THE BOOK OF POULTRY

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THE
BOOK OF POULTRY

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THE BOOK OF POULTRY

BREEDS AND VARIETIES OF POULTRY

EARLY VARIETIES OF FOWLS

JUNGLE FOWLS

1. Jungle fowl is the name applied to the wild fowls from which it is claimed that the present varieties of fowls descended. At the present time four varieties of jungle fowls are recognized: the *red jungle fowl* of India (*Gallus bankivus*), the *gray jungle fowl* of India (*Gallus Sonneratii*), the *Ceylon jungle fowl* (*Gallus Lafayettii*), and the *green*, or *forked-tail*, *jungle fowl* (*Gallus furcatus*, or *varius*). Naturalists claim that another fowl, the gigantic cock (*Gallus giganteus*), existed at one

2. Red Jungle Fowl.—The wild **red jungle fowl** has been bred in its purity in captivity, and is well known in many sections of the world. Some of the most beautiful specimens of this fowl have been bred by Nelson R. Wood at the Smithsonian Institution. These birds were quite domestic, and a person who was not well informed on this subject would call them Black-Breasted Red Game Bantam fowls. In fact, the red jungle fowl very closely resembles in color and markings the black-breasted red game fowl of former days, and is much more like the latter than any of the domestic fowls. The

points of difference between these two varieties are that the plumage colors of the red jungle fowl are more brilliant, and the red is usually deeper than is favored for exhibition game bantams. The call of the red jungle fowl resembles the crowing of the domestic cock.

From different localities a number of minor variations of the red jungle fowl have been reported. From India it has been reported that red jungle fowls usually have horn-colored, or greenish, shanks, but that some have yellow shanks; and also that they vary much in color, some being black-red, some brown-red, some ginger-red, and others a yellowish brown. These four colors are common in game fowls that may have descended from the red jungle fowl. Lewis Wright, a prominent investigator, has made note of several other important variations. He gives the curator of the Asiatic Society's Museum at Calcutta as authority for the statement that the red jungle fowls from the Himalayan districts are paler in tint than those from other parts of India; that those from the Malayan peninsula are brighter colored than those from India; that the Malay fowls had red deaf-ears, and that nearly all of the Indian fowls had white deaf-ears, although he stated that he had seen one Indian variety without this very distinct character; that the Indian fowls had shanks of a leaden-blue color, and that the shanks of the Malayan and Javan fowls had a distinct yellowish tinge. Darwin states that the Malay hens that he saw had more red on the breast than the Indian hens. Notwithstanding these variations, the same authorities claim that all the red jungle fowls closely resemble the Black-Breasted Red Game fowls.

3. Gray Jungle Fowl.—The wild **gray jungle fowl** is found in the southern part of India. It was formerly abundant in the forests of that locality and was hunted by sportsmen, who called it the **jungle cock.** The true gray jungle fowl resembles the present-day domestic fowl as closely as do the other jungle fowls, but it is by nature very wild, and when kept in confinement will not permit of handling, like the red jungle fowl.

The general color of the male is gray; the feathers, which are pointed, are brown, laced with gray, and have gray shafts; the tail feathers are black, brilliantly glossed with green. The neck hackle feathers, the feathers on the wing bows, and some of the saddle feathers are tipped with a glossy waxlike, or enamellike, substance formed by the coalescence of the barbs at the end of the feather. These glossy tips are orange on the wing and saddle and pale yellow on the hackle, presenting a very beautiful appearance. The comb, wattles, and face are red; and the beak, shanks, and feet are yellow. The female is usually of a brown, or partridge, color on the upper portion of the body; on the breast it is grayish white and is laced by longitudinal bars of ruddy color, the grayish color gradually diminishing upwards until at the throat it becomes almost pure white. The female of this variety has a very small comb, bare face, and scarcely any wattles. The lacing on the plumage of this variety resembles to a considerable degree the similar markings on the Sebright Bantam, Laced Polish, and Wyandotte fowls.

The gray jungle fowl has been bred in several different localities, and hence its characters are well known. It will crossbreed with other varieties of jungle fowls and with tame bantam fowls, and the offspring of such crosses will maintain the color and markings of the wild fowl even when they have not more than one-third, or even less, of wild blood in their veins.

A marked difference between this variety and the red jungle fowl is in the tone of the voice. As previously mentioned, the call of the red jungle cock resembles that of the domestic cock. The call of the gray jungle cock is more like the scream of the peacock. The voice of the gray jungle hen also is different from that of the hen of other kinds of jungle fowl.

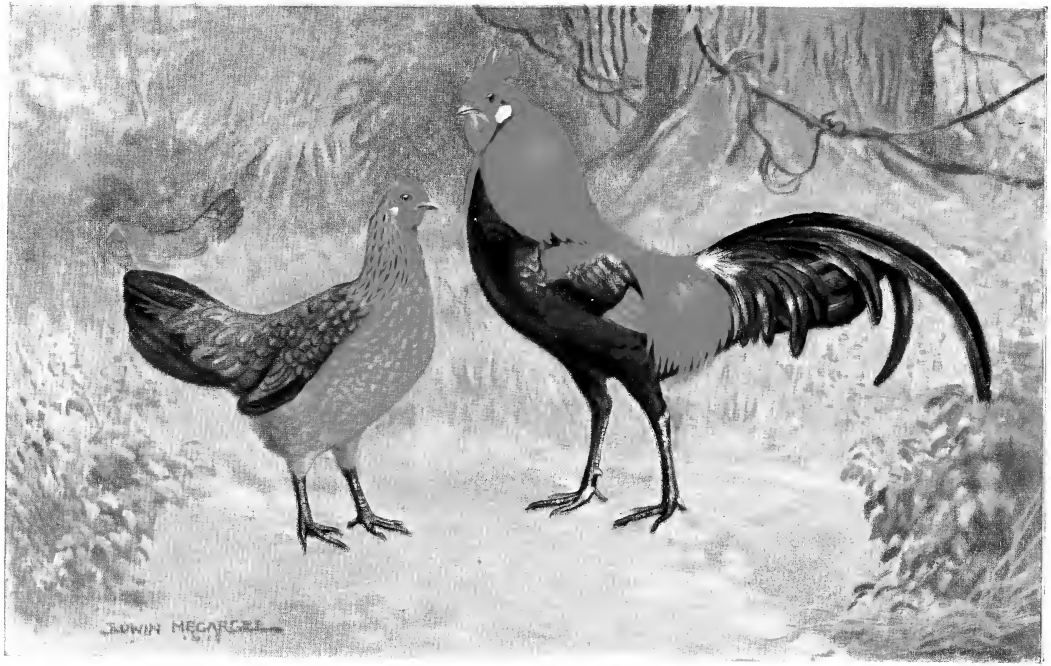
At one time it was claimed that jungle fowls would lay but four eggs before they would begin to incubate them, and that the eggs of these fowls would hatch in 17 or 18 days instead of in the 21 days required for the incubation of the eggs of domestic fowls. It is now known, however, that both the red and the gray jungle fowls will lay more than four eggs to a nest, and have been known to lay as many as eleven; it is also known that

their eggs will hatch in the same length of time as the eggs of bantam fowls, to which fowls they correspond in size. The eggs of red and of gray jungle fowls that are placed under hens immediately after they are laid will sometimes hatch in 18 days, but they usually hatch in 19 days. The greater part of all bantam eggs will hatch before the end of the twentieth day, thus indicating that this peculiarity belongs naturally to all bantams and not to the wild varieties only.

4. Ceylon Jungle Fowl.—The wild **Ceylon jungle fowl** is found in Ceylon and on the southern slopes of Java. It is like the red jungle fowl in many respects, the two most distinctive differences between them being that the Ceylon jungle fowl, in its wild state, has a red or brown breast and a yellow center in the comb. The Ceylon jungle fowl has orange-red color in its hackle, a yellowish-red breast, brownish-white shanks, and a bluish-purple saddle. The neck has true hackle feathers and the saddle feathers are broad and rounded at the point. The comb of the cock is short at the base, but is considerably elongated along the top or upper line; the comb of the hen is very small. The plumage of the hen is partridge colored. The eyes of both the male and the female are pearl colored, resembling, in this respect, the Aseel game fowls. The wild Ceylon jungle fowls have long, sharp spurs and are very pugnacious. The head of the female resembles that of a pheasant more than that of a fowl. Some females have a slight indication of wattles.

The color description of the Ceylon jungle fowl as published in the catalog of the British Museum is as follows:

"*Adult Male.*—Top of the head, rufous orange; hackles, upper part of the mantle, and lesser wing coverts, golden orange, with black band down middle; lower part of mantle, scapulars, and median wing coverts, orange red, with a dark maroon center stripe; lower back and rump, bright orange red, the terminal half of each feather with a bright, triangular spot of rich violet and narrowly margined with black; upper tail coverts glossed with purple and blue; primaries, brownish black, lightest on the outer web; secondaries, black, slightly glossed with purplish blue; greater coverts, black, more or less mixed or margined on the outer web with dark chestnut; feathers at the base of the naked throat, rich glossy violet; chest, breast, and sides, like the lower part of the mantle; feathers of the belly, chestnut



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RED JUNGLE FOWLS

mottled or tipped with purplish blue. Comb, wattles, and naked skin about the head, yellowish or purplish red, the former with a large oval yellow spot on the middle of the posterior half; bill, yellow; feet and legs, brown. Total length, 30 inches; wing, 9 inches; tail, 11 inches; tarsus, 3 inches.

"*Adult Female.*—The female differs from the female of the *Gallus gallus* (or *bankivus*) [red jungle fowl] as follows: Edges of feathers of neck and upper mantle, darker, more rufous, and narrower; secondaries, creamy, irregularly barred with dark brown; chest and sides, shading from gray to fawn, mottled with rufous buff, and with whitish shaft streaks; breasts and under parts, irregularly shafted with black; tail feathers, rufous, thickly mottled with brown; comb, very small; no wattles; facial skin, less naked. Length, 17 inches; wing, 7.5 inches; tail, 4.9 inches; tarsus, 2.4 inches."

5. Green, or Forked-Tail, Jungle Fowl.—The wild fowl known as the **green, or forked-tail, jungle fowl,** frequents the island of Java and is also found in the East Indies. But few specimens of this variety have been kept in captivity. The forked-tail jungle fowl has the most beautiful plumage of all the jungle fowls. A well-developed fowl of this variety rivals the Vulturine Guinea fowl in the beauty of its plumage. In both sexes the surface of the hackle is metallic purple, overlaid with a brilliant sheen of golden green. The rest of the body feathering is black, glossed with green, except on the under surface. The back, saddle, and tail coverts shade from orange to yellow and are regularly striped with black. The comb of the male is of a pale greenish blue at the base, shading into a purplish pink along the edges; in the dewlap these colors are reversed, and there is a patch of yellow at its juncture with the throat. This is scarcely visible when the dewlap is contracted, but is conspicuous when it is fully expanded. During such expansion the face, which is naturally flesh colored, changes to a bright red. The eyes of both sexes are gray and the shanks are flesh colored. The female has neither comb nor wattles; her plumage is barred with buff and black; the top of the head and the back of the neck is dark brown; the neck and the upper part of the mantle is sandy brown; the feathers of the female have submarginal blackish bands and dusky center stripes, broken by white shafting; the rest of the upper parts, the secondaries, and the secondary coverts are dark brown,

irregularly barred and margined at the extremity with buff; the primary quills and coverts are dark brown; the lobes, the superciliary stripes, and the sides of the face, are pale buff; the chin and throat are white; the under parts are buff, the chest feathers with brownish margins and the sides and flanks with blackish mottlings; the tail is black, irregularly edged with buff. Total length of fowl, 15.3 inches; wing, 7.7 inches; tail, 4.5 inches; tarsus, 2.3 inches.

Frank Finn, F. Z. S., in his book "Fancy Pheasants and Their Allies," states: "This jungle fowl is not only a very beautiful and unique bird in itself, but it produces very beautiful hybrids with domestic hens. Some of these appear to be red with a violet hackle. In the Paris Museum, however, they have a splendid bronze bird which is evidently a cross of the *Gallus varius* probably with a black hen. The hybrids seem to be partly or occasionally fertile. The green jungle fowl is called the forked-tail jungle fowl, but this arises from a mistake, as the tail is no more forked in life than the tail of an ordinary rooster. The beauty of the cock's delicately tinted comb is remarkable, reminding one of the petal of an orchid, and its size will doubtless soon be increased under domestication. The beautiful glossy ruff and the gold-laced saddle also are unique and require to be seen to be fully appreciated. All the specimens I have ever seen have been very tame and steady."

6. Gigantic Cock.—The **gigantic cock** is supposed to have been the Malay of early days or its ancestor. Whatever it may have been, it is extinct so far as is known at present. Temminck, the naturalist, in speaking of what he calls the "Coq Jago Mihi," in a book published in 1813, says: "I place at the head of this genus the largest species of which we shall speak. This bird, which lives in a wild state, dwells in the woods of the southern part of Sumatra. It can be found also in the western part of Java. Dampier and Marsden mention it. The latter, who has devoted a few words to it, claims to have seen a cockerel of this kind stand on the floor and reach with his beak to the dinner table. When the fowl was tired it rested on the first articulation of its legs and was still

taller than a common rooster. One can form an idea of the great height of this fowl by the illustration of the foot that I have represented with its natural dimensions."

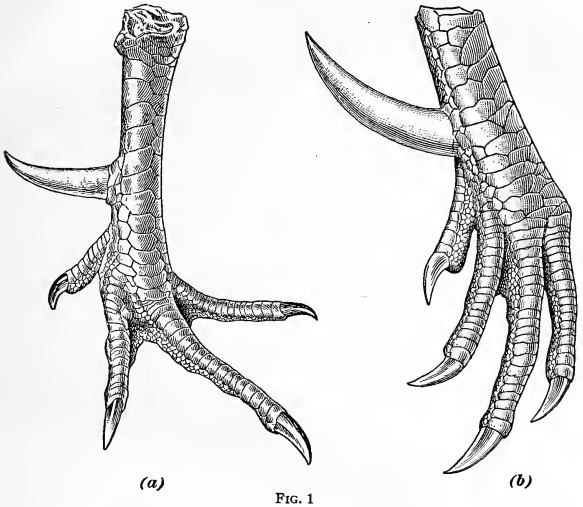


FIG. 1

The foot referred to is shown in Fig. 1 (*b*). Its relative size can be seen from the foot of an Earl of Derby Game fowl, shown in Fig. 1 (*a*). Both are shown in half their natural size.

ANCESTRY AND ORIGIN OF DOMESTIC FOWLS

7. Ancestry of Domestic Fowls.—The ancestry of the present-day domestic fowls is a matter that may possibly never be decided to the satisfaction of all investigators, but it has proved to be an absorbing subject to a large number of them. For a long time it has been generally believed that all domestic fowls have descended from some one or other of the jungle fowls that now exist in a wild state. The point on which investigators differ is whether the domestic fowls have descended

from only one variety of jungle fowl, or whether they have come from several or all of the jungle fowls. To determine whether or not any particular variety of jungle fowl could be considered as one of the ancestors of domestic fowls it has been customary to cross fowls of that variety with domestic fowls and then attempt to breed from the hybrids, or crosses, thus formed. If the hybrids proved fertile, the variety of jungle fowl used in making the cross was claimed to be one of the original ancestors of the domestic fowls. If the hybrid proved to be sterile, the jungle fowl was not considered as a possible original ancestor. The conflicting results that have been obtained in these tests have given rise to decided differences of opinion.

8. Darwin claimed that the red jungle fowl was the only original parent stock of all the then existing domestic fowls, and, because of the prominence of this scientist, his statement was readily accepted. Darwin based his claim on what he asserted to be a fact—that only the crosses produced by mating red jungle cocks with domestic hens were fertile. He did not consider the other jungle fowls as parent varieties of the domestic fowls, because he claimed that the hybrids resulting from crossing them with domestic fowls would not reproduce. This theory was accepted by nearly all naturalists, and until within the past few years was not seriously questioned.

Since the time that Darwin made his claim in favor of the red jungle fowl as the only original ancestor of the domestic fowls, fertile hybrids have been obtained by crossing each of the four recognized varieties of jungle fowls with various varieties of domestic fowls. Careful investigation has convinced those who have for years studied the subject of the origin of fowls that there is no adequate evidence that all fowls, both large and small, have a common origin. In fact, recent investigators are inclined to believe that more or less of the blood of the four wild varieties is in one or more varieties of the domestic fowls of the present time.

9. Some claim that the gigantic cock is the ancestor of certain varieties of domestic fowls, such as the Asiatics, Malay, and Aseel, and this belief is getting stronger the more the sub-

ject is investigated. This claim is based on the fact that these varieties of domestic fowls are much larger than any of the present-day jungle fowls, and that they must have inherited their size from some large ancestor. The question of the existence of this large variety is, however, still a debatable one, as no wild fowls of this description can be found.

There are a number of bits of evidence that tend to confirm the early existence of a very large fowl similar to the one mentioned. At the present time fowls of mammoth size exist in domestication in oriental countries. In China, the records of the mi-aus, which are institutions that correspond to monasteries in other countries, show that large yellow-colored fowls, *kinkee* (gold fowl), have been raised by the brotherhood of these organizations for more than 1,500 years. This, of course, would indicate the prior existence of a large fowl. In the Malay and Aseel breeds, the peculiar comb, and in the Asiatics the different color of the skin, shanks, and eggshell, as compared with the color of the corresponding parts in the European varieties, are taken as reasons for assuming that the large oriental breeds had an ancestor that was of larger size and of different character than any of the present-day jungle fowls. One author, in writing of the Malay of early days, states that there was little doubt but that the Malay was the kulm fowl of India with no other changes except such slight modifications as usually occur when wild fowls are domesticated.

10. Beginning of Recognition of Breed and Variety Characters.—No exact information as to the time when breed and variety characters were first recognized has been obtained, but it is probable that the first breed distinctions were of game fowls, which were kept for fighting purposes. The sport of cock fighting is a very ancient one and written records of such contests as old as 1000 B. C. have been found.

Columella, a Roman land owner, stock raiser, and writer, has been credited with writing, about 35 A. D., the first description of breeds of fowls, and mentioned a five-toed variety, presumably the ancestor of the Dorking. Bonington Moubray, of England, in 1814, wrote for publication what was probably

the first description of Game, Dorking, Polish, Malay, and Spanish fowls as distinct breeds. In 1784 he wrote that he had a Duke of Leeds breed.

The early Romans have left records of five-toed fowls of two varieties—the white and the red; and it is possible that the white and the red Dorking fowls of the present day have descended from the fowls of these varieties that the Romans introduced into Britain at the time of their occupation of that country.

In the early part of the 19th century some twelve kinds of domestic fowls, and several kinds of ducks, geese, and turkeys were recognized as distinct from one another. From then until the present time many changes have been made in fowls and many new varieties have been added, until there are now more that 200 varieties that are of distinct type and color.

Formerly, in many localities, most attention was given to the development of the egg-producing powers of the fowls, and in other localities the chief object was the development of their meat-producing qualities. At the present time marked attention is being given to the upbuilding of breeds and varieties for size, egg-producing powers, and table qualities.

STANDARDS OF POULTRY

11. Standard-bred poultry is poultry that has been bred to conform to a certain standard set for each breed. In America, standard-bred poultry is the poultry that is bred to conform to the standard given in the American Standard of Perfection, which is issued by the American Poultry Association. In other countries, standard-bred poultry is the poultry that is bred to conform to the standard created by the governing poultry association of the country. It has been the custom for many years to call well-bred fowls *thoroughbred*, but this has now been more or less discontinued, because the term thoroughbred is not sufficiently definite. For instance, fowls that have been bred in direct line from the original jungle fowls might properly be called thoroughbred fowls, but they are not standard-bred fowls; also, breeds of fowls, such as the

Aseel, may be thoroughbred, that is, they may be of pure blood, but they are not standard bred, because they do not conform to any of the accepted standards.

12. The standard defines the size, shape, and color of the fowls of each breed, as well as the form and color of each part. Although the present standards are of comparatively modern origin, rules of some kind for the separation of fowls into divisions have been in existence from the beginning of poultry culture. In fact, in respect to color and form, poultry has received more attention than livestock. The influence of a standard has become stronger and stronger until it is now so far reaching that it largely determines the future of every variety of poultry. This is due to the fact that a standard influences the popularity of a variety, because its popularity depends on the usefulness of the variety, on the ease with which it may be reproduced by a large number of persons, and on the attractiveness of its form and color. If a variety must depend entirely on its fitness for exhibition purposes, it cannot long continue to be popular. Even the inexperienced spectator at a poultry show will notice that certain kinds of fowls are much more popular than others, although he may not appreciate the reasons for this. White varieties have gained in popularity chiefly because they can be more easily reproduced of a good quality than colored varieties. Barred Plymouth Rock fowls have enjoyed the greatest popularity for a longer time than any other variety, because they have qualities that make them very desirable for both utility and exhibition purposes. Their closest rival for popularity is the White Plymouth Rock, which has more recently been developed of an attractive shape and color. However, although it is true that some varieties have attained popularity in spite of the fact that they are most difficult to reproduce of good quality, and that extraordinary demands for shape and color prompt the true fancier to greater efforts, such demands discourage amateurs and the less experienced breeders and thus generally lessen the popularity of such a variety.

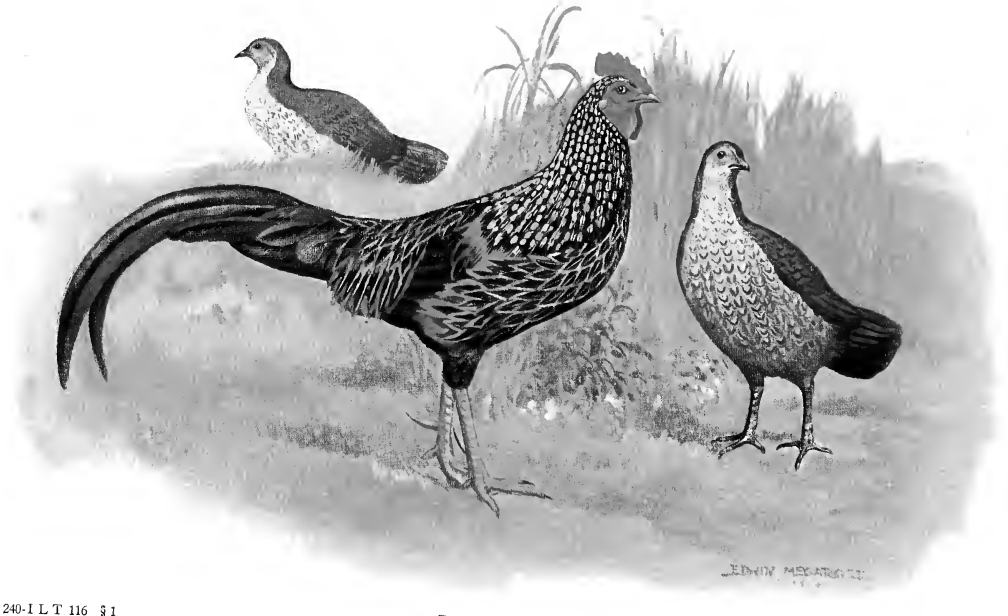
13. Original Standards.—The earliest descriptions that divided fowls into classes had more to do with weight and size

at given ages, egg production, and market fitness than with what are now considered exhibition qualities. Measurements of the different parts, the average weight of old and of young fowls, the color of the skin, and an indefinite description of plumage colors was the next step in description. The first description of breeds was issued in England about 1865, at which time the English Poultry Club was formed. The Standard issued by this Club was the first publication of the kind, and designated 15 as a complete scale of points.

The Standard of Excellence appeared in America about the same time (publisher's date, 1867). This was a reprint of the Standard prepared by the London Poultry Club, with alterations and additions adapting it to America.

14. English Standard.—The English Standard of Excellence is commonly known as the Poultry Club Standards; it was edited originally by the late Alexander Comyns, and revised under the supervision of T. Threlford, secretary of the club. The standard descriptions of the varieties given in the publication were compiled by specialty clubs, and in each case the club claims title to its own description and copyright. All are embodied in one book and are controlled by the main body of poultry breeders and exhibitors, in a manner that has met with approval. Whenever it is thought advisable to change the wording of a standard description, a committee is appointed to consider the subject, and a report of the action may not be made for several years. During the interval between the selection of the committee and the making of the report, the members conduct a careful examination of existing conditions, the advantages or disadvantages of the proposed changes are carefully weighed, and the report that follows is thus likely to meet with general approval.

15. American Standard.—The complete Standard of the American Poultry Association was issued in 1874. Following this came the Standard of 1875, which was an improvement over the others. The descriptions embodied in the American Standard were more concise and their meaning was more readily understood than the briefer descriptions in the



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GRAY JUNGLE FOWLS

English Standard. The first Illustrated Standard was issued by the American Poultry Association in 1888. This Standard was declared obsolete at the Buffalo meeting, in January, 1889.

The first general modification of the American Standard occurred in the authorized edition of January 15, 1875. The one issued in 1874 contained 100 pages and was an improvement over the previous editions. The issue of 1875 contained 243 pages and was the first complete revision of the American Standard. Revisions have occurred from year to year, and, although the changes have been slight, they have been instrumental in improving the quality of poultry by better descriptions of form and color. The fewer the modifications the more certain is the established type to be maintained. Extreme modifications are likely to cause confusion and result in more or less dissatisfaction among the breeders. A general sameness of appearance in the makeup of the Standard existed until the edition of 1904, which was called the Illustrated Standard. This was a step forward in standard making that has been heartily approved. The revision of the Standard of 1910 was authorized at the meeting of 1908; its text matter was approved at the meeting of 1909, and the final approval of both the text matter and the illustrations was given at the St. Louis meeting in August, 1910. The illustrations are from idealized photographs, retouched and finished to meet the approval of members present at the meeting.

Following the issuing of the Standard of 1910, which was printed in book form and placed on sale in January, 1911, there arose some dissatisfaction relative to the text and some of the illustrations. These defects were brought to the attention of the meeting of the American Poultry Association held in the city of Denver, Colorado, during the week of August 7 to 12, 1911, at which time a committee was authorized to print a new edition of the 1910 Standard and to correct errors in text and replace some of the illustrations that were not considered suitable. At the same time a committee of seven was appointed to prepare for the next revision intended for publication in 1915.

16. Show-Room Classification.—Show-room classifications are not the same in all countries or even in all parts of the same country. In America they are usually made to conform to the breeds and their varieties as listed in the American Standard of Perfection. But in addition to such varieties, some show-room classifications will include a few of the non-standard varieties, and the greater number of them will permit classes for any of the non-standard varieties, either of a particular breed or of many breeds.

STANDARD AND NON-STANDARD VARIETIES OF POULTRY

17. The list of breeds and varieties of poultry in Table I includes only those that are known to reproduce their kind of a settled type of form and color. In the column headed Standard Varieties are listed the varieties of fowls included in the American Standard of Perfection; in the column headed Non-Standard Varieties are listed the varieties not included in that publication, but which are bred in the United States and other countries, many of them being standard varieties in other countries. In compiling this list, a slight deviation from a set rule has been made. The Antwerp Brahma has been listed under the Asiatic fowls as a non-standard variety. To be strictly correct, this variety, which is not a true Brahma of the accepted type, should be placed with the Belgian fowls, but it has been placed with the Asiatics for the sake of convenience and uniformity in the description of the breeds given in later Sections. In this table the name used for each variety is the name commonly applied to it in its native country.

Descriptions of the various breeds and varieties and instructions for their breeding and management will be found in other Sections.

TABLE I

BREEDS AND STANDARD AND NON-STANDARD VARIETIES OF POULTRY

Classes and Breeds	Standard Varieties	Non-Standard Varieties	Color of Eggshell
American fowls:			
Plymouth Rock	Barred	Black	Brown or tinted
	Buff	Buff Barred	Brown or tinted
	Columbian	Pea-Comb	Brown or tinted
	Partridge	Rose-Comb	Brown or tinted
	Silver Penciled		Brown or tinted
	White		Brown or tinted
Wyandotte	Black	Buff Columbian	Brown or tinted
	Buff	Cuckoo	Brown or tinted
	Columbian	Pyle Colored	Brown or tinted
	Golden Laced	Violet	Brown or tinted
	Partridge	White-Laced Buff	Brown or tinted
	Silver Laced		Brown or tinted
	Silver Penciled		Brown or tinted
	White		Brown or tinted
Rhode Island Red	Rose-Comb	Pea-Comb	Brown or tinted
	Single-Comb	White	Brown or tinted
Dominique	Rose-Comb		Brown or tinted
Java	Black		Brown or tinted
	Mottled		Brown or tinted
Jersey Blue		Blue	Brown or tinted
Buckeye	Pea-Comb		Brown or tinted
Asiatic fowls:			
Brahma	Light	Antwerp	Brown or tinted
	Dark	Buff	Brown or tinted
Cochin	Black	Cuckoo	Brown or tinted
	Buff		Brown or tinted
	Partridge		Brown or tinted
	White		Brown or tinted
Langshan	Black	Blue	Brown or tinted
	White	Buff	Brown or tinted
Belgian fowls:			
Antwerp Brahma		Brown	Brown
Ardenne		Black-Red	White
Brabant		Black	White
		Mottled	White
Braekel		Black	White
		Black-Headed	White
		Blue	White
		Chamois	White
		Golden	White

TABLE I—(*Continued*)

Classes and Breeds	Standard Varieties	Non-Standard Varieties	Color of Eggshell
Belgian fowls—(*Continued*):			
Braekel		Silver	White
		White	White
Bruges		Black	White
Campine		Golden	White
		Silver	White
Flemish		Silver-Gray	Pale yellow
Herve		Blue	White
Huttegem		Cuckoo	Tinted
		Ermine	Tinted
		Golden	Tinted
Malines		Black	Brown or tinted
		Cuckoo	Brown or tinted
		Silvered Black	Brown or tinted
		Turkey-Headed	Brown or tinted
		White	Brown or tinted
Dutch fowls:			
Breda		Black	White
		Blue	White
		Cuckoo	White
		White	White
Drente		Numerous varieties	White
Hamburg	Black		White
	Golden Penciled		White
	Golden Spangled		White
	Silver Penciled		White
	Silver Spangled		White
	White		White
Owl-Bearded Dutch		Numerous varieties	White
Red Cap	Rose-Comb		White
English fowls:			
Dorking	Colored	Cuckoo	White
	Silver-Gray	Rose-Comb Silver-Gray	White
	White	Red	White
Orpington	Single-Comb Black	Blue	Tinted
	Single-Comb Buff	Columbian	Tinted
	Single-Comb White	Cuckoo	Tinted
		Jubilee Rose-Comb	Tinted
		Jubilee Single-Comb	Tinted
		Rose-Comb Black	Tinted

TABLE I—(*Continued*)

Classes and Breeds	Standard Varieties	Non-Standard Varieties	Color of Eggshell
English fowls—(*Continued*):			
Orpington		Rose-Comb Buff	Tinted
		Rose-Comb White	Tinted
		Spangled Rose-Comb	Tinted
		Spangled Single-Comb	Tinted
Scotch Dumpy		Numerous colors	Tinted
Scotch Gray		Barred or Cuckoo	White
Sussex		Brown	Tinted
		Light	Tinted
		Red	Tinted
		Speckled	Tinted
French fowls:			
Crevecœur	Black		White
Houdan	Mottled		White
La Flèche	Black		White
La Bresse		Black	White
		Blue	White
		Gray	White
		White	White
		Parti-colored	White
Bourbourg		Parti-colored black and white	Tinted
Faverolle		Black	Tinted
		Light	Tinted
		Salmon	Tinted
		White	Tinted
Game fowls:			
Exhibition Game	Birchen	Wheaten	Tinted
	Black		Tinted
	Black-Breasted Red		Tinted
	Brown-Red		Tinted
	Golden Duckwing		Tinted
	Red Pyle		Tinted
	Silver Duckwing		Tinted
	White		Tinted
Cornish, or Indian, Game	Dark		
	White		Tinted
	White-Laced Red		Tinted
Malay	Black-Breasted Red		Brown
Sumatra	Black		White
Aseel		Black-Red	Tinted
		Brown-Red	Tinted

TABLE I—(*Continued*)

Classes and Breeds	Standard Varieties	Non-Standard Varieties	Color of Eggshell
Game fowls—(*Continued*):			
Aseel		Duckwing	Tinted
		Pyle	Tinted
		White	Tinted
Old-English		Black	Tinted
		Black-Red	Tinted
		Brown-Red	Tinted
		Duckwing	Tinted
		Pyle	Tinted
		Spangled	Tinted
		White	Tinted
German fowls:			
Lakenfelder		Parti-colored	White
Mediterranean fowls:			
Ancona	Mottled Single-Comb	Mottled Rose-Comb	White
Andalusian	Blue		White
Leghorn	Single-Comb Black	Blue	White
	Single-Comb Brown	Dominique	White
	Rose-Comb Brown	Mottled	White
	Single-Comb Buff	Partridge	White
	Rose-Comb Buff	Pyle	White
	Silver	Rose-Comb Black	White
	Single-Comb White		White
	Rose-Comb White		White
Minorca	Single-Comb Black	Barred	White
	Rose-Comb Black	Blue	White
	Single-Comb White	Rose-Comb White	White
Spanish	White-Faced Black	White-Faced White	White
Polish fowls:	White-Crested Black		White
	Buff Laced		White
	Bearded Golden		White
	Non-Bearded Golden		White
	Bearded Silver		White
	Non-Bearded Silver		White
	Bearded White		White
	Non-Bearded White		White
Miscellaneous fowls:			
Frizzle	Bay		Tinted
	Black		Tinted
	Red		Tinted
	White		Tinted
Naked Neck		Numerous colors	Tinted

TABLE I—*(Continued)*

Classes and Breeds	Standard Varieties	Non-Standard Varieties	Color of Eggshell
Miscellaneous fowls—(Continued):			
Rumpless		Numerous colors	Tinted
Silky		Numerous varieties	Tinted
Sultan	White		Tinted
Yokohama, Tosa, or Phoenix		Numerous varieties	Tinted
Bantam fowls:			
Booted	White	Black and other varieties	Tinted
Brahma	Dark		Tinted
	Light		Tinted
Cochin	Black	Cuckoo	Tinted
	Buff		Tinted
	Partridge		Tinted
	White		Tinted
Exhibition Game Bantam	Birchen	Old-English	White or slightly tinted
	Black	Wheaten	White or slightly tinted
	Black-Breasted Red		White or slightly tinted
	Brown-Red		White or slightly tinted
	Golden Duckwing		White or slightly tinted
	Red Pyle		White or slightly tinted
	Silver Duckwing		White or slightly tinted
	White		White or slightly tinted
Japanese	Black	Buff	White or slightly tinted
	Black-Tailed	Duckwing	White or slightly tinted
	White	Splashed	White or slightly tinted
Polish	Bearded White	White-Crested Black	White or slightly tinted
	Buff Laced	Golden	White or slightly tinted
	Non-Bearded	Silver	White or slightly tinted

TABLE I—(*Continued*)

Classes and Breeds	Standard Varieties	Non-Standard Varieties	Color of Eggshell
Bantam fowls—(*Continued*):			
Rose-Comb	Black		White or slightly tinted
	White		White or slightly tinted
Sebright	Golden		White or slightly tinted
	Silver		White or slightly tinted
Miscellaneous bantams:			
Andalusian		Blue	White or slightly tinted
Aseel		Black-Red	Tinted
Frizzle		Numerous varieties	Tinted
German		Numerous varieties	Tinted
Langshan		Black	Tinted
Leghorn		Numerous varieties	Tinted
Malay	Black-Red	Numerous varieties	Tinted
Minorca		Black	Tinted
Nankin		Buff	Tinted
Rumpless		Numerous colors	Tinted
Scotch Gray		Cuckoo	Tinted
Silky	White		Tinted
Spanish		Black	Tinted
Sultan		White	Tinted
Yokohama		Numerous varieties	Tinted
Ducks:			
Aylesbury	White		White or tinted with green
Call	Gray		Tinted
	White		Tinted
Cayuga	Black		Green
Crested	White		Tinted
East India	Black		Green
Huttegem		Broken colors, Blue-white	Tinted
Indian Runner	Fawn-White	White	White
Khaki		Buff (female is penciled)	Tinted
Muscovy	Colored		White
	White		White

TABLE I—(*Continued*)

Classes and Breeds	Standard Varieties	Non-Standard Varieties	Color of Eggshell
Ducks—(*Continued*):			
Orpington		Buff	Tinted
Partridge		Partridge colored	Tinted
Pekin	White		White
Rouen	Colored		Greenish tint
Swedish	Blue		Blue tinted
Geese:			
African	Gray		White
Buff		Buff colored	White
Chinese	Brown		White
	White		White
Egyptian	Colored		Tinted
Embden	White		White
Toulouse	Gray		White
Wild, or Canadian	Gray, marked with black		Tinted
Guinea fowls:			
		Gray	Speckled
		Pearl	Speckled
		Vulturine	Speckled
		White	Speckled
Peafowls:			
		Black-Winged	Speckled
		Common	Speckled
		Javan	Speckled
		White	Speckled
Turkeys:			
	Black	Cambridge Bronze	Speckled
	Bourbon Red	Ronquieres	Speckled
	Bronze	Fawn	Speckled
	Buff	Gray	Speckled
	Narragansett		Speckled
	Slate		Speckled
	White		Speckled

NOTE.—Bantam fowls of the same breed are apt to lay either white or tinted eggs. Ducks of the same breed may lay either white or tinted eggs; some have a greenish and others a bluish tint. The eggs of the geese may be white, grayish white, or cream colored.

SELECTION OF BREEDING STOCK

GENERAL DISCUSSION

18. The selection of the breeding stock for the foundation of a strain of fowls is of fundamental inportance, for on the quality of the breeding stock depends, in a large measure, the ultimate success of the strain. It should be borne in mind that no matter how much a breeder may know of breeding methods he can scarcely hope to build up a strain of high quality from inferior breeding stock, and that he may, by improper methods of breeding, lose many of the good qualities of his breeding stock. The best results can be obtained only by practicing the best methods of breeding on the finest breeding stock. Hence, the first step is to select the best available breeding stock.

19. Value of Breed Characters.—Fowls are classified into breeds according to their shape, and no fowl, no matter how good its plumage colors may be, is of any value for breeding purposes unless it has the distinctive form peculiar to the breed to which it belongs. This shape should be so well defined that by means of it any breed of fowls can be readily distinguished from all other kinds of fowls. Deviation from the well-defined breed characters of any breeds on the part of any considerable number of fanciers would soon deprive them of their prominent position in the poultry world.

Because of the serious consequences that might follow, very careful consideration should be given to all proposed changes in the standard descriptions of breeds, and no changes should be made unless the evidence is overwhelmingly conclusive that such changes would be beneficial to the breed. In the past there have been changes in standards that have so altered breeds as to deprive the fowls of their commercial qualities and place them in the restricted field of ornamental poultry.

20. Value of Color, or Variety, Characters.—More attention is commonly given to variety characters than to breed characters. This, perhaps, is because variety distinctions are based entirely on the color of the plumage, and hence are more conspicuous than breed distinctions. In selecting fowls of any variety for breeding stock, great care should be taken to see that the color not only of the plumage but of the head points, the shanks, the feet, and even the soles of the feet, and also the markings on the plumage and the shading on the under plumage is according to the Standard.

The colors of the fowls of any variety must be so well defined and have such perfect shades as to have the most attractive appearance; and they must also be as free as possible from colors, markings, and shadings that are foreign to the variety. Formerly it was more difficult than at the present time to obtain certain combinations of colors in fowls. For instance, it was difficult to obtain white varieties with pure white plumage and either golden yellow or pinkish-white shanks, according to the requirements of the Standard. It frequently happens that white-plumaged fowls have yellow in the plumage and a light shade of yellow in their shanks. The plumage of white fowls should be white down to the skin, and the shanks and beak should be of a rich shade of yellow. When pinkish-white shanks are a required character of a variety, they should be as perfect in color as the plumage.

In selecting breeding fowls, the quality of the plumage colors is also an important matter to consider. To be of real value, fowls must be able to continue to reproduce year after year a large percentage of young true to variety color, or of even a better color than themselves. The color must be good enough to stand up well against all exposure to sun, rain, and other climatic conditions; and it must be attractive enough to win and retain public favor.

All exhibition fowls should have plumage of a rich color and a glossy finish, and this richness of plumage should be encouraged as long as it does not lead to unnatural conditions. Rich, glossy, and profuse feathers are found only in fowls that have great vitality and the best of health.

21. Value of New Breeds and Varieties.—The increase in the number of new breeds and varieties should be encouraged because it prompts fanciers to work hard in their search for newer things, increases the interest in poultry exhibitions, creates new ideals, new ambitions, and new fanciers, and advertises poultry raising by being noticed in the public press. There is also always a great effort on the part of originators to herald their new varieties into notice and make them popular. All this causes new varieties to be widely distributed in a comparatively short time, and thus leads to a more thorough testing of their qualities before they are distributed for commercial purposes. No harm is done to poultry farming even if a dozen or more widely advertised new varieties fail to come up to expectations, provided they are properly tested. The only harm that may come from the introduction of new varieties is when such varieties are injudiciously crossed into profitable flocks before the new varieties have been thoroughly tested for each and every character it is claimed they possess.

22. Value of Size.—The proper size for fowls of any breed is determined, to a certain extent, by the use to which they are to be put. As a general rule, it may be said that the best possible size for a fowl is that stated in the Standard description of the breed to which it belongs. In fowls intended for market poultry, weight, of course, is of considerable advantage, and when intended for this purpose a Brahma, for instance, may be fed up to a weight more than half as much again as that demanded by the Standard. In fowls intended for egg production, a size that will be medium within Standard requirements will be most appropriate. It is never wise to attempt to increase the size of a fowl of any variety beyond a point where excessive size will detract from an attractive form. A Columbian Wyandotte, for instance, equal in size to a Light Brahma would be out of proportion for its breed and would be a monstrosity, but a Light Brahma might be increased in size considerably over the Standard requirements without being open to the same criticism. The naturally large proportions of the Brahma can be increased without injury to symmetry.

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CEYLON JUNGLE FOWLS

The proper size of a fowl of any breed should be determined by the height, length, and breadth for the breed as given in the Standard, rather than by the amount of flesh the fowl may carry as the result of heavy feeding. It is sometimes possible for a small fowl to carry so much flesh as to weigh more than another fowl in thin flesh that may have a large enough frame to appear twice the size of the smaller one. Among fanciers it has been the practice for so long to estimate the size of standard-bred fowls by their weight alone, that the idea that size is synonymous with weight has become well established; this is true not only in America but also in other countries. The result of this practice has been to neglect somewhat the dimensions of poultry in considering their size—one of their most valuable characters.

Fowls for breeding purposes should always be selected from those that come up to the weights published in the Standard. In that publication the weights for both mature and immature fowls are given. At one time a premium in points was given to a fowl that was of more than standard weight, and a corresponding number of points was deducted from the score of a fowl that was below standard weight. At another time preference was given to those nearest the standard weight. It is thought that better form was generally produced under this latter rule than the other. In all breeds, however, the rule should be to allow any size up to the point beyond which the proper proportions of the fowls would be changed. A fowl of any variety in which size is of particular value cannot be too large so long as it maintains its breed characters to perfection.

23. Value of Symmetry.—A fowl is symmetrical, or has a perfect form, when each part is perfect in itself and is in the proper proportion to every other part. To describe how any particular fowl should look to be considered symmetrical would require almost the entire description of the shape of the fowl as contained in the Standard. To produce successful exhibition poultry, symmetry must be perfect in every fowl used for breeding. The selection of fowls of perfect symmetry may not always bring success, but without it success is seldom, if ever,

acquired. Fowls that lack symmetry, even though they are covered with the most beautiful plumage demanded for the variety, may appear deformed. A back of bad proportions will destroy perfect symmetry; shanks too short for the breed, by giving a fowl a dumpy appearance, will mar a form that might otherwise have been attractive; and a comb of too great size and incorrect form may detract so much from the beauty of the head points as to disturb the balance of an otherwise well-formed fowl.

SELECTION OF BREED FOR FOUNDATION STOCK

24. Division of Breeds According to Use.—According to the uses to which they are put, fowls may be separated into five classes: (1) Heavy-weight, or meat-producing, fowls; (2) medium-weight, or general-purpose fowls, which are those that are used for both egg production and meat production; (3) egg-producing fowls; (4) ornamental fowls, that is, those kept for their beauty; (5) bantams.

The heavy-weight, or meat-producing, fowls are the Asiatics, which include the Brahmas, the Cochins, and the Langshans; the general-purpose fowls are the American and English breeds; the egg-producing fowls are the Mediterranean breeds; the distinctly ornamental fowls are those that are kept for show purposes only. Bantams of all kinds, although largely ornamental, are a class by themselves. They are highly esteemed for exhibition purposes but are not equally well thought of for utility purposes.

25. Breeds Best Adapted to Certain Climates.—Certain breeds of fowls are better adapted to certain climates than others, and in selecting a breed of fowls the poultryman should bear this carefully in mind.

The Dorkings, which are held in high esteem in England, thrive better in some localities than in others. Dry or well-drained soil is best suited for the fowls of this breed.

Brahmas and Cochins seem to do best in a moist climate, such as is found near the ocean; inland conditions are less favorable to them. Hence it follows that the soil and climate

of New England seem better suited to the Brahmas and Cochins than those of the Middle West. In America, the Brahma does best on dry, well-drained soil.

In all localities in England and America, the general-purpose fowls, such as the Plymouth Rock, Rhode Island Red, and Orpington, seem to do better than those of the heavier breeds.

