



THE ILLUSTRATED  
BOOK OF POULTRY

BY

L. WRIGHT.



## CHAPTER XXX.

## GAME BANTAMS.

THE creation of Game Bantams is one of the most striking triumphs of the breeder's art, and the popularity of these graceful little birds has of late been somewhat extraordinary. This is no doubt owing in part to the much better quality of the specimens exhibited of late years, which are as different to those formerly shown as possible, presenting the fine outlines and plumage of the Game fowl in faultless perfection, with the diminutive size of the Bantam. This took a long time to acquire, and for many years stout stocky birds, with wings carried low, and spreading tails, had to be awarded prizes for want of better; but such specimens would stand no chance whatever now; the neat, light, whip-like figure of the true Game bird being quite indispensable to any chance of success. Most careful breeding is needful to secure this, with the necessary points in plumage and other respects; but we have been fortunate in obtaining such very full notes on these beautiful birds as leave no point untreated of on which information is needed by the fancier. The gentleman to whom Bantam breeders and ourselves alike are so much indebted, is Mr. W. F. Entwistle, of Westfield, near Bradford, Yorkshire, who writes as follows:—

“Game Bantams rank amongst the most beautiful of our ornamental fowls, and they are by no means unprofitable either as layers or for table use; for though small their flesh is most delicious, and they very early arrive at maturity. They are undoubtedly of English production, having been bred by crossing the English Game fowl with the Bantam, and selecting for future stock-birds those chickens which most closely resembled their Game parents, and by breeding in and in till the size was reduced to the desired point. Their good properties have rendered them such general favourites that they have become very plentiful throughout the United Kingdom, as well as on the Continent and the United States, to which they have been exported in considerable numbers.

“We have four leading varieties of Game Bantams, viz., Black-breasted Reds, Brown-breasted Reds, Duckwings, and Piles, or White-breasted Reds; and besides these there are White, Black, and Wheaten Game Bantams, the last-named being almost indispensable for the breeding of Black-breasted Reds and Duckwings. All Game Bantams should resemble the large Game fowls in everything except size; but the full-grown cock should not exceed twenty-six ounces, nor the hen twenty ounces when in condition for exhibition. In the laying season, a really good hen will often weigh more than twenty ounces, but she then looks clumsy and heavy, owing to the formation of eggs.

“In breeding Game Bantams, the great points to be aimed at are style, good feather, and colour. By style we mean general shape of the bird, and carriage of its head, wings, and tail. I will take shape first. The head should be very long, narrow, and gracefully curved; the neck long and slender; the shoulders broad and square; the chest broad; the body short and wedge-shaped, very fine and small at the tail-roots; the thighs well apart, rather long and well-rounded; the shanks long, straight, and slender; the toes long and well-spread, flat on the ground, the hind toe pointing exactly opposite the middle one, so as to give the bird a firm footing. If the hind toe

turns sideways or under the foot, the bird is said to be duck-footed, and is therefore considered worthless. The scales of the legs should be small and smooth, fitting close to the leg. The wings to be short, well-curved, and fitting close to the sides of the body, not drooping. The tail should consist of narrow hard feathers, and be carried at a very slight elevation, tightly closed, so as to give it a light graceful appearance. A wry-tail, *i.e.*, carried on one side, is of course a disqualification. The general appearance of the bird should be upright, bold, and fearless. As regards the second point, good feather, all the feathers should be sound, narrow, hard, and wiry, and lie as closely together as possible, so as to show the shape of the bird distinctly. In the cock the neck-hackles should be short and hard, not meeting in front of the breast nor covering the shoulders. The tail should be furnished with fine long narrow sickle-feathers. The following though highly objectionable, are very common faults, and should be carefully guarded against: Short thick heads and necks, large crooked combs, white ear-lobes, short thick legs, long bodies, narrow chests, broad rumps, fanned tails, long drooping wings, long broad feathers, duck feet.

"The colour of the leading varieties is as follows:—The Black-breasted Red cock's face and head should be bright red; eyes vermilion red; beak dark greenish horn-colour; head and neck-hackle clear orange-red; back and wing-bow rich clear crimson, shading off to orange on the rump-hackles; wing-butts black; wing-bar steel-blue; flight-covert clear deep bay; breast, belly, thighs, and tail bluish black; legs and feet willow or olive-green.

"The hen's face, comb, ear-lobes, and wattles bright red; eye vermilion, to match the cock's; beak, legs, and feet to match the cock's; head and neck gold and black, the gold predominating, each feather having a golden shaft and broad margin, with narrow black stripes between; breast a rich salmon-red, the shaft of each feather one shade lighter; belly and thighs ashy grey, with a tinge of salmon-red; back and wings uniform light brown, or brownish drab, every feather being very finely pencilled with black, so evenly as at a little distance to appear only one shade deeper brown; tail black, the outer top-feathers finely pencilled with brown, to match the shade of the body.

"Faults to be avoided in the Black-breasted Reds are: In the cock, black stripes in the neck; black markings in the wing-bow; coloured feathers in the breast, belly, or thighs; red shafts in the tail-feathers; brownish or rusty bars. In the hen, large, uneven, or blotchy markings on the wings; red or yellow shading on the wings; too pale or too dark breasts. Yellow or daw eyes, and blue, white, or yellow legs are considered bad for exhibition birds of either sex.

"The Brown-breasted Red cock's face and head are a dark purplish red; eyes the darkest shade of brown; beak black; the head and neck-hackle are light orange, or brassy, striped with black towards the bottom; back and wing-bow rich orange, shading lighter towards the rump-hackles, which should match the neck-hackle; shoulder-butts greenish-black; wing-bars rich dark green; flight-coverts greenish black; breast dark brown, almost black, but each feather having a rich brown shaft and margin all round; belly and thighs dark brown, with a lighter brown streak down the shaft of the feathers; tail greenish black; legs and feet dark bronze, black, or olive-green.

"The hen's face, comb, wattles, and ear-lobes are dark purple, nearly black; eyes the darkest brown; beak black; head and neck black and gold, principally black, each feather being black, with a narrow gold edge; the breast black, every feather slightly edged with gold, and having a narrow gold shaft; back, wings, and tail greenish black; legs and feet to match the cock's—the darkest bronze is best.

"The Duckwing cock's face and head are bright red; eyes vermilion; beak greenish horn-colour; head and neck-feathers clear creamy white, or very pale straw-colour, free from black; back and wing-bow clear bright orange, shading into straw-colour on the rump-hackles; shoulder-

butts bluish-black ; wing-bars steel-blue ; secondaries clear white on lower web, with a small black spot on the end of each, forming a bar of black down the wing just above the white ; breast, belly, thighs, and tail bluish-black ; legs and feet willow-green. The Silver Duckwing cock is similar to the above, except in the following particulars : Hackle-feathers pure white, with slight stripes of black ; back and wing-bow pure white.

“The Duckwing hen’s face, comb, wattles, and ear-lobes are bright red ; eyes vermilion, beak greenish horn ; head and neck white and black (the centre and margin of each hackle-feather being white and the remainder black, the white should predominate) ; breast light salmon or fawn, each feather having a stripe one shade lighter down the shaft ; thighs and belly ashy-grey ; back and wings uniform light French grey, very evenly and finely pencilled with black, giving the whole a bluish-grey appearance ; the shaft of each feather white ; tail black, except the top outer-feathers, which should be finely pencilled with silvery grey ; legs and feet willow-green. The Silver Duckwing hen differs from the above in being whiter in the neck, much paler in the breast, and lighter on the wings and back ; altogether a lighter bird, and having a frosted appearance on the wings and back.

“The Red Pile cock’s face and head are bright red ; eyes vermilion ; beak greenish-yellow if the legs are willow, clear yellow if the legs are yellow, fleshy white if the legs are white ; head and neck-hackle deep orange-red, slightly striped with white towards the shoulders ; back and wing-bow deep crimson, shading into orange-red on the rump-hackles, which should match the neck ; shoulder-butts, breast, belly, and thighs creamy white ; wing-bars and tail white ; secondaries clear deep bay on lower webs ; legs and feet willow, yellow, or white, but the yellow is to be preferred.

“The hen’s face, comb, wattles, and ear-lobes are red ; eyes vermilion ; beak, legs, and feet to match the cock’s ; head and neck gold and white, the more golden the better, each feather having a white centre ; breast deep salmon, with the shaft one shade lighter in each feather ; belly and thighs shading off to creamy white, slightly marked with salmon ; back and tail creamy white ; wings creamy-white, with salmon-red markings on the wing-bow (this is called the ‘rose,’ and is greatly admired by many, though the clear white wing is preferred by others).

“Black Game Bantams are simply what their name implies, and need no further description. They are very rare, and are not encouraged at exhibitions, nor are the White, because neither of them are so striking or attractive as the Black or White Rose-combed Bantams.

“The term Wheaten applies properly to the hens, as the cocks to match them are the Black-breasted Reds and Duckwings. There are Red Wheatens and Grey Wheatens. The Red Wheaten hen’s face, comb, wattles, and ear-lobes are red ; eye vermilion ; beak greenish-horn ; head and neck-feathers clear golden yellow ; breast a pale fawn or creamy-white ; belly and thighs creamy-white ; back and wings pale fawn or light-buff ; tail black, the top outer-feathers may be edged with light buff or fawn ; legs and feet light willow. The Grey Wheaten hen corresponds with the above except in the head and neck, which are white, or white slightly striped with black towards the shoulders, but the freer from stripes the better.

“To breed good Game Bantams, select a cock and three or four hens from eighteen months to two years old, and put them together early in January. Use the first eggs laid, and commence setting your hens at the latter part of February, and they may be set with advantage until the beginning of June. Generally Game Bantam eggs will hatch on the nineteenth or twentieth day, if the hen is a good sitter. Her nest should be made of earth, and on the ground, and have a little hay or soft straw for a lining. In very hot and dry weather, a slight sprinkling of warm water two or three days before the eggs should hatch will do them good ; but I do not favour the plan so

often recommended of sprinkling them daily under all circumstances. I hatch a great number every year, and only sprinkle the eggs in very dry hot weather; yet my average hatching is very good indeed.

