, or the "rump" blue. In hens, the size of both beak-wattle and eye are proportionately less. The neck is much shorter than a Carrier's, and widens at once gradually to the shoulders; the gullet should be clean, and not prominent as in the Owl. The flights and tail are of more moderate length than in the Carrier, and the wings often shorter in proportion to the tail; but length of feather depends much on the time the birds are hatched. The bird does not stand quite so tall on its legs as a Carrier, and is, in fact, more *compactly* made altogether. It is accordingly worthless, unless finally set off by clean and hard plumage.

It should also be remarked that while the sides of the head are in a Carrier desired parallel and as close as possible,

the skull of a Dragoon is wedge-shaped—broad behind and tapering towards the front. The beak should be nearly or quite black in blues, blue-chequers, silvers, and grizzles; reds,



BIRMINGHAM DRAGOON HEN, 1870.

yellows, and whites have pale beaks. Blues and blue-chequers are also the only varieties which show dark colour in the eye-lash, except some dark grizzles.

Such is the present accepted type of the Dragoon, as now

acknowledged by nearly all breeders; but as this is verbally denied still by a few Birmingham fanciers, it next becomes necessary to prove very briefly how the "Birmingham school," as it is called, has itself steadily approached it of late, till there is now no important difference. In the year 1870, then, a Birmingham Dragoon fancier described the bird as having a "long, flat, narrow head, straight *thin* bill, and prominent eye;" and Mr. Ludlow, a well-known Birmingham authority, further described the Birmingham type as follows:—"Head long and straight; skull narrow, well developed at the back; eye-lash white and circular; neck long, slender, and graceful; legs long, clean, and angular; bearing of a timid, tremulous kind;" and he further describes the wings as "sharp-pointed."

Mr. Ludlow accompanied his description with a drawing, of which we give an accurate tracing on the opposite page, which was stated to represent a hen of *mature age*, and in which we unquestionably see a vast difference from even the *moderated* London type of the cock shown on page 87. The beak is longer and thinner, there is less wattle by far, the legs are much longer, and the whole bird is much more slim; the crown of the head is also flat. The differences are so sharp and clear as to be beyond dispute.

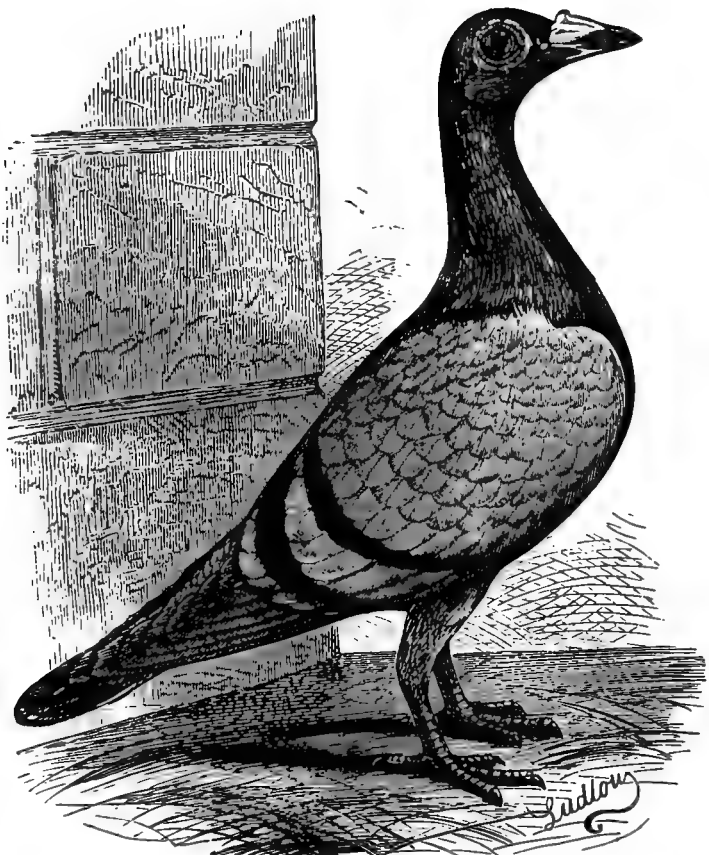
Fig. 22.

Going on, however, a few years from this description and figure, Mr. Ludlow, in 1874, tempered down the description of the skull to "*rather* narrow;" and while he still calls the beak "long," gives it as $1\frac{5}{8}$ inches, the *same* length as the then London standard. He also termed it "strong," but accompanied this description with the drawing reproduced in Fig. 22, which, as compared with the bird on page 87, shows a beak decidedly thin. In Fulton's "Book of Pigeons," however, in 1875, Mr. Ludlow claims for the Birmingham type of Dragoon "a nice,

thick, evenly-shaped beak;" and a month or two later* he gave as his ideal the portrait on the opposite page of a mature *hen*. On comparing this recent Birmingham hen with the hen drawn in 1870, we see how the beak has become shortened and thickened, the skull less flat, the wings and tail shorter, the body plumper, and the neck widened more rapidly to the shoulders. In brief, and without wasting further space in details, a simple comparison of the three drawings will show that Mr. Ludlow's last hen would be a very good match for the London cock, and is infinitely nearer to it in type than to his own earlier drawing. If we consider that no judge in his senses, whichever he admired, would discard a bird for a little more or less beak-wattle alone, there is in fact no real difference left at all.

We have desired to show these facts plainly, because certain parties still keep up a strife which is now mainly of mere words. Of what avail is it, for instance, for London fanciers to call the beak short, and the other school to insist that it is "long," when both lay down the *same precise length* of $1\frac{5}{8}$ inches, as both do? London has yielded something, and Birmingham more; and we have now as good a standard as we can have, if the desire be—as it is professed—to have a *distinctly typical pigeon*. For if the present moderated London style be objected to as too near the Carrier, and the *old* Birmingham type argued for as the "original" Dragoon, it can only be replied that the evidence of fact is the other way. Old Moore is conclusive evidence, as far as the "original" type goes, that it was avowedly made by a cross, and that it was also usual by crossing to give it a "tolerable degree of stoutness." And, on the other hand, if the one London point of more size in wattle be a Carrier point, *every* other point in the old Birmingham model—

* All these statements and comparisons will be found fully worked out by the author of this work, in the *Live Stock Journal* of May 7, 14, and 21, 1875.



BIRMINGHAM DRAGOON HEN (MODERN TYPE).

the long face, the flat, narrow, parallel skull, the long and thin neck, the length of feather and limb—are Carrier properties. The true fancier at least will never consent to abandon the type now adopted, after long debate, by mutual consent. The moderate-sized wattle, of good shape, is wonderfully difficult to breed good. It tends to break out in excrescences, or to get too coarse or too small, and this is the charm of producing it; but the old Birmingham style of head and wattle can be bred by the dozen, and is so far a lower class of pigeon—in fact, hardly a fancy pigeon at all, which the true Dragoon is.

We give, then, the two shaded drawings as fairly representing the modern Dragoon; the cock showing about as *much* wattle as a good breeder likes to see, while the hen shows about as *little* as he prefers on a bird of even the weaker sex. The difference is not greater than the latitude taken by different judges of *every* pigeon; both agree now in seeking a thick and dark beak, and most certainly neither would throw out a good bird for a little difference in limb or feather. The sole point really left in dispute is as to the eye-lash of blues and chequers, which the Birmingham fanciers still profess to desire white and circular, while the Londoners seek a dark hue and pinched form. It need not be pointed out that here again the Londoners are furthest from the Carrier; and it is sufficient to add that this point will settle itself if the bird be correctly judged for soundness of colour; for, as before remarked, we have hardly ever, if ever, seen a good sound blue, dark on the rump, which had not the dark eye-lash.

Blue Dragoons are, as a rule, bred together, choosing good colour, and especially avoiding light-rumped birds. This fault of light rump is common to the brighter blues, and is best counteracted by matching to blue-chequers, or even to *dark* grizzles: indeed, some good breeders prefer to pair up their birds, as a rule, blue to a chequer or dark grizzle. They say that by this method of breeding they get plenty of blues and more good

rumps than in any other way; and we think it likely, provided any matches between bright blues and light grizzles are avoided. The grizzle is itself a peculiar mixture of blue and white in a kind of pepper-and-salt pattern, and is by no means easy to produce uniform all over, free from white on the rump, owing to the mixture of white in the blood. The result of many inquiries is that most good grizzles are got by matching average to darker tint, with an occasional cross of the blue-chequer; but that, after all, grizzles of the desired quality all over are much a matter of chance. The bars of all blues and its sub-varieties should be clean, black, and sharp, and the eyes as deep a red as possible.

Silvers are divided into what is called brown barred and black-barred, but the black is only a very dark brown after all. The breast should be free from red or copper, and the silver as clear in colour as possible. Every fancier prefers the dark or so-called "black" bar; and to obtain it the only way is to cross every second or third year with blues in a special way. The bright light-rumped blues will not answer. A dark-rumped, good blue cock should be paired to a silver hen; and the best blues from this cross paired again to silvers. If the blue cock be young while the silver hen is old, cocks will generally predominate in the produce.

Whites are, of course, usually bred together; when crossed, the lightest blues and silvers are of course required, crossing the produce back to whites.

In breeding yellow and red there is now less difficulty than formerly, there being little doubt that both colours, which are foreign to the original strain of the Carrier, have been obtained by complicated crosses with Scandaroons and other pigeons. The great point is to select birds always which have the rump of a pure self-colour, free from dun or ash-colour. With such materials, the yellow may either be refreshed, when necessary (for all yellows soon become pale when in-bred), by foreign

yellows or a cross from the red. Reds can only be kept up by red, from another strain also *pure* and deep in colour all over, and always avoiding any reds from the yellow cross; unless a *jet black* bird can be procured of suitable properties, which will often improve the red considerably. But any sign of sootiness, or ash-colour, or bars should discard a bird at once. The eyes of these varieties are orange.

As to head-points, it is necessary every now and then to keep down size and keep up symmetry of wattle by using a bird rather under-wattled. Symmetry of body will give little trouble.

Above all, study condition. A Dragoon is nothing unless hard and clean in feather, as if "cut out" of solid material. Nothing but plenty of exercise can give this; while it also tends to darken the eye, keep the wattle hard and compact, and in blues darken the beak and eye-lash.

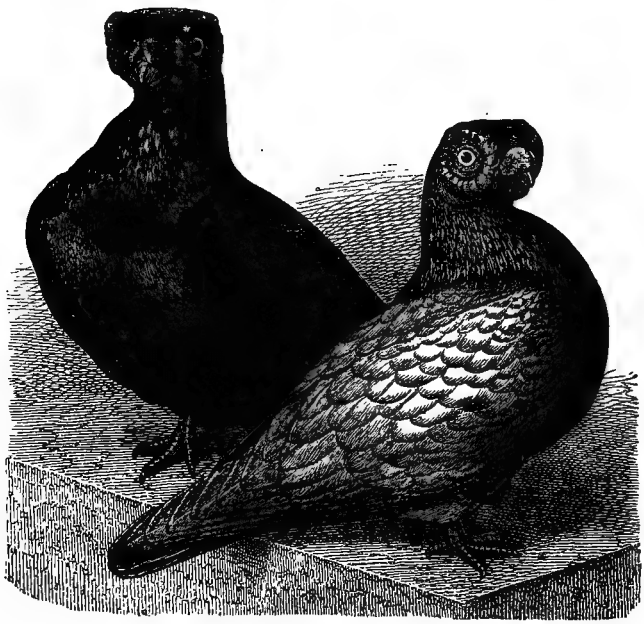
Dragoons will train and perform well for any distance up to a hundred or a hundred and twenty miles. It is probable that if bred so severely by results as the Belgian birds, they might be found not inferior for longer distances. They give no trouble, and need scarcely any attention in rearing.

CHAPTER VIII.

BARBS.

The Barb makes a convenient transition between the wattled pigeons and the Short-faces, as they are called; and it is interesting to observe in this variety how some of the very same elements that go to make up the Carrier have been here developed in a direction exactly opposite to the type of that pigeon. The resemblance between the large eye-wattles of both varieties is so striking that some people have tried

the experiment of crossing Barbs with Carriers, in the hope of improving this point; but the model of the two birds is so totally different that no good has ever been traced to such a cross. It has been forgotten that not only is a Carrier



BARBS.

head narrow, but the type of the eye-wattle is *thin;* whilst we want in a Barb to encourage width, as much as possible, in both wattle and skull.

This is, no doubt, one of the most ancient varieties of pigeons. Shakespeare alludes in *As You Like It* (Act iv., Scene 2) to a "Barbary" pigeon, which there is not the slightest doubt is the same as that before us; and it seems likely that Moore

is correct in supposing that the "Mahomet"—a mere crested variety of Barb—received its name from one of the sort being a pet of the Arabian impostor. Both alike trace the pigeon to Africa, it will be noticed; and modern importations have been made from the same source apparently. It is at least certain that the birds which have most improved all existing strains of Barbs have been imported, by Messrs. Baily and Son, from the neighbourhood of Marseilles, the traffic between which port and Northern Africa was formerly even greater than it is now.

The Barb was formerly considered a "toy" pigeon, but the modern development of its properties has made it so difficult to produce them in a degree even approaching perfection, that it is now ranked amongst the "high-class" varieties. Not only is it as difficult to breed a good Barb as a good Carrier, but the bird, after being shown as a young one, takes just about as long to "make up" sufficiently for winning as an adult bird. There are, in fact, much fewer good Barbs to be found than good Carriers; so that perhaps no variety is so "open" to the efforts of any new recruit to the ranks of pigeon breeders.

Being a wattled pigeon, the principal properties of a Barb lie in the head, as in the Carrier; but the type is in every point almost as opposite as can well be to that of the pigeon just named. A good notion of the *ideal* may be got from an old-fashioned reel of cotton a little unwound—we mean such as were used before the very thick machine-cotton reels came in vogue. The eye-wattles represent the two projecting ends or rims of the reel, the middle part of which roughly represents the skull of the bird. It will be gathered from this that the skull is wanted as wide as possible from side to side, while the two eye-wattles are desired as large as possible, and as thick as possible at the edges, so that they do not fall or drop down over the eyes, which is a very great disfigurement, though not unfrequently seen in worn-out old birds. It is particularly

desired that the head be entirely free from any wedge-shape, but be as wide between the front of the eye-wattles as it is behind. When this is the case the skull will look very short and appear sharply cut out in front, the two front corners, as they may be termed, standing out in a peculiar "square" manner not seen in any other pigeon. The skull looks the better if there is a sort of projection or fulness at the back, making the top of it rather flat.

Fig. 23.—Head of Barb.

We next come to the eye-wattles, which differ essentially from those of the Carrier in being desired *thick*, as well as large and circular; also in being *bright red* in colour. They are subject to the same fault as the Carrier's: viz., a tendency to grow most towards the front and top, while deficient or "pinched" behind. But this fault is less seen in square-headed birds. A good formation, as regards thickness of wattle, adds amazingly to the appearance of a bird. If the greatest thickness be towards the edges, and the wattle be comparatively thinner in the middle, round the eye itself, that organ is much less liable to spouts, and the wide and square appearance of the head is much increased; whereas, if the wattle be thick at the centre and thinner at the edges the effect is very poor. In regard to colour of wattle, the imported birds are often better than home-bred ones. Mr. Fulton* attributes this, we think justly, to the freer use of duns by English breeders. It is

* See "Book of Pigeons," p. 235.

certain that dun is little liked by foreign fanciers, and that blacks, reds, yellows, and whites usually have much redder wattles than duns, which are generally pale. Greater confinement also has its influence. The colour of the eye itself *should* be white, or what pigeon fanciers call "pearl," but it is very rare to find the iris all white. If the inner portion immediately surrounding the pupil is pearl, the eye will pass very well, though the outer edge be orange or gravel, as it more frequently is. An altogether red, gravel, or orange eye is a decided fault, but may be condoned for other striking head properties.

The beak should be as thick and short as possible, the desirability of thickness applying more particularly to the lower mandible. It should rather incline downwards, or be "down-faced;" but overmuch insistance by some judges upon this point has led to an objectionable practice of slightly bending down the beak, while soft, with the finger and thumb. When this is done gently, every day from about three days old, for a week or so, it cannot be detected, we fear; but most people who act thus overdo it, and produce an unnatural appearance of "down-face" which ought to be disqualified. The beak of a Barb is always *desired* to be white, or rather flesh-colour. A black beak, which is very common in some otherwise good strains of blacks, not only makes the head look very coarse in itself, but is very generally accompanied by a dark or smoky tinge in the red of the eye-wattles, which makes things still worse. A beak with more than a slight stripe of dark colour on the upper mandible, is therefore a decided fault: but this again may be condoned for a fine and massive head.

The beak-wattle should only be a moderate size, as smooth as possible, and so shaped as to *fill up*, but little more than do so, the even convex curve which the profile of the whole head from crown to the point of the beak should present. Some good birds are heavily jewed underneath the lower mandible; but

this is generally regarded as a fault, though opinion varies a great deal on this point—more so than on any other point in a Barb. Our impression is, however, that the majority prefer a bird without very much jewing.

The neck of a Barb should be rather shortish, widening rapidly to the shoulders. It adds to the apparent shortness of face, if there be a full gullet; but some fanciers prefer the gullet clean. The chest or breast should be very broad—more decidedly so than in any other pigeon; and the flights and tail of moderate length, giving the whole bird rather a plump appearance. Of course early hatching will often cause comparatively long feather; and we once had a very fine-headed black cock as long in feather as a Carrier; but we always felt that this unusual length was not "in character" with the bird. We also like to see the flights so "set" inside the outer quills or secondaries, as to show a kind of "corner" in the wing above the line of the body, and some of Mr. Hedley's strain used to show this point remarkably. The legs ought to be very short, giving quite a waddling gait to the bird when walking; and the shanks should be clean. Many otherwise good birds are slightly feathered down the outside of the shank, and it is a venial fault, but a fault still. Some people pluck these feathers; but we do not consider this fair, and as it can be easily detected, such treatment should be followed (like every other *detected* act of deceit) with disqualification.

Barbs are shown black, dun, red, yellow, and white. The whites are almost always black-eyed (termed "bull"-eyed by fanciers) but if white like the others, are more valuable. Whites are a distinct strain, and are of great beauty when the head-points are fairly good, as some are; the wattles being in this colour really a bright coral-red. There are but few breeders of whites, so that this colour sadly needs improvement; but if bred up to the same head-properties as blacks, a white Barb would be in our opinion one of the most beautiful pigeons in

the whole fancy. We have had whites very fair in skull and wattle; but they fail as a rule in the beaks being too long and straight, and the beak-wattle too rough. The other colours have been so mixed up by breeders, that every colour (except of course white) has been known to be produced by the same pair of parent birds during one season. In other breeds dun is usually kept to match with black, and only jet black sometimes allowed to mix with red or yellow blood; hence the reds and yellows are kept pure. But in Barbs the result of the general mixture is that reds are very seldom sound in colour all over, the rump and tail being generally dun or slate-colour, owing to the dun blood in the strain.

These circumstances make breeding for colour very difficult in Barbs, especially as regards yellows. In other pigeons it is usual to cross this colour with red; but the impure colour in red Barbs makes this cross comparatively useless here, and as a fact, all the best yellows about which we have inquired have been bred from yellow mated to rich black. The black cross is also excellent with reds, and may in either colour be employed either way. If reds and yellows were crossed exclusively with rich blacks until the dun tails were bred out, and duns confined to crossing with blacks, no doubt the colours of Barbs would speedily be both improved and rendered more certain. Dun is as a rule the best cross with black, owing to the propensity of blacks to develop dark beaks and pinched eye-wattles. The duns, on the contrary, have much more frequently large soft eye-wattles (though they are apt to be pale in colour), and white beaks, by which the faults in the black are corrected. Whites are of course bred together when good enough, but might be vastly improved by crossing with light-coloured duns, and then breeding back the pied produce to white again.

Barbs being so uncertain in colour, and as regards yellow peculiarly so, an experiment recorded by Mr. J. Firth in the direction of systematic breeding for it is very instructive and

interesting. He matched together first a black cock and yellow hen, as just now recommended; the cross producing seven birds, of which *four were reds;* showing very strongly the uncertainty of colour just remarked upon. These four reds were two cocks and two hens; one hen dying. The surviving red hen was matched to a yellow cock bred from another branch of the same family, and produced amongst others a yellow hen, which we will call No. 1. One of the red cocks was matched to a yellow hen of another strain, and produced amongst others a yellow cock, which shall be called No. 2. The other red cock was matched to a *black* hen, and produced amongst others a red cock, which shall be called No. 3, and a yellow hen we will term No. 4. With this second stock at command, then, Mr. Firth matched No. 1 (yellow) to No. 3 (red), and No. 2 (yellow) with No. 4 (also yellow); and at the time he reported the experiment, he had hatched, from these two pairs, eight young ones, every one a perfectly-coloured yellow.

Opinion rather varies as to the proper size of a Barb. It is often said that the pigeon ought to be rather small; but in old birds at least, we have generally noticed that a good-sized bird wins. The nearest to a general rule we can lay down is, that the bird must have the appearance of a *big head*, whatever the body may be. If the head appear wide, square, and large, the bird is all the better if the body be small; but the large-looking head is essential anyhow, in anything like good competition. Small birds are more likely to win as young ones, their neat appearance, if the skull is well shaped, carrying off their inferior size. It is, in fact, as a rule, necessary to breed a very different kind of stock to win with in young Barb classes. There are eye-wattles that develop quickly, as in Carriers, though they are apt to "spout" at a later date. Birds with such wattles, therefore, and good shaped skulls of only moderate size, often make the most showy young ones: indeed, it is almost impossible to get a Barb that when young looks *short* in the

face, of more than moderate size. On the other hand, a harder wattle that grows more slowly, and a much longer-looking face that gives *room* for the eye-wattles to grow, will generally, if there be real massive character about the head, make the most dangerous bird in the end. We have, however, bred very pretty-looking young ones that also made up well, and realised when developed a considerable sum, though not of the most massive school.

We have heard a great deal about the uncertain character of Barb breeding in regard to head properties; but we believe no pigeon breeds more truly if bred in the right way. The grand points are, good *square* skulls, and good beaks. Mere eye-wattle can be got up easily, but good skull and beak cannot. On the other hand, if well-bred birds of this character be started with and kept to, a high degree of certainty is attainable. Moderate ages may be bred together, but it is bad practice to put young birds together, as the wattle is apt to diminish; therefore, a young bird with wattle undeveloped is best matched to a fully matured one. Young birds, on the contrary, show the best beak, which is another reason for counteracting in point of age. It is in fact found, as a rule, that in Barb breeding there is a kind of antagonism between eye-wattle and beak. Heavy wattle, which is produced by breeding fully matured birds of good type, is usually accompanied by some failing in thickness of beak; which therefore needs to be counteracted by throwing in younger blood, and so on through the whole history of the strain.

Black, or at least dark beaks, are a great difficulty in black Barbs. There is evidently a strong tendency for all black pigeons to become black in the beak; but in a Barb this gives a coarseness of look which is most unpleasant. Unfortunately this objectionable depth of colour seems increased by much flying, which adds yet another difficulty in Barb breeding. For these reasons it is almost impossible to go on long breeding

only blacks together, the more so as they seem also to have more tendency than the other colours to become pinch-eyed. It is therefore necessary to match them from time to time with duns or reds, which improve beak and wattle both. Two very dark beaks should never be bred from, or the result will be a black beak in nearly every case. By careful matching to duns and reds, we have seen not a few absolutely clear beaks produced even in black Barbs, and the effect is so far superior to that of a dark beak, that this point is well worth careful cultivation.

The young are hardy and easily reared, but require feeders after the first week, the form of the beak interposing mechanical difficulties. Very rarely we have had a really good bird that fed well, but it is the exception. A strain of common, long-faced Barbs often supplies good feeders; but on the whole, after trying these, Dragoons, and some others, we preferred medium or short-faced Antwerps, the proportions of their heads appearing to suit those of the Barbs exceedingly well. The quality of the young ones can be seen pretty fairly at a very early age, long before they are fledged. If a bird is very broad and hollow across the head, with an immense gaping mouth, it is likely to turn out well. At a later stage they often become very plain and common-looking, owing to the growth of the feathers; but this is only transitory, and the quality reappears. Yellows can be distinguished almost as soon as hatched, by the skin being almost bare and of a peculiar *polished* appearance. Duns have a somewhat similar look, but not so marked. The age of three or four months is a rather critical time, if it finds them in the cold weather of autumn—they seem tried by the change in plumage. A cod-liver oil capsule every other day at this period seems to keep up flesh and strength, and will prevent many losses; we never lost a young bird after, at Mr. Firth's suggestion, we tried this treatment.

As soon as the eye-wattle is at all fully developed, it needs

pretty constant cleaning with a sponge and water; as being thick and fleshy, dirt and secretion is apt to accumulate in the creases, which may cause disease and must cause discomfort. Spouts should be attended to early, as if much developed they are far more troublesome than in Carriers, owing to the greater thickness, and do not always heal so well when operated upon. There are birds which grow a great deal too much wattle, and we have seen some in the show-pen which have had more cut away than has been suffered to remain; we are glad to say that such birds win less frequently now than formerly. Apart from cutting, we have seen some old birds exhibited of the heavy-browed type, which were really pitiable in appearance, the overgrown, relaxed wattle falling down over the eye in a very repulsive manner.

Before exhibiting Barbs, the eye-wattles want a *thorough* washing with a cloth or sponge, and cold water. It is wonderful how this will bring out the colour, and a very little butter rubbed on while the skin is damp will keep it for some time. Often a few small feathers will grow on the edge of the eye-wattles, and these the majority of exhibitors consider it admissible to remove, though it cannot strictly be defended. There is no temptation to go any further, since it would take away from width of skull to do so. The upper mandible will sometimes grow longer than the under one in all birds fed from a hopper; and in such cases it is fair to cut back to an even point, which is always preserved in pigeons that feed from the floor. The beak should in fact be *kept* so for mere purposes of health, whether the bird be shown or not; but before showing it should always be examined and trimmed back if necessary to the proper point: to go one fraction beyond betrays itself in a moment, and is fraud.

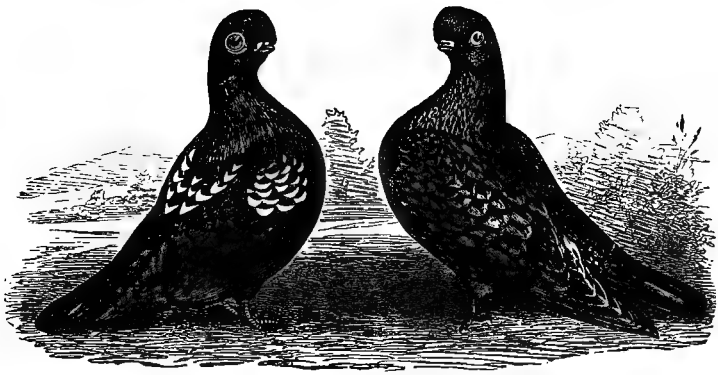
Barbs readily become very tame and familiar: we have had several that even deserved to be called affectionate. This is especially the case if brought up by hand, which is very easily

done. No high-class pigeon, it may safely be said, gives more constant occupation and interest to the breeder, in counteracting successively the various tendencies which develop as we have tried to explain. Now guarding against a black beak; now against pale wattle; now throwing in more wattle; now restoring beak properties generally; now eradicating heavy jew wattle—his work never comes to an end, while at the same time no pigeon responds more surely to judicious matching.