The Mediterranean varieties are well adapted to all kinds of soil and climatic conditions. They are well suited to Italy and Spain, the countries of their origin; they are as good egg producers in the colder climate of New York and Connecticut as in the milder climate of New Jersey and in the warm climate of California.

The Hamburg and the Campine fowls are remarkably good egg producers. Formerly, the Hamburg fowls were the most highly considered of all for egg production, but they have of late years been bred principally for exhibition. At the present time the Campines and the Braekels are largely kept in Belgium for egg production, and the Leghorns are kept in America for the same purpose. The Malines are considered best in Belgium for market poultry.

Years ago the La Flèche, the Crevecœur, and the Houdan fowls were preeminently the market poultry of France. In recent years several varieties of the La Bresse fowls have become popular in France. They and the Faverolles are both highly considered at the present time. The La Bresse fowls are valued for both egg production and market poultry. They lay eggs with white shells, and are highly valued by those who prefer white eggs. The Faverolles are likewise highly valued by those who prefer brownish eggs, as these fowls lay eggs having tinted shells.

The Cornish, or Indian, Game fowls have gained in popularity as market poultry. They are used in some localities for crossing with Dorkings and Orpingtons and with all the American breeds and varieties. The offspring from these crosses are used only for table poultry and such offspring have but little value either as egg producers or for breeding purposes. The Old-English Game fowls have returned to favor in England. Some strains of this fowl are excellent eggs producers and have

a large percentage of breast meat on their carcasses. Were it not for their pugnacious inclinations, they might be more commonly selected by those who keep a few fowls for home consumption.

No fowls having yellow flesh and skin dress more beautifully for market than do all the buff and partridge varieties. If more attention were given to the cultivation of breast meat on all of these fowls, and less drastic requirements were demanded of the partridge varieties for exhibition, all of them would become popular as market poultry.

Bantams may be kept in a very small space. Ten or a dozen Brahma or Cochin bantam females without a male may be safely kept in the most densely populated part of a city with full assurance that they will not disturb the neighbors. They will lay quite as well without as with a male. Two bantam eggs are fully equal to one egg of larger size. Bantams will lay many eggs during the winter months, provided they have comfortable quarters to stay in. Other kinds of bantams will do quite as well but are not so easily controlled, as they are light of wing and may fly about and annoy the neighbors. Brahma and Cochin bantams, dressed for table, weigh about $1\frac{1}{2}$ pounds.

Where range is restricted, a trio of White Holland or of Black turkeys can be kept within an orchard of 4 or 5 acres. Methods of restraining them are described elsewhere. Where there is more range, a larger number can, of course, be kept. Turkeys will not do well if compelled to occupy the same ground with other kind of fowls or with any farm animals, such as cows and pigs. Where unrestricted range can be had, any variety of turkeys will do well.

Ducks for home consumption, for egg production, and for market poultry can be cultivated at a profit. Indian Runner ducks will lay quite as many eggs as will the average hen. They dress beautifully at 4 pounds for table purposes and are remarkably good foragers. Pekin ducks grow quickly to broiler size, dressing at from 4 to 6 pounds when 10 to 12 weeks of age. The Rouen is, perhaps, the best for winter roasters.

Geese may be kept in any locality where there is sufficient water for them to swim and a sufficient growth of herbage to sustain them. For a small, compact goose, either of the two varieties of China geese will answer well. The Embden and the Toulouse are the best for the heavy-weight roasters. A trio of either of these should hatch and rear each year sufficient geese for the average family, and they can be kept on the farm without injury to any of the growing crops provided they are fenced in a pasture lot or waste piece of land where there is a good water supply.

26. Importance of the Selection of Good Individuals.—In selecting fowls for breeding purposes, it should be borne in mind that the selection of the individuals of a breed is just as important, if not more important, than the selection of the breed itself. The best exhibition poultry, the best market poultry, or the most prolific egg layers cannot be produced by any but the best fowls of the breed.

The great importance of the selection of good fowls has been brought out by egg-laying contests in various parts of the world. In France, where the poultrymen have given closer attention to the development of the utility qualities in their fowls than the poultrymen of other countries, an expert has, as the result of a large number of experiments, found the fowls of the following breeds, in the order given, to be the best egg layers: Hamburg, Leghorn, and La Bresse. The Dorkings and other larger fowls are given lower positions. An English expert claims that the general-purpose breeds are fully the equal of all, except the Hamburg and the Leghorn, in egg laying. In Australia, the egg-laying contests have shown that the Leghorns, Wyandottes, Langshans, and Orpingtons all average a higher egg production than the best of those specified by the French. This great variation in results in different parts of the world, even with fowls of the same breed, is a good indication that the production of the greatest number of eggs does not depend so much on the breed of the fowls as on their individual merits. This is also true in respect to table and exhibition qualities.

27. Variations in Local Preferences.—The preference for breeds of fowls varies considerably in different countries and in different localities in the same country; frequently these preferences are based on non-essential details, but are none the less important for the poultryman to observe. Brahma fowls, for instance, are not highly esteemed in England, Edwin Brown, the noted English poultry authority, even going so far as to say that no fowl that has feathered legs is a first-class table fowl. In contrast with this, it may be said that the Coucou de Malines of Belgium and the Brahmas of America, both of which are feather-legged breeds, are highly esteemed in the respective countries.

There are also preferences based on the color of the skin and of the shanks of fowls. In Europe, fowls having white skin and white or cream-colored flesh are preferred. In America, those with yellow skin and yellow flesh are preferred. In France, one of the most highly favored table fowls is the La Bresse, a fowl quite like the Leghorn in form and color. The flesh of the La Bresse is white and the shanks and feet are bluish gray. The French are partial to the Faverolles, which are feather-legged fowls, and also to the Houdans, which have no feathers on their shanks and feet, but have considerable crest and beard.

A wide diversity of opinion exists throughout the world as to which breed is best for egg production, for market poultry, and for the show room. It is thus necessary for the poultryman to select the kinds that are most popular in his locality and which will attract the most attention there. This rule is just as necessary for the fancier who is to exhibit his fowls as it is for the commercial poultry raiser who must cater to the whims of the market where he disposes of his goods.

Local preferences go so far as even to favor one form for a breed in one locality and another form in another. In England, for instance, the fanciers prefer a type of Brahma, Cochin, Leghorn, and Plymouth Rock unlike the types of these breeds as accepted in America. The preferences in America and England differ greatly as to color and markings of the partridge varieties. The Houdan of England and the Houdan of

America are very dissimilar, and the one that is preferred in one country would not be acceptable in the other.

Such preferences are quite natural, and they are met with continually a few hundred miles apart in the same country. The winning Brahmas at Boston differ very materially from those that win in the Middle West, and in about the same proportion that the English Brahmas differ from the Boston type. The claim that one type for a breed rules in America is sometimes strongly made, yet those who travel extensively through the country know that marked variations exist in different localities. The injury or benefit of such a condition of affairs is, of course, purely conjectural, but one thing that is certain is that if the wrong type is selected or preferred in any locality, those who follow that selection as their ideal for breeding are sure to fail in the production of true form and must suffer defeat when they exhibit their fowls in a competition where the fowls will be judged properly.

28. Value of Combination of Exhibition and Utility Qualities.—A combination of qualities is most desirable in every fowl. The ideal fowl is the one that is capable of a good egg production, is good for market poultry, and has the distinctive shape and color characteristics to make it valuable for exhibition. All of these qualities are necessary for the highest success with any variety.

It has been said that exhibition poultry is not the most desirable for utility purposes, because such fowls do not lay well and do not produce good market poultry. Yet it is a fact that the best egg-producing fowls and market-poultry-producing fowls have come from some of the most attractive standard-bred poultry. Standard requirements for all breeds call for a formation that is always considered the best for producing either the best market poultry or the largest number of eggs, as the case may be. The reason why standard-bred poultry is thought to be unsatisfactory for egg production is because the fowls that are kept for the show room are seldom, if ever, handled in such a way as to induce them to lay a great number of eggs. Prize-winning fowls of the egg-producing varieties

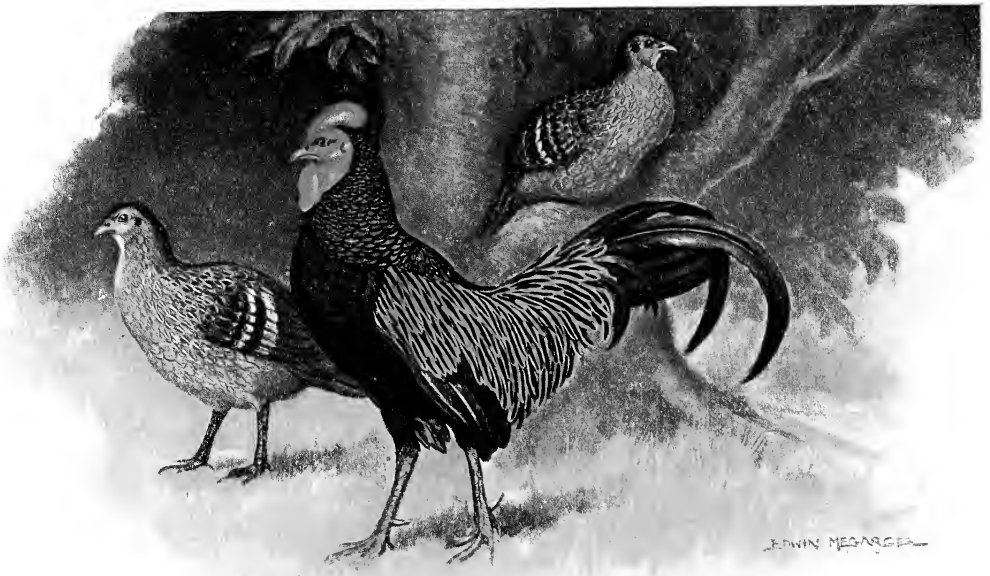
will usually produce a high average of eggs if handled properly, and prize-winning fowls of the Asiatic and general-purpose breeds will usually produce table poultry of the highest quality.

Far from exhibition poultry being useless, those who have given the matter careful consideration must admit that the remarkable increase in both the quantity and the quality of poultry products in the past few decades has come from the efforts of fanciers who have striven to produce new and better varieties and who have first kept them for exhibition. These new and improved varieties have been distributed by fanciers to all parts of the world, and the result has been an improvement in quality. This statement is borne out by the fact that more advancement has been made in poultry during the last 50 years, during which the development of exhibition poultry has been most rapid, than was made in the hundred years previous.

VARIATIONS IN EXHIBITION POULTRY

29. Variations From Original Type.—The accepted types of many varieties of the various breeds of fowls at the present time differ greatly from the original type of the breed. This is because the newer varieties have not all been molded on the same lines as those on which the original variety of the breed was formed. The Barred Plymouth Rock and the Laced Wyandotte fowls were the first varieties in their respective families, and although it is generally admitted to be desirable to have all varieties of these breeds conform to breed type, differences do exist in the several varieties. The Black Orpington was the original of the Orpington breed, and the general contour of all the varieties should be the same as this. This, however, is known not to be the case, although the general characters of the Orpingtons individualize the breed. The form of the Orpington is a distinct type, and should be changed as little as possible; any changes should be in the line of making the type more distinct. A tendency toward having them more like the Plymouth Rock would be a great mistake.

Sometimes it happens that the original variety is not the best type of the breed. In the Hamburgs, for instance, the



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GREEN, OR FORKED-TAIL, JUNGLE FOWLS

silver penciled variety was the original. The other varieties are considered under the one description of shape in the Standard, but there are marked differences in the shape of the penciled and the spangled varieties. The shape of the Black Hamburg is, in fact, the best model for all the varieties, but it is much better for the Spangled Hamburg fowls to remain as they are; an attempt to modify them would detract from their beauty.

Similar conditions exist to a greater or less degree in all breeds that have several varieties. Although all turkeys conform to a certain extent to one description, certain differences exist. Bantam fowls of some breeds of which there are several varieties will have slight differences among them. Although it may be possible for such differences to exist without confusion, it should be the purpose of the fancier to make those which belong to a certain breed conform to the breed characters.

30. Loss of Prestige of Asiatic Fowls.—The Asiatic fowls, particularly the Brahmas and the Cochins, have lost much of their popularity as utility poultry, although between 1878 and 1885 they were considered to be the best general-purpose fowls in existence. This change has taken place because these breeds have been transformed by the fancier from the foremost of all utility fowls to the first among fowls that are bred solely for their form and feathers. During the transformation the utility qualities were, to a large extent, lost.

When the first Cochins came to England and the first Brahmas to America, the poultry world was startled at the large number of eggs produced by fowls of these breeds, by the quality and flavor of their flesh, and by their large size. The Brahma soon became the pride of the poultry breeders of America, and the Cochin occupied an equally prominent position in England. Fowls of these breeds were first bred and fed both for an increased egg production and for better table quality, and as long as this lasted they maintained their prominent position in the poultry world. About 1885, however, the craze in England for profuse feathering caused the breeders to modify the Brahmas and Cochins to such an extent that they soon

became almost a mass of feathers, and, especially in England, they became so deficient in table quality and egg production as to be almost useless for anything but show purposes.

In America the desire for full-feathered Cochins did not begin until 1890. At first the general preference was for long legs, vulture hocks, and leg and toe feathering so profuse as to give the shank and toe feathering the appearance of intermingling with the stiff feathers of the hock. This style of feathering never became so popular in America as in England, but the desire for it spread quickly, and from that time till the present full-feathered Cochins have been bred in America with the fewest possible stiff feathers at the hock. In America the changing of the Brahma type began about the year 1900. Leg and toe feathering, with fluffy and full cushion, was at first permitted, and this was increased until finally the Brahma rivaled the Cochin in this respect. The most remarkable change in these fowls occurred when the breeders and judges alike began to favor a Brahma with a slight stoop like that of the Cochin, with profuse body feathering, and with a head that lacked the distinctive wide skull of the Brahma, with the projection over the eyes—in fact, a head that resembled that of a Brahma capon a year old.

From the beginning of their decline as general-purpose fowls, year by year fewer and fewer of the Brahmas and Cochins have been shown, in spite of the fact that they are beautiful in form and color and therefore highly ornamental. Asiatic fowls have continued to lose popularity until they are now kept mainly to gratify the artistic tastes of lovers of beautiful poultry, who care but little for utility qualities. The most beautifully colored Buff and Partridge Cochin fowls have been produced in recent years. They are a wonderful creation and a great credit to the fancier's art. The same is also true of the Light and the Dark Brahma fowls, which have the most exquisite colors and markings. In fact, as beautiful poultry, the Cochins and the Brahmas have no rivals except the fowls of the Polish family. These, like the Asiatics, are very beautiful, but are not generally popular, nor are they kept to any extent even for exhibition purposes.

Some strains of Brahmas are, however, still valued as market poultry and are highly esteemed in the few localities in which they are raised. In some parts of New England, for instance, where soft roasters are grown, the Brahmas are popular. If they could be procured of the type of former days they would be much more valuable.

31. Rise of the Leghorn and Decline of the Minorca. The Leghorns, since their origination by the breeders of America, have held first place for the production of eggs. The Minorcas, formerly prolific layers of white-shelled eggs of large size, were their only rivals. Differences in breeding, however, have placed practically all varieties of Leghorns in the lead. The breeders of America and Australia have adhered to the egg-producing type of Leghorn, and have refused to change the standard description of this breed so as to take from it any body proportions favorable to egg production. England has sacrificed utility form for exhibition quality in Leghorns to an extent that has lessened their egg production and made them a coarser type of fowls. The practice of breeding Leghorns of too great size has, however, changed in England since 1908, because the breeders have been convinced that the American and Australian type of Leghorn produces a larger number of eggs.

Even greater changes have been made in the Minorca. They have been transformed from a light weight to a weight that fully equals and frequently surpasses that of the Plymouth Rock. Large Minorcas produce large eggs, but their egg yield per year has decreased in proportion as their size of body has increased. There has been some objection to increasing the size of Minorcas, but so far no attention has been paid to it; in fact, more rather than less weight is generally desired.

32. Popularity of the General-Purpose Breeds.—The Plymouth Rock and the Wyandotte breeds have gained in popularity, because the fowls of these breeds have been bred nearer and nearer to the line of utility demands. The Barred Plymouth Rock has steadily held the place of honor for both exhibition and market poultry, and more of this variety of

fowls are kept for utility purposes throughout America than of any other kinds, and although the demands for exhibition quality have changed, no change that would lessen the value of the Plymouth Rock for egg production or for market poultry has been permitted. The White Plymouth Rock, the closest rival of the barred variety, has likewise been improved in both utility and exhibition qualities. The former creaminess of plumage of the white variety has been removed, and specimens with perfectly white plumage and yellow beaks and shanks are the idols of the show room. The body proportions of the Plymouth Rock continue to be preferred, and these fowls seem to be the only rivals of the old-time Brahmas in districts where capons and soft roasters are produced.

33. The Wyandottes are good utility fowls, because they have been kept within a form and size best suited to their natural qualities. The Partridge Wyandotte has lost favor in America as a utility fowl, and this has been because of a persistent determination to have dark colored plumage in this variety. The Partridge Wyandotte holds an enviable position among general-purpose fowls in England, because in that country a lighter color has been favored in the plumage.

The Wyandotte form, which borders on that of the Cochin, is beautiful for exhibition poultry, but no fowl of such proportions can be prolific in the production of eggs nor grow quickly into the best of table poultry. This is due to the fact that the heavy growth of feathers requires so much nourishment that it lessens the amount of breast meat and renders the fowl incapable of laying as many eggs as a more scantily feathered fowl.

White Wyandottes of proper type are beautiful exhibition poultry, excellent for table poultry, and good egg producers. The Silver Laced Wyandotte fowls at one time (about 1905) held first place for several years as the most prolific egg producers tested in public competition. The prolific egg-producing qualities of the Wyandottes in general and their excellence as market poultry will continue as long as the form and body proportions best suited for utility and exhibition pur-

poses are kept intact and a tendency to enlarge their size is checked. The clause in the Standard that gave preference, in close competition, to the specimen nearest to the standard weight, has done much for the Wyandotte. A like clause should be attached to the Standard demands for all breeds and varieties that have a standard weight, as this would curb a tendency toward unnaturally large or small size.

34. The Rhode Island Red fowls are among the best in respect to proportions for market poultry, and they are the most prolific producers of eggs of desirable size; and the Standard description for them makes equally easy their production for exhibition and for utility purposes. The tendency at present is to develop them into a square form. If this is continued they may be changed from most desirable general-purpose fowls to fowls like the Malines of Belgium, which are of square form and desirable for table poultry, but which lack in egg-producing qualities and in beauty for exhibition. For all purposes, the Rhode Island Red fowls have qualities that are seldom excelled by those of any other breed, though, of course they can be so improved as to make them more valuable for egg production, for table poultry, and for exhibition. But, should the demand for more beauty change their natural form, they will be sure to decline in general value.

35. The Houdans and the Faverolles of France have been molded by the English fanciers into fowls of beautiful form and color; and in America they have the same characters. As a result, fowls of these two breeds are bred only by a few fanciers, and are raised largely for their beauty and for the high price obtainable for exceptionally fine exhibition specimens. They were prolific egg producers, and, as originally bred, they were the best of market poultry. These utility qualifications combined with their exhibition qualities should have given them supremacy over others, yet they are almost unknown in many localities.

36. There is a difference in the attitude taken by the English and the American fanciers in regard to exhibition poultry. In England there is a tendency to increase exhi-

bition qualities at the expense of utility qualities. Throughout England, the Dorking, the Sussex, and the Orpington fowls are prime favorites as general-purpose fowls, and yet a tendency has been shown to alter them in such a way as to diminish their utility qualities. On the other hand, the tendency in America has been to improve the Orpington not only in exhibition qualities but also in egg production and in table qualities. The same has also been attemped with the Dorking, the Houdan, the Faverolle, and the Cornish, or Indian, Game fowls.

An overdevelopment of form or color of fowls of any breed or variety that improves their appearance at the expense of their utility qualities is apt to cause that breed or variety to decline in public favor.

37. Ill Effects of Excessive Development of One Quality.—In breeds excessively developed in any one quality there is little possibility of combining both exhibition and utility qualities, and such breeds are likely to decline in public favor. There are many instances of this. The original Black Spanish fowls, for instance, were among the best egg producers of their time. The white formerly extended but little below the face, but this has been increased until it covers the face and extends down on the neck. The development of this white below the face, an increase in the size of the comb, and neglect of form have continued until the proportions of the body have been so altered as to deprive the fowls of their former excellence as table poultry and to lessen their egg production. The Black Spanish are now examples of extreme development in head points, but they have ceased to be utility poultry.

The crest of the Polish, the graceful bearing of the game, the large comb of the Minorca, and the stilty form of the highest type of English Langshans are examples of extreme breeding. None of these features was present in the original type of any of these fowls, and the changes have so altered them as to make them absolutely distinct from the original type. Although the appearance of some may have been improved, none of these breeds has advanced in public favor.

38. The Minorca is a fowl that has been greatly developed in one direction at the sacrifice of its utility qualities. It has been changed to a fowl with a large comb and wattles and long legs, and has been so altered as to have the appearance of a fowl of a different breed. From the beginning of the popularity of the Minorca, and until about 1900, the Black Leghorn was almost forgotten; since the Minorca has been so greatly changed the Black Leghorn has returned to popular favor. The Minorca, however, has genuine merit, and might still be more generally distributed were it not for the excessive growth of comb. Excessively large comb and wattles not only require special protection during the winter months, but they require so much blood to sustain them that the bodily heat is diminished and egg production lessened. Because of these reasons, some Minorcas used in breeding pens are *dubbed*, that is, their combs are cut off to a short stub, as in the case of game fowls used for fighting in the pit. The Minorcas of America have less comb than is sought for in England, and if they had still less comb they would undoubtedly be more popular than they are.

39. Some fowls have been developed so much in one or more exhibition qualities that it seems as if the fanciers did not care whether or not the fowls had utility qualities. The game, Polish, and Hamburg fowls are examples of this. The original type of Old-English Game had a perfect form for table meat and egg production, and the Polish and Hamburgs of years ago were known as "everlasting layers." These qualities were lost in a measure in the transformation from their original to their present forms. The modern game fowl has been made so tall that it bears practically no resemblance to the Old-English Game, and, as a result, the modern game is seldom seen except in the possession of a few enthusiastic fanciers. The original Polish and Hamburg have also been lost, the modern types looking like different breeds. Their places have been filled to some extent by the Braekels and Campines, which have been revived; they are becoming popular for utility and exhibition purposes.

The value of medium form for a breed is not always realized, and the changing of a breed to make it better for one particular purpose frequently leads to undesirable consequences in other directions. For instance, the development of excessive size in the Plymouth Rock intended for caponizing has destroyed the fitness of many strains for the show room, and it will be impossible to maintain the utility type so strongly present in all varieties of Plymouth Rock that conform to the standard weight, if the fowls are bred to weigh several pounds more than this weight. This increase in size changes the general contour of the fowls so materially as to make it appear quite unlike the Plymouth Rock. Whenever this occurs, the fowls, of course, lose their exhibition value, and such occurrences will eventually cause the fanciers to turn to some other breed, like the Light Brahma or some other Asiatic, to be developed into a fowl that can secure in the show room the highest honors for large size.

40. Tendency to Strive for Original Qualities.—In America there is a tendency among poultry fanciers to strive to get the qualities originally found in the various breeds and varieties of fowls. It is only after fowls have been changed a great deal that the sterling qualities of the original types have come to be fully appreciated. The growing popularity of the Columbian Wyandotte, the Columbian Plymouth Rock, and the Surrey fowls speaks strongly in favor of the qualities of the Brahma of former days. These fowls have color and markings identical with those of the Light Brahma. The Wyandotte form prevails in the Columbian Wyandotte, and the Plymouth Rock form is being established in the Columbian Plymouth Rock. The Light-Brahma colored Surrey fowls are well thought of both in England and in Canada. The color and markings of the Dark Brahma have been again brought into public favor by the Silver Penciled Wyandotte and the Silver Penciled Plymouth Rock.

In addition to the return to Brahma colors and markings in the general-purpose breeds, a disposition has recently been shown by poultrymen to bring the Brahmas themselves back

to a utility form. If this tendency continues this breed will become more popular than ever. Whether or not utility qualities will be established in the Brahmas will, however, depend on the judgment of the breeders. They must realize that in the modernized type of Brahma they should have a fowl that will be suitable not only for a heavy-weight roaster, but also for a soft roaster or a capon with more meat of a better quality than a fowl of any other breed or variety, and that will answer well for egg production.

41. Between 1880 and 1885 a brisk controversy over the method of placing awards on poultry brought out the differences between the poultry of different countries and the changes that had been made in certain breeds of poultry. At that time high officials in the service of the English government claimed that only form and feathers were considered important in England, and that utility qualities were not given sufficient attention. Throughout this controversy the French were lauded for preserving the table qualities of their fowls instead of paying undue attention to plumage color and head points. To bring out the contrast between the English and the French ideals in poultry, it was claimed that Houdan fowls, at that time the most popular breed for market poultry, had been imported from France into England and had been markedly injured in table qualities by the English fanciers, who had handled them for exhibition purposes only, and had bred them to form and feather for the purpose of gaining high prices for them as show-room fowls. The breeders of France still continue to pay more attention to size and egg-laying qualities in their fowls than to fancy points.

42. Results of Domestication.—Domestication of fowls has caused an increase of weight and egg production, and an improvement in the quality of their meat and plumage color. It has also resulted in greatly increasing the number of breeds and varieties of fowls. Jungle fowls, in their wild state, rarely exceed 3 or 4 pounds in weight, but there are records of instances in which they have been developed to a weight of 6 pounds by domestication. This increase was due to the

fact that they had less freedom, more food, and a change of environment. Care in the selection, management, and feeding of the European varieties of fowls has resulted in a marked increase in their size. The fowls that were imported to Europe and America from the Orient were originally much larger than the European and American breeds and have been increased in size until they now weigh considerably more than when they came from China.

The increase in egg production has been even more marked than the increase in size. The egg production of the wild species of fowls has been reckoned at from 4 to 12 eggs to a clutch, and as naturalists state that the jungle fowls raise two broods in a season, this would mean an egg production of from 8 to 24 eggs a year. The average yield of large flocks of thousands of domestic fowls has been increased to as much as 135 eggs a year; numerous hens have laid as many as 200 eggs a year, and there are a few records of 250 eggs for a single hen.

RANGES AND HOUSES FOR EXHIBITION POULTRY

RANGES

43. Ranges of the proper kind are very necessary for poultry intended for exhibition purposes, because fowls on good ranges will generally have the most beautiful plumage they are capable of growing, and also fine health and abundant vitality. Ranges with plenty of shade trees and bushes are the most desirable, but if white or light-plumaged fowls are kept, care should be taken to see that none of the bushes possess juice of a kind that will stain. It is impossible to wash some of these stains from white plumage. When dark-plumaged fowls are kept, the character of the underbrush or shrubbery is not so important.

When permitted to live continuously under favorable conditions and to enjoy considerable freedom on the range, the plumage of fowls will take on a gloss that can be produced in

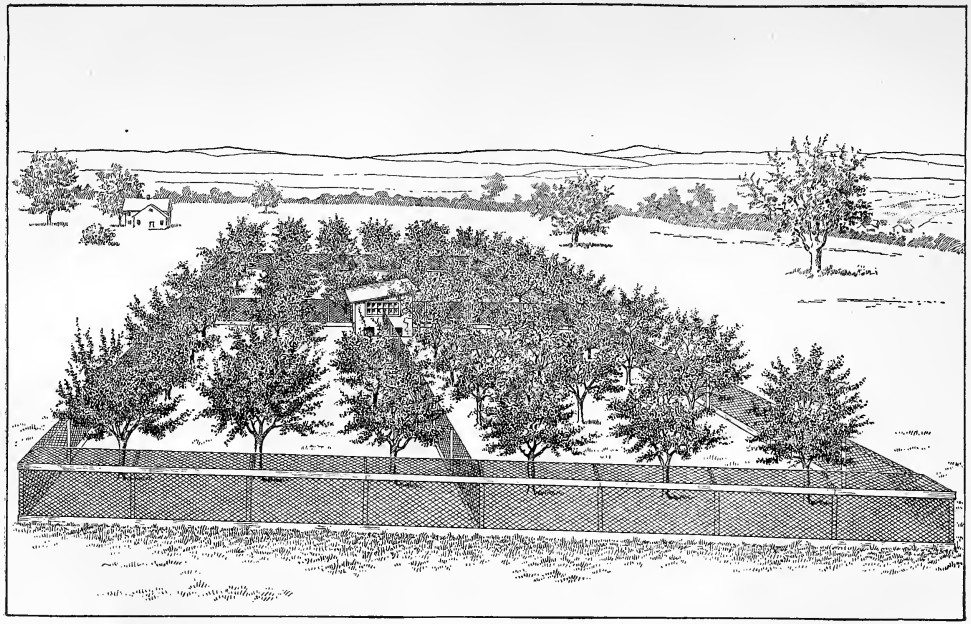


FIG. 2

no other way, though proper care and feeding also help to improve the gloss on the plumage. However, all fanciers are not located so that they can give their fowls ideal natural surroundings, but they should bear in mind that the more nearly they can approach such conditions the more satisfactory will be the results. Orchards, corn fields, and fruit gardens where currant and other fruit bushes abound may be made to serve as a good substitute for more natural surroundings.

44. An almost perfect substitute for a natural range is shown in Fig. 2. The range is an acre of ground planted with fruit trees and enclosed by a wire fence, In such an enclosure one hundred hens may be kept separate from the males during the summer months. The plot is divided into four separate yards, and each yard can be used for a breeding pen for fowls, or for an outdoor nursery for mother hens and their broods. After the chicks are weaned they can remain in the yard until grown to maturity. As they grow the least desirable of all may be sold as broilers. All cockerels not needed should be used for this purpose. As they mature, the cockerels kept should be separated from the pullets, either by fencing them apart on the same range or by moving the cockerels to another range.

When fowls of any kind, but exhibition fowls especially, are confined in enclosures, great care should be taken to keep the enclosures clean and in a perfectly sanitary condition. The grass in the enclosure, if any, should be raked frequently to remove the accumulations of filth. If grass grows long and profusely, it should be trimmed with a lawn mower and all filth raked up and taken away. Grass seed should be sown after each raking to keep up a plentiful supply of grass. If the ground is bare it should be swept clean with a stiff broom so that part of the top soil is brushed away. These cleanings and those from the grass will make good fertilizer. To renew or cleanse the soil it should be plowed up, raked over, and leveled, and wheat screenings, oats, and grass seed sown.

Exhibition poultry with yellow shanks should not be kept for any length of time in yards or on roosts where lime has been

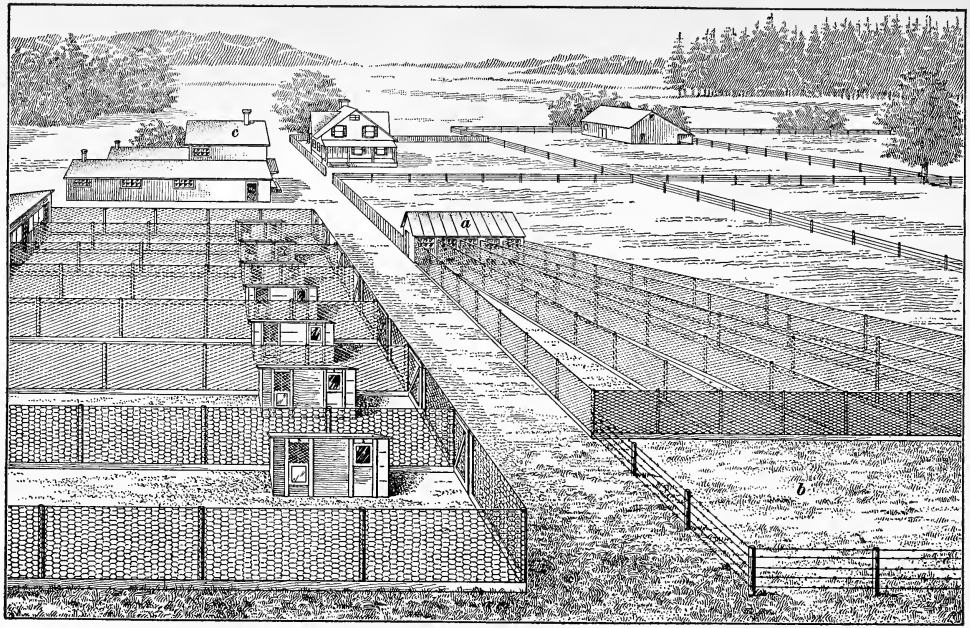


FIG. 3

sprinkled, because lime is likely to bleach the shanks. Even dark-colored shanks may be changed by lime.

45. Three or four acres of ground may be arranged for a home, a garden, and pens for breeding poultry. When this is done, proper fencing to confine the poultry is of prime importance. A plan for such an arrangement is shown in Fig. 3. The home is in the background, and directly in front of this is a house *a* and runways for keeping half-grown pullets and cockerels separate. By arranging the runways according to the plan shown, the fowls have the greatest yard room with the least house room. Broody hens may be broken of their desire to sit by keeping them for a short time in the yard *b*, or this yard may be used for mother hens and young chicks.

In the background at the left of the dwelling house is a brooder house *c*, the upper part of which is used as a feed room, and under the building is an incubator cellar. Next to this building are fattening pens and a room where killing and dressing may be done.

In the foreground on the left are breeding yards, which are equipped with colony houses like that shown in Fig 4, and in each yard is placed a small house like the one shown in Fig. 7. This may be used for a brood coop or a cockerel house. In this way three males can be bred to each lot of hens, which is accomplished by allowing one to run with the hens and keeping the other two confined.

The plan given for arranging a small tract is adapted from the plan on a "small holding" in England, where the purpose is to secure eggs, market poultry, and fowls for exhibition.

Fruit trees should be planted outside of and along the fence line of the yards. If the yards are more than 30 feet long, some trees should also be planted in the middle. The mistake of planting too many trees should, however, be avoided. All the shade the fowls need is enough to run under when they want to be protected from the direct rays of the sun. Too much shade will be likely to make the ground too damp for poultry, and too many trees inside of the yards will also make it difficult to plow and cultivate the soil.

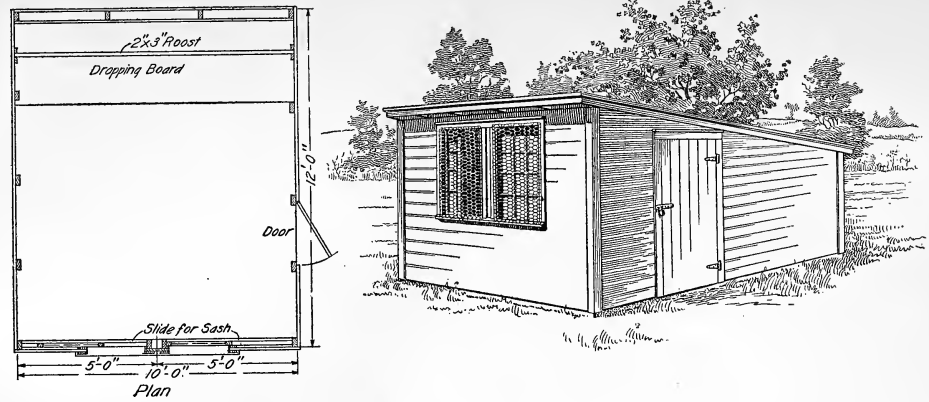

2"x3" Roost
Dropping Board
12'-0"
Door
Slide for Sash
5'-0"
10'-0"
5'-0"
Plan
Wire Netting over outside of Frame
Sash 12 Lights 8"x10"
6" German drop Siding
Front Elevation
2'x4" Rafters 2'-0" on ¢
Wind Shield
Sash
7'-0"
3'-0"
Dropping Board
6"
3'-0"
5'-0"
2'-6"
15"
15"
Nest Box
12'-0"
Section

FIG. 4

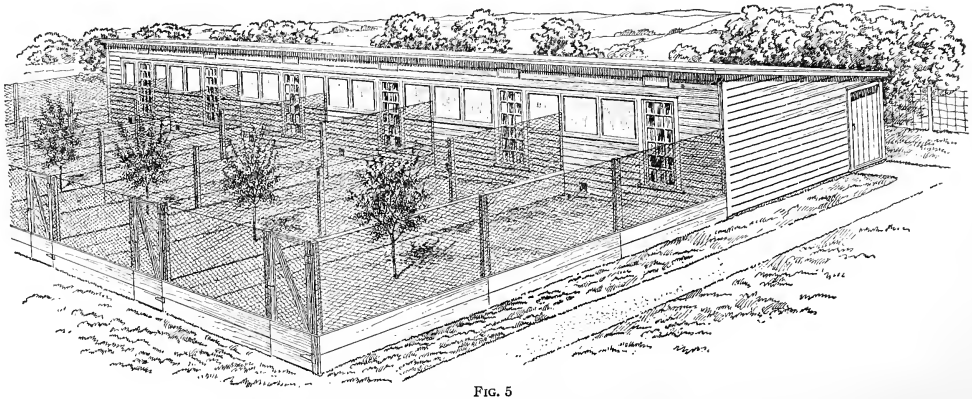


FIG. 5

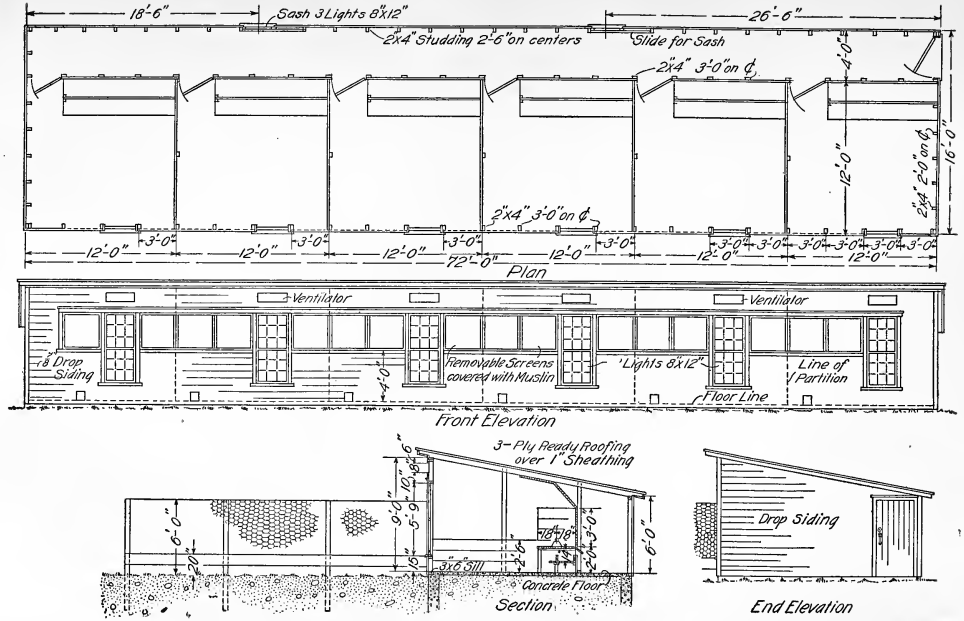

18'-6"
Sash 3 Lights 8"x12"
26'-6"
2"x4" Studding 2'-6" on centers
Slide for Sash
2"x4" 3'-0" on ¢
2"x4" 2'-0" on ¢
4'-0"
12'-0"
16'-0"
2"x4" 3'-0" on ¢
12'-0"
3'-0"
72'-0"
Plan
Ventilator
Ventilator
8" Drop Siding
Removable Screens covered with Muslin
Lights 8"x12"
Line of Partition
Floor Line
4'-0"
Front Elevation
3-Ply Ready Roofing over 1" Sheathing
9'-0"
5'-9"
6'-0"
20"
15"
2'-6"
2'-3"
6'-0"
2"x6" Sill
Concrete Floor
Section
Drop Siding
End Elevation

FIG. 6

HOUSES AND COOPS

46. Houses and coops for fowls for exhibition should be built and arranged to meet the requirements of breeding for exhibition. That is, fowls for exhibition must be kept in small flocks if good results are to be obtained, and must be confined in well-fenced enclosures so as to prevent the fowls of different flocks from becoming mixed, and to prevent hens from mating with any males except those selected for mating with them.

The houses best suited for exhibition poultry are colony houses similar to the one shown in Fig. 4, and connected apartment houses like that shown in Fig. 5. The plan of this connected apartment house is shown in Fig. 6. When space is limited, and where two or more matings are kept, no house will be better than the one shown in Fig. 5. The chief advantage of the colony house is its isolation from other houses, and hence in keeping the fowls free from outside disturbances. The colony house, however, has the disadvantage that considerable labor is required to care for it properly. The other two styles of houses mentioned are more generally used, because they can be cared for with much less labor.

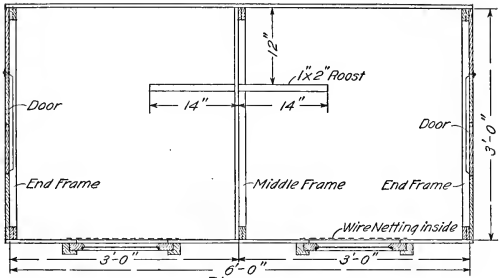
The interior arrangement of houses for exhibition poultry will also be necessarily somewhat different from that of houses intended for utility poultry. For instance, more space must be allowed between the roosting poles for exhibition fowls than for utility fowls, in order to prevent, as far as possible, the breaking of any of the wing and tail feathers. To prevent the long sickle feathers from striking the wall, the back roost pole should be placed from 18 to 24 inches from the wall; a like distance should be maintained between each two roost poles. When a large number of cockerels are kept in one house, more space than this between the roost poles will be of advantage. Enough roosting space should be provided in each house so that each fowl will have from 12 to 14 inches. This much space is needed to allow the fowls to turn about while on the roost and to move about on the roosts without crowding and annoying one another to the extent of becoming irritated and quarrelsome.

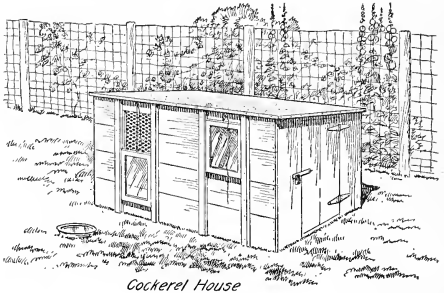
47. After the breeding season has passed, and when the time comes for separating the sexes, the females may be allowed to stay in the breeding pens or they may be turned out together to range in a field or orchard. The males may be kept in small coops or sheds either alone or two or more together, provided they do not quarrel. Some males will not live quietly together in pairs; others will live peacefully in flocks of three or four. Males may be kept in a number of places. A low shed for a roosting place, and small runs in the open on the north side of the shed where there is but little sunshine, will be a suitable provision for them. Under such conditions they will molt and grow as clean, clear plumage as fowls that are kept continuously in airy buildings or in large coops inside of such buildings.

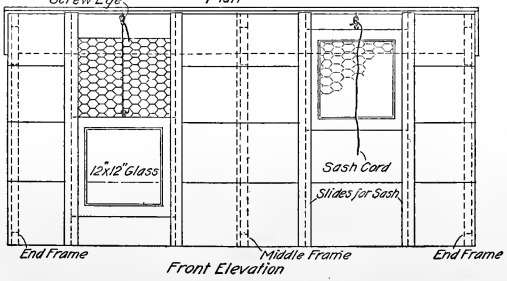
Fowls are sometimes provided with rough rustic coops, or with shelters made of odd pieces of boards, rails, or poles and roofed over with boards that extend out over the sides to shed water and keep out the sun. Such shelters may be placed in fields of growing corn, and made large enough to accommodate from three to five hens, or from two to three cocks. Fowls that molt under such conditions will be in fine shape for exhibition at the fall fairs and winter shows.

In many parts of the world in which the finest exhibition poultry is raised the males are kept in coops similar to the one shown in Fig. 7. This coop is 6 feet long, 3 feet wide, 3 feet high in front, and 2 feet 6 inches high in the rear. It is divided into two coops, each of which is 3 feet square. Cocks may be kept in such coops during their molt and prior to the show season. Cockerels may be kept in them from an immature age until they are finished either for sale or for the show room. It is not unusual for both cocks and cockerels to be kept for months at a time in such coops. White-plumaged fowls will molt and grow, under such shelter, a new coat of feathers that will be pure white.