"The chickens will not require food for the first twenty-four hours after hatching, but then should have custard made of eggs and milk, with a few bread-crumbs added. After three days give also a little canary-seed. After the fourteenth day give also the ordinary meal-dough made of equal parts of oatmeal and barley-meal, or 'fine sharps,' sometimes known as 'thirds.' The meal should be mixed into a crumbling consistency with good milk, and only sufficient made at once for half a day's feeding. A little at a time, frequently given, is the best rule for feeding chickens. The custard and canary-seed should be continued daily until the chicks are five weeks old; afterwards wheat may be substituted for canary-seed, and the meal-dough should be continued as usual. The hen may, with advantage in most cases, be confined under a coop until the chicks are six weeks old, to prevent her rambling too far, and so losing her brood. The chickens should be able easily to pass in and out of the croop between the front bars, and should have constant access to grass, fresh earth, and fresh water.

"When the chickens are three months old, it is a good plan to remove the cockerels from the pullets, keeping each sex separately. This prevents a good deal of fighting, and preserves the pullets' feathers from being spoiled by breaking, &c. Cockerels should not be dubbed until they have acquired full feather, which is usually at six or seven months old. To perform this operation properly, a steady hand and sharp, short-bladed scissors are necessary. An assistant should hold the bird firmly with its legs tied. The operator, having at hand a sponge and cold water, should commence by cutting off each ear-lobe, leaving no loose skin; then cut off the wattles, each one separately, and being careful not to remove the skin of the face between the ear-lobes and the wattles, nor to cut away the skin from the throat between the wattles. This is often done, but is quite unnecessary, and indeed a decided disadvantage, as it often spoils the bird's hackle by bringing it too forward, and the bird takes double the time to get ready for showing. Next and last, cut off the comb close to the head from back to front. By now sponging the bird's head any little bits left on may be seen and removed, and nothing more is required than to touch the scars with fresh lard the day following the cutting.

"When the hens' ear-lobes are white, it is usual to cut them off if the birds are intended for exhibition; but it is far better to *breed* them with small, perfectly red ear-lobes, and this may be done by care in selecting the brood stock, and for pullet-breeding using only birds with small, fine, straight combs, and smooth, red ear-lobes. These remarks apply equally to the brood cock and the hens.

"I will now describe the proper selection of brood stock very carefully in detail, for the production of exhibition birds.

"To breed Black-breasted Red cocks, choose a Black-breasted Red cock about two years old, having all the points you require in the cockerels, particularly long head, neck, and legs, short body and wings, broad chest, fine tail, perfect colour, hard feather. Also two hens of the same age, of the Red Wheaten colour. In shape and hardness of feather these are generally superior to the Partridge-feathered hens. Look especially for fine long heads and necks, clear full eyes, sound feet, good feather, broad shoulders and chests, fine sterns, hard wiry tails, well carried back.

"For Black-breasted Red pullets, select a cock about two years old, one shade darker in colour than the bird used for cock breeding, and slightly striped with black in the hackles; perfect in shape and style. If possible, choose one that has *not* been dubbed, and see that you have in him a very small, straight, erect comb, finely serrated, also very small and *perfectly red* ear-lobes. If

there is any white in the cock's ear-lobes, you may expect to see it reproduced at least fourfold worse in the pullets from him ; and a faulty comb in the cock should at once decide against him as a stock bird for pullets. I would particularly insist on the necessity of having a fine head and smooth face, with small comb and ear-lobes, in both the cock and hen from which to breed pullets, of whatever colour. Choose, then, two or three hens, each possessing the points you want in the pullets, and all being as much alike as possible in colour and markings, and commence setting their eggs a month later than those from which you desire cockerels, because it is always better *to show pullets at least a month younger than cockerels.*

"To breed the best Brown-breasted Red cockerels, secure a cock not over two years old, good in all the standard properties, and especially in the dark face, dark eye, and clearly-marked breast and general colour throughout. The *colour* of the cock is a very important point in the bird from which you wish to breed cockerels, as is also the shape of the hen. Put two hens with him of the standard colour, specially selecting them for shape, fine heads, and good brassy hackles, with clearly-marked breasts, but *as black in breast as you can get them*, so long as they have well-defined lacing on the edges of the feathers.

"For breeding Brown-breasted Red pullets, use a cock rather darker in colour than the exhibition standard ; indeed, if his breast is nearly black so much the better. The most important points are shape and fine head properties, and as green-black wings as possible. Put two or three hens with him, and let them be perfect in everything, as dark in hackle as possible so as to have the gold edges at all.

"We breed our Duckwing cockerels in two ways. First, by a very bright rich-coloured Black-breasted Red cock, perfectly clear in hackle, and white-necked Wheaten hens. Secondly, by a perfectly-coloured Duckwing cock, and the Grey Wheaten hens, or very light-coloured Partridge-feathered Red hens. I find the above ways best, as a rule ; but Duckwings may also be bred from a Red cock and a prize Duckwing hen, by pure Duckwing parents on both sides, or by a Duckwing cock out of a Ginger-red hen.

"For breeding Duckwing pullets, use the Silver Duckwing cock and prize Duckwing hens, or exhibition standard Red hens. If the Red hens are used, select those which are the clearest golden colour on the head, and perfectly free from red or rusty marks on the wing.

"To breed the Red Pile cocks, take a rich-coloured White-breasted Red Pile cock, and put him to a couple of Pile hens rich gold in the neck, well rosed on the wing, and showing a little colour on the flight-coverts, but rather pale in the breast. To breed the pullets use the same cock and standard-coloured hens, not more than two or three hens at a time. When we use a cross of any other colour with the Piles, it is the Black-breasted Red, and we choose the darkest Red cock we can find in our stock, and put him to the darkest-coloured Pile hens, being particular that the Red cock's wings have a very deep rich bay on them.

"The Wheaten hens are bred from the cock-breeding strains of Black-breasted Reds and Duckwings, and need no further description.

"Exhibiting successfully requires knowledge and tact. There are many good Game Bantam cocks that when alone show admirably in a pen, but if a hen is placed with them, droop their wings and spread their tails so as to make them look worthless. It is well to know the natural disposition and all the peculiarities of your birds, and to guard against such cases as these. There are other cocks that always look sulky alone, and will not show at all unless they have a hen with them. Many a good bird loses his chance for want of ascertaining whether he shows best alone or in company.

"It is desirable to accustom a cock to being in a pen, so that he may feel at home in it.

Many good birds will not show to advantage through being wild and frightened. I therefore usually put up the cockerels I intend for exhibition about a week before the show, keeping them in a wire pen or cage, four feet long, two and a half wide, and two high. Feed them as usual, and now and then add a few hemp-seeds and a few white peas, which will brighten the feathers. The hens, on the contrary, should not be caged up, but have their usual grass-run up to the time of exhibiting them; for, as a rule, hens lose condition rapidly when penned up.

"The 'trimming' required before sending the birds to show is simply to wash their heads, legs, and feet clean, and to cut off close to the skin the stiff bristly feathers that stand up over the eye of the cock, not touching the feathers that lie flat and in proper order. It is absolutely necessary that all birds shown in one pen should match exactly in colour of eyes and legs; and when a pair of hens or pullets are shown, they should match in every point—head, eye, comb, colour and marking, style, size, &c.

"The best time to show pullets is as soon as they have acquired full feather, and before they commence laying, say from four to seven months old. Cocks show best between six and fourteen months of age, and are generally better the first year than ever afterwards. The exceptions to this rule are very rare, but I have had a few Black-red cocks that have won cups after their second year, and in very strong competition. There are comparatively very few Game Bantam cocks that grow fine long sickle-feathers after the first moult, and they usually get too thick and clumsy-looking at the same time, especially about the head and neck."

Mr. Entwistle has so fully treated of every necessary point, that we have nothing to add beyond one or two general remarks. We may observe that even at present there is a perceptible improvement going on in the style and "gamey" make of these beautiful birds, so that every year a greater number of specimens are shown which retain their beauty even during that second season which has been quite correctly stated to be so fatal in general to these points. Much in regard to this depends on good hard feeding and plenty of exercise, the best cock being in danger of growing clumsy and stocky if confined and overfed.

Game Bantams are hardy birds, and need little care, while on the table they make no bad substitute for partridges. The hens are generally pretty good layers, and always make capital sitters and mothers. The question of crosses we need not enter into, since to cross them is to lose every point which makes them desirable.

**JUDGING GAME BANTAMS.**—These Game fowls in miniature are to be judged very much as their larger brethren, only allowing due weight to size, or rather to want of it. It will have been observed that the maximum weight for the cock is given by Mr. Entwistle as twenty-six ounces, whereas the so-called "Standard of Excellence" gives the maximum weight as twenty-four ounces, and states that all above that weight are "disqualified." On this subject we need only repeat our remarks in the last chapter, only adding that in the case of Game Bantams they have, if possible, so much greater force, that the alleged "disqualification" is perfectly absurd. We have seen many a small symmetrical bird, of splendid shape and carriage, and "hard as a nail" in flesh and feather, which for that very reason would weigh more than the twenty-four ounce limit, and more also than a much larger-looking, loose-bodied, and loose-feathered bird, in bad condition, which yet would come within the "Standard." Even the twenty-six ounce limit, though pretty safe, should not be pushed too far in case of a bird otherwise good in true Game Bantam points; and never to such a degree as to disqualify a good bird in favour of a lighter, but in every other respect bad one.

Game Bantam cocks not unfrequently have false sickles fastened in, and are also frequently

shown much plucked about the hackle and saddle-feathers. A case of the former kind known to us was almost the *only* case of trimming we ever met with in which, while condemning an indubitable breach of morality, we could not help feeling some sympathy for the perpetrator. He had shown his bird in faultless condition, and won the cup, when some dirty scamp plucked the sickles out of jealousy. How the job was managed we do not know, since the natural stumps to which false feathers are generally attached were in this case wanting, but *somehow*—perhaps in the stumps of the top pair of tail-feathers—the bird's own sickles *were* re-affixed, and he again won, to be afterwards denounced by, and disqualified on the complaint of, the very man who, we have not the slightest moral doubt, did the injury, and therefore knew, as no one else could, of the operation that must have been performed for the bird to be shown again. Some rather strong language was used on that occasion, but we could not resist the conclusion, knowing what we did know, that in this case "there was something to be said on both sides."