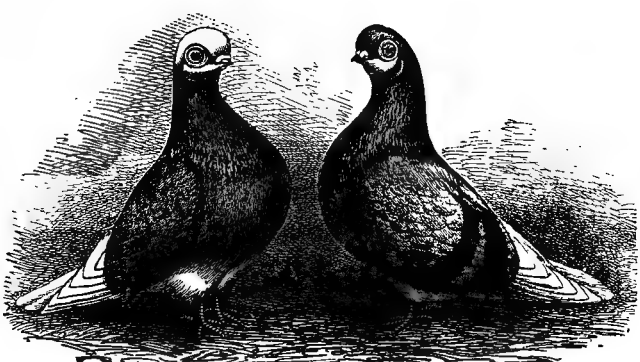
CHAPTER IX.

SHORT-FACED TUMBLERS.

THE class of pigeons known as Short-faced Tumblers have now so completely lost all propensity to tumble, and been so long bred for other properties, that many people have questioned whether they were ever true Tumblers at all. It is true they are now bred for fancy points without reference to performance of any kind, and are therefore purely fancy birds: but there is no real doubt that they are at least mainly descended from performing Tumblers. As we have already seen, even etymology is worth a great deal as argument in pigeon history, and there is strong proof even in the name; but other evidence is not lacking. Moore first describes Tumblers as performing birds, and afterwards mentions the Almond or Ermine variety: and even Eaton, in 1858, states that he has seen Almonds perform well. At the present date, though many breeders have never seen one of their birds tumble, a tumbling Short-face is still occasionally met with. The anonymous "treatise" published in 1765, however, presuming it can be depended upon, puts the fact beyond doubt, and closely defines the date of transition. Concerning the Almond it expressly states that "this



MOTTLED TUMBLER. ALMOND TUMBLER.



BALDHEAD. BEARD.

SHORT-FACED TUMBLERS.

beautiful and very valuable species were originally produced from the common Tumblers being properly matched so as to intermix the feather," and names black, black grizzles, yellows, whites, duns, and other colours as having contributed to this result, which it plainly implies was then recent, adding that by the same process Almonds are "always attainable." The gradual development of the present Short-faced bird is further shown by the fact that even as late as 1802, when Windus published his celebrated treatise on the Almond, the wings were not trailed as now, but carried above the tail, the same as figured in the general "Treatise" of 1765.

It by no means follows, however, that a cross may not have been employed to add or increase certain properties; and there is indeed fair presumptive evidence that such was the case. Mr. J. C. Lyell considers that an Indian pigeon called the Goolee had probably something to do with the process; and the reference to our engraving of Indian pigeons at page 201 will indeed show very strong resemblances in the decided "stop," the tip-toe carriage, and the wings trailed below the tail, which last feature is especially remarkable. That the Fantail came from India we know, and that a peculiar kind of performing Tumblers exists there still is also perfectly well known: it is therefore by no means unlikely that the whole tribe of Tumblers may have come to us from India. But besides the Goolee, in a letter published in 1879* Mr. Lyell cites interesting evidence respecting other crosses which may have co-operated in producing the Short-faced Tumbler. Mr. Jayne, the celebrated breeder of Croydon, stated to him in conversation that the late Mr. Morey (mentioned by Eaton as never without a stud of pigeons for sixty years) was the only one known to him who could recount how the Short-faced pigeon was produced; that it was the result of thirty-two crosses; and that the African Owl had something to do with it. Eaton writes of Mr. Morey as already dead in

* *Live Stock Journal*, Jan. 31, 1879.

1858, and this would carry his memory back before the time of Windus, who wrote in 1802; his testimony is therefore of weight by itself, however apparently improbable. But Mr. Lyell adds that during a visit to London in 1878, he found in a fresh copy of Windus, which he picked up, an undated hand-bill apparently (from the type) of about 1800, offering fifteen guineas reward for twelve Tumblers stolen from Mr. Parr of Bethnal Green. These were fully described, and included Almonds, Splashes, a dun hen, black Splash cock, and red cock; but the remarkable thing is, that while some are described as having a "fine straight beak" as now, others have a "short down beak." This, coupled with Mr. Morey's statement, is very strong evidence that the short round head of the African Owl really may have had something to do with the development of the Short-faced Tumbler.

We have discussed this subject at some length because of its exceeding interest, both in regard to the bird itself, and to pigeon development generally. We now turn to the practical description of the several varieties.

The Almond Tumbler is by common consent placed at the head of the Short-faced varieties, and has done more to raise the tone of the pigeon-fancy than any other breed. While many other pigeons too often got into low company, the Almond seemed from the first to attract the sympathies and enlist the interest of *gentlemen*, and was brought to perfection by private Societies of the highest class, whose lineal descendants exist in London at the present day. The origin of the peculiar "feather" of the Almond, as we have already seen, cannot be positively determined; all that can be averred with certainty is the fact, that somehow or other the ancient breeders—Eastern or Western, or both—did manage so to blend together the three colours of yellow, white, and black, as that *each one* of the large quill feathers should show that mixture of the three, to which the

name of Almond is applied. We believe red blood is also interwoven in the strain; or else the red of pigeons must be regarded as only a deeper shade of the colour known as yellow.

The colour alone distinguishing the Almond class of these Tumblers from others, we must first describe this. The ground colour has been compared by different writers successively to the outside of the kernel, and inside of the shell, and the outside of the shell of the ordinary Jordan almond; and no one now knows what precise shade was perferred by the old breeders. We believe, however, that the middle comparison best expresses it, and that the colour desired was a rich, soft, slightly brownish *yellow*. We are sorry to say that this colour has now all but disappeared, and that not a few breeders seem even to prefer a kind of mahogany brown that almost deserves to be called red. This colour is easier to breed, but we must give our opinion that with it has departed most of the *beauty* the true Almond feather possessed; and it is significant that with the change has come an almost total disappearance of "feather" fanciers, and an abandonment of feather properties for "head and beak." No wonder: there is nothing in such feather *worth* breeding for, and nothing for a mere spectator to admire when it is got. We never saw but two really yellow birds, but it was very different with *them;* and we cannot but feel that if more attention were paid to this point it would not only tend to discourage the evils to be mentioned presently, but attract many more breeders to this pigeon, of the same class as bred it in old times, but who will never tolerate the modern practices.

However this question of ground-colour be settled, the essential point in a *perfect* standard "Almond" Tumbler is, that the twelve quill feathers of the tail, and the ten large quills or flights in each wing, should each show both ground-colour, black, and white, *in each feather*—so far, at least, as regards the cocks. It is, however, not universal to find ten flights; in-breeding and small size causing the production of many birds with a

quill less on each side; and hence by common consent nine on each wing are admitted as sufficient. It must be clearly understood that no *pattern* whatever is insisted upon; and this is where novices often cannot understand the matter at all. The point is that each of the "standard" feathers, as they are called, should show, in some shape and position, a patch of the ground-colour, of black, and of white; and these colours as clear and unmixed as possible, a mixture (such as the yellow being grizzled with white, or peppered with black) being considered a fault. While these standard feathers are the essential point, it is further desired that the "rump" of the bird should be sound in colour, and not light (or "mealy," as fanciers term it), and that the body generally be as evenly sprinkled with black ticks as can be attained; this is called being well "broken" in feather, and the development of the black marks, the "breaking of the feather." The neck and breast run to richer colour, very beautifully glossed with green.

An Almond cock only acquires perfection in colour properties at the age of two or three years, the exact period varying according to its original colour, owing to a progressive change which all birds go through, the ground deepening, and the quantity of black increasing. At first, therefore, one or more of the standard feathers probably want the black component necessary, while the ground is too light. A year later these feathers may be standard, but there will be little or no "break" on the body. A year later, again, the body will be well broken, but the *white* may have disappeared from a standard feather or two; and later still the bird will be too dark altogether. Hence a rather lightish bird will remain a standard one a year longer than one rather dark; or again, all standard flights are seldom seen the same year with the best stage of body feathering. It is also to be observed that hens are lighter than cocks, and that in their case, while they are expected to show a standard tail, it is useless to look for more than three or four standard

flights, the rest being invariably deficient in black. For these reasons it is generally necessary in showing pairs of Almonds to select a hen a year older than the cock, to make a matched pair; and the beginner must guard, in selecting his breeding stock, against rejecting hens for being too light, since he must remember that in breeding effect they match much darker-looking cocks. The one thing that should be avoided is a rump mealy or spangled with white.

Following Eaton's Treatise, "shape or carriage" is the next property in an Almond. While the chest is broad, the neck must rapidly taper till it becomes very thin at the gullet; and this tapering neck is to be thrown far back in an extremely pert and saucy way that is very attractive. Our figures will show this point plainly, and also the peculiar trailing of the wings on or near the ground, which is the second point in good carriage. In the third place, the legs are very fine and short, and the bird walks (when showing itself off) on tip-toe. The flights and tail are short. It may be remarked here that the whole bird is small—the smallest in the pigeon fancy except the Foreign Owl.

The next property is termed "head." This is desired as short and round as possible, but broad and high in proportion. The forehead rises abruptly from the base of the beak, and even overhangs, which is called having a good "stop." When a head does not thus overhang, or at least rise up abruptly, it is termed "mousey," or "pleasant-faced." The head should be large in proportion to the body, and it is also desired that the feathers on the front of the cheeks should project well, or curve outwards, which is called being "muffy."

The fourth property is spoken of as "beak," and what is meant is that it be short and fine. The length should not exceed five-eighths of an inch from the centre of the eye to the point, and the beak must run straight out, without any approach to a downward inclination. It must also be extremely

fine or thin. Some people have compared a good beak to an oat-grain stuck into a cherry; while others prefer a beak which, equally fine at the point, has a slightly thicker base, like that of a goldfinch. There are good examples of both, but a sharp goldfinch beak is the rarer; the essential thing is that the beak run off fine. The wattle on the beak must be exceedingly small and fine, and any excess here, or in thickness of beak will make the best-headed bird look coarse. The colour of the beak is that of a grain of wheat. Black beaks are found, and also give coarseness of appearance.

It is, however, to be observed that all Short-faced Tumblers are shown with their beaks *trimmed*, which is not in this case fraud, but long-understood custom. No bird could appear naturally as Tumblers are seen in pens. It was early found that the excessively small beak of the Tumbler grew more dead horn in proportion than other pigeons, and hence the practice no doubt originated of cutting off the superfluous growth. To some extent this is often actually necessary, many beaks growing crossed or wry if not attended to, which seriously injures the health, since no bird in this condition can preen its feathers properly. At all events, it is now the universal practice to trim the beak with sharp scissors nearly down to the "quick," which improves them considerably. This causes no more pain than trimming the finger-nails; but some people, anxious to go to the extreme limit, have occasionally cut *into* the quick or living portion, as can be seen by the appearance of blood at the point. Any bird thus barbarously treated should be instantly disqualified.

The fifth and last property is termed the "eye." This must be large, circular, and prominent, black in the pupil, and the iris white or pearl. The cere or lash round the lids is narrow or small, the feathers growing as close as possible up to the lids; and the eye should be set well down and a little back, so as to give full effect to the height of the forehead. The comparatively

large white iris gives the eye an arch look, peculiar to Short-faced Tumblers.

In breeding Almonds, the composite character of the breed has always to be kept in view. The variety is not fixed as are most others; and those who purchase Almonds expecting them to breed true, will be disappointed. The bird is a *mixture* obtained by long patience and many crosses (this is true, whichever of the theories just now mentioned as to its origin may be adopted), and hence, by the great law of reversion explained in the chapter on Pedigree Breeding, the original component elements which went to form it constantly tend to re-appear. We have supposed these to be (1) black; (2) red or yellow; and (3) white. They crop out in breeding Almonds as follows:

Kites represent the Black blood, and are black with more or less of a reddish or yellowish bronze in the feather; or, as others term it, a "fiery glow" through the black. Some may be almost pure black, others more of a rich bronze.

Agates may be either red or yellow. Strictly speaking an Agate consists of one of these colours, with more or less of white intermixed. The simple term of Agate is, however, usually confined to birds showing the colour alone over the body, with white in only the flights and tail. If white is freely intermixed over the body, it is usual to call the bird an Agate Splash. Sometimes again, no white at all is visible until very careful examination, and some people call those birds "Whole-feathers," or yellows or reds respectively; or when they have a few white markings on the wings and back, as in the "Mottled Tumblers" to be presently described, call these "Mottles." Mr. Fulton has, however,* clearly pointed out the difference, which it is very important to keep in mind, because these birds are little use for breeding those Whole-feathers or Mottles to which they seem to belong. On examination the whiter or Agate blood is found in some of the *quill* of

* "Book of Pigeons" pp. 148, 149.

the feathers being white, and more or less of the web near the roots a little grizzled, whereas the true Whole-feather or Mottle is sound in colour to the root.

The White blood sometimes also comes out in almost white birds; but as there is almost always a little colour somewhere, these too must be termed Agates.

Splashes resemble Almonds in having all three colours; but differ in having white intermixed with the body feathering, which in Almonds is only black and yellow. They very often also have one or more of the standard feathers with white and black only.

True Whole-feathers are also found, and also a kind of dun, some of which approach yellow in colour, and if so are very useful in breeding.

Such being the colours that occur in breeding Almonds, it will be readily understood that it is utterly impossible there should be any regular rule for matching. The object must always be to keep up the *balance* of blood, and as fast as any deficiency in either of the colours appears, to supply it. To this end it is necessary that the breeding of the birds be known, and in default of this the amateur is working in the dark. Thus, we may have two Almonds it is wished to match up. Both look very much alike; yet one may be the produce of a pair which have thrown a predominance of Agates and Splashes, showing that the lighter colours were getting the ascendancy; while the other may be the issue of a recent strong infusion of Kite blood. It is evident the two would require very different matches. Generally, however, it may be observed that as all light colours tend to get the upper hand, more frequent crosses of dark Almonds and Kites are necessary than of the lighter sub-varieties; and also, as a rule, Agates and light Almonds require pairing with Kites or very dark Almonds. A Splash, again, may often be mated to advantage with a Whole-feather, or even a Kite with abundance

of the bronze or "colour" through the feather. The object always is to supply the missing element. As a rule the Kites with plenty of bronze are much more useful than the nearly black ones. On the whole, the matches of Almond to dark Almond or Kite, and of Splashes to various shades of Agates and Whole-feathers, are most common amongst old breeders. We trust we have made the general principle plain; and also how much depends upon the pedigree or previous breeding.

In relation to other points, and especially points of head and carriage, we can only insist upon the importance of pairing the *best* together, if it be only a few pairs. It is common for beginners, if they have say ten really fine-headed birds, to try and pair them with ten other moderate birds. This is lost time and labour; whereas if they paired them up as five *first-class* pairs, they would probably produce something good. The policy alluded to is bad in all pigeons; but in Almonds, or any Short-faced Tumblers, it is simply hopeless, so high is the standard demanded.

In regard to the heads, however, it is necessary to state that very few birds are now shown whose heads have not been tampered with, an implement of wood like Fig. 24 being pressed into the bottom of the forehead daily, from the time the bird is a few days old, till the skull is "set." If it be done too severely the young one dies, and many do die: if not thus overdone, and the head at starting be decently good, the result is a "grand head and stop." The process is one of very great cruelty, the skull being literally crushed into shape, with immediately fatal results in scores of cases. In many other cases where the bird survives, it suffers for life; the nostrils being crushed almost together, and the eyes

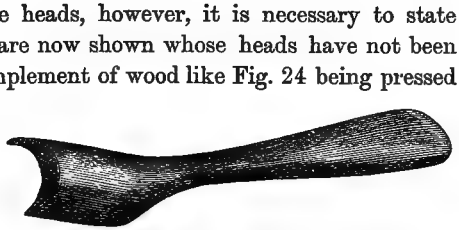


Fig. 24.—HEAD-MOULDER.

squeezed almost out of the head. Many of the *unnaturally* prominent eyes seen in Short-faced Tumblers are due to this cause; as also the constant running and irritation which gives so much trouble, and is due either to the compression of all the soft contents of the skull, or the closure of the natural vent through the nostrils. Such abuses cry aloud for a remedy which Mr. Fulton has been the first to publicly demand, and which will never be found whilst judges attach, and teach amateurs to attach, such exaggerated importance to "head and beak." It is a significant fact that since these points were made the cardinal ones, the number and character of Almond breeders has declined, and more than one gentleman left this fancy in disgust as soon as he learnt what he must do in order to win. The remedy is, to give back the old prominence to "feather," and especially to seek again for the difficult *yellow* ground. There is abundance of work here for any breeder's skill and patience, whilst good heads, once so scarce, are now "made" by the dozen. *Good* heads can be bred; and we hesitate to imply that *all* even of the very best owe their perfection to the process described; having had birds shown to us with such solemn assurances to the contrary as we feel unable to disregard. But that the "heads" once so rare, and now so general, have all, or even most of them, been genuinely bred, is simply impossible. In fact, what was once the most difficult point is now the very commonest of all, to the detriment of the pigeon in every way. As to the remedy, we are convinced that if the old standard of colour and feather were revived, sought for, and *judged* by, the result would be a return to that old state of things when the Almond Tumbler was the chosen pet of men of position and family.

Whole-coloured Short-faces are met with occasionally, though those called so usually show some Agate blood in the quill and fluff of the feather, as already explained. By choosing birds as free as possible from this, however, real whole-feathered

reds and yellows have been produced, and can be produced again. The colour requires keeping up, by breeding the soundest reds together, and following the same plan with the yellows, adding an occasional cross from the red.

It is, however, to be noticed, that *fixed* whole-feathered colours, or whole-coloured Agates, bred in this way, cannot be used in Almond breeding in the same way as those which occur spontaneously. Their colour being fixed by selection, they tend too strongly to perpetuate themselves, instead of merely contributing the required element to the Almond mixture. The same remark applies to *Kites*. These are often so good in head, and the colour is so much liked by a few fanciers, that they too are bred as a Kite strain; and in this case the Kite proportionately loses its value for Almond breeding.

Mottles, when at all approaching perfection, are very beautiful birds, especially the black Mottle. They should be a sound "whole" colour all over, with the exception of the mottling, which may be either confined to a "rose" of small white feathers on each shoulder, or there may be added a few on the back, which are most admired if ranged in symmetrical lines. The white on the back is termed a "handkerchief" mark. Some fanciers object to it, and in Mr. Tegetmeier's book the black Mottles are shown without it; but Eaton's work, in the coloured plate of the same variety, shows the handkerchief back clearly, and the majority prefer it.

It seems probable, but is not certain, that the mottled marking may have originally occurred with the other sub-varieties in breeding Almond Tumblers, and been afterwards perpetuated by selection. Occasionally *Agate* Mottles (the difference between Agates and true sound colours has been already explained) are produced even now; and the best means of breeding red or yellow Mottles is to match such birds to *real* Whole-feathers, mottled or not, and select the best of the

progeny. At least, this is the best plan if Short-faced blood be adhered to. But there is often to be found all but perfect marking among the common Tumblers described in the next chapter; and as these can sometimes be found even a shade better in head than what is termed pleasant-faced, a surer way is to cross with such a strain.

Black Mottles have long been a distinct strain, and we agree with Mr. Fulton in considering them the most beautiful of the Short-faced family. Probably no pigeon is so hard to breed, two main difficulties constantly occurring. The first is of course to obtain the marking, without too many white feathers, or what is termed being too gay. Nearly all the birds shown have undergone a fearful amount of "weeding" on this account, and there is in particular a strong propensity to a white mark on the forehead, which is termed a "blaze," and which is sometimes dyed to hide it. Secondly, the Almond origin shows itself in a strong propensity to Kite colour, the more so as Kites are almost the only crosses available. The Kite tinge also is apt to come out on the head, though it may occur anywhere, especially in the quill feathers. This Kite colour, then, has to be bred out; and this can only be done by avoiding, as far as possible, breeding together two birds possessing it. Sometimes a really jet-black whole-coloured bird can be obtained, and such will of course make a valuable cross for black Mottle breeding. The marking can only be kept even near the right standard by bearing in mind that the white always tends to increase, and that a bird at all gay should therefore be matched to a Whole-feather or dark Kite, while one with enough mottle should go with one much too dark, or even a whole-coloured black. The blaze on the face is, however, much the hardest thing to overcome. That nearly perfect marking is possible is proved by the success attained in common Tumblers.

Baldheads, like the following, and unlike the preceding

varieties, are quite a distinct strain from Almonds, at least for very many years. The bird is so called from its white head ; and the chief point about this property is that the line dividing the white feathers from the coloured ones should run straight and clean across. It is preferred if the line go almost close to the eye, when the bird is termed "high-cut;" if the white extends lower it is called "low-cut," and is not so valuable. The pearl eye, head, and beak, should be as in the Almond, but head and beak are seldom quite so good. Very many of the birds exhibited, we are sorry to say, are more or less plucked about the dividing line to make it appear more even : such plucking should be attentively looked for either in judging or in purchasing stock. Small foul marks are also liable to occur just over the eye, and we remember once seeing one of the very best Balds ever exhibited disqualified for the removal of a mark of this kind.

Besides the white head, Baldheads are required to be clean-thighed—in fact, the whole belly is white, the dividing line here also being desired to run clean across at the bottom of the breast—white in tail, and as far as possible with ten white flights in each wing. Here is perhaps the greatest difficulty. Ten flights are apt to be accompanied by a white *inner* flight, which is a fault; also with a head too low-cut ; while on the other hand the lesser quantity of white blood shown in a high-cut bird tends to come out also in foul marks on the thighs ; or if not there, *almost always* in a short number of white flights. It is therefore common in pigeon reports to read of a Bald being "eight a side," or "eight and nine," which is very good in flights—in fact, more than is at all usual, and with good head points enough to win almost anywhere.

Baldheads are bred blue, silver, black, red, and yellow; blues and silvers being far the most common, and naturally best in quality. We have seen a few blues and one silver nearly equal to Almonds in head, eye, and beak ; but we cannot say as much

(personally) of any other colour. Blues and silvers are matched together, as, the tail being white, there is not the evil of white rump to be dreaded that follows this match in whole-coloured birds like Dragoons. Blacks are very scarce, and we think might be improved by matching to both Kites and black Mottles. Mr. Fulton strongly recommends the first cross, but says nothing of the second; whilst we are convinced that the great tendency to *blaze on the face* in the Mottle shows some past connection between the breeds, which would make this cross the easiest and most effective of any. Reds or yellows might also be paired to black, if they could be got rich enough in colour, but any *poor* red or yellow spoils black completely in all pigeons. Reds and yellows may be matched as usual: some have crossed yellows with Almonds with good result. Yellows are far inferior in effect to either reds, blacks, or blues. We may remark in conclusion, that it is generally necessary to match a good-headed Bald to one lower cut, in order to avoid foul thighs and too small a number of white flights.

Beards have the head all coloured, with the exception of a crescent-shaped white bib under the beak. Some few people say that there should be a coloured line down the middle of this, but we never saw it, and do not believe any one now alive ever did either. The tail also should be white, like the Bald-head, and the flights are desired white also, but owing to the less quantity of white about the head it is particularly difficult to get them all, few birds having more than seven a side. Eight and eight is good enough to win almost anywhere if the other points are good enough. The Beard is usually only white at the ends of the thighs, or the "stockings," the belly being coloured; this difference is also evidently connected with the less quantity of white about the head, and few judges would regard whole white thighs as a fault if they could be got. Head, eye, and beak should resemble those

of the other Short-faced Tumblers, except that in blues and blacks the upper mandible is nearly always dark. While, however, good-headed Balds can be found in the flesh, we have scarcely ever seen Beards nearly so good in head as the others of the family. Black Beards could probably be improved greatly in this respect by judicious matching to black, Kite, or black-mottled Tumblers, breeding back to the Beard marking.

Matching for breeding colours, which are known as in the Baldhead, will follow the hints above given for that breed. Reds and yellows especially, however, could be vastly improved in head properties by matching to Whole-feathered birds good in those points. We may also remark that some fanciers have matched Balds and Beards together with good results, producing thereby excellent progeny of both varieties.

There is, beside the foregoing, rarely met with a Short-faced *Blue* Tumbler, whole-coloured except black bars. Most of them want improvement as regards head points, but breed so true to colour that they could be easily developed with a little care.

Short-faces depend especially, and above all other varieties, upon good *feeders* for success; none of them being able to rear their own young, unless, perhaps, some of the coarser-headed Beards and blues. Two or three pairs of feeders for each pair of breeders are therefore needed, and the greatest care is necessary to put down *every* date of laying and hatching, feeders included. Obviously only fine-beaked birds are suitable, such as coarse Jacobins, pleasant-faced or common Tumblers, &c., heavy-beaked birds injuring the young. Young Almonds are so delicate that *two* shifts are often advisable, and a tame and quiet disposition on the part of the feeders is absolutely necessary.

The prominent eyes are apt to give trouble if sawdust is used in the nest-pan as generally recommended, becoming so easily irritated. Mr. Eaton strongly advises that the sawdust be lined with rush-matting steeped in tobacco water, and shaped by pressing into it the bottom of another pan. This plan can be recommended. The eyes are also peculiarly liable to catch cold and discharge. Very often we believe this is caused by the crushing in of the skull already described; but when the cause is cold, a gentle bathing with warm water, or, still better, *warm tea*, will give relief.

Short-faces are particularly liable to what is termed "going light," or wasting away. After all, *good feeders* are the best preventive against this; but small capsules of cod-liver oil with quinine are also very useful. Plucking the tail sometimes assists, but is not so suitable as for other varieties, owing to the feathers often re-growing of foul colours. With every precaution, the proportion of losses and deaths is greater among this class of pigeons than any other; so that Eaton observes how, when he had hatched a little wonder, he used to sit absorbed in "wonder and astonishment" how he should get it reared. To hatch early is useless unless the weather be particularly favourable, and Short-faces should not therefore be even paired, as a rule, till the early part of April. Artificial warmth may occur to some; but all experience proves that the delicacy of the bird is far increased by such means; and that it is far better in the long run to allow access to the open air. If, however, "feather" should regain its place, and judges discourage that tampering with the head which leads to so many evils, no doubt a considerable portion of the special delicacy of the Almond would disappear.

Almonds too light in colour are sometimes a little *oiled* before exhibition, and we have seen prizes given to birds disgustingly greasy; but such fraud should be easily detected. We have already hinted that much trimming is also too usual,

and mere odd feathers cannot be detected; but whole patches should not fail to "catch the judge's eye." We have known the mottling in Mottles *added*, or fastened in! To guard against such practices, every bird chosen for a prize, or any purchase, should be carefully overhauled.