48. In Fig. 8 is shown a portable coop 10 feet wide and 12 feet long divided into four compartments each 3 feet wide. The part *a*, which is the house proper, is 4 feet long, and the


12"
1"x2" Roost
Door
14"
14"
Door
3'-0"
End Frame
Middle Frame
End Frame
Wire Netting Inside
3'-0"
6'-0"
3'-0"
Plan


Cockerel House


Screw Eye
12"x12" Glass
Sash Cord
Slides for Sash
End Frame
Middle Frame
End Frame
Front Elevation

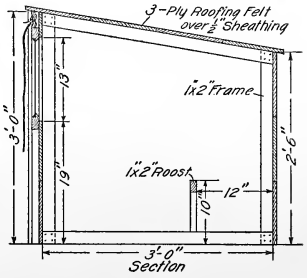
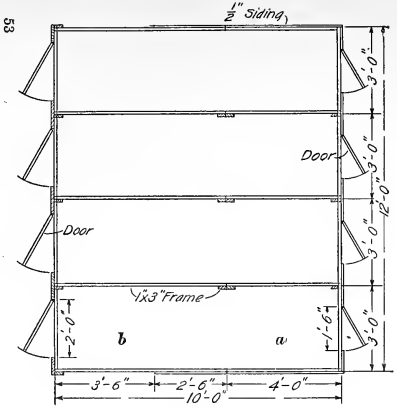
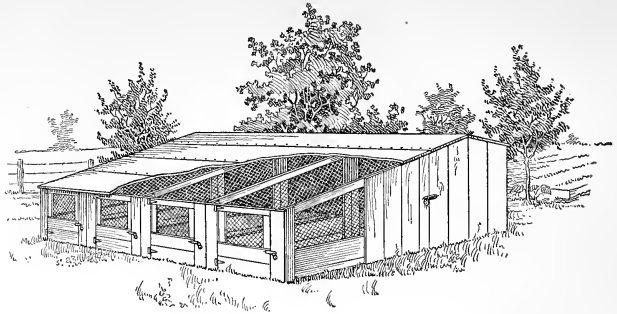
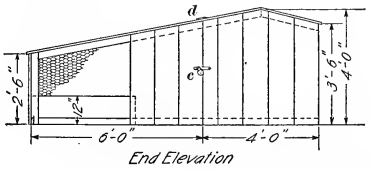

3-Ply Roofing Felt
over ½" Sheathing
1"x2" Frame
3'-0"
8"
16"
2'-6"
1"x2" Roost
10"
12"
3'-0"
Section

FIG. 7

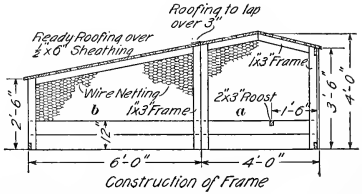


Plan





End Elevation



Construction of Frame

FIG. 8

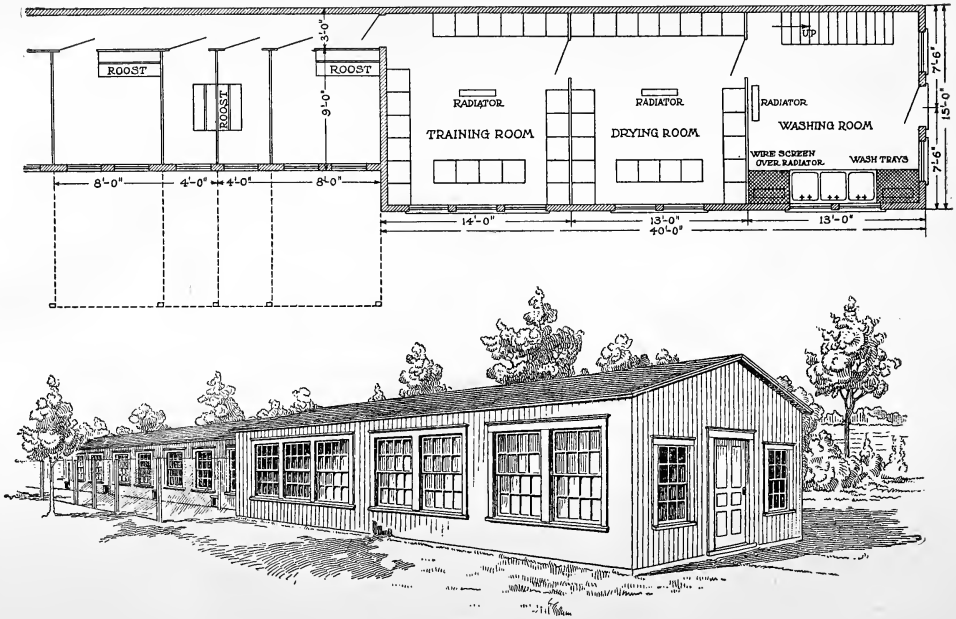

ROOST
ROOST
ROOST
3'-0"
9'-0"
8'-0"
4'-0"
4'-0"
8'-0"
RADIATOR
TRAINING ROOM
RADIATOR
DRYING ROOM
RADIATOR
WASHING ROOM
UP
WIRE SCREEN OVER RADIATOR
WASH TRAYS
7'-6"
5'-0"
7'-6"
14'-0"
13'-0"
40'-0"
13'-0"

FIG. 9

covered runway *b* is 6 feet long, and is fastened to the house by a hasp and lock *c*. A flap *d*, in the roofing felt prevents leakage where the house and the covered run join. This coop is suitable for cocks, cockerels, or hens with broods of chicks. Two or three cockerels, one cock and two young cockerels, or four females may be kept in each apartment. Two hens with broods of chicks will be well protected in each division. This coop is also suitable for cocks during and after the season of molt.

49. A house well suited for the care of fowls for exhibition is shown in Fig. 9. This is 13 feet high at the center and 10 feet high at the eaves; the other dimensions are given on the illustration. The front room in the main part of the house is a washing room, where the fowls for exhibition are washed. The middle room is a drying room, where the fowls are kept after washing until thoroughly dry. The third room is equipped with coops in which the fowls are trained for the show room. The three rooms are heated with a hot-water heating system. No heat is needed for the back part of the building.

The rear portion of the building is a connected appartment house, with a hall in the rear and small rooms in front of the hall. Some of these rooms are 8 feet square and others are 4 feet wide and 8 feet deep; these rooms may, however, be made any width that is best suited to the needs of the fowls. Males and females intended for sale, for exhibition, or for ready handling may be kept in these pens.

Houses of this kind are of the greatest value on farms where there is a constant demand for fowls for exhibition. By having a large number of fowls constantly under his eye, the poultryman will be able to note their value, and can thus select wisely for shipment without much danger of being mistaken in picking out fowls of poor quality. Houses of this kind are particularly well adapted to keeping fowls intended for exhibition. Fowls that are too nervous for sale or for exhibition will soon become tame under the influence of such surroundings.

PRINCIPLES OF POULTRY BREEDING

DEFINITIONS

1. Science is knowledge gained and verified by observation and correct thinking. Knowledge gained by experience may be faulty, but if this has been proved or verified by repeated observation and clear thinking, it may be considered as reasonably correct. The **science of poultry breeding** might be described as the acquired ability so to unite or mate true-bred males and females of a single variety as to produce from this mating offspring of a better quality than either one of the parents. To do this successfully demands mating in pairs, or what would give the same results, caring for the eggs in such manner that the breeder can with certainty identify both parents of the offspring.

The practice of making use of scientific terms in treatises relating to poultry has become so prevalent that it might be of advantage to have the meaning of these recorded prior to taking up the several branches of scientific breeding. Not all of them can be explained within a reasonable space, but those most usually employed can be readily understood from a brief definition.

An **acquired character** is one not native or innate, but gained by training or treatment. A habit, for instance, is acquired; ill temper may be acquired because of bad treatment.

Atavism is the recurrence, in a descendant, of characters of a more or less remote ancestor instead of those of an immediate or near ancestor, or of any ancestral deformity or disease after its disappearance for one or more generations; intermittent heredity; reversion.

A **breed** of fowls is a race, or a large group, the individuals of which maintain through successive generations a certain distinct shape of body.

A **dominant character** is a controlling one; that is, because of its superior strength it will assert itself to the exclusion of other characters. Either the male or the female may possess dominant characters, and the parent possessing such characters will have the greater influence over the characters of the offspring.

Evolution is a process in which, by a series of continuous progressive changes, a complex organism is developed from a crude or simple beginning. In poultry, evolution is traced in the development of many complex breeds and varieties from a few original breeds.

A **hereditary character** is one that is capable of being transmitted from parent fowls to their offspring. It is possible for acquired characters to become hereditary. That is, fowls, because of improper treatment, may acquire bad form, become lacking in vitality, etc., and may transmit these qualities to their young. The acquisition and transmission of desirable qualities, such as the opposite of those mentioned, also take place.

An **inheritance,** in poultry, is one or more qualities that a chick receives from its ancestors. For example, a chick may have by inheritance undesirable characters, such as side sprigs, off-colored eyes, or bad formation of any part of the body, or desirable characters, such as uniform color and markings.

A **negative character** is one that has a predominating or controlling influence for bad on the characters of the offspring. It is the opposite of a positive character.

A **positive character** is one that has a predominating or controlling influence for good on the character of the offspring. It is the opposite of a negative character. Positive and nega-

tive elements can scarcely ever be brought together in such a way as to produce beneficial results in the offspring.

Nick, as used by poultrymen, refers to the mating of fowls specially suited to each other in their qualities, the object being to produce offspring of certain desired characters. Desired results will not be produced in offspring if one fowl has positive characters and the other negative characters, or, in other words, if the fowls do not nick well. Both the mating and the offspring may be spoken of as a nick.

A **preponderance** is a superiority in state, quality, force, or influence sufficient for overbalancing anything that opposes it. One fowl has a preponderance over another fowl in a mating when it has the greater influence in determining the character of the offspring. A preponderance may be for either good or evil.

A **prepotent** parent fowl is the one that has more dominant characters than the other, and hence it will have the greater influence on the character of the offspring.

A producing male or female, or, as commonly called, a **producer,** is a fowl that has produced from matings with each of two or more fowls of the opposite sex at different periods a number of offspring of both sexes better than either of their parents, and which offspring are in their turn capable of producing from several matings better offspring than themselves. To determine the producing ability of a fowl, it is necessary to mate a female with several males, to mate a male with several females, and then to mate some of the best offspring with several other fowls. The original fowls cannot be considered satisfactory producers unless a fair percentage of the offspring in the first and second generations are of better quality than the original pair. The value of producers to a breeder is very great, for it is only by breeding from such fowls that systematic progress can be made and a fair percentage of prizes won. Although it is a fact that individual specimens of remarkable quality have been produced from uncertain matings, seldom, if ever, have these individuals been capable of perpetuating their own qualities in the offspring or of giving them better qualities.

A **recessive character** is a character possessed by one parent, which may not appear in the immediate offspring, but which is latently present and capable of being transmitted to later descendants. A recessive character is the opposite of a dominant character.

Reversion is a return to or toward an ancestral type; atavism. This term is often very carelessly used, being applied to all sorts of unsatisfactory results obtained from bad matings. Not all defects in chicks are due to reversion. They are frequently due to undesirable qualities in the parents.

Segregation means a separation of a collection into individuals or groups of individuals; isolation.

Unilateral means affecting one side only.

A **variation** is a deviation in structure, color, or function from the type or parent form.

A **variety** of fowls is a subdivision of a breed in which the individuals maintain through successive generations certain distinct colors in their plumage in addition to the shape characteristics of the breed.

MENDEL'S LAW

2. In 1865, Gregor Johann Mendel, an Austrian Augustinian abbot, read several papers before a natural history society of Brünn, Austria. The papers detailed the results of experiments made by the abbot in crossing varieties of garden pea (*Pisum sativum*) and certain members of the genus *Hieracium*. The experiments had continued for a period of 8 years and had been made in an extremely careful manner.

The papers attracted but little attention at the time, and were soon lost and forgotten in the archives of the society. About the close of the last century came an increase of interest in the study of heredity, and Mendel's papers were remembered and exhumed by German experimenters. In 1901, a translation of them was printed in the journal of the Royal Horticultural Society of England.

Although Mendel confined his investigations to the growing of peas, he brought into notice principles that have been

accepted by scientists of the world as a guide for further investigation. Mice, guinea pigs, rabbits, cage birds, and poultry have been made use of by breeders for their experiments, because they are frequent producers of young, some of them multiplying so fast as to reach, in one year, the third or fourth generation. It is less difficult to reach conclusions through the use of them than may be obtained from investigations carried on with animals that produce offspring but once a year.

Writings on Mendelism are as yet limited in English to a few monographs; in German, the literature of the subject is somewhat more extensive.

3. Mr. Chas. B. Davenport, Director of the Station for Experimental Evolution, Carnegie Institution, Washington, D. C., has defined Mendel's law as it will apply to poultry, in the following statement:

The law of heredity known as Mendel's law depends upon three principles. First, the principle of *independent unit characters* according to which each of the characteristics of poultry is a unit or may be analyzed into units which are inherited independently of one another. Thus, the color of the plumage or certain parts of the pattern, the form of the comb, the booting on the feet, and the iris color are examples of such characteristics: some of these are units and all are inherited independently of one another. A consequence of this principle is that we may have a rose-comb black bird, a rose-comb white, a rose-comb game, a rose-comb booted, or a rose-comb with clean shanks; that is, we can combine the booting with any form of comb, plumage color, eye color, and so on.

The second principle is that the unit characters are not inherited as such, but the only thing that is inherited is a representative of the character in the egg or sperm cell. Since this representative determines what the character shall be, it is called a *determiner*. It follows that the adult characters of the parents, grandparents, and so on are not inherited in the offspring, but that offspring and parents show similar characters because there are similar determiners in the common

germ plasm from which they develop. Not all of the determiners that are in the germ plasm show in the body of any individual, and, consequently, the offspring may differ in appearance from the parents and from one another just because they do not all have exactly the same determiners in their germ plasm.

The third principle is that of *segregation*, or *separation of the different determiners* in the germ cells. Suppose one parent has no extra toe and the other parent has extra toes, then the offspring will receive the determiner for extra toes from one parent only and not from the other. Now when such offspring, whether pullets or cockerels, form their germ cells, some of the germ cells have the determiner for extra toes and some lack it. If brother and sister of this generation be mated, there may be in the fertilized egg no determiner for extra toes, or the determiner for extra toes may come from both parents or from one only. The relative frequency of these three occurrences is as the numbers 1, 1, 2. What is true of the extra toe is true of the other unit characters.

These three principles constitute the whole of the modern theory of heredity, and by keeping them constantly in mind we are enabled to make any desired combinations of characteristics and, within limits, to predict the proportion of offspring having the different combinations. Let me illustrate by an example. I have a rose-comb White Leghorn hen and a single-comb Black Minorca, and I wish to make a rose-comb black from these parents. I mate them and, provided the stock on both sides is perfectly pure, all of the offspring are alike. We suspect that the white color of the White Leghorn is due to a chemical substance in the embryo that prevents the development of the black pigment. Since that is in the White Leghorn parent, it will be in the offspring also, and consequently in the offspring the black pigment will be more or less completely prevented from developing. As a matter of fact, a certain amount of black pigment may appear in the feathers of the pullets. Since the rose-comb has a determiner, in addition to that of the single comb, which determines the production of the lateral parts of the comb, all of the offspring will

have this determiner from the rose-comb White Leghorn, and all will show a rose comb. The rose comb will be weakened, because, in the hybrid, it develops from a single determiner instead of from two. The consequence of this is that all of the hybrids between our rose-comb white and single-comb black will be rose-comb whites much like the mother, but, according to the principle stated above, the germ cells of these white birds will be of four sorts, namely: (1) with the white determiner and with the rose-comb determiner; (2) with the white determiner and without the rose-comb determiner (potential single comb); (3) without the white determiner (potential blacks) and with the rose-comb determiner; (4) without the white determiner and without the rose-comb determiner. Now, since both in the females and in the males the same four kinds of cells are produced in equal numbers, and since it is a matter of chance which one of the four kinds of germ cells a particular kind of germ cell of the cock shall unite, it follows that these sixteen combinations are equally apt to occur: 1–1, 1–2, 1–3, 1–4, 2–1, 2–2, 2–3, 2–4, 3–1, 3–2, 3–3, 3–4, 4–1, 4–2, 4–3, 4–4. The combination 1–1 will give the rose-comb whites that will breed true like the original rose-comb White Leghorn. The combination 4–4 will give single-comb blacks that will breed true like the Black Minorca with which we have started. Such pure birds will each occur in one case out of sixteen; the other fourteen will be more or less mixed. In the combinations 3–3 or 3–4 we shall get the rose-comb black which we were seeking, and the combination 2–2 or 2–4 will give the single-comb white. It is easy to see what the other combinations will yield.

By the application of these principles one may succeed in making the desired combinations and be able to predict the number of individuals that will show the desired combination in the second hybrid generation. To avoid disappointment, it must be said that many apparently simple characters are not really such, but are analyzable into two or more units; also that one cannot tell in advance, but only after study, whether a particular character is due to a determiner or to the absence of a determiner. Thus, there are some whites that

are due to the absence of the determiner that makes black pigment, and consequently, when mated with blacks, all of the offspring are black. This is a different case from that of the White Leghorn in which the determiner for black pigment is present, but an additional determiner is present that stops the formation of the black pigment.

4. An explanation of Mendel's laws expressed in an algebraic way is published in Nelson's Encyclopedia as follows:

Mendel "chose forms of garden sweet peas that are known to be constant from generation to generation. In his initial investigations he selected seven pairs. Taking two forms, *a* and *b*, which differ from one another in one character only; he crossed them, and so produced a set of hybrid offspring. Call two of these offspring *g* and *d*. Mendel's doctrine of heredity in its most general form is as follows: As the result of crossing the hybrid forms produced by his first operation, he concluded that the facts are explicable only on the hypothesis that *g* and *d* contain each an equal number of the two types of sex cells (gametes) contained respectively in *a* and *b*. This may be elaborated thus: If we call the distinguishing characters possessed respectively by *a* and *b*, *A* and *B*, then all the sex cells of *a* possess the character *A*, meaning that, *if fertilized by sex cells of the same type*, they all possess the power of growing into organisms displaying the character *A*. So also with the sex cells of *B*. But on Mendel's supposition the sex cells of *g* and *d* differ from those of the pure parent forms in that they consist of equal numbers of type *A* and of type *B*. In graphic form, as shown in Fig. 1, the result is as follows: There are thus three possible types of union which may occur: (1) Sex cells of type *A* may unite with type *A*, producing pure forms; (2) sex cells of type *B* may unite with type *B*, producing another series of pure forms; or (3) sex cells of type *A* may unite with those of type *B*, producing a series of hybrid forms. Further, on the doctrine of chance, these

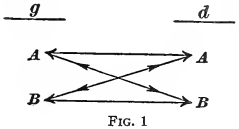


FIG. 1

hybrid forms may tend to be twice as numerous as either of the pure forms, so that in 100 fertilizations there will tend to be 25 *A*'s, 25 *B*'s, and 50 *A B*'s. In algebraical form, $(A+B) \times (A+B) = A^2+2\ A\ B+B^2$. It is one of Mendel's important contributions to science that he proved the existence of this numerical relation among hybrids. His proof consisted in rearing hybrids of the second and subsequent generations, and showing that those which we have described as type *A*, if interfertilized, remain constant from generation to generation, as under similar conditions do those of type *B*. On the other hand, those which we have described as type *A B*, when interfertilized, gave rise to mixed offspring. This theory involves, of course, Weismann's assumption of a germ plasm as something apart from the body of the parent.

"When Mendel crossed *a* and *b*, he found that their hybrid offspring *g*, *d*, and so forth, displayed the character *A*, to the entire exclusion of the character *B*. To this character he gave the name of dominant, while the apparently suppressed character he called recessive. In point of fact, however, the offspring are of three types—the pure-bred *A*'s, the pure-bred *B*'s, and the third type described as *A B*'s. These forms display the dominant or *A* character, and are therefore not externally to be distinguished from the pure-bred *A*'s. But—and this is the important point—they differ in that, while the pure-bred *A*'s when interfertilized, yield again pure-bred *A*'s only, the offspring of the intercrossing of the hybrid forms fall into three series—pure-bred *A*'s, pure-bred *B*'s, and hybrid forms or *A B*'s again. A little reflection will therefore show that the hybrid or *A B* forms of the second generation are entirely comparable, both as regards the character of their germ cells and as regards their body or somatic characters, to the hybrids of the first generation—that is to *g* and *d*. Mendel's principles seem to afford a rational explanation of certain hitherto obscure phenomena of hybridization."

5. A Method for Applying Mendel's Law.—The mathematics involved in the subject of Mendelism has so far been passed over as too difficult for the general reader. The

rather advanced subject of Probability belonging to higher algebra must be understood. This algebraic process is used to ascertain the probability that certain characters possessed by plants or animals will reappear in their offspring. To employ this process with certainty requires considerable skill in mathematics. There is, however, a phase of mathematics that is of extreme value to the poultry fancier, and it has the merit of being very easily used and understood, and it is absolutely exact. It enables the breeder to investigate with perfect precision the dominant and recessive qualities, as Mendel called them, and to determine whether they are constant, or erratic and variable. Questions of the influence of sex, color, shape, size, etc. can be answered so well in no other way.

Suppose, for example, that the problem to be solved is the creation of blue-plumaged fowls by the well-known method of crossing black with white. In the notation to be employed, b^1 and b_1 will denote, respectively, a black male and a black female; w^1 and w_1 will denote a white male and a white female. When a black male is mated with a white female, the cross will be $b^1\ w_1$; the reverse of this will be $b_1\ w^1$. If two such crosses are mated, the result will be $b^1_1\ w^1_1$. Such an expression as $b^2_3\ w^4_3$ would denote a fowl whose qualities of every

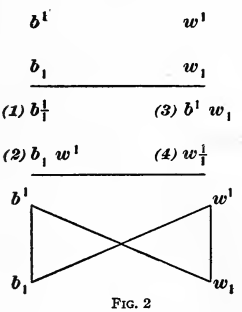


FIG. 2

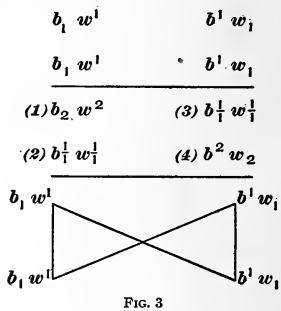


FIG. 3

kind are derived from an ancestry of two black males, three black females, four white males, and three white females.

Suppose, now, that a pair of blacks and a pair of whites are mated in every possible way. Mating black with black gives $b\frac{1}{1}$—a pure black like its parents, if the strain is fully established. Mating the black female with the white male gives $b_1\, w^1$. Mating the white female with the black male gives $b^1\, w_1$. Finally, the white pair produces $w\frac{1}{1}$. The process is shown by the diagram of Fig. 2. If sex counts for anything, the crosses $b_1\, w^1$ and $b^1\, w_1$ should show it, for the cross of $b^1\, w_1$ has for its ancestors a black male and a white female; the cross $b_1\, w^1$ descends from a black female and a white male, the sexes being reversed.

The next step, as shown in the diagram of Fig. 3, may consist in crossing the hybrids $b_1\, w^1$ and $b^1\, w_1$, or the entire output of the first mating may be crossed in every possible way. The combination of the cross will be shown first. The cross $b_2\, w^2$, numbered (*1*) shows two black females and two white males as the ancestors. Mating $b_1\, w^1$ with $b^1\, w_1$ gives $b\frac{1}{1}\, w\frac{1}{1}$, numbered (*2*), in which both sex and color are equal. Mating $b^1\, w_1$ on the right below with $b_1\, w^1$ on the left above gives $b\frac{1}{1}\, w\frac{1}{1}$, numbered (*3*). Finally, $b^1\ w_1$ on the right below with the same cross on the right above gives $b^2\, w_2$, which is numbered (*4*). This cross reverses the sexes shown in (*1*). The diagram shows the entire operation. It will be noticed that for the first time both the sexes and colors are evenly balanced in (*2*) and (*3*).

$b\frac{1}{1}$	$b_1\, w^1$	$b^1\, w_1$	$w\frac{1}{1}$
$b\frac{1}{1}$	$b_1\, w^1$	$b^1\, w_1$	$w\frac{1}{1}$

(*1*) $b\frac{2}{2}$	(*5*) $b\frac{1}{2}\, w^1$	(*9*) $b\frac{2}{1}\, w_1$	(*13*) $b\frac{1}{1}\, w\frac{1}{1}$
(*2*) $b\frac{1}{2}\, w^1$	(*6*) $b_2\, w^2$	(*10*) $b\frac{1}{1}\, w\frac{1}{1}$	(*14*) $b_1\, w\frac{2}{1}$
(*3*) $b\frac{2}{1}\, w_1$	(*7*) $b\frac{1}{1}\, w\frac{1}{1}$	(*11*) $b^2\, w_2$	(*15*) $b^1\, w\frac{1}{2}$
(*4*) $b\frac{1}{1}\, w\frac{1}{1}$	(*8*) $b_1\, w\frac{2}{1}$	(*12*) $b^1\, w\frac{1}{2}$	(*16*) $w\frac{2}{2}$

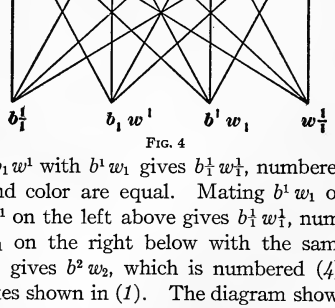


FIG. 4

Now take the entire output of the first cross and combine in every possible way, as shown in Fig. 4. The order of procedure is to combine the first term on the left below with each term above; then the second term below with each term above, and so on. Each term below gives a column of four terms and these in the four columns are numbered from (*1*) to (*16*). The four enclosed terms (*6*), (*7*), (*10*), and (*11*) are the same as the four terms represented by Fig. 3. Of these, two are perfect crosses and two show the sexes reversed. The diagram shows every possible combination, and a study of these crosses in actual life would be very instructive. Combinations (*4*), (*7*), (*10*), and (*13*) are perfect crosses, evenly balanced with respect to color and sex. If qualities are transmitted in an erratic way, these combinations will show it. Numbers (*1*) and (*16*) are pure black and pure white, respectively; (*5*) has three black and one white, and (*8*) has one black and three white; from these combinations the comparative influences of color can be seen. Number (*2*) has two black females and (*15*) has two white females; from these the influences of sex can be learned. In fact, something is shown by every pair included between (*1*) and (*16*).

This method of notation has many advantages. It is extremely simple and renders the tagging of fowls easy and exact. Again, *b* and *w* may represent any quality that the breeder may desire to note, such as comb, shanks, hackle, feet, saddle, etc. In continuing this process of crossing, the breeder may find that black is dominant over white, in which case he may cross the strong in white, as (*14*) and (*15*), with the weak in black, as (*8*) and (*12*). This will give crosses in which white ancestry greatly predominates over black. The operation may be such as to give sixteen crosses or only four, the latter being shown in Fig. 5. In these combinations the white is three times the black. In (*1*) and (*4*) the sexes are reversed. Numbers (*2*) and (*3*) should show whether transmission is constant or otherwise.

$b^1\ w\frac{1}{2}$	$b_1\ w\frac{2}{1}$
$b^1\ w\frac{1}{2}$	$b_1\ w\frac{2}{1}$
(*1*) $b^2\ w\frac{2}{4}$	(*3*) $b\frac{1}{1}\ w\frac{3}{3}$
(*2*) $b\frac{1}{1}\ w\frac{3}{3}$	(*4*) $b_2\ w\frac{4}{2}$

FIG. 5

If the breeder wishes to continue the process of hybridizing, as he naturally will, he may select intelligently and make his combinations with mathematical certainty. The results will no doubt be disappointing, for there are many unknown factors in the problem. It is better, however, to proceed with precision rather than at random.

Suppose that he chooses to make combinations such as those shown in Fig. 6. Here the results are in strict accordance with Mendel's law. The following pairs are alike: (*3*) and (*7*), (*2*) and (*4*), (*6*) and (*8*). With respect to sex and color (*5*) is perfectly balanced, and (*3*) and (*7*) have the white male in excess. The diagram perfectly represents the combinations.

$b_2^1\ w^1$ $b_1^1\ w_1^1$ $b_1\ w_1^2$

$b_2^1\ w^1$ $b_1^1\ w_1^1$ $b_1\ w_1^2$

(*1*) $b_4^2\ w^2$ (*4*) $b_3^2\ w_1^2$ (*7*) $b_3^1\ w_1^3$

(*2*) $b_3^2\ w_1^2$ (*5*) $b_2^2\ w_2^2$ (*8*) $b_2^1\ w_2^3$

(*3*) $b_3^1\ w_1^3$ (*6*) $b_2^1\ w_2^3$ (*9*) $b_2\ w_2^4$

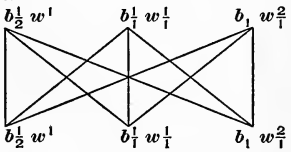


FIG. 6

6. Chart Illustrating Mendel's Law.—In his experiments, Mendel crossed peas of two kinds; one kind tall, and of robust growth; the other dwarf, and of more delicate foliage. His first discovery was that the qualities of tallness and robustness are dominant over the quality of dwarfness. This was shown at the first crossing, for instead of getting some plants of each kind and some intermediate in size between the parents, the entire output was tall and robust. This result created the expectation that the next crop would be tall like the plants of the first cross. They were not so, however, for the smaller, more delicate plants reappeared among those of the next generation, in the ratio of one to three of the tall plants. Later, however, he discovered that some of the tall plants were pure dominant (*Dp*), and would produce only tall plants ever afterwards. He discovered also that of each three of the tall plants, two were not *pure*, but *uncertain*, dominants (*Du*); for, when

planted, they produced *Dp*, *Du*, and small plants (*Rp*) in the proportion, respectively, of 1, 2, and 1. Because the small plants were entirely absent from the product of the first cross, Mendel called the quality of dwarfness or smallness recessive. The small plants reappeared, however, in the second cross, and always afterwards when he planted the uncertain dominants (*Du*). Moreover, they had rid themselves of the influence of the dominant plants, for they continued to come *true* ever afterwards, without intermixture or sign of the dominant characters. The uncertain dominants (*Du*) continued indefinitely to break up into *1 Dp*, *2 Du*, and *1 Rp*. This is Mendel's law, and it is shown exactly in Fig. 7. Mendel's experiments covered many other characters of plants, such as the color of their flowers, the size and shape of their leaves, the peculiarities of their seeds, etc.

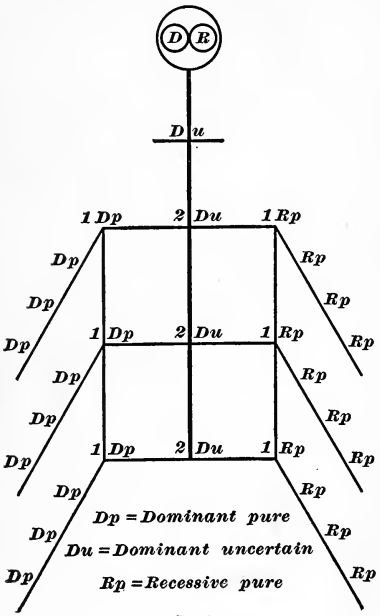


FIG. 7

Since his time, the question whether or not his law is applicable also in the breeding of animals and birds, and especially in poultry breeding, has led to considerable experiment and some dispute. The weight of evidence is strongly in the affirmative, though results are not so easily and quickly obtainable as in the case of plants. It is hoped, however, that poultry fanciers as well as thremmatologists in general will abandon

more and more the haphazard methods now followed, and will regulate their methods in accordance with the orderly procedure of science. But whatever may be the method of the poultry breeder, he should remember that the chances are always in favor of the fowl that has the desired points of excellence in the highest degree of perfection. The faulty and imperfect should be rigorously discarded, because only the best can be counted on to produce the best.

MENDELIAN EXPERIMENTS

7. The principles of Mendelism have been sufficiently applied to poultry to indicate that a close adherence to them might be of benefit to those who attempt cross-breeding in the hope of establishing a new breed or variety, but whether it will prove to be of value in the handling of breeds that are well established has not even been approached, in the sense of having yielded anything of value. The only facts that have been established are that the best results are obtained from fowls that are known producers, and that such individuals must be used for line breeding. For many years this has been well understood by breeders of experience.

Professor Bateson, M. A., F. R. S., of Cambridge, England, an authority on Mendelism, gives the following opinion in a recent publication: "To prevent disappointments, however, it must at once be admitted that for fanciers, Mendelism can do but little. 'Fancying' provides the chief interest in life for thousands of persons in this country. It is an occupation with which the scientific naturalist should have more sympathy than he has commonly evinced. If the scientific world had kept in touch with the operations of the 'fancy,' much nonsense which has passed into scientific orthodoxy would never have been written. The study of Mendelian phenomena will do something to bring about a fruitful exchange of experience.

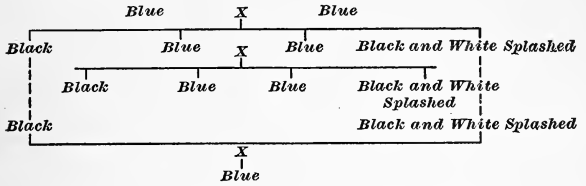
"But for the 'fancy' our work can as yet do two things only: first, in the study of the workings of the Mendelian system it will provide a most fascinating pursuit, which, if followed with

assiduous care, may at any moment lead to some considerable advance in scientific knowledge; secondly, the principles already ascertained will be found of practical assistance in the formation of new breeds, and may save many mistakes and waste of time. But applied to the business of breeding winners in established breeds, they cannot materially help, for almost always the points that tell are too fine to be dealt with in our analysis."

8. In the official report of 1910, the Minister of Agriculture of South Australia gives a report of experiments made by Punnett as follows:

"The White Leghorn breed of poultry is characterized by its pure white plumage. In this case, white plumage is dominant to colored, but the dominance is not quite perfect. When a white and a brown Leghorn are crossed, all the resulting offspring are white, but almost invariably they have a few colored feathers. Such birds give off an equal number of gametes bearing the white and colored characters. This is easily tested by breeding them together. Breeders have long recognized the difficulty of obtaining a pure strain of the Andalusian variety. No matter how carefully the blues are selected, they always throw wasters of two sorts: some pure black and others a peculiar white with black splashes. Careful breeding shows that on an average one-half of the offspring of a pen of Andalusians come blue, one-fourth black, and one-fourth splashed black and white. These proportions at once suggest that the blues are heterozygotes: for we have already seen that the breeding of heterozygotes results in one-half of the total offspring coming heterozygotes. If this is so, it follows that the blacks and splashed whites are by nature homozygous, and consequently ought to breed true. Experiment has shown that such is actually the case. Further, we should be led to expect heterozygous offspring from a union of two homozygotes. Here again the experimental results accord with the theory. When splashed black and white are bred together all the offspring without exception are blue. Paradoxical as it may sound, the mating of the black and white

wasters gives a proportion of blue Andalusians twice as great as the mating of blue with blue. The black and the white splashed are really the pure breeds. The pure blue Andalusian is, and from its nature must be, a mongrel. The fact is shown by the chart:



"This has long been known to most breeders as really the reason why Andalusians lack popularity. You cannot convince novices that blue is a hybrid color, a midway between black and white. Breeders have many times shown me letters full of abuse about the color of chicks resulting from the mating of first-class show Andalusians. To offer to sell a novice a pen of black and splashed birds as breeders would, of course, lead to trouble. In crossing a White Leghorn cock with a Black Orpington hen, the white of the Leghorn is dominant if the white male bird be used: but it is not so if the sexes be reversed. Many persons think that because all the chickens come white they will stay white when bred together, but that is not so. *F 2* will show white, and black and white, and black. Pure blacks will breed black; impure blacks will breed black and white. This latter may appear to be up in the air, but it has its practical application. Crossing a White Leghorn cock with a Black Orpington hen has already practical value in South Australia; they are our two standard breeds. Some persons like to keep both the light and the heavy breed. The progeny of this cross are white plumaged and have white legs, as demanded for export to England. I have a letter from Professor Bateson of the Cambridge University in which he says that the experiments I carried out the year before last at Roseworthy were most interesting. 'It is rather surprising,' he says, 'that these results—referring to a Black Orping-

TABLE I

LIST OF DOMINANT AND RECESSIVE CHARACTERS IN POULTRY

No.	Character	Dominant	Recessive	Notes
1	Comb	Rose	Single	As Wyandotte or Hamburg, over any single-combed breed
2	Comb	Leaf	Single	
3	Comb	Rose	Leaf	
4	Nostril	Narrow, low nostril	High nostril	Shown in crosses with Polish or Houdan, and fowl like Minorca or game with normally shaped heads
5	Cerebral hernia	No hernia	Hernia	
6	Crest	Crested	Smooth head	All first crosses with Houdan or Polish show traces of crest
7	Muff	Muffing	No muff	Crosses with Houdans or Faverolles show diminished muffs and beards in the progeny
8	Beard	Bearded	No beard	
9	Ear lobe	Red	White	White is a new character and red is difficult to breed out
10	Eye	Black iris	Red iris	The red eye is the ancient character of the *Gallus bankiva*, and though recessive to black yet is a stubborn recessive, and though latent, constantly reasserts itself. Pearl is frequently dominant over red
11	Eye	Red iris	Pearl iris	
12	Eye	Dark brown	Red iris	
13	Beak	White	Horn	
14	Beak	Black	Yellow	Both ancient colors. Sometimes one is dominant and sometimes the other. Black the most dominant character, then yellow
15	Beak	Yellow	Horn	
16	Skin color	Black	White	White and yellow skin are both ancient
17	Skin color	White	Yellow	Dorking over Indian Game or Cochin

18	Shanks	Feathered	Clean	Cochin-Leghorn, Cochin feathering has been bred out in the Orpingtons, but still reappears, and the Dorking white has conquered the Cochin yellow
19	Shanks	White	Yellow	
20	Shanks	Black	Yellow	Black usually dominant, as breeders of Wyandottes and Leghorns know. But yellow sometimes dominates and has covered the Minorca cross in Black Leghorns
21	Shanks	Yellow	Willow	Both ancient. Willow too often reasserts itself
22	Shanks	Blue	Yellow	Rose-comb Leghorn breeders with Hamburg cross will find this a crux, also Blue Leghorn if contaminated with Andalusian blood
23	Hock	Plain	Vulture	In crosses with Asiatic (vulture-hocked) and Mediterranean breeds (plain), the plain dominates and disappears much more rapidly than shank feathering
23A	Plumage	White	Black	All colored plumage is more or less recessive to white, which is a new character, but black sometimes dominates and sometimes mingles to form blue
24	Plumage	White	Pigmented	
25	Plumage	Black	Red	But frequently albinism results. Black is imperfectly dominant over red
26	Wing coverts	Red	Other colors	Red wing coverts are an ancient heritage from the jungle fowls, and red constantly reasserts itself
27	Shaftiness	Shaftiness	No shaft	A fault in Brown Leghorns, Buff Orpingtons, etc., hard to eradicate
28	Hackle	Solid black	Laced	Silver Laced Wyandottes crossed with Black Rocks lose the laced hackle, and many laced birds throw black hackles. Black is imperfectly dominant

TABLE I—(*Continued*)

No.	Character	Dominant	Recessive	Notes
29	Penciling	Penciled feathers	Plain	Said to be a "fundamental form of coloration in the genus *Gallus*." "A concentric repetition on the feather of alternating bands of the lacing and ground-color" (Partridge Wyandottes). Said by Davenport to be dominant but is certainly incomplete, and can be easily dominated by black
30	Tail	Black	Other colors	Black pigment persists in the tail (Cochin and Orpington), much more than in any other part of the plumage. It is an ancient heritage of the race
31	Tail Tail	Tailed Tail unlimited	Rumpless Normal tail	The Rumpies are modern and eccentric. The Yokohamas are dominant over normal tails
32	Color of eggshell	Brown	White	When the Mediterranean breeds (white-shelled eggs) are crossed with Asiatic (brown), the brown dominates, and the eggs are tinted. And the tinted egg is one sign among others of a cross. Leghorn and Minorca eggs are often tinted
33	Broodiness	Sitting	Non-sitting	Incomplete dominance until the "sitting" blood preponderates (a "sitting" Minorca or Leghorn is not reliable in its brooding)

ton cock and a White Leghorn hen—should differ so materially from that of the reciprocal mating. Perhaps some individual peculiarity of the parent was the cause. I should be glad to hear results of the repetition of that experiment.'

"I have repeated these experiments. We had two or three pens of reciprocal matings and used exactly the same blood, with the result that the White Leghorn cock and Black Orpington hens produced all chickens with white plumage and white legs. In the case of the Black Orpington cock and the White Leghorn hen, some of the progeny were black: all had more or less black in plumage, and all had black legs. The great point about Mendel's law is the recognition of the unit character—that is, the purity of the germ cell. If new blood is introduced, the inevitable result will be reversion and a manifestation of the true import of Mendel's law of segregation."

DOMINANT AND RECESSIVE CHARACTERS

9. The greatest influence, according to Mendel's law, comes from the dominant character, but without the recessive agent the consummation of the purpose intended cannot be accomplished. When a fuller realization of the meaning of this law has been reached, a more definite application can be made. By permission of the publishers of "The Poultry Manual," written by the Rev. T. W. Sturges, M. A., of England, a list of dominant and recessive characters in poultry as compiled by the author is given in Table I. The author states that the list has been gathered from various sources and that the data are not given as decisive and certain but that they are the results of careful experiments and are likely to be useful for future guidance.

MODERN METHODS OF PRODUCING EXHIBITION POULTRY

INFLUENCES AFFECTING OFFSPRING

10. Influence of Original Breeds.—The original fowls from which modern breeds have descended need be considered only in mating poultry for best results, as a guard against undesirable qualities they may have had. Chance matings cannot give any hope of success. Only careful matings should be practiced. Due consideration should be given to every influence that will affect the offspring from the matings. The original breeds from which all poultry has come have been so improved as virtually to change them into new breeds. Not all defects, however, have been removed from the blood lines which descended from them. More of these faults occur in breeds that have been formed by intermingling several of them. For this reason more dangerous influences will be found in new breeds than were possessed by the originals.

The multiplication of varieties in each breed has increased influences that may become detrimental. In making new breeds and their subvarieties more different kinds have usually been brought together than would have been the case if careful study had been given in advance to their creation. A reference to the history of the origin of the Columbian Wyandotte will expose the underlying dangers, which are apt to show their supremacy at a time when least expected. Better results might have been more quickly obtained if other lines had been followed. Among the strains that have been established by more simple methods are frequently found individuals of surprising qualities. These, when mated with fowls of another strain, may prove to be disappointing. Their introduction may improve some qualities, but their good influences are apt to be destroyed by the bad influences hidden away because of a faulty beginning.

11. Influence of Sex.—Some cockerels resemble their male parents and some pullets resemble their female parents. This is accepted as proof that influence descends from the male parent directly to the male offspring and that the female is dominant with the pullets. This is called the *influence of sex*, and it is mentioned frequently when it occurs. No mention, however, is made of the thousands of fowls that do not resemble their parents. That influence of sex does exist is freely admitted, but that it exists to an extent that will control the form and color of all offspring cannot be proved. When a few instances of atavistic reversion occur, loud mention is made of them; nothing is said, however, of the thousands of instances when it does not occur. Influence of sex may be extended by selection; whenever parents stamp their own resemblance on any number of their offspring, it is frequently from breeding in line or from inbreeding, and not the influence of sex.

Because a few fowls are so like their ancestors as to attract attention is no reason for believing that markings of plumage can be controlled through the influence of sex. Form, color, and markings are established by careful mating of fowls with the reproducing qualities needed to produce the form and color desired. Influence of sex will show from such matings, but such influence will not control. To establish sex influence will require more delicate handling than is possible in breeding poultry. The uncertainties that are always present render assured results impossible. The one safeguard against contamination when such trials are made is separation without possibility of interference. Claims cannot be accepted when the results must depend upon eggs produced by hens that have not had their freedom restricted.

12. Influence of the Male.—That the male has more or less influence over the offspring must be admitted, but just how far that influence extends must continue to be uncertain until more definite information can be gathered. The mere fact that a line of cockerels resembles the male ancestors does not prove that this likeness is the result of male influence. Hamburg cockerels resemble Hamburg males just as Hamburg

pullets have a likeness to Hamburg females; but that all pullets or all cockerels of this breed have likeness to a particular ancestor can scarcely be proved. Although these have been, perhaps, more carefully bred than other kinds, their offspring may differ materially from one another. The same is true in all breeds and varieties. There are but few strains so well established as to produce each season even a few cockerels and pullets that inherit so striking an ancestral resemblance as to make possible their selection with any certainty of results. Theory or belief frequently leads to conclusions that cannot be substantiated.

13. Influence of the Female.—There is more evidence of parental influence through the female than the male. From producing hens, strains have been established even when males of only medium quality have been used. Failures have been frequent from using the highest grade of males with females of medium quality. Seldom, if ever, have satisfactory results come from mating males of the highest grade with females of indifferent quality. In many instances good results have been obtained from females mated with males of indifferent quality. Such results have occurred frequently enough to have established the belief that greater parental influence comes through the female than through the male. Such influence can be traced through every line of breeding, and in each kind of domestic animal this influence can be seen. The best results are never obtained from females of inferior quality, but marvelous results may come through the use of the highest grade of females, even though the male line is not of the most desirable kind.

A producing female should be highly prized. A few desirable females will, if properly mated, produce more offspring with desirable qualities than will come from the use of a hundred hens of a poor quality, although of the same variety. This may occur even though the males mated with the inferior females are of a better quality than those mated with the better hens. It is certain to occur if all the males are of a superior quality, provided the lines of breeding are not antagonistic.

Such comparisons are made for the purpose of emphasizing the absolute necessity of having hens of superior quality from which to produce the finest exhibition fowls.

14. Influence of Previous Matings.—There is a belief more or less prevalent that the first male mate of a hen continues to influence her offspring even after it has been supplanted by another male. The potency of the immediate sire of any given brood is of course conceded to be greater than that of any or all preceding mates of the mother; nevertheless, certain theorists contend that the male influence is persistent, and that each later chick is indebted in some measure to the earlier mates of the mother hen. They insist that the rudimentary ova are modified or influenced in some inexplicable way by the first mating. They believe, too, that this persistence of male potency obtains not only with birds but with the mammals also, including man.

A careful investigation of this subject has proved that the theory has no basis whatever in fact.