Mr. Entwistle has kindly sent us the following Scale of Points, as used by him in judging for several years. We ought to add that it was sent to us *after* our own had been sent to him in type; and if this be remembered, the agreement in all essential points will be found remarkable, and such as bears a further strong testimony to the accuracy of our own methods of analysis.

MR. ENTWISTLE'S SCALE OF POINTS FOR GAME BANTAMS.

Good colour . . . . .	20
Good symmetry . . . . .	12
Correct size and weight . . . . .	10
Good condition—appearance, 10, and handling, 8 . . . . .	18
Good fine head . . . . .	10
Good-coloured eyes . . . . .	4
Good hard feather, divided as follows :—Hackle, short and close, 4 ; tail, narrow and well-carried, 8 ; wings, short and well up, 8 . . . . .	20
Long and slender legs and feet or toes . . . . .	6
	100

Mr. Entwistle, it will be seen, prefers the even scale of 100 points; and we may, perhaps, here reply to several of our readers who have seemed at a loss to understand why in our scales the defects, if all added up, do not even *profess* to balance the value of a perfect bird. We can only refer to our arguments on this head at page 235, with the added remark that even the list of "disqualifications" in any scale is a list of faults *extra* to the 100 points; and that if it be necessary, the added points should sum up exactly 100, and—as often happens—what has hitherto been only considered a *fault* is advanced to the rank of *disqualification* (as, for instance, crest in La Flèche); the scale must in that case be *altered*, in order that the remaining points may still add up 100. This, if accuracy be the end of a scale, is absurd. Again, in the case of some breeds which have fewer characteristics, greater values must in the case of 100 points be given to those few characteristics in proportion to other breeds, in order that the total may "fill" the scale; for instance, any black variety, having less points for plumage than a coloured or marked one, the comb or similar points must have *more* value given them in order to balance. This too is absurd, and contrary to fact. To facts, indeed, we appeal. We began with attempts to keep to 100 points, but *all* our analyses pointed to the conclusion that the principle was wrong; and though we could with no difficulty reduce all our scales to exactly 100, it would be to ensure an altogether artificial "symmetry," at the expense of accuracy.



## SCHEDULE FOR JUDGING GAME BANTAMS.

GENERAL CHARACTERISTICS AND COLOUR OF GAME BANTAMS.—The same in all respects as for Game, excepting size. Except however in Piles, which are best yellow, the legs are almost always willow or olive, Brown-reds being a very dark shade, or bronze. Weight should not exceed twenty-six ounces in cocks, and twenty ounces in hens. Carriage and general shape also resembling Game, but from the small size appearing more pert and saucy.

## VALUE OF DEFECTS IN JUDGING.

<i>Points of Merit.</i>	<i>Defects to be Deducted.</i>
A bird perfect in shape, style, colour, condition, and hardness of body and feather, and not too large, to count in points . . . . . 100	Bad head . . . . . 10
For an extra small bird otherwise perfect. See Note.*	Too much hackle-feathering . . . . . 5
	Tail too ample, or spread . . . . . 8
	Wings carried too low . . . . . 2
	Thick or clumsy body . . . . . 12
	Legs or feet awkward, or imperfect, or out of proportion . . . . . 14
	Faulty colour . . . . . 21
	Too great size . . . . . See Note *
	Want of general symmetry . . . . . 15
	„ „ condition (as to appearance) . . . . . 15
	„ „ hardness (on handling) . . . . . 12

DISQUALIFICATIONS.—Same as in Game fowls.

\* We have found, with birds in average condition, that twenty-two ounces in cockerels and eighteen ounces in hens are what will fairly entitle birds to be called "perfect;" and about one point should be deducted for the first ounce over this, two points the second ounce, three points the third ounce, and so on, while two points per ounce may be credited for less weights. But as already observed, individual birds differ much, and it is the *apparent size usually denoted* by these weights, and not the weights themselves, that are to be considered by the judge.



## CHAPTER XXXI.

## WILD BREEDS OF POULTRY—ORIGIN OF THE DOMESTIC FOWL.

WE have already on several occasions incidentally stated our opinion that more facts need to be ascertained before the question as to the origin of the Domestic Fowl can be satisfactorily settled. It is well-known, however, that most modern naturalists, among whom Mr. Darwin deserves special mention, believe that one existing wild variety, known as the *Gallus Bankiva*, or *Gallus ferrugineus*, is the sole progenitor; and as we formerly accepted this view ourselves on what we supposed to be the sufficient authority of such names, but have been gradually led to look upon it with the greatest distrust by facts which have since fallen under our own observation, or been communicated to us by others in the course of an extensive correspondence upon poultry matters, it may be expected that we should not altogether pass by the subject. We shall, therefore, after describing the four wild varieties at present known, state briefly the chief reasons why we feel unable to adopt the ordinary view, and how we are at least inclined to regard the matter from all the facts as yet known. To do more than this in the present state of knowledge would be to repeat the very fault which we think has been committed by others—of dogmatizing upon insufficient information: it will, therefore, be understood that we only profess to treat the question as it shapes itself for the present in our own mind.

The varieties of wild Jungle Fowl now known to naturalists we have already stated to be four in number; and these we will first describe, adding such information concerning them as we have been able to obtain.

**GALLUS BANKIVA**, or *Gallus ferrugineus*.—This is the most widely-distributed of all the wild breeds of India, ranging all over Continental India, till in the eastward it meets with Sonnerat's Fowl, and southward through the principal islands. In Malay it is called *Ayam utan*, the word "ayam," as we have already seen, signifying fowl. It is generally described as resembling the Black-breasted Red Game, but smaller, and with a more drooping tail; in fact, as being midway between Game and Game Bantams in size, but resembling the variety named in colour, with dark legs having a slight green tinge; but later and more accurate observers have detected very evident differences in colour, and even size, between the birds found in various parts. Mr. Trevor Dickens, who spent many years in India as an officer in the army, and during that time paid special attention to both the wild and game native breeds, states that besides the small variety with horn-coloured or greenish legs, "there is another and rather larger sort of the *Gallus ferrugineus*, which has often been mistaken for the *Gallus Sonneratii*; this species has yellow legs, and may be styled the *Gallus ferrugineus major*; while the less and commoner breed may be styled *Gallus ferrugineus minor*." He also states that in different parts they vary much in colour, some resembling Black-reds, some Brown-reds or Ginger-reds, and others more of a yellowish brown. Sir William Jardine corroborates this statement; and so does Mr. Blyth, who, as Curator of the Asiatic Society's Museum at Calcutta, had unusual facilities for observation. He states that

the birds brought from the Himalayas are paler in tint than those from other parts of India; that those from the Malayan peninsula are brighter-coloured than the Indian birds; and even that the Malay birds had red deaf-ears, whilst nearly all the Indian specimens had white ears, though he had seen one Indian specimen without this very distinct characteristic. Mr. Blyth also noted that the legs of most Indian birds were leaden blue, while the Malayan and Javan had a distinct yellowish tinge; and Mr. Darwin remarks that Malay hens seen by him were redder on the breast and neck than Indian hens. On the whole, however, the bird everywhere very closely resembles the Black-red Game type, and has a good, ordinary, erect, serrated single comb and wattles, resembling those of the domestic variety. The cock is generally a really black-breasted bird when adult, though the chickens mostly have the black mixed with rusty feathers, which is not uncommon in Partridge Cochins and other black-breasted red breeds. The hen also possesses comb and wattles, in which this variety differs from some of the others to be described. On the whole, and allowing for a considerable variety in tint (we have seen that even the Black-breasted Game breed varies very considerably in colour), we may say briefly, that a bird midway between the Game and Game Bantam in size, with rather lower carriage, and with the tail borne almost horizontally, gives a sufficiently accurate idea of the *Gallus Bankiva*.

This fowl is found to breed very freely with the Domestic Fowl of India, and the progeny is fertile with either parent race. It is also a fact of great weight that the voice of each sex—that of the hen especially—closely resembles that of the domestic bird, though the last note of the crow in the cock is less prolonged. It also appears fairly capable of domestication.

This Jungle Fowl is very often shot for sport, and is said to afford very pretty shooting. If killed young and hung for a few days, they have a most delicious gamey flavour. "In travelling through a forest country," says Jerdon, "many are always found near the roads, to which they resort to pick up the grain from the droppings of cattle, &c. Dogs often put them up, when they at once fly on to the nearest trees. When cultivated land is near their haunts, they may be seen morning and evening in the fields, often in straggling parties of from ten to twenty."

GALLUS STANLEYII.—This wild breed is generally stated to be peculiar to the island of Ceylon, but Mr. Trevor Dickens states that it is also met with on the southern slopes of the Ghauts, and in Java. It is very much like the preceding, except that the cock has a red or brown breast, and the comb is almost yellow, but with a red edge. We should be disposed to consider it as practically identical with the *Gallus Bankiva*, but for the very peculiar crow, which both Tennant and Layard describe as closely resembling the words "George Joyce" sharply repeated. The cock often crosses with the domestic breeds; but Mr. Mitford states that both of two hybrids he possessed which were thus produced were perfectly sterile. Both inherited the voice of the wild parent. This variety has never yet been known to breed in confinement, and, till very lately, no living specimens had ever reached Europe. Early in September, 1873, however, a pair were delivered at the Zoological Society's Gardens in Regent's Park, London; and, although on arrival there appeared very little chance of their surviving, the skill and care devoted to them had such success, that at the time of a visit we paid, some three weeks later, they were considerably recovered, the cock being half-way through his moult, and improving daily. The male bird of this pair had orange-yellow hackles, a yellowish-red breast, pink legs, and a beautiful bluish-purple saddle. The hackles are true hackle-feathers, but the blue saddle-feathers are broad and rounded at the points, though exceedingly glossy. The comb is short or narrow at the base, expanding at the summit, and both it and the wattles are of the ordinary colour, except that the comb is yellow in the centre. The comb of the hen is very small, though still perceptible; and her plumage is a plain unobtrusive

partridge colour. The eyes of both birds are pearl or greenish-white; and it is somewhat remarkable that cock-fighters in India always place most reliance on birds with eyes of this colour; the more so as Layard says the cock of *Gallus Stanleyii* has tremendously sharp spurs, and in the frequent fights which occur seldom fails to thrash the domestic bird. He also states that the hen lays from six to twelve eggs, which are of a cream colour, mottled with reddish-brown specks; and that the young when hatched resemble young chickens of the Domestic Fowl.