CHAPTER X.

COMMON AND PERFORMING TUMBLERS.

THE class of pigeons described in the heading of this chapter is a very large one, and the division indicated is by no means well-marked. Probably all were originally actually tumbling birds; but of late years several divisions have been bred for feather or marking, and hence have been derived varieties which are shown in classes for these points, but which very often neither perform nor possess the head properties of the Short-faces. Baldheads, Beards, and Mottles are perhaps most bred in this way for the show-pen. Many are what is called "pleasant-faced," or with a decided, though moderate, approach to the short-faced type; and these birds, as already observed, make admirable feeders for their more delicate relatives described in the last chapter, and most valuable crosses for improving their marking. We have seen many mottled birds which were all but perfect in marking, and also Baldheads and Beards which left little to be desired. In the neighbourhood of Birmingham many fanciers prefer the Mottle without what has been already described as the handkerchief back, and with no other marking than the mottled shoulder: these are often called Rosewings, and perfect specimens of these pleasant faced Mottles or Rosewings, whether performers or not, have a considerable local value.

As regards the breeding of these "marked" birds, nothing need be added to what is stated in the last chapter. It is

always necessary to *keep down the white*, which constantly tends to encroach or predominate: and hence a bird even perfectly marked has generally to be matched with one possessing scarcely enough white; whilst too "gay" a Mottle may have to be matched to a Whole-feather, and too heavily-marked a Beard, or too low-cut a Baldhead, to birds with a short number of flights or with slightly foul thighs. It may, however, be added that there are strains of Beards which do not tumble, but which are capital *long distance flyers*, being very fast and sure up to over a hundred miles. These long-faced flying Beards, however, are seldom so good as pleasant-faced, but more approach in head the type of the German Toys.

Of actual *tumbling* pigeons there are several varieties, even in performance, which are well understood and specially cultivated in some neighbourhoods, particularly those of Newcastle and Birmingham. It is first to be understood that the "tumble" is a complete backward somersault in the air. *Tipplers* throw only one such at a time, but repeat such detached performances frequently during their flight. *Tumblers* often make two, three, or more backward revolutions without stopping. And lastly, there is the true Birmingham *Roller*, which turns over backwards with inconceivable rapidity through a considerable distance, like a spinning ball. These are varieties of what may be termed strictly *flying* Tumblers, the performance being gone through whilst the birds fly in mid-air, and often at a very great height; but there are also what are termed *house* Tumblers, which spring up a few inches from the floor of the loft, turn one complete somersault, and alight on their feet again. Some of these birds will also tumble many times while flying *in* the loft or aviary. Finally, Mr. Tegetmeier has described, under the name of Lowtan, or Lotan, a very peculiar variety of Tumbler, cultivated in India. These birds do not tumble of their own accord, but are taken by the neck between two fingers, given a slight shake, and

placed on the ground, when they roll over and over as if in a fit, the natives stating that if not taken up they would continue to do so until they died; though one of Mr. Tegetmeier's correspondents found that the only bird he allowed to go on unchecked stopped itself at last from exhaustion. A sub-variety of these birds is said to tumble, or rather roll, when tapped on the head with the point of the finger.

These facts open up a very interesting question as to the origin of the tumbling propensity. Mr. Tegetmeier observes that the various eccentric movements included in it "obviously depend on an extra irritability of the nervous system," and suggests a comparison that appears just between them and the involuntary tremulous motion in the neck of a Fantail. Some have maintained, on the other hand, that tumbling is voluntary and the result of training, and a source of pleasure to the birds. There is some reason for this view of the case in the fact that a well-trained flight of birds will often go through their performances in evident concert, and so close together that it is almost impossible to conceive they would not come into collision unless they had control over their movements. It is also noticed that when a bird has been away some miles from home, on its return to its mate the pair will often go through a regular performance, as if in joy at the re-union. So much also depends upon judicious treatment and training, that it is natural owners and breeders should attribute the performances of their birds to this cause.

In our opinion, the only tenable hypothesis is that advanced by Mr. Henry Kesteven, M.R.C.S.,* the evidence for which may be shortly stated and is of unusual weight. This view attributes tumbling to some form of *epilepsy*. On closely watching Tumblers, it is seen that the act of tumbling consists in a violent spasm of the muscles of the back, which is bent into the form of an arc, while the wings at the same time strike together

* See *Live Stock Journal*, May 31st and August 30th, 1878.

across the back. It is evidently a convulsive muscular spasm of some kind, and this is the predominating feature of epilepsy, which we also know may be excited by many causes. Now it is well known that good Birmingham "rollers," if in descending they strike or come in contact with anything, such as a chimney, are very often converted into what are called "mad" Tumblers, whose tumbling is perfectly uncontrollable. The analogy between these and the poor Indian birds which roll over and over when shaken by the neck or tapped on the head can easily be seen. It has also been observed that "house" Tumblers will often show a perceptible dread of the performance, sitting for hours on some point and not daring to leave it, and trying to hide away from the owner, whom they know as making them attempt the task. It is also known that an epileptic condition is most strongly hereditary, and it is easy to understand how it may have arisen in confinement. The mere catching of pigeons is likely to produce such a condition in individuals, and all birds in partial confinement are apt to develop a nervous irritability not natural to them. In this way it is easy enough to understand how tumbling may have been first acquired, and then developed and transmitted.

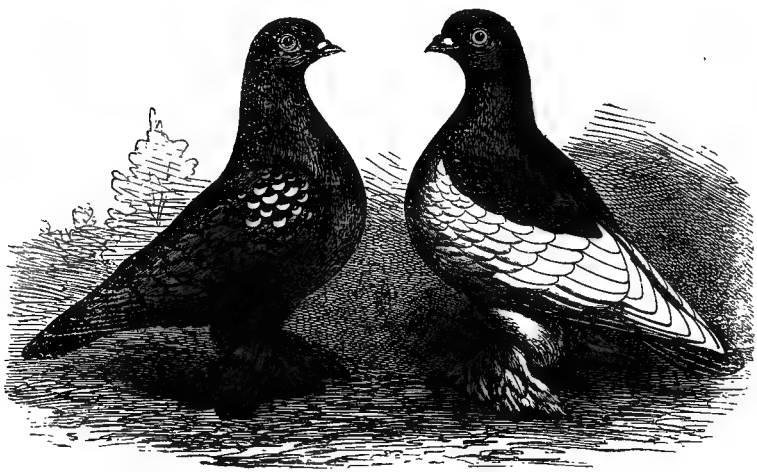
The probability of this hypothesis appears more strong when some other circumstances are considered, though some of them have even been urged as objections to it. It has, for instance, been asked why tumbling is confined to one branch of the pigeon family. The reply is that it is not so, strictly speaking. Mr. Kesteven found a pure Antwerp cock which tumbled, and some other stray individuals have been reported; and the Oriental Rollers, to be presently mentioned, show us another and distinct family remarkable for tumbling. It is also said that there appears no exciting cause for the convulsive attacks which it is supposed constitute tumbling; but it is obvious that either rapid ascent in the air, or the quickened circulation caused by flying, would be abundantly capable of supplying the necessary

stimulus. Still more conclusive, however, is the fact, so well known to all Birmingham trainers, that if Rollers are allowed unlimited liberty their performance deteriorates, and may even altogether cease; which is precisely what might be expected if, as we have supposed, the epileptic tendency has been developed by semi-confinement or other exciting causes. Unchecked liberty in such a case, it might be supposed, would tend to restore the nervous system to a normal state, and it does so. We can also understand how many varieties of "Tumblers" have lost, for want of cultivation, all propensity to tumble.

Mr. Kesteven, however, ascertained one more fact, which may almost be deemed final, and must certainly be so if supported by other observations. He submitted the brain of a young Baldhead Tumbler to microscopic examination, and the result was the discovery that the coats of the blood-vessels were thickened, indicating irregular and unnatural blood-pressure. These appearances are about the *only constant sign of epilepsy* in the human brain.

We regard it, therefore, as beyond any reasonable doubt that tumbling is a symptom of some form of epileptic disease; but it by no means follows that all tumbling is entirely involuntary or a cause of suffering to the birds. The same nervous sensibilities which give most pleasure are capable, in different degree, of causing severe suffering; and it is also well known that actions which are ordinarily of the character of disease, by frequent repetition become habits, and afford a measure of enjoyment, besides coming to a certain extent under control. Even the line between voluntary and involuntary is not definite; for taking a case strikingly akin to the present, it is notorious that hysterical fits are in hundreds of cases entered upon in a more or less voluntary manner, though when unchecked they pass beyond the control of the patient and occasion suffering. It is therefore conceivable that even convulsive action of an epileptic nature may assume a form not

only partially controllable, but capable of giving pleasure; and observation tends to confirm this view of the case. If the poor ground Tumbler never tumbles voluntarily, and the house Tumbler shows signs of fear and dread, it is no less true that the real flying Tumbler shows every sign of eagerness and joy at starting on those aërial flights which *it* also must know by



ROSEWING OR MOTTLE. SADDLE.

MUFF-LEGGED FLYING TUMBLERS.

experience give stimulus to the spasmodic action. The delight of the one is as obvious as the dread of the other; and while the man of real humanity should hesitate to cultivate a form of disease which in the house Tumbler evidently causes suffering and fear, he need not hesitate to maintain those other forms which, according to all the evidence accessible, afford sensations of the most pleasurable character.

The varieties of form and colour in flying Tumblers are endless, and they are so crossed as seldom to breed true. Mottles and Rosewings are occasionally bred by themselves;

but performance is most studied, as in Homing pigeons. There are also solid or self-coloured birds, and mottled birds in which the colours are intermingled all over the body. There are Whitesides, in which all is coloured except the sides of the wings; Saddles, in which the flights are white as well, also the thighs and lower breast—in fact, the same as a Magpie exactly; Grizzles, and all kinds of odd colours and markings. All these (and more) are found both clean and feather-legged. Our illustration shows a muff-legged Mottle, and a Saddle or Magpie-marked bird.

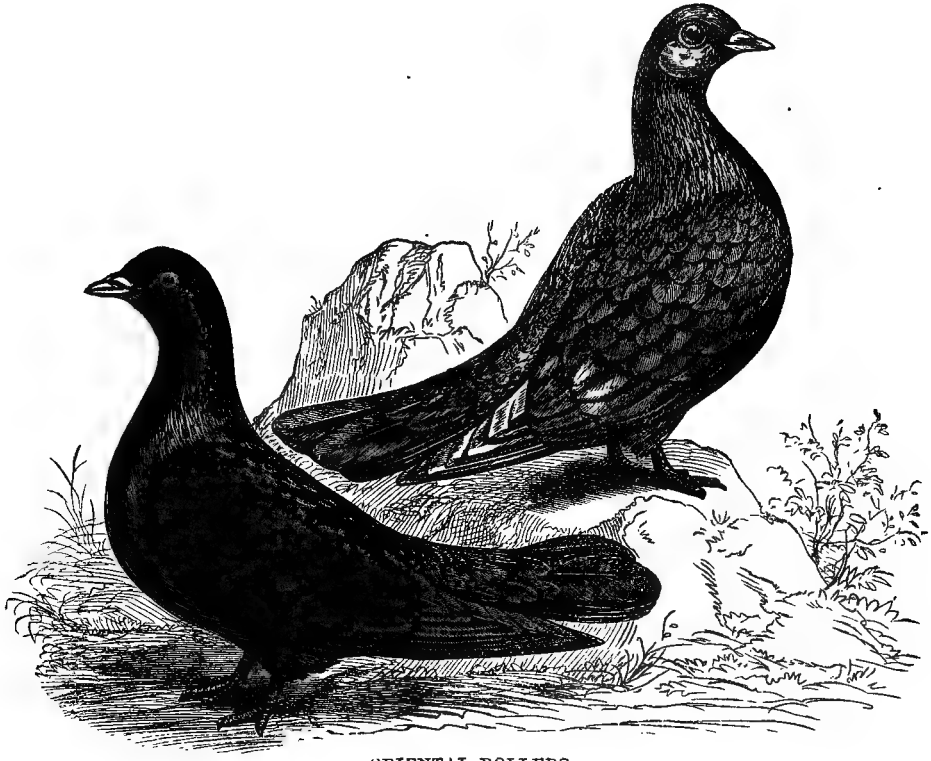
The birds being generally paired to preserve a given style of performance, it is needless and impossible to give directions for mating, beyond the general principle that if any selection at all be desired in colour and marking some suitability in matching should be studied; such as putting a good red to a good black, and heavily-pied markings to each other, and not to mixed Mottles or Grizzles. Good performers of the ordinary type are generally wide at the shoulders and chest, and very narrow at the rump; also somewhat short in the back, which often exhibits signs of hollowness, as might be expected. The eyes are pearly white, and the forehead rather high, though without the decided "stop" which has been developed in the Short-faces.

In addition to the Flying Tumblers familiar to English fanciers, Mr. Ludlow has described, under the name of "Oriental Rollers," a quite distinct and very remarkable variety, cultivated in Greece, Turkey, and Asia Minor, of which several specimens have on one or two occasions been imported. They are found of all colours, including a kind of almond feather; and the whole-coloured blacks are remarkable for two points, which distinguish them from ordinary black pigeons. The first is an extraordinary iridescent lustre, which extends throughout the body, somewhat like the bronze in an

Archangel; and the second that the beaks are white, or with only a touch of black on the very tip. The general peculiarities of the birds Mr. Ludlow describes as follows:—

"On reference to the accompanying representation it will be seen that they are in appearance also somewhat novel, and dissimilar to our English breed. The beak is not, as in most Tumblers, of a dove or 'spindle' character, but straight, and moderately thick and strong. Nor does the head possess the high crown or projecting forehead so common amongst our native Tumblers; but it is rather long, yet nicely in keeping with the peculiar elongated hollow back and narrow form of the bird; the neck is rather short, the legs also short, and the eye of a 'pearl' colour. I may say that *great length* and *hollowness* from neck to tip of tail is a most desirable feature, and such is (apart from a trial) one of the best signs of quality. The entire length, as I have said, should be long; still the back itself is actually short. The birds possess an elasticity of form which is quite uncommon, and whilst trotting about in search of food, &c., or after taking a refreshing draught, they will raise their tails, and thus hollow their backs to a strange degree. Another remarkable feature in them is that the little pointed oil-gland, immediately above the tail (common to poultry and most kinds of pigeons), is *not to be found* in any pure birds of this breed, which is quite destitute of this common characteristic.

"The tail also is peculiar and quite uncommon. It is long, and composed of from fourteen to twenty-two feathers, sixteen being about the average number in these birds; these are arranged equally on either side, one above another, and the two top ones, diverging a little outwards, show a slight division in the tail, but there is not the slightest affinity or resemblance to a 'fan' tail, as some might suppose by the excessive number of feathers, but it is a distinct peculiarity of this breed (twelve being the normal number of tail-quills in most pigeons). The



ORIENTAL ROLLERS.

greater the number of quills in 'Oriental Rollers' the more the specimens are valued. A further singular feature noticeable in the tails of these birds is that occasionally two feathers may be found growing from one quill, separating at its pithy junction as a twin feather, each rather narrower than ordinarily, but of the usual length, and not outgrown, or causing a disordered formation of the tail."

We learn from Mr. Ludlow that a pair or two of these birds are usually kept and flown with a flock of other pigeons. When let out they fly apart for awhile until their companions have attained a good height, when they assume and keep a position *directly over them*, and begin a most extraordinary series of evolutions, mounting as high as possible, and "rolling" down to the flock beneath, thence re-mounting to repeat the performance.

Very much depends upon the judicious training of Flying Tumblers, and especially as regards Rollers. Many of these latter birds have been purchased, and being turned out at liberty have by degrees entirely lost their performing powers, and caused much unjust suspicion. The probable reason for this result we have already seen; and it may be well, therefore, to give a few hints as to the training and treatment necessary to rear and keep a flight in good working condition.

Many young birds, when they first begin to manifest the propensity, cannot tumble completely over, but fall backwards in a very awkward manner from want of confidence. In this case, if the tail be shortened or the centre feathers plucked, it will cause less resistance, and the young bird will probably be able to get over without difficulty. With practice the habit will be confirmed; and as the tail gradually grows it will not interfere with the tumbling. Many good birds have had to be helped in this way.

The great point in all flying and training is to see that the

birds are always *at work* when they are out of doors. To secure this object it is usual to let them out before feeding, morning and evening. The area, or starting-place, should be as high as possible, and the birds thrown well up, or hurried up by clapping or waving a flag at starting, and let in again to be fed *as soon as they come down.* If flown with food in their crops they are much more likely to settle on roofs or chimneys; and when a Flying Tumbler has once acquired this habit it is spoilt as a performer. Besides this, in turning over the food is liable to be thrown up from the crop into the throat, and thus choke the bird, several cases of which accident have become known to us. If the birds do not fly freely, or want to come down at once, they should be kept in for several days, and only liberated on some clear bright day, when the fine weather and long confinement will dispose them to take more exercise. Whenever they settle they must be frightened or driven off, but allowed to feed as soon as ever they come in; and by steadily following this system the birds soon get into the habit of spending all the time they are in the open air upon the wing. When in regular training, it is best to fly them twice a day, in the morning and evening, giving them a *light* feed after the morning fly, and as much as they like after their fly at night. It is also necessary to see that only good flyers are let out together, as lazy birds, or "pitchers," may corrupt the whole flock. It is also necessary, when they are up in the air, to avoid anything that may tempt them to descend, unless they are really wanted in. Only in the evening, after they have come in and had their feed, may they be occasionally allowed a little liberty on the roof, when they will pick up "scour" and otherwise make good use of their time.

Flights are very often lost during fog, snow, rain, or high winds, if these come on suddenly while they are up—for, of course, the birds would not be liberated in such weather. It is well always to have a reserve of a few birds at home, which in

case of emergency may be sent up after the others and decoy them home; for this purpose they are all the better if poor flyers, or not, strictly speaking, flyers at all, the only object being for them to reach the others, and then, if possible, return at once. It is, in fact, very dangerous to have birds fly too well. By careful and regular practice they may easily be got to fly for several hours together; and if while they are up a strong wind rises or a slight mist comes up, leaving the sky clear overhead, they will often be lost altogether. For these reasons, when they have once been well trained it is well to get them into as heavy flesh as possible, and to divide the flight so as to fly them on alternate days or fewer, when they will not be disposed to fly so long.

It is early enough to turn out young Tumblers at three or four months old, and the plan usually followed is to toss two or three at a time, along with the same number of old ones kept back for that purpose, into the flight as they are returning after a fly. The toss-up of the fresh birds will generally set off the whole lot again for a few minutes, which will give the young ones practice, and gradually accustom them to flying and tumbling. Some young birds develop the tumbling propensity very fast, and others much later; and it not unfrequently happens that the later-developed ones make the best performers in the end. But there must always be a strict drafting, and every bird found to be an idler, after fair and due trial, must be got rid of if the quality of the loft is to be preserved.

In starting a new flight of Tumblers, we should advise first getting a few common Dragoons or Antwerps accustomed to fly round the locality. Then let young Tumblers be either purchased or bred, and, when strong enough, let them out for half an hour each day, *hungry*, so that they will not go far, but only learn to observe the neighbourhood. They can easily be tempted in with a little food. Then shut them up a day or two, after which let them fly with the Dragoons or Antwerps

for a week or fortnight, always getting them in directly they return. The Dragoons will teach them their way about, and after that should be shut up or parted with, as longer companionship might spoil the Tumblers. The subsequent training will proceed as before. One or two Cumulets, if they can be got, will be useful in getting the Tumblers to fly high.

To recapitulate briefly, the principles of training are simply these :—1. They are only let out *at first* every three or four days, in order that the confinement may dispose them to fly actively directly they are liberated. As that habit is confirmed they are let out oftener, till they may have a morning and evening fly, if convenient, every day. 2. They are let out *fasting*, in order that they may return instantly the disposition to exertion is over; and fed immediately to keep up this habit. The reasons for feeding lightly after the morning fly are obvious, as also for never liberating them when there are other birds about to tempt them to pitch—at least, in the early stages. Beyond this system, nothing is necessary beyond weeding out all unsatisfactory or lazy birds. It may, however, be remarked that all this training is directed towards "flying" simply; the tumbling is developed as the young bird grows, and if the stock be good will come of itself by association and habit.

In exhibiting Tumblers the chief points are, of course, purity and richness of colour and regularity of markings.

CHAPTER XI.

POUTERS.

THERE is little doubt as to the origin of this pigeon, though it has given rise to some dispute. Moore, who describes the English Pouter in 1735 precisely as we do, distinctly states that it was bred by crossing the "Dutch Cropper" to a Horse-

man, a long-bodied and long-feathered bird. The Cropper seems to have been the origin of a tribe of several varieties, and to have been remarkable only for a large inflated crop and feathered legs; differing from our Pouter in having the thighs wide apart, and having no upright carriage. Mr. Ure cannot see* "how such a cross could produce a bird like the English Pouter," and says that Moore "does not speak from his own personal experience;" but this is a purely gratuitous assumption, and an objection to his account which nothing in the text justifies. It is at least more likely that the cross with a long-feathered bird should have improved length of body and feather, besides making the bird close-thighed, as Moore actually affirms it did, than that the bird was produced solely by breeding up the Dutch Cropper alone, recognised as a distinct variety by Moore himself; and we do know positively that long since his time the cross with a Runt has been employed repeatedly in Pouter breeding to give size, the consequent thickness of girth having to be bred out again. Moore writes contemporaneously, as of a matter he was perfectly familiar with, that "this pigeon, which was first bred in England, and is therefore called the English Pouter, is originally a mixed breed between a Horseman and a Cropper, and by matching their young ones over and over to the Cropper, *experience teaches us* it will add a wonderful beauty to this bird, and raise in it the five following properties." Nothing can be plainer, and we may add that nothing is so inherently probable.

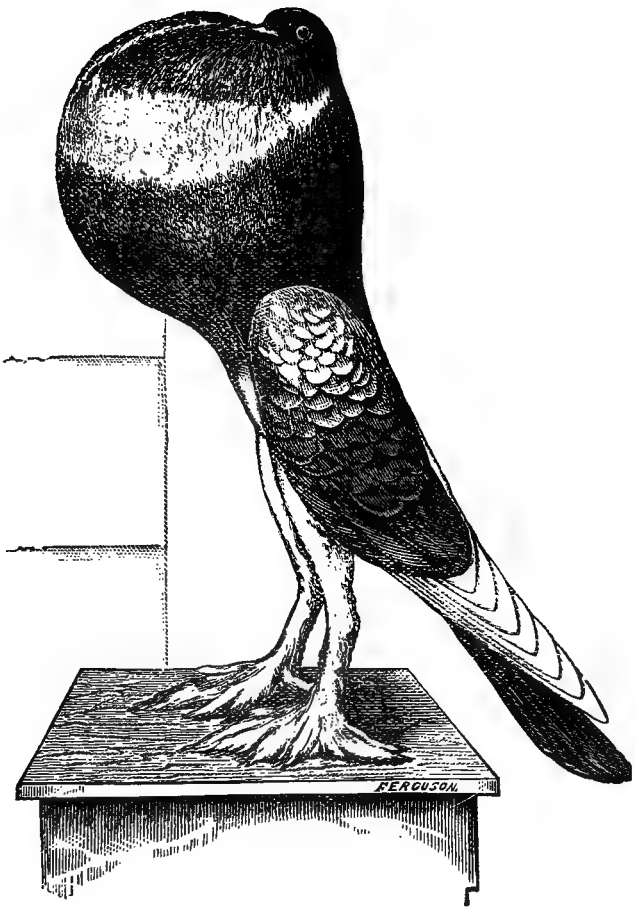
Of the allied varieties mentioned, the Cropper is already alluded to: it seems to have had no property but a very large crop, produced (no one knows how) by developing the power all pigeons have to some extent of inflating the crop with air. We have seen signs of the same power in fowls and once in a blackbird. The Parisian Pouter, Moore says, resembled a Pouter,

* "Book of Pigeons," p. 97.

but was long-cropped and not large, short-bodied, short-legged, and thick in girth: its peculiarity lying in the plumage, which resembled fine Irish stitch, chequered with various colours in every feather. The Uploper resembled an English Pouter in all but size, which was small, the legs particularly so, and derived its name from the cock's habit of leaping towards the hen. Lastly, he refers to the Pouting Horseman, a cross kept up to improve Pouters from time to time by making them close-thighed. All these varieties seem to have disappeared, except so far as the smaller of them may have helped in the manufacture of Pigmy Pouters.

The London weavers generally have the credit of bringing the Pouter to perfection; but although we do not wish to disturb the old traditions which give them this honour, we think it right to put on record the fact that many inquiries have traced the Pouter fancy very far back indeed to the city of *Norwich*, though it has long since departed thence in favour of Canaries. That Pouters—and first-class ones too—were bred in Norwich very long ago we think there is no doubt, and from thence the fancy spread to Great Yarmouth; but whether or not Norwich ante-dated the Spitalfields silk-weavers, no information we have been able to obtain can determine. It is, however, certain that at a later date, with the ruin of their handicraft, the London weavers had to part with their birds, which have since been kept up mainly by Scotch fanciers. The Pouter is, in fact, the favourite pigeon in Scotland, where it is bred in immense numbers. For years the variety was quite neglected in London, only Mr. Volckman cultivating it for a short time; but of late it has been taken up by Mr. Gresham, Captain Hill, and others, and rarely fails to be well represented at the shows of the National Peristeronic Society.

The properties of the Pouter—as such, and apart from colour—are described by Moore as exactly the same now known; but modern fanciers differ from him in the order of



THE BLACK-PIED POUTER.

relative importance. This will be seen by the following table of the properties, as placed by different authorities.

Moore.	*Tegetmeier.*	*Fulton and Ure.*
1. Length of body.	1. Length of limb.	1. Length of limb.
2. Length of legs.	2. Length of feather.	2. Slenderness of girth.
3. Neatness of crop.	3. Slenderness of body.	3. Crop.
4. Slenderness of girth.	4. Size and car. of crop.	4. Length of feather.
5. Beauty of feather.	5. Colour.	5. Colour and marking.

It will be seen that all modern writers agree in valuing length of limb most and colour least—in the last following Moore—but differ in all the rest. We prefer the order of the two Scotch authorities of those above; but, as far as we can follow the judging of late years, our impression is that crop now comes next to limb, and we shall therefore enumerate the properties as:—1. Limb; 2. Crop; 3. Slenderness of body; 4. Length of feather; 5. Colour and marking.