METHODS OF BREEDING

LINE BREEDING

15. Line breeding consists in mating fowls in a direct line from certain ancestors in a manner that will improve in the offspring all the desirable qualities of the parents and will establish the most desirable traits. When line breeding has been successfully applied, it may be continued for a number of years without the introduction of new blood into a flock. To accomplish this, care must be continually given to the selecting of the healthiest individuals from among the best of the offspring. Strength and vitality must be maintained, even though all the chicks are hatched and reared in the natural way.

To obtain the best results from this manner of breeding, fowls of superior qualities must be selected as the foundation stock. Three or four females and a male may be selected

as a beginning. The chicks from each hen must be toe-marked for identification, the toe markings to be continued as the identification mark of the blood lines that descend from each female. If the chicks hatched the first year from each hen are all satisfactory, from the fact that they are an improvement on the original, the first year's breeding has been successful. If the chicks from one or more hens are superior to all the rest, they with their chicks should be retained; the inferior chicks and their mothers should be discarded.

To avoid loss of vitality, only mature hens should be used in the breeding pen. Hens in their second or third year of laying will, if vigorous, produce chicks with health and vitality. Pullets are less likely than hens to produce vigorous chicks. To continue the process, hens in their second or third year should be mated with the best cockerels, each mating being headed with a cockerel that comes from one line, the pullets being selected from the lines that have descended from hens other than the ancestor of the cockerel. All the several qualifications of size, shape, and color must be established to the fullest extent, for in no other way will the blood lines established prove to be of value; and these lines must be kept separate from each hen and from each male fowl as well, when more than one has been made use of in breeding them.

INBREEDING

16. Inbreeding is the mating together of closely related fowls, year after year, in direct line, from a few original fowls. This differs materially from line breeding, from the fact that the best fowls resulting each year from such matings are again mated and remated even to the extent of pairing brothers and sisters in an effort to establish certain desirable qualities. This practice is frequently kept up indefinitely in the hope of establishing better color. Shape may be improved in this way; rarely, however, is such the case. Loss of size and deterioration of shape are misfortunes that usually follow inbreeding. Vitality will often become less vigorous in flocks where inbreeding is practiced.

Such undesirable consequences may be avoided by the method of selection and through the practice of migration. To gain the best results from the practice of inbreeding, eggs from mature hens only should be hatched, and only the most vigorous of all should be selected for this purpose. No fowl, either male or female, lacking in vigor should be bred from. This must be rigidly observed or vitality will quickly wane. *Migration* consists in sending pullets a distance away where they may have the advantage of a change of climate and soil. The pullets may be returned as yearling hens and used as producers. Cockerels also may be sent into a locality entirely different—one where a limestone soil prevails will be of the greatest advantage. To illustrate: a strain of fowls was originated and constantly kept where there was a clay soil. Pullets and cockerels of this strain were sent away each year more than two hundred miles. There they roamed at freedom over fields and woodlands where a gravelly, limestone subsoil prevailed. The hens were brought back and used when 2 or 3 years old for producing the eggs for hatching. Some were mated to cockerels of the year before; some to those that had been sent away and returned. Some of the cockerels that had been sent away returned as yearlings and were used both with hens that had been in migration and with hens bred at home. This practice was followed during a period of 7 years, no new blood whatever being introduced into the flock. Size, shape, and color were all improved and there was no evidence of failing vitality. Birds from this flock won prizes east, west, north, and south; they were sent into Mexico and Australia, and in both countries their excellence was recognized. It was not unusual for every egg of a dozen or fifteen placed under a hen to yield a strong, vigorous chick. Later, when new blood was introduced, it was brought into the flock by a cockerel and pullet specially selected for the purpose.

To be successful in inbreeding, perfect records of the blood lines must be kept. A most complete system of marking must be followed; the toe punch must be used constantly; every chick that is hatched must be so marked as to be identified without doubt as to both of its parents. The hen and the

cock of the mating must be recognized with certainty by their toe marks. To increase the certainty of recognition, in addition to toe markings, sealed leg bands may be used; when identified in this way, the greatest possible distance in relationship may be assured. Weaklings and those that produce them may be traced in this way, as may also deformities of body. The practice of establishing first the color and markings and afterwards the size and form, usually results in the loss of the latter, and when the attempt has been made to regain these desirable features, color is lost. The only safe method to follow is that which is carefully directed toward the retention, at least, if not the improvement, of all three qualities. The practice of placing too much emphasis on beautiful color of fowls that lack size and breed characters has encouraged the plan of working for color. The best rule is to endeavor to secure the most nearly perfect size, shape, color, and markings all combined.

To influence color and markings, fowls possessing these to a marked degree should be selected for the mating. If size, shape, and perfect colors are possessed by individual fowls, advancement will be made more quickly than by the use of fowls lacking in any of these desirable qualities. Yet, one cannot always be so fortunate as this, and when color is most desired, size and shape may be sacrificed to a limited extent; when size and shape are the features demanded, color may in a measure be neglected. No matter how well the fowls may be selected, size, shape, and vigor are apt to dwindle in the order mentioned.

To overcome these dangers, new blood may be gradually fed into the blood line of the fowls used for inbreeding. To do this, a vigorous hen of large size, perfect type, and of as good color and markings as possible should be chosen; this hen should be mated to the best cockerel produced from the inbred stock of the year before. If the offspring resulting from this mating are desirable, the same hen should be used another year and be mated to the best cockerel that was bred the year before from the inbred stock. The best pullets bred from this hen should be mated to their own sire. If the offspring from

this mating are what they should be, the best of them may be mated as new blood into the line of inbred stock. No attempt should be made to use the new blood until the second generation has proved successful; and the second or subsequent generations only should be used. This same process may be repeated year after year, the result of which will be cockerels, which may be mated each year to one or two of the best hens of the inbred stock. Hens in their second year from the same blood may be mated to the best cockerels of the inbred line.

The foundation stock must be as nearly perfect as possible in size, shape, and color. Fowls for foundation stock should be chosen from flocks that possess the desirable qualities hoped for, and they must be perfect so far as can be determined. This is necessary from the fact that in future generations imperfections may spring up which did not make their appearance in the first cross. If undesirable features make their appearance in the first cross, new hens should be selected and the ones used the previous year should be mated to another cockerel to prove whether the dangerous features came from the hen or whether they were brought to the surface by the union of the two. If they came entirely from the hen, they will reappear later; if they were due to both parents, they are apt to occur again. If they do not make their appearance in the result of the second mating, this fact may be accepted as satisfactory evidence that the fault was in the first male selected. No chance work may be permitted in selecting fowls for this purpose, and, in addition to this, unusual care must be given to the keeping of records and the intermingling of blood lines, to avoid dangers that are apt to follow.

STRAIN BREEDING

17. A **strain,** as defined by the American Poultry Association, is: "A family of any variety of fowls bred in line by descent by one fancier, or a successor, during a number of years, that has acquired individual characteristics which distinguish it more or less from other strains or specimens of the same variety." This plainly indicates that a strain must

descend in line from individuals that are able to transmit their characters through a series of generations, and it can be plainly seen that a strain of fowls cannot be established in a few years. Even when the third or fourth generation from the original ancestors has been reached a strain has not necessarily been established. Although line breeding may have been practiced to this extent, unless qualities have been established that assure the recurrence of better and better offspring each year, a strain will not even have been started, much less established.

It is thus evident that a valuable strain cannot be produced at all except by the most careful selection of the foundation stock, and the most skilful mating in later generations, so that the stock will continue to improve each year to such an extent as to establish a strong family resemblance in the offspring. Chance breeding cannot be relied on to produce satisfactory results, and it should be realized that there is a great difference between a man trained to raise poultry commercially and a man skilled in the art of mating fowls to produce exceptionally good results for exhibition.

In introducing new blood into a strain, it should always be borne in mind that exceptionally beautiful prize-winning fowls are not always the best to use for this purpose. It often occurs that a prize winner may be said to belong to a certain strain because it is beautiful or because it may greatly resemble the fowls in the strain. Such statements are misleading. The careless introduction of such a fowl into a strain might prove injurious.

18. Selection of Foundation Stock for a Strain.—The most important requirement in the establishment of a strain is to maintain the true breed formation, and before a poultryman attempts to select the foundation stock for a strain, he should have a perfect conception of what the true breed formation is. Although there is a distinctive formation for each breed, and each variety is supposed to have the same form, it is seldom that this is the case. To convince himself of this fact, a poultryman has only to examine a large number of prize-

winning fowls of a single variety, and he will see that numerous types are present. This state of affairs is due to the fact that each breeder has drawn his own conclusions as to what is the proper form for the variety, and has produced fowls that conform as nearly as possible to his ideal. If all or a number of these types had been produced by one person it would prove either that he did not understand the true type of the breed or that he had bred a number of types in the hope of winning the approval of a large number of people.

This great variation in type makes it necessary to select a type that both suits the fancy of the person who is to breed the strain and comes as near as possible to his idea of Standard requirements. Without such a conception a person will scarcely be competent to select the proper foundation stock for a strain.

In choosing both the male and the female to start a strain, special attention should be given to the head, comb, wattles, and ear lobes. These should be as near as possible to the poultryman's ideal of perfection. No fowls that have any defective features of the head or comb should ever be admitted to a strain, for the reason that as more or less inbreeding must be followed, these defects will become exaggerated in future generations. A slight imperfection in the comb of a female is likely to be exaggerated in the combs of the cockerels she will produce. Small, low-set combs of perfect form and with beautiful serrations are always the best. Uneven serrations or a lumpy enlargement at the heel of the comb in either parent will probably be followed by the much despised feature of side sprigs in the offspring.

Of the two parents, the female is the important one to have as nearly perfect as possible. The male will influence the offspring largely in head points, color, and finish, but size and breed characters are influenced more perhaps by the female than by the male. No matter how nearly perfect a male may be, if mated with a female of inferior quality, poor results will be obtained. A female of the highest character will produce better offspring when mated to a male lacking in breed characters than an inferior female mated to a male of the highest

character. The same principle holds true in breeding livestock of all kinds, and in all forms of plant life by regarding the female as the analogue of the soil. However perfect a seed of any kind may be, it will yield inferior results if planted in poor soil; inferior seed of the same variety planted in rich, fertile soil is apt to yield surprising results.

Too much stress cannot be placed on the value of selecting the proper females. Game fanciers in all ages have appreciated the value of the producing hen, and although it has always been possible to purchase large numbers of males from game fanciers, seldom, if ever, has it been possible to get producing hens of the highest quality out of the yards of those who breed the purest blooded and the best type of game fowls. A producing hen, from the standpoint of the game fancier, is not one that lays a large number of eggs, but one that has the power to transmit sterling qualities to her offspring to such an extent as to give them the power to transmit these qualities to their offspring. A first-class producing hen should be capable of producing both cockerels and pullets of high-grade exhibition quality. Many hens of the highest quality fail to produce any considerable number of exhibition fowls. Others will produce better cockerels than pullets, and some will produce better pullets than cockerels. A line of producers has not been established until the offspring of the second generation, both males and females, are found to be better than their grandparents. Such a strain will be valuable if it can be held together without loss of vitality, form, or color. The ability to do this is the fancier's art, for excellence cannot be produced consistently by chance, nor can it be perpetuated if careless methods are practiced. One old-time fancier, now dead, who produced hundreds of the choicest exhibition fowls, accomplished his results by the most careful selection. Speaking of his methods he said: "The family in this yard has produced, without change, for many years. When the sire is gone, he is replaced by one of his own best sons; if a hen fails me, her place is filled by one of her own best daughters." He thus bred and improved this one strain for more than a quarter of a century without introducing any new blood.

A complete record of each male and female was kept, the eggs from each hen were hatched separately, the chicks were toe-marked and leg-banded to preserve their identity as long as they existed, and all of the chicks were raised by hens.

19. General Plan of Mating Fowls in Strain Breeding.—The first mating for the purpose of establishing a strain should be made with the greatest care. One or more males, as may be needed, should be selected for their individual excellence from a strain the fowls of which have been known to breed well for a number of years. Two or three females should be selected for mating with each male. These females should have the same desirable qualities as the males. Hens in their second year of laying that are known to have produced good offspring as pullets will be the best, if they can be secured. If two or more pens are started, each pen should include one male and two or three females. An equal number of fowls should be placed in each pen.

The hens selected should have the fewest possible imperfections in size, form, and color, and no effort should be made to overcome an imperfection in one fowl by an extraordinary development of the same quality in the other. A hen with a bad comb, for instance, mated to a male with a perfect comb is not apt to produce cockerels with desirable combs. A back that is too short may sometimes be lengthened out slightly in the offspring by mating such a female with a male having a long back, though there is no certainty that perfection in this respect will be obtained by such mating. Deficiencies of breast in the male may be improved in the offspring by mating such males with hens with well-developed breasts, but, on the other hand, offspring from hens lacking in breast and body formation are not apt to have these qualities in any degree of perfection, even though the male be perfect. To insure success, it is necessary to have the nearest possible approach to perfection in all respects in both parents. It is not worth the time and the expense to try to overcome a defect in one parent by having the corresponding quality more nearly perfect in the other.

The eggs from each hen must be hatched separately, and the chicks marked for future identification. When all the offspring have matured, those from each hen should be kept until they are of good size, and the quality of both males and females carefully examined and considered. If it is found that one or more of the original hens have produced but few good offspring, they may be considered undesirable, even though some of them may have produced either excellent cockerels or excellent pullets, as stated before. If some of the original hens have produced a considerable number of desirable offspring of both sexes, these hens with their offspring should be selected for building up the strain. If thought advisable, the hens that did not produce satisfactory offspring may be mated with males of a different strain, and the same method of judging the offspring applied; if no better results are obtained from these hens in this second mating, they and all their offspring should be discarded. If any of these hens show good results in this second mating, they may be bred from further, though all their offspring should be kept apart from the others and carefully watched to see that they continue to be of good quality.

In order to secure the best results in strain breeding, offspring of desirable quality should be obtained from two or more hens. After this has been done, these offsprings should be crossed; that is, males from hen No. 1 should be mated to females from hen No. 2, and the females from hen No. 1 to the males from hen No. 2. The cocks that have been successful in producing good offspring in these matings should be mated to their own best daughters, and the hens should be mated to their own best cockerel. Cockerels of the present year should be mated with hens that are more than a year old—almost 2 years old would be better. This system should be followed to improve the stamina of the strain, and it will be successful, provided that only fowls of abundant vitality are used for breeding purposes.

20. Introduction of New Blood Into a Strain.—The introduction of new blood into an established strain must be

done with caution. The first step in doing this is to select a 2-year-old hen of the highest character outside of the strain, and to mate her with one of the best cockerels of the strain. If the offspring from this mating are satisfactory, one or two of the pullets thus produced and the parent hen should be mated to the original male, and one of the best cockerels from this mating should be mated with one of the best hens of the strain in her second year of laying. If the offspring from the pullets mated to their own sire and from the cockerel mated to a hen of the strain are better in quality than any of the cockerels and pullets produced the previous year by the original new hen, this will be satisfactory evidence that the new blood is of good quality, and the offspring of this third generation may be sparingly infused into the blood lines of the strain.

Sometimes the fancier prefers to select a male from outside the strain for the introduction of new blood. In such case, the male should be mated to two or three of the best hens of the strain. If the offspring from these crosses show an improvement over their parents, some of the pullets so produced should be mated to their sire, and one of the best cockerels should be mated to his mother to test the producing quality of the new blood. Even though the offspring from both of these series of crosses may be reasonably desirable, caution should be exercised in the introduction of this blood into the established strain. It should not be attempted before the third generation.

In both of the above methods, if the offspring are not altogether desirable, the entire lot, both the original fowls and the younger ones, should be discarded, new fowls obtained, and the trial repeated. It is always desirable to have new blood ready to introduce into a strain, and to accomplish this it is advisable to have one or two hens of desirable quality constantly being bred as just described.

21. Maintenance of Quality in a Strain.—It is of the greatest importance to maintain quality in a strain of exhibition poultry. This means that the fowls must possess in the highest degree the three requirements of size, shape, and

color. After the best obtainable fowls have been selected for the establishment of a strain, it is necessary to select the offspring from these in such way as to increase the good qualities of the fowls to the greatest possible extent. The fowls in the strain cannot remain stationary, or just as good as the originals. They must either improve or deteriorate in quality. As soon as there is any evidence of a decline in any of the three essential qualities of the strain, it will be necessary to introduce new blood into it, if success is to be maintained.

Size can be maintained by breeding from good-sized hens that possess abundant vitality. Pullets should seldom, if ever, be used for the perpetuation of quality, because immaturity in the females counts against size and vitality in the offspring. Shape can be maintained by breeding from fowls that possess it to a marked degree. In solid-colored fowls, such as white, buff, and black, color can be most easily maintained if fowls of good, even color, having excellent shape, are bred from. In parti-colored fowls, or in fowls that are striped, barred, penciled, or blended with two or more colors, it will be more difficult to maintain perfect color and markings. The details of color breeding will be fully discussed in treating of each variety.

METHODS OF MATING

22. Mating is the act of pairing a male and a female for the purpose of producing offspring. When fowls are mated to produce other fowls suitable for exhibition, the breeder selects the fowls for mating with a view to obtaining in the offspring a certain combination of desirable characters. It is never possible to obtain more than a certain percentage of desirable offspring from any mating, but this percentage will be high or low according to the skill of the breeder. Two important factors influence the value of the results: the ancestry of each parent must be accurately known; and absolute control must be maintained over the fowls that are being mated, so that the breeder may know that those he desires to mate actually do so, and that no others mate with them.

The most successful breeders of poultry are those who have managed their fowls best and have been able to control their matings with the greatest certainty. The rate of improvement in poultry, or in fact in any animals, lessens as the uncertainty of the matings increases. Notwithstanding the fact that poultry will reproduce more rapidly than horses, cattle, sheep, swine, dogs, etc., these larger animals have been more easily improved in every way than poultry, because the sire and dam can be better controlled. The uncertainty in regard to the blood lines of fowls retards their improvement.

Real quality in exhibition fowls can be reproduced only by the most careful mating, so that the succeeding generations possess as far as possible all the qualities that are demanded by the Standard. The average quality of exhibition fowls is getting higher year by year, and each year in many localities the honors of the show room go to better fowls than those of the year before. To keep pace with this, it is necessary to practice the most successful methods in mating, as well as in raising, exhibition poultry. The practice of breeding fowls promiscuously and selecting the best offspring for exhibition, cannot be followed with success.

23. Mating in Pairs.—The mating together of a male and a female fowl in such way that the parents of the offspring can be definitely known is called **mating in pairs.** This does not commonly mean that a male should be mated with but one female, but rather that a female should be mated with but one male. There are two principal methods of mating in pairs. The first is to confine one male and several females in a yard and trap-nest the females. As the sire is the same for all the chicks, it is thus possible to know the parents of all the offspring. Trap nests, however, have been objected to on the ground that they are annoying to the hen and disturb her sufficiently to lessen her power of producing at her best. For this reason some breeders prefer the second method of mating in pairs. This consists in having a separate pen and yard for each hen, and transferring the male from pen to pen during the mating season.

24. Single Mating.—When fowls are mated for the production, from the same pair, of both male and female offspring fit for exhibition, the process is called **single mating.** This may be practiced with most varieties. Attempts have frequently been made to produce by single matings the most delicately marked fowls of the varieties most difficult to produce, but seldom have the results been equal to those produced by double mating. Fowls of fairly good quality in Barred Plymouth Rocks and Brown Leghorns have been produced by single mating, but the most desirable shade of color in both of these, as demanded at the present time, cannot be produced by single mating.

25. Double Mating.—The mating of one pair of fowls for the purpose of producing male offspring, and another pair for the production of female offspring is called **double mating.** This is practiced to a great extent in the production of Barred Plymouth Rocks, Brown Leghorns, partridge-colored fowls of all breeds, and to some extent in producing fowls that have penciling or lacing in their plumage. A detailed explanation of the proper method of double mating will be found in the directions for mating varieties in which this practice is followed. In double mating, great care must be taken to see that the male and the female blood lines are kept separate; if the blood lines are crossed, color will be injured.

26. Yard Mating.—The keeping of a male and several females together in yards, or mating in pairs, is termed **yard mating** when neither trap nests nor other system of identification of the eggs of each hen is employed. Consequently, yard mating is not accurate enough for scientific breeding.

27. Theoretical Mating.—No matings are more certain of failure than the ordinary **theoretical,** or, as it is often called, **haphazard mating.** Fowls selected only because of their outward appearance seldom produce satisfactory offspring. For instance, the mating of a few hens gathered from different flocks with a male from another locality is likely to result in disappointment, even though all of the fowls may be of fine quality.

Matings between fowls deficient in some characters with fowls that are overdeveloped in these respects, on the supposition that the offspring will be a happy medium, seldom produce satisfactory results. The same is true when a dark-colored male and a pale-colored female of the same variety are mated together in the hope of producing a medium shade in the offspring. The result is usually an undesirable mottled effect.

Many other instances of theoretical matings might be noted, but the foregoing are sufficient to illustrate. It should be borne in mind that theoretical matings are of no value until they have been thoroughly tested in a practical way, because experience has shown that the great majority of theoretical matings will not produce the results expected of them.

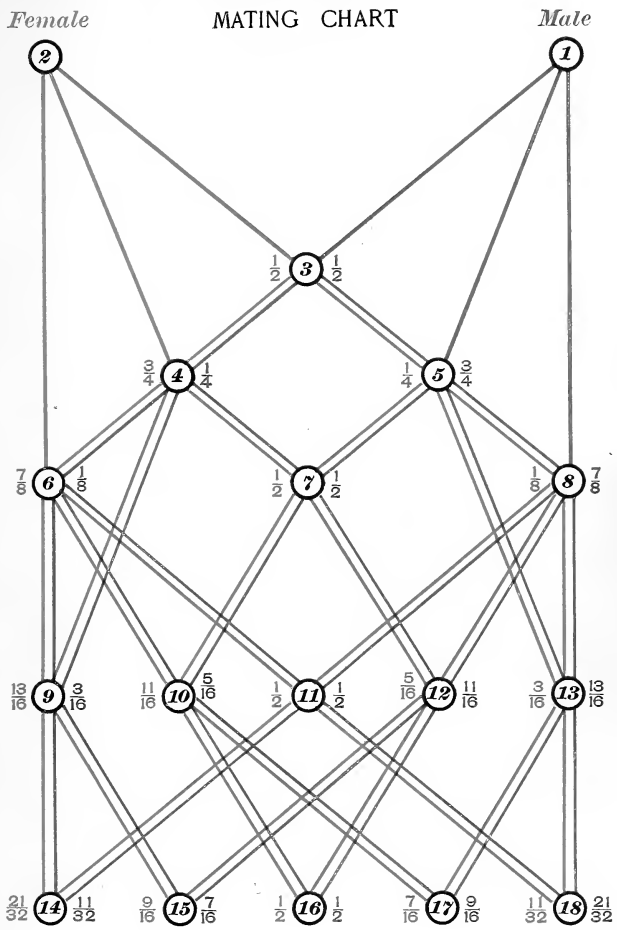
28. Practical Mating.—The matings that are made after a breeder has had considerable experience in careful breeding are called **practical matings,** and if the breeder's experience has been of the proper kind, such matings are likely to be most prolific of good results. There are breeders who, year after year, produce fowls of the highest quality and of the varieties most difficult to handle. Only such fanciers as are fully equipped for securing improvements with the varieties they handle are able to secure good results.

To be successful, a breeder should possess the following characteristics: a full determination to succeed; a full knowledge of Standard requirements; familiarity with methods that have been successful with the strain he is handling; the ability to select quality, that is, the proper size, shape, and color; and the patience to be content to work year after year with the idea of ultimately being able to establish a strain of fine quality. It would be mere chance that a breeder should be able to select quality of a better kind than he had ever seen.

MATING-CHART SYSTEM OF BREEDING

29. The work of poultry breeding is gradually assuming the precision and certainty of an art directed and controlled by science. The time is rapidly passing when chance is to have sway in the poultry yard, for the keen and intelligent rivalry among fanciers has rendered the observance of scientific methods indispensable. The art of combining every factor of physical excellence into an ideal strain of poultry, and of then working along straight lines until this ideal strain has become actual is the aim of every scientific breeder. In the attainment of the best results, there are many aids, among which a good mating chart such as shown in Fig. 8, is perhaps the most helpful. The first guides of this kind had many faults; they were vague, unsymmetrical, and confusing; and, in consequence, they served but poorly the purpose for which they were intended. It is believed that the chart there shown has few of the faults referred to, and that it will be found a trustworthy means of directing the procedure of the poultryman.

30. Description of the Chart.—The lines of the chart are in two colors, blue and red. The blue lines represent the blood of the male, and the red lines show the blood of the female. The groups of offspring from the various matings are indicated by circles numbered from *3* to *18*, and beside each of these circles are fractions in blue and red showing the quantity of male blood and female blood, respectively, in each group. The chart shows only a few generations, but it is, of course, capable of indefinite extension; or it may be used without extension. Thus, if a pair of fowls be selected from any group, as, for example, from group *18*, the male may be regarded as *1* and the female as *2*, and the chart will serve as before. The groups *3*, *7*, *11*, and *16*, which are equally distant from the sides, show an equal quantity of male and female blood from the original pair. The groups on the right of these have an excess of male blood, and those on the left, an excess of female blood. To find the fractions showing the proportion of male to female blood in any group, it is necessary only


Female
MATING CHART
Male
2
1
1/2 3 1/2
3/4 4 1/4
1/4 5 3/4
7/8 6 1/8
1/2 7 1/2
1/8 8 7/8
13/16 9 3/16
11/16 10 5/16
1/2 11 1/2
5/16 12 11/16
3/16 13 13/16
21/32 14 11/32
9/16 15 7/16
1/2 16 1/2
7/16 17 9/16
11/32 18 21/32

240 ⅔ 2

FIG. 8

to halve the blood in the two groups from which the group in question is derived. Thus, group *18* comes from groups *11* and *13*. In these the blood of the female represented by *2* is $\frac{1}{2}+\frac{3}{16}$, or $\frac{11}{16}$. This divided by 2 gives $\frac{11}{32}$ as the quantity of blood from *2*; and $\frac{1}{2}+\frac{13}{16}$, or $\frac{21}{16}$, is the total blood found in *11* and *13* of the male ancestor *1*. One-half of $\frac{21}{16}$, or $\frac{21}{32}$, is the quantity of male ancestral blood in group *18*.

By comparing groups equidistant from the middle of the chart on the left and right the breeder can determine the dominance over certain features that is possessed by the male or the female ancestors. Thus, a comparison of *15* and *17* will determine the question of prepotency as between the male and the female ancestor. The chart, in short, is a perfect and trustworthy guide in experimenting for the establishment of any feature desired in the offspring.

31. A detailed explanation of the chart may be made as follows: The first year the original male *1* and female *2* are mated and produce the offspring in group *3*, the blood of each of the individuals of which comes half from male *1* and half from female *2*.

The second year female *2* is mated to one of her own sons from *3* and produces *4*, a group in which each of the fowls derives three-fourths of its blood from female *2* and one-fourth of its blood from male *1*. Similarly, the second year male *1* is mated to one of his own daughters from group *3* and produces *5*, a group in which each of the fowls derives three-fourths of its blood from male *1* and one-fourth of its blood from female *2*.

The third year a cockerel from *4* is mated with female *2*, who is his grandmother, to produce *6*. Each of the fowls in *6* will thus derive seven-eighths of its blood from female *2*, and only one-eighth from male *1*. Likewise, in the third year, one or more pullets from *5* are mated with male *1* to produce *8*. Each of the fowls in *8* will thus derive seven-eighths of its blood from the original sire *1* and only one-eighth from female *2*. In the same year, pullets from *4* and cockerels from *5*, or vice versa, will produce *7*, a group in which each of the fowls will

derive half of its blood from male *1* and half from female *2*. The members of *7* will thus have the same blood elements as those of *3*. Considered from a theoretical standpoint only, it would be possible to obtain the same results, that is, fowls with the same blood elements as those in *7*, by mating together full brothers and sisters from *3*, but this is not considered an advisable practice, because the mating of brother and sister hastens degeneration.

The fourth year the groups *9*, *10*, *11*, *12*, and *13* are produced, and the fifth year the groups *14*, *15*, *16*, *17*, and *18* are produced by the matings that are indicated by the lines on the chart.

As already stated, this system may be carried on for as many years as may be desired, provided only mature hens of marked vitality, having the best size, shape, and color, and males having similar qualities are used for breeding. Special care must be taken to keep the identification markings of the fowls in each group exact, because it is only by mating the fowls from the proper groups that the best results can be attained. If the identity of the fowls is lost it will be impossible to continue the breeding system with any degree of certainty.

PLUMAGE COLOR IN FOWLS

32. Color in the plumage of poultry is due to the secretion of certain pigments from the blood. The mixing of these pigments by cross-breeding produces blends and mixtures of colors. The colors common to poultry are black, red, white, buff, and blue. Red is seldom if ever found alone in the plumage of fowls; it is usually accompanied by black. Black plumage is apt to show both white and red markings. Partridge-colored fowls have red and black shading in their plumage. Buff is usually accompanied by either black or white or both. A buff fowl of an absolutely true color, without either shadings of black or white, would be almost a novelty. Pyle Game fowls show spots of black in the white feathers. Blue results from a mixture of black and white.

33. Sources of Color in Poultry Plumage.—Shades of color and markings change so frequently in the poultry world that if the breeder desires to keep up to date he must be able to produce them, and in order to do this, he must understand what fowls these colors originated from. The sources of the various colors in poultry is in their ancestors. The black-red combination is found in the red jungle fowl and in the Malay and Aseel game fowls. White and the various shades of gray are common in the Yokohama fowls and in the Ceylon and the gray jungle fowls. These fowls have also red, black, buff, and blue in their plumage. So far as is known, the Cochins were the original buff fowls, and the partridge color in modern fowls came through the Partridge Cochin.

34. Stability of Color and Markings.—Poultry fanciers are apt to be led astray when speculating as to the natural stability, or fixedness, of the original markings and colors in wild fowls. The truth is that the most beautifully plumaged wild fowls, such as quail, wild water fowls, wild turkeys, ostriches, and even such modest birds as the sparrows, are no more exact in their colors and markings than are the best of domestic poultry in which the colors and markings are most difficult to maintain. This is fairly conclusive proof that nature never intended that individuals of even a narrowly restricted group, like a variety, should be perfect copies of one another. The same principle will be found to hold true in leaves, spears of grass, flowers, etc. If it were not for this variation, all possibility of a diversity in nature would be removed, and the result would be a monotony that would be wearisome to both the eye and the mind. Unity in variety is the universal scheme in nature.

35. Black Plumage and White Plumage.—These two types of plumage, because they are exact opposites of each other, are considered together. White is due to the presence of all colors in combination, and black is due to the absence of all color. Though it is not generally believed that a black fowl has ever come as a sport from pure white-plumaged fowls, yet the albino sport from black fowls is of frequent occurrence,

and usually such sports have the purest of white plumage. Some of the purest of white-plumaged fowls have come from mating with a white Cochin Bantam hen a male albino sport from a Black Cochin Bantam. Fowls with the purest of white plumage are very apt to show black spots in their plumage or to have feathers which are all or partly black. This is not an evidence of impurity, though it is at times classed as a disqualification.

When black fowls are cultivated so as to have a beetle-greenish sheen to their plumage, this fathers an excess of color which is almost certain to show its strength in the production of purple barrings in the feathers. The more pronounced the green sheen the more likely is the purple to make its appearance, and red feathers are apt to grow in the hackle, saddle, and wing bows of fowls having such brilliant black plumage. There is a very strong objection to purple barring in the plumage of fowls, and such barring cannot be removed without easy detection. Feathers tinged with red are usually so few in number that they can be easily removed, and thus a disqualification for them does not amount to much. These undesirable purple and reddish sheens are particularly apt to occur in offspring that come from matings in which both the male and the female have a rich beetle-green sheen on their plumage. To prevent the offspring from having these undesirable shades in their plumage, females with the least sheen, or none at all in their plumage, should be selected for mating with the richly colored males.

The best white-plumaged fowls will be obtained from mating fowls possessing absolutely white plumage on all parts of their bodies; that is, plumage in which the down and the quills of the feathers, as well as the surface, are white.

36. Buff Plumage.—Buff plumage is produced by mixing black, white, red, and yellow in proper proportions. It is important to know what colors have been used in producing buff, because such knowledge is a guide to a certain extent in the selection of fowls for mating. Buff-plumaged fowls with white in their flight feathers are almost certain to produce

offspring that will lack color, and those that have black in their flight feathers usually produce offspring darker in surface color than is desirable.

The true color for buff-plumaged fowls is a rich, golden buff, a happy medium between the lemon and the reddish shades of buff. This, as might be expected, is the most difficult shade of buff to develop, yet it has been produced in such perfection that the fowls having it were one even shade of rich golden buff without a trace of white or black in wings, tail, or other parts of their plumage. This shade of buff is the kind that will stand the strain of weather conditions without changing enough to become unattractive.

The production of solid buff-plumaged fowls, or in fact of any fowls of a solid color, can be accomplished only when even, or perfect, shades are used in mating. Some breeders mate light and dark shades of a solid color in the hope of getting a medium shade in the offspring. This is sometimes moderately successful, but in the case of buff fowls it is very rarely satisfactory. The mating of light and dark shades of buff will commonly produce offspring of a very undesirable mealy appearance, due to the fact that their feathers will be of different shades of buff.

The shade of color in buff varieties can best be improved by mating males and females of an even shade of golden buff. The top color of the male should be more brilliant than in the female, and the breast and body color of both sexes should be as nearly alike as possible. If some difference in the breast color is unavoidable, the breast plumage of the male may be slightly deeper in shade than in the female. The under plumage in both sexes should be buff of a shade that is not quite so deep as the surface color. Both black and white should, as far as possible, be eliminated from the plumage of both male and female buff fowls in a mating.

37. Blue Plumage.—Blue plumage can be produced in every breed that has variety colors of black, white, and buff, as blue-plumaged fowls will result from mating black fowls with fowls having either white or buff plumage. Blue has

existed as a plumage color in poultry for so long that it has come to be recognized as a true color for poultry. Wherever black and white fowls have been kept together on the same farm, fowls having blue plumage have frequently appeared. Such fowls may be found on almost any farm where poultry is kept. In spite of all the blue-plumaged poultry that has been produced at various times, the Blue Andalusian, the Blue Duck, and the Slate, or Blue, turkey are the only domestic fowls that have been bred to any extent with blue feathers. Some of these fowls have an edging of black on their feathers and some have only one shade of blue, usually a slaty shade, with spots of black occurring on the feathers.

38. Parti-Colored Plumage.—One of the most difficult tasks for the fancier is the production of parti-colored fowls such as the Light Brahmas, Columbian Wyandottes, and fowls that have plumage colors the same as the Light Brahmas, White-Crested Black Polish, etc. To keep each shade of color separate, and to confine each shade to the part of the body to which it belongs, is a problem in color breeding that demands the greatest care. This problem is complicated because from time to time the fashion in these parti-colored varieties changes, and slightly different combinations or arrangements of colors have to be obtained.

One of the most difficult tasks of the fancier is to confine all of the white in the White-Crested Black Polish to the crest. This is a feat that requires a great deal of skill. Another difficult task is to maintain intact the beautiful striping in the hackle of the Light Brahmas, which extends almost to the point of the feather, and yet is completely encircled with white. This same difficulty presents itself in all varieties having Light Brahma plumage color. Equal care must be used in mating the varieties of fowls that have the Dark Brahma colors. In these the requirements are to confine the gray and the white to the parts to which they belong, to have them properly distributed, to maintain the beautiful penciling of the female, and to secure the brilliant glistening black in the breast and body plumage of the males and a clean, clear top color.

39. Influence of Color of Under Plumage.—The downy portion of the plumage, which is not visible when the plumage of a fowl is in its natural position is called the **under plumage.** The shade of color in the under plumage in parents has a considerable influence over that of the surface color of their offspring, and it must be borne in mind that the proper shade of under plumage for exhibition purposes and the proper shade for fowls intended to breed exhibition fowls of some varieties are quite different. For this reason, it will be necessary to discuss the color of the under plumage of each variety separately when the directions for mating the various varieties are given. At this point, only a few general principles and a few specific cases will be considered.

As a general principle, it may be stated that, aside from the shade of color in the surface plumage of the parents, the darker the under plumage of the parents the darker will be the surface plumage of the offspring; and, conversely, that the lighter the under plumage of the parents, the lighter will be the surface plumage of the offspring. A proper shade of color in the under plumage of the parent fowls will always have a desirable influence over the color of the surface plumage of the offspring.

Dark-plumaged fowls that have a light shade of color in the under plumage will produce offspring with a lighter or softer shade of color in the surface plumage than their own. Black-plumaged fowls that have gray or white in their under plumage are apt to produce offspring with white in the under plumage of the neck and in the flights and the secondary feathers of the wings.

Buff-plumaged fowls with very light or white under plumage will produce offspring with very light-colored surface plumage, with white under plumage, and white in the flight feathers. Buff-plumaged fowls with dark or slaty under plumage will produce offspring very dark in surface plumage, and they are apt to have black in the tail and wings. The proper shade of color in the under plumage of buff-plumaged fowls for both exhibition and breeding purposes, is buff lighter in shade than the surface plumage.

Black or slate color in the under plumage of Silver Laced Wyandotte breeding fowls will cast either a metallic luster or dark shadings over the surface plumage of the males produced from such matings, and will also frequently result in smut in the color of the plumage of the back and breast of the females. These same influences are also noted in the offspring from matings of fowls with the dark under plumage of the Dark Brahma, and of all other varieties of fowls that have the color and markings that belong to the Dark Brahmas. A clear, clean, silvery color of plumage in the neck, back, saddle, and wings may be produced in this variety by breeding from fowls that have light gray or white in the under plumage; but to produce satisfactory offspring, such fowls must be bred in line for several years from fowls like themselves.

The surface plumage of the backs of the Silver Laced Wyandotte males may be badly overcast with black as a result of breeding in line for many years from fowls with dark under plumage. The claim has been made that perfectly clear-plumaged males of this variety have been produced from parents with dark under plumage; but if this were true, it is certain that more of such males would be exhibited in poultry shows. Close investigation usually shows that the males of the Silver Laced Wyandottes that have clear, clean, silvery-tinted neck, back, saddle, and wing plumage, not only have light under plumage themselves, but that the same is true of their parents.

In parti-colored fowls, the question of the proper shade of under plumage is complicated by the necessity for separating the colors into their proper proportions, and by the fact that the fashion changes every little while. When, for instance, fashion favors an excess of black in the Light Brahmas, it is necessary to cultivate black under plumage in the female parent. Thus, fowls that would produce the most desirable color and markings in their offspring, would themselves be debarred from competition because of the extreme darkness of their under plumage. Without such a dark shade of under plumage color in the parents, however, it would be almost impossible to produce Light Brahma males with the saddle

plumage striped with black in such perfection that it would rival the same character of striping in the Partridge Cochin or in the Brown Leghorn.

In the black-red varieties, such as the partridge-colored fowls, in the Cochins, Plymouth Rocks, Wyandottes, and the Brown Leghorns, the females that produce the exhibition males would be debarred from competition themselves because their color is too dark.

MISCELLANEOUS INFORMATION

40. Age of Fowls for Mating.—Pullets do not produce the best results as breeders, and it is only under unusual circumstances, such, for instance, as the necessity of hastening the improvement of a strain, or of obtaining immediate results from a pullet of fine quality, that they should be used to produce eggs for hatching. Under no circumstances should eggs be hatched from pullets that are less than 9 months old. When used for breeding, a pullet should be mated with a cock that is past 18 months of age and has abundant vitality. If the health of such a pullet is maintained, she will probably produce better offspring in her second year of laying than she did as a pullet. In handling pullets as breeders, great care should be taken not to force them for a large egg yield, as this will be apt to injure their health.

Hens in their second year of laying are better than pullets for producing chicks. Females of this age that produce fowls of the finest quality for the show room, or that produce offspring that lay a large number of eggs, should be kept as breeders as long as they will lay and continue to be strong and healthy. Hens have been known to produce as many as thirty-five chicks in their seventh year of laying, all of which have won honors in the show room. Such cases, however, are rare instances of remarkable producing powers. Hens of this character should be mated each year either to the best cockerel produced the year before in the strain that descended from her or else to her own best son.

Early hatched cockerels—that is, those hatched prior to May—are well suited for mating the following March with hens in their second year of laying. Such cockerels should be at least 10 months old, well grown, fully matured, and have remarkable vigor—the kind of cockerels that show fight whenever approached. On an average, fine offspring should be secured from such matings. However, cockerels younger than 10 months of age are frequently mated with hens in their second year of laying, and cockerels and pullets both less than 9 months old are often mated. Such matings are rarely satisfactory, because the chicks from them are usually undersized, for the variety, and they also lack vitality.

The best males for mating are those that are hatched late in the fall and are well grown and full of vitality by the second January following, at which time they will probably be 15 or 16 months old. Their value for mating will be greatly increased if they have been kept apart from all females, and have been forced by feeding into as large a growth as possible while enjoying partial freedom on a range. Males of this kind are especially valued for matings in the Asiatic and general-purpose breeds.

When a cockerel has shown unusual power, either in producing many pullets that lay well or many offspring well suited for exhibition, he should be retained in the flock as long as he retains his power of transmitting these characters. Cocks in their fifth breeding year have been known to produce cockerels and pullets that have won in the keenest competition. In mating old cocks, it should be borne in mind that they are seldom as prolific as young males, and therefore should be mated with fewer hens. A cock in his fifth year of breeding should be mated to but one female, and this female should preferably be a hen in her second year of laying, or at least more than 1 year old.

41. Care of Females Kept for Breeding.—Hens and pullets should be kept apart from the males, except during the time that the eggs are to be used for hatching. The females will lay fully as well without the males, and there will also be

the additional advantage that any person buying the infertile eggs at ordinary market rates will not be able to secure chicks from them.

The males should be put into the pens with the females several days before it is desired to save eggs for hatching, as the first fertile eggs will not be laid until about one week from the time the male is put in. At the end of the breeding season the eggs will continue to be fertile from a week to 10 days after the males have been taken away.

Some males will not fertilize as many eggs as others, and such males should either be exchanged for others or be mated to fewer hens. All males will be more prolific during the spring and early summer months than during any other season of the year.

Males will injure the plumage of the females with which they are mated, and thus lessen the value of the females for exhibition. For this reason, the males should run with the females as little as possible during the show season. If kept entirely separate, the plumage of the females will be in better condition than if mated with the males. It may be necessary at times to introduce a male among them, in order to lessen their ardor; when needed, a cockerel of light weight should be used, and he should be left with them only for a short time.

42. Marking Fowls for Identification.—To be successful in breeding poultry, the fancier must be accurate; that is, he must know the pedigrees of all the fowls he mates, and must be certain of their identity. The first step toward identifying chicks is to make sure of the hen that laid the egg, and to hatch the egg in such a way that the chick that comes from it can be told with absolute certainty. After the chick appears, it is necessary to mark it in some way so that it can be identified at any time during its life.

There are several methods of marking chicks. The **toe-marking system** is satisfactory, but it does not admit of a large enough number of variations when the breeding operations are on an extensive scale.

Metal bands for attaching to the shanks are a satisfactory method of marking fowls, and permit of sufficient variations. Several forms of aluminum bands are shown in Fig. 9. The small band shown in (*a*) is suitable for placing around the shank of a chick, and later, when the shank grows too large for this band, it may be removed and fastened through the web of the wing. The band shown in (*b*) is used for chicks also, but is rather too wide to insert in the web of the wing. Both of these bands are shown in their actual size. After a fowl reaches its full growth, a band like that shown in (*c*), which

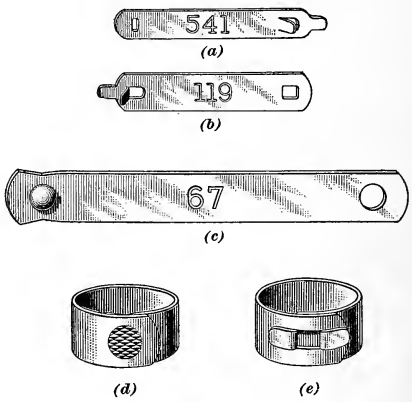


FIG. 9

may be sealed, may be fastened about the shank. This band, fastened with a rivet, is shown in (*d*), the fastening being done very easily with a pair of pincers, as shown in Fig. 10. After being well fastened or sealed, such a band will last the lifetime of a fowl, unless removed by cutting. All of these bands may be stamped with any number or other characters desired. A type of aluminum band known as an interlocking band is shown in Fig. 9 (*e*).

Colored celluloid bands are used for marking fowls kept in large flocks. They are most useful when used in connec-

tion with the metal bands and serve as a means of quick identification for various large groups of fowls when they are kept

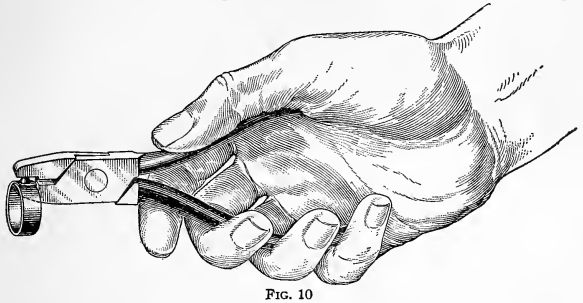


FIG. 10

in big flocks; that is, all the chicks hatched in one year may have a blue band; those hatched the next year, a red band; the next, a yellow band; and so on. In this way the age of fowls may be told at a glance. The bands may be used also to identify strains or families of fowls. Though they have their usefulness in this way, they are not an absolutely accurate means of identifying fowls; in addition they are liable to be lost from the shank; in such cases, if no other band were used, the identity of a fowl would be lost. Three celluloid markers are shown in Fig. 11. The ring shown in (*a*) encircles the shank a number of times. One end of this is hooked about the shank and then the rest is wound around much in the same manner that a key is worked on a key ring. The ring shown at (*b*) is a

FIG. 11

small one of the same type as that shown at (*a*). At (*c*) is shown a flat celluloid band. Poultry supply houses sell celluloid rings and bands in as many as eight different colors.