SONNERAT'S JUNGLE FOWL, *Gallus Sonneratii* of naturalists, is a very peculiar and

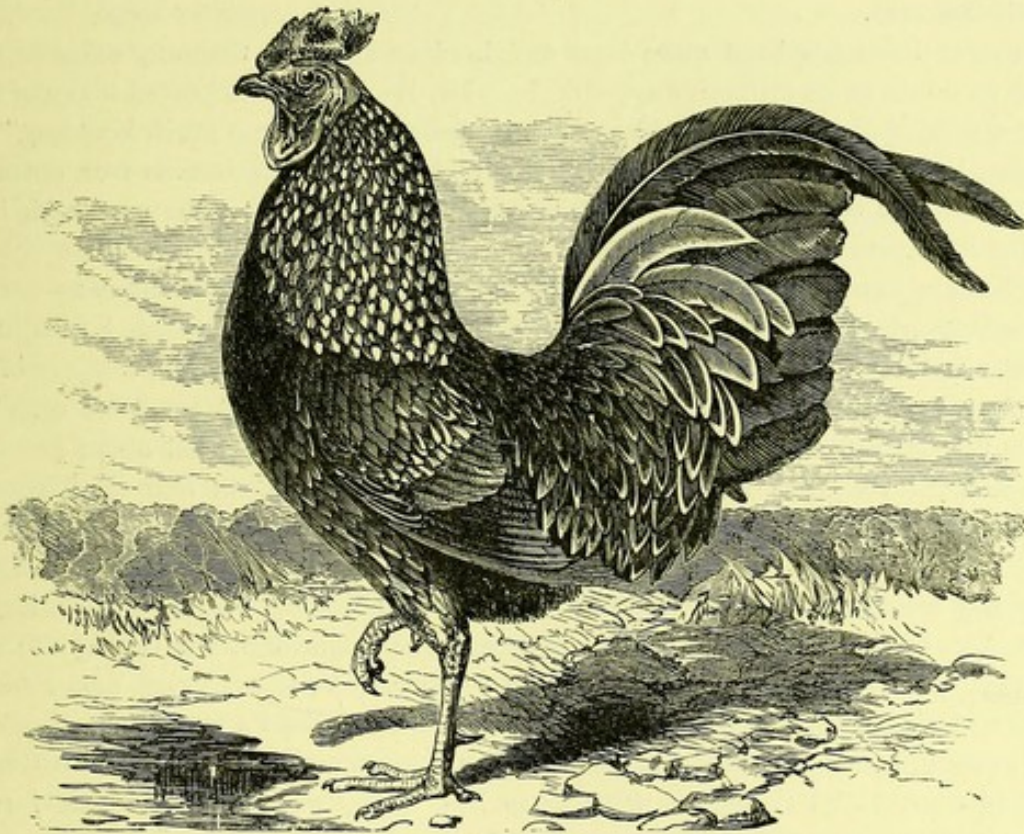


Fig. 99.—GALLUS SONNERATII.

apparently distinct variety. It is confined to the more southerly parts of India, among which, however, it is very common, and is that known as the "Jungle Cock" by Indian sportsmen. Colonel Sykes says that it is very abundant in the woods of the western Ghauts, and that it should be subdivided into two strongly-marked varieties; one of which, however, appears to be the *Gallus Stanleyii*, the cock having a great deal of red in the plumage, which the true Sonnerat has not.

This breed in general contour much more resembles the Domestic Fowl than either of the preceding, as will be seen from the illustration; it is also larger, stronger, and more powerful. It, however, differs in the hen being destitute of either comb or wattles, while the comb of the cock has only very fine serrations on the edge; and still more in the peculiar character of the cock's hackles, the shafts of which expand at the tips into a flat and horny plate, which gleams in the sun. These plates are generally of a golden orange-colour, but occasionally appear banded with various colours. The plumed portion of the hackle is dark greyish, the shafts being deep gold, which expand at the tips into the plates just described; and not unfrequently the hackles will show *two*

such plates, the shaft of the feather contracting after the first and then again expanding. The breast and back are generally a rich grey, verging into black or blue dun; the tail black, brilliantly glossed with green; and the bill, legs, and feet yellow. Occasionally yellow is found in the hackles and other plumage. The hen is generally of a brown or partridge-colour on the upper parts, and greyish white on the breast, passing into almost pure white under the throat. Traces of the peculiar horny plates have been found in the hen, but are not common.

The crow of the cock is agreed by all to differ somewhat from that of the ordinary fowl. Colonel Sykes says it resembles the crow of the Bantam; Jerdon says it "is very peculiar, being a broken and imperfect kind of crow, impossible to describe;" and Mr. Darwin affirms that "its voice is utterly different.

The Sonnerat Fowl has been more kept and bred in England than any other of the Jungle Fowls, owing no doubt to its attractive appearance. Mr. Jamrach has imported many of them; but in many cases, from ignorance of its habits, or, as we believe, from "too much kindness," they have not done well. We have, however, been kindly furnished in several instances with notes upon this beautiful bird, and the results of breeding it in confinement, which will be read with interest on account of the little practically known hitherto upon the subject.

Mr. J. Charlton Parr, of Grappenhall Heyes, Warrington, writes us as follows:—

"The only breed of Jungle Fowls I have kept is the Sonnerat, of which I bought a pair of imported birds from Mr. Jamrach. The hen laid twice—I mean two separate litters of four eggs each time—the first year, and showed a strong disposition to sit; but I took the eggs each time and put them under Bantams: three or four were hatched, and one lived till about half-grown, but then sickened and died. The next year the hen laid three litters of four eggs (seemingly the invariable number, being never more and never less at a time), and I succeeded in rearing five birds, a cock and four hens. These were as tame as ordinary fowls, and came to the whistle. I gave two of the hens away (one of them to the Zoological Society, Regent's Park, London), and one I think died by some accident. The cock was a very fine bird, but during the winter, just as he had attained his handsome plumage, a weasel killed him; the old cock died soon after, and so my chances of further increase were at an end. The old hen lived a long time, seemed perfectly strong and healthy, and not to suffer at all from the severest weather. The old cock was looking 'seedy' at one time, and I thought not likely to live, so by way of experiment I turned him loose in the depth of winter, with even snow on the ground; he soon began to improve, and in a month's time was quite recovered.

"The crow of the cock bird was very extraordinary, not like the crow of a cock, but more like the scream of a peacock; and the hen's voice, too, was unlike that of the domestic hen. I feel confident myself that the Sonnerat Fowl is not at all events the parent of any of our breeds of Game Fowl. I did not succeed in crossing with common fowl; though I put a hen Game Bantam with the Sonnerat cock, he never seemed to take the least notice of her, except to drive her away. I was surprised to notice that the eggs always hatched in seventeen or eighteen days, instead of the time needed for the incubation of the Domestic Fowl."

Mr. G. Nevile, of Stubton, Newark, again, writes us as follows:—

"In answer to your questions, I bought a pair of Jungle Fowl [Sonnerat] in 1863, and for seven years continued to breed from them and one pair of their progeny, with more or less success; rearing sometimes one pair, once two pair, but frequently none, as I found that unless they were very forward and healthy birds they could not stand the approach of winter, even though placed in warmed houses with yards for exercise. I never could rear enough to allow them to run wild. They had generally two months or so of run in an enclosed small paddock in the late summer, but

at other times were penned up. I think no modification of the wild disposition could be observed, further than their coming to be fed with any favourite food.

"I know of no particular habit wherein they differ from the Domestic Fowl, unless that of laying only four eggs at one laying and then wishing to sit, though they soon began to lay again if not permitted to. I never remember to have heard the voice of the hen at all; the cock's peculiar crow is of course well known. I came to the conclusion that Jungle Fowl were too delicate for this country. We fed them like young pheasants, on ants' eggs; and it was difficult to get the young ones to take any other food."

Mr. John Douglas, of Clumber, Worksop, Notts, has bred the Sonnerat Fowl rather extensively, and also many hybrids, which makes his experience especially valuable. He writes of them in the following terms:—

"I got my stock from a pure cock and hen some years back; and after breeding from them, I put the cock to some Game Bantam hens, and some of the pullets to a Game Bantam cock. From each cross I had several broods, which were much wilder in disposition than the pure Game, and in general kept to the woods, always laying at a distance off among the trees. Besides the cross-breeds, I have bred I should think at least twenty pure Sonnerats from the original stock.

"The pure Sonnerats always came true to colour, and did not seem to deteriorate at all in the neck-hackles. They always seemed wild, and when started got up even wilder than the pheasants; and I believe would make even better sport than pheasants in cover, being quicker and more difficult to hit. I may say, indeed, that one object I had was to make them an addition to our shooting, or add them to our game birds as an extra variety; and I cannot see that there would have been any difficulty, but that we were so infested with foxes they got destroyed almost as fast as I could breed them, which was very discouraging.

"I found one thing which interested me about the pure Sonnerat hens or pullets, and that was, that if their eggs were taken away after sitting a week, they would in eight or nine days lay again. I have had them lay from nine to fifteen eggs at a time, never I think less than nine. In one case I took away the eggs when the hen had sat a fortnight, and she laid again in seven days—a pure wild hen. The crow of the cock is certainly different to the Game, but *not so very different to some Bantams*. The young are very hardy and quite easily reared. If I lived in a county where foxes were not preserved, I would undertake to 'swarm' a cover in three years from one pair of healthy Sonnerats, I am so confident of the hardiness of the young with proper care.