The "limb," or leg, requires to be long, properly placed and shaped, and properly feathered. The length is measured by pressing the back of a pen-knife or similar article close against the top of the thigh, stretching out the whole as far as possible without pain, and measuring from the blade to the very end of the toe-nail. A difference in "pull" will add an eighth of an inch, so that fanciers pull pretty tight; and a long nail will also make a difference, on which account we have often thought it would be fairer to measure to the *root* of the toe-nail. In practice, however, birds are only measured in judging when it is a very fine point, but are taken by the eye as they stand in the pen with others: the only way in which it is possible to judge fairly the many points of a Pouter. A bird seven inches in length is first-rate so far as length goes, and very rarely is an extra eighth or quarter attained. Much of the apparent length depends on the shank being long in proportion to the thigh, and the foot being well set on; and a good Pouter fancier will attach more importance

to this than to an eighth of an inch or more in mere actual length.

As to shape and position, the thigh must have a fair amount of muscle, and the whole limbs be placed pretty close together. They must not be too bent at the hock, which is being cow-hocked, nor, on the other hand, be quite straight, which looks loose and weak. The hocks should be turned slightly in and the toes slightly out. In regard to feather, the thighs and shanks should be well covered with soft, rather small feathers, longer feathers spreading well out at the toes. The faults here are being scant or almost bare; or, on the other hand, furnished with flaggy feathers and more or less vulture-hocked.

The "crop" is to be as spherical as possible, and carried exactly even, and not on one side, as is sometimes the case; on these conditions size of crop is a merit. It should be capable of being fully inflated, and not so over large as to then bulge *behind* the bird. It should also carry *up* well, so as on the one hand to bury the beak on top, and on the other to flow easily into the lines of the body below. A crop carried low often shows a nick or angle at its junction with the breast, and this fault is heavy odds in a pen against a bird when its opponent is good in this point.

Slenderness of girth, or of body round the shoulders, is one of the most attractive properties. A first-class Pouter appears surprisingly small in the hand on this account. Of course the age of the bird has something to do with it, all Pouters getting somewhat stouter with each year; and it also depends (so far, at least, as appearance of it goes) very much upon the wings being clipped up tight at the shoulders: a point in which age also tells to disadvantage, especially in hens which have bred. To show this point well a Pouter must be slightly hollow in the back, the want of which is called being "hog-backed." It is this property which was

chiefly lost in crossing with the Runt to gain size; and it needs more attention yet than it sometimes receives.

"Length of feather," or of body, as Moore called it, is measured (when measured at all) by stretching a tape over the head, from the point of the beak to the end of the tail. In old days Pouters were usually judged in this way, and many have been bred over twenty inches; but this property has long been relegated into a position subordinate to length of limb. It will be obvious, on reflection, that if the tail be too long in proportion to the limbs, it must, by encountering the floor, *tip the bird forward*, preventing that statuesque and upright carriage which is so much admired. Formerly Pouters were judged standing on a block, which is still used to display their carriage. In that position the tail can hang down below the level of the feet; but as soon as the birds came to be judged on the flat floor of a large pen this advantage was taken away, and tail became necessarily subordinate to due *proportion*—a most happy thing for any pigeon. It will be found that it requires about a seven-inch limb to carry even nineteen inches in feather; and this property has therefore seldom to be measured for. Sometimes the flights are short in proportion to the tail, which is a blemish, and spoils the symmetry of the bird.

"Colour and marking" come last, but are much needed to set off a good bird, though the best cannot make a Pouter. There are five recognised standard colours, viz.: "Pieds" in black, blue, red, and yellow; and Whites. The last are pure all over, and need no remark; and as they are less trouble to breed, do not in open competition stand so high as the Pied varieties. These are of the colour they are pied with —black, blue, red, or yellow—over the whole body generally, with the exception of a crescentic white mark on the crop, which is desired as even in shape as possible. The round patch of colour which forms the top of this is called the "bib," and if it

is absent, so that the white crescent reaches the throat, or if there be white in it or above it under the throat at all, the bird has the fault of being "swallow-throated." If, again, the white crescent, whose horns should stop at the sides of the neck, reaches round behind, it is "ring-necked," another great blemish. Finally, some birds—especially black Pieds, have a white mark on the head or forehead, which is called a "snip" or snip-mark, and is also a blemish. The colour ends on the breast, a little below the crop, where the under parts (including the limbs) become white to the under part of the rump. The flights are also white, the rest of the wing coloured, except a few white feathers on the shoulders. These *should* be arranged like the rose on a Mottled Tumbler; but this is very rare, and it is sufficient if they be few and detached. If too many the bird is too "gay," and if the white runs to the edge of the wing it is "bishopped," or "lawn-sleeved." It is very rare indeed to see both wings perfect in marking. In blue and black Pieds the tail is coloured; but in reds and yellows it is white, though usually a little foul here and there. Why this should be so is rather puzzling, as the colours have been often crossed and the other markings are the same. The feathers on the crop of blues and blacks show most brilliant metallic reflections.

Every colour has its special difficulties in breeding, perhaps the black Pied most of all, for which reason most fanciers value it most. The pinion-marking in this colour is often very good; but snips are very apt to occur; and above all is the extraordinary propensity to "foul thighs," or black or grey feathers where all should be pure white. They are also apt to be thick or runtish in shape. For these reasons blacks are matched to blues; but the cross is bad, the result being mostly chequers, or bad-coloured birds. A much better plan is to throw in the red, which is generally a clean-thighed colour. By matching a red cock to a black hen there are always produced some

birds of a peculiar reddish-grey mixture, which English breeders call "Strawberry colour," and Scotchmen "Sandies." Both colours—the red particularly—must be good; and if a sandy from such a cross be matched again to a black at all decent, the result, according to both Mr. Ure and Mr. Fulton, is generally satisfactory. Dark chequers bred from blacks and blues are useful if no better offers; but every one who has tried it considers red the best cross.

Blues are bred together. They breed also lighter blues of a silver tint, and lightish blues with brown or kite bars instead of the desired black bars. Such kite-barred birds are termed "silver-mealies" by Scotch breeders, and it is singular that they often surpass the blues in length of limb and feather. They accordingly make most valuable crosses for blues, but any other cross is apt to injure the colouring; and there are, in particular, many blues about of a most disagreeable smoky tinge, owing to a cross with the black. These dark birds are generally runtish, and should be discouraged. The great difficulty in breeding blues is a tendency to get too "gay." The birds tend to be short of bib, or bishopped, or ring-necked, &c. Such birds must always be matched to such as are short of white, or the result will be white splashes, downright swallow-throat, white shoulders, and faults of that sort.

Reds and yellows are most scarce—*good* ones are rare indeed. The difficulty with them is the colour, which is washed out or mealy. We must refer to Mr. Fulton's large work for detailed notes on these colours, only observing that he condemns the breeding of red and yellow together as spoiling both, and advises breeding *matured* reds together as the best means of improving the colour. When such matching produces a good yellow, as it sometimes will, that is the best cross for a yellow; or a red may also be crossed with a yellow; but in that case this great Scotch authority warns us against ever using even a red of the progeny, however good in colour, to

cross back with reds. To doing so he attributes the loss of colour in red Pouters, and insists on all birds with yellow blood being kept to cross with yellows alone.

In whites the chief difficulty is size. Colour gives no difficulty; and this colour is naturally more slim in body than any. But this very fact, with the other fact that crosses from other colours are not needed so far as colour goes, tends to reduce the size. On this account it is sometimes necessary to cross with light mealies or silvers, or with the splashes thus produced. After such a cross foul marks are liable to occur for some time, especially if the crossed blood be matched on both sides. There is, however, a "danger signal" in regard to this point. White Pouters have light beaks and "bull" eyes, like nearly all white pigeons. As long as these points are right there is little risk of foul marks; but a dark beak or orange eye betrays the lingering of active foreign blood, and must only be matched to birds of orthodox head-points.

All sorts of splashes and mis-marked birds are used in crossing by Scotch fanciers, but not so much as formerly, standard birds being more plentiful than they were. In using them, it is chiefly necessary to see that they are crossed back to their *allied* colours, and it is therefore particularly important to know their pedigree.

Leg-feathering needs constant attention—matching birds too heavily feathered with those too thinly furnished. For detailed directions on this point, illustrated by diagrams of different degrees in feather, we must refer to Mr. Fulton's great work. It is necessary, however, to state that it rarely answers to go on breeding the *correct* amount of feather together, for the reason that heavy feather seems very much a sign of coarse *vigour* (which needs to be kept up in this pigeon particularly), and must therefore be bred from occasionally.

It is, however, much easier to breed colour and feather than to keep up the quality of the *Pouter* as such. It will be readily

understood that such length as is desired can only be maintained by great strength, and the difficulty is much increased by the desire for slimness of girth, a strong large bird tending to be coarse. Again, the extreme length of limb naturally tends to make the legs weak as the young bird grows; and probably some of the finest limbs ever bred have never been reared so as to be able to stand. The only means of overcoming these difficulties we must now briefly point out. The first is constant infusion of new blood, which in Pouters *cannot* be dispensed with, unless the breeder has a very wide stock; and, for reasons just stated, this should occasionally be given in the shape of coarse, heavily-feathered birds, but always looking for a good length of shank. The vulture-hocks need shortening during the breeding season. A second means is to rear each promising bird *singly* under a pair of proved hearty feeders, such as large Dragoons or Antwerps. And lastly, great benefit will be found from giving each bird every morning and evening a bolus, made of oatmeal and bone-dust, mixed up with a few drops of Parrish's compound syrup of phosphate of iron, or what is equally good, simple syrup of hypophosphite of lime. As the birds grow they should have plenty of exercise in a good aviary.

Pouters need careful *training* to show to advantage. They should always be accustomed to be taken up and talked to, so as to lose all fear; but as soon as they are nearly through moult, those to be exhibited are regularly drilled. Each bird is placed in a high pen with a block in the centre of its floor, and so arranged that a cock and hen may be suddenly allowed to see each other. Every time the owner visits them, which must be often, he calls to them with the peculiar Pouter call,* and perhaps also

* This is variously described, and, indeed, different individuals do not use precisely the same. Some pronounce it *hua, hua;* others *hee-he, hee-he;* and others *hoo-ie, hoo-ie.* We have heard it surmised that a celebrated Scotch fancier derives his name from traditional connection with Pouter breeding; and a well-known writer certainly spells the call as *huie, huie.*

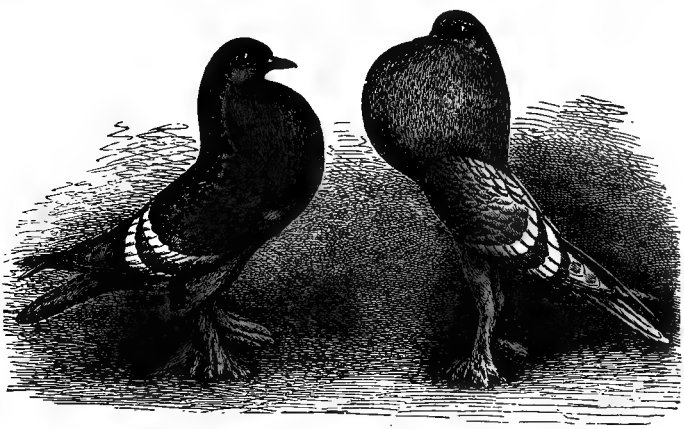
snaps his fingers or waves his hand before the pen, at the same time allowing the two birds to see each other. They naturally "play up," and gradually learn to associate the presence of man and the call with agreeable company, so that they will play on being challenged; but no other bird should be in sight except whilst the owner is training, or they will be restless and sulk. Particular care must be taken never to point the finger at them and allow them to peck at it. Some inexperienced amateurs do so, and the result is that the bird gets the habit and will never afterwards show at all. Many a fine bird has lost all chance in this way.

Pouters are rather subject to over-gorging, both with food and water. The old remedy for this is to place the bird in a stocking that fits it rather tightly and keeps the crop well up, and to hang the stocking on a nail in the wall, kneading the crop now and then with the fingers till emptied. The bird must be kept in a pen for some days afterwards, and fed carefully and sparingly. If a bird has become gorged several times the crop is apt to become chronically loose and pendulous, for which the only remedy is to cut a piece entirely out, and sew carefully up again, the two skins separately. It is very difficult in this operation to so preserve the symmetry of the crop that the bird can be exhibited again; but a fine bird may thus be saved for breeding.

Pouters require the largest size of breeding-places and nest-pans. If shelves are employed, they should be fourteen inches wide and eighteen inches apart; and the nest-pans, the largest size made. This pigeon, however, on the average, really does breed best upon the floor.

Pigmy Pouters appear to have been first produced by Sir John Sebright, so well known also for his extraordinary success in producing dwarf poultry. Eaton writes of him:—"After his death I was at the sale of his bantams and pigeons. I was

surprised, on looking at his Pouters, how it was possible he could have reduced the English Pouters down to such little Lilliputians, or *multum in parvo* Pouter, possessing in an elegant degree all the properties of the English Pouter." The breed was, however, subsequently lost; and to Mr. Tegetmeier chiefly belongs the credit of reviving it, which we believe he did by working upon the small varieties of pouting pigeons pro-



ISABEL. PIGMY POUTER.

duced by the German fanciers. These are numerous, and nearly all possess fair crops, but nearly all are destitute of limb properties: the legs being generally short, and either bare or heavily feathered and hocked, the latter type being known as Isabels. The latter have often pretty "Toy" markings, such as the white bars shown in the illustration, but are generally low in carriage. By matching the two extremes of leg-feather together a correct standard in that respect was easily at command; but length of limb and upright carriage presented great difficulty, and much more did the orthodox English pied marking, which was unknown to the German birds. By

crossing with Pieds, however, these difficulties have been overcome, and we have seen birds exhibited of late which offered a really close approximation to the English blue-pied Pouter in miniature.

Birds shown as Pigmy Pouters must, of course, be judged by Pouter points. The German varieties are judged by attractiveness in appearance and perfection of colour and markings. All of these varieties are hardy and good breeders. The chief difficulty is to keep them small, as they constantly tend to throw back, like Bantams, to their larger ancestry. For this reason there is not the difficulty in finding fresh blood which is encountered in regular Pouter breeding; on the contrary, in-breeding is of direct benefit in reducing size, and slimness may be sought to any extent. The birds are simply rare because little fancied; were they bred largely, they would be much easier to produce good in points than the larger birds. Those who wish to breed them should cross with in-bred, and therefore small and slim standard birds, in-breeding the produce till the desired result is attained.

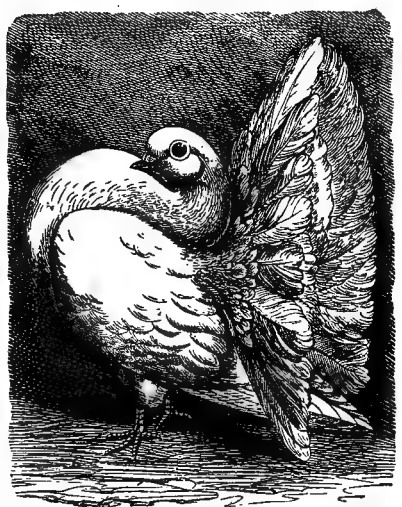
CHAPTER XII.

FANTAILS.

THE Fantail seems to come most naturally next to the Pouter, both being of late so much associated with Scotland. There is, however, not the slightest doubt that this pigeon came from India, where it is still well known, and whence many importations have been made of late years; American fanciers particularly having several times imported direct from Calcutta.

At one time this pigeon was divided into two distinct classes, each admired by a distinct school of fanciers, who cultivated what were known respectively as English and

Scotch Fantails. The English school argued from the name of Fantail that a wide-spread tail must be the cardinal property, and aimed to develop that at all costs. The result was the almost utter loss of what are called carriage and motion, and the development of a huge tail carried forward, almost flat, over the back, like a pot-lid; and to this type all the prizes went, for a time, at English shows. On the other hand, the breeders of the truer type, or Scotch Fantail, undoubtedly at one time too much disregarded tail, though this fault has now been remedied.



SCOTCH FANTAIL.

Perhaps the two types have always coexisted to some extent; and the argument which led English breeders astray would never have been listened to had amateurs attended more to the faithful guidance of old Moore. He knows the pigeon as the "Broad-tailed Shaker," and gives as the leading characteristics that it "has a beautiful, long, thin neck, which bends like the neck of a swan, leaning towards the back; it has a frequent tremulous motion, or shaking in the neck, which is the reason why they are called Shakers." He adds that they are "called by some" Fantails; but still further adds that even in his time there were two sorts. "The one," he says, "has a neck much longer and more slender than the other, but the

longest neck is the most beautiful and the most esteemed." Now as the longest neck must necessarily cause the tail to be carried farthest back, this sentence is incontestable proof that the Scotch or upright tail, not the forward, pot-lid style, was the accepted bird in Moore's day.

At present, as we think, the Fantail is about correct; the deficiency in the tails of some of the Scotch birds of some years ago having been counteracted. The body is very short and plump, the neck *comparatively* very long, though it and the head must appear fine. The neck is carried so extremely far back and curved ("like that of a swan," as Moore justly compares it), that a point near the junction with the head lies on or nearly on the back, at the root of the tail. This will be explained by the engraving; but the "motion," or what some vulgarly call the "nerve," can only be described. It consists of a vibration, or heaving up and down and forward and back, the bird being unable to keep still, and occasionally walking backwards from the same uncontrollable impulse. The legs are rather short, and when excited the bird walks on tip-toe. A good bird carries its head at times below the level of its breast, and when with this is combined a good "strut," this is called "good carriage." The tail, we consider, should be as nearly as possible flat, but not carried at all forward of a perpendicular plane—any leaning forward not only destroys the other properties, but all æsthetic beauty, and we hold that this is an important consideration. When spread, the tail should be as nearly as possible a perfect circle, with the exception of two or three inches wide at the bottom, through which pass the ends of the flight-feathers, which must be carried low. Such a tail will need at least twenty-four feathers (the ordinary number in pigeons is twelve), and twenty-six or twenty-eight are better. Forty or more feathers are recorded, but always make too heavy a tail, which is scarcely ever carried straight. A large bird can carry more feathers than a small one, but a good

Fantail should be small. The oil-gland most pigeons possess is often absent in the Fantail (not always), and there are also liable to occur feathers which split into two stems from one root, which is a fault. We believe, however, this feature often arises from plucking, the feathers of a Fantail so treated often coming amiss: on which account even a damaged tail is best, as a rule, left alone.

The size of the tail occasions various difficulties occasionally. If the bird carries its head *too* far back, it may go through the tail; the only remedy for which is to carefully tie the four middle ones together so as to prevent this: after a while the habit may probably be cured. Other birds do not carry their wings low enough, so that the points pass through the tail instead of under it: this may sometimes be cured by loading each longest flight with a bit of lead, but the trouble is ill-spent, and it is best to give up showing such a bird, and simply shorten the flights sufficiently to save the bird the annoyance, and make it comfortable for breeding.

The English type of bird—larger, with immense tails carried over the back, little motion, and the head much higher—is now little encouraged except in coloured birds. Blacks, blues, reds, and yellows are sometimes seen of it; but most of the whites have Scotch blood in them, and are being rapidly bred to Scotch properties. The Scotch type is shown in whites and what are called Saddle-backs, which are all white except the sides of the wings, which are coloured like a Turbit. By crossing with other pigeons some peculiar markings have been produced, but these have never maintained their position. There is also a "laced" Fantail known, in which all the feathers have the web disunited, like Silky fowls.

In breeding Fantails, too small hens should be avoided, the progeny being generally too delicate to rear. Smallness should therefore be sought on the cock's side, with a moderate-sized hen. If any point be deficient, it should of course be supplied:

thus, a regular *old*-fashioned Scotch bird with little tail may be mated with advantage to a smallish specimen of the old English type. Peaks sometimes occur, many of the original Indian birds having been peak-crested; but the feature is not at all liked, and is nearly bred out. If not too small, Fantails are fairly hardy, and give little trouble in rearing. Birds remarkable for "motion" are, however, sometimes incapable of breeding for the first two or three years, though this extreme nervousness usually wears off in time.

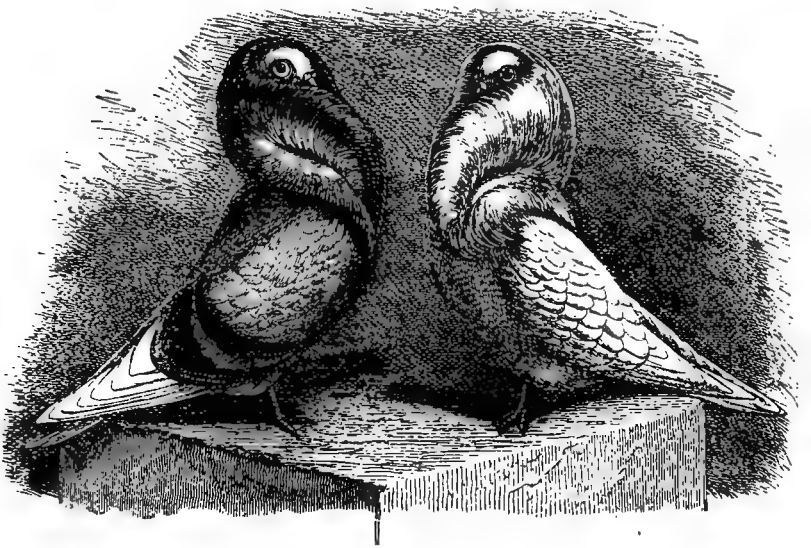
Fantails are difficult birds to show, especially in the small wire pens usually allotted them. Some tails are much firmer than others, and will stand more knocking about; but few come back from a show without woeful signs of their imprisonment. They should be sent in baskets or boxes carefully planned and fitted, and if baskets, very smoothly lined; using in fact every expedient that thought can suggest or contrivance execute to avoid damage to the tails.

CHAPTER XIII.

JACOBINS.

MOORE describes this pigeon as the smallest of all, and says the smaller the better. There is no doubt it was formerly, at least, very much smaller than it is bred now, and that it has degenerated in some other points as well. This fact has occasioned much controversy as to the true type of the pigeon; one school (of whom Mr. George Ure in Scotland and Mr. Harrison Weir in England may be cited as exponents) considering that the loss of old properties has arisen from the modern stress upon two new ones, known as "mane" and "rose," and that the only remedy is in a return to the old style in all points; while the other as stoutly maintains that the necessity does not follow, and that if it did the beauty of a good "mane" is cheaply purchased by merely some increase in size.

The extreme of neither argument will bear examination. On the one hand, it is impossible to admit that we are to be tied down to every point precisely as known to Moore; and it is simply an egregious mistake to argue, as some have done, that the points as described by old authors were always the



Blue and White Jacobins.

result of careful study, and deliberate, fixed determination. This position has been assumed by more than one advocate of the old-fashioned Jacobin; but it is, on the contrary, as certain as anything can be that many of the varieties were far from settled in Moore's time, and that a general *consensus* of opinion had hardly begun to exist. The Carrier has been not only lengthened in face, but far improved in other properties, since Moore's time; and who would go back to his standard, or even that of "Mayor," for the Almond Tumbler? As regards the

Jacobin itself, this pigeon was so far unsettled when Moore wrote that bare and feathered legs were acknowledged indiscriminately, and even the chain was evidently far from perfect. Equally wrong are those we allude to in ascribing the new points to the last few years, or the "last ten years," as one writer has done. Both Moore, and "Mayor" thirty years later, describe as the "Ruff" a pigeon resembling the Jacobin, but larger, in which "the feathers of the hood and chain are much longer," though not so compact and close as the other; and both state that the Jacobin was matched to this bird "in order to improve their chain," and was thus bred larger and with some tendency to more looseness of feather. Though both disapproved of this, it is therefore established by their own evidence that this chain of breeding *had already set in;* and Mr. Brent, so far back as 1850, describes the "rose." The modern properties are, therefore, no craze of "one or two late judges," as has been stated, but can, at least, boast a respectable antiquity, and are the legitimate effects of attempting to develop an acknowledged property.

On the other hand, we hold that there has been far too much stress, *comparatively*, laid in recent years upon mane and chain, with the accompanying "rose," to the neglect of other properties; and this, according to our opinions expressed already concerning other breeds, is in our view a grave error. The neglected properties have chiefly been hood (defect in which we have often seen condoned for good chain), short face, and size, or rather, want of it. We might, perhaps, add slimness of girth, which, as in a Pouter, we consider an important property in a Jacobin. And while we like a good mane, we hold that it should not be allowed to outweigh the want of the other properties, and should only be developed so far as consistent with them. With this brief exposition of the disputed question, we proceed to the pigeon itself.

The head of a Jacobin should be that of a short-faced, or

at least moderately short-faced Baldhead, though somewhat low-cut may be permitted. The beak should also point slightly downward. Shortness of face has been much neglected, a coarseness of head and length of beak having crept in and altered the bird for the worse; but there can be no doubt that the head originally grafted on the Jacobin was that of a Baldhead Tumbler, and any one who shall breed up this property without losing the others will assuredly reap reward. The eyes are also pearl; and from the same parentage is derived the points of white flights and tail. About thighs opinion is divided. Brent says white, as in Baldheads; while Fulton prefers coloured, for the very reason that such *differs* from the Baldhead, but allows that the point is secondary either way. As such we prefer to leave it, with the remark that the question is very closely connected with that of flights, about which there is the same difficulty of getting all white as in Baldheads and Beards, many high-cut Jacobins having only seven or less a side. On the contrary, a bird lower cut, with clean thighs, often has white flights; and for this reason low-cut have usually to be matched with high-cut birds to keep up flight properties. There is very little difficulty in other respects in regard to colour, red and yellow being usually very rich and good in Jacks. Blues were unknown at one time, but were obtained by crossing with Baldheads, and are now occasionally seen very good; and blacks have been shown of very excellent quality. The best blacks we know of have been bred from red crosses, which often produce strawberry birds in the first place, these being matched back to blacks again. Whole-coloured whites, blues, and some other colours have also been shown, but ought not to rank so high, having no flight difficulties to contend with.

The most important property in a Jacobin is hood, or the portion of re-curved feathers which come over the top of the head. The hood must come as far forward, fit as flat down on the head, and be as even at the edge as possible. A good hood

will come level with the eyes. The feathers at the root of the hood sometimes prevent its fitting so close as desired; and these are often extracted or cut off close to the skin by unprincipled persons: for which reason any bird fixed on for a prize or a purchase should be most carefully examined, by drawing the hood feathers back so as to expose the roots, to see nothing has been tampered with.

The peculiar turned plumage which forms the hood is continued down the sides of the neck, where it forms the "chain." This must come as low as possible, and be so long and so set as to nearly or quite meet down the front of the breast. It is equally important that it be smooth and even at the edges. Another set of feathers turns backward over the shoulders, leaving an opening or furrow between. Viewed in front, the chain should lie so flat to the sides of the neck that the latter appears thin. In "Mayor's" time it appears some people used to cut out a strip of skin down the breast and sew the edges together, to make the chain come closer; but at the present day birds have so much more chain that such a cruel practice has become not only disused, but forgotten.