INCUBATION AND BROODING FOR EXHIBITION POULTRY

INCUBATION

INFLUENCE AND CONTROL OF FERTILITY

1. The percentage of fertile eggs depends directly on the health of the fowls, and the only indication that a reasonable number of hatchable eggs may be expected from any mating may be found in the degree of health and vitality that the fowls exhibit. None of the many plans that have been devised to control the fertility of eggs is of much value if the health of the fowls is poor; if the fowls have good health and abundant vitality, a large percentage of the eggs will be fertile, and there is no necessity for following any special plan. The health and vitality of breeding fowls is influenced by a number of factors, which thus indirectly affect the percentage of fertile eggs and the health and vitality of the offspring.

2. Influence of Feeding on Fertility.—Improper feeding or pampering with rich feeds is one of the most common causes of unsatisfactory results with exhibition poultry. Usually exhibition fowls are not only overfed but improper feeds are given during the period of preparation for the show room and also during the hatching season, and this is largely responsible

for a lack of fertility in their eggs. The coddling and overfeeding creates a feverish condition of the blood and thus robs the fowls of their health and vigor. During the show season particular care should be taken not to overfeed the exhibition fowls, for they will become fat and their value for early use in the breeding pen will be destroyed.

In feeding fowls, it should always be borne in mind that the eggs are produced from the material that is extracted from the feed eaten. Hence, the importance of giving the proper feeds, so that the eggs will contain the elements of vigorous life. Such eggs can be laid only by hens that have had the most natural feeds; that is, a properly balanced ration of grain, animal, and green feeds. Green feed during the winter months is of relatively more importance than the other feeds, and the power of green feed to give hatchable quality to eggs can scarcely be overestimated.

Care should be taken to see that the male fowls in a mating get sufficient feed. It sometimes happens that the males in a mating are unusually attentive to the hens and refrain from eating until the hens have been fully satisfied. When this occurs the males will not get enough to eat and should be fed apart from the females. To overcome this difficulty some fanciers have tried the method of hanging feed cups out of the reach of the hens, but at a height from which the males can feed readily. This, however, is usually a failure, because some of the hens, more active than the rest, will fly up and scatter the grain on the floor of the house.

3. Effect of Excessive Laying.—Excessive laying is always detrimental to fertility. The best fertility can be secured only when the entire strength and vitality of both the male and the female can be concentrated in three or four dozen eggs for hatching. Hens that have laid prolifically during the winter, that is, from five to six dozen eggs before the time of saving their eggs for hatching, have their vitality very much reduced, and their eggs are frequently infertile. Hens that have not laid too many eggs before the hatching season and that lay but few during the hatching season may reasonably be expected

to lay eggs each of which will produce a chick with abundant vitality. Another point that is important to bear in mind in connection with the eggs from prolific hens is that the eggs from such hens are usually smaller than the normal and contain less albumen than is desirable; also, this albumen is of a watery consistency, and gives less vitality to the embryo chick than albumen of proper consistency. The yolks of eggs laid by practically all the hens of one breed will be found to be of a uniform size; hence, if the egg is smaller than the normal it will usually be found lacking in albumen.

The practice of restraining the best producers from laying prior to the hatching season is of advantage to their offspring, because it saves all the vigor of the parents for the fertile eggs instead of allowing them to dissipate some in producing eggs for eating. Fowls may be restrained from laying by feeding them sparingly of a ration that will not produce fat nor hasten egg production. A suitable ration for such purposes may be composed of large pieces of hard bread, so that the fowls will have to pick small pieces, and a small quantity of wheat. The restraining of the fowls from laying may be further aided by transferring them at short intervals from one pen to another, by feeding them little or no green feed, no meat at all, and by keeping the females in separate pens out of sight of the males.

4. Importance of Activity.—To maintain the vitality of both male and female fowls, it is necessary that they be active, and in order to insure this activity they should have plenty of room for exercise and should be stimulated to exercise by compelling them to scratch and hunt for their feed. Fowls that have to struggle somewhat for an existence usually lay remarkably fertile eggs. If, under such circumstances, the proper kinds of feed is given to them they will be kept in good flesh without getting too fat. This is the best physical condition for fowls that are to lay eggs for hatching. Fowls that are either too thin or too fat cannot lay satisfactorily.

Because of the restriction on their activity, fowls for exhibition should not be confined for any considerable time in small pens or coops. Exhibition fowls kept constantly in

small coops during the poultry-show season are seldom, if ever, fit to do well in the breeding pen in the spring; at least they will not be fit for such service earlier than 60 days after they have been released from such confinement, because they do not regain all their normal vitality before that length of time, and they will need that vitality when mated with hens that are to produce eggs for hatching.

Though the keeping of fowls in small coops will help to condition them for the show pen, it is possible to condition them satisfactorily without confining them in small coops. Conditioning may be done to better advantage in small compartments with outside runs. When such enclosures cannot be provided, the fowls should in some way be forced to take plenty of exercise during the time of preparing them for the show.

Because it is impossible to send fowls to a series of poultry shows during the winter season without lessening their vitality, due to an unavoidable lack of exercise and other unfavorable conditions, it is the best policy not to show fowls that are intended for breeding. Some breeders systematically use one group of fowls for exhibition and another for breeding. However, in cases where the fancier is compelled to show his best, he must not expect much from them in the breeding line during the early spring months, and should see to it that they get all the exercise they need both immediately after the show season and throughout the breeding season.

5. Influence of Management in the Houses.—The method of management in the houses has considerable to do with the general health of fowls. The houses should, of course, be kept clean and dry. The breeding fowls should never be kept shut up in houses; they should be permitted to go outside in all kinds of weather except when their combs or wattles will be frozen, and day and night there should be plenty of fresh air inside of the house. Though the houses should always be warm enough at night so that the fowls will be comfortable on their roosts, the warmth for this purpose should come from the bodies of the fowls rather than from any artificial heat. This may be accomplished by the use of hooded roosts or

by arranging the house so that each fowl has only the proper air space to warm up with its body. Fresh air can be secured through a muslin front on the house. Artificial heat is not beneficial to poultry, because houses heated in this way are apt to be damp, and because in cold weather there will be too much difference between the inside and the outside temperatures, and when the fowls run out of a warm house in the morning they will be suddenly chilled by the cold air. There is no best temperature for the interior of a poultry house for all times of the year. What is known as a seasonable temperature will be best, that is, one that will be in proportion to the temperature outside; in a properly constructed and managed poultry house such a temperature can be maintained entirely from the bodily heat of the fowls, and there will be no need to resort to any other source of heat.

6. Influence of Age.—The strongest chicks are those that come from well-matured hens in their second or third year of laying and that have not laid a large number of eggs during the winter months. If such hens are properly fed they will lay good medium-sized eggs that will contain sufficient albumen to furnish the greatest vitality to the embryo chick.

Both sexes, if properly cared for, will continue to produce until 4 or 5 years old. Hens from 7 to 9 years old have produced offspring of the finest exhibition qualities, but male fowls, even with the best of care, cannot be depended on beyond the fourth year.

7. Effect of Dubbing.—It is a practice of poultrymen, in the case of breeding fowls that have extraordinarily large combs and wattles, to resort to what is called **dubbing,** which consists in cutting off the greater part of the comb and wattles. After the wounds have healed it takes much less blood than formerly to support what is left of the comb and wattles, and this blood will give an increased vitality and greater egg-producing power to the fowls so treated.

8. Effect of Feather Trimming.—In the case of fowls that have an excessive fluff feathering about the vent and on the abdomen, it usually increases their activity and egg-producing

powers to trim off these feathers below the tail, on both the males and the females. This will materially increase the chances for fertility.

9. Number of Hens to Mate With One Male.—The number of hens mated with one male has an influence on the fertility of the eggs and on the vitality of the offspring, for the reason that the greater the number of females the more the energy of the male is divided and the less each female receives. As a general rule, therefore, it is always of advantage to have but few females with a male in mating for the production of exhibition poultry. On an average, in the case of Mediterranean breeds, from five to seven females is the proper number to mate with one male; and in the case of the larger breeds, from three to five females with one male. The number of females best suited to mating with any one male can be decided most accurately only after the results from a mating are known.

10. Changing of Males Frequently.—The practice of frequently changing males in a breeding pen, as, for instance, using two males and changing them on alternate days with the same females, will lead to an increased number of fertile eggs and will give good results to the breeder who makes a business of selling eggs for hatching. But this method of mating has its disadvantages also. It makes the keeping of accurate breeding records very difficult, and thus complicates the work of the breeder. Where the best results for exhibition are sought after it is better to have a few hens in each mating with one male than to have a large number of hens dividing their time among several males.

11. Separation of Sexes Out of Breeding Season. Males and females that are kept for producing exhibition fowls should be kept apart at all times except during the period when the eggs are saved for hatching. There are many advantages in this practice. The most important is that by this means any eggs that are sold out of the hatching season cannot be hatched. Other advantages are that there will be less danger of broken plumage, less danger of plumage being destroyed

directly after the molt, and more likelihood that the males will be able to finish the molt in better form than if they were with the hens. Females will frequently pluck the new plumage from the males that are confined with them, but are less apt to pluck the feathers from one another. The habit of plucking feathers from one another, however, is quickly acquired after they once begin to pick feathers from the males.

NATURAL VERSUS ARTIFICIAL INCUBATION AND BROODING

12. The methods of hatching eggs and of brooding chicks for the purpose of producing fowls for exhibition or for developing and continuing a strain of exhibition fowls are of fundamental importance, and hence are worthy of the most careful consideration. Experience has proved that natural incubation, or hatching with hens, is the most satisfactory, because the mother hen surrounds her eggs with a natural environment that cannot be secured in artificial incubation. This imparts to chicks greater vitality and stronger reproducing qualities than will be secured by the artificial method. The eggs from inbred stock, particularly, are apt to produce a higher percentage of chicks and stronger chicks when incubated naturally than when hatched in an incubator.

Although the best results are obtained by natural incubation, it is not a practical proposition for the great majority of fanciers to follow this method for hatching all of their chicks. This is because they have to be well matured and ready to show during the early fall and winter months. To meet this requirement, the chicks must be hatched, in most localities, in cold weather, and as very few hens become broody in such weather and the chicks do not develop rapidly enough when brooded naturally in cold weather, artificial incubation and brooding are necessary.

The main use that the average fancier, living in a cold climate, can make of natural incubation is for the production of his breeding stock. This will be one safeguard in maintaining the greatest possible amount of vitality and fertility in his fowls. In all localities the spring is the ideal time for

brooding newly hatched chicks, and hence the best time for hatching out the chicks that are to constitute the future breeding stock of a strain is at this season. In the northern hemisphere this means that the best time for hatching chicks is from the beginning of March to the end of June, the earlier months being better for localities where the spring comes early, and the later months where it comes later. In the southern hemisphere it should, of course, always be borne in mind that the seasons are the reverse of those in the northern hemisphere.

The temperature during the winter months is not always a matter of latitude, and breeders in some localities have advantages over others situated at approximately equal distances from the equator. For instance, in England and France and in some other localities, there is less severe cold weather than is usual in the northern part of the United States and in Canada; hence, in the mild winters of England and France there is less necessity for artificial incubation and brooding than there is in the United States and in Canada.

Mild weather is always beneficial to the growth of young chicks. They will grow better in a mild climate than in one that is either very hot or very cold. For example, Orpingtons will grow faster and mature earlier in England than in Canada, and Plymouth Rocks and other general-purpose fowls will grow faster and mature earlier in Tennessee than in Massachusetts. The environment of a warm climate, though it hastens the growth, does not improve the quality of fowls. No variety of fowls will do so well in tropical countries during the periods of severe heat as they will do in the same locality during the cooler part of the year.

MANAGEMENT IN INCUBATION

13. The custom of buying eggs for hatching, and, more recently, of buying day-old chicks, has increased rapidly, and has superseded to a great extent the custom of buying fully developed fowls for breeders. The beginner in poultry breeding can scarcely do better than to obtain eggs from some trust-

worthy source. Such a source would be a poultry establishment where fine stock is kept and where the eggs for hatching that are to be sold are selected with as much care as those for home hatching. The purchaser should be satisfied if he is able to raise to maturity two or three fowls of good quality from a single sitting. The beginner should continue to buy and hatch eggs until he has become fairly familiar with exhibition quality. After he reaches this point it will be safe for him to secure fowls of the highest quality obtainable, and to introduce them carefully into his flock as previously described.

When the business of selling day-old chicks of standard-bred poultry becomes better established among fanciers, it may be advisable for the beginner to purchase young chicks, but at the present time, when endeavoring to secure fowls for breeding stock, the safest plan is to buy eggs and place them under a broody hen. The hen should hatch out and also brood the chicks.

It is never safe to bring eggs from a distance and place them in an incubator tray with home-laid eggs. The chances are that the home-laid eggs will hatch out many hours in advance of the eggs that have been shipped, and that the latter will hatch poorly. It is always much safer to entrust a dozen or more of the shipped eggs to the care of a trusty hen.

14. Cockerels and Pullets for Fall Shows.—Show rules debar all chickens hatched prior to January 1 from being shown the next fall and winter as cockerels or pullets, and, as it is desirable to have the fowls as fully matured as possible, most fanciers endeavor to have their first chicks hatched as soon as possible after that date. To accomplish this they usually start their incubators as soon after December 12 as eggs fit for hatching can be secured. Some fanciers arrange their incubating so that they will continue to get new chicks every little while during the winter and spring months, in order to have chickens in good condition for exhibition at all the fall and winter shows. Other fanciers go still farther and hatch out chicks artificially every month in the year; this plan assures them of having fowls fit for the show room at all times.

The importance of hatching chicks out as soon after January 1 as possible may be better understood if the length of time required for them to develop into good show cockerels and pullets is understood. In the Asiatic class, for instance, the males should be more than 9 months old and the females at least 7 months old before they are in good show condition. Orpingtons, Plymouth Rocks, Wyandottes, Rhode Island Reds, and others of the general-purpose breeds, if well cared for, will probably be fit for showing when they are from 7 to 8 months old. It is possible to have the smaller breeds in show condition in from 6 to 7 months. On an average, however, it is safer to allow a little more time than just stated for developing chicks of any of the breeds into good showroom condition. As poultry shows begin in August or September, it can be plainly seen that the fanciers must get their chicks out of the shell early in January and take the best of care of them. In a cold climate it will also be necessary for fanciers, under such conditions, to depend largely on artificial incubation for producing their early chicks, at least.

15. Number of Eggs for a Sitting.—In the natural incubation of eggs intended to produce fowls for exhibition, and especially in cases where high-priced eggs are purchased, not more than seven or nine eggs should be placed under one hen. A sitting of thirteen or fifteen eggs should be divided between two hens. Placing such a small number of eggs under each hen insures a more even temperature to all the eggs, and hence better chicks.

16. Time for Buying Eggs for Hatching.—The best time to buy eggs for hatching is during the mild weather of the spring. It is not advisable to purchase eggs for hatching during cold weather, because eggs laid during January, February, and March are not likely to produce more than three living chicks from nine eggs, though those laid later in the spring, if they come from good stock, will most probably produce five living chicks from nine eggs.

Fertility improves gradually from January to July and then gradually declines from July to the end of the year.

BROODING

17. In order to become best suited for exhibition purposes, a fowl must be developed quickly from shell to maturity. The least neglect at any point may partly stunt or delay the growth of the young chick, and when this occurs the chances for developing a valuable exhibition fowl will be greatly lessened. Hence, to prevent the occurrence of any check it is necessary to give the fowl constant care from the hour of hatching until it is sent to the show room. To develop to the best advantage, chicks must have plenty of room, fresh air, sunshine, and shade, and their coops and surroundings must be kept clean and sanitary.

As mentioned before, it will be necessary for the fancier to practice artificial brooding to a certain extent in all localities; in localities where the winters are cold artificial brooding will have to be employed for raising practically all the chicks. To secure satisfactory results with this method, however, care and judgment must be exercised, for in cold weather the vitality of chicks is apt to be low. The necessity for such care is emphasized in the brooding of poultry for the show room, for the reason that chicks from such poultry are very often deficient in vitality, and because they must make a rapid and unchecked growth.

To secure the best results in artificially brooding chicks for exhibition, the poultryman should see that there is plenty of fresh air and still plenty of warmth for the chicks in the brooders, but the brooder must not be so warm that the chicks will be chilled when they run out into the outside air. The air under the hover should always be of an even temperature, and the heat at no time should exceed 95° F. This temperature should be maintained under the hover for the first week, or in some cases not quite that long. After the first week the temperature should be reduced one degree each day until a temperature of 80° F. is reached. Outside of the hover the temperature of the air should be kept at 70° F. This temperature may be continued until chicks are two or three weeks old; it can then be lowered to 60° F.

Though artificial brooding must be the mainstay of the fancier in most places, he should always practice natural brooding to some extent, for the reason that the chicks that are hatched out and brooded by hens are apt to be the best of the year. They are almost certain to have greater vitality and exhibit more vigor than the average chicks hatched and brooded artificially. If they are brooded naturally on a sanitary range they will also be certain to have better size, health, and plumage than those that are raised under less favorable conditions.

In both artificial and natural brooding, crowding of the chicks must be avoided at all times. Too many chicks in a brooder make the air foul, the temperature and the humidity too high, the place more unsanitary and difficult to keep clean, and the general conditions less healthful. Too many chicks with a hen will prevent all of them from receiving the proper shelter under her body and will keep them in a continual condition of unrest, because of their struggles to obtain more favorable positions. Because of these reasons a brooder built for fifty chicks will be suitable for thirty chicks intended for exhibition, and a hen that can brood fifteen chicks during warm weather will not be able to take as good care of more than nine during cool or cold weather. A coop that is large enough for two hens and their broods during cold weather will be none too large for one hen and her brood when the weather is warm.

FEEDING OF EXHIBITION POULTRY

FEEDS FOR EXHIBITION POULTRY

18. Exhibition poultry, as a rule, should have nothing but simple, clean, and readily digestible feeds. Hard, dry grains such as wheat, oats, cracked corn, barley, and buckwheat, combined with green feed, should form the principal part of their diet.

The least desirable grain of all is light-weight oats, which are largely husks and of but little feeding value. Buckwheat more than a year old may, by shrinkage, have lost much of its feeding value. The very best that can be had is none too good for producing the best results. Mixtures of shriveled, shrunken, or poorly developed grains should not be fed.

Animal food of some kind is thought to be absolutely necessary for a plentiful egg production, but it is questionable whether it is of benefit when fed freely to the fowls used for breeding purposes. Buttermilk used to moisten mash is one of the best, if not the very best, kinds of animal foods for breeding stock. Sour skim-milk will answer for poultry almost as well as buttermilk, and milk, either sweet or sour, is always best for moistening mash feed.

Mangels, turnips, cabbage, clover, and alfalfa hay, and roots generally are suitable green feeds for feeding in winter to exhibition fowls. Cabbage and turnips have a tendency to flavor the eggs, but this will not matter when the eggs are all used for hatching. The leaves from clover and alfalfa hay are among the very best of the green feeds for winter feeding. Fifty hens will eat a peck or more of this feed each day.

A plentiful supply of fresh water at all times is essential for fowls, because without it they can neither properly digest their food nor lay eggs. Whether or not it is advisable to give exhibition fowls warm water during the winter is a matter

that can best be decided by each individual fancier. If given to fowls at all it should be given every morning; fowls should not have warm water one day and cold water the next; the water should be warm, and not boiling hot.

Grit, and shell-forming material, such as oyster shells, old plaster, and finely broken limestone grit, should be kept before the hens at all times, so that they may help themselves when they want it. Charcoal is also beneficial. The feeding of dry mash in hoppers from which the fowls can help themselves will be beneficial.

METHODS OF FEEDING

19. During the winter months all grain for exhibition fowls should be thrown into the litter of the houses, where the fowls will have to scratch to get it. Feeding them in this way three times a day is advisable, because it induces them to take considerable exercise. Mash feed can usually be fed most conveniently at noon. When only a few fowls are kept, all scraps from the table should be cut up very fine, cooked, and mixed, until the mass is very dry, with wheat bran, middlings, or ground oats. This mixture makes an excellent feed for poultry, and when it is used no other mash feed will be needed.

Green feeds of some kind should be fed daily to fowls that do not have their freedom on a range where they can pick up for themselves all the green feed they need.

20. Feeding to Flesh Fowls for Exhibition.—In cases where fowls intended for exhibition do not have sufficient flesh on their bodies to make them appear to best advantage in a show, their weight may be increased and their lines filled out by feeding them a ration of corn bread and boiled rice, sweetened to taste with black molasses, in connection with dry feed from the hopper.

The corn bread should be made the same as for table use, and, if it is to be fed to white-plumaged fowls, white corn meal should be used; the rice should be boiled in either water or milk until fairly dry and then sweetened to taste with black

molasses. Equal parts of corn bread and rice should be mixed together, the corn bread being crumbled up so as to make a better mixture. About 2 ounces of this ration should be fed to each fowl both night and morning, and in addition the fowls should be allowed to eat whatever else they may need from hoppers containing cracked corn, whole wheat, and a small quantity of lean meat scrap.

When being fed to fowls with dark plumage, a little tincture of iron or a little sulphur may with benefit be added to the corn bread and rice ration for a week. The tincture of iron should be mixed with the ration in the proportion of about five drops for each fowl both night and morning. Instead of the tincture of iron a pinch of sulphur may be added to one feed of the ration every other day for each fowl. Neither of these substances should be added to the ration if it is to be fed to the fowls with white or buff-colored plumage.

21. Feeding to Stimulate Feather Growth.—The growth of the feathers can always be stimulated by giving feed of a nitrogeneous character, such as bone meal, lean meat, and small quantities of flaxseed meal. This kind of feed will, however, also tend to increase the size of the combs, wattles, and ear lobes, and hence when such feeds are given their effect on the fowls should be carefully watched.

22. Feeding of White-Plumaged Fowls.—Great care should be exercised in feeding white-plumaged fowls, because very little coloring matter in a feed will injure the whiteness of their plumage. Such materials as iron, sulphur, and yellow corn should never be fed to white fowls during the molting period, as they are likely to produce undesirable effects on the feathers.

Some fanciers prefer to feed their white-plumaged exhibition fowls no grain except whole, ground, or hulled oats. Other suitable grain feeds for such fowls are white corn, white wheat, pearl barley, and a dry mash composed by measure of equal parts of ground oats and wheat middlings to which is added about 10 per cent. of the whole quantity of gluten meal.

23. Modification of Plumage Color by Feeding.—The feeding of various materials in an attempt to improve or change

the plumage color of fowls, commonly called **color feeding,** has met with indifferent success. The argument in favor of such feeding is that many of the beautifully plumaged birds of the tropics lose much of their color and luster when removed from their natural feeding grounds. Hence, some poultrymen claim that the fruits, seeds, plants, bugs, etc., eaten by these fowls in their native haunts have an influence over the color and luster of their feathers. However true this may be, experiments by persons competent to judge have shown that the feeding of various materials to domestic fowls has failed to improve the color of their plumage.

A tasteless red pepper that lacks the hot properties of cayenne pepper may be fed to poultry for the purpose of modifying their plumage color. Several kinds of this tasteless red pepper are offered for sale by the poultry supply houses of London.

Color feeding with this pepper has been tried many times in an effort to improve the shade of color in buff fowls, but it has not yet been very successful. The nearest approach to success in feeding this to buff fowls has been shown in sometimes turning the buff plumage to a reddish-buff color after the feathers were fully grown, but in most instances when the tasteless red pepper was fed during the molting period the feathers assumed a mottled appearance.

Tasteless red pepper is fed to canary birds to improve or change their plumage color. It usually has the effect of changing light buff, or canary color, to a deeper tint. This pepper also produces a similar effect on the plumage of many kinds of cage birds to which it is fed during the entire molting period. It has, however, generally failed to change the plumage color of pigeons, bantams, and other poultry.

The feeding of cayenne pepper to fowls for the purpose of reddening their plumage has also been tried. Lewis Wright records an experiment by Doctor Sauermann in which cayenne pepper was fed to twelve White Leghorns, but only two of the fowls showed any effects from the treatment. Within 10 days after the feeding was begun the plumage of these two turned red in the breast and hackle; the body feathers showed much

less red, and the flight and tail feathers remained white. The change of color occurred only on the surface of the feathers. The second season cayenne pepper was again fed to the same two fowls, and a duller reddish-brown color developed in the parts that had been colored the previous season. The color of the legs and feet were also changed to an orange red, and the yolks of the eggs laid by the fowls were red. After the fowls were killed the influence of the coloring was seen in their fatty parts. The most notable part of this experiment was that it showed the peculiar susceptibility of certain individuals to the influence of the pepper, because out of the twelve fowls treated only two showed any effects.

The feeding of various aniline dyes to canary birds was tried in an experimental way many years ago. When these dyes were given to the birds in water, only a few were affected, and these only slightly, and the change in color was permanent in only a part of the feathers. Then the aniline dyes were fed to the canaries in different combinations with various oils and fats, but the birds to which the colored oils were fed did not molt, so that this did not prove satisfactory.

Since that time, however, bird fanciers have become so expert in the feeding of the tasteless red pepper that they are able to change the shade of every feather on the body of a canary bird to a rich golden, a coppery, or a reddish tint, as preferred, the shade of the color depending on the quantity of material and the length of time it is fed.

24. Feeding of Condiments.—The feeding of condiments, or tonics, to poultry is a common practice of some fanciers, and some of these mixtures contain stimulants that so excite the organs of reproduction as sometimes to rupture them. The frequent use of such drugs is very inadvisable, as nothing is more certain to undermine the constitution and shorten the life of fowls. The occasional use of simple tonics for the purpose of stimulating a system that has become inactive from cold or other causes may be beneficial, but the use of stimulants to improve the failing vitality of fowls intended for exhibition cannot be fruitful of good results.

A simple tonic that may be safely used to counteract the effect of cold, to stimulate a dormant system, or to sharpen a failing appetite may be made of the following materials, each ingredient being ground into a very fine powder and all then mixed together: Cayenne pepper, 2 ounces; ginger, 5 ounces; Peruvian bark, 2 ounces; cinnamon, 3 ounces; red carbonate of iron, 4 ounces.

A stroked teaspoonful of this tonic will be sufficient for a dose for a dozen fowls. This quantity, mixed with stale bread that has been previously softened with sweet milk and pressed with the hands until thoroughly dry, should be fed twice a day. When given to fowls that are suffering with a cold, a teaspoonful of spirits of camphor may be mixed in with the bread that is fed to each dozen fowls.

When feeding this tonic to white-plumaged fowls, the red carbonate of iron should be omitted, for iron in any form, especially during the period of molt, is apt to discolor the plumage. When fed to dark-plumaged fowls, however, the iron should be left in, as it will improve their color.

25. Feeding to Increase Gloss of Plumage.—A rich finish, or glossy appearance, may be imparted to the plumage of fowls by feeding to them small quantities of a jelly made from linseed, or flaxseed. In the preparation of linseed jelly, it is convenient to place the linseed in a saucepan in the proportion of about 4 ounces of linseed to 1 pint of water. It should be brought gently to a boil, and then stood on a cooler part of the stove and allowed to simmer gently for an hour or two. When properly made, the linseed jelly should be thick and stringy when dripped from a spoon. The linseed husks should be removed by straining through a cloth, and the jelly allowed to cool.

A teaspoonful of this jelly mixed with bread crumbs may be fed to each fowl twice a day for several days, and about a dozen hemp seed may with advantage be added to the mixture; if the mixture is to be fed to dark-plumaged fowls, about five drops of tincture of iron for each fowl may be added, but the tincture of iron should not be added if the fowls have white or buff plumage.

The best results will be obtained if this feed is given to fowls during the period of molt, but they must be carefully watched while being fed on this diet, as the flaxseed jelly may loosen their bowels. If this occurs, the feeding of the jelly should be discontinued at once.

26. Feeding to Improve Head Parts.—Hens and pullets intended for exhibition will frequently be found to have a deficient development of comb, and the comb, face, wattles, and ear lobes will be of a light shade of color. These undesirable conditions may usually be greatly improved by feeding to the fowls with their regular daily ration a small quantity of green cut bone seasoned with paprika. About ½ ounce of the green cut bone should be fed to each fowl. This, however, may loosen the bowels, and for this reason it should be fed only when the fowls can be carefully watched.

Though such feeding will develop the comb, wattles, and ear lobes and impart a rich red color to them, it may, if carried on too long, force an overdevelopment in these parts. For this reason, as soon as the improvement begins to show, the fowls should be removed to cooler quarters and the giving of the stimulating feed should cease. This sudden change will not check the improvement as soon as made, as the effect of the feed will remain in the system of the fowl for some time, but it will prevent an excessive stimulation.

PREPARATION OF FOWLS FOR THE SHOW ROOM

SELECTION OF FOWLS FOR EXHIBITION

27. To be a successful exhibitor, it is necessary for a person to possess the ability, (1) to pick out, while they are still immature, the chicks that possess quality; (2) to detect the first evidences of defects or deformities of any kind; and (3) to select the best fowls at maturity.

The most successful fanciers are those who are able closely to cull their flocks as they grow and develop, weeding out those that are inferior and making room for those of the greatest value. Such ability can be obtained only by long experience. The beginner should not trust to his own judgment until after he has had considerable experience, or has had the opportunity of watching an experienced and successful breeder cull his chicks a number of times. The novice should be particularly careful about discarding half-grown chicks on account of apparent defects.

The novice in exhibition-poultry breeding is frequently disheartened by a series of defeats in the show room, where he has been compelled to compete against experienced fanciers. There is, however, no good reason for his becoming disheartened. He must bear in mind that the success of the older fanciers has been earned as a result of many years of constant care and labor, of selecting fowls for exhibition, and of experience in showing fowls in perfect condition. Only by patient work can the novice hope to compete on equal terms with the fancier who has had years of experience and success and has had the time and ability to build up a valuable strain.

28. All chicks with deformities, such as badly shaped combs, shanks of bad color, crooked toes, etc., should be dis-

carded when young; to do this without making mistakes it is necessary for a poultryman to be familiar with the changes that various apparent deformities in chicks undergo as they develop and approach maturity.

The most common change that occurs in fowls when passing from the chick stage to maturity is the change in the color of the shanks and feet and of the plumage. In some varieties, for instance, the color of the shanks and feet changes materially from the chick to the mature stage. Some white-plumaged fowls will show dark in the plumage of the chick feathers and will have greenish-colored shanks up to the time when they change the chick feathers for mature plumage. In some fowls, the shanks and beaks that are overcast with green during the early stages of the chick's existence become the most perfectly colored shanks and beaks in the mature fowls. Fowls that have black or dark-colored shanks when mature may have shanks of a slaty-gray color as chicks, and change gradually to the proper color as they grow older. Chicks that should have yellow-colored shanks may have very pale yellow shanks, but such shanks may be materially brightened and frequently changed to a golden yellow by turning the chicks loose on a range of grass and clover.

As just mentioned, white-plumaged fowls may have dark feathers as chicks but shed these and replace them with white feathers when the adult growth is taken on. Buff-plumaged chicks may have both white and black feathers in their plumage during the earlier stages of growth and then drop them for correctly colored feathers as they grow to maturity. Barred Plymouth Rocks, Laced or Penciled Wyandottes, and other varieties that have the same colors in their plumage, may have a very undesirable plumage color as chicks, and then change to the proper color as the chicks develop to full-grown fowls.

29. To be competent to select the best mature fowls from his own flock, a fancier must be free from personal preferences, must have a full knowledge of standard requirements, and must have the ability to apply skilfully the knowledge that he has. This means that the fancier must be particularly

familiar with all of the fine points of the variety from which he is making his selections. The better fitted a person is to judge fowls in the show room, naturally the better fitted he will be to select the fowls from his own flock that will stand the best chance of winning prizes.

Size, shape, and color are the three main factors that must be considered when selecting fowls for the show room. Size must be considered both from the standpoint of weight and of body formation. A fowl, for instance, may be found to be overweight when placed on the scales, but may yet not have the proper measurements to appear symmetrical. To be of the correct size, a fowl must not only be large and heavy enough for the breed, but it must be of the right size to conform to its own proportions.

For a fowl to be of proper shape, each and every section of it must conform to the standard description, and the sections must be so proportioned one to the other that the fowl appears to be symmetrical. Size and shape must be companions in body formation, for if a fowl is lacking in either particular it will not be symmetrical and will have to be marked down for the defects.

The color requirements for each variety are given where each variety is described, and it is not necessary to make much comment on this point here. It should, however, be carefully borne in mind that the standard description for any color describes the only correct color or colors for that variety, and that any deviations from that shade of color will count against a fowl. It may seem superfluous to make this statement, but it is made because so many fanciers do not seem to appreciate the value of exact shades of color. When the standard description states that the plumage should be white, this means a pure white, not a creamy or yellowish white; buff should be a golden buff, and no other color is correct; red for Rhode Island Reds is a rich cherry red, not a yellowish red or any other shade of red; many other similar examples might be mentioned.

30. Immediately before sending a lot of fowls away to a show room, a general survey should be made of the entire lot

of exhibition poultry, and the best selected and carefully examined to discover their weak points. None but fowls of the best quality should ever be sent away to an exhibition hall, because no other fowls will have even a chance of winning, and the exhibitor can gain nothing but an undesirable reputation by having fowls of poor quality in the show room.

It is usually a good practice to select one or two extra fowls to go along with the fowls that have been selected for the exhibition, in order that there may be some to take the place of those that may become unfit during the journey for showing.

To be in the best condition for exhibition, not only the shape, size, color, and markings should be perfect but the fowls must be in perfect health. Perfect health is necessary in exhibition poultry, because this alone promotes the growth of beautiful plumage, fills out all the muscles and tissues so as to round out the form of the fowl into the proper contour, imparts a gloss, or sheen, to the plumage, and brings out the rich blood-red color of the comb, face, wattles, and ear lobes, and the bright flashing eye that is so important in the exhibition pen.

The best evidence of the success of any method of raising poultry is in the degree of health and vigor present in the producing fowls and in their offspring.

Hens and pullets never appear to better advantage than just before they begin to lay, because after they begin to lay the bloom of beauty and the finer exhibition qualities are quickly lost. When females begin to turn red in the face it is a sign of the near approach of their laying period; if at this time they are transferred frequently from pen to pen and a ration that is not an egg-laying ration is fed to them, the period when they are at their best just prior to laying may be considerably prolonged.

DEFORMITIES—THEIR CAUSES AND AVOIDANCE

31. Deformities of all kinds should be weeded out by systematically culling and selling for market all afflicted fowls. No fowl having bone or feather deformities of any kind should be retained in a breeding flock. Crooked backs, spines, breasts, thighs, and shank bones are all deformities that will count

against quality in the offspring, and, since such defects are strongly hereditary, no chances should be taken. Even strong proof that a deformity resulted from an accident should not be sufficient reason for retaining a deformed fowl in the breeding pen. Medical authorities consider malformation as an evidence of a weak constitution, and for this reason, if for no other, any bodily defect should debar a fowl from consideration in the exhibition pen. The breeder should not be misled into thinking that any correction of a deformity in a parent fowl will remove the possibility of that deformity being transmitted to its offspring. It is, for instance, sometimes possible to correct twisted feathers in an otherwise very desirable fowl, but this does not remove the cause of the twisted feathers, and the breeding danger still remains.

The most common deformities in poultry are crooked breastbones, twisted toes, crooked legs, wry tails, and slipped wings. A crooked breastbone will often be caused by the roosting of a fowl while the bone is still soft, the weight of the body bending the breastbone over as it rests on the roost. If this is continued night after night, the deformity will become permanent. Round indentions may be made in breastbones in the same manner, although this deformity does not twist the bone to either side. When a chick is born with a naturally deformed breastbone, the entire bone is twisted out of shape. Natural deformities, of course, cannot be avoided, but deformities due to roosting while too young may be avoided by compelling the chicks to rest at night on straw on the floor. It is impossible to tell by examination whether a crooked breastbone in a fowl is an hereditary defect or whether it has been caused by accident. Because of this fact it is always advisable not to breed from deformed fowls.

Twisted toes may result from many causes. Toes of young chicks may become deformed by the young fowls resting on them in a twisted position at night in an overheated brooder. Larger fowls may sometimes step on the toes of little chicks and twist them out of shape. The toes of both fowls and chicks may be broken or their feet twisted out of shape by catching them in cracks between boards. Sometimes twisted toes are

hereditary defects. There is no cure for twisted toes, no matter what their cause, but they count against a fowl in the show room. Enlargement of the joints and natural deformities of the feet may be transmitted for several generations.

Crooked hocks or legs that turn in toward the breastbone, causing knock knees, are defects that should never be overlooked in the selection of fowls for breeders. Such deformities not only destroy symmetry but they also prevent the widening out of the breast between the thighs, and by confining the internal organs prove injurious to the development and general health of the fowl. Such a defect will not only render a fowl unfit for exhibition, but will also destroy its value for breeding. A defect of this kind is apt to reappear not only in the first generation but also in the offspring of many other generations.

Deformities of the back or spine consisting of twists or curvatures are considered strongly hereditary, and for this reason should be stamped out of a flock as soon as possible.

32. Defects in the arrangement of feathers are quite common in poultry, and should be carefully watched for and avoided. It frequently happens that the flight feathers of the wing will hang down below the natural wing line. When this is the case, a fowl is said to have a *slipped wing* or *slipped flight feathers*. This may be a natural defect, or it may have been caused by one or more feathers becoming accidentally twisted at the pinion joint of the wing, a circumstance that will annoy the fowl, cause it to work its wing continually, and thus give the feathers an unnatural shape as they grow. Slipped flight feathers occur most frequently in full-feathered fowls. It is a most difficult problem to breed in the same fowl the combination of soft hock feathers, pliable tail feathers, and perfect wing feathers that are characteristic of Cochins and of fowls of other breeds that are so profusely feathered as to induce a heavier growth of stiff feathers in their wings and hocks than would grow naturally on a close-feathered fowl. When the wings of close-feathered fowls have any of these defects, the faults are more objectionable than in others.

Slipped flight feathers may be improved by binding the flight feathers together and tying them up against the upper portion of the wing as shown in Fig. 1. This kind of treatment may hold the flight feathers in place for a short time, but it will not remove the weakness that caused the feathers to slip, nor will it remove the undesirable breeding defects.

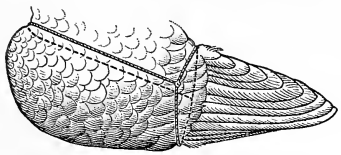


FIG. 1

The other defects that are apt to occur in the plumage of fowls are: the failure of feathers to grow on the wings at the juncture of the flight and secondary feathers, the failure of some feathers to completely develop, and the occurrence on some fowls of twisted feathers such as wry tails, squirrel tails, and tails that droop unnaturally. Although some of these defects may be temporarily remedied, the remedy does not make the fowls suitable for breeders, and all fowls showing such deformities should be rejected as defective and unfit for either the show room or the breeding pen.

MANAGEMENT OF FOWLS IN CLOSE CONFINEMENT

33. The fancier must be well versed in the art of managing his fowls in close confinement, because it is almost impossible to raise exhibition poultry without confining them at some stage of their development. It is not unusual for exhibition fowls of the finest quality to be kept in close confinement more or less from the time when molting begins until after the show season has ended. To keep the fowls in good health and to preserve all their good qualities, the coops and runs must be kept absolutely clean and free from insect vermin.

Freedom from insect vermin is very important in the case of exhibition poultry, because of the effect the insects will have on the plumage. If depluming, or feather, mites infest fowls that are kept in confined quarters, the destruction of the feathers will be considerable, and this will naturally detract a great deal from the appearance of the fowls, as shown in

Fig. 2. Once these mites get a foothold, the even temperature of the coops and the steady, moist warmth of the fowls will encourage their speedy growth, and they frequently deplume the fowls to such an extent as to render them useless for exhibition. The appearance of exhibition fowls is also affected by red mites and various kinds of lice, which irritate the fowls and take from them such a quantity of blood that their vitality is reduced and they are not able to make a proper growth of plumage.

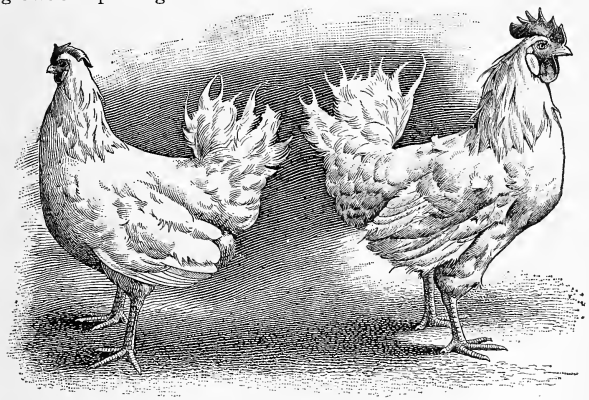


Fig. 2

Young fowls, that is, cockerels and pullets, must be watched more closely if kept in close confinement than older fowls, as they will not usually thrive well under such conditions. Young fowls will do the best when allowed to grow to maturity on the range, and the more freedom they have the better. It takes the most careful management to produce exhibition cockerels and pullets of the best quality in close confinement, and this can be done only after considerable experience has been gained.

CARE OF HEAD POINTS

34. It is particularly important to have the head points of exhibition fowls in the best possible condition, for the reason that they are the points first noticed by the judge; this is especially true of all varieties of the Mediterranean and the crested fowls. Too much care cannot be given to the cultivation and preparation of these points for the show room. In caring for the head points of a fowl, however, it must always be borne in mind that there is a point beyond which it is not permissible to go. The natural beauty of these points may be brought out to the best advantage, but it is not a legitimate practice to trim, cut, or alter the shape of the comb or wattles, nor is it proper to tamper with the ear lobes except to treat them so that they will be in good condition.

To keep the combs and the other head points in good condition, it is fundamentally necessary to keep the fowls free from insect vermin and to maintain their vitality. Scurf is apt to appear on the face, comb, and wattles of fowls that are exposed to the ravages of insect vermin of any kind, and loss of vitality from any cause whatever will lead to diseased combs. To avoid both of these undesirable conditions, absolute cleanliness both of the fowls and of their living quarters is a necessity.

Whenever the least sign of scurf makes its appearance on any part of the face, comb, wattles, or ear lobes, these parts should be washed perfectly clean with a brush and soap and then rinsed with clean water and dried with a soft cloth. If any sign of white spots appears on any of these parts, the affected place should be rubbed thoroughly with a small quantity of iodide of sulphur ointment. Only a small quantity of this should be used—not enough so that the feathers will be smeared, and the little that is used should be rubbed thoroughly into the affected parts.

35. Improvement of Color of Head Points.—The color of comb, wattles, face, and ear lobes of all fowls will be improved by feeding them tincture of iron, though this will also injure the color of the plumage of white and buff fowls.

The color of the comb, face, and wattles of fowls in the show pen may be heightened for the time being by bringing strange males and holding them in front of the coops. This will excite the ire of the fowl in the coop and cause the blood to flow more rapidly throughout its system. This increase in circulation of the blood will improve the appearance of the head points, including the eyes.

36. Care of Combs.—Very large combs are caused by excessive heat, by overfeeding, and by feeding an excess of animal food. The methods of preventing these faults readily suggest themselves. Extremes of temperatures in the living quarters of either pullets or cockerels should be avoided. Cockerels should not be kept where it is cold enough to retard their bodily development, nor should pullets be kept where it will be warm enough to hasten unduly their bodily development, for this will also tend to loosen their plumage and prevent the best results from being obtained.

The combs of cockerels will quickly overdevelop and sometimes become rough if they are kept in warm coops. Such conditions are often brought about by overcrowding the fowls in coops. Because of this fact, cockerels of the Mediterranean class and of other kinds that show an inclination to overdevelopment of the comb, should be kept continually in cool places.

The development of the comb in pullets is not so marked as in the case of cockerels, and when the combs of the pullets do not develop sufficiently fast, the growth may be advanced by keeping them in warm places. In such places, however, they must be carefully watched to avoid an overdevelopment of the comb, and the keeping of pullets in warm places also has the disadvantage of hastening egg production; hence, caution should be used in keeping pullets in warm places.

Fowls of breeds and varieties that have large combs naturally or fowls of any kind that have an overdevelopment of comb should never be kept in warm places during the winter months, nor should they be fed meat or condiments of any kind that will be apt to increase the growth of comb.

Small, depressed spots termed *thumb marks* are frequently found on the combs of Leghorns and Minorcas. These are usually caused by the combs of the growing chicks becoming bent over either by the excessive heat of the brooder or by the constant pressure of the body of the mother hen against the comb. If noticed at their beginning, these indentations may be partly removed by frequently rubbing the comb between the thumb and fingers, not hard enough to irritate, but just enough to make the comb pliable and to work out the wrinkles. The use of a little vaseline during the rubbing will aid in the manipulation of the comb.

Side sprigs, one of the most common defects of the comb, are the bane of the fancier. They are thought to be a breeding defect that comes from intermingling double, rose, and single combs in the original crosses. There is no legitimate way to remove side sprigs, though some breeders do remove them successfully by pinching them off between the nails of the thumb and finger.