"Among the cross-bred birds I found the Sonnerat blood showed much more in the pullets than the cockerels; after eight years I can detect it in the pullets, the light-coloured quills showing in the feathers of the back and breast. The cockerels from the very first cross of the Sonnerat cock and Game Bantam hens (which were black-reds) had most of them lost all the waxy appearance in their hackles; and the second cross from these half-bred cockerels with the black-red hens had lost nearly all signs of the cross with regard to the colour; but you could trace the blood in the shape and symmetry—perhaps more in the head than any other point. And I never noticed any of the cross-bred cockerels 'throw back' to the Sonnerat colour at all, though, as I have said, we can see the blood in the head now and then. But in the pullets bred the same way, only *vice versa*, the colour seemed to remain; and even now, after eight years, I can still see the colour of the pure Sonnerat hen in some of the pullets to a great extent, though the blood is pretty much lost."

Finding Mr. Douglas had kept his original stock for some time in confinement, before turning the birds out, we asked him for his mode of treatment under those circumstances, as more likely to be of use to those who might in future desire to keep this beautiful bird. He has accordingly

described his management for us; the great point, as will be seen, being to ensure an *appearance* of nature as far as possible.

"Where I kept my first pair to breed from," he says, "was in a new pen, twelve feet wide and thirty-six feet long, fenced in eighteen feet high. It had a roosting-house twelve feet square open to the front, and two dwarfed oak trees about fifteen feet high, so placed that they could fly from one to the other, and close to the woods. Here (in the two trees) they roosted, summer and winter; never in any sort of weather would they roost inside of the house made for them. Every week they had a fresh piece a yard square of heath and turf let into the ground, with plenty of lettuces and any *fruit* that was in season, such as a few strawberries, currants, bramble or blackberries, or in fact any soft fruit I could get, taking care not to overdo the thing. They were fed on good soft food, with a little wheat and sometimes rice boiled; and had a heap of cinder-ashes and old lime rubbish in a dry corner, with a nice supply of road washings, which are the fine, small, bright stones you will find at the bottom of the hills on turnpike roads after heavy rains. Of course they must be kept from much intrusion to do well. The young only require to be attended to as carefully as any other fancy poultry; keeping the hen cooped the same as for pheasants. They grow up as tame as reared pheasants, but as age increases will ramble off into the cover, always however coming back to feed at call. The half-breeds take more after Game Bantams in disposition, but still show more shyness. I forgot to say I found the pure breeds, while in confinement, were very fond of small *live mice*, of which I always took care to supply them with a few weekly."

THE JAVANESE JUNGLE FOWL, known to naturalists as *Gallus varius*, or *Gallus furcatus*, or as the "Forked-tailed Cock," which is simply the last name translated, is in some respects a most peculiar and strongly-marked bird. Very few have reached Europe, but there are, or at least were very recently, fine specimens in the Zoological Gardens at Antwerp. There used to be some also in the gardens at Regent's Park, London, from the male of which some hybrids were raised. Such hybrids are suspected to have received the names of *Gallus Æneus* and *Gallus Temminckii*, which are either cross-bred from the Javan Fowl, or evidently only sub-varieties of it; though some naturalists have supposed the *Gallus Æneus* to be the original type, and *Gallus varius* the derived.

The comb of the cock, which is small and unserrated, is bluish at the base, changing to violet or purple at the edge. The head is rather long and narrow, the face being red, and the eye very prominent. Under the throat, in place of the usual double wattles, is a single wattle hanging from the median line of the lower mandible. This wattle is yellow at the back of the throat, changing into a rich dark crimson at the anterior edge. The feathers of the neck are scarcely like hackles, but are blunt and rounded on the lower edge, and being of a deep metallic green bordered with black, give much the effect of scales. These "scaly" feathers reach, as in the ordinary hackles of the common cock, to the middle of the back. The saddle-feathers are the same metallic green in the centre, but are bordered with yellow; and the wing-bow feathers, or shoulder-coverts, are the same green with golden-green edges. The secondaries are a deep orange-red on the lower edges, which is all that appears when the wing is closed, while the primaries are nearly black; the under parts also being black or very dark grey, with a bluish shade, or what Game-breeders call a blue-dun colour. The tail is glossy green-black, the two centre feathers branching open, from which one of the names is derived. The hen is smaller, has no comb or wattles, and is of a generally greyish colour underneath, with greenish hackles, and grey with a more brownish tinge over the upper parts of the body and tail. The colour of the legs seems to vary, the Antwerp specimens being of a flesh-colour, while most Eastern sportsmen describe the colour as blue or bluish grey.

The above are all the wild breeds of poultry now known to naturalists. Temminck described a fifth, under the name of *Gallus giganteus*, which is generally supposed to have been the Malay, though there is some difficulty in reconciling the whole of his description with that breed. The Malay at all events is now extinct as a wild race, so far as is at present known. Reviewing these four varieties, then, most naturalists consider the *Gallus Bankiva* to be the sole progenitor of the domestic breeds; and Mr. Darwin sums up the arguments in favour of this view so forcibly, that we may for convenience condense them from his work alone.\*

Of the Sonnerat Fowl Mr. Darwin notices the peculiar horny plates, which he has not been able to find traces of in any domestic breed, and which he found in some hybrids raised in the Zoological Gardens from a Red Game hen; also the absence of distinct serrations in the cock's comb, the want of true hackles on the saddle, the "utterly different" voice, and the nearly sterile character of the hybrids. Of the last point especially he collects examples; quoting Mr. Blyth, who raised nearly 100 hybrid chickens, which were tender, and mostly died young, those which survived being absolutely sterile when crossed either *inter se* or with either parent. Mr. Dixon, he says, inquired into some hybrids raised at the Regent's Park Gardens, and found them not quite so sterile, five or six chickens being reared out of about fifty eggs, but still very unfertile. In other and more extensive experiments at the Gardens, out of some 500 eggs from various hybrids and first crosses, only twelve chickens were reared, of which only three were the product of hybrids *inter se*. "From these facts, and from the above strongly-marked differences in structure between the Domestic Fowl and *Gallus Sonneratii*," Mr. Darwin concludes, "we may reject this latter species as the parent of any domestic breed."

Of the *Gallus Stanleyii* he says that, like the last, it crosses readily with the tame hens, and even visits farms for that purpose. But the two hybrids being found by Mr. Mitford to be quite sterile, this too "may in all probability be rejected as one of the primitive stocks."

The *Gallus furcatus* is said to "differ in so many characters—green plumage, unserrated comb, and single median wattle—that no one supposes it to have been the parent of any one of our breeds," though many hybrids have been raised from it. These hybrids are said by Mr. Crawford to be invariably sterile; but Mr. Darwin himself states that this was not the case with some bred at the Gardens. He also adds the curious fact that across the tail of one of several fowls sent him by Sir James Brooke from Borneo were *transverse blue bands*, like those which are very often seen on the tails of the hybrids from *Gallus furcatus*; this he thinks may denote that some of the fowls of Borneo have been affected by a cross of *Gallus furcatus*, though the case may also possibly be merely one of "analogous variation."

Coming, then, to *Gallus Bankiva*, he finds that this variety has a much wider range than the other; that it varies in its *habitat*; that it varies considerably even in the wild state; that it almost precisely resembles the Game—the most typical of all our present breeds; that the voice resembles that of the Game cock; and that it breeds freely with Bantams, and the progeny also breed freely with Bantams, though very unfortunately Captain Hutton, who establishes this fact, did not attempt breeding the hybrids *inter se*. This is certainly to be regretted, as the breeding of hybrids amongst themselves is known universally to be the severest proof of unity of species; we think, however, it is very possible the experiment would have succeeded. Hence Mr. Darwin concludes that "from the extremely close resemblance in colour, general structure, and especially in voice, between *Gallus Bankiva* and the Game fowl; from their fertility, as far as this has been ascertained, when crossed; from the possibility of the wild species being tamed; and from its varying in the

\* "Variation of Animals and Plants under Domestication," Vol. I., pp. 233—237.



wild state, we may confidently look at it as the parent of at least the Game breeds." Then replying to the hypothesis that some other wild species may have been the parent of other breeds, and still exist undiscovered or have become extinct, he considers extinction at least "an improbable hypothesis, seeing that the four known species have not become extinct in the most ancient and thickly-peopled regions of the East." He ends with the general argument that "the four known species of *Gallus*, when crossed with each other, or when crossed (with the exception of *Gallus Bankiva*) with the Domestic Fowl, produce infertile hybrids;" but finally admits that "we have not such good evidence with fowls as with pigeons of all the breeds having descended from a single primitive stock." This last sentence speaks the truly scientific man, and stands in amusing contrast with the ignorant dogmatism of some who, without a tithe of Mr. Darwin's knowledge, have written as if the whole matter could be settled by their bare affirmation, and even gone out of their way to speak in terms of deliberate insult of such as had the misfortune to be unable to agree with them. With such we have nothing to do—they are beyond conviction; but for those who honestly seek further facts upon which to reason, we will proceed to state such as have come under our own notice, and seem to us to furnish strong reasons against some of Mr. Darwin's conclusions. We say some of them, because they by no means tend to prove that there was not one primitive stock; though they do, in our opinion, make it exceedingly doubtful whether that stock was the *Gallus Bankiva*.