Next come the disputed points of "mane" and "rose." As chain developed, and the feathers composing it became longer, it was found that instead of the "parting" passing round the shoulders and back, the feathers tended to diverge in all directions from one spot in the centre on each side, leaving the white fluff visible as a more or less elongated *spot*, instead of a *line*. This spot or centre of white fluff was called the "rose." Similarly, instead of the feathers pointing apart, up and down, at the back of the neck, they pointed backward from the rose, filling up an even crest along the back of the whole chain, which was called "mane" appropriately enough. Mane thus arose simply by developing chain; and is by the vast majority considered an additional property. This mane, too, must be smooth and even, not notched or ragged.

In carriage the Jacobin should somewhat resemble a Tumbler, carrying the head well back, so as to show off the peculiar properties. It must not, however, trail the wings, but, on the contrary, be a tight-feathered bird; and it is also desired as slim in girth as can possibly be got.

As already hinted, we believe that the disputes about mane have chiefly arisen from the fact that the property seems antagonistic to diminutive size. This arises from the other fact that good mane chiefly depends on great length and fulness of chain-feather, which naturally occurs more often on coarse, vigorous birds. Our own opinion is that, while an added beauty and legitimate development, it should only be cultivated so far as is possible in subordination to the other acknowledged properties. It will readily be gathered that this can only be done by matching those larger birds which possess good chain and mane with small and slim ones which are good in hood. Much can be done in this way; and if these views shall find general acceptance, and judges refuse to give prizes (as some have done) for *mane and chain only*, but insist on having, with mane or not, small and elegant Jacobins, we have no doubt that the required pigeon will be produced, and that the outcry of the old-fashioned fanciers against mane will die out.

As a rule, Jacobins give little trouble in rearing or feeding, though the smallest specimens are apt to be delicate. Should the short face be more cultivated, difficulty in rearing might increase; in fact, the bird would become one of the very highest class of pigeons, having other difficult properties engrafted on *all* those of the high-class Baldhead! To call such a pigeon—and all these properties are fairly *in* the Jacobin—a Toy, as some do, is simply a farce. On the contrary, no pigeon is as yet so far off the acknowledged standard, even close approximation to which has never been produced by man. A Jacobin fairly perfect in hood, mane, and chain, with the head of a Baldhead and the size of a Tumbler, has yet to be seen.

CHAPTER XIV.

FRILLED PIGEONS.

UNDER this heading we can conveniently group a collection of pigeons which very evidently have one common ancestry, though they now range themselves into four tolerably distinct groups or varieties. Whether the Owl or the Turbit is the original type cannot now be ascertained with any certainty, the whole being of Eastern origin; but without discussing this point, we may proceed at once to describe the many different varieties as (1) Owls, (2) Turbits, (3) Turbiteens, and (4) Satinettes, and their sub-varieties.

Owls have very greatly increased in popularity of late years. They have long been known in England; but within a year or two of 1850 very superior birds were imported from Africa of a much smaller size. These were called "Foreign," while the others were called "English" Owls, but as they were largely crossed with the latter to improve head-points and diminish size, there was for a time considerable confusion. At length, however, the fashion of seeking smallness in English Owls ceased, and breeders endeavoured rather to produce fine bold birds, since which the English Owl has greatly improved. English Owls are coloured, but are chiefly blues and silvers; and there is also a colour peculiar to them called "powdered" blue or silver, which consists of a peculiar "frost" or silvery cast over the ground-colour on the head, neck, and shoulders. Some think this was produced accidentally by a cross of blue with silver, others that a cross with the Damascene gave the "powder;" any way, the colour has ever since remained in the strain, and is a favourite one. Foreign Owls are generally white, blues and blacks being very rarely shown; they are desired as small as can possibly be got. Other than the differences in size and in the usual colours,

and the sole occurrence of powdered blues and silvers in the larger English birds, the points are the same in all Owls.

The beak of the Owl gives the bird its name, being short and stout, turned down, and with the upper mandible curving down over the lower in as even a curve as possible with the whole profile of the head. When young, the mandibles are more equal in length. The whole head should be as globular as possible in every direction. There is apt to be a protuberance over the eye and also at the back of the skull, but either is so far a fault. The eye, of course, should stand out well, flat cheeks detracting from roundness of head; and the beak-wattle must for the same reason be even, convex, and fairly developed, so as to "fill up" the forehead. A young bird, therefore, does not look quite so well in forehead as an old one, the wattle filling up with age.

Beak and head are the most difficult points to procure in Owls. Next comes "gullet," or a development of loose skin under the beak or chin, like a dewlap. This should come as low as possible, and adds to the apparent shortness of the head. Mr. Harrison Weir and one or two other good authorities prefer a bird without gullet, with a clean-cut throat; but the vast majority both of judges and breeders consider a gullet one of the properties.

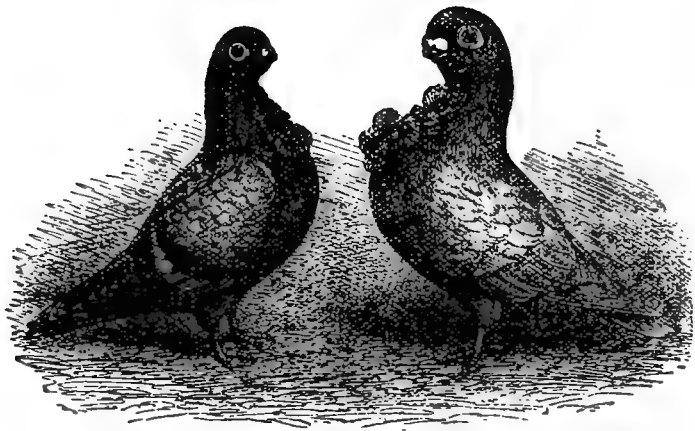
The fourth and last property is frill; and here we touch on delicate ground. There is no *great* difference any way between Owls and Turbits; and many have implied that there is none but peak and colour: that if Turbits were bred whole-coloured and without peaks they would be Owls. We thoroughly agree with Mr. Harrison Weir that this is wrong, and has arisen from ignoring differences that were recognised by the older fanciers. If the frill, or group of re-curved feathers on the breast, is to extend as far up and down as possible, as in the Turbit, there is so far no difference, as may be seen by comparing the engravings of Owls and Turbits; and Mr. Fulton

adopts this view. But Mr. Brent, writing many years ago, says of the Owl that "the frill or purll is *shorter*, more compact, and somewhat rose-shaped." We see even now occasionally an all but circular "rose" instead of a frill in some Owls; and Brent, in another place, says distinctly that the frill should be thus "rose-shaped." It is plain, in fact, that since Moore's time fanciers considered a circle the general *ideal* of the Owl; and that, as they sought for as truly a circular set of curves as possible all over the skull, so also they sought for a circle on the breast, and a round, short, plump body. It is a pity to lose points that assist distinction; and, therefore, while we admit the present state of confusion, we earnestly hope breeders of this beautiful pigeon will seek to recover the round, short, but amply developed "rose-frill." The frill is occasionally found so ample as to be triple, an extra line on each side nearly extending to the back of the head.

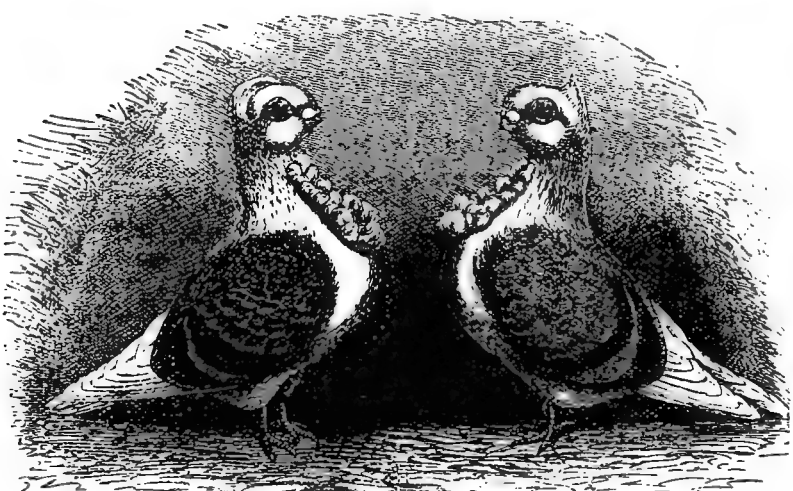
The carriage should be up, with the head thrown back, the feather short, the chest broad, the shoulders rounded. The eyes are generally gravel or orange, except Whites, which are bull-eyed. Eastern fanciers have bred Owls with white tails and divers other odd markings; but in England they are almost always whole-coloured, the blues and silvers having bars as usual. Many blues are light-rumped, and many silvers kite-barred, owing to a too free use of silvers in breeding; this fault may be counteracted by crossing with dark, sound-rumped blues or blue-chequers.

The larger Owls are hardy and generally good feeders; but sometimes a very well-gulleted bird feeds badly. The small Foreign Owls are very delicate, and need nurses, for which purpose nothing can exceed Common Tumblers. Foreign Owls require to have their lofts well ventilated, yet perfectly free from damp and draught, else they die by dozens: in fact, they are at the best exceedingly delicate birds. Mr. Fulton* states

* "Book of Pigeons," p 306.



FOREIGN AND ENGLISH OWLS.



SHELL-CRESTED BLUE-CHEQUER. PEAK-CRESTED BLUE.

TUBBITS.

that in very good-headed specimens the tongue is often rather too long for the mouth, and causes death by canker from the irritation. This may be prevented by snipping off the horny tip of the tongue.

Turbits resemble Owls in many points, and both Mr. Fulton and many others adopt the head of the Owl *in toto* as the standard for the Turbit, except, perhaps, the curving upper mandible. To this we cannot agree. The head, though round in general shape, is longer, and the gape of the mouth far wider; the beak also, though short, is not *so* short, nor so down-faced: it is, in fact, both a straighter and *heavier* beak altogether. The greatest fault in Turbits is a long and spindly beak, and it is found far easier in practice to change this by an Owl cross into an Owl's beak, than to breed the true massive beak of the Turbit with a good "frog-mouth." Otherwise, the same remarks apply to beak-wattle, which should fill up the curve of the forehead, as in the Owl. The gullet also resembles that variety.

The frill in a Turbit should be ample in volume, and extend as far up and down as possible. Comparing the *ideal* of both head and frill with that of the Owl, it will be seen that in the Turbit the model is very much the shape of the coloured shoulder of the bird, or a kind of egg-shape.

The colour of the Turbit is all white, except the shoulders of the wings, which are found black, blue, blue-chequered, silver, red, yellow, and dun. The blues and allied colours are of course barred. The eyes are generally black or very dark hazel, the bull-eye showing that the foundation of the variety was originally a white bird. There is generally more or less colour under the wing, and sometimes very good birds are rather foul-thighed. Occasionally even a flight or two is foul, for which reason it is better if an inner flight or two be white, provided it does not interfere with the colour of the side or shoulder when the wing is closed.

The last property of the Turbit is peak, or crest. The peak-crest should be as high and pointed as possible, and the feathers meet evenly, so as to form an even ridge or mane behind, as low as it extends, down the back of the neck. The shell-crest is a kind of hood resembling the edge of a shell, and somewhat like the hood of a Jacobin less developed. The shell-crests have, as a rule, the best heads, and are therefore crossed often with the peaks. The result has been that very few of either are now seen at all approaching perfection. It is also rare to see a Turbit really good in frill.

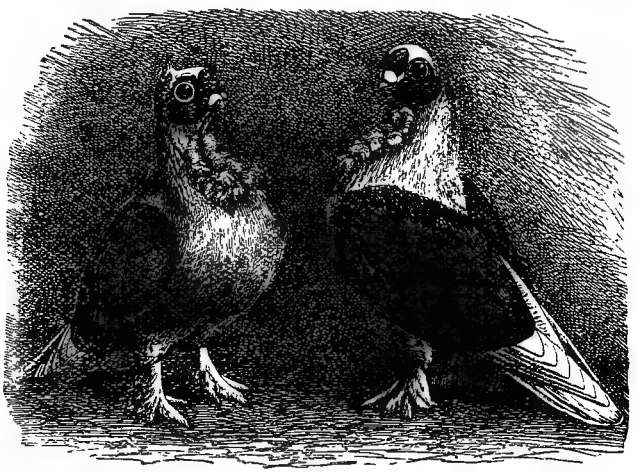
The Turbit should be small, but is longer in feather than the Owl. It is fairly hardy, and often feeds well; but the smallest and best often give much trouble in this respect, and therefore require feeders. This point should be ascertained by experience as regards every separate pair of birds put up for breeding. For obvious reasons, it is best to use good-sized hens as far as possible, and trust for smallness chiefly to the cocks.

The colours of Turbits are generally very good, especially the reds and yellows. The red, as usual, will improve yellow; but all reds from the cross must be kept away from reds, and confined to crossing with yellows only. Blacks may be crossed with duns as usual, also with reds and yellows occasionally. Blues are sometimes kite-barred, from too much use of silvers, and need care. Foul thighs, bad crests, and spindly beaks are the greatest difficulties, and next to these a want of frill.

Black-tailed Turbits have been shown, but have not found favour.

Turbiteens are a comparatively recent importation from Asia Minor, for which English fanciers are indebted to Mr. H. Caridia, a Greek gentleman, now of Birmingham. They may be regarded as an Oriental refinement upon the Turbit, and Mr. Caridia states that they were produced by crossing with a

black-headed bird marked like the Nun, and crossing back to white Owls to keep out the black tail. However this may be, the production of varieties like the Turbiteens and Satinettes must stamp the Smyrna pigeon-fanciers as of the very highest class; the varieties they have produced, with their added beauties,



TURBITEENS, PEAK-CRESTED AND PLAIN-HEADED.

being amongst the most fascinating in appearance of all the pigeon tribe.

In general marking the Turbiteen is a Turbit: that is, a white bird with coloured sides or shoulders, the colour (whatever it is) being of the richest character. All the usual colours are found. Besides the usual markings, however, are the head and face marks. Of these there is as yet no fixed pattern, the Oriental breeders having simply made it their object to place on the head a well-defined coloured patch or patches of any kind. But gradually a perceptible approach to regularity has been attained, and at present the efforts of English fanciers

have been directed to the production of a large spot on the forehead, and a cheek-mark evenly disposed on each side, as shown in the engraving. Both marks should be as free from scattered feathers or peppering as possible.

The head of the Turbiteen resembles that of the Owl rather than of the Turbit in its shortness, roundness, and down-face. The legs are muffled, or covered with short and grouse-like feathers; the frill to be as full as possible. Birds are bred both plain-headed, as in the Owl, and peak-crested, like the Turbit; and both head and colour being so good, Turbiteens have been largely employed of late in Turbit-breeding to improve these points.

The colour of the Turbiteens being so rich, it may be well to describe the Eastern method of breeding, especially as an Oriental sun is even more difficult to contend with than ours. We therefore transcribe from the "Book of Pigeons"* a paragraph from the account kindly furnished us by Mr. Caridia for that work.

"A bird produced from a cross of a black and red, whether it is black, bronzed-black, or red, will do to match either with black or red again. Also a bird bred from a cross of a red and yellow, whether red or yellow, will do admirably with either red or yellow again. But birds bred from parents of one colour should be freely mated, as they ought to be, with birds of dissimilar colour: viz., a bird bred from a pair of blacks should be crossed with a bird bred from a pair of reds, and a bird bred from a pair of reds should be crossed with one bred from a pair of yellows; thus you have black mated to red, and red mated to yellow. As a rule, never breed from a black and a yellow, but if you want to improve black, mate it with a black or red bred from a black and red; if you want to improve red, mate it with a black or red bred from a black and red; if you want to improve the yellow, mate

* Page 319.

it with a red or yellow bred from a red and yellow. Pair also two reds bred from black and red, and two yellows bred from red and yellow, and continue to observe which colour requires strengthening, and by following the above plan your success is certain."

Turbiteens with *large* head-marks generally have red or orange eyes, as in coloured Owls, and dark beaks. With small marks the eye is uncertain, being often dark, as in Turbits, from the Owl blood; the beak also is lighter. They are as a rule good feeders, as well as very hardy, being flown freely in their native land; but after generations of aviary-rearing it is to be feared the same difficulty will be found as in Turbits and Owls. Eastern fanciers always prefer the larger birds; and if this preference should be happily maintained in England the difficulty may not be found, as we have already seen that the large English Owl generally feeds well, though the smaller Owl, like the small Turbit, requires more or less assistance.

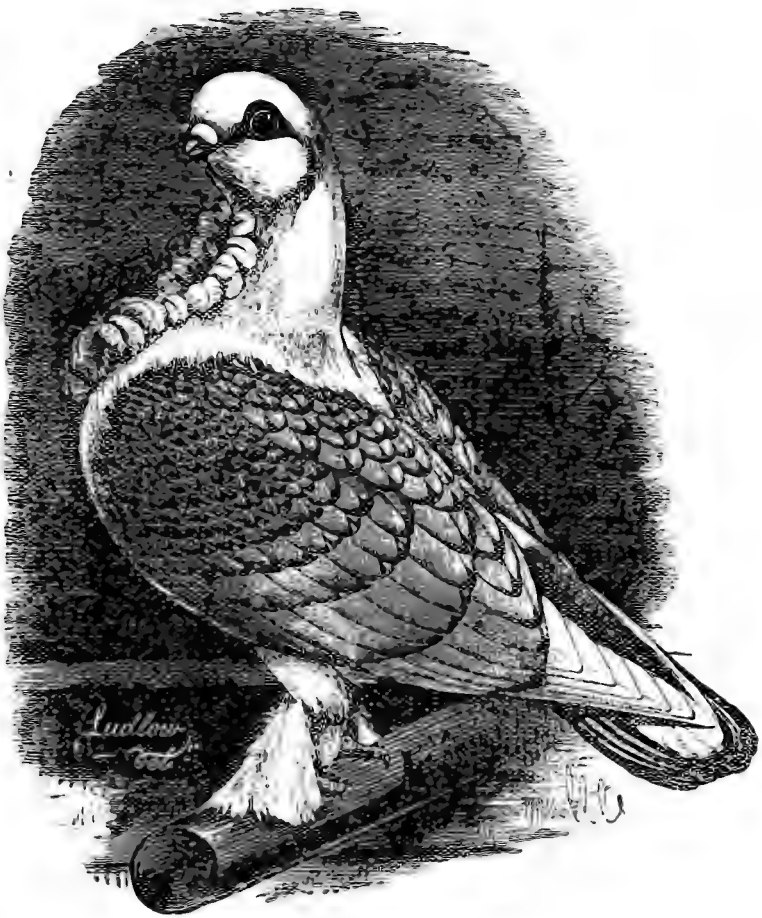
Satinettes and their sub-varieties are the most artificial development of the Owl or Turbit family, and come from Asia Minor, like the Turbiteens. They share with the latter birds the grouse legs so admired by Eastern fanciers; and, like them, are bred more to the Owl type of head than the Turbit. They are both peaked and plain-headed. The frill should be as ample as can be got, and all the general points resemble those of the preceding varieties; but they have added and striking beauties of colour and marking.

These points were for a good while not understood; and hence, because a pair of birds did not as a rule breed their like there was said by many to be "nothing in the variety," one well-known authority going so far as to say the whole Satinette tribe were mere "sports" from Turbits. In saying this it must have been forgotten that all the colours in pigeons are more or less interchangeable; black, for instance, being bred

to duns, reds, and yellows, and Barbs producing almost any colour. But the reason of the variety of produce of any pair of birds of the Satinette family is the fact that, like the Almond, the colour and marking have been produced by the long and careful blending of three colours, until all three are *united in one bird*, as in the Almond. The difference is that the Oriental breeders, with a higher skill, have in the same way as the Germans united the different colours with a beauty and regularity of *pattern* which we have already seen the Almond does not possess. But sub-varieties constantly tend to appear, precisely in the same way as the Almond, Splash, Whole-feather, or Kite do in Almond-breeding, and have to be used in the same way.

The Satinette, then, is a combination of pinky-brown, black, and white, which is often more or less mixed with blue in addition. Most of the body is white, like the Turbit. The shoulders (coloured in the Turbit) are of the pinky-brown ground, shading into white and marked with black. The black marking is sometimes of an arrow-pointed character, as in our illustration, sometimes of a laced type, as in Sebright Bantams or the Blondinettes shown in the engraving. The flights are white, the tail-coverts generally coloured; the tail itself black, with a large round white spot at the end of each feather; or the feathers might also be described as with a ring of black at the end. A bluish tinge in the black is a fault.

Brunettes are lighter Satinettes, the ground being a silvery-greyish buff, and the markings grey instead of black. Bluettes have blue shoulders, like a blue Turbit, blue tails with the white spot at the end, and the three colours *in the bars*, the main breadth of which is white, but edged with the pinky brown of a rich colour, shading into black. Silverettes have silver shoulders, with white bars edged with black only, tail grey, with the usual spots. There are besides black-and-white birds only, from which, with a little patience, birds might be bred



SATINETTE.

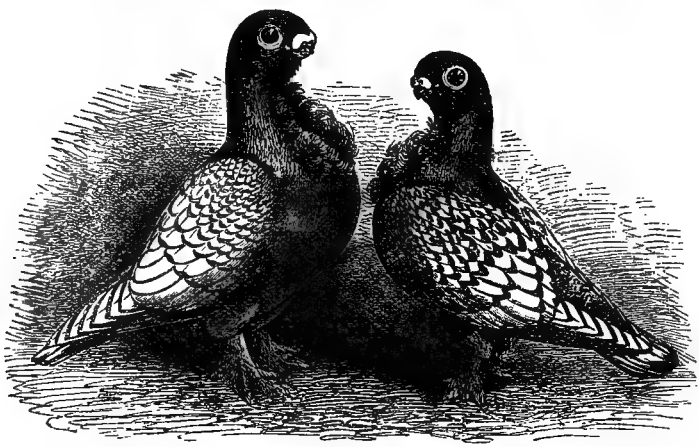
laced as accurately and as clear black and white as a silver Sebright Bantam.

Now, as in the Almond, sometimes the darker kinds crop up and sometimes the lighter. It is not well as a rule to cross the plain-shouldered barred varieties, such as Bluettes and Silverettes, with the laced or ticked ones; but the darker varieties of each should be matched to the lighter, as in Almonds; thus mating a dark Satinette to a Brunette, or a dark Bluette to either a light one or a Silverette. In every case endeavour to supply the most absent ingredient, as in Almond breeding. If matches of the proper varieties are scarce, Mr. Caridia strongly warns the breeder not to cross with Turbits, which have coloured shoulders with white tails, and so would destroy tail-marking; but if an out-cross must be used, to employ either a white Owl with dark tail or a pure white Owl, which will not interfere with marking nearly so much. Crossing with similarly-coloured German toys is useless, as it utterly destroys all the head and frill properties.

Blondinettes were produced about the year 1850, Mr. Caridia states by crossing silver and blue Owls with Satinettes. They are, like the Satinettes, both peak-crested and plain-headed. The generic difference between their tribe and that of the Satinettes is in the body-colour; the heads, necks, breast, thighs, &c., being of a whole colour, from the Owl cross; while the Satinette varieties are white, from the Turbit parentage. With this difference, there are in Blondinettes most of the Satinette varieties. There are, for instance, Blues and Silvers with tri-coloured bars, like Bluettes and Silverettes; others with tri-coloured markings, like the true Satinette; and there is a very pretty variety called Black, which is simply a black lacing on as pure a white ground as possible. They must all have grouse legs, good frills, round heads, and the white spot at the end of the tail-feathers.

Blondinettes, to preserve their beauties, must be bred like the Satinettes, matching the more heavily-marked to lightly-marked birds, and continually throwing in the colour most wanting. An exception may be made to some extent in regard to the more simply laced or bi-coloured birds, which, if preferred, may be perfected by breeding together.

The appearance of the young of all these varieties is

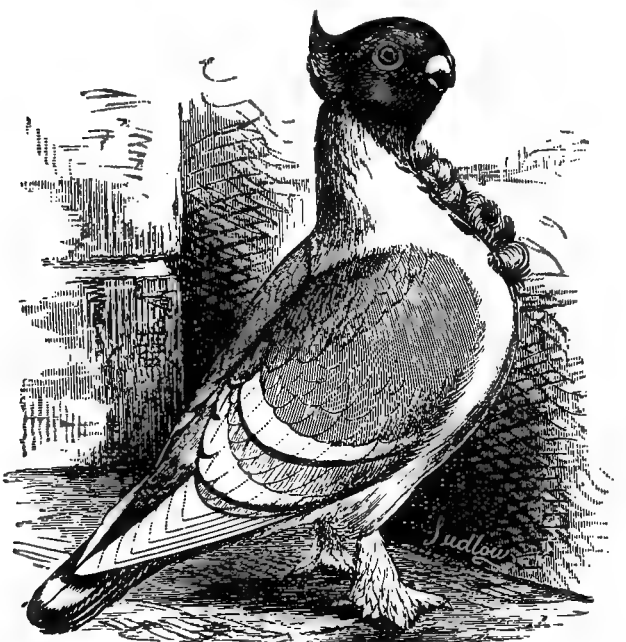


BLONDINETTES.

uncertain, and birds should not be discarded because of unsatisfactory appearance when in the nest feather, which is very often quite dull; or even one patch of confused colour. Some birds, however, are variegated from the first; and by matching the best of these together, pigeons have been produced with the markings extending up the neck. It is very common for the white tail spot (which in the Blondinettes sometimes becomes a white band) not to appear at all till the first moult. Now and then a bird will lose this point (showing, probably, a reversion to a black-tailed Owl), and if good in head

and frill, such need not be discarded, but will be a valuable match for a lightly-marked specimen.

Vizors are another and the last introduced of the short-billed Frilled Pigeons; and have been also produced in Asia Minor. Mr. Ludlow states that they were produced by



BLUE VIZOR.

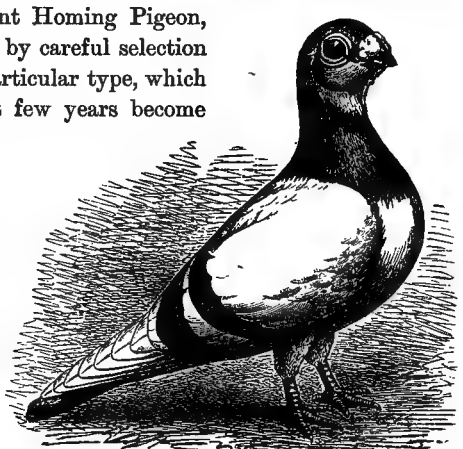
matching a Nun-marked Turbit (see illustration of Nuns at p. 191) known in Turkey, and now and then shown in England under the name of *Dominoes*, with Satinettes and Blondinettes, but the use of the Blondinette for such a purpose seems to us very doubtful. The blue Vizor has a dark blue head, the marking including the crest, and coming

down to the bottom of the gullet, which is well developed. The shoulders are blue, as in the Turbit, with white bars edged with black, a shade of brown sometimes occurring between the white and black. It will be seen at once that this is almost exactly the marking of the Bluette. The back is white, the tail blue from a line across the rump, merging into black at the end, where there is a round white spot on each feather; all the rest white. Silvers resemble blues save in the ground colour, and are bred with them. Blacks resemble blues except that the shoulders are solid, like English Turbits; the head and other markings are the same, but the white tail-spot is difficult to get. Vizors are said not to breed very true.