The shape of slightly imperfect combs may be improved by proper manipulation. Points that are crooked or that hang out of form may be worked into shape by massaging with the thumb and fingers, using a little vaseline to avoid friction. To be effective, however, the work should be begun the moment the defect makes its appearance.

37. Care of Ear Lobes.—White ear lobes that are rough, irregular, or slow in development may be improved by careful massage. The ear lobes should be first washed with soap and warm water, anointed with thick cream, and then rubbed gently between the thumb and fingers. Following this a lotion made of glycerine with a small quantity of oxide of zinc, or just some cream, should be applied. The ear lobes should then be gently dried with a soft cloth and sprinkled with a little dry oxide of zinc. Under such treatment the wrinkles in the lobes will gradually soften and the lobes will become more pliable.

Red spots in white ear lobes and white, or enamel, spots in red ear lobes cannot be successfully removed, but they may be

improved if properly manipulated. They should be treated as recommended for rough and irregular ear lobes, but the rubbing should be more vigorous, so as to increase the circulation of blood through the lobes. Though this rubbing may be carried to a considerable extent, it should never be persisted in long enough to inflame or irritate the lobes.

If fowls with white ear lobes are protected from the sun and rain the whiteness of these parts will be better preserved than if the fowls are exposed to the elements.

The white flashes that come and go on the faces and combs of both males and females that have red faces as well as combs may be avoided to a certain extent in dark-plumaged fowls by feeding them iron, but the same treatment would ruin the plumage of white or partly white fowls. When iron is fed during the molting period not only will the color of the comb, wattles, and ear lobes be improved, but also the luster of the plumage of dark fowls will be greatly enhanced.

Ear lobes that are small or wrinkled may be improved by anointing them with a mixture of equal parts of cream and zinc oxide and properly massaging them. During the massaging the ear lobes should not be rubbed, but they should be gently gripped by the fingers at the point where they join the head and gently stretched by drawing the fingers slowly out toward the edges and the lobe allowed to slip through them. If this stretching is done gently once or twice a day, the ear lobes will soon become more smooth and will assume a more attractive appearance. Care should be taken never to bruise them.

38. Care of Crests.—When the period of molt arrives, the crests of all crested fowls should be gone over carefully and every stub and broken feather, and every feather having a dead appearance, as though having been retained in the crest during the previous period of molt, should be carefully plucked out. The beard about the throat should be treated in the same manner. On crested fowls, when the system of trimming the crest off short during the breeding season has been followed, a large number of stubs will be found in the

crests. A few of these should be plucked out each day during the molting period; this should be done with extreme care to avoid injuring the scalp. To insure against the injury of the scalp of fowls that are treated in this way, they should be confined indoors, each one by itself. Being indoors, their scalps will be protected from the direct rays of the sun, and being separate, other fowls will be prevented from picking the bare scalp and thus ruining the fowl for exhibition purposes.

To produce satisfactory crested fowls, it is necessary to keep each one by itself from the beginning of molt until the crest is full grown. and even then the crested fowls should be closely watched when with those of their own or other kinds to prevent the plucking of feathers from the crest.

After fowls have been thoroughly cleaned, the use of oil or alcohol about the head, face, comb, or wattles is to be discouraged. Clean, warm water will be found best for cleaning these parts. Combs, wattles, and ear lobes that have been cleaned with alcohol, oil, or vinegar are likely to show a whitish cast a few hours after treatment, and scales like dandruff sometimes appear within 24 hours after they have been cleaned in this way. When combs are scurfed over and scaly or full of rough places and dirt, they may be cleaned with soap and water and a soft-bristled tooth brush or other brush that will not tear the surface of the comb. In scrubbing any of the head parts in this way, great care should be taken not to irritate them.

39. Lotions and Ointments for Head Parts.—Nothing is better for softening the skin on the face, comb, wattles, and ear lobes than a lotion of 4 parts of thick cream and 1 part of zinc oxide. When this is used, it should not be smeared thickly over the spots but should be rubbed in gently with the thumb and fingers, and when the parts are thoroughly softened they should be dried with a cloth. White ear lobes may be improved by such treatment.

No liquids that are likely to irritate the comb, face, wattles, or ear lobes should ever be applied to these parts, because such irritation will be liable to cause scales similar to dandruff

scales to grow. Warm rainwater is at all times to be preferred for cleansing the head parts. Oil, vinegar, and alcohol are likely to have an irritating effect, though a mixture of 3 parts of water and 1 part of vinegar may be safely used. Oil is particularly objectionable for using on the head parts, because, in addition to its irritating effect, it is also likely to drip off and smear the plumage—a thing that will be greatly detrimental to the quality and appearance of the plumage. Whenever grease of any kind is needed on the head parts, a mixture of either cream or glycerine thickened with zinc oxide is the best for the purpose, and only a small quantity of this should be used at a time—the parts should never be smeared with either of these mixtures.

As previously mentioned, iodide of sulphur ointment is suitable for using on the head parts of fowls when a germicide is needed.

CARE OF SHANKS AND FEET

40. The shanks and feet of an exhibition fowl are very important to have in the best possible condition, as defects in these parts are conspicuous and detract a great deal from the appearance of a fowl. Great care and attention is required to keep the shanks and feet of fowls in perfect condition, and if scales once begin to grow on the shanks it will require constant watchfulness to prevent the fowls from becoming disfigured, thus practically disbarring them from a chance to win when in close competition.

The shanks and feet of exhibition fowls should be kept clean and free from disease at all times. No fowl that becomes infected with scaly leg should ever be permitted to remain about a poultry establishment. In cleaning the shanks of fowls, it is well to know that the scales are shed from the shanks naturally at nearly the same time that the feathers are molted. Loose scales that do not shed off readily should be removed at this time.

Shanks, feet, and toes may be made bright and glossy by polishing them first with a woolen cloth moistened in sweet oil and then by polishing them with a bit of chamois. The use

of oil, coloring matter, or stains of any kind is apt to destroy the natural gloss of these parts and give them an unnatural appearance. A thorough polishing with a woolen rag and then with chamois without the application of any oil is really to be preferred.

In cases when scales or scurvy appear on the shanks, the appearance of the shanks may be improved by rubbing them with a woolen cloth moistened with a mixture of equal parts of sweet oil and alcohol. Whenever oil is used about a fowl, great care should be taken never to soil the plumage with it, and no traces of the material should be left on the shanks and feet.

41. Care of Shanks and Feet of Feather-Legged Fowls.—Careless methods which permit dampness and filth to abound where poultry is kept is almost certain to cause rough shanks and scaly legs and feet. The methods of avoiding rough shanks, scaly legs, and broken shank and toe feathers in feather-legged fowls, however, require very detailed attention, as the thickly feathered shanks are more liable to become diseased. Where feathers grow profusely on the shanks and toes there is always scurf among them close to the scales. This scurf and the scales furnish a safe lodging place for the mites that cause scaly leg and other diseases. When these insects once obtain a foothold the work of destroying the feathers and accumulating scurf will often proceed unnoticed until the legs and feet have become covered with scales and the feathers are broken or destroyed. When this stage has been reached, the size of the shanks and feet has apparently increased to unnatural proportions, and the appearance of the shanks and feet is disgusting.

The closest attention to cleanliness and sanitary conditions is required to avoid diseased conditions in feather-legged fowls, and after the shanks and feet of such fowls become diseased prompt and energetic measures are necessary if the trouble is to be checked before it goes too far. When diseased, it is advisable to cut off all the feathers on the shanks and toes, leaving only the stubs of the feathers; these parts must be

cleansed and be treated with carbolated vaseline. After the fowl is almost cured, the stubs should be pulled out of the shanks and feet and the parts thoroughly cleansed with soap and water, dried, anointed with zinc-oxide ointment, and the fowls kept on dry, clean straw until entirely cured. When the new feathers begin to grow, the shanks should be washed clean and polished with a soft cloth. This will avoid the necessity of polishing the shanks later after the feathers are full grown, when there will be a chance of breaking them. Absolute cleanliness will prevent the recurrence of the trouble.

Feather-legged fowls intended for exhibition should have all the short stubs and broken feathers removed from their shanks and toes as soon as the molt begins. The shanks and feet should be kept free from dirt of all kinds, and the fowls should be kept where the feathers will grow freely without the possibility of their being broken off by contact with rough places. To prevent the shank and toe feathers from becoming broken, the fowls should have plenty of room to move about both inside and outside of the houses, so that they will not crowd or trample on one another. Neither should they be permitted to scratch for their food from the beginning of molt until the end of the show season. To prevent their shanks and feet from becoming diseased, in addition to keeping the yards and houses clean, the floors of the houses should be covered with several inches of dry sand, and this should be changed frequently to keep it clean and free from dampness. When handled as just described, fine, complete shank and toe feathers can be grown on Cochins, Brahmas, and Langshans, and can be maintained in perfect condition for several months.

42. Preservation of Color of Shanks and Feet.—The proper shade of color of the shanks and feet is one of the most important features to secure and maintain in a fowl that is intended for exhibition. As fowls grow older, it is perfectly natural for them gradually to lose the color of their shanks and feet. This loss of color the fancier cannot control. But he is able to control the premature loss of color due to keeping fowls under improper conditions.

If the fowls are compelled to walk around continually on an alkali soil, or in ashes, lime, dampness, or filth, the color of the shanks will undergo a change. Alkali exerts a bleaching action. Yellow shanks will be changed to white; dark-colored shanks will be turned to gray; green or blue shanks, to a grayish tint; and pinkish-white shanks, to an ashy white.

Keeping the fowls on a grass-covered range or a clover field and on clean straw in the houses will improve the color of the shanks and feet of all varieties.

CARE OF PLUMAGE

43. As a preliminary to preparing fowls for the show room, a careful examination of their plumage should be made at least 60 days before the date on which they are to be exhibited. At this time all broken feathers should be removed, or at least this should be done at a time that will assure their renewal in time for exhibition.

If wing, sickle, or covert feathers are broken they should be removed as soon as the quills are dry, because it will take 60 days or more for a long, sweeping sickle to grow to complete length in a Hamburg or a Leghorn, or in other fowls with similar sweeping tails. The tail feathers of Asiatics and of females of all breeds will grow in a shorter time. The average tail feathers of Cochin females will grow in from 4 to 5 weeks, and the wing and tail feathers of a Brahma hen will grow in 6 weeks. The tails of hens of the Mediterranean varieties will grow complete in from 5 to 7 weeks, and the tails of some other of the small varieties will grow even more quickly.

Particular attention should be given to the examination of the plumage of buff-colored fowls. Buff fowls that do not molt completely are apt to show a mottled surface color, which on close examination will be found to be due to the presence of many old feathers. In such cases, the unmolted plumage, or old feathers, should be plucked out carefully one at a time, so as not to disturb the new growth of feathers. After the removal of the old feathers, new ones will grow in their stead in from 4 to 6 weeks. All tail and wing feathers that are

not dropped naturally during the molt should be carefully removed, one at a time, as soon as it is evident that they will not be dropped.

Stubs of feathers and broken feathers should be carefully removed just as the fowls begin to molt. All parts of the body should be gone over, and each stub removed gently so as to avoid giving pain or tearing the skin of the fowl. These stubs should not be plucked too soon before the fowls begin to molt, for in such cases the feathers that grow from these feather cells will be apt to develop more quickly than the rest of the plumage and thus would probably cause an uneven surface color.

In removing either feathers or stubs of feathers from dark-plumaged fowls, care should be taken not to injure the feather cells that must produce the new feathers, because such injuries will cause white tips or white edges to show in the new growth. To avoid all chance of injury to the feather cells, the quills should not be removed until they are perfectly ripe, or dry. This state of dryness in a quill may be brought about by trimming a little from the outer end of the feather every day or two. This, by discouraging the growth of the feather, causes the quill to shrink and loosen the hold of the skin on it.

If close attention is given to these details, all fowls may be assisted through their molt and a complete, fresh covering of feathers secured at the time when they will be needed for the show room.

44. Protection of Plumage From Sun and Rain. From the time they begin their molt, fowls that are intended for exhibition should be protected from the elements, at least to the extent of not having their plumage soaked by the rain and then dried in the sun. Exposure to the sun after wetting causes what is known as *supplementary lacing;* that is, the outer edge of the web of the feather is bleached to a lighter shade of color than the other parts of the feather. Fowls of all colors will have their plumage more or less injured in this way by exposure to rain and sun, though the injury is more noticeable in the plumage of buff fowls. The plumage of buff-colored pullets is more injured than is that of the cockerels.

The predisposition to a creamy-yellow cast in the surface plumage of the males of certain white-plumaged fowls that have come from dark-plumaged fowls, such as the White Orpingtons, White Plymouth Rocks, and White Wyandottes, although it may be bred out of a flock by careful selection, is likely to become more pronounced if the fowls are exposed to the rays of the sun while their feathers are wet. This creamy yellowness is very undesirable in exhibition fowls, but it is unsportsmanlike and illegitimate to bleach it out. To be on the safe side, white fowls should never be exposed to the rain and sun after the molt begins. The feathers of white-plumaged fowls that are pure white down to the skin, including the quills, will not be injured so much by exposure to the rain and sun. This may give them a little supplementary lacing at the edges of the feathers but it will not turn them yellow.

Cockerels and pullets of all varieties, particularly, should be watched and protected from the rain and sun. Although these young fowls do not molt completely at the time of assuming their adult plumage, they do grow three complete coverings of feathers between the embryo state and the time of assuming their mature plumage. As soon as the first feathers of the adult growth appear, they should be protected from the rain, and, when wet, must not be dried by the sun.

Whiteness of the plumage, whiteness of the ear lobes, brilliancy of sheen, and show condition will all be materially improved by sheltering the fowls from the sun and rain. In the preparation of fowls for exhibition, special attention must be given to protect their plumage. Coops well suited for such protection are shown in *Standard-Bred Poultry*, Part 1. These coops may be changed to suit different localities.

Young chicks should not be exposed to the scorching rays of the sun, as this is likely to blister them and lessen their chances of growing a covering of perfect plumage.

45. Causes of White Feathers.—The white feathers that appear in the plumage of dark-colored fowls are frequently due to the injury of such feathers while small during the molt. When a soft, new feather is injured the blood usually flows

from it, and it then grows out white, failing to develop the color natural to the variety. Feather-legged fowls may have white feathers on their shanks and toes due to bruising or breaking when small. White feathers also occur from the same cause in wings, tails, and in other parts of the body. Such injuries to the feathers are often caused by the fowls becoming frightened during molt, dashing around in the houses, and striking their feathers against roosts, nest boxes, side walls, etc. Many prizes have been lost through injuries of this kind that might easily have been prevented by the exercise of a little care.

Fowls infested with lice or lacking in vitality are likely to grow feathers of an uneven shade and that lack gloss and finish; and white feathers are also likely to grow in dark-plumaged fowls that are so affected.

TRAINING OF FOWLS FOR THE SHOW ROOM

46. The **natural form** of a fowl is that which it unconsciously assumes when standing at rest, that is, it is the form it assumes in a natural, unconscious pose. This natural form in a fowl may be inherited from its ancestors, but it is seldom seen, because, when frightened, when running, when feeding, or when engaged in pursuits that demand movement, it is not well shown. It is also very seldom that a fowl's natural form is exactly true to the type of the breed to which it belongs. Hence, a fowl that has natural form that corresponds closely with the proper breed type is very valuable, especially if this is a dominant quality and the fowl is capable of transmitting its desirable natural form to its offspring.

Because of the fact that most fowls will not pose naturally in a form that closely approximates the type of the breed to which they belong, fanciers early resorted to training their fowls so that they would pose in certain desired positions at a signal or as soon as any person approached them, and thus exhibit their breed characters to the best advantage. The form that is the result of such training is called **made form.** It is unnatural to the fowl, and is not transmitted to its offspring—the ungainly form that such a fowl might have shown before its training will ordinarily be transmitted to its offspring. A

fowl that has remarkable shape or form when at freedom will be almost certain to assume even more attractive poses when penned for exhibition. It will also possess the valuable quality of transmitting its beautiful form to its offspring.

For those who are adept at training poultry, it is possible to train fowls so that they will stand, or pose, in almost any desired position within reason. It is thus possible to change the entire formation of a fowl from that which is natural to it. For instance, a fowl may be taught to stand more erect, to lean forwards a trifle, to stoop a little at the hock joint, to hold its head erect, to curve the neck either forwards or backwards, and to hold the head as though looking to one side.

The wonderful poses of extremely well-trained game and game bantam fowls illustrate how much the form of a fowl may be changed from its original natural form. This is sometimes so marked as to lead persons unfamiliar with these fowls to think them different fowls before and after posing. Though the poses of game and game bantam fowls are a remarkable result of careful training, fowls of almost any variety may, with patience, be taught to assume striking attitudes when they are placed in coops for exhibition. Turkeys, geese, and ducks may also be trained to improve their form in the show room.

Show-room form is the form exhibited by a fowl when it is placed in a coop in an exhibition hall. This may be natural form or it may be made form—that is, largely artificial—but the method of obtaining the form is never considered by the judges. All they can judge a fowl by is the actual form in which it poses before them and its behavior during the time it is being judged.

47. When a fowl appears at ease in an exhibition coop in a show and does not attempt to interfere with or attract the attention of other fowls in its immediate vicinity, it is said to have good **pen manners.** The most effective way to insure good pen manners in any fowl is to keep it where it can be accustomed to the presence of other fowls; this is not always easy, because the males and females intended for exhibition should never be permitted to run together in the same enclo-

sures from the beginning of the period of molt until the close of the show season.

Females intended for exhibition should have a small-sized male turned in with them for an hour each day during the week prior to the exhibition. Such a male will not be large enough to injure their plumage, and by being accustomed to his presence the possibility of the females appearing at a disadvantage when they are penned in the vicinity of males at a show will be removed. Males that are kept together, or near together, in coops or pens are likely to behave much better in the show room than those that have been kept away from all other fowls.

The pen manners of both males and females may be further improved at home by confining them for a certain length of time each day in exhibition coops of the size that are commonly used in the show room, and by having them handled as frequently as possible by strangers, in order to accustom them to strangers before they have to face the crowds in the show room.

48. Method of Training.—As applied to poultry, **training** means the teaching of pen, or show room, manners to fowls, so that they will appear to the best advantage when on exhibition. The objects of training fowls are to teach them: (1) To stand well when on inspection, that is, to pose; (2) to be quiet or self-possessed; (3) to permit of handling without offering resistance.

Perhaps the most important thing to bear in mind when training a fowl is that to show to best advantage a fowl must be absolutely fearless. A fowl should never be frightened, and it should be gradually accustomed to the presence of as many people as possible, and to children, dogs, and any other objects they will be likely to see in a poultry show. It should also be accustomed to the presence of other fowls in coops near by, and to a certain amount of noise, so that the conditions in the show room will not be too strange to it.

In training fowls, it is necessary for the fancier to exercise the greatest kindness and patience. No attempt should ever

be made to force a fowl to pose in any particular position. As far as possible, it is much better to appeal to the greed of the fowl by offering choice bits of food, and thus get it to assume the desired positions unconsciously. When a fowl has hopes of receiving food it will pose in an alert and sprightly attitude that might be impossible to obtain in any other way. Hence, every time that the trainer approaches the coop in which an exhibition fowl is confined he should give it a morsel to eat. By this method the fowl will soon become accustomed to expect food when any person approaches it, and will immediately strike the attitude it has been accustomed to. The alert appearance on such occasions will be due to the fact that the fowl will be keenly looking for the food that it expects.

49. The first step in training a fowl is to place it in a coop of the same size as the regulation exhibition coop, which is 26 inches high, 24 inches long, and 22 inches wide. A coop 24 inches square and 29 or 30 inches high is preferable for fowls of large size like the Brahmas or Langshans. The coop should be placed where there is plenty of light, and similar coops containing other fowls should be placed near it. If possible, it is advisable to place the coop or coops in which the fowls to be trained are confined in a location that the trainer passes very frequently. This will save the trainer many steps and will accustom the fowls to having people pass them. As mentioned before, children and dogs playing around the coop will also aid in training the fowl. Litter, usually shavings, such as is used in exhibitions, should be placed on the floor of the coop.

As soon as the fowl becomes somewhat accustomed to its new surroundings, the next step is to quiet it by putting the hand into the coop and patting it gently on the back, under the breast, and under the throat. Occasionally, the trainer should take hold of the wing and open it out gently as a judge would do when looking to see whether it has any foreign color. The feathers of tight-plumaged fowls, such as the Leghorns and the Minorcas, may be stroked with the lay of the feathers, but the plumage of loose-feathered, or fluffy, fowls, such as the

Cochins and the Wyandottes, should never be smoothed down. The plumage of such fowls should be frequently ruffled by starting with the fingers touching in the back at the rear of the abdomen and drawing them gently up against the lay of the feathers the full length of the body. After these first two stages of training have been continued for a few days the fowls should be quiet and self-possessed with people and other fowls around them, and should appear to enjoy being caressed with the hands. They will then be in the proper frame of mind to be trained in the finer points of posing.

It must always be borne in mind that to get a fowl to pose attractively it must be taught to expect attention whenever any person approaches the coop. To impress this idea on the mind of a fowl, a trainer should never approach the coop without paying some attention to the fowl. During the show, of course, but comparatively few persons will handle it, but the habit formed during the training will cling to the fowl and it will pose for any person in the hope of receiving a titbit.

50. The food used for coaxing fowls during training may be almost any of the ordinary poultry feeds. A kernel of corn or a small bit of stale bread is convenient. This should be held between the fingers at the desired height and position. The food should not be held too high or the fowl may assume a shortened appearance because of stretching upwards. If it is desired to have the fowl stand squarely in front of the judge or of any person looking into the coop, the food should be held at a point near the center of the coop; if the object is to get the fowl to stand a little sidewise, the food should be held to one side or the other. A fowl trained in this way will always come to the front of the coop when any person approaches. It will never cringe or cower in the back part of the coop. A fowl that will shrink its feathers in and cower away from the judge as though afraid can never be expected to win a prize where the competition is keen. Some trainers will hold a bit of food between their lips instead of in their fingers and allow the fowl to pick it out. A fowl so trained will be alert when a judge puts his head near the coop to get a close view of it.

As soon as a fowl has been taught to come to the front part of the cage in the desired position the trainer should begin to train the fowl with a light, round stick about 24 to 30 inches long, similar to that used by judges. With this, the fowl should be tapped gently on the back, under the breast, and under the throat. This should be done carefully at first, until the fowl becomes accustomed to the stick, and should be continued until the fowl will stand in the shape that it is desired to show to the judge. Such work requires skill and experience and can be learned only by continually practicing it on fowls. It should always be borne in mind that steady, continuous posing is one of the most desirable requisites for an exhibition fowl. A fowl that will pose steadily in such a position that it will show off the beauties of its formation to best advantage is several times more valuable than one that will pose for only a moment or two. It is one of the advantages of the experienced and expert fancier that his fowls will not only pose in good form but that they will also hold their pose before the judge at least long enough for him to have the opportunity to score all of its points.

In training a fowl whose tail is carried too high it will sometimes be found impossible to induce the fowl to carry it lower. In some cases of this kind it will be possible to lower the tail feathers as much as ten degrees by taking hold of the tail piece and gradually and gently working the feathers down and repeating this day after day.

51. Results of Training.—The finest results in training fowls for exhibition can be attained only by persons who are well versed in the demands of the show room and who have developed considerable skill in training, either as a result of years of experience or from careful personal instruction by fanciers well informed in such requirements. All breeders may, however, train their fowls so that they will be tractable, easy to handle, and so that they will pose to advantage when under inspection.

The good results secured from training fowls may be summarized as follows:

1. By being taught to assume striking and attractive attitudes the moment any person approaches their coop, fowls will be able to show themselves off to the best advantage. Fowls that draw their plumage together and cower away from the judge as if frightened have little chance of winning a prize when in competition with fowls that are better trained.

2. Fowls become so tame that they will not struggle in the least when handled and will not resist when any person attempts to take them from the coop. Fowls that are not well trained will resist any attempt to handle them and will naturally have little chance of winning when the competition is at all keen. It is also true that fowls that are adverse to being handled at home will resist with energy any attempt on the part of a stranger to handle them in the show room.

3. When the wings are spread open for inspection, a fowl that has been properly trained will assist rather than retard the operation, and will thus receive better consideration from the judge.

4. Sometimes it is possible to find a fowl so well trained that it is possible to take it out of its coop, place it on a box or barrel, and have it remain posed in an attractive attitude long enough to permit several photographs to be made of it. When of good character, a fowl as well trained as this will require a fowl of much better form to beat it in competition.

PREPARATION OF FOWLS FOR THE SHOW ROOM

52. The preparation of fowls for the show room, or **conditioning,** as it is often called, is important, but as Lewis Wright, one of the most successful of English fanciers, has said, its importance has been greatly exaggerated by persons who are desirous of impressing others with their special ability or knowledge of secrets along this line. Some persons claim that they can change very inferior poultry into sure winners by proper preparation, and that what they can do in 2 or 3 weeks of conditioning is the main secret of successful exhibiting. Though in many cases special preparation for the show room is useful, it amounts to very little in comparison with the

value of breeding from good stock and of good general management. Many fowls require but little preparation for a show; those that require considerable preparation are not the kind that win prizes in shows where the competition is at all keen.

To be in first-class show condition, a fowl must be in perfect health, must be well prepared, must have a proper amount of flesh, and must have plumage of practically perfect color and markings. From this it can be seen that the proper preparation is but one of the factors that influence the value of a fowl.

What is commonly known as **faking** is dishonest preparation of fowls for the show room. Sometimes this is so skilfully done that it is impossible to detect the removal of blemishes, but it is faking just the same, and the exhibitor that practices such methods acts unwisely and deserves the contempt of his fellow competitors.

The honest preparation of fowls for the show room consists of such manipulation as will bring out the best of the natural qualities of the fowl, such as its true form and color. Such preparation will include cleaning, grooming, polishing, and other means of bringing out the best in a fowl; dishonest preparation begins whenever the breeder begins to remove imperfections by cutting or trimming sections that are lacking in perfection, by dyeing, bleaching, or splicing plumage, and, so long as color disqualifications are embodied in the standard, by removing such feathers as would disqualify a fowl from competition.

The way to win prizes in the show room is to hatch and raise fowls that will possess to the highest degree the best quality that can be produced, and after such fowls have grown to proper size, to care for and prepare them honestly for the show room.

53. Show-Room Condition.—To be in good show-room condition a fowl must have not only good health, strength, vigor, and the excellence of color and markings that go with these qualities, but every part of it—the plumage, the head parts, the shanks, and the feet—must be absolutely clean and

free from parasites, diseases, and deformities. The show-room condition of a fowl has more influence on its success in a competition than any other one factor, except perhaps the barring to the skin in Barred Plymouth Rocks. In the scale of points in the Standard of Perfection from four to six points, according to the breed, is given as the value of condition, but in spite of the fact that such a small value is given to this factor, so strong an influence does condition have on the minds of the poultry judges that it is practically impossible for a fowl in poor condition to win when the competition is at all keen. It is usually considered that the competition is keen where fowls of the highest character are shown. As the standard of exhibition poultry advances from year to year, the importance of their show-room condition also increases.

Many exhibitors make the mistake of not having the shanks and feet of their fowls in the finest possible condition, and many greatly coveted prizes have been lost because of this fact. To be in the best show-room condition, the shanks and feet must not only be clean enough to appear clean to the casual observer but all dirt must be removed from about and beneath the scales, and all roughness and traces of scaly leg must be removed. It must be borne in mind that no section of a fowl must be neglected if it is desired to have it in the best show-room condition.

Perhaps the most detestable form of lack of condition in fowls is the presence in their feathers of parasites or insect powder. Even though a fowl may possess unusual excellence in other directions, the presence of either of these conditions in its plumage will often be enough to turn the tide of fortune away from it. A judge whose temper has been ruffled by parasites crawling over his hands or by having his eyes irritated by insect powder from the plumage of a fowl, is in no humor to look kindly on the fowl. Such a lack of condition is frequently the hidden cause of defeat. There is no excuse for such a condition, and no exhibitor really deserves an award for fowls that are infested with parasites or dusted with insect powder, because such undesirable conditions can be readily removed in every instance before the fowl is sent to the show.

54. Cleaning the Shanks and Feet.—The process of cleaning a fowl should begin with the shanks and feet, and should include the removal of all particles of dirt, all discolored scales, and all rough places on the surface. To do this conveniently, the fowl must be held in some way that will prevent it from struggling to free itself and thus possibly break its plumage. A cloth with holes for the feet and suspended like a hammock may be used, and thus the attendant will have both of his hands free to work with, and will probably be able to do a better job than would be the case if he were compelled to hold a struggling fowl with one hand and clean its shanks with the other.

Dry scales may be removed with a nail file, with an orangewood stick, such as is used in manicuring, with a small paddle of any kind of hard wood, or a few of them may be removed with the thumb nail. Dirt may be removed from between the scales with a wooden toothpick or with any small, pointed piece of wood. After the dirt and loose scales have been removed, the shanks and feet should be scrubbed with a stiff nail brush. Warm water and soap or hand sapolio are good for this purpose, unless the legs are very rough; in such cases a soft cloth with sapolio and a little powdered pumice stone will be found effective in scouring off the rough spots. When scouring, however, care should be taken not to break the skin and cause the blood to flow.

When the shanks and feet have been thoroughly washed and scoured, they should be rinsed perfectly clean, dried with a soft cloth, and dressed carefully with a solution of equal parts of alcohol and olive oil. Care should be taken not to soil the plumage of fowls with this solution if they are not to be washed afterwards, but in the case of fowls that are to be washed this does not matter. The more tender the shanks and feet have been made by the cleaning process, the more thoroughly they should be anointed with the lotion of alcohol and olive oil. Sometimes it will be advisable to make several applications of this lotion before the fowl is washed. If evidence of continued tenderness is shown, the shanks should be treated with carbolated vaseline twice in 24 hours before washing.

55. Washing a Fowl.—When properly done, a thorough washing of the plumage of a fowl will bring out its finer qualities and make it appear to better advantage. White-plumaged fowls are greatly improved by washing; immaculate cleanliness is an absolute necessity when such fowls are on exhibition. Fowls that should have a fluffy appearance when shown, such as the Cochin, are greatly benefited by washing. Such fowls may have several washings. This will soften the down, or under plumage, and when it dries the fluff will be enlarged to such an extent that the fowls will appear larger, and much more rounded in contour. To a certain extent, the same effect can be produced by several washings of fowls of any breed.

When a fowl is washed for exhibition it must be entirely freed from dirt on the plumage down to the skin, the skin must be cleaned, and every particle of dirt must be cleaned from the head, shanks, and feet.

56. To wash a fowl properly, it is necessary to pay attention to certain details: (1) The feathers should first be thoroughly softened in warm water; (2) the soap should be worked well down into the plumage and onto the skin; (3) all the dirt should be loosened from the plumage; (4) every particle of dirt and soap should be rinsed from the plumage; (5) the plumage should be properly dried after being washed. The greatest difficulty in washing will be found in removing all the dirt from the under part of the body and on the abdomen below the tail feathers.

Three tubs of water will be needed for washing the plumage. One of them should contain water heated to from 105° to 110° F. The water in this tub must not be hot enough to scald the skin of a fowl or to loosen the feathers, but it must be hot enough to soften the feathers and prevent them from breaking during the washing. The second tub should be filled with water heated to 80° F. The third tub should be filled with cool or cold water at the temperature at which it comes from the faucet or well. Some persons prefer to have the chill taken off the water in the third tub, claiming that undesirable results have been obtained from using cold water.

Though some unfortunate effects may have resulted from this, it is significant that most of the successful breeders in the country use cold water for the final rinsing and are strongly in favor of its tonic effect. The temperature of the room where the washing is to be done should be about 70° F., and the temperature of the room in which the fowls are to be dried should range from 80° to 85° F.

It will usually be found covenient to wash most fowls on a Friday morning, because most poultry shows begin on Tuesday, and, unless the distances are great, the fowls are shipped on Monday. If the first washing of any fowl proves unsuccessful there is then a chance to repeat the washing on Saturday, and again on Sunday if necessary.

57. The fowl to be washed should first be completely immersed in the warm water several times, until the feathers are thoroughly water soaked. Then the feathers should be rubbed with soap of the soft, floating kind, which is best because it can be more easily rinsed from the plumage than most other kinds. The soap should be worked down into the feathers and on to the skin with the fingers of both hands, and every part of the plumage should be rubbed with the soap and water until the feathers are full of a thick lather. If this is done carefully there will be no danger of breaking the feathers. This rubbing and washing should be continued until all the dirt has been removed or loosened from the plumage. Then as much as possible of the dirt and soap should be rinsed out in this first water. There is no need of being fearful of immersing the head of a fowl in the soapy water, or of splashing this water in its mouth. The soap and water will not do it any harm, but will, on the contrary, tend to clean out its digestive organs.

The next step is to transfer the fowl to the tub of lukewarm water and thoroughly rinse it. All of the remaining dirt and soap should be removed in this second water. The fowl should be lifted out of the lukewarm water and held for a few moments to allow the water to drain from the feathers. Then it should be immersed several times in the third tub containing the cold water. This will serve to harden the fowl and prevent it from

catching cold, and will also help to rinse out any last particles of soap or dirt that may remain after the first two rinsings.

As soon as the fowl is removed from the water for the last time, all the moisture that can be absorbed from the plumage with a sponge should be removed in this way, and then towels or soft white cloths should be used to remove as much as possible of what remains. The rubbing should always be with the lay of the feathers, so as to avoid mussing or breaking them. After this drying the fowl should be placed in a clean coop, the floor of which is thickly littered with clean, dry straw, and confined there until the plumage is perfectly dry.

58. When only a few fowls have to be dried, they are sometimes placed where artificial heat, such as that from an open fireplace, a stove, or a very warm steam radiator, may be used to assist the drying, though they should not be placed near enough to run a chance of being scorched. To confine a fowl where it may get the full advantage of such heat it is customary to place it in a clean box, with a slatted or screened front toward the source of heat; or an exhibition coop, a shipping box, or a hamper may be used.

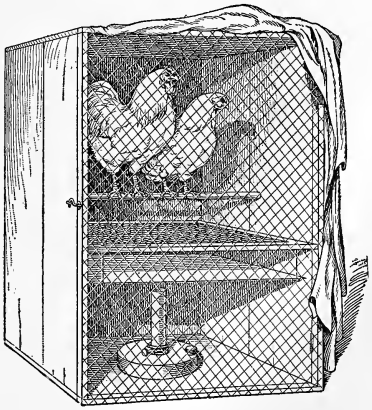


FIG. 3

A drying box made especially for drying fowls after they have been washed is shown in Fig. 3. This is $4\frac{1}{2}$ feet high, 3 feet long, and $2\frac{1}{2}$ feet wide, and will accommodate three or four fowls. The box has a screen door and a curtain in the front. The door serves to confine the fowls and keeps the curtain from blowing in on the lamp, and when let down in front

of the box the curtain serves to keep the heat in, but allows enough circulation of air to prevent suffocation. A lamp supplies the artificial heat, and a galvanized-iron radiator above it distributes the heat evenly throughout the box. The lamp should always be kept turned very low, because but little heat is needed to dry the fowls, and it is very undesirable to have the lamp smoke. The screen above the radiator is made of heavy close-mesh wire screen (about 4 meshes to the inch) and prevents the fowls from jumping on the radiator and burning their feet. A roost for the fowls should be placed 6 or 8 inches above the screen.

59. If the washing has been well done, after the feathers are dry they will be pure and clean, and will have a bright, glossy appearance. If any soap remains in the plumage, the feathers are apt to cling together and both the web of the surface feathers and the under fluff will have an unattractive appearance. In such cases it will be necessary to rewash the fowl, though no more soap will be needed in the second washing unless the feathers have not been well cleaned in the first.

It is not unusual for fowls to faint during the process of washing. When this occurs, it is most likely to happen just as the fowls are first immersed in the water. Although fainting is not of common occurrence, it is always well to be prepared for such an emergency. The best thing to do when a fowl faints is immediately to dash cold water in its face, shake it a little, and hold its head erect. In the greater number of instances this will revive the fowl almost instantly. When the water used is very cold and the fowls to be washed are not of the most rugged kind, a teaspoonful of half water and half whisky, poured down each fowl's throat just before washing will prevent it from becoming chilled or taking cold.

60. Many exhibitors wash the plumage of Leghorns, Minorcas, and other close- or tight-plumaged fowls by merely going over the surface with a sponge or soft brush dipped in soap and water. Though this superficial washing will improve the appearance of the fowls, it is not as satisfactory as washing them in a tub, and is not to be recommended.

When fowls such as the Leghorns and Minorcas are washed, the long sickle feathers of the tail should be laid on a smooth, clean board and carefully washed with a brush and soap and water, the rubbing always being done with the lay of the feathers. Before such feathers have become perfectly dry, all wrinkles and curves should be smoothed out of them with a soft, dry brush.

When the long sickle feathers on a fowl become ruffled or disarranged they may be restored to their proper shape by proper ironing. The feathers, one at a time, should be straightened out, placed between damp white cloths on a smooth surface, several thicknesses of cloth should be placed on top, and then a warm flat iron passed over the upper layer of cloth and considerable pressure applied with the hand. The layers of cloth next to the feather are moistened so that the web will be properly softened. The layer of cloth on top of the feather should be thick enough to prevent the feather from drying, curling, or burning. The warm iron passing over the top of the cloth drives heat down through the moisture, slightly steams the feather, thus softening it and making it very susceptible to the smoothing action of the pressure from the iron. As soon as the moisture leaves the feather it will be set in the position in which it was pressed. Hence the importance of getting the feather well smoothed out before pressing it. It is seldom necessary to use such extreme measures in smoothing out a feather.

61. Clearing Up White Plumage.—To clear up the plumage of white fowls, that is, to counteract any slight yellowish tinge of the feathers, it is a common practice to add a little of the very best quality of bluing (indigo or soluble Prussian blue), the same as is used for washing clothes, to the tub of cold water in which they are rinsed. Only a very small quantity of the bluing should be used, merely enough to impart a slight bluish cast to the water—not enough to color it blue. The object in using this is merely to clear up the color of the feathers, not to dye them, and it is better to use none at all than to use so much that the feathers will appear blue when dry. It

should always be borne in mind that the best way to secure white-plumaged fowls is to breed them pure white and not to attempt to produce the white by chemical action. Some not only destroy the colors in the plumage of their fowls by chemicals, but also sometimes destroy the feathers themselves.

62. **Improvement of Gloss of Plumage by Polishing.** The gloss of plumage of fowls may be improved by polishing, or rubbing, the feathers the right way of the web with a soft woolen cloth, chamois skin, or piece of silk. Such polishing of the plumage is useful just before the fowls are to be sent to a show, or directly after they have been given a thorough washing.

Fowls like the Cochins and the Wyandottes, which are much improved by a fluffy appearance in their feathers, should not have their feathers polished. This fluffiness, or fulness of appearance, may be improved by ruffling the feathers the wrong way, that is, by drawing the fingers through them from the rear end of the fowl toward the head.

TRANSPORTATION AND SHOW-ROOM MANAGEMENT

SHIPPING FOWLS TO A SHOW

63. It is always the best practice to ship fowls to the show room in boxes, baskets, or hampers, that contain only one fowl, or that are divided into compartments that contain only one fowl each. These packages, or each compartment of a package, should be plainly labeled with the proper entry card. If these precautions are taken the exhibitor will have little trouble in having his fowls properly cooped at a show. These precautions are particularly important to observe when fowls are shipped to shows where no exhibitor is permitted to coop his own fowls or to see them in the show prior to their being judged. When the owner, manager, or attendant goes with the fowls and coops them himself it is not necessary to take

such precautions. It is safe to ship a pen of one male and four females in a box, basket, or hamper, because they will all be placed inside of one coop when they arrive at the show room.

64. Shipping Coops and Baskets.—Special attention should be given to the construction of shipping coops or boxes that are to be used for shipping poultry to a show. They should be made of sufficient height so that the head of the fowl will not strike against the top, and thus make an injury to the comb very probable. A solid lid is better than a slatted one, because a fowl is apt to reach out between the slats and have its comb or some other part of its head injured. To accommodate the largest males comfortably, a coop should be 30 inches high, but for females and for males of smaller size the coops need not be so high.

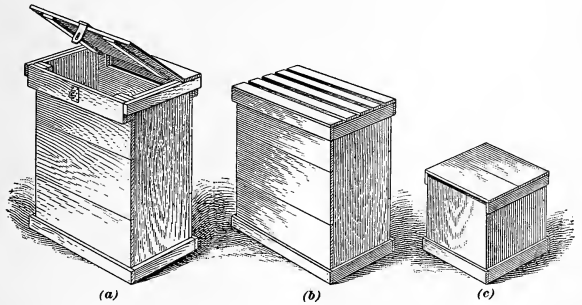


FIG. 4

Three styles of shipping coops are shown in Fig. 4. The large coop shown in (*a*) has a solid lid, is 30 inches high, 22 inches long, and 14 inches wide, and is well suited for males of the larger breeds. The medium-sized coop shown in (*b*) has a slatted top, is 26 inches high, 22 inches long, and 14 inches wide, and is often used for males of the smaller breeds and for females of all varieties, but it can be improved by providing it with a solid lid. The small cubical-shaped coop shown in (*c*) is 14 inches square and is intended for a bantam. The end pieces of this box extend $\frac{1}{2}$ inch above the sides, and when the

top is nailed down ventilation is secured through the openings on the sides. This same construction may also be applied to the boxes shown in (*a*) and (*b*).

Box coops, such as those shown in Fig. 4, should be made of $\frac{1}{2}$-inch lumber planed on both sides. The corner posts should be 1, $1\frac{1}{4}$, or $1\frac{1}{2}$ inches square, according to the size of the box, and the floor should be securely fastened to cleats between the corner posts. A shipping coop should be as light in weight as possible, but it should not be so frail as to endanger the safety of a fowl in transit or to cause the transportation company to make an extra charge because of its fragility. Care should always be taken to nail cleats about the top and bottom outside of the coop. Such cleats will prevent the coops from being too closely crowded together during transit, and thus aid in preventing the fowls from suffering for a lack of air. Other styles of shipping coops are made of paper and wood.

65. Willow baskets and hampers are largely used in England both for shipping poultry to shows and to all parts of the world. There, it is the custom for a person who buys fowls from another and has them shipped to him in baskets or hampers to return the packages to the shipper. Round baskets of different styles of weaves and of different sizes are shown in

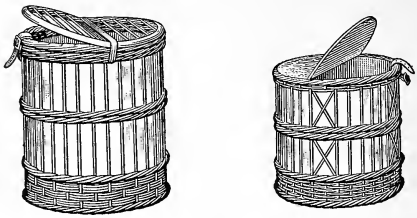


FIG. 5

Fig. 5. It will be noted that their tops are hinged across the center and that the lid is fastened down with a strap. Sometimes a lock is used. The larger basket at the left in Fig. 5 will carry a trio of Cochins, four Cochin hens, or six females of smaller size. Though a basket of this size might not answer for shipping so many fowls a long distance, it does very well

for shipping that many short distances like those common in England. The smaller basket on the right is intended for carrying single fowls.

Round willow baskets are ordinarily made in the following sizes: For bantams, 18 inches in diameter and 18 inches in height; for pullets, 20 inches in diameter and 20 inches in height; for cockerels, 22 inches in diameter and 22 inches in height; for large fowls, 24 inches in diameter and 24 inches in height, and also 26 inches in diameter and 26 inches in height.

These baskets are made of willow branches from which the bark has been removed. When the willow is left in its natural color, the baskets are called buff willow baskets; when they are stained and varnished they are called stained willow baskets.

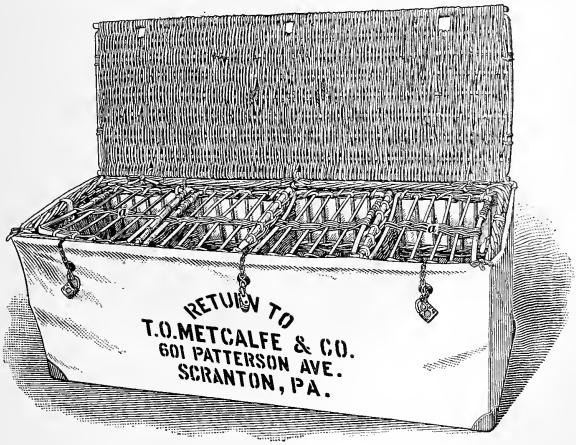


Fig. 6

Long, hamper-like baskets, such as those shown in Figs. 6 and 7, and which are divided into compartments, are made in many sizes and are used for the transportation of all kinds of fowls. The basket shown in Fig. 6 is intended for bantams, and is more closely woven than the larger basket shown in

Fig. 7. Fine-woven baskets are also used for pigeons. The basket shown in Fig. 6 is divided into four compartments *a*, each of which is 12 inches long, 9 inches wide, and 12 inches deep. The outside measurements of the basket are: 38½ inches long, 14½ inches wide at the top, and 13 inches wide at the bottom, and 14½ inches deep. Each of the compartments has a separate lid *a* under the main lid of the basket and can be opened independently of the main lid, in order that the fowls may be removed one at a time without danger of the others escaping.