In the first place, then, the supposed sterility of Sonnerat hybrids seems to us to rest on very insufficient data, and is indeed altogether disproved by the experience of Mr. Douglas above quoted. Mr. Blyth himself is stated to have raised nearly 100 hybrids at Calcutta—a most amazing number if the races are alien, as all who have tried to produce pheasant hybrids are well aware. Those which were reared, it is true, are stated to have been "absolutely sterile," whether bred *inter se* or with either parent, and to have been very tender, mostly dying young. But this weakness of constitution we have seen to be shared by the *pure* Sonnerat in the experience of both Mr. Parr and Mr. Nevile; while, on the other hand, Mr. Douglas found them both hardy, and the hybrids prolific. These contradictions appear at first sight inexplicable, but vanish on consideration. Mr. Parr and Mr. Nevile kept them in confinement, one gentleman even giving them warmed houses; while the other was a *skilled poultry-fancier and breeder*, thoroughly acquainted with the rearing both of game and poultry, and who kept and reared his as nearly as possible in their free, wild condition. We have already seen the effect of such treatment in the case of delicate domestic breeds (see Mr. Teebay's notes on Spanish), and we get a most significant confirmation of our supposition as to the cause of such surprising differences of experience, in Mr. Parr's own old cock, which, ailing as he was, *revived directly he was turned out in the woods*, although the snow was on the ground. Stronger corroboration there could in fact hardly be; but since his notes above were written, we have asked Mr. Douglas specially as to the prolificacy of the hybrids, and he replies as follows:—"The hybrids, or cross-breeds, with me were very prolific—hardly ever a bad egg. They crossed all ways, as I had them for years and crossed them anyhow—or rather they crossed themselves—and how they bred I scarcely know; but I do know there were but few eggs failed to have chicks in them." Again, it is admitted that three chickens were actually reared at the Gardens from hybrids crossed *inter se*; and small as this number is, breeding *inter se* at all is a fact so strong, as is in nearly all other cases held sufficient to constitute unity of species; while we have shown the strongest reasons for believing that the want of greater fertility, and the barrenness in other cases, may have been owing to too artificial treatment. The men to make such experiments are men like Mr. Douglas, who have made the ways and habits of fowls the *special* study of their lives, and who think nothing of disappointments which would throw others possessing only

a general knowledge of the subject off the track at once. Hence they succeed where others fail; and if, in the case of curassows or other birds it is desired to acclimatise, stock were judiciously distributed amongst such skilled breeders rather than to provincial "societies," we are convinced that the results would be far greater than they now frequently are.\*

The very fact that both Mr. Parr and Mr. Nevile found the Sonnerat hens to lay only four eggs at a litter, may be taken to confirm the same view, of the unnatural confinement diminishing the fertility of even the pure breed. It is true, as Mr. Douglas has pointed out to us, that it may also have arisen from the hens being aged, since old Game hens will often only lay four eggs at a litter, or even three; but the probability is, we think, rather as we have stated. Could it be shown that the number four was the invariable litter of the Sonnerat Fowl, the fact would be stronger than any Mr. Darwin has mentioned in favour of distinctness of species, marking, in fact, even more distinctness than is the case with pheasants or turkeys; but that this is not the case is certain. Not only is Mr. Douglas's experience quite different, but Dr. Jerdon—a most excellent authority—writes that "the hen (wild) lays from February to May, generally producing from seven to ten eggs, of a pinky cream-colour." Hence we may conclude that, be the cause what it may, the number of four eggs was exceptional. The short period of incubation need scarcely be mentioned, being common to many breeds of Bantams, and in less degree to the Hamburgs also.

With regard to the horny plates in the cock's plumage, we have seen that in most of the cases, at least in Mr. Douglas's experience, this feature readily disappeared or was absorbed, though in some specimens of hybrids Mr. Darwin found them present, but "much smaller." And Dr. Horner† gives an account of some hybrids he had obtained from the Zoological Gardens, of which the cock was bred from a true Sonnerat with a Game hen, and the hen was his own grand-daughter through a Game hen. Dr. Horner, it is worthy of remark, states nothing about the birds being unprolific, though he says their chickens were delicate and reared with difficulty; but we refer to his account chiefly for a remark he makes, as follows:—"Mr. Hunt [then chief superintendent of the aviaries at the Zoological Gardens, Regent's Park] informs me that he believes there are but two cock birds in England really bred direct from the Sonnerat Jungle Fowl, and which *exhibit the peculiar golden plate on the feathers*—the one at present in the Regent's Park Gardens and my own. He also warns me of the difficulty of rearing chickens bred in-and-in." The italics are Dr. Horner's, and rather significant; proving that hybrids of the Sonnerat did *not* always present the peculiar golden plate; and the remark at the end inferentially renders it probable that many of the hybrids bred at the Gardens were produced from in-bred, and therefore partially unprolific stock. It seems, therefore, plain to us that the peculiar horny plate, supposed to be so strong a proof of distinctness of species, cannot be laid much stress upon, being readily absorbed and quickly disappearing. It certainly is not more distinct in its character than the crest of a Polish fowl; yet this we have before seen is readily absorbed in a cross, and disappears in the same way, while in other cases it maintains its ground, and marks a variety breeding as true as any, though—and the coincidence is singular—often decidedly unfertile in comparison with some other breeds. The true character of this feature must also be considered, since its importance may otherwise be much exaggerated.

\* In an article by Mr. Tegetmeier on the Amherst Pheasant, in *The Field* for August 30th, 1873, is a remark which singularly illustrates this question of fertility. "It is found, says the writer, "that the breeding of the Amherst pheasant offers no difficulty, provided it be attempted *under natural conditions*, and not in the close pens and stifling vermin-haunted houses that are characteristic of some of our zoological collections." We hardly need remark that no reference is here intended to the Regent's Park Gardens; Mr. Bartlett's efforts to secure "natural conditions," and consequent comparative success, being well known: but even there the space at command is not sufficient to test the fertility of naturally wild fowls.

† Wingfield and Johnson's "Poultry Book," 1855, pp. 148, 237.

Its real nature appears by comparison with the feathers of the Sebastopol goose, an analogy which is pointed out by Mr. Darwin himself when describing that bird. "These feathers," he says, "are remarkable from the central shaft, which is excessively thin and transparent, being split into fine filaments, which after running for a space free, sometimes coalesce again. It is a curious fact that these filaments are regularly clothed on each side with fine down or barbules, *precisely like those on the proper barbs of the feather*: this structure of the feathers is transmitted to half-bred birds. In *Gallus Sonneratii* the barbs and barbules blend together, and form thin horny plates of the same nature with the shaft. In this variety of the goose, the shaft *divides* into filaments which acquire barbules, and thus resemble true barbs." Hence we see that this goose presents a variation from the normal type of a precisely analogous character (though in contrariety) to that of the Sonnerat; yet no one supposes it to be a distinct species.

Regarding the Ceylon Jungle Fowl, or *Gallus Stanleyii*, there is less evidence available on either side. The fact that hybrids between it and the common fowl are so common in Ceylon as scarcely to excite remark, should make us cautious in concluding, on the sole evidence of the two individuals mentioned by Mr. Mitford, that such hybrids are sterile; and on this point many of our observations on the *Gallus Sonneratii*, as to the difficulty of breeding from wild birds or their descendants *in captivity*, will peculiarly apply, for it will be noted that the wild breed itself is stated never to have bred in such circumstances, or even to have long survived. Hence we might expect great difficulty in breeding from its hybrids, quite apart from any actual sterility. The great difference in voice is of more weight, but will be thought much less of by a poultry-fancier, who is accustomed to the most extraordinary differences between the voices of various domestic races, than by a naturalist. On the whole, it must be admitted that there is very little evidence to show either that the *Gallus Stanleyii* had or had not any share in the origin of the domestic fowl, though it is worthy of remark that the resemblance of the bird itself is perhaps the most startling of all the wild breeds; so that Messrs. Layard and Kellaert mention the "George Joyce" crow as the sole reason for discarding it as one of the parent stocks. This reason, however, as we have remarked, a fancier would consider very insufficient if unsupported by others. In relation to this breed, it is also decidedly worthy of remark that in most cases of reversion in colour amongst various breeds of poultry, the evident tendency is towards a *red or brown breast* in the cock rather than to a black. This fact we have already pointed out; and, so far as it goes, it is more in favour of the present variety than of the *Gallus Bankiva* as a possible parent of our domestic breeds.

Of the Fork-tailed Java Cock, or *Gallus furcatus*, Mr. Darwin has remarked that it differs so very much from the Domestic Fowl, that "no one supposes" it to have been the parent of any of our breeds. The points of difference named are the green plumage, the unserrated comb, and the single median wattle; the last being, perhaps, the most marked of them all. We were, therefore, much surprised and interested to see only the other day a Light Brahma hen in which this identical feature was conspicuously developed. She was one of a trio of American Light Brahmas, sent by Mr. J. M. Wade, of Philadelphia, to Mr. G. Wm. Petter, of Streatham Grove, Surrey. One of the hens was the grand bird drawn for our plate, from a photograph, many months before reaching England, and which we found to weigh nearly fourteen pounds; the other was the hen in question. The extraordinary appearance of her head struck us at once, and is shown in Fig. 100, which is drawn from life. There is not a vestige of the ordinary wattles at the sides of the base of the lower mandible; but instead thereof an immense single wattle hanging in the true median line, giving the whole head a most peculiar expression, which is added to by the shapeless character of the comb. The feature would have struck any observer at once, as it struck ourselves; so strongly, in fact, that we at once sought and obtained a promise that the head of the bird should be pre-

served, which will be carried into effect. But this marked instance does not stand alone. In our own Brahma breeding, although we never had the wattles altogether absent, we have many times had the middle one excessively developed, while the true wattles were scarcely visible; and on writing to Mr. F. Wragg, who has probably bred more Brahmas than any one else living, he informs us that he has on several occasions bred birds in which the two wattles were joined together, though the division remained plainly perceptible. Hence it is plain that there is still a perceptible, though slight, tendency to revert to a single median wattle in the Brahma breed.

Even this is not all. We have already seen that this Brahma breed has the *forked tail* so characteristic of *Gallus furcatus*; which, considered together with the preceding facts, is a strange coincidence. The same forked tail we have occasionally seen in several other breeds; and once, in a report of a show, we remarked upon it in a prize Game Fowl. But further, and stranger still, Mr.