CHAPTER XV.

EXHIBITION ANTWERPS.

From the mixed blood described in Chapter XIX. as the origin of the present Homing Pigeon, has been developed by careful selection and breeding one particular type, which has within the last few years become one of our most popular show varieties. It was formerly called the "short-faced" Antwerp; but as this nomenclature led to many errors of judging, which hindered improvement for some years, and as, moreover, allied



Silver-dun Antwerp.

birds of the same variety and with analogous properties are now exhibited as "long-faced," "medium-faced," and "short-faced,"-it is better to adopt the generic name employed above, though the short-faced is the perfect type of the breed. There is no doubt that this is really a Belgian bird, and has arisen from the predominance in some localities of that Owl blood, which, as stated in Chapter XIX., is one of the component parts of the Homing Pigeon. To this day a frilled breast is no unheard-of occurrence, though rare; and the Owly type has to be rather carefully guarded against in breeding.

Most of the properties of the Exhibition Antwerp are in the head, of which we append an illustration of the full natural size. It will be seen at a glance that great capacity and intelligence are the characteristics of this head; and when trained these birds often make fair Homers, though now too valuable to be used for such a purpose, and seldom flown.

HEAD OF ANTWERP.

First of all, we observe that the word "short-faced" is a misnomer, because *shortness is not a property.* If it were, then the shorter it was the better the bird would be, which is not the case. Fig. 25 represents the profile, and Fig. 26 a top view of a good mature head; and if it were any shorter it would be so much worse. The first and great point is that the

curve A E B C be even and unbroken, with no flat place, much less depression at E or B. This is called a good "arched face," and it will be seen that age rather improves it by the growth of the beak-wattle. This last may project a little without fault, provided it be even and not ragged. It matters not how

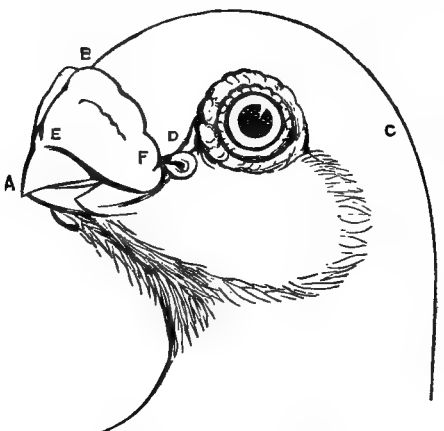


Fig. 25.

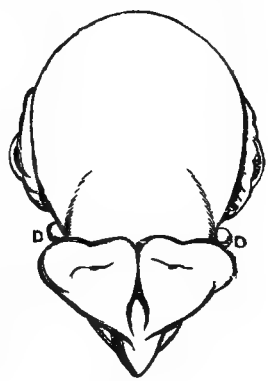


Fig. 26.

long in reason the head may be, provided the front of the beak, A E, is short, blunt, and massive. Length of nostril E F, or a good space between wattle and eye at D, only give room for the front of the skull to develop, and do not spoil the short appearance of a well-shaped head; since an Antwerp must be, like a Barb, a *big-headed* pigeon. Referring to the top view, the next main point is that the head be wide across behind the wattle, at D D, so that if the beak-wattle were removed and a flat edge laid against the side of the face there should be no hollow or depression.

In brief, we want generally the head of an Antwerp to be bounded by convex curves, somewhat as in the Owl, but with more length to give massive character. The eyelash or

eye-wattle should harmonise with this. At one time, when breeders went for shortness of face, a Barb cross was resorted to, and the consequence was a kind of eye-wattle like Fig. 27, which quite destroys the character of the head by its projection at the outer edges. If, on the contrary, the eye-wattle lie close at the edges to the skull, and the eye stands out boldly in the centre, as in Fig. 28, a well-developed eye-wattle adds to the apparent size and roundness of head, and is an advantage to the bird. We have seen eye-wattles of the Barb type on very good birds, but it is a fault decidedly, and so far spoils the head.

Fig. 27.

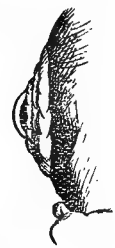


Fig. 28.

Fig. 29 shows the head of a *young* bird likely with age to develop into Fig. 25, to show how age and development apparently shorten the face. At E B there may be a slight flatness, to be by-and-by filled up by growth of wattle, and the beak from A to F is longer, the beak-wattle at present following at its lower edge the nearly horizontal line of the nostril, whereas with age the wattle drops at the back below the nostril, and so shortens the beak and makes it look thicker. In many cases it really does thicken a little with age. The space D also appears much greater for the same reasons. It is, therefore, particularly necessary to guard against condemning young birds for

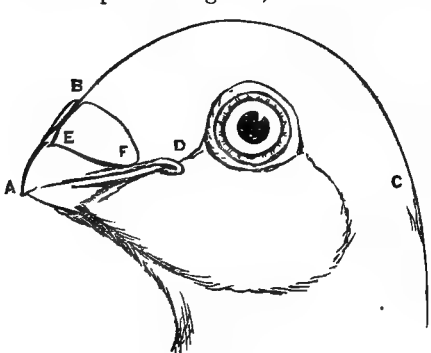


Fig. 29.

appearing too long in face; if the beak be thick enough and blunt at the point, and the length of it from A to E be *comparatively* short, while the nostril, E F, and the space D be comparatively long, the bird will very probably make a good one, provided E B is well filled up in front, and the head be wide across at D D. In fact, with such proportions, a fair length must make up best in the end, as it will make the biggest head. The cheeks below the eyes should also be well filled out. After a certain age the beak generally shrivels and

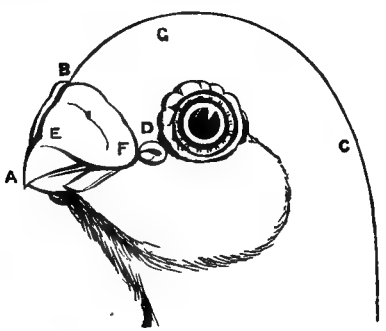


Fig. 30.

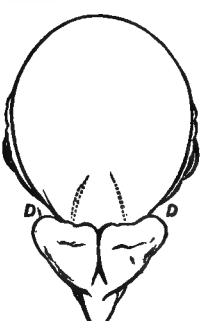


Fig. 31.

becomes thin, thus destroying the grand and massive character of the head. Hence a time comes when the finest bird must yield his place to younger rivals.

We have already said that this *massive* convexity being the main property of a good Antwerp head, if the profile in Fig. 25 were shortened it would be spoilt. This will be seen on comparing the foregoing figures with Figs. 30 and 31, which show exactly such a head as many judges used to *think* was desired by Antwerp fanciers. We have purposely chosen one of the best of this type, so as to make the comparison most fairly; but have seen, years ago, prizes given to far worse. It will be seen at once that this is an Owly head; and of course

we do not want the Antwerp to *be* an Owl, but to be as distinct as possible, except in points we cannot help. First, such a very short head often has a little gullet, which in an Antwerp is a fault. Secondly, the extreme rotundity at G actually seems to flatten the head at E B, the most prominent point being the point G, near the top of the head; whereas in the real Antwerp type we want the most prominent part to be the forehead, near B. In the same way, the extreme roundness of skull causes the cheeks to appear hollow, and the head narrow from D to D in the top view, Fig. 31; and there is very little space at D between beak-wattle and eye, which is again an Owl and not an Antwerp point. It will also be found that in nearly all cases of such short heads the beak is very much thinner than here represented, and there is rarely so good a beak-wattle; so that these short Owly heads are usually far worse than here shown, which is one of the best of the faulty type. Finally, it is quite enough for a fancier to know that these short Owly heads give no difficulty; they can be bred by the dozen, by simply matching the shortest-faced birds together, there being no counteracting points to interpose obstacles. It was, in fact, by doing so that the falseness of the type was discovered and a truer one finally found.

An Exhibition Antwerp, then, should not have gullet, or extreme shortness of face, or small beak-wattle, or small head, or circular profile, for these are Owl points. Neither should it have an exaggerated eye-wattle, with the eye sunk in the centre, or an over-broad cylindrical skull, which belong to the Barb. It should have a short but massive beak; full, bold, convex, but *oval* head, free from hollows anywhere; and the head must be *big*, because this size is difficult to produce, and is the one property which most corrects the tendencies above described. While a big head is sought the fancier can never go very far wrong in over-shortness of face.

To keep up this property of size in the head it is necessary

occasionally to cross with longer-faced birds, such as is shown in Fig. 32, which gives an idea of what is termed "medium-faced." Some of these show the Antwerp properties so strongly as to be very valuable even as show birds, and the fact that they were called "medium," no doubt, helped to create the false impression as to the right type for the short-faced. It has been shown why the true type is a little towards medium-face. Examining this diagram, it will be seen that the curve A E B C gives a good arched face; there is good space at D, and a massive beak, short before the wattle. It is not the highest type, being too long, but it is *true Antwerp;* and when the heads are getting too small (it will be seen at once that Fig. 32 could add nothing to such a good head as is shown in Fig. 25) such a bird may and should be crossed into the strain, often with wonderful results in giving size of head. It is a curious fact that although these longer heads are rarely so wide across as those they are crossed with, they often add width as well as length to a strain with smaller skulls. Hence these birds form part of the Antwerp fancier's regular breeding-stock; and by a good judge even a bird as long in face as Fig. 32 would be given prizes in preference to the head shown in Fig. 30.

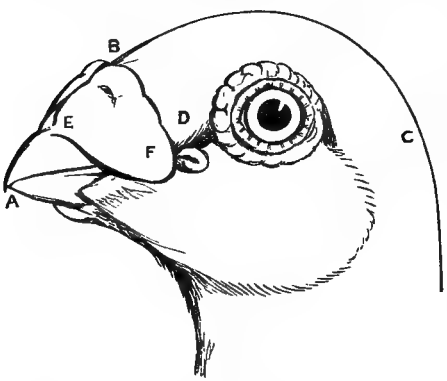


Fig. 32.

As regards other points, the Antwerp should be a good flying bird, with symmetrical and powerful wings, medium legs, bold carriage, and a nice taper appearance towards the

tail. The usual colours are blues, blue-chequers, red-chequers, and silver-duns, the latter a kind of reddish cream-colour, with chocolate bars. We have also seen good Grizzles. Blues and blue-chequers may be bred and crossed as usual; red-chequers may be occasionally only crossed with blue-chequers, now and then requiring after such a cross a counter-acting cross of silver-dun; the silver-duns are bred solely together, unless with a rare cross from a red-chequer.

The silver-duns are the aristocrats of the family. The neck and breast should be rich chocolate, the head light. This is natural in the cocks, but the hens are darker-headed. This was remedied by breeding light-headed birds together, but the result has been a tendency to grey in the neck and breast of the cock, which can only be counteracted by breeding from rather dark-headed hens. We confess we think it a pity not to recognise the distinctness of sex and encourage darker-headed hens. Nothing can look more artistically beautiful than a loft full of silver-dun Antwerps.

Antwerps are thoroughly hardy, and cannot be surpassed as feeders. They are active, but readily become accustomed to their owner, and give, therefore, no trouble whatever, except that of keeping up their properties.

CHAPTER XVI.

TRUMPETERS, ARCHANGELS, NUNS, MAGPIES, RUNTS.

From amongst the crowd of miscellaneous Toy pigeons it is convenient to group together the above as having attained the dignity of more or less often obtaining special classes at English shows: otherwise they have no connection, the Trumpeter coming to us from Russia, Nuns and Magpies from Germany, and Runts probably from the Mediterranean. We simply take them together as the most generally known of the Toy classes.

Trumpeters are described by Moore as well known in his time, and as deriving their name from the peculiar voice, the coo being very frequent, loud, and abrupt. Their other properties are rose, crest, and foot-feather. The crest should resemble that of the shell-crested Turbit, Nun, and other pigeons, or otherwise the edge of a shell standing upright, and extending round the back of the head till nearly level with

MOTTLED TRUMPETER.

the eyes. It should not lie down, or fit close like the hood of a Jacobin, but stand upright, clear away from the head; and when it does this the more developed it is the better. The rose is a circular top-knot or crest on the top of the head, spreading out as evenly as possible on all sides from a central spot in the middle. The legs are heavily vulture-hocked,

and the shanks themselves furnished with very long quill-feathers.

The old style of English Trumpeters excelled in foot-feather, but rose and crest were poor. About 1860, or soon after, however, Messrs. John Baily and Son began to import birds from Russia, with enormous development of rose and crest, so far superior that they beat all the old stock. Their foot-feather was less developed; but this point has been improved, and the Russian Trumpeter is now the accepted standard. The eyes are pearl, and the colours black, white, black-mottled, and splashed. It is a long-feathered bird, loose in feather, and being also large in body, appears very large in size. Nothing can be more stately than the way a Trumpeter cock walks about when courting his hen.

Trumpeters deserve to be considered a very high class of pigeon, but are not general favourites, being unfortunately very delicate. It is not probably the climate—since they come from Russia—but more likely the usual confinement in which they are kept, which is too much for them. Be the cause what it may, imported birds are peculiarly liable to consumption, for which it might be well to try small doses of hypophosphite of soda.

The lighter mottles and splashes do not look nearly so attractive as blacks and the orthodox mottle, or rather approach to it, for we have never yet seen a really good rose-mottled Trumpeter. The most likely plan of breeding such would be to go on matching blacks with the better mottles.

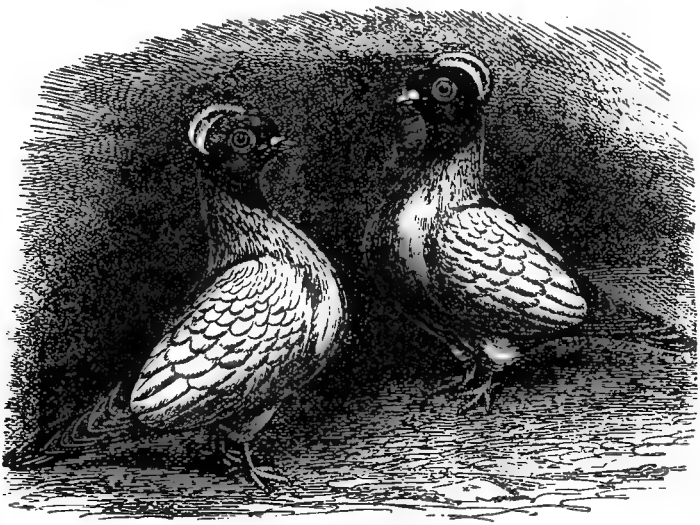
In breeding for fancy properties the voice of the Trumpeter has been nearly lost, in many birds entirely so. It is never taken into consideration in judging. There is, however, a true laughing or trumpeting pigeon, with clean legs, not only described by Moore, but later by Brent; and in 1878 a pair of these birds were shown by Mr. Betty at a meeting of the National Peristeronic Society. They were blue-chequered, very small, dove-headed, and clean-legged.

Archangels were introduced into England from Ghent; their real origin no one knows. The name is supposed to be derived from the splendour of the plumage. The bird was scarce for a long time, and only since about 1870 has it become popular; but a class for the variety is now often very well filled. The head and beak are long, like the thin-faced type of Toys, or the dove, and the head has behind a very pointed peak-crest, with or without a bit of mane below. The rest of the bird is rather slim and long-feathered, and the size rather small. The main characteristic is the plumage, which is remarkable for a fiery, rich, metallic *lustre* all over; the colour itself being black on the shoulders and tail, and rich copper over all the rest. The black parts, however, shine like the rest, with all sorts of green metallic reflections. We have said the tail should be black as well as the sides of the wings; but, strictly speaking, we have never seen a bird so, every tail being so far bluish as to show a distinct black bar at the end. It has proved so impossible to vanquish this, after many years' trial, that many fanciers now prefer to recognise the blue tail, and no longer reckon the darkest a point in judging.

Besides the deep-coloured birds, which are the proper type, the same strains produce yellows. These are valuable for crosses, like duns with black Carriers, but in appearance and lustre are themselves far inferior. There are also whites, various splashes, &c., but we believe these are the product of crosses. Whole blacks have more merit, as possessing more of the peculiar lustre. The eyes should be red or orange.

The Archangel breeds very true, and the chief points to keep in view are peak and lustre. It is hardy and a good feeder, and gives no trouble. The Germans have, however, lately produced a bird of standard colour with *white bars*, and also some other fancy markings, which afford work enough for the most ambitious fancier.

Nuns have the shaped head and pearl eyes of a pleasant-faced Tumbler, medium-sized trim bodies, and clean legs. They have a shell-crest like that of the Trumpeter, but hardly so large, which should stand as upright and clean as possible, and come down at least as low as the eye. This crest must be white, like the back of the neck, but immediately from its



NUNS.

base the head must be coloured, the colour coming forward in a nice curve to the front of the neck, as in the engraving. The fitness of the name is very obvious. The whole body is white, except the coloured head and the flights and tail. The colours are black, blue, red, and yellow, duns also appearing, and being used to cross with black. Blacks far outnumber the rest.

The flights should be all coloured; but this is so rare that Moore only specifies six a side as the standard. Since then breeders have advanced, and eight a side is common; nine a

side, however, remains very good in flights. Few birds have more than nine and ten. The beak should be dark in black Nuns, light in the other colours. A dark beak in blacks and a low-cut bib are most likely to be accompanied by the standard number of flights. The eye-cere is also very nearly black, and many black Nuns have almost black legs.

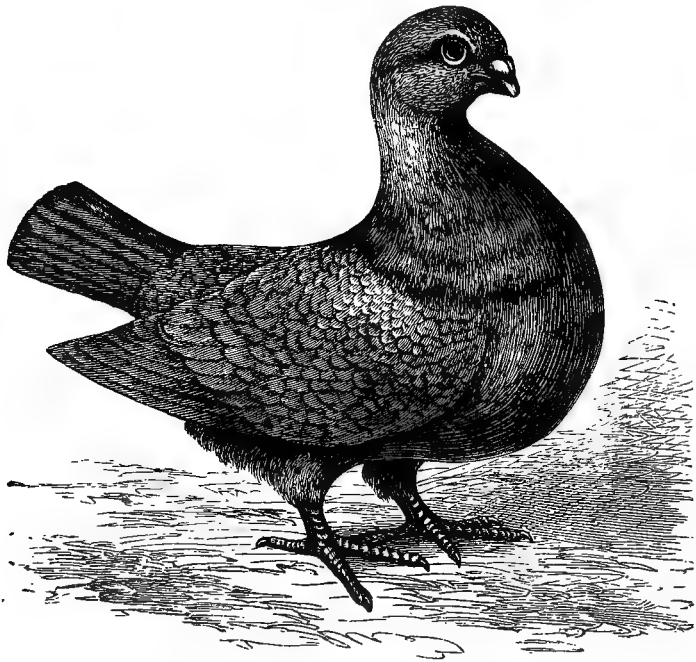
The Nun is trimmed for exhibition more than almost any bird. About the line of the bib is often weeded a little to make the line sharp; but most of all is the head plucked near the root of the crest, to prevent coloured feathers growing up against the white shell. So notorious and universal is this that it keeps many from the breed, even an honest bird being suspected. Nuns are hardy and good feeders, and some people who like them keep them as nurses for short-faced Tumblers.

Quite lately, Messrs. Baily and Son have re-introduced from Germany a bird that is almost a Nun reversed, the chief difference being that the head is not so Tumbler-shaped, but more that of a common Toy. The head and bib and tail are white, the shell and all the rest black. The chief difference is that all the wing is black, instead of the flights being white, as they would be by strict analogy. The birds are also generally grouse-legged. This variety was mentioned by Dixon.

Magpies have ordinary Toy or Dove-house pigeon heads, clean legs, and trim bodies, possessing no properties at all but colour and marking. The marking exactly resembles that of the Flying Tumbler shown in the engraving at p. 132 as a "Saddle." It covers the head, neck, breast (down to above the thighs), back, rump, tail-coverts, and tail, also the shoulder-coverts; the rest of the wing, belly, and thighs being white. The eye is a clear pearl, with a red cere or lash round it. The colours are black, red, blue, and yellow. The beak is generally flesh-colour.

The colours are generally very good, especially the black,

and can be bred as usual. The marking breeds, as a rule, very true; and it will give little trouble to preserve, provided the higher-cut birds are selected—that is, those in which the



LEGHORN RUNT.

colour on the breast ends rather high up. The Magpie is a very free and hardy breeder and good feeder, but apt to be a little wild. Kindness will get over this, and those of a quiet disposition make capital nurses.

Runts are the giants of the pigeon family, few birds being ever exhibited under 2 lbs. weight. Moore mentions several varieties, and one of them, known as the Leghorn Runt, seems

to have had a very attractive and characteristic outline, and to have been known as a fancy bird, Eaton saying he knew a pair sold for £25. We copy the figure from Eaton's work, and

Common Blue Runt.

from it will be readily understood the curved and swan-like neck, the "goose-head," turned-up tail, and broad curved beak which Moore describes. This variety has disappeared in England, but as Brent and Eaton both knew it as imported, might probably be recovered from the Mediterranean.

The Common Runt, as seen at shows, is simply an immensely large common pigeon, and prizes are usually given to weight alone. We have seen 2 lbs. 9 oz. scaled. The colours shown are blue with black bars and silver with brown bars. They are dangerous pigeons to keep with other varieties, being rather ill-natured and very powerful. They are not very good breeders or nurses, and the best way to get fine ones is to give one squeaker to a pair of good Dragoons or Antwerps. The Runt, from its great size and length of feather, is sometimes crossed with the Pouter, to give that variety size, even now.

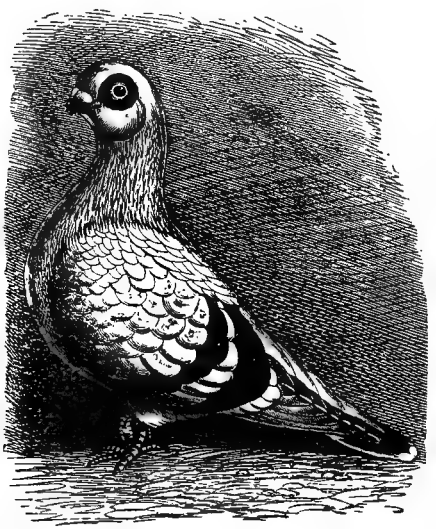
By crossing Runts with common Dove-house pigeons a mongrel Runt has been produced, called by the French *Pigeons Mondains*, which does breed well, and is bred and fattened for the French markets. When three weeks or a month old the birds are crammed, after a week of which they put on a surprising amount of flesh. The crammers usually fill the birds from the mouth with millet (or millet and tares) kept in water, taking a mouthful, and "blowing" the crops full in an instant three times a day. Lately they have introduced the plan of cramming them as they do poultry, with buckwheat meal paste, or gruel, administered through a flexible tube.

CHAPTER XVII.

EASTERN TOY PIGEONS.

After taking from the large variety of Toy pigeons those which have attained special classes, as in the last chapter, the only feasible way of further dividing the remainder seems to be to take together, first, those which appear to be of Eastern origin, and then to group the remainder, most of which come from Germany. In regard to breeding, little can be said for want of any general experience. The amateur must be guided by his own judgment in pairing together the best colour and markings.

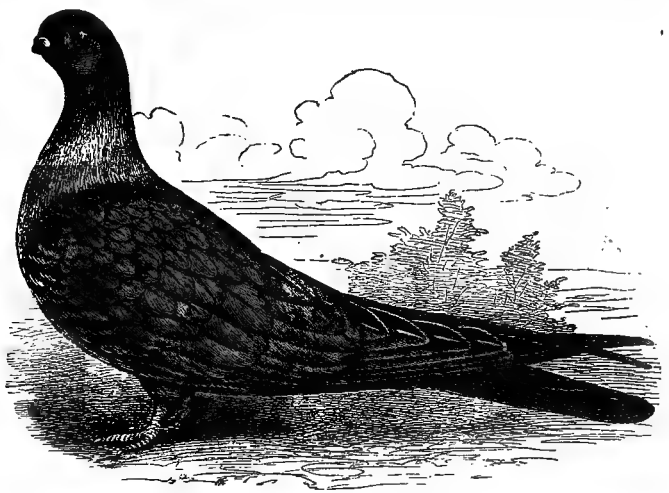
Capuchins are generally black, with white tails, clean-legged, with a Tumbler head and pearl eyes. Their characteristic is a close-fitting hood, like that of the Jacobin, but without chain below it. Some people have described this as a shell-crest, but it does not stand up at all like the crest of a Nun, lying down as close as possible. The carriage is bold and upright. There are also blue and black Capuchins. They are bred in Asia Minor.



DAMASCENE.

Damascenes have a round Owl-like head, with a short down-faced beak. The eye (orange) is surrounded by a peculiar plum-coloured cere or eyelash. The most peculiar point about them, however, is the colour, which is of a striking mealy or frosted, slightly blue white, such as is called French white, as if dusted with faintly blue white flour. The bars on wings and tail are jet black. The under-flue of the feather is dark, the beak and nails being also dark. The peculiarity in feather is of the same kind as the "powder" of English Owls, and suggests whether the "powdered blues" may not have been so obtained, especially when we consider the resemblance in heads. The Ice pigeons also have a frosted appearance of the same kind.

Swifts are named from the great resemblance of their long flights and tails to the Martin and Swallow tribe of birds. They are bred in Egypt and India. The head is short and round, eye light yellow or orange, the cere flesh-colour. The legs are short in comparison, the characteristic of the breed

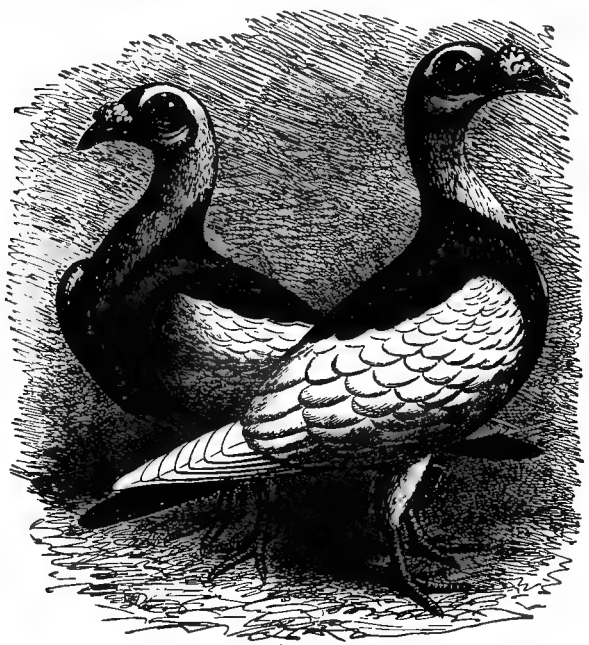


SWIFT.

being its *extreme* length of body and feather. All the feathers are, in fact, much longer than usual, and, unless the birds are in first-rate condition, soft and loose. Owing to this they are very bad flyers, the wings having no strength. Mr. Ludlow says that a bird he had measured 32½ inches from tip to tip of the wings. He gives them the character of being hardy.