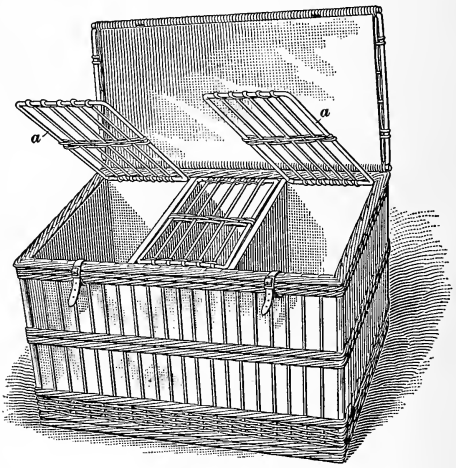


Fig. 7

The outside lid is fastened down by three chains and locks. All of the basket, with the exception of the lid, is covered with canvas to prevent the fowls from sticking their heads out and to keep dirt from their plumage.

The basket shown in Fig. 7 is intended for fowls of the larger sizes, and may be made in a great variety of dimensions. For females of the larger type, each compartment is usually 18 inches long, 10 inches wide, and 18 inches deep. For males, each compartment is usually made 21 inches long, 11 inches

wide, and 21 inches deep. The size of such baskets will naturally be regulated by the size of the fowls they are intended to accommodate and the number of compartments they contain. Each compartment has a separate lid *a*. The basket is lined inside with canvas or cloth of some kind, and the material that lines the lid should be waterproof.

In addition to insuring greater safety in the cooping of fowls at a show, the use of single coops, or of single compartments for each fowl in a basket, also prevents the fowls from trampling on and soiling or injuring one another, and tight sides prevent the fowl from becoming injured from outside sources. Long tails or sickle feathers that protrude outside of a coop are apt to be broken, and protruding heads are also apt to be injured.

The ventilation of the shipping coops should receive particular attention. More ventilation will be needed during warm weather than during cold weather. When the weather is extremely cold it is often advisable to fasten muslin over all openings in a coop. It should always be borne in mind, however, that there is far greater danger that the fowls will suffer from a lack of air during transit than that they will get too much air or suffer from cold.

66. Litter and Water in Coops.—The bottom of each shipping coop should be covered with 2 or 3 inches of litter before a fowl is placed in it. This litter may consist of chaff from hay or straw, finely cut straw, clean hay, cut hay of any kind, or plain shavings or sawdust. The materials are named in the order of their value. The shavings or sawdust should be used only when none of the others can be had. All litter should be dry, and special care should be taken to select clean, dry material for litter that is placed in coops that are to house white fowls; nothing that will stain their plumage should be used, and care should also be taken to see that the inside of the coops should be perfectly clean.

No drink of any kind should be placed in a coop during transit. Fowls should be plentifully fed and watered before they are put into shipping coops, and when this is attended to they will

need no more feed or drink for 24 hours. If the journey is apt to last longer than one day, a large piece of dry bread and one-half of an apple of medium size may be placed in the coop; these will supply a fowl with sufficient feed and moisture for another day. When fowls are sent on trips that will keep them in transit for more than 2 days, they must be fed and watered during the journey by an attendant, who can do this without the least chance of soiling their plumage.

MANAGEMENT IN A SHOW ROOM

67. The most important things to watch while fowls are in the show room are that too much feed and water are not given as soon as they are taken from the shipping coops, and that nothing but simple feeds are fed during the entire show. It is unfortunate that many fowls are carelessly fed and watered as soon as they are received in the show room. Such a practice often leads to unsatisfactory results. If a fowl has all the food and water it will swallow as soon as it is taken from the shipping coop, it is almost sure to gorge itself to such an extent that it will change its form, and the chances of victory in a close competition will be greatly reduced. Bantams gorged in this way can seldom, if ever, win a prize. The only way to prevent an occurrence of this kind is either to have the owner present when the fowls are taken from their shipping coops, or to have strict rules in the show room that prohibit the filling of the feed or water cups prior to judging. A small quantity of both feed and water may be given to the fowls as soon as they are placed in the show coops, but it is better to give them none at all than to allow them to gorge themselves.

It is necessary that fowls in a show room have only simple feeds, in order that they may retain their health and form. Fowls intended for use later in the breeding pens will be kept in better condition for breeding if nothing but stale bread and a little wheat is fed from the time they are judged until they are returned home, than if other feeds are given. The feeding of corn and other rich feeds to fowls in the show room

causes much injury. If meat, cut green bone, and various prepared foods are fed the digestive organs will become deranged, and fowls so fed frequently return home from the show room in such a weakened condition that they seldom, if ever, recover. Less and plainer feed is desirable in the show room and in the breeding pen.

68. Retouching Fowls in the Show Room.—As immaculate condition is one of the most desirable features of exhibition poultry, no specks or spots of dirt that may have been gathered in transit should be permitted on the plumage of fowls in a show. After fowls have reached a show, any spots or dirt on the plumage, shanks, or feet of dark-plumaged fowls may be removed with alcohol. Similar spots on the plumage of white- or buff-plumaged fowls may be removed with ether or gasoline. Yellow beeswax dissolved in alcohol makes a suitable polish for brightening the shanks and feet. A very little of this should be poured on a clean woolen cloth and the shanks and toes rubbed briskly with it. No coloring matter of any kind should ever be used on the shanks and feet, as this would be faking of the worst kind.

CARE OF FOWLS AFTER A SHOW

69. Fowls that have just returned from a show require special care for a time, in order to maintain their health. The week or 10 days that they have been confined in a small coop while journeying to and from the show and while on exhibition, the sudden changes from a warm room to the outside cold, the nervous strain caused by the excitement in the show room, the jolting during transportation, and other factors, all tend materially to reduce their vitality. To relieve the nervous strain they have been under and to enable them to regain their normal condition as speedily as possible, fowls just home from a show should have gentle treatment and a gradual change from show conditions to the more natural conditions of the breeding pen.

As soon as the fowls reach home from a show they should be placed in comfortable pens and fed. For the first meal they should have a moderate quantity of stale bread that has

been soaked in sweet milk and then the milk pressed from the bread until the latter is fairly crumbly. A small quantity of this twice a day for the first 2 or 3 days after returning, together with a reasonable quantity of cracked corn and wheat at night for the third meal, should constitute the ration for the fowls. After this they may be fed as usual.

After fowls return home from a show they should be confined inside of their breeding pens for several days. They should not be permitted to run outside for at least a week. Too much freedom after their long confinement in the shipping and show coops is likely to have a bad effect on them. The floors of the house in which they are placed should be covered with straw litter and the fowls should be protected from snow, damp, and rain for a sufficient length of time to enable them to become hardened to their surroundings.

POULTRY JUDGING

PRACTICE OF JUDGING

GENERAL DISCUSSION

1. Notwithstanding the fact that both in England and in America there are sets of definite descriptions, called standards, and rules governing the placing of awards on poultry, there exists a difference of opinion as to how this work shall be done. Though the standards are apparently clear and concise, different persons will apply them differently, due largely to the fact that they have strong personal preferences for some particular point or points on which they place exaggerated value. No one has given more consideration to this subject than the late Lewis Wright, who, in his introduction to the Poultry Club Standards, discusses it as follows:

"When three or four good judges of any particular variety of fowls assemble before a few good specimens, it will generally be found that they agree in their conclusions as to which are first, second, and third best. There are, of course, exceptions; there may be some strong personal interest, and some people have a specially favorite point; and there are occasional cases of real doubt, when it is very difficult balancing one point against another, to decide which really is best. But, as a rule, when none have any personal interest in the exhibits, there will be substantial agreement, in spite of the fact that one bird may be the best in one point, and some other in another, none being alike in all.

"As there are many points to be taken account of in every fowl, such a simple fact as this shows that there is some proportion generally accepted, however tacitly and roughly, between the judging value of those points, or of defects in them. For the general opinion, united in as above, does not depend upon the best bird being the best in any one cardinal point: otherwise a class of twenty could be judged in ten minutes. However insensibly and informally it may be done, the aggregate of points or defects has to be weighed, and it is acknowledged by all that excellence or defect in some points is not of so much importance as in others.

"So much being beyond dispute, a Standard of Perfection is framed on the supposition that this relative value of points, these being first carefully defined, is capable of being represented by numbers, and that it is desirable for it to be so represented. The desirability of it appears after a very little reflection. While agreement is general, as before stated, and real public opinion at any great show is practically unanimous in nearly every case, the actual awards, which involve much in many ways, are made by individuals: and some individuals have strong personal preferences for some particular point. Passing by any regrettable cases of corruption or inability about which nothing can be said, when public opinion is affronted at a show it is often due to some strong idiosyncrasy of the particular judge. It can be seen that he had attached to some particular point an exaggerated value. Every breeder remembers instances of this. General opinion condemns such an award: and it is obviously desirable that in a Standard of Perfection the generally recognized true value of points should be laid down as a standard to which reference and appeal can be made.

"The Standard aims first at correctly describing the varieties treated of in language as simple and comprehensive as possible. In the second place, it aims to lay down the fair proportionate value that general opinion assigns to any defects in the various points. It is hoped that qualified judges will recognize and respect these proportionate values thus arrived at and not arbitrarily upset them by notions of their own:

though it is not likely, nor perhaps desirable, that birds should be systematically 'scored' by them and prizes awarded accordingly. This has been done in America for years, but it is becoming more doubtful whether the system will continue, the larger shows being now judged otherwise. The proper use of a standard is not to give birds a score, but to place them in correct order of merit. It must never be forgotten that small deductions or cuts for conspicuous defects cannot do this. The figures in the 'points' are meant to express what ought to be deducted from the standard 100 points for as much fault in the points named as can exist and still leave a bird in competition. Not as much as possible, by any means; for instance, if the point be the comb, and 10 points are allowed, a comb bad beyond a certain degree would throw a bird entirely out, and not be deducted for. The meaning is that if the faulty comb still leaves the bird a chance, the 10 should be deducted: and less for slighter defects, perhaps even only 1 or ½ a point for very slight defects. But for glaring faults serious cuts should be made if the standard is to serve its purpose.

"In careful comparison in close cases, one bird should not be first tabulated or scored, and then the other. In passing from one to the other the eye is not trustworthy, if this method be followed. The two combs should be compared and cut first, then the two hackles, and other points in succession. In this way a real comparison is made, and the birds, fairly cut, compared with one another. An experience of years assures me that close comparison cannot be made in any other way; but that in this way it can be made most effective."

2. In the preceding discussion the fact is brought out that judges sometimes have strong personal preferences and that when this is not the case they usually agree. That the Standard of Perfection has been placed as a guide no one can deny, yet in some instances the overwhelming influence of personal preference may guide the judge away from the Standard descriptions into the line of description preferred by himself. Whenever this occurs, there is dissatisfaction among the exhibitors.

Mr. Wright makes a most convincing argument in favor of comparison judging when he says: "In passing from one to the other, the eye is not trustworthy." Combs, wattles, ear lobes, and body formation should be compared, two or more fowls being placed side by side and considered together section by section under the same light and conditions. The weakest point in the score-card system is brought to the surface when fowls are removed from their coops, carried to another part of the hall, held in the hands and examined, and judgment passed upon them without regard to the value of others in the class.

3. From the beginning of judging according to standard descriptions, there has been a disposition to make regulations that will enable all judges to act alike in placing awards. This may appear well theoretically, but it would be most unfortunate to have it occur. If all saw alike, from a single viewpoint, and judges could not look beyond the absolute letter of a standard description, there would be little scope for competition. If but one kind of Plymouth Rock, Wyandotte, or Orpington were permitted to win; if no diversity of opinion could exist; if the standard description were so rigid that only fowls cast in the mold selected could win, what incentive would there be for improvement? There are almost as many opinions among standard makers as there are individuals engaged in compiling a standard. If the standard requirements were so rigid as to allow the exercise by judges of no discretion whatever, every fancier, if he wished to continue as an exhibitor, would be forced to abandon all effort to create new breeds, new varieties, and new points of excellence. For he would know in advance that no superiority in his poultry would be considered unless it conformed in every particular to the standard.

It would be most fortunate, however, if all persons could learn to apply the standard equally well. If all persons could understand alike the meaning of type in each breed and apply it rigidly to all fowls considered, there would be more rapid advancement in the breeding of fine poultry. Sometimes it

is the case, when there are no fowls in a show room that approach standard requirements, that a fowl will be valued high enough to permit of awarding it the first prize. This is an unfortunate practice, for the reason that it retards improvements and leads to dissatisfaction, although it may gratify the pride of an exhibitor at the time. Dissatisfaction crops out when fowls that have been scored above their true value are placed in competition with fowls that are of superior value. It is difficult to make an exhibitor understand that no favoritism has been shown in scoring a fowl lower than at a previous exhibition. A score of 90 in one show room should indicate a fowl of the same value as a score of 90 in any other show room. Whenever a higher score is given to a fowl in one show room than in another, it is an indication that the standard has not been properly applied.

4. Failure to consider type or breed characters above all other requirements is largely responsible for the lack of proper judging. One of the foremost experts in judging states that if it were not for a few minor details, it would not be possible to distinguish between some breeds upon any other basis than the shape of their combs. For example, the White Plymouth Rock and the White Wyandotte, the former with a single comb and the latter with a rose comb, could not be distinguished, were it not for their combs, except by the shape of their bodies. These two types are frequently bred so nearly alike that they could not be separated into classes in the show room if it were not for the difference of comb. Buff Orpingtons that would pass for Buff Plymouth Rocks, were it not for the color of shanks, are the rule rather than the exception. Judges are frequently compelled to examine the comb or the shanks and feet to be sure whether a fowl is a Wyandotte, a Plymouth Rock, or an Orpington.

Such conditions as these should not and could not exist if the judges would be rigid in the application of the standard demands for type and breed characters. If White geese that plainly show an intermingling of Toulouse blood are selected to win as Embden geese, what encouragement is there for the

exhibitor to breed the White geese in their purity? If preference is given to Orpingtons that can be distinguished from Plymouth Rocks only by the color of their shanks, what incentive will there be to breed Plymouth Rocks of proper form? If White Wyandottes can be distinguished from Plymouth Rocks only by the difference in comb, what incentive will there be to keep the Plymouth Rock and Wyandotte type of fowls separate and distinct?

The rules for judging should be so rigid that lack of type or breed characters will disqualify a fowl from competition. No fowl, however beautiful in plumage, that lacks the type required for the breed should be permitted to compete in a class of Wyandotte fowls. A buff fowl of Plymouth Rock type should not be permitted to compete in the Orpington class for no better reason than that its shanks are white or pinkish white. There are no three breeds more distinct in breed characters than Plymouth Rocks, Wyandottes, and Orpingtons, and, notwithstanding this, leniency in judging may be blamed for lack of sharpness in making these breed distinctions. In an attempt to establish standards that will compel judges to think alike, the first effort should be directed toward having a better understanding of breed characters. The standard should be so far reaching as to debar from competition fowls lacking the form required for the breed. No judge should be encouraged in his calling who has slighted type for beautiful plumage. No judge should be encouraged who has not proved his ability to distinguish form even more readily than color, and no one is competent to place awards who does not understand the true meaning of symmetry.

5. Symmetry is the term used to cover type and type only. From the application of symmetry, the gauge of a judge's ability can be taken, for whenever this is so overlooked that color has the preference over shape, a judge has shown his inability to apply the standard so far as breed characters are concerned. Type over color should be the most rigid law, and this can be rightfully estimated only by those who understand the meaning of symmetry. Symmetry refers to the

aggregation of all parts into a harmonious whole, and it can be properly considered only by those who have a thorough knowledge of shape, section by section, and who, in addition to this, can estimate the sections in their totality as constituting perfect form. The distinctive type of each breed must be so thoroughly understood as to make impossible a misunderstanding of breed characters.

METHODS OF JUDGING

GENERAL REMARKS

6. In America there are three methods of judging: (1) By the official score card of the American Poultry Association; (2) by the decimal score card; and (3) by comparison.

The practice of judging by score card was begun and has continued in the United States and Canada ever since the compilation of the first Standard by the American Poultry Association. A few shows that are held during the month of November and a large number that are held between December and April practice the score-card method of judging. The shows that are held from April to November are judged by comparison. The score-card method of judging has been recognized by the American Poultry Association since its origin.

The decimal score card was introduced by I. K. Felch in 1890, and since that time both the official and the decimal score cards have been used, and, naturally, the adherents of each strongly favor their own. Since 1890, each time a revision of the Standard has been made by the American Poultry Association, a motion has been introduced favoring the adoption of the decimal system either in place of the system established by the American Poultry Association or in connection with it. The adoption, however, has not been made, and despite the fact that the decimal score card has not met with the approval of the American Poultry Association, and has been denied recognition by that body, its use continues and its advocates are increasing in number.

Although comparison judging has been used for so long in the placing of awards, in fact, much longer than the score-card method, it did not have the sanction of the American Poultry Association until the Standard of 1904 was authorized at Rochester. Judging by comparison is practiced each year at all shows held prior to November 1 throughout the United States and Canada. Nearly all the larger exhibitions are judged under the comparison system.

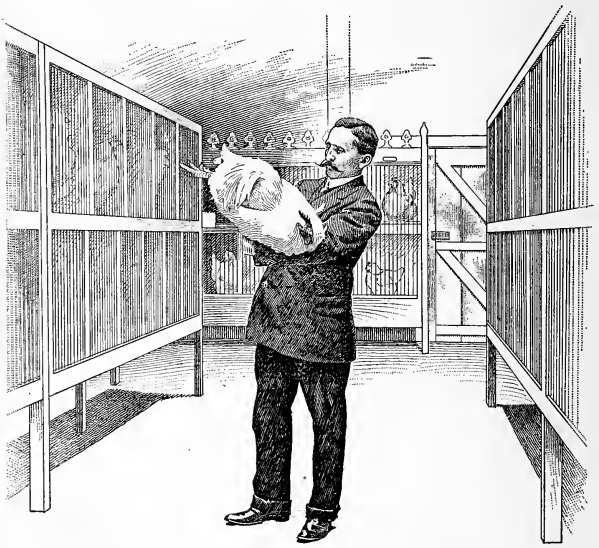


FIG. 1

The advantages of each method of judging depend on the ability of the judges accurately to determine how nearly the fowls under consideration approach the requirements of the standard. The use of the score card is considered of the greatest advantage to the amateur, who gains knowledge by a careful study of his own fowls in comparing them with the decisions of the judge, which are shown in detail on the cards,

which go to the exhibitors. Comparison judging, however, is equally beneficial, provided the exhibitor is present and can understand the reasons for the various awards and rejections. Comparison judging becomes of more general use in neighborhoods where poultry shows have been held annually for a considerable length of time. Score-card judging is in more common use in localities where the practice of holding poultry shows is in its infancy. More shows are judged by score cards throughout the United States and Canada than are judged by comparison. Comparison judging is really an advanced system of judging that can be employed by those who are familiar with the distinctions considered of the greatest importance.

FIG. 2

Views of judges at work in the show room are illustrated in Figs. 1 and 2. In Fig. 1 is shown a judge examining a fowl in a French poultry exhibition, and in Fig. 2 is shown a judge at work in an English show.

OFFICIAL-SCORE-CARD METHOD

7. The **official-score-card method** is a method of judging by the official score card of the American Poultry Association. A copy of this score card is shown in Fig. 3. The only change needed to make this score card local is to print at the top the name of the local association using it. The rest of the card is correct according to the rules of the American Poultry Association.

This card gives a list of the parts of a fowl in respect to which it is to be scored, and a space is provided marking the

OFFICIAL SCORE CARD OF THE

Fancier's Poultry Association

DATE _____ VARIETY _____

OWNER _____ SEX _____

ADDRESS _____ BAND NO _____

ENTRY NO _____ WEIGHT _____

	Shape	Color	Remarks
Symmetry			
Weight or Size			
Condition			
Head and Beak			
Eyes			
Comb			
Wattles & Ear Lobes			
Neck			
Wings			
Back			
Tail			
Breast			
Body and Fluff			
Legs and Toes			
*Hardness of Feather			
†Crest and Beard			

Total Cuts _____ Score _____

*Applies to Games and Game Bantams
†Applies to Crested Breeds

_____ Judge

_____ Secretary

FIG. 3

score for each part. A definite number of points is assigned to each part, the total number of points indicating perfection in all parts being 100. The figures scored after each part indicates the degree to which it approaches perfection according to standard requirements, and the total score shows how closely a fowl approaches perfection in all respects, which is 100 points. This method is a mathematical analysis of the defects found in a fowl, and enables a judge to make a discount for each.

The score card was designed for judging poultry at exhibitions. The object was not only to decide the awards, giving the highest scores and the best prizes to the birds least defective, but to give every fowl exhibited a rating in terms of the standard requirements and in comparison with competing fowls of the same sex and variety.

This system can be used also by fanciers and breeders as a guide in computing values in sale birds, in selecting breeding fowls, and in selecting exhibition fowls.

8. When the score card is properly used, each fowl to be scored is marked with a numbered leg band, is correctly weighed, and carefully inspected in each section, both as to shape and color, when these are divided in the scale. No part is then neglected or overlooked, neither is undue allowance given one section above another. While different judges may not score all fowls alike, those who strive to apply the standard literally and without prejudice will score the best fowls the highest and the poorest the lowest. A good rule to follow is to be as lenient as possible with a superior fowl and severe with a decidedly inferior one.

The first requisite in the accurate use of the score card is a working knowledge of the text of the Standard of Perfection. No matter what a person thinks or what a person likes in any variety, when judging he must give the Standard specifications preference and be guided entirely by its rules. These qualifications govern poultry judging, and no unwritten law can supplant them. To learn to select or judge any variety, the judge should compare the different classes and types and

become familiar with the list of technical terms, so that when reading or talking about any section, he will know what it is and where to look for it. Frequent practice will increase proficiency in these matters.

9. A fowl, when scored, should be fully matured or nearly so; it ought also to be completely recovered from its annual molt, but not so long after as to be faded or worn in plumage. Every fowl should be in perfect health, clean, and in prime condition. It is not safe to anticipate what a partly grown or half-feathered fowl will score a month or two hence. A correct estimate cannot be given until the hackle is full, and the flights (primaries and secondaries) are in and the tail is fully developed. An adult fowl will score highest at the completion of its annual molt, but hardly ever will it equal the record it might have made as a cockerel or pullet at the time when it first came into maturity. A cockerel at this stage has a comb of medium size compared with his body parts, his tail sickles are the proper length and nicely curved, and he has taken on an attractive style. If a pullet, she looks her best when getting ready to deposit her first egg, and it often pays to do things to encourage her to postpone this event until after she has made her appearance in the show room.

10. A disqualification is a deformity or serious defect that renders a fowl unworthy of being scored. A deformity may be permanent, hereditary, or the result of an injury. A serious defect in shape or plumage denotes the presence of too much foreign blood. Some disqualifications apply to all breeds, others to a large part, and some only to one variety. The first are general; the others are special. Judges may overlook a special deformity such as a crooked back or a wry tail and notice a less serious general defect immediately. If a fancier will form the habit of running his hand down the back the first thing he does with every fowl he inspects, he may save the time, trouble, and expense of scoring a worthless show fowl, or perhaps he may save an entry fee and avoid the chagrin and humiliation of having his mistakes made public. Even though

the Standard advises the judge to give a fowl the benefit of a doubt before disqualifying it, amateurs should not exhibit fowls liable to be disqualified.

11. When estimating the cut or discount due to a defect, always consider the valuation of the section in points, compare the real fowl with the ideal fowl as described in the Standard, and deduct a percentage equal to the defect. The following explanation should make this idea plain. Read the standard description and then look at the section of the fowl in question and see whether it is one-half, two-thirds, three-fourths, seven-eighths, or fifteen-sixteenths as good as the standard. These degrees of merit indicate a discount of 50, $33\frac{1}{3}$, $12\frac{1}{2}$, and $6\frac{1}{4}$ per cent., respectively. If the part is allotted 8 points for shape alone, as is the comb, 50 per cent. defective would require a cut of 4 points; $33\frac{1}{3}$ per cent., a cut of $2\frac{1}{2}$ or 3 points, because $\frac{1}{2}$ point is usually the numerical fractional cut; 25 per cent., a cut of 2 points; $12\frac{1}{2}$ per cent., a cut of 1 point; and $6\frac{1}{4}$ per cent., a cut of $\frac{1}{2}$ point. A section not considered defective enough to receive a cut of $\frac{1}{2}$ point, yet hardly up to the ideal, may be checked and the fowl having it rated below a fowl scoring the same, but having no defects in the corresponding section. A fowl receiving two such checks would fall below another fowl of equal score having but one. This method will often avoid a tie and place the exhibits in their proper order of merit.

A fowl so defective as to deserve a cut of 3 points in any section where shape and color are divided would not be considered a possible candidate for first honors unless perfect in other sections. It is those fowls that are nearly perfect in all sections that will score 90 points each or better and be entitled to the prizes. The Standard rule is that every first prize winner must score at least 90, excepting a parti-colored cock, which may win a first prize at 88, and his second prize competitor must have a score in proportion. A fowl more than 10 points defective cannot win a first prize, and one more than 12 points defective cannot win a second prize if the show is held under the American Poultry Association rules.

12. Symmetry is more than shape, although a symmetrical fowl is invariably of good form and carriage. It is the harmony of the different sections of a fowl that makes or spoils its symmetry. If the comb is too large or too small when it should be medium compared with the size of the fowl; if the neck is short or long when it should be of medium length; if the back is out of proportion, or the body is narrow when it should be wide, or shallow when the standard requires it to be deep, any or all of these will call for a cut under symmetry when they destroy the proper contour of the fowl. It will be necessary to be careful in cutting for lack of symmetry so as not to discount again for shape in the same section. If the part under consideration is out of proportion, no matter whether it is of good shape or not, it affects symmetry. If it is out of shape and yet harmonizes with the whole, it should suffer for lack of shape rather than for lack of symmetry.

13. Weight is determined by weighing each bird separately and discounting for any lack at the rate of 2 points per pound, and for the fraction of a pound never less than $\frac{1}{2}$ point. After the first of December each year until the end of that show season, Asiatic fowls are disqualified if they weigh less than a certain amount. This does not mean, however, that they can be properly scored without weighing at other times of the year. Typical fowls of this class are naturally large when full grown, and immature chicks should not be shown under the score card. With bantams and those breeds prized for their smallness, the rules for weight are the reverse of those for large fowls, although there is no time limit when certain overweights do not disqualify.

14. Size is effective with those breeds which have no weight clause; it is determined by the eye of the judge or the appearance of a fowl. If immature, it should not be discounted so much as if it were naturally too small when full grown. If it is overly large for the breed, it should be cut more, in proportion, than if it were small and too heavy. Fat should not be confounded with size, although it makes weight. Oversize in the small breeds injures the sprightly appearance of the fowls

and causes a confusion of classes or types. This fault should be discounted as severely as lack of weight in the larger breeds.

15. Poor condition is seldom seen in a well-kept show fowl. When the comb is partly frozen with the frosted parts still on, when the plumage is soiled, mutilated, or broken, the eyes swollen, the nostrils clogged, the shanks dirty or scaly, or the fowl diseased in any way, the faulty section should suffer a cut of ½ point or more, even to the full value allotted in the scale for perfection.

16. The head and back are judged both as to shape and color. In some breeds a broad head with a projecting crown is called for, so that the breadth as well as the length of the cranium and the curve of the beak must be considered. The color includes that of the small feathers near the comb, and the complexion of the face, as well as the color of the beak.

The numerical value assigned to the comb is wholly for shape. If the color were other than standard, the fowl would be out of condition and not fit to score. The comb should be considered and analyzed; the base, blade, serrations, points, or spikes, should each be considered separately and as a whole, and cut accordingly. A well-balanced comb is one of the essentials of a good show fowl.

Wattles and ear lobes often have natural defects in shape, such as folds and wrinkles. They are not infrequently mutilated according to the disposition of the possessor. The former should be cut more severely than the latter. The color on this section is more important than the shape, presumably on account of the lobes often being the first telltale spot to show foreign blood. Care should be taken to discern between defects and disqualifications for color in ear lobes.

17. The shape of the neck is sometimes injured by the presence of pinfeathers. They prevent the neck from being nicely arched and the section is cut for lack of shape. The color section embraces all of the feathers that flow over the shoulders from the head down to the tips of the hackle.

18. The wings are often defective in shape on account of broken or partly grown flights, as well as from improper folding. The wing will need to be spread for intelligent judging as to both shape and color, although the folding should be noted before taking the fowl from the coop. The wing bows and primaries are often most defective, but it is right to accord the wing coverts and secondaries an equal valuation, and to discount accordingly.

19. The shape of the back makes or spoils the good appearance of a fowl, and the ill-shaped, humpbacked fowl should be cut severely. The plumage on the back, being exposed to the sun and rain, more often than the under parts, the color of this part is usually more or less faded, bronzed, or brassed. Where the valuation is liberal, always cut in proportion, if necessary.

20. To be perfect in shape, the tail must be complete in main tail feathers, sickles, lesser sickles, and coverts, and the main feathers must be carried at the angle specified. Loss of sickles or broken feathers mar the shape, but this fault should not be cut so severely as too widespread, pinched, or high tails. The main tail, as well as the sickles, are apt to be defective in color. They should be examined the entire length before making a cut for lack of color or markings.

21. Some persons make a mistake in judging the breast, through including the front part of the body. The breast is that part which extends from the throat to the forward point of the breastbone (see *13*, Fig. 7), and should be so considered when estimating its shape or color.

22. Good-bodied fowls are the exception rather than the rule. Too much leniency has been shown by judges in cutting for defects in body and fluff. The body should include all of the keel, the fluff, and the posterior parts, or abdomen, of the fowl. Parti-colored fowls are seldom, if ever, perfect in color in these sections.

23. Legs and toes include the thighs as well as the feet and shanks. To be perfect in shape, they must set well apart and

be perfectly straight and upright when viewed from the front, and nearly so when seen from the side. The toes must be straight and of medium length.

Color embraces that of the plumage on the thighs, the shank and toe feathering, and also the smooth, bony part covered only by scales. No rule can be given as to how much each defect should be cut, such as dark spots on the shank, for there are so many variations in both size and density

24. Hardness of feather has no significance with any breeds other than game or game bantam fowls. Hard, close feathering is characteristic of these breeds, and any approach to fluffiness would render a game unworthy to win a prize.

25. The breeds with crests or with both crests and beards should receive special attention from the judge. The antler combs, which are small, as well as the crests of such fowls should be regarded as of peculiar merit. The body formation of crested fowls should be considered separately, and special consideration should be given to head points, which usually receive more than one-fourth of the entire count.

In passing on any breed whatever, the judge will need to employ a close observation and a most careful reasoning; only by so doing will experience and practice bring the high proficiency for which he should strive.

DECIMAL-SCORE-CARD METHOD

26. The **decimal-score-card method** is a method for calculating by tenths. The decimal score card, which is shown in Fig. 4, provides ten divisions for the features in respect to which a fowl is to be scored, and the perfect score for each feature is 10 points. Provision is made where necessary for scoring features separately in respect to shape and color. The decimal score card differs materially from the official score card, which provides for scoring more features, and these are valued differently for different breeds.

THE DECIMAL SCORE CARD

Date _____

Breed _____

Sex _____ Entry No. _____

Coop No. ____ Ring No. ____ Weight ____

Owner or Exhibitor,

Copyright by I. K. Felch

Each Section 10 Points

CONDITION WEIGHT or SIZE			
COMB, or CREST AND COMB			
HEAD AND ADJUNCTS	BEAK EYE EAR LOBE WATTLES		
NECK	Shape Color	.....	
BACK	Shape Color	.....	
BREAST	Shape Color	.....	
BODY and FLUFF	Shape Color	.....	
WINGS	Shape Color	.....	
TAIL	Shape Color	.....	
LEGS and TOES	Shape Plum'g Color		
Total Defects		Score	

DIRECTIONS FOR USING THIS CARD.—To cut for weight, comb, head, legs, chick (X) the features defective and cut in the column. For shape, make cut above the dotted line. For color, below the line. Shape being more defective than color, cut in space for shape, but low enough to include the dotted lines. Color being the greater evil, commence the figure just above the dotted line and carry deep down into color space. This secures despatch in use for exhibitions.

_____ Judge

_____ President

_____ Secretary

FIG. 4

27. Advantages of the Decimal System.—The arguments for or the objections against the decimal system that have arisen have been directed to the fact that no two breeds can be valued the same. Those who favor the decimal system claim that a perfect back in a Plymouth Rock is of equal value to the back of a Partridge Cochin or a Game Bantam, and that neither should have the advantage over the other in the general division of points; that backs for Plymouth Rocks, Cochins, or Bantams can be valued at 10 points as well as to have the back of each fowl estimated at a different percentage. There is evidence of value in the decimal method of calculation from the fact that the monetary system of several countries and the metric system are based on the decimal system. When matters of such vast importance can be conducted best under a decimal system, there should be no hesitation in conceding that the same system will apply equally well in poultry judging. The adoption of the official score card of the American Poultry Association seems to have been more a matter of preference of the members than of greater convenience.

28. Application of the Decimal Score Card.—In the decimal score card, 35 points are apportioned for shape; 35 points for color; 10 points for condition, weight, or size; 10 points for comb or crest and comb; and 10 points for beak, eyes, ear lobes, and wattles. When judging a fowl by this system, if it is out of condition or under sized to the extent that it should be deprived of one-fifth of the full value of a section, a cut of 2 points must be made. If comb or crest, or comb and crest combined are deficient to the extent of one-fifth they are cut 2 points; if one-tenth deficient, the cut is 1 point. If the head, including the beak, eyes, ear lobes, and wattles, is defective to the extent of one-tenth, a cut of 1 point is made; if one-fifth, 2 points; if two-fifths, 4 points. In judging the neck, if its shape is faulty to the extent of one-tenth of its value, it must be cut $\frac{1}{2}$ point; if it is lacking in color to the extent of one-fifth of its whole value, it must be cut 1 point for color. This would make a total cut of $1\frac{1}{2}$ points for shape and color combined.

In judging back, breast, body, and fluff, all of these should be valued separately in decimals, deducting one-tenth or one-fifth, or more or less as the quality of these parts requires. In each of them, as in the neck, there must be made a light or a heavy cut, or no cut at all, according to their approach to standard requirements. Both shape and color must be judged section by section, both separately and in connection with one another. The shape of the wings should be considered in the same manner, and the cut thought to be equitable should be made for shape. Close examination must be given to the color of both wings, including the surface plumage color, under-plumage color, flights, and secondaries. The tail of the fowl should be carefully inspected for shape and for color, and must be discounted in the same manner, dividing the cut for shape and that for color so as to have the proper proportions of defect recorded for each. Legs and toes should be judged for shape, for color, and for toe feathering when present. If deficient one-fifth from the description in the Standard, a cut of 2 points must be made; if one-tenth, a cut of 1 point; if one-twentieth, a cut of $\frac{1}{2}$ point. In the same manner, the card can be applied to every breed of fowls and its subvarieties, and also to turkeys and water fowls.

29. Comparison of the Authorized and Decimal Score Cards.—In the score of fowls, and hence in the competition of fowls of different classes for the honor of being the best fowl in a show, it makes a slight difference whether the authorized score card or whether the decimal score card is used. In some cases the results would be different in judging fowls of different classes if the decimal score card were used instead of the authorized score card. These differences are so slight and they are apt to occur so seldom as to remove them from serious consideration.

30. As before stated, there are ten divisions or sections in the decimal card, which is used in the same way for all breeds and varieties of fowls. In the authorized card, 11 sections are provided for geese, 12 sections for turkeys, and 15 for the American and Mediterranean classes. In other breeds and

varieties a less or equal number of sections are provided. To alter all this so as to have them conform one with the other would bring about so remarkable a change in standard construction as to cause considerable controversy, which should be avoided.

In the application of the decimal system, it is only necessary to remember that there are ten sections, each of which is valued at 10 points, and that in seven of them shape and color are valued at 5 points each. No matter what the discount may be, it can be calculated in fifths or tenths in each separate section, and when the discounts have been made in this way, equal results will come from the application of the decimal card in judging every breed and variety.

When the authorized score card is used, and a 5- or a 10-percent. cut is made for color, the average discount does not seem as fair as might have been reached by the application of the decimal system. On the other hand, every cut that can be made by comparison or by the authorized system can be applied by the decimal system, and neither the decimal system nor any other system of judging is properly applied unless the same care in application is given to the one that will be needed in properly applying the others. Every point that can be made in favor of any one system can be made for the others, but to accomplish this, the person applying the system must have a thorough understanding of the system and of the teachings and requirements of the Standard, and a familiarity with the breeds themselves.

COMPARISON METHOD

31. The **comparison method of judging** consists in a careful examination of every section of the fowl, and a determination of the quality by this means, the final placing of awards being decided without numerical estimates. In fact, to judge by comparison is to select the best, by applying, by means of sight estimates, the criteria of perfection established by the Standard.

When properly applied, comparison judging can be made more equitable in placing awards than any other system; for

selecting the best fowls in the classes, no system is superior to it. The main objection, and, in fact, the only real objection that can be made against it is that no record is made, nor is there any reason apparent to the absent exhibitor for the award of prizes. A record by scores and the results published conveys a numerical value for individual fowls to the mind of the absentee. In the score card he has comparative numerical values of the fowls that were outside the list of awards.

32. When judging by comparison, the judges must make a general survey of the entire class. Not only must each individual be carefully considered, but the entire class must be gone over and the best selected. Those that are undersized or defective, or lacking in breed characters should be eliminated from consideration. The remainder should be considered not only as individuals, but in comparison with one another, for the safest conclusions will always be reached by careful examination of each fowl separately and as compared with one another. Frequently a fowl that is beautiful when alone will shrink in quality when placed in comparison with one of its own kind. Herein lies the value of comparison, because the results are reached not only by the careful examination of each fowl, but from a comparison of the best of all so examined with one another.

Every detail must be gone over just as minutely in comparison as in score-card judging. Each fowl and every section of each fowl must be as carefully considered under this as under other methods. Comparison judging has not been properly done when a few glances only have been taken at a fowl. Each fowl must be handled as carefully under this as under other systems. Valuation, section by section, must be made; disqualifications, disqualifying weights, and proper size must be sought out as carefully in comparison judging as in any other system. The fact that comparison judging so safely selects breed characters does not imply that color has been lost sight of under the system. Color has had so much more attention than shape under score-card judging as to warrant

the objection that variety color has had preference over breed characters. When comparison judging is properly done, each section must be carefully scrutinized both for shape and for color. In no other way can the system be applied as it should be, and in accordance with the directions found in the Standard for comparison judging.

33. A notation for symmetry, good or bad, should be made on the award list. A complete tally should be kept of the value of symmetry. When the points for symmetry worthy of consideration have been sorted out, they should be marked one, two, three, etc., meaning first, second, third, or lower quality in symmetry. Such marks should be made on the award list opposite each fowl. These marks mean that one fowl of all the lot was best in symmetry, another second, third, fourth, or up to any number, according to the size of the class. Symmetry having been decided, another record must be made of one, two, three, etc., for general body formation and a like record for size, shape, and general condition. Such records should be made until the fowls have been gone over, section by section, for size, shape, and color.

After a complete record of this kind has been made, fowls with no disqualifications or breeding defects should be placed side by side, and carefully gone over by comparing each one with the others in the search for superior quality.

34. In the application of this system, as in other systems, every detail must be considered, the main difference being that the work is done mentally, a comparative valuation reached, and recorded in figures on the side of the lists. This same process should be carried to a conclusion, but not until after as careful consideration has been given mentally to each section as is required in the figures on the score card. There is but one fair conclusion that can be reached through the application of comparison judging, and that conclusion should be that the best fowl in every class has been placed at the head, and all others have been placed in their exact order of merit—the first, second, third, fourth, and fifth places having gone to fowls that rank in quality in the order in which they

are named. In the application of this system, a fowl not worthy of consideration should be marked *0*, and no fowl should be awarded first place that will not score 90 per cent. or more.

35. In the consideration of breeding pens, first the females must match in size, shape, and color. The male must conform to them in masculine proportions. Shanks that do not match in color, heads that do not conform one with another, and irregular or unequal body formation in females are very detrimental to the pen. While they might all score equally well, they do not match in the pen, and they are not of equal merit, and under the comparison system they must pay the penalty for the lack of general symmetry. A pen of fowls that do not harmonize, that do not all conform to the requirements of size, shape, and color, should not win. Comparison judging also gives due credit to superior value in individual fowls. No other system gives consideration to unusual quality as equitably as is given under the comparison system. One competent to judge by comparison will display ability to select at sight fowls of great merit, even though they may be wandering by the roadside, ranging through the fields, or confined in the exhibition pen. Thorough competency in comparison judging can be acquired only by those with ability to select the best fowls without hesitation wherever they may see them. The same ability is needed for the proper application of the score-card system, but since the score card shows numerical values, it may be applied satisfactorily even by those not able to select the best at sight. For the most satisfactory results, however, a thorough understanding of all systems should be acquired.

36. The object of the Standard is to create uniformity of opinion, adherence to type, and beautiful plumage color. Such requirements, if observed, will lead to the development of fowls conforming to the Standard in its demands for size, shape, and color, without which no fowl is true to the variety to which it is said to belong. A White Wyandotte or a White Plymouth Rock of bad form should scarcely be noticed in the

COMPARISON CARD

Variety_____ Judge_____

Sex and Age_____ At Exhibition held at_____

Date_____

Entry or Coop Number	Symmetry, Shape, or Station	Color of Plumage	Comb, Wattles, and Ear Lobes or Dubbing	Size, Condition Legs and Toes, or Toe-Feathering	Rank or Award	Remarks

FIG. 5

show room; in fact, it should be sent to the shambles. The same should happen to any fowl not of true breed characters. New varieties are created through a desire to have something more beautiful than has yet been produced. This desire is commendable, but because such a desire is paramount in the mind of poultry breeders is not sufficient excuse for overriding the rules of the Standard and awarding prizes to fowls deficient in breed characters. Persons in the advance line of poultry breeding should exemplify the demands of the Standard in every fowl exhibited by them, and every judge who passes upon a class should feel it his duty to apply the Standard perfectly. Each time the Standard is not applied according to rule, a wrong has been done. Better that fowls of irregular form should be shown in the "any other variety class" than that they should receive an award in some well-defined class to which for lack of form they should not be admitted.

A form of card that may be used in comparison judging is shown in Fig. 5. This card was developed and made use of by J. H. Drevenstedt and T. F. McGrew, two of the earliest adherents of comparison judging in America. Any number of lines needed to complete an entry may be added.

DETAILS OF JUDGING

GENERAL REMARKS

37. The standard should be applied equally well under all systems. Whether the awards are placed by a committee or by an individual, should not change the results; nor should there be any difference in the results obtained whether the system used is the score card or comparison judging. The standard is the law and its meaning should be as rigidly enforced in the use of one system as another. The same results should be obtained under either or all, and those who fail in applying any method of judging, might better attribute such failure to either incompetency or neglect than to condemn one method in favor of another.

Those who fail to consider each section as minutely under the method of comparison as they do under the score-card system have failed to comply with the rules. Those versed in the application of the standard should be able to distinguish breed characters at a glance. This should be arrived at as completely under the comparison system as with the score card. Proper plumage color can be selected quite as well under one system as under another. A solution of this was reached by Lewis Wright when he stated that to do the work well fowls must be compared side by side, that during the course of such comparisons each section must be considered or compared with the corresponding section in each fowl, and that the final accounting should be made in the summing up of quality as found to exist in all sections, preference being given only to such things as are most difficult to produce. This, of course, would refer to type of the highest degree and variety color in perfection.

38. In the application of the English Standard, fowls having serious defects are debarred from competition. In England the score card is not applied as is practiced in America, but the English judges do deduct for defects up to a certain limit; for instance, 20 points or more may be deducted for defects in plumage and condition, and as many as 25 points may be deducted in some breeds for head points alone. Where a penalty of 20 points may be applied for bad shape and 10 points for deficiency in size there is little chance for a fowl of poor form to win a prize. If an equal penalty were applied in all localities, a speedy improvement of size, shape, and color would be brought about. It is admitted that the English fanciers improve their exhibition fowls more quickly than the American fanciers. This comes from the fact that lack of size, shape, or color in every section is so severely penalized by them that fowls lacking standard requirements are declared useless for any purpose other than table use.

39. Judging by Points.—Beginning with the publishing of the original American Standard, score-card judging was applied. This method prevailed almost exclusively for many

years in winter shows held throughout the United States and Canada. But one score-card system was in vogue up to 1890, when the decimal score card was introduced. Until that time the official score card of the American Poultry Association had no competitor. Since the introduction of the decimal system, numerous kinds of cards have been used, some of which include partial description of defects and others of which embody a condensed description of imperfections likely to be found. No system, however, has rivaled the official score card of the American Poultry Association except the decimal score card, which has been more or less used in some localities since its introduction. The decimal card divides by tenths and cuts are made in the same manner or by units or fractions as may be preferred. There can be no reasonable objection to this system except that it does not conform to the scale of points of both the English and American Standards. Undoubtedly, both Standards could be changed so as to make it possible to judge fowls by the decimal system, but so long as the poultry fanciers of both countries object to such a change, it would seem to be better, at least for the present, to use only the standard score card in the placing of awards. The use of more than one score card in the same country is liable to lead to confusion.

According to the Standard, judges are required to discount common defects according to rule. This rule so regulates cutting for defects as to make certain discounts absolute. In the application of this rule, the lowest fraction permitted is $\frac{1}{2}$ point, and the highest cut is 3 points. For instance, for black feathers or feathers in any section of Barred Plymouth Rocks, a cut of $\frac{1}{2}$ to $1\frac{1}{2}$ points is made. This penalty is applied to defects that can be quickly removed; while purple barring, which cannot be removed from the plumage of a fowl is penalized from $\frac{1}{2}$ to 2 points in each section where it appears. Black feathers are as natural to Barred Plymouth Rock fowls as purple barring is to black-plumaged fowls. The more beautiful the sheen of black plumage, the more likely purple barring is to appear. Thumb marks on combs are breeding defects the same as side sprigs are; the former is penalized at 1 point;

side sprigs disqualify. The thumb marks can never be removed from the comb, but side sprigs, which are equally objectionable, can be quickly removed without leaving trace of their existence. In cutting for defects, black or white in several varieties is cut from ½ point to the limit in the sections where they appear. Although the English Standard is applied entirely by comparison, its rules of application are even more exacting than the rules of cutting for defects in the American Standard of Perfection.