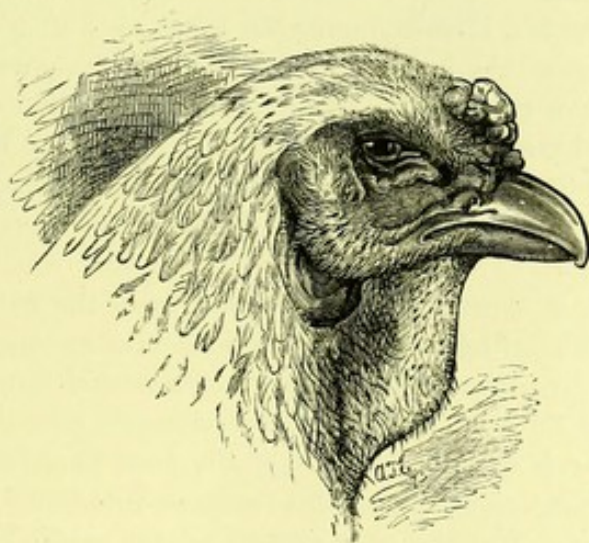


Fig. 100.—HEAD OF BRAHMA WITH SINGLE WATTLE.

Darwin has referred to the shaded bands across the tails of some Borneo fowls, which he thinks may hence have had a cross from the *Gallus furcatus*, since hybrids of that fowl often show the same feature. These shaded bands we have frequently observed across the green-black tail-feathers of our own Dark Brahmas, and still more often across the tails of birds bred by Mr. Teebay. Across the greenish-black will be rather broad bands of blue and purple, and we believe these are never seen in other fowls unless crossed with Brahmas; at all events, we have examined every pen containing a cock in several large shows, without finding an example in other than the Brahma classes. And, finally, as regards this part of the subject, in the best and purest-coloured Dark Brahma cocks, there is a *greenish* lustre to both black and white of the hackles and saddle-feathers, which is not to be seen in any other breed having black and white hackles, such as Silver Duckwing Game, or Silver-grey Dorkings. If it be considered that these several points of resemblance all occur in one breed, they certainly suggest some curious conclusions.

Still further, we find that the blue or purple comb, unserrated, of the *Gallus furcatus* is a conspicuous feature of an existing breed, the Silky Fowl. And it will not have been forgotten that the Brahma, which offers those curious points of resemblance referred to in the preceding paragraphs, is marked besides by a peculiar comb; which though not that of the *Gallus furcatus*, still in many cases approaches it; for we have seen many Brahma cocks with pea-combs in which,

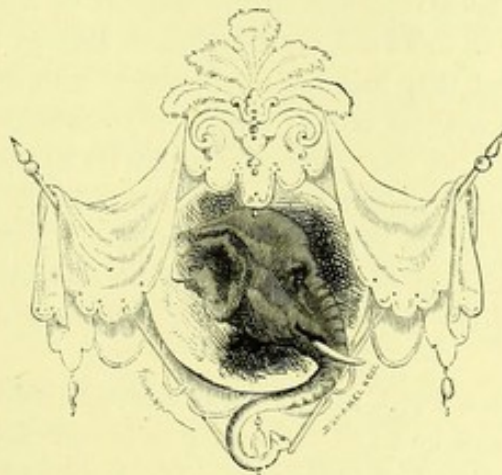
though the triple character was well marked, there was not a vestige of serration. The Rev. James Ellis, of Bracknell, Berks, once sent us a fine cock expressly to have our opinion upon a comb of this sort. And, lastly, we saw (see p. 247) that *all* the great Asiatic races, when crossed, have been known to produce the pea-comb by reversion; showing, on Mr. Darwin's own principles, that this feature almost certainly had a place somewhere in the ancestry of the Asiatic stocks.

Passing finally to *Gallus Bankiva*, we find this fowl more largely distributed than the others; that it almost precisely resembles an existing breed; that it varies in colour and somewhat in size (these two being perhaps the strongest points of all in favour of its claims); and that its hybrids appear to breed freely with either of the parent stocks. On the other hand, the crow of the cock, though very similar to that of the Game, is admitted to be shorter, as if the last note were broken off. It remains to be proved if the hybrids would breed among themselves; and—what deserves particular mention—the neck-hackles when first moulted are replaced, not by the true hackles, but by short dark grey or black feathers, which remain for two or three months before they are replaced by the new hackles. It is true Mr. Darwin quotes Mr. Brent as stating that these black feathers appear in the domestic cock also, but in his case contemporaneously with the hackles; remaining in both after the hackles have grown. We think, however, that Mr. Brent must have examined Game Fowls chiefly; for we have examined many other breeds at the moulting season, and been utterly unable to find these black feathers at any stage of the process, except in some (not all) Game Fowls; and it is worthy of note that this is the breed which most closely resembles the *Gallus Bankiva* in other respects.

Summing up the whole, it appears that the barrenness of the hybrids of *Gallus Sonneratii* is at best exceedingly doubtful, having more than probably resulted in great part from injudicious treatment, and disappearing in a great degree under more natural conditions; while the peculiar plates quickly disappear, and the wild blood is readily absorbed into the domestic; we find also that the crow, though peculiar, is described by one of the most experienced breeders as "not so very unlike a Bantam's;" while Colonel Sykes also compares it to that of a Bantam. We find the barrenness of hybrids of *Gallus Stanleyii* rests entirely on the evidence of two specimens; while we also find that this race is apparently the most of all impatient of confinement, and has "never yet bred in captivity," even *when pure*; and we further find that the symptoms of reversion in domestic breeds point to the colour of this variety rather than to the one usually regarded as the parent. We find a strong tendency to approach more or less to *every* peculiar point of the *Gallus furcatus* in a domestic Asiatic breed; while this latter breed also possesses a feature—the *triple* comb—to which *other* Asiatic races show a strange tendency still to revert. And of the *Gallus Bankiva*, it is found that the voice differs in some degree; that it has a peculiar feature—the temporary black hackle—which only appears to be found in the domestic breed most closely resembling it, and not always even in that; whilst the perfect fertility of its hybrids still remains to be ascertained, and for all that appears is in no respect greater than that of the Sonnerat.

What are we then to suppose? That the *Gallus furcatus*, for instance, was the progenitor of the Brahma, just as the *Gallus Bankiva* almost unquestionably was of the Game? By no means: no naturalist would come to any such conclusion. What we think *is* clear, is simply that there are tendencies in some of our domestic breeds which certainly are not due to the *Gallus Bankiva*, and which, as they *are* found in the *Gallus furcatus*, are probably the result of natural rather than artificial development; a conclusion which is strengthened by the fact that another feature of *Gallus furcatus*, not usually found in the domestic breed most resembling it, still appears occasionally by reversion in that same breed. Hence, we are disposed to think the original type can only be found still further back; that it diverged into various sub-types, including the four wild breeds

still known ; and developed through the *Gallus Bankiva* into the Games, while other breeds were reached through collateral branches, now either extinct, or possibly still further modified into the present other three known races. It is no objection whatever to such a theory that "the four *known* species have *not* become extinct," as Mr. Darwin says; the simple fact being that such four are "known" merely *because* they are "not extinct." That one of these collateral branches was of great size, and in most points resembled the Brahma more than either Cochin or Malay, we think probable. We shall see that the turkey rather degenerated than increased in size by domestication ; and we shall also see that clever naturalists in *that* case resorted to the theory of an extinct breed on very far slighter grounds than those we have briefly sketched out. We have no wish to drag the *odium theologicum* into such a work as this ; but we may at least legitimately remark that those who believe, on what they consider sufficient grounds, that various races of animals (how many distinct races we need not say ; we have not the slightest doubt that some have developed into many varieties, or that the horse and the ass, for instance, may have sprung from one progenitor) were created by a great Master Workman in great degree for the use of man, the highest of his creatures, may be pardoned if they also believe that such a Workman may possibly and probably have created them originally in a shape adapted for his use, and that, in becoming feral, many of them may have degenerated, and become less adapted for such purposes than the first type originally was. More positive conclusions than these, we do not feel at present that there are facts enough to enable us to frame.



## CHAPTER XXXII.

## THE GUINEA FOWL.

UNDER the general head of Guinea fowls, or the genus *Numida*, naturalists have grouped many so-called varieties; but it is very doubtful whether these are even so distinct as the various races of ordinary domestic poultry. The fact that all belong to some part of Africa alone makes a common origin almost certain; and although there is no doubt that the various kinds breed true, that is no more than can be said of the Spanish, Poland, or other common domestic fowls. Many of these sub-races have been crossed, and we believe in every case the progeny have proved fertile, which most naturalists consider evidence of at least close identity; though the whole question of species and what constitutes species needs much more in the way of investigation than it has ever yet received.

Of these various races of Guinea fowls, some have a peculiar bony helmet on the top of the head, while others have this replaced by a crest of feathers, the shape and size of which crest varies in different so-called varieties; and in a third variety which does appear to have some real distinctiveness, there is neither crest nor helmet, and such a resemblance to the vulture generally that the bird has been graphically termed the Vulturine Guinea Fowl. Of the first or helmeted group Mr. Elliot and other naturalists have described some half-dozen varieties, but in our opinion several of these are practically identical. The Common Guinea Fowl of West Africa, or *Numida meleagris*, has for a long time been regarded as the original of our domestic race, though some authorities lately have objected to this view, on the ground that as the bird is admitted to have been known to the Romans, and they had more intercourse with the Egyptian side of the great African continent than with the western, one of the varieties common in Abyssinia is more likely to have been the original. We think the common view by far the more likely to be correct. Not only is the name entitled to some weight in a case of this kind, but when residing at Bristol, which is a considerable centre of the West African trade, we have on several occasions seen Guinea fowls perched on the rigging of African vessels, which had been brought from the coast by sailors; and in every case these birds were obviously identical with the domestic breed, both in head and plumage.