Scandaroons are one of the most typical breeds known, and are believed to come from Persia. The main points are in the head. It is narrow from side to side, and very arched or Roman-nosed, the beak itself being considerably curved. The eye, which is orange, is surrounded by a considerable quantity of

red cere or wattle, and the wattle on the beak is also considerably developed—about as much as in a London Dragoon. A peculiar redness runs along the line of mouth, and a pinky tinge generally pervades the beak-wattle also. The total length of face is about that of the Carrier—say two inches. The beak is

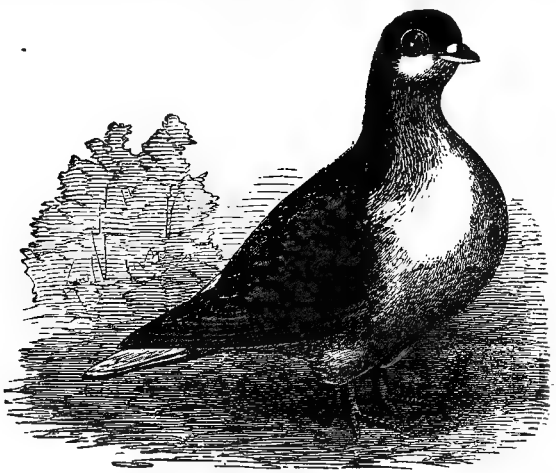


SCANDAROONS.

flesh-colour. The Scandaroon is found in white, various whole colours, and pieds. In all, the colour is the most rich and intense of any variety of pigeon, the red especially so. Owing to the length of face, light beak, and beak-wattle, the Scandaroon has been considerably used in crossing both with Carriers and Dragoons: with the former to produce whites; with the latter

to get good reds and yellows. It seems, upon the whole, likely that these birds were the original stock of our present English Carriers.

Of *Indian* pigeons, that best known is generally called by the name of the *Lahore*. Of these many specimens have reached England, all of one type. As thus imported in Indian



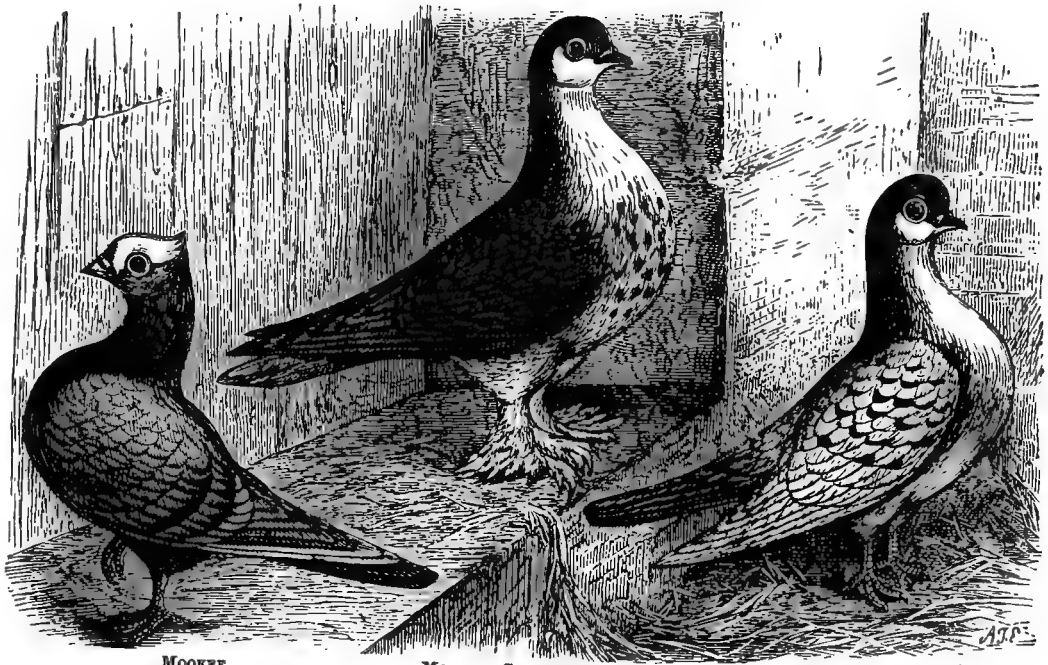
LAHORE.

vessels, the Lahore is a largish pigeon of plump make, and rather heavy-looking, with rather short, clean legs. The head is of the common type, with a rather thick beak, the eye having round it a small red cere. The points are in the marking, which is peculiar and striking, especially as the birds seen so far have been black. The top of the head down to the eye is black, and the upper mandible of the beak dark also, while the under mandible is light. The black runs over the eye, and comes down and round the back of the neck to half-way round, and over the back to the tail-coverts; the wings are also black, all else white. Thus the neck when looked at from

behind looks as if all black, and when from the front all white, the line being very sharp and clear. Lahores are good breeders and feeders, and very tame and domesticated.

Mr. J. C. Lyell, who spent some time in India, states that the Lahore is only a sub-variety of a pigeon called there the Sherajee, which has the same markings, but is stocking-legged or grouse-legged, like a Pouter. He further states that there is a sub-variety of the Sherajee still more esteemed, which, in place of being pure white in front, is mottled on the breast. In this case no two feathers of the mottle must touch each other, but every spot be clear; and when this is the case the natives value the bird highly, and will pay so much for each mottle, even up to 1,000 rupees per bird. The colours known of the Sherajee are yellow, red, black, blue, dun; blacks being the most common and, therefore, least valued.

The *Mookee*, Mr. Lyell affirms, is the true narrow-tailed "Shaker," so long lost, of Willughby's "Ornithology." Since Willughby plainly describes a *narrow or pointed-tailed* bird, and not a spread-tailed one, it certainly is impossible to believe, with Moore and Brent, that he meant a bastard between a Fantail and some other sort. He again mentions expressly a *close* tail, with the tremulous motion. The Mookee exactly answers to this; and coming from India, the home of the Fantail, is probably the pigeon meant. It is peak-crested; white-headed, like a Baldhead, but cut high across the eye, with the upper mandible light and the lower dark; eye dark; *two outer flights* of each wing only white, all the rest of the bird coloured. The head is carried back, and there is a constant vibration of the neck backwards and forwards, as in Fantails, but not to so great an extent. The head is rather peculiar in shape—neither short nor yet the common type, but as if drawn straight to a point. Most of the birds are black, the rest blue and ash-coloured. The most usual fault is in flights, such as one and three, two and five, &c. Three and three are allowed, but



Mookee. Mottled Sherajee. Mottled Goolee.

INDIAN FANCY PIGEONS.

more, or unequal numbers, are not recognised by Indian fanciers. Foul or ragged-cut heads are also a difficulty. A few reds and yellows are known. There are only twelve feathers in the tail, which is quite close; and it is at once obvious that no such bird could be bred down from the Fantail. It is far more likely that the "motion" of the Mookee was grafted on to the Fantail.

The *Goolee* is marked on head and neck like the Sherajee, or Lahore, but differs in the tail being coloured and the wings white. It is clean-legged. A more valued variety is mottled on the wings. As in the mottled Sherajee, however, this mottling is different to English mottling, where separate white feathers appear on a solid coloured ground. This Indian mottling consists of separate coloured feathers on a solid white ground. The higher class of Goolees have a high forehead, with almost a "stop" to it. The wings are carried low, and the birds walk on tiptoe. The resemblance in all these points to the short-faced Tumbler has been remarked upon in Chapter IX. Sometimes the Goolee is bred with the head, tail, and speckles on the wing of three different colours, and is then of higher value—this strange mixture *of three colours in one bird* being another strange coincidence with Almond Tumbler history.

The engraving of these Indian pigeons is made from sketches by Mr. Lyell.

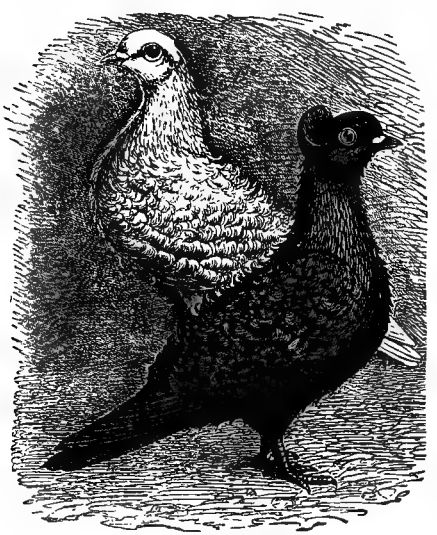
CHAPTER XVIII.

MISCELLANEOUS TOYS.

We have now to notice briefly a miscellaneous crowd of pigeons, most of which have been produced in Germany, where the fanciers have given themselves specially to feather and marking, and have produced an extraordinary number of

varieties. We cannot even describe all of them; and as nearly all have the ordinary Dove-house type of head and body, breeding is confined to matching for the colour and markings desired, many of which are mere hybrids or sports, like new geraniums. A few of the more characteristic may, however, be taken first.

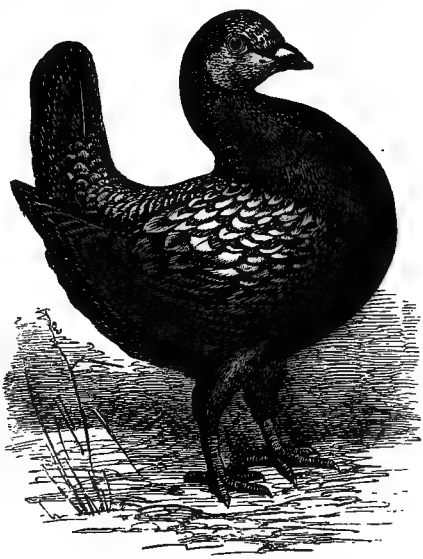
Frill-backs answer to Frizzled fowls in poultry, and are remarkable for each feather, except the flights and tail, being curled or twisted in a peculiar way. Like the Frizzled fowls, the peculiarity seems independent of any fixed colour or variety, and birds are found both plain-headed and crested, clean and feather-legged, and of all colours. But whites, grizzles, and blacks are most frequent, in the order named. Good birds of this sort often take prizes in a variety class. The chief fault is want of curl in some part of the body, especially over the shoulders. In breeding, the best curled specimens should be paired together, irrespective of colour, curl being of far greater moment than all else, and an odd colour standing, if anything, a better chance.



FRILL-BACKS.

Florentines, also called Burmese, are most peculiar and characteristic pigeons. They are large, stand high on the leg,

and carry the tail nearly upright and the neck far back, so as almost to touch. The flights are also short and carried high, nearly meeting just under the tail. It will be readily seen, from this description, as also from the engraving, that the pigeon has a most ridiculous resemblance to a Bantam fowl. They are found both as whole-colours and mottles. Mr. Ludlow considers the breed related to the Leghorn Runt, and on comparing the figure with that of the latter bird, as given by Eaton (see p. 193), this will appear not improbable.

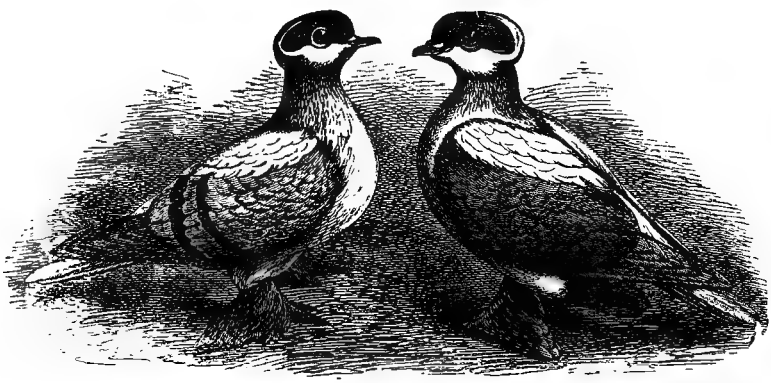


FLORENTINE, OR BURMESE.

Swallows are very pretty and striking birds, and sometimes (though rarely) get a class to themselves. The beak is rather long and thin, neck shortish, legs muffed and generally rather vultured, and the head adorned with a well-defined shell-crest. The colour is as follows:—Head coloured, clean cut through the mouth and eye, and reaching to the base of the crest, which, with all the rest of the head and neck, is white. The entire wing is also coloured, leaving the tail, wing-coverts, and all the rest of the bird white, except the *shank*-feather, the thighs being white. Swallows are bred in all the usual colours, but blues are found of a pure self-wing as well as black-barred. The chief

points are colour and marking, and next to these heavy leg-feather.

Priests resemble Swallows in shell-crest and muffed legs, but have an additional tuft or crest over the nose, thus marking a kind of transition between the Swallow and the more heavily-furnished Trumpeter. The nasal tuft is found both rose-shaped and parted. The upper mandible is light, the lower dark;



SWALLOWS.

nasal tuft and top of head white to the crest, which is coloured; crest and all else coloured, except *white wing-bars;* rarely there is also a white tail-band, which is an additional point of value. In blues the white bars are edged with black. The colours are blue, black, red, and yellow.

Brunswicks are like Priests, with the sole difference that the white on the head extends over the shell-crest and the flights are white.

Letz pigeons are of the same class, but the nasal tuft becomes a well-developed "rose," and the legs are more heavily feathered and vulture-hocked: in all these points making a still closer approach to the Trumpeter, a cross of

which probably produced them. They are generally whole-coloured, of various colours, with white bars.

Fairies, or *Fairy Swallows*, head a sub-variety of the Swallow family. Generally they differ in being plain-headed, but are also found shell-crowned and always muff-legged. They are all white, except having coloured flights, coloured shanks (white hocks), and a large, oval, coloured patch on the forehead. The eye is dark, and the upper mandible. We once saw a bird with a coloured saddle like that of a Magpie.

Shields are of the same shape, with clean heads and muffed legs, but differ in being all white, except the shoulders or sides of wings, which are coloured as in the Turbit, but with white bars, edged in blues with a narrow line of black. The eyes are dark.

Crescents are of the same shape, but are all over creamy white, except a pair of chocolate or brown bars, and a large crescent, of the same colour, depending on the breast, the two horns reaching up almost to the back of the eye.

Starlings are much like Crescents, but the colour is reversed. They are only known in black; and, accordingly, are of that colour all over, except a large dependent white crescent on the breast, and a pair of white bars. They are known both clean-legged and muffed, plain-headed and shell-crested.

Fire pigeons, or *Fire-backs*, seem to be of the same tribe crossed with the Archangel. They have the heavy muffed legs, with vulture hocks and clean heads. The colour is a rich chestnut, with an indescribable lustre or fiery copper glow all over the neck, sides, and back, sometimes ticked with black; the head, muffs, and under parts kite-black; tail and coverts white, and a white spot on the forehead. This is a very handsome pigeon, and good specimens are much admired.

Ice pigeons have a Dove-house head, and are both clean-legged and muffed. The characteristic of all the varieties is a frosted, powdery bloom. The eyes are generally dark, and also

the beak, but the eyes of some are orange. They are found of various colours and patterns, the original appearing to be a lavender, self-coloured bird. This is also found with white bars edged with black. There are also blues, with white bars edged with black, blue-black flights, and barred tails. And, finally, there are various kinds of spangling on the sides, somewhat resembling the patterns found in the Satinette tribe, with black zig-zag markings on various coloured grounds. These kinds are called Ural or Siberian Ice pigeons. The matching of these birds must be conducted on the same general principles as have been described for the Satinettes. Ice pigeons are very beautiful when clean and of good quality, and such a specimen rarely fails to score in the Any Variety class.

Hyacinths are plain-headed and clean-legged, rather large, and very hardy. Their points lie in the plumage. This is a kind of purplish-blue over the body and tail, but the sides or shoulders are tri-coloured, the ground-colour being a kind of light brown, marked with black arrow-tips, enclosing a kind of greyish or blue triangle. The marking in good specimens extends over the back. Eyes orange, beak dark.

Victorias are simply Hyacinths of a lighter shade.

Porcelains are of the same class, but the black markings are heavier, making a kind of link between this pigeon and the Suabian.

The *Suabian* is generally heavily spangled with black on the sides in a crescentic form, the black often having a peculiar copper or bronzy lustre. This is either upon a white or variegated ground, and the bird is more valued if the lower webs of the flight-feathers also show a white spot. The tail is black, and in some cases shows a white band, like the Satinette. The head is generally black, ticked with white.

The last four birds appear more or less related, and the Germans cross the various colours and markings together, which makes the definition of varieties very difficult. There

are also sub-varieties with crests and with muffed legs. In fact, the possible varieties of these pigeons must be endless. The most singular thing about them is that European as well as Asiatic fanciers should, quite independently, have found out the possibility of producing a beautiful tri-coloured marking on one bird.

Helmets are marked like Nuns, the top of the head and tail being coloured, but without any crest. The flights are, however, generally white, though coloured flights are also shown.

Spots resemble Helmets, except that, in place of the whole top of the head being coloured, there is only a large oval spot on the forehead. They are occasionally seen shell-crested, which brings out the Nun relationship very strongly. In fact, apart from the tri-coloured birds, it may be said that nearly all the rest of the Toys seem derived more or less from Nuns and Trumpeters, bred to various colours and markings.

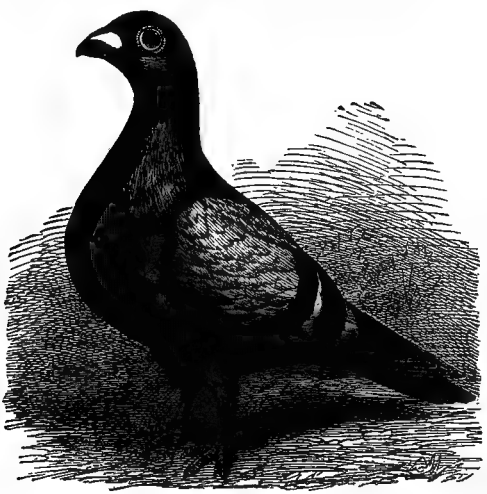
All the Toy pigeons are hardy birds, good breeders, and capital feeders, but most of them are naturally of a rather wild or shy disposition. We have found several of them, however, rapidly lose this when brought up in confinement, and especially if reared by hand. Many of them would be especially attractive to ladies and children if better known; and it is to be much regretted that the Any Other Variety class at most shows, by offering more prizes, does not do more to make the public acquainted with a class of birds that possess at least æsthetic beauty of a very high order.

CHAPTER XIX.

HOMING PIGEONS.

THIS is the accepted term now given to the pigeons used for flying journeys, whether or not they are also given messages to carry. It appears likely that the old Carriers, Dragoons, and Horsemen were thus used; but these being now developed

into fancy breeds, independent of any such purpose, the term Carrier only created confusion. For some time the names of Flying Antwerp or Antwerp Carrier were used; but as the term Antwerp has gradually attached itself to the show variety developed from these birds and described in Chapter XV., general consent has at length settled down to the name of Homing Pigeons, which exactly expresses what is meant, and was, we believe, first employed by Mr. Tegetmeier. The fact is, the birds used in flying are of no fixed type, and the extraordinary results attained of late years have been got by the fusion of different strains. At least three of these have been traced: one of them being the English Dragoon; the second a really Belgian pigeon called the Smerle, which from the round head and occasional frill was evidently of Owl parentage; the third a round-headed, pearl-eyed, high-flying bird, called the Cumulet, and which was evidently related to the Tumbler. We believe the long-faced Beard blood was also used, as we noticed that one of the winners in the Alexandra Palace Races of 1878 showed white beard, white thighs, and white flights, though of the best Belgian ancestry.



BLUE HOMING PIGEON.

All pigeons are strongly attached to their homes, and will fly back to them as far as their powers allow. From time immemorial this tendency has been used to make the birds carry messages, as shown by Pliny and other classical authors; and it was early found that some strains, besides greater powers of flight, possessed greater intelligence, memory, power of

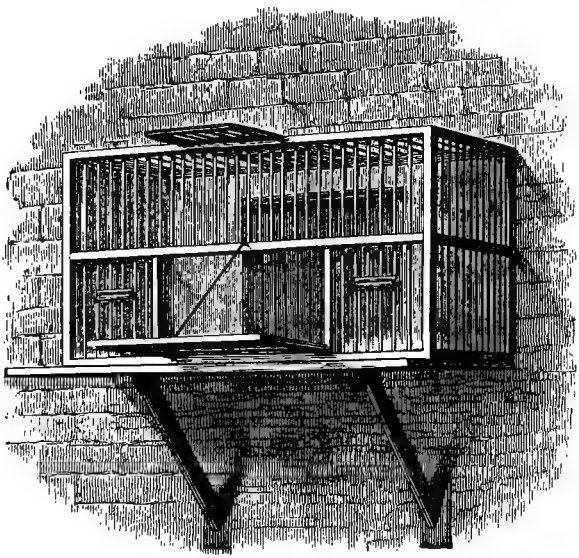


Fig. 33.—Area.

observation, or other qualities which enabled them better than others to *find* their way home. These mental and bodily qualities admit of being cultivated, like any others; and the Homing Pigeon is a bird which, originally bred from various sources, has been perfected by simply breeding together the *best performers*, irrespective of shape or colour. The types vary a great deal even now; some have long and thinnish beaks, some short and thick. All colours come from the same strain,

and the Owl blood now and then comes out in a frill; but all good flyers will, however, be found to have a bold eye, a capacious forehead, and powerful wings. Much dispute and heart-burning has been caused by the classes now so common for the "best" flying pigeons at many shows. It is impossible in a pen to select the "best." Though a practised eye can select birds which, by their powerful pinions and other signs, promise well, scarcely any large class fails to show examples of the "best" being overlooked, unless the judge recognises them; whereas, if the prizes were awarded for the "handsomest" Homing Pigeons, their right to class as such being decided by the usual tests, the selection would speak for itself, and all heart-burnings be removed. The only other way of avoiding such disputes and absurdities would be to make such classes local to the town where the show was held, to take the birds a given journey, and award prizes to the first returned; in other words, to fly them *to* the show or show-town instead of *from* it. This plan may be recommended as likely to be of far greater local interest, and placing the class on its true footing.

The loft for a stud of Homing Pigeons should be *high*. Such a position is not only much easier found by the birds, but experience teaches that there is much less loitering outside than if low down, as in a garden; also much less danger from cats. The birds being constantly in and out, a cage or area, somewhat resembling Fig. 33, must be provided, by which the pigeons can enter at all times, but cannot leave the loft without the owner's permission. On reaching home they light upon a ledge or board outside the area, and if the trap-door is open, enter at once through the open space. If it is closed, they etner by *pushing inwards* swing wire doors called "bolting-wires," provided for that purpose on each side of the trap-door, and which will lift or swing from the top inwards, but are prevented by a beading on the frame at the bottom from opening outwards. In Fig. 33, these are represented as swinging

on a spindle; but the simplest way of making them is to bend the wire at right angles, and hang the bend in small staples, as shown in Fig. 34. Besides the entering wires, it is very handy to have one or two bolting-wires between the area *and the loft*, so that when a bird comes in it cannot go at once into the loft, but is confined to the area, where it can be easily caught. When not wanted, these inner bolting-wires can be tied back to the top of the area. Young pigeons soon learn to use these bolting-wires; but while they are doing so it is usual to accommodate them by a slide in the top of the area, as shown in Fig. 33. By withdrawing this, a square hole is left, called a "dropping-hole," through which the bird with unextended pinions can readily drop down, but through which its flapping wings will not allow it to fly in an upward direction.

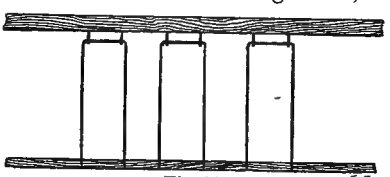


Fig. 34.

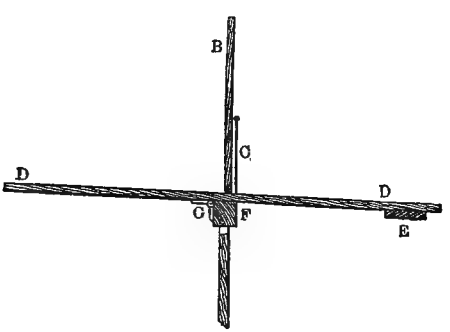


Fig. 35.

If the loft is so situated that cats can reach it, precautions must be taken against their entering, which can easily be done by a *balanced* alighting board, shown in Fig. 35, where B represents the front of the area or loft, and C the bolting-wires. The alighting board, D D, is fixed by a hinge, G, to a cross-piece, F, which keeps the weight, E, from drawing the board below a horizontal position. This weight should be a shade

more than the heaviest pigeon, or rather, enough to a little more than balance the pigeon at the other end. Hence the pigeon alights and finds the stage secure; but if a cat alights the board at once tips up and lets her down. If there is a series of bolting-wires, necessitating a wide stage, it must be divided into strips or sections, and each piece balanced separately. All entrances should be painted in some conspicuous manner. It is often better to have no outside cage or area, but to have it *inside* the loft instead.

The loft must be divisible into at least two divisions, arranged so that either at pleasure can have access to the area or entrance. This is easily managed, as shown in Fig. 36, where *b c* are the two compartments divided by the partition, *d d*, and entered by separate doors, *h h*. The partition may be of wire, boarded up a foot or so from the floor. Near the front of the loft the partition forks, as at *f g*, and a door turning at the point of the fork will give either side access to the entrance, *e*. By this arrangement imported birds can be confined while the young ones fly, or old and young flown separately, &c. If space permits, it is very desirable to have also some large breeding-pens in which particular birds can be confined at pleasure.

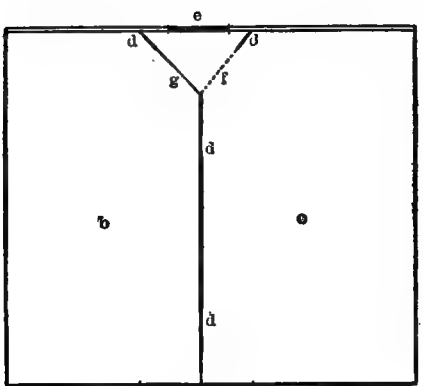


Fig. 36.

The selection of breeding stock in this class of pigeons is a very simple affair. The principle is this:—Given a dozen birds, the progeny of one good pair. In training some of these will

be lost altogether, and by the various tests one pair is found best in strength and intelligence—for there is no doubt these birds find their way home by observation and not by blind instinct, as some suppose. The progeny of this best pair will produce a greater number of good Homers than the inferior birds would do. In Belgium the best performers only have been bred from for generations, and the rigorous training weeds out the inferior ones wholesale. These come over to England largely, and can be had at a cheap rate. But to breed from them is to reverse all the rules by which success was obtained; it is exactly analogous to attempting to breed fancy pigeons from parents which possess *no properties.* The only road to success is the simple rule of only breeding from proved good performers. Much crossing is required to keep up nervous and muscular energy; but every cross must be the very best performer the purse can afford.