DISQUALIFYING DEFECTS

40. Fowls having glaring defects should be disqualified, or debarred from competition. This practice is more generally followed in England than in America. Disqualifications are applied for the purpose of setting aside all fowls possessing defects that make them undesirable to use for breeding. At times too much consideration is given to mild defects that are not apt to descend to offspring. All defects that lessen the breeding quality of a fowl should be severely criticized. Every kind of defect or deformity that is likely to be hereditary should be considered as a disqualification. Among the disqualifications are some that may be considered as breeding defects that cannot be removed. Others that might be breeding defects but that are readily removable should be considered as defects rather than as disqualifications. So long as removable defects are disqualifications, they will be removed to avoid this penalty. Only amateurs suffer through disqualification for removable defects; expert poultrymen seldom, if ever, show fowls with removable defects.

41. In addition to pronounced deformities, there are a number of minor hereditary, or breeding, defects that cannot be removed and that will disqualify fowls. Among these are wry tail, squirrel tail, white in red ear lobes or red in white ear lobes, lopped comb, slipped flights, and crooked backs or bone deformities of any kind. Thumb marks in combs are even more serious defects than lopped combs or side sprigs,

and although they cannot be removed they are not considered as disqualifications.

Among the disqualifying defects are some that are not likely to descend from parent to offspring. For instance, a fowl with white plumage may be disqualified for black or any foreign color in its plumage. If the color defect is removed, disqualification becomes impossible; if from any cause this has been overlooked, the fowl will be disqualified when shown. Such color defects may not be breeding defects. There are, however, hereditary defects that can be removed and the fowl changed to a prize winner. The most glaring of such defects are side sprigs, stubs, or feathers on shanks or toes, and foreign color in plumage; all of these can be removed without detection, and when removed the fowl so treated may win a prize.

42. Removal of Defects, or Faking.—The severe penalty applied to removable disqualifications is likely to encourage dishonesty, or faking, as it is often called. In the preparation of fowls for exhibition, the most honest person may be led into error by a desire for success and without intending deception may remove color disqualifications from the plumage of fowls that are being prepared for the show room. Under the rules of the Standard, faking is considered most despicable. The Standard declares that not only the removal but also the attempt to remove any color disqualifications or disqualifications of any kind to be faking punishable by expulsion from the show room of all fowls shown by the offender. Yet, several removable breeding defects are penalized by disqualification and to remove them becomes a temptation hard to be successfully resisted.

43. Ways of Faking.—According to a strict interpretation of the Standard, the removal of a single faulty feather would be faking. It would be considered as bad to remove ten or a dozen mismarked feathers as to remove a hundred, yet the well-trained fancier would say that it would be suicidal to permit them to remain. A fancier who seldom entered a

fowl for competition was very strong in the belief that it was untidy not to clean up the plumage of fowls and keep them in the most presentable condition. Others of equal prominence have said that a person would scarcely attend a wedding or a function of like character without being well groomed, nor should a fowl be entered at an exhibition without being equally well groomed in every particular. The inclination to pluck all mismarked feathers from the plumage of a fowl prior to exhibition exists with every fancier. Lack of experience is about the only excuse that is ever offered for not having prepared every specimen shown. Objectionable feathers are seldom breeding defects. The most difficult problem with reference to the grooming of birds is to decide where preparation ceases and deception, or faking, begins.

Dark markings are apt to show in the back plumage of fowls of all kinds with Light Brahma plumage color. If these mismarked feathers are left exposed to view, the fowl may be debarred from competition; if such feathers are removed, the fowl may win the highest honors. A number of such feathers cannot be removed without their absence being noted. When the feathers are gone, the judge must decide whether there is sufficient evidence that they have been removed. The statement in the Standard, which is absolute, decides that all fowls that have been faked shall be debarred from competition; but so few decisions of this kind have ever been made as virtually to make the law of no avail. Situations quite as difficult present themselves with reference to black or foreign color in any part of the plumage of white-feathered fowls.

The trimming of combs is against the rules of the show room. The removal of a side sprig will, if detected, debar from competition every fowl the owner has entered. None but the unskilled exhibitors will be detected in this. Trimmed combs cannot be overlooked so easily, for wherever the knife or lancet has been applied, marks are left that cannot be mistaken. Spliced feathers in wings or tails can be quickly detected if the eye of the judge is keen, yet all of these do occur without punishment to the offender. Shanks, toes, or feathers dyed or bleached are of frequent occurrence. When

awkwardly done, this is readily detected; but these may all be accomplished in a manner that will baffle detection except by the most careful examination by the judge. The use of hot irons, cigars, or a match to obliterate white or gray spots in wing feathers may be so practiced as to be difficult of detection. Usually, as in other cases, the expert performs his work so well as to baffle detection, but the amateur or novice must suffer from his inexperience.

44. Prevention of Faking.—So long as removable defects are penalized as disqualifications, the removing of foul feathers and similar defects will be practiced. Less of this would be likely to occur were these spots of foreign color considered only as minor defects and discounted as such; but so long as foreign color in any part of the plumage disqualifies a fowl, the practice of removing such feathers is likely to continue. Following in line with this principle, fewer rather than more disqualifications for foreign color would be needed and stronger rules should be enforced against the removal of defects injurious to breeding quality. When changes are made in any portion of body or plumage that will hide or remove blemishes due to breeding, the most severe punishment should be meted out to the offender. No excuse should be accepted for a disfigured or improved fowl. Satisfactory evidence of changes having been made should be accepted as proof of wrong having been done, and no mercy should be shown.

45. Detection of Faking.—As before stated, whenever the knife has been used on combs or other portions of the body, the scar it leaves will usually permanently brand the fowl so treated. For instance, the removal of side sprigs may be detected by the scars left on the side of the comb, but this may be so well done as to baffle detection, as the usual method is to pinch them out with the finger nails, or to erase the scar by rubbing it both ways with sandpaper.

Dyed plumage is not readily detected, because if the dying has been well done and the feathers washed and scoured into a natural appearance, it will not be possible to detect the

presence of the dye by the eye unless a magnifying glass is used, and even this may not be satisfactory. However, if the feathers that are suspected of having been dyed are rubbed with a white cloth that has been dampened with alcohol, the presence of the dye is likely to be revealed. In cases where it is strongly suspected that the feathers have been dyed, but where the detection by ordinary means is difficult, the deception may be exposed if the feathers are subjected to the following chemical tests: (1) Pour about 1 inch or more of hydrochloric acid in a glass test tube. Insert the full length of the feather in the tube, and shake the acid about the feather. Feathers dyed buff will turn a blue or violet color. If the colors of the feather are natural they will remain unchanged. (2) The detection of some dyes requires the feathers dyed with them to be subjected to a solution made up of equal parts by measure of a saturated solution of crystals of protochloride of tin in hydrochloric acid and water. This solution must be absolutely fresh when used. To make this preparation quickly, a few of the crystals may be dissolved in the diluted acid and the feathers inserted. If this does not bleach out the color there is but little likelihood that the feathers have been dyed.

Artificially colored shanks or toes may be detected by the application of a white cloth moistened with alcohol, or with a solution made up of 1 teaspoonful of nitric acid to 4 ounces of water.

The presence of spliced feathers can be detected by examining all wing and tail feathers close down to the juncture of the quill with the skin. When splicing has been done, the overlapping of the quill of one feather on another will show the artifice.

The removal of white or gray spots from feathers by burning leaves much the same appearance as is created by the ravage of the depluming mite; the edges of the feathers will be rolled or curled or they will be perforated near the edges. A feather so ruffled may be restored by rubbing it smooth with a soft brush; thus, it may be difficult to detect faking of this kind if practiced by a skilled fancier.

The removal of stubs or of stiff hock feathers from the shanks or of feathers from the tail will leave traces that will be visible to the naked eye, because the quills of such feathers are large and leave good-sized holes. Sometimes the deception may be detected by the presence of very small feathers growing in the places where the large feathers should be. A magnifying glass may be of use in determining whether such feathers have been plucked or not. However, if such plucking has been skilfully done, detection is sometimes difficult.

The removal of the smaller foul, or mismarked, feathers from the body of a fowl is a difficult matter to detect unless so many of them have been taken out as to leave noticeable bare spots or vacant spaces among the feathers.

The cushion, tail, and hock plumage of a fowl should be examined to see whether or not fluffing has been done. Fluffing is the bending and breaking of the quills and shafts of the feathers in these parts of fowls, especially of Asiatics and Asiatic Bantams, for the purpose of building them out into unnatural size. A careful inspection of the quills and shafts of the feathers will show whether or not they have been bent or broken.

46. Inexcusable Practices.—No plausible excuse can be offered for trimming combs, splicing feathers, fluffing, or removing tail feathers or furnishings and stiff plumage in the hocks at a time which makes it impossible to grow others prior to the date of exhibition. If any of these methods of faking have been practiced, all fowls so treated should be debarred from competition.

No breeding defects are more objectionable than stiff hock feathering and foul markings in tail plumage. Fluffing for the development of cushion may transform a fowl with tight plumage into one having full cushion fluff with a well-spread tail. Such a fowl would be absolutely useless for breeding purposes, yet it may make a fine exhibition fowl, and the deception may be most complete and discoverable only by a careful examination of every feather in the cushion and about the tail, from its extreme outer point to its juncture with the skin.

PROCEDURE IN JUDGING

47. The rules governing the placing of awards on poultry are embodied in the several Standards. In America, these rules for judging are applied under three systems, which have been described. No person can be considered competent to apply these rules under any of the systems unless he is thoroughly versed in the details of the Standard descriptions. No matter which method may be made use of, it will be an impossibility for any one to reckon the discounts in all or in any one of the separate sections unless he is familiar with the requirements for perfection in those sections. He must also be capable of making reasonable discounts for deficiencies and to state plainly why a deduction has been made; to be in a position to do this satisfactorily he must, likewise, have a thorough knowledge of the instructions to judges in applying the comparison system and in cutting for defects in the score-card systems. These matters are recorded in the first few pages of the American Standard of Perfection.

48. Examination for Type.—In judging fowls where the standard is applied, each fowl should be considered first for type or breed formation. This is given on the score card as symmetry. Before a fowl has been picked up or disturbed in any way its value as to perfect or imperfect type should be noted and a deduction made accordingly. In Fig. 6 is shown a Black Orpington posing in a manner calculated to show off its form to best advantage. In the show room, however, it is usually the case that the form must be judged while the fowl is in its coop.

In making a deduction for type, if symmetry is valued at 4 points and if the fowl under consideration is nearly perfect but is slightly off in breed formation, a cut of $\frac{1}{2}$ point should be made; if it lacks more than this, a cut of 1 point should be made; but if it is very bad in breed formation, a cut of 2 points or more should be made. It will not matter whether the application is made under the score-card system or by the comparison system, the same defect should count against a fowl equally

in both. From this it is evident that to apply the standard properly, a person must become familiar with the true type of the breed under consideration. It is as necessary for a game fowl to have the long, slender neck belonging to its breed as it is for an Asiatic or a Wyandotte to have the short, bulky neck belonging to its breed. Conformation, which means the formation, general structure, or arrangement of parts, is a term that must be well understood before the true meaning of symmetry will be grasped. To be proficient in the use of the Standard requires a thorough understanding of the proper formation for every breed to which it is applied, and no person should attempt to go beyond his knowledge in the placing of awards.

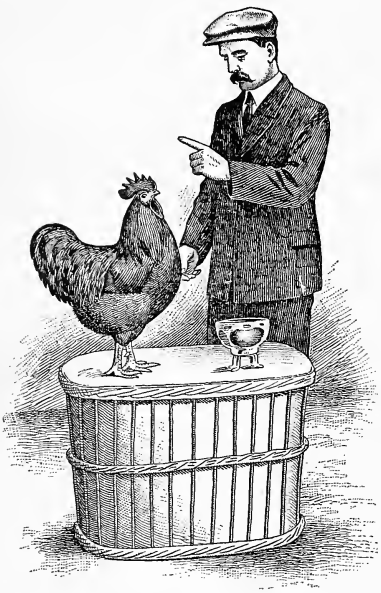


FIG. 6

49. Examination for Weight and Disqualifications. Under the Standard description for American breeds and in fact for all breeds where weights are included, disqualifying weights and disqualifications should be considered directly after a careful survey has been made for shape. No one should ever slight these two demands. A disqualified fowl should never be considered fit for an award. A fowl under weight should be discounted for its fault; a fowl disqualified for weight should never be permitted to win a prize. The usual

method of procedure, however, is first to consider symmetry, then condition. Following this, a deduction is made for shape. After the fowls have been gone over for symmetry, condition, and shape in each section, including combs and other head points, a thorough examination should be made for disqualifications, and then each section should be examined for color. Whether the score card or the comparison system is applied, equal care should be given to each section for shape and for color, the same as when the score card is applied.

50. Examination for Head Points.—Head points include shape and color of head, comb, wattles, and ear lobes, and these should have more than passing influence over the final decision. A fowl that stands well, has beautiful head points, including comb and eyes, and that stays to the front of the coop, meeting the approach of the judge without attack or resistance, has many points in its favor. Among the expressions relative to quality that will be heard in a day from those in attendance at a poultry exhibition, more than half of them will be made with reference to the beauty or defects of head and comb. Combs are highly valued in the scale of points, and the head and its belongings are one-fifth or more of the entire scale.

If beautiful in form and color and well set on the head, combs are discounted but little. On the other hand, they must be discounted for the slightest defect and severely cut for greater defects. Since imperfections of comb readily descend to offspring, they are for this reason heavily discounted; on the other hand, beautiful heads and combs, because they contribute greatly to beauty, are rated highly by judges. All defects that have a detrimental influence over future offspring should be more severely cut than minor defects that are not apt to descend to offspring. As an example, a rough twisted comb should be discounted one-half or more of its entire valuation. A comb of proper size and shape that lops slightly, perhaps as a result of poor condition, is not apt to be a breeding defect, and may be passed with a cut of $\frac{1}{2}$ point. A comb that lops on account of too great size or deformity should be cut at least one-half or more of its total value. This will serve

to penalize not only Standard but breeding defects as well. All cuts should be made in conformity to the rules in the Standard to guide in cutting for defects; but, in addition to this, discounts should be made for well-known breeding defects.

Wattles and ear lobes need not be so severely taxed for defects as combs, except for white in ear lobes that should be red, and red in ear lobes that should be white. Red in ear lobes of the Mediterranean varieties and white in the face are breeding defects that should be severely penalized. Injuries are apt to occur to wattles that hang down and are continually coming in contact with rough places. For this reason, but slight cuts if any are ever made in wattles not injured by foreign color. The eyes should be scrutinized for shape and color. Those not correct in color according to Standard demands should be discounted in proportion to their defect. Pearl eyes where red eyes should be, or one that is off colored should merit a cut of 1 point; if both eyes are off colored they should be cut even more than is demanded by the Standard. Pearl eyes in the parent stock descend readily to the offspring. Eyes that are brilliant and bright red indicate vigor; eyes that are pale instead of red as demanded, indicate lack of vitality.

51. Examination of Neck, Back, Saddle, and Tail. The neck, back, and saddle may be considered both separately and in conjunction with one another. The neck might conform to the shape demands of the Standard, yet, in connection with the back and saddle, it might not appear to be so nearly perfect; for this reason the three may be considered separately or as a whole, and the general deduction from all three be apportioned to each section according to its ratio value. A cut of $\frac{1}{2}$ point may be needed for the neck, 2 for the back, and $1\frac{1}{2}$ for the saddle; or the neck might be passed as perfect in shape and $2\frac{1}{2}$ points placed against the back; or the back might be left with a cut of 2 points and $\frac{1}{2}$ point be added to the saddle. When the score card is applied, separate cuts must be made; under comparison, a competent judge would survey the three sections and make his total deduction at a glance.

The tail should be considered in connection with the back and saddle. The tail formation may be perfect in itself, but in union with back and saddle, it may be of bad proportions. Symmetry may be well illustrated as follows: It may be possible for a neck, a back, a saddle, or a tail to approach perfection as individual parts, but when all are united the union may not be pleasing, and symmetry may be destroyed. The main tail feathers, the sickles, and the coverts should be carefully considered, so that a decision may be reached as to whether the formation is natural or the result of manipulation.

52. Examination of Wings.—Wings naturally belong to the back, and should be considered both singly and conjointly with the back. The wings should be well placed; they should be full and oval in formation from the juncture of the wing with the back down to where it is hidden in the breast and body plumage. Wings should never be flat, but should be filled out beneath, with the muscles located about the junction of the wing with the body of the fowl. This swells out and makes oval the wing formation. Where these muscles are lacking in fulness, the wings are apt to fit close and give a flat appearance to the side of the fowl. Wings should be well folded; the flights and secondaries should be carried well up in a manner that forms the perfect wing bay. Slipped flights or wings that hang down are breeding defects, and should be severely penalized in varieties that have tight plumage, and less severely dealt with in fowls that have fluffy plumage. A slipped wing in a Plymouth Rock female would be bad, but a slight defect of this kind might be overlooked in an Asiatic. The shape of the wing includes the entire wing, the flights, and the secondaries, as well as the whole wing formation. The carriage and shape must be considered under the section alloted for the shape of wings. The wings must be examined for color both before and after they are opened. Each feather of the flights and the secondaries must be carefully inspected and the small pinions and under filling as well.

53. Examination of Breast and Body.—A perfect breast and body formation has the advantage of beauty for exhibition

and value for table use. A fowl having a long, deep breast, with great breadth in front and rounding away in all directions from the point of the breast, is apt to be beautiful in formation and valuable for utility purposes. Fowls that have broad, full backs, with deep breasts of great length, being besides well built out between the thighs, have much greater value for exhibition than fowls deficient in these parts. Severe cuts should always be made for deficiency in breast and body formation. A breast that is narrow between the thighs will so confine the internal organs as to injure the health of the fowl. Such fowls will fail in vitality and dwindle away. For this reason a defect of this kind in breast or body should be punished severely in the scale of points. Equal severity should be dealt out to an exhibition fowl so fat in the abdomen as to exaggerate body formation. Standard description of breast and body in all varieties favors beautiful formation, with attractive curves from the breast in front down under and between the thighs, rounding up the abdomen into beautiful form, but not extending it. For an excess of fat in the abdomen, a fowl should be discounted at least one-half of the value of that section.

54. Examination of Thighs, Shanks, and Toes. The Standard mentions the legs and toes. The legs and toes, as understood by poultrymen, include the first joint, or drumstick, the shank, and the toes. The second joint, which is really the thigh and the drumstick, is the upper portion of the leg, but to meet the description of the Standard, the drumstick may be considered as the upper part of the leg and the shank as the lower part. One of the most important features of leg formation is proper width between the thighs, in accordance with the character of the fowl. Asiatic fowls should be wide between the thighs; fowls of the American and English breeds, not so wide as the Asiatics, but wide in comparison to the size of the fowl; fowls of the Mediterranean and other smaller varieties should be of a width that will permit of breast and body formation conforming to the width of the back and will leave room for internal organs. Narrowness between the

thighs and narrow, short, or thin breast and body formation are among the worst defects that a fowl can have. Narrowness between the thighs is an indication of failing vitality, and for this defect severe cuts should be made.

55. Examination of Color.—In the consideration of color, the scale of discounts must be carefully applied to every section and, although shape is of greater import, color is the source of beauty. Whenever perfect color is lacking, a cut must be made for this defect in each section. Where a deduction of $\frac{1}{4}$ point is made for color in each section in the case of color apportionment for American breeds, it would amount to a total discount of $2\frac{3}{4}$ points. If $\frac{1}{2}$ point is indicated for defective color in each section, the cut for color should be double this amount. In some cases a cut of from $\frac{1}{2}$ to $1\frac{1}{2}$ or 2 points will be needed for color defects in separate sections. For instance, a cut of $\frac{1}{2}$ point for buff color might be necessary in the neck of the female, while a cut of $2\frac{1}{2}$ points would be needed for bad color in back or body plumage. Wings may be discounted for black or for white up to half or more of the entire color value of the sections. Discounts for color should always be considered in connection with the age of the fowl. Pullets in the best show condition should be more severely penalized for color defects than hens 2 or 3 years old of the same variety. Color should always have careful consideration and be discounted according to the relative value in the general make-up of fowls, but it should never be more severely penalized than shape. A thorough examination for color defects should always be made according to the demands of the Standard.

56. Examination of Condition.—To be in good condition, a fowl must be absolutely clean throughout. Scaly legs deserve to be cut not only for shape but for condition as well. A broken or crooked toe should be cut both for shape and for condition; dirt between the scales of the shanks or toes, or dirt in any part of the plumage, head, or head points is considered as an indication of under condition, and such defects should be severely cut as a rebuke to the exhibitor for lack of

preparation and as a discount against a fowl that has not been prepared properly for the show room. Perfect symmetry, head points, and condition are apt to win the laurels for the fowls that possess them. If either or all of these are lacking, the fowl usually cannot win. No fowl that is so lacking in condition as to appear unclean or unkempt should be permitted to win a prize in a show room. Well-groomed poultry is the kind that should win prizes in keen competition.

REQUIREMENTS FOR ADMISSION OF NEW BREEDS TO THE STANDARD

57. When new breeds have been made and it is desired to have them admitted to the American Standard of Perfection, application must be made to the American Poultry Association and convincing evidence must be presented to prove that the new variety has acquired breed characters sufficiently strong to produce 50 per cent. of their offspring pure to type and character. In other words, before the American Poultry Association will accept, or admit, a new variety as standard bred, the fowls of the variety must have the shape or form of the breed to which they belong and the variety color so well established in them as to produce offspring 50 per cent. of which would be recognized as pure in character and form to the variety.

In addition to this, at least one pair of old and one pair of young fowls of the variety must be shown three consecutive years at some one of the poultry shows held under the auspices of the American Poultry Association. Their presence at each one of these shows and the quality of the specimens shown must be vouched for by the judge who passed upon them and the secretary of the show at which they were exhibited. The final application for their admission to the Standard must be sent to the Secretary of the American Poultry Association more than 60 days prior to the annual meeting, and this petition must contain evidence in writing of the quality of the fowls and places they have been shown, and the standard description of them. This application must be received early enough for

the secretary to give notice to the membership of the association of the application 60 days in advance of the annual meeting. Each and every one of these requirements must be fully complied with or the application will be rejected. All who anticipate making application for the admission of a new breed should get from the secretary of the American Poultry Association a copy of the full requirements for the admission of new breeds and follow it out to the letter.

GLOSSARY OF TECHNICAL TERMS USED BY POULTRYMEN

58. The terms and expressions peculiar to some certain industry or calling are often not readily understood by the novice. For this reason, it is sometimes thought advisable to add a chapter explaining the terms used, instead of defining them in the text. A treatment of the subject of poultry breeding would not be complete without an explanation of its technical terms. Without a clear understanding of the meaning of the terms used no one could judge fowls according to Standard requirements or select them for breeding purposes or the show pen or even converse intelligently on the subject of poultry.

In order to impart a clear understanding of the terms applied to the different parts of a fowl, a profile view of one is shown in Fig. 7, with the different parts numbered. Following this will be found a list of the names of the numbered parts. Farther on is a list of technical terms and expressions used by poultrymen, some of which have been explained in the text. This list will be found useful for purposes of reference. Some of the terms are peculiar to England and some to certain parts of the United States, but the meaning of each is fully explained and many are made clear by illustrations.

Abdomen.—The part of the body of a fowl that contains the viscera. See *32*, Fig. 7.

Albino.—A fowl that is pure white in all parts except the eyes, due to the absence of coloring pigment; a sport from black or colored fowls.

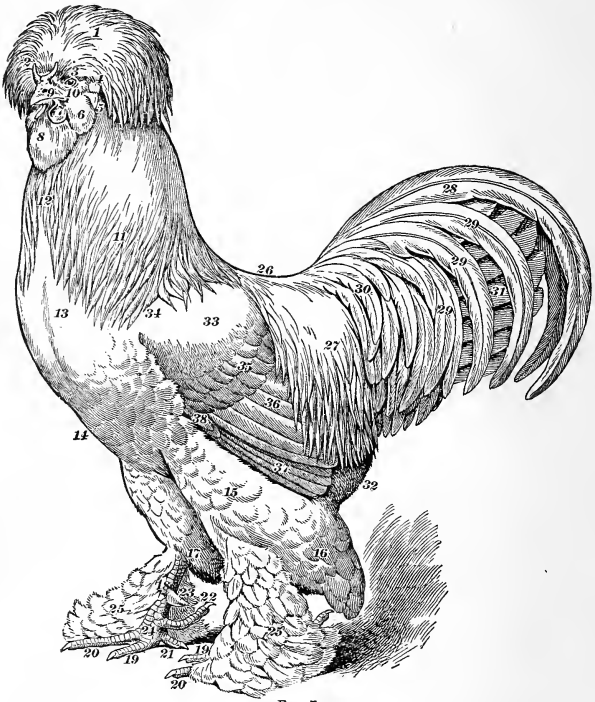


FIG. 7

NAMES OF NUMBERED PARTS

1, Crest
2, Comb
3, Eye
4, Feathers covering the ear
5, Ear lobe
6, Muff
7, Wattles
8, Beard
9, Beak
10, Face
11, Hackle
12, Neck
13, Breast
14, Breastbone, or keel
15, Thigh
16, Vulture hock
17, Hock joint
18, Shank
19, Third toe
20, Middle toe
21, Fourth toe
22, Fifth toe
23, Spur
24, Foot
25, Shank and toe feathering
26, Back
27, Saddle
28, Sickles
29, Lesser sickles
30, Tail coverts
31, Main tail
32, Abdomen
33, Wing bow
34, Shoulder
35, Wing bar
36, Wing bay, or secondary feathers
37, Primary, or flight, feathers
38, Primary coverts

Amateur.—A person not well informed about the art of poultry raising; a beginner; a novice.

Fig. 8

Antler Comb.—A comb composed of two small prongs somewhat resembling antlers; a **V**-shaped comb; common in Polish, La Flèche, and some strains of Houdans. Fig. 8.

A. O. C.—Any other color.

A. O. V.—Any other variety.

Atavism.—Recurrence to an ancestral type or to a deformity or disease after its disappearance for several generations; reversion.

Band.—(1) A stripe or marking of any kind at the end of or across a feather. (2) A band of metal or other material, usually stamped with numbers or letters, or colored, for attaching to the shank of a fowl so that it can be identified.

Bantam.—A dwarf, or pigmy, fowl, usually about one-fifth the size of a large fowl of the variety to which it corresponds in every particular except size.

Fig. 9

Barb.—One of the side branches of a feather, which collectively make up the web and fluff. See feather.

Barring.—Bands of alternate colors that extend across a feather. Fig. 9.

Barred to the Skin.—An expression applied to fowls whose feathers are barred from the tip to the end of the fluff, as in Barred Plymouth Rocks.

Bay.—A reddish-brown color, approaching chestnut; also used to designate eyes in fowls that have an approach to blood-red color.

Beak.—As used by poultrymen, the beak is the bony formation extending from the front of the head of chickens and turkeys; it consists of the upper and lower mandibles. See *9*, Fig. 7. The corresponding part of water fowls is called the bill.

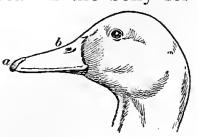


Fig. 10

Bean.—A growth, resembling a thumb nail, on the point of the upper mandible of the bill of a duck,

as shown at *a*, Fig. 10. A like growth of a smaller size is found on the bill of a goose.

Beard.—(1) A tuft of feathers under the beak and about the throat of such fowls as Polish, Houdans, etc. See *8*, Fig. 7. (2) A tuft of hair growing on the breast of turkeys.

Beefy.—A term applied to coarse, overgrown combs; such combs are more commonly found on Mediterranean fowls than on those of other varieties.

Beetle Brows.—See brows.

Bib.—The English name for beard.

Bill.—The mandibles of water fowls, which correspond to the beak in other domestic fowls.

Bird.—Fowl was the term formerly applied to all winged creatures; modern usage restricts the name fowl to the larger domesticated fowls and designates the smaller wild fowls as birds. However, the term bird is frequently indiscriminatingly used instead of the term fowl.

Blade.—The rear part of a single comb, generally called the heel. See *b*, Fig. 31.

Blocky.—A term applied to a fowl that is of heavy and square build; said of a fowl that is broad, or wide, between the thighs. Compare with cobby, an English term that expresses the same meaning.

Bloom.—The gloss, sheen, or finish on the plumage of fowls.

Body.—Fanciers usually apply the term body to the trunk of a fowl only.

Booted.—Fowls that are feathered on the shanks and toes are said to be booted.

Bouquet Crest.—A crest that stands up from the head and to some extent resembles a bouquet of flowers; found on crested ducks.

Brassiness.—A term applied to a yellow or yellowish tint commonly found in the feathers of white fowls and sometimes in the feathers of dark-plumaged fowls.

Breast.—(1) A term applied to that part of the front of the body of live fowls that extends from the throat to the point of the breastbone; see *13*, Fig. 7. (2) The term is applied also

to the meat on both sides of the breastbone of fowls prepared for the table.

Breed.—A family of fowls all of which are of the same distinctive shape. A breed may include a number of varieties, the fowls of all the varieties having the same shape but being distinguished by different plumage colors and markings.

Breeding Down.—A term applied to the process of producing small, or bantam, fowls from larger fowls by selecting and breeding the smallest fowls obtainable—a process usually involving breeding through a number of generations.

Brick Color.—A reddish-brown color occasionally found on fowls of black-red varieties.

Broken Colored.—See mottled and spangled.

Brood.—A number of chicks that are mothered by one hen or kept in one brooder.

Broody.—When a hen shows a desire to sit, that is, to hatch eggs, she is said to be broody.

Brows.—The projection of the skull over the eyes of a fowl, as in Asiatic and Malay fowls; termed beetle brows in England. Fig. 11.

Fig. 11

Cap.—The upper part of a fowl's skull or comb; a term used in England.

Cape.—The feathers between the shoulders and about the neck underneath the hackle.

Fig. 12

Capon.—A castrated cock or cockerel; that is, a male from which the reproductive organs have been removed; a female from which the reproductive organs have been removed is called a poulard.

Carriage.—The general appearance, pose, or bearing of a fowl; the way in which a fowl carries itself when walking.

Caruncles.—Irregular growths of flesh such as occur on the head and neck of turkeys and Muscovy ducks. Fig. 12.

Carunculated.—Covered with caruncles.

Castrate.—To remove the testicles, the organs of reproduction, from a male fowl.

Cavernous.—Said of nostrils that are prominent and deeply hollowed. Such nostrils are found on crested fowls. Fig. 13.

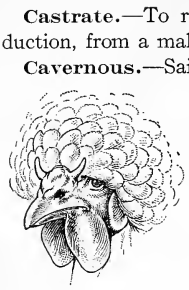


Fig. 13

Chain Armor.—Faulty lacing on the claret-colored breast of a Rouen drake.

Chick.—One of the newly hatched young of fowls or birds.

Chicken.—Specifically, a fowl less than 1 year old; commonly, a fowl of any age.

Cinnamon Color.—A dark reddish buff, formerly admissible on one variety of Cochins.

Claret Color.—Descriptive of the breast color of a Rouen drake.

Clean Legged.—A term used in describing a fowl that has no feathers on its shanks or toes.

Close Feathered.—See tight feathered.

Cloudy.—A term applied to plumage that has irregular markings. See mossiness.

Clutch.—The number of eggs a domestic fowl incubates, or sits on, at one time, usually from 11 to 15. See sitting.

Coat.—The plumage of a fowl taken as a whole.

Cob.—A male swan.

Cobby.—A term applied in England to a fowl that is thickset, heavily built, and round in form. See blocky.

Cock.—A male fowl more than 1 year old; the term is commonly applied to pit game cocks of any age.

Cockerel.—A male fowl less than 1 year old. The practice in the show room is to allow males to be shown as cockerels during the entire show season that follows their hatching. Compare with pullet.

Cockerel Bred.—Bred in line from a mating made expressly for producing cockerels for exhibition. Both males and females from such matings are said to be cockerel bred. Compare with pullet bred.

Collar.—A white ring around the neck, as in Rouen ducks and in pheasants.

Color.—A term applied to any one of the many hues that may be found on the feathers or on any other part of the body of a fowl. This term is used also in describing the coloring of the entire plumage. A fowl is said to have good color when each of its colors is of the proper tint and is found in its proper place, and to have bad color when the reverse is true.

Comb.—The fleshy growth on the top of the head of a fowl. See *2*, Fig. 7, and Figs. 8, 11, 22, 26, 28, 31, and 36.

Fig. 14

Comb Over.—An expression for lopped comb; used in England. Figs. 14 and 30.

Comparison Judging.—Judging birds by comparing them with one another, and without applying a score card.

Concave Sweep.—The continuous curve of the back from the shoulder to the tail; required in some breeds.

Condition.—The state of the health and plumage of a fowl; sometimes applied only to the finish, or appearance, of the plumage.

Conditioning.—The process of preparing a fowl for the show room.

Coverts.—Feathers that grow about the tail; also the secondary quill feathers. See *30* and *38*, Fig. 7, and wing and tail coverts and hangers.

Cradle Comb.—A term formerly applied to the Wyandotte comb; at present but little used. Same as rocker comb.

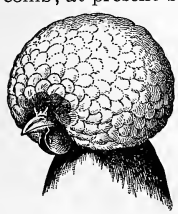


Fig. 15

Creaminess.—A term descriptive of white feathers that are tinged with a slight yellow or cream color.

Crest.—A tuft of feathers on top of the head. Figs. 15 and 22.

Crop.—An enlarged part of the gullet, or pouch, in which food is stored and softened prior to passing into the gizzard.

Crop Bound.—A term applied to an unnatural condition of the crop, in which that organ is stopped up and food is prevented from passing through it.

Cross.—A mating of fowls of different breeds.

Cross-Bred.—The offspring from two fowls of different *breeds;* as from mating a Plymouth Rock with a Rhode Island Red.

Curl Feather.—One of the set of curled feathers near the base of the back of a male duck.

Curve.—Any arched or concave line on the body of a fowl, such as the curve of the back, the curve formed by the flowing tail feathers, or the arched shape of the neck in water fowls.

Cushion.—A raised mass of plumage due to an excessive development of soft feathers about the tail of Cochins and some other fowls.

Cushion Comb.—The name applied in England to the comb of the Silky; a circular cushion of flesh with a number of small protuberances on it. Same as strawberry comb.

Cut.—A deduction made from the score of a fowl; as a cut of 2 points.

Cygnet.—A young swan.

Daw Eyed.—A term used at one time to describe game fowls that had peculiar eyes resembling those of a jackdaw, which were of a pearl color; pigeons with eyes of the same kind are said to be pearl eyed.

Deaf-Ear.—The ear lobe.

Debarred.—Barred from competition.

Deep Bodied.—Said of fowls that have a good depth of body from the top of the back to the lower side of the breast-bone.

Defect.—Any blemish, imperfection, fault, or lack of some feature or quality.

Dewlap.—A growth of loose skin below the beak or bill, as in Brahmas and water fowls. Fig. 11.

Diamond.—An expression formerly used in place of wing bay. See *36*, Fig. 7.

Dished.—When hollows or depressions appear in the bill of a water fowl, it is said to be dished. See *b*, Fig. 10.

Disqualification.—A defect that will debar a fowl from competition.

Disqualified.—Condemned; unfit for exhibition.

Double Comb.—A term formerly applied to all combs except the single comb.

Double Lacing.—A double ring or penciling about the outer edge of a feather. Fig. 16. See supplementary lacing.

FIG. 16

Double Mating.—A system of mating in which males fit for exhibition are produced from one pair of breeding fowls, and females fit for exhibition are produced from another pair.

Down.—(1) The first downy covering of young chicks. (2) The soft cottonlike part of a feather below the web; see *b*, Fig. 18. (3) A mosslike growth between the toes.

Drake.—A male duck.

Dubbing.—The cutting off of the comb, wattles, and ear lobes of game fowls.

Duck.—A species of water fowl, including both sexes; also, a female of the species, as distinguished from the male.

Duckling.—A young duck.

Duck Foot.—See web foot.

Duck Footed.—A fowl is said to be duck footed when the back toe is carried close to the other toes, instead of being well spread out behind. Fig. 17.

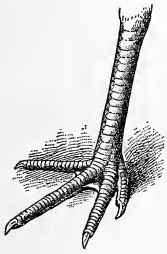


FIG. 17

Ear Lobe.—The fleshy growth below the ear; this may be red, white, or other color, according to the variety. Same as deaf-ear. See *5*, Fig. 7.

Eggs for Hatching.—Eggs that are suitable for incubation.

Exhibition Fowl.—A fowl suitable for exhibition in a show room.

Face.—On a fowl, the part of the head about the eyes that is bare of feathers.

Faking.—A term equivalent in meaning to deceiving; it is in frequent use by poultrymen. Faking consists in removing or dyeing objectionable feathers, in coloring shanks and feet, in removing side sprigs, or in the use of other unfair means to win a prize in a show room.

Fancier.—A breeder of poultry, pigeons, or pet stock.

Fancy.—A lax term for fanciers collectively.

Feather.—One of the appendages peculiar to and growing out of the skin of a fowl or a bird, collectively forming the plumage. Fig. 18. A feather is commonly composed of the following principal parts: *web a*, in which the barbs are stuck together, forming a thin, smooth sheet; the *fluff*, or *down b*, in which the barbs are not united; the *shaft*, quill, or barrel, which is composed of a lower hollow and tubular part *c*, and an upper part *d*, which is filled with pith.

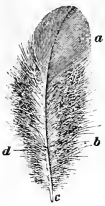


FIG. 18

Feather Cell.—The cell in the body from which a feather grows.

Feather Legged.—Said of fowls that have feathers growing on the sides of the shanks and toes; booted. See *25*, Fig. 7.

Fillers.—The small feathers that grow between the main tail feathers.

Finish.—Gloss on plumage.

First-Cross Fowls.—Fowls resulting from the first crossing of standard-bred males and females of different breeds.

Flat Shin.—A flat part on the shank of a game fowl.

Flight Coverts.—Short feathers that grow at the base of the flight feathers and partly cover them. See *38*, Fig. 7.

Flights, or Flight Feathers.—The primary feathers on the wing of a fowl. See *37*, Fig. 7.

Flow.—Said of feathers that hang loosely or sweepingly.

Fluff.—(1) The downy or lower part of a feather; see *b*, Fig. 18. (2) The profuse soft feathering about the thighs and abdomen; see *32*, Fig. 7.

Fluffing.—The act of bending or breaking the shafts and quills of the feathers in the fluff, cushion, and tail feathering of Asiatic Bantam and other Asiatic fowls, to build them out into unnatural size. This constitutes faking.

Folded Comb.—A comb that falls over to one side and folds back, forming a loop.

Foreign Color.—Any color found on a fowl that is not characteristic of or standard for the variety to which the fowl belongs.

Form.—As applied to fowls in the show room, form refers to their condition and finish.

Foul Feathers.—Feathers that are marked with foreign color.

Fowl.—A domestic cock, hen, cockerel, or pullet.

Foxy.—See rusty.

Frizzle Feathers.—Feathers that are crinkled or curled.

Frosting.—Irregular markings or lacing of a light color. Similar markings of a dark color give the appearance of mossiness.

Furnished.—A fowl is said to be furnished when it has a complete growth of tail, hackle, and saddle plumage, and a well-developed comb and other head points.

Furnishings.—Same as hangers.

Gaff.—A steel spur.

Gamy.—Like a game fowl; full of fight.

Gay.—A fowl is said to be gay when it has spangled, splashed, or colored plumage with an excessive amount of white on it.

Gills.—An improper name for the wattles.

Gloss.—The luster on the surface of feathers.

Gobbler.—A male turkey.

Gray.—A color produced by a mixture of black and white; it is of different shades, according to the proportions of black and white, as in the plumage of Dark Brahmas and Silver-Gray Dorkings.

Ground Color.—In fowls, the main, or principal, color in the plumage; for example, in a Buff Laced Polish fowl, the buff is the ground color.

Gullet.—The opening through which food passes.

Gypsy Color.—Purple color, as found on the face of some game fowls; also called mulberry color.

Hackle Feathers.—The long, flowing feathers that grow on the neck of a fowl; more plentiful in males than in females. See *11*, Fig. 7. See hackle.

Hangers.—An improper name for saddle feathers.

Hatch.—(1) To produce young from, that is, to cause young to develop in and come forth from an egg by either natural or

artificial incubation. (2) A brood hatched at one sitting or one incubation.

Hard Feathers.—Firm, close feathering, such as is found on game fowls.

Hen.—A mature female domestic fowl.

Hen Feathered.—Said of a male fowl with a tail like a hen, as in the males of Sebrights and some varieties of game fowls.

Hen Tailed.—Same as hen feathered.

Henny.—A term applied to a male fowl, usually a game, that has tail or other plumage resembling that of a hen.

High-in-Back.—A term used in England to describe hump or roach back.

Hock.—The joint between the thigh and the shank. See *17*, Fig. 7.

Hollowed Place in Comb.—A depression in the comb of a fowl; same as a thumb mark. Fig. 30.

Hood.—Neck feathers that curve forwards over the head.

Horn Comb.—Same as antler comb and **V**-shaped comb.

Horseshoe Lacing.—Lacing forming a horseshoe about the tip of a feather. Fig. 19.

Fig. 19

Hump Back.—A fowl with a hump back is one that has a knob, lump, or prominence on the back.

Hybrid.—The offspring from two birds of different *species;* as from mating a goldfinch with a canary, or a turkey with a guinea.

Ideal.—Of a perfection that is seldom realized.

Inbred Fowl.—An offspring from closely related fowls.

Inbreeding.—Breeding, or following a course of breeding, from nearly related fowls.

Incubate.—See hatch and sit.

Irregular Lacing.—Incomplete or imperfect lacing about the edge of a feather.

Jaw.—In a fowl, the jaw is that part of the head that supports the upper and lower mandibles.

Keel.—(1) The lower edge of the breastbone. (2) The loose flesh and feathers hanging below the breast in ducks and other poultry.

Knee Joint.—Same as hock joint. See *17*, Fig. 7.

Knob.—The protuberance on a goose at the juncture of the head and the bill.

Fig. 20

Knock Kneed.—A malformation of the legs of a fowl, in which the hock joints come close together instead of being well apart as they should be. Fig. 20.

Lacing.—The edging along the margin of a feather; it is usually darker in color than the body of the feather. Fig. 21.

Fig. 21

Leader.—The spike, or heel, on a rose comb—the part that extends to the rear. See *a*, Fig. 28.

Leaf Comb.—A comb consisting of two small sections, each shaped like a leaf. Fig. 22.

Leggy.—A fowl is said to be leggy when it has too great length in legs.

Leg and Toe Feathering.—The feathering on both the shanks and feet; booting. See *25*, Fig. 7.

Lesser Sickles.—The smaller tail feathers next to the full, flowing sickles. See *29*, Fig. 7.

Line Breeding.—Breeding, or following a course of breeding, from a limited number of original fowls. In line breeding the fowls mated are not so closely related as those mated in inbreeding. Line breeding is really a modified form of inbreeding.

Fig. 22

Loop.—A double fold in the comb, as in a Minorca female.

Lopped Comb.—A comb that falls over on either side. Same as comb over. Figs. 14 and 30.

Low Built.—Said of a fowl that is very short in the legs and hence carries its body close to the ground.

Lump Comb.—Same as strawberry comb.

Made Form.—The form that may be produced in a fowl by training.

Main Tail Feathers.—The stiff feathers of the tail under and between the sickles and coverts. See *31*, Fig. 7.

Mandibles.—The horny upper and lower parts of the beak or bill.

Marbled.—A term used to describe ticked or laced feathers on the breast of Pyle Game cocks.

Markings.—Striping, lacing, barring, or marks of any kind on the plumage.

Mazarine.—Deep-blue or purplish markings across a black feather.

Fig. 23

Mealy.—A term used to describe plumage that should be one solid color but is covered with irregular dots of mixed or faulty color.

Moon.—A rounded spot of color tipping the feathers of fowls of some varieties.

Mossiness.—An effect produced by irregular dark markings. Fig. 23. See frosting.

Molt.—(1) To cast off or shed the feathers of fowls. (2) The act or process of molting. (3) The season or period of molting.

Mottled.—Marked with spots or blotches of different colors.

Mulberry Color.—See gypsy color.

Muff, Muffle, Muffling.—A growth of feathers on either side of the head, usually seen on bearded fowls, and very marked in Faverolles. See *6*, Fig. 7.

Natural Form.—The natural appearance of a fowl without training.

Fig. 24

Non-Sitter.—A fowl that does not incubate eggs.

Novice.—A beginner; an inexperienced person.

Open Barring.—Barring in which the bars are wide apart. Fig. 24.

Fig. 25

Open Lacing.—Narrow lacing about the edge of a feather and forming a ring around a spot of another color, giving the feather the appearance of having a large open center. Fig. 25.

Overlap.—To lie partly over; said of the colors on plumage when they meet on a ragged edge, giving the appearance of one color overlapping another.

Parti-Colored.—Of several colors; variegated.

Pea Comb.—A small, low comb divided lengthwise into