The Vulturine Royal Guinea Fowl, as it is called, certainly does present very peculiar and singular characteristics. The neck and tail are very long in comparison with the common variety, and the other points have been described as follows:—The head and upper part of the throat are destitute of feathers, but sprinkled with hairs of a black colour, which are longest on the neck; the nape is thickly clothed with short, velvet-like, brown down; and the lower part of the neck ornamented with long, lanceolate, and flowing feathers, having a broad stripe of white down the centre, to which on each side succeeds a line of dull black, finely dotted with white, and margined with fine blue. The feathers of the inferior part of the back are of similar form, but broader, with a narrower line of white down the centre, and with the minute white dots disposed in irregular and obliquely transverse lines. The wing-coverts, back, rump, tail, under tail-coverts, and thighs, are

blackish brown, ornamented with numerous round and irregular spots of white surrounded by circles of black, the intermediate spaces being filled by very minute spots of dull white; the primaries are brown, with light shafts and spots of brownish white on the outer web; the secondaries brownish black on the tips, with three imperfect lines of white disposed lengthwise on the outer web, and three rows of irregular spots of white on the inner web; the breast and sides of the abdomen are of a beautiful metallic blue, the centre of the abdomen black, the flanks dull pink, with numerous spots of white surrounded by circles of black; the bill is brownish, and the feet brown.\*

Mr. Gould writes of this magnificent variety of Guinea fowl:—"Independently of the chaste and delicate markings which adorn the whole of this tribe, the neck of the present species of Guinea fowl is ornamented by a ruff of lanceolate flowing plumes; which new feature, as well as the head being entirely devoid of fleshy appendages, render it conspicuously different from all its congeners. It is certainly one of the most noble birds that has been discovered for some years; and we indulge in the hope that the period may not be far distant when we shall become better acquainted with the species, and that living individuals may even become denizens of our menageries and farm-yards, where they would doubtless thrive equally well as their congener so familiar to us all."

It is the long neck adorned with lanceolate feathers, the absence of casque or crest, and the long tail and legs, which give this bird so strange a resemblance to the vulture. It has been introduced into one or two menageries; but there is little probability as yet of its being introduced as farm stock. We may here repeat our remark in the last chapter, that even the most intelligent keeper of a zoological institution is not the most likely person to multiply and naturalise a new race of poultry; his knowledge is not special enough, and in this particular walk is far surpassed by that of any intelligent and enthusiastic poultry amateur. Instead of merely giving prizes for rearing, as was once done in relation to curassows, a zoological society would act in a manner far more likely to attain its object, were eggs or stock of the desired new variety to be given to such amateurs of skill and standing as were willing to accept them, and had at command the ample space they so imperatively require; when the most special care would be given, and all that skill, intelligence, and enthusiasm could suggest would be cheerfully lavished upon the new breed, in a way which no public institution can ever secure.

The domestic Guinea fowl in ordinary circumstances can hardly be considered profitable poultry, but its character has nevertheless been considerably belied. We have heard it said that it could not be kept on account of the screeching noise it makes; but we cannot understand how any one objecting on that ground can abide the noise of an ordinary cock, much less of an ordinary farm-yard; since, disagreeable as the cry is (resembling the noise of a creaking axle more than anything else we can think of), it is very seldom heard near the house. Sounder objections are found in the straying proclivities of the fowl; its disposition to lay away, by which many eggs are lost; and its pugnacious habit of beating other varieties of poultry. But for this latter trick it would long since have been naturalised as a game bird, having been turned into covert with perfect success; but it was soon found that the Guinea fowls drove away other descriptions of game to such an extent that the birds had to be destroyed on that account, the pheasants being most valued.

As a domestic bird, however, these bad qualities are susceptible of much amelioration, provided the treatment be kind and good. It is almost hopeless to commence a stock with adult birds; directly they are left at liberty they are "off," and probably never return. But by setting eggs under common hens, and rearing them at home, they grow up much tamer, and will flock

\* "Cassell's Book of Birds," Vol. III., p. 256.



round the person who feeds them, and even allow themselves to be taken up and petted, like other poultry. When reared thus kindly, and secluded nests are provided, they will generally lay in the house; and if perches are placed high for them, and they are regularly fed every night, will roost at home also. So far domesticated they will pay to rear, in places where they can have ample range, for their flesh alone, which is most delicious, resembling that of the pheasant. The hen lays from 60 to 100 eggs per annum, the eggs being rather small, very pointed at the end, and of a dark cream-colour. These eggs are of beautiful flavour, and there is considerable demand for them in London, where we have often seen them exposed for sale in little baskets lined with green moss.

Mr. Hewitt kindly adds a few remarks which places their utility in what we must confess is to us a novel light, and which it may be well to "make a note of." He writes: "As to Guinea fowls, if allowed to breed wild and become numerous, they will invariably displace *all* the pheasants in any covert they may take to, if not interfered with; and as when thus wild they will run before dogs with all the pertinacity of the corncrake, they afford but little sport for the gun. It may be added, the flavour of the birds thus allowed unrestrained liberty is certainly improved, and more game-like than ordinary, becoming more like that of the partridge than the pheasant. Although thus unsuitable for sport, it must be constantly borne in mind no birds are better house-guards, if allowed constantly to roost in high trees (which they will always do if they can) near the residence of their owners. It is with them, as with Spanish geese—'nothing can stir about in the night without their becoming aware of it; and they as invariably give notice of it by their restless cries, so that to be forewarned of danger is half the battle.' Such were the remarks written to me by a friend long since dead, and who added, 'I am sure, Mr. Hewitt, in all these years I have rested safely, without *any* robbery, though our place is desolate enough to invite pilfering, well knowing my Spanish geese and the Guinea fowls were the best watch-dogs in the neighbourhood; in fact, the dogs almost invariably give us only the *second* notice of coming danger—indeed, my impression certainly is the dogs themselves as confidently rely on the geese and Guinea fowls as we ourselves do.'"

The Guinea hen seldom sits herself until August, when chicks are always somewhat difficult to rear. Hence it is advisable to set the earlier eggs under hens, which not only avoids this difficulty, but brings them up tamer. The period of incubation is generally twenty-six days, not twenty-eight as often stated. If the eggs are removed daily, in the hen's absence, she will not forsake the nest, provided one be left in it as a nest-egg; but if several are allowed to accumulate and then removed, she will seek another, concealing the second nest most carefully. The chickens are said to be very delicate; but this arises from the small size of their crops, which will not contain enough food to last them nearly so long as those of other chickens do. Hence they need feeding *every half-hour*; and, if thus treated, may be reared at least as easily as turkeys. They grow fast, as already stated. Ordinary good chicken diet, such as ground oats, will suit them; but they require rather more animal food, such as chopped egg or cooked meat. We once, in our young days, reared a chick from an egg given us, in the small stone-paved yard we have on a previous occasion referred to; and this solitary chick always appeared to do well enough even there, till an accident, such as *will* happen in the best-regulated families, brought it to an untimely end.

The youngsters have amazingly thick and strong legs compared with other chickens, and become able to "paddle their own canoe"—and at a surprising rate too—at a very early age. The young chicks are very pretty, the body being brown, beautifully striped, and the legs and bill a deep orange red. The adult weight varies from three to four pounds, the latter being rarely exceeded, though odd birds have been known to reach more. The plumage being very plentiful, the bird when plucked is smaller than it would appear.



GUINEA FOWLS,  
THE PROPERTY OF MR J. W. LUDLOW

There is no doubt whatever that in a state of nature the Guinea fowl is monogamous, or pairs ; but two hens may safely be allowed to one cock in captivity. With more than this the result is doubtful ; we have known persons put as many as four hens without harm, but in other cases such an experiment has not succeeded. The cock calls his hens to a choice morsel of food much as the common chanticleer does ; apart from this and other obvious demonstrations, the gender is somewhat difficult to distinguish. One mark of the sexes is the cry, the hen alone uttering the peculiar note which almost every one has compared to the words "Come back!" uttered in a shrill tone, and which we may almost imagine to have been acquired from the cries of despairing hen-wives, in entreaties oft repeated to these errant ladies. Cock-birds may also be distinguished by their arching their backs, and running along on tip-toe with a mincing air ; they are also more spiteful than the hens to other poultry. Another mark of sex is that the wattles of the male are larger than those of the female, and rather differently placed.

An American writer states that he has kept nine hens to one cock, and that nearly all the eggs were good. He adds that the nine hens averaged 122 eggs each during the year. In neither point does this experience agree with what we have been able to collect from English breeders ; but the warm summer climate and plentiful grain-supply of the United States must be taken into consideration.

We have seen that even in the wild state the Guinea fowl varies in colour ; and still more variation might be expected to occur under domestication, which is accordingly the case. The ordinary fowl retains the original marking with great uniformity, being a number of small white spots over a purplish grey ground. This is sometimes called the *Pearl* Guinea Fowl, from the supposed resemblance of the spots to small pearls. Occasionally these colours are found reversed, the spots being dark and the ground light, which produces a most curious effect. White Guinea fowls are also well known, and by crossing these with the dark varieties, pied fowls have been produced. The White variety has been stated to be the result of domestication ; but Ellis, in his "Three Visits to Madagascar," writes : "Among the companions of my journey was an officer, attended by a slave carrying in a neatly-made wicker cage a pair of perfectly white Guinea fowls, as a great rarity, and a present from the chief of a distant province to the prince." Madagascar being a well-known *habitat* of the fowl in question, and having at least one sub-race or variety of its own, it is almost certain the birds here described were simply a rare sport, like the white elephants of India. Blue and dun birds, almost or even quite destitute of spots, are often met with ; but the ordinary or "pearl" plumage is far the most common. Mr. Hewitt remarks that "unless the birds are *wholly* white, white feathers in any part, even in the flight-feathers, are most unsightly and objectionable in a Guinea fowl."

The Guinea fowl is found wild in the Cape Verde Islands, and also in Jamaica, to both of which there is no doubt it has been carried from Africa. In spite, however, of its great elegance of form and feather, it is rarely seen at shows ; the reasons being, Mr. Hewitt states, that they are in the first place "so hard to catch," and when caught look so restless and unhappy in a pen. On one or two occasions we have found classes for them, and in such cases have always noticed that they were much admired, especially by ladies. In judging them when shown, no fixed standard can be laid down ; but size, general symmetry, good condition, and elegance of plumage and general appearance must be taken into consideration.

Hybrids are not very uncommon between the Guinea fowl and other poultry. The last case we knew of was between the Guinea fowl and Dark Brahma. In this, as in all other instances we have heard of, the progeny was very wild and perfectly sterile. The Guinea fowl has also been known to cross with the turkey-hen.