It follows that the breeder of Homing Pigeons *must* face *wholesale losses;* unless his training is severe enough to discard all below a certain standard, in fact, he *cannot succeed. His losses are not mere accidents, but part of his process, and simply represent to him the inferior birds of the fancier. This should be well understood, as many attempt to avoid losing birds in this way by training easily. They keep the birds; but they lose all the qualities for which they are valuable.*

It will be seen that it is useless to start a loft by buying old birds to turn loose. If worth their salt, they would be off at once. When old ones are purchased, therefore, they must either be confined in a loft and wire aviary, or all the web of the feather may be stripped from the shafts of the flights on one side, and the birds let out after going to nest. It is best, as a rule, to obtain young ones just able to leave their parents. As soon as these are strong enough to fly, they should be allowed for some days to view the neighbourhood from the area, without being let out; after which preparation they may be let out

with any old bird or two just after feeding at night. They will then be disposed to return very soon, and after a few days can be allowed to fly round the house. It is advisable to test them a little as opportunity offers, and any losses by this will only save time and money in the end.

Homing Pigeons should be paired early, in order that the young birds may be in time for the summer races. Being very strong, they do not suffer from this. In starting from a few good birds, some pairs of common feeders are useful, as each pair can then bring up one bird, and rear it extra strong and hearty. Young ones, as soon as they know the locality a bit, are usually let out every morning fasting, to accustom them to have a good fly and come in sharp. If let out with food in their crops they are apt to loiter, which is a very bad habit, as they may do the same on arriving from a race. Here, again, is the great use of having a separate division in the loft.

Young birds should not be trained at all till they know the immediate neighbourhood thoroughly well, and are strong on the wing, which will rarely be till three months old. They should be first tossed early in the morning, unfed, about five or six hundred yards from home only, when as soon as they get up they should recognise it. If they do not, the sooner they are lost the better. They should be thus tossed in all directions, on successive days if possible, but always in fine weather; by which they will learn to know their own immediate neighbourhood in all directions, and also the *habit* of making for home after being carried in a basket. The next tosses may be half a mile, all round as before; then a mile or more, which should in most places accustom them to any part of their own town. We strongly advocate these small increments *at first*, as teaching the birds what is wanted, and giving them a fair chance. After that the distances may increase, though we are sure it is best by easy stages to teach the birds their own neighbourhood for five miles all round, always on an empty

stomach, and never tossing near a building, which might tempt them to pitch. The birds should be thrown steadily, well up, and taking care to open the hand so as not to pull out any feathers.

After this we would toss at ten miles, and thence by about ten mile stages to fifty miles. After that the tosses must be as happens, from fifteen to thirty miles apart, and losses increase. In Belgium they will make the training stages fifty or a hundred miles, or even more apart; but the losses from such are enormous, and rapidly weed out all but a few. In fact, we are convinced those few often reach home more by luck than talent, and that some of the *best* birds are thus thrown away. As soon as systematic training commences, regular notes should be kept of all the different performances, with the weather, wind, and all circumstances; for the rule must be rigorously observed of never breeding from a bird that habitually comes in late in a race. We do not consider that young birds should be flown beyond one hundred and fifty miles the first season.

The English system formerly was to *toss* the birds singly. The Belgian system is to open the basket and let all fly at once. By the latter plan much fewer are lost, as the more sagacious nurse the others home, showing them at least the proper direction. Of late the Belgian plan has become usual in England.

The baskets or panniers used in training vary in size and pattern, but are generally oblong. They should be, however, nine inches clear in depth, and every bird should have at least twenty-seven to thirty superficial inches of floor space. The best material for the bottom is the *dry tan* we have already recommended. It is clean and wholesome, and the birds can see grain on it better than on anything else. It is usual, however, to have one or both ends of the basket partially open, so that the pigeons can put their heads out for food and water. There is generally a small trap-door in the cover to put the birds in, and the whole cover lifts up to start the birds. The covers

are secured by straps. The ends of these straps are usually secured by strings, the knot of which is embraced in a hole made in a disc of lead, which is then stamped or sealed on both sides by a pair of pincer-dies, in order to show that the basket and its contents have not been tampered with.

It does not, for obvious reasons, answer to fly hens during the breeding season, except at about eight or nine days after hatching; and cocks should not be flown for four or five days after hatching, as the soft meat would prevent their winning. The plumage should also be in good order; and as moulting time approaches this should be carefully looked to before a race, for a bird *minus* part of its flight-feathers would be at a very great disadvantage. It is well also to examine the feet, and see if any dirt or excrement adheres; if so, it should be removed, as even a few grains is so much dead weight to carry.

Birds in training are stamped before each stage and when entering; they also often have the owner's name and address. Ordinary type of a heavy kind, set up in a small holder made for the purpose, answers well for this, and india-rubber stamps are also used. The marks are stamped on the broadest flights or tail-feathers, the feather being spread out on a few sheets of blotting-paper laid on the table or a piece of wood, and the stamp, covered with printer's ink evenly distributed on an inking-pad, firmly impressed. All these details are fixed and carried out by various Societies, through whom most of the pigeon-racing is carried on, the members' subscriptions helping to defray the expenses of training. Wherever possible, it is best to send an attendant, which can be done when there are many to divide the expenses, who can feed and water the birds properly. When this is impossible, it is usual to send to the station-masters at the training-stations where the birds are to be tossed, and who on most lines are very obliging in this way.

Pigeon-racing can never become so general, or such long distances become customary, in England as in Belgium or in

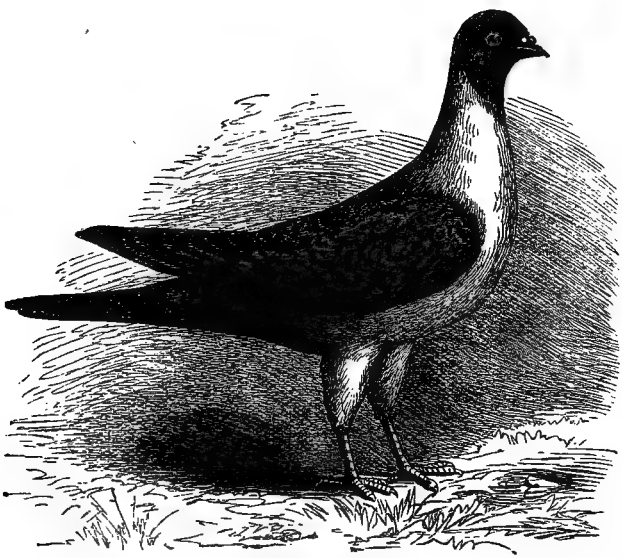
France. Our atmosphere is damp and foggy and our country hilly, intercepting the view of the birds, whilst on the Continent the country is flat and the air singularly clear. In Belgium thousands of birds will be entered for a single race, and every fourth man is deeply interested in the sport, which is subsidised by Government and by leading men, while the railways afford special facilities for the thousands of panniers which pass to and fro. Many pigeons are also kept in training for military purposes, and the regular pigeon post which carried letters into beleaguered Paris is well remembered. In this case the birds were sent out of the city at every opportunity or by balloons. The messages were collected, set up in type in four columns like a newspaper, and photographed on a film of collodion about one inch by two, or on fine paper, which was rolled up and placed in a small quill, the quill being tied by the ends to the stem of one of the centre feathers of the tail. On receipt the messages were deciphered by a microscope and written out for transmission, one of the small slips described holding several hundred of them, the fees (at a regular tariff of a franc per word) costing over £100.

In England pigeons have been employed for carrying messages from light-ships to the shore, and racing has made great strides of late years. As a rule, the longest distances available are from such towns as Berwick or Newcastle to London or Brighton; but occasionally races take place across the Channel from Paris or other cities further inland.

Observation has shown that the greatest speed for the whole of a race is about a mile per minute. This is very rarely attained, the average being only half that. On the other hand, as this necessarily includes some rest, it is plain the actual speed must be even greater; and, in fact, short distances are done at a greater rate.

The introduction of long-distance races has revolutionised pigeon-flying in England. No doubt the old style of public-

house matches is still kept up; but the various pigeon Societies which cultivate more ambitious contests are now supported by men of position and influence, and the pursuit has grown immensely in public favour since the Franco-German war.



MODENESE FLYING PIGEON.

Modena Flying Pigeons.—Before concluding this work, we must briefly mention the peculiar kind of pigeon-flying practised for centuries past in the city of Modena, as described by Signor Malmusi and Professor P. Bonizzi, summaries of whose notes on the subject have been published by Dr. Baldamus in Dresden, and more lately in England by Mr. J. C. Lyell. The peculiarity of these pigeons is their mode of flight and training by the *Triganieri*, or pigeon-flyers, which there is documentary evidence to carry back to the year 1327. The

various flocks are trained to fly in any direction pointed out by the flag of their owner; to fly to the highest tower of the cathedral at a given signal; to mix with other flocks at another; and at yet another to return home; the object of each *Triganiere* being to call home all his own pigeons, with as many as he can of those so mixed with them in the *mêlée*. Each pigeon so captured is generally redeemed at the price of a *lira*. It is also stated that some of these pigeons have been trained to be sent *out of* the city on messages; and that generally they obey the strictest discipline in feeding and other respects; coming to the owner's shoulder or finger at the word of command, and eating out of any one of the feeding-vessels designated by him. If the former statement be true, it *reverses* the ordinary method of sending messages by homing birds; but in any case the obedience of the Modenese pigeons whilst in the air to every command of their owner opens up a new and very interesting chapter of the pigeon fancy.

There is reason to believe that while the system of training and flying these pigeons in Modena is very ancient, the present variety is comparatively a modern creation. We take from the German work of Dr. Baldamus the accompanying illustration of a "Magpie" Modenese pigeon, from which it will be seen that the thighs and legs are long, the head carried high, and in a brisk manner, and the beak stout, and rather short. The tail is desired to be carried high, either horizontal or slightly raised, and is longer than the flights. The marking in this particular variety resembles that of the Nun in the head, with coloured wings, flights, and tail: any *artificially-coloured* bars are valued; but black or brown bars are eschewed. Of colour and markings there are, however, almost countless varieties, the rarest being most esteemed.

CHAPTER XX.

DISEASES OF PIGEONS.

THERE is more difficulty in doctoring pigeons than most other domestic creatures, owing to the very great differences in the circumstances under which a given complaint may have to be treated. This is well exemplified in the well-known uncertainty of purgatives as regards these birds. Supposing a sick pigeon has been fed on sound old beans, it will readily be understood by any one who has read Chapter II. of this work that an ordinary purge would probably act energetically; but when we remember that a sudden change to softer *food* usually purges a bird freely, we shall easily see why, if our bird had been fed on such laxative diet—say wheat—it might be comparatively little affected by laxative medicine. The amount of exercise, air, &c., also vary so widely that any one who shall attempt the task of a pigeon-doctor may well expect a disheartening variety of effect from his prescriptions. The subject is, however, better understood now than formerly, and the following hints have at least all been of proved service in actual cases.

The doses are for ordinary pigeons, full grown, and should be diminished or increased according to size. Their effect will be greater so far as known circumstances are taken into account and care taken to act in accordance: for instance, giving a milder purge, with some change of food, to a bird fed on constipating diet; or adopting more rough and active treatment for colds or roup with birds at large, and milder measures for such as are in confinement.

Canker is a general term among pigeon breeders for an ulcerous or foul growth, which may assume different forms and appear in different places. The matter is usually yellowish, and wattled pigeons are peculiarly subject to have it in the ear and about the head, whilst all varieties are subject to cankers

or foul growths in the mouth or throat. Carriers are also liable occasionally to outbreaks on the wattle. General experience seems to prove that many forms are contagious; but it is possible the fact may simply be that similar conditions cause the same ailment more or less through a loft. Canker of some form or other has repeatedly been traced to foul, neglected water, either in bath or fountain. This should, therefore, never occur, though cases also happen where the greatest cleanliness has been observed. We have already expressed the opinion that the deprivation of green food has probably much to do with the disposition to this type of disease; and we have also reason to believe that scraped cuttle-fish is of the greatest value as a preventive.

For external cases the most valuable application is carbolic acid. To cankered spots on the wattle, in those malignant cases sometimes called "small-pox," the acid may be applied in full strength by a camel-hair pencil, at intervals of twenty-four hours till checked, afterwards cleansing with diluted acid, one part to a hundred. In this form, two or three purges of Epsom salts often assist a cure. To canker in the ear, about the head, or in the mouth, it is better to apply a dilution of one part saturated acid to eight parts glycerine, twice in twenty-four hours, till the diseased secretion is evidently checked. Another method of treatment recommended by Mr. Betty for canker in the ear is to inject for several days a solution of sugar of lead, three grains to the ounce, followed by a solution of sulphate of zinc of the same strength. To the more virulent forms of canker which sometimes appear near the joining of the mandibles, especially in Tumblers, either the undiluted acid or the glycerine dilution may be applied, according to circumstances. Some breeders cut off the affected parts and apply lunar caustic to the healthy surface left by the cut; but after prescribing for many cases, we can recommend the carbolic acid application as—if not infallible—by far the most

generally successful. There is, however, one most important circumstance to add, as bearing on internal treatment. Many post-mortem examinations* have revealed the fact that *fatal* cases of canker are very often associated with scrofulous or tuberculous disease of the liver. Guided by this indication, when canker has largely affected young birds in a loft, as it often does, we have prescribed the administration of three to ten drops (according to size and age of the young bird), twice daily, of syrup of hypophosphite of iron *or* soda, with the best effects. It should be given just after each feed, as soon as the young squeaker is old enough to bear the administration of the bread or oatmeal pill in which it must be mixed, and is the nearest to a specific for scrofulous or tuberculous constitution that we know.

In a large class of cases canker attacks the throat, especially of young birds, and grows there with alarming rapidity, being also, to all appearances, infectious. This form of the disease deserves to be called *diphtheria*, and may even be that complaint; it is, at least, certainly encouraged by want of pure air, and as evidently discouraged by ample ventilation. Here the medicine should be a few drops of iron tonic with chlorate of potass, and the application to the throat must be different. The best prescription is as follows:—Carbolic acid, one drachm; sulphurous acid, three drachms; solution of perchloride of iron, half an ounce; glycerine, half an ounce; to be applied several times a day with a camel-hair pencil. In all cases of canker and diphtheria the greatest cleanliness should be observed, and the pens and loft copiously syringed with diluted Condy's Fluid. Mild cases of canker in the nest can often be cured by an ordinary rhubarb pill, or perhaps a second may be needed; such cases being often really due to improper food, and consequent indigestion.

* Made by competent veterinary authorities through *The Live Stock Journal*.

Sometimes the tongue is too long for the mouth, and the constant irritation causes canker in the lower mandible. In such cases, cutting off the tip of the tongue and dressing the affected place twice a day with salicylic acid will almost always effect a cure.

Colds, if taken in time, will often yield to very simple treatment. As soon as any watery secretion in nose or eyes is noticed, give a small pinch of Epsom salts, and put the bird in a warm pen, bathing the legs every night in hot water, and carefully drying after. A second mode of treatment that often answers is to give every morning a few bits of sugar the size of a pea, on which have been dropped spirits of camphor. A drop twice daily of tincture of aconite is another good medicine in many cases—the mother tincture, given in a little water. In all cases, removal to a pen out of the draught is the main thing. If the running is at all profuse, bathe the eyes or nostrils with warm tea.

In severe colds, especially where bronchitis or inflammation of the lungs are suspected, it is often of great benefit to apply diluted ointment of biniodide of mercury to the ribs or under the wings once a day for three or four days; or spirits of turpentine may be rubbed in over a space the size of a shilling between the shoulders. In all such cases the birds should be mainly fed on oatmeal pills soaked in milk, or other soft food. Inflammation of the lungs is best distinguished from a merely severe cold, by the marked high temperature.

Constipation will usually yield to either jalap, Epsom salts, or castor-oil. Another very simple and useful purge is a teaspoonful of warm treacle.

Crop-bound is in pigeons practically confined to Pouters, and has been treated of at page 152.

Crop, Watery, see *Foul Crop*.

Diarrhœa is a very frequent complaint, especially when care is not taken of the quality of the food. A castor-oil capsule or a few drops of rhubarb and laudanum mixture will generally check it, if taken in time; in more severe cases, or which do not yield to the foregoing, regular doses of two to three drops of chlorodyne, according to the usual directions on the bottle, will generally suffice. If blood appearing should show a tendency to dysentery, about the only hope of saving the bird will be doses every four hours of one to three drops of laudanum in a spoonful of arrowroot or gruel. As a last resort, a grain of tannic acid may be added to the laudanum, but is so powerful an astringent as to be dangerous, and should only be risked when all else has failed.

Diphtheria, see *Canker*.

Egg-bound birds will generally yield to treatment. In many cases it is sufficient to introduce an oiled feather into the vent. If this fails, hold the vent for some minutes over the steam from hot water, and then replace quietly in the nest. If this still fails after some hours, a tea-spoonful of warm treacle mixed with finely-minced groundsel will often be found efficacious. In all cases the cock should be excluded till the difficulty is over, as his solicitude and persecution will only make matters worse.

Eyes, Inflamed.—In some cases a severe cold or other irritation seems to lead to a small white speck on the eye, which increases and ultimately causes loss of sight. Such symptoms, or films, or any severe inflammation may often be successfully combated by dropping into the eye night and morning a drop of solution of atropine, two grains to the ounce; or, if preferred, tincture of belladonna. A three-grain solution of nitrate of silver is also often useful, but in such cases it is well to consult a doctor.

Foul Crop is a name given to a complaint that particularly attacks Pouters, but is found in other varieties also. The crop is more or less full of offensive fluid, and the food passes out very slowly, the organ being evidently flabby and torpid. Old cases are often incurable; but when taken in reasonable time the complaint will generally yield to boluses made of powdered charcoal, mixed up with butter and a little oatmeal to bind them together till swallowed. A couple may be given morning and evening, giving food and drink very sparingly. Often a few drops daily of quinine and iron mixture afterwards are of service. Sometimes this complaint comes on while feeding young, the bird leaving its squeakers, and moping and losing weight rapidly. In such cases there is usually a torpid liver, and benefit will be found from a quarter of a grain of calomel, mixed with one and a half to three grains of rhubarb, according to the size of the bird. Sometimes a second pill may be needed after two days, following with the charcoal.

Fractures, when accessible, are pretty easily treated by splints made of brown paper smeared with white of egg. Stiffer substances are unsuitable, the greatest gentleness being necessary.

Gizzard Fallen, see *Prolapsus*.

Going Light is a term applied by fanciers to a wasting away, which is apt to attack young birds at a few months old, particularly short-faced Tumblers. It may also occur at a later period, but the most dangerous time is with young birds at some time during their first moult. Numerous post-mortem examinations have shown that the cause is not uniform, as once supposed, but that the cases range themselves into no less than three distinct categories; a fact which accounts for the various results of any one mode of treatment. Unfortunately the symptoms which distinguish one class of cases from another are not clear, and only probable conclusions can be drawn. The first class

arises from inflammation (often accompanied by ulceration) of the bowels. We should suspect this cause when young birds were affected as they began to feed themselves or after any marked change of food; or when older ones were attacked when first feeding young; or when the bird *almost from the first*, and rather suddenly, assumed a huddled-up, rough, woe-begone attitude, which, however, distinguishes most sick pigeons before the end. In cases of this type the remedy is laudanum (see *Diarrhœa*), and the bird should be fed on pellets of oatmeal mixed with boiled milk. The second class of cases arise from what is truly *consumption*, or tubercle, and is to be suspected generally when the birds appear to gasp for breath towards the end. Such are practically hopeless, and show a diseased constitution. The only remedy would be to give, as soon as old enough, from the nest-pan, a few drops daily of syrup of hypophosphite of soda. This will act as a preventive in many cases; but we would always try to change or renovate the strain. The third class of cases is much allied, but depends upon a strumous rather than consumptive tendency. These cases afford most room for treatment, and may be suspected when they occur largely at moulting time. They are diagnosed beyond doubt when examination shows scrofulous deposit in the liver, or when accompanied by wing disease, or gouty swellings on the legs or joints, in the same loft. Here, again, constant doses from infancy of hypophosphite, but in this case choosing syrup of hypophosphite of iron, will be of the greatest benefit; or Parrish's compound Syrup of Phosphates may be given in the same way; and as the critical time approaches a capsule should be added daily of cod-liver oil. This treatment we have proved in several cases to have worked a wonderful change in the number of squeakers reared in the loft. Plucking the tail is sometimes of great service, but is not suitable for some varieties on account of the plumage coming again with blemishes, as with Almonds and Fantails.

Gout is a term applied, with or without reason, to swellings on the legs, particularly at the joints. It will often yield to painting daily with spirits of turpentine or tincture of iodine. One should be tried for a fortnight, and if it fails, the other. This should be combined with internal daily doses of a few drops of quinine and iron mixture, or of syrup of hypophosphite of iron. We have also known benefit follow, when all other medicine had failed, minute doses of iodide of potassium; and Mr. Betty strongly recommends a drachm of bicarbonate of potass or carbonate of magnesia to each pint of drinking water, as correcting the acidity of the blood and tending to remove the deposits. He also advises the application of biniodide of mercury ointment to the diseased joints.

Insects should be guarded against as described in Chapter III. If birds do become infested with any kind, a little mercurial ointment, diluted with three to five parts lard (most diluted for small birds), should be applied behind the head, near the vent, and under the wings. Petroleum ointment is safer and often efficacious.

Lameness sometimes affects pigeons quite suddenly in the most mysterious manner. Mr. Fulton, whose crowded lofts give him unusual opportunities of observation, states, however, that he has frequently noticed, after pigeons have struck hard against anything in flying, and no apparent mischief has followed, this sudden lameness has occurred later; from which it is likely that the cause is severe shock, of precisely the same kind as sometimes develops such serious ulterior results from a railway accident. Quiet and rest are the best remedies; and it is probable that sedatives, such as an occasional $\frac{1}{4}$ grain of opium or $\frac{1}{2}$ grain of bromide of potassium, might be of benefit.

Leg Weakness, see Chapter on Pouters.

Megrims is the curious term applied to a nervous or brain disease, shown by various twistings or turnings of the head, or turning round of the whole body, more or less constant and marked. A free incision at the back of the skull will sometimes relieve the brain and cause a cure; but such cases are not hopeful. We should also be disposed to try seclusion in a rather dark pen, with daily doses of $\frac{1}{10}$ grain of acetate of morphia, or if that failed, $\frac{1}{2}$ grain of bromide of potassium. Mr. Betty recommends opening the bowels with castor oil or a compound aloe pill, followed by pills made thus: Half a grain of carbonate of ammonia, a quarter of a grain of camphor, one grain of carbonate of soda, divided into eight pills, one given twice or thrice a day.

Prolapsus is a very frequent complaint. The first symptom is a soft swelling at or near the vent, which gradually becomes worse, and may or may not harden, till the bird is useless. The complaint was called "gizzard-fallen" by old fanciers, but is really a descent of the intestines or other internal organs near the part, due either to original weakness and relaxation of the tissues, or to debility consequent upon excessive sexual appetite; the latter being the most frequent cause. We are not sure that cure is possible, but we have seen apparent benefit follow an astringent injection of alum three times a day, accompanied by exposing the vent to a stream of cold water for a few minutes. Such birds should not be bred from.

Rheumatism is difficult sometimes to distinguish from gout, but is more apt to occur at moulting time or in wet weather. Warmth and dryness, away from draught, and the biniodide of mercury ointment mentioned under gout, with the alkaline water, are the most serviceable remedies. Sometimes rubbing the affected limbs with camphorated oil is of great benefit.

Roup in pigeons may be treated with Walton's Pills and seclusion in a pen free from draught, first giving a mild aperient,

such as a pinch of Epsom salts. The nostrils should be cleansed night and morning with diluted chlorinated soda. If this fails, we would dress the nostrils (but not the eyes) with diluted carbolic acid, one part to 100 of water, well shaken up before using, and give a small capsule of copaiba each evening for a few days, followed by an aperient. This medicine should not, however, be given till the secretion has run its course for some days. If the eyes are much affected, much benefit is often found from bathing morning and evening with warm green tea. By roup is only understood severe cold, accompanied by contagion, and a secretion from the eyes or nostrils which hardens as it dries. If more solid matter is found in the throat or elsewhere, treat as for *Canker*, which see.

Spouts are confined to wattled pigeons, and consist of a folded corner in the lower eyelid, through which there is a constant gradual drain of fluid, which much weakens the bird. The treatment is to cut the spout clean out with curved scissors. Before doing so the inner surface should be carefully examined, when little nodules or pimples will often be seen. These must all be cut clean away, however extensive may be the required excision; but it is always best to operate on a spout in good time, as this often saves more severe measures at a later period. However wide the gap left by the cut, it generally fills up well. Before cutting, and whenever necessary to clean, dip the blades of the scissors in Condy's Fluid, and apply the same with a very soft sponge after the cut till bleeding is stopped, after which put on the wound a very small bit of zinc ointment. This must be renewed every day, and especial care taken to prevent the eyelids sticking together, which may occur if the ointment dressing be not regularly attended to. If both eyes need operating upon, Mr. Fulton advises that they be done at once, and that the tops of both wattles be drawn upwards by a silk thread through them and passing over the head, which

will effectually prevent them from coming down and adhering to the wound.

Before operating the bird must be bandaged, and it should be kept in a box, unable to move, for a few hours, till the wound is a little hardened. When released the legs must be tied together so as only to allow the bird to walk in its pen, but not lift either foot to scratch the eye. It is also well to smear some zinc ointment on the shoulder, in order that if the bird rubs its eye thereon it may do no damage, but rather get a fresh application of the healing dressing.

Wing-disease is usually a sign of scrofulous taint, but probably developed in most cases by accident. A hardish yellowish lump forms on the joint, and the wing either drops or becomes stiff. The lump is to be painted every other day with the strongest iodine liniment, also the under side opposite to it. The wing itself should be clipped with scissors down to a stump, so as to have rest for the remainder of the season. We have found this treatment more successful than painting with turpentine and slinging the wing, which may, however, also be tried, as advised by Mr. Fulton. If taken early, it is generally enough simply to pluck all the flights, and also all the short feathers near the swelling. In all cases we would give a few drops daily of syrup of hypophosphite of soda.

There is another form of tumour in which the swelling is filled with fluid; in this case the wing should be plucked and the blister opened, when the re-growth of the feathers will usually prevent matter forming again.

Wounds of all sorts should be thoroughly cleansed with a clean sponge and Condy's Red Fluid, plucking the neighbourhood if necessary. Then apply zinc ointment, and repeat this occasionally till healed.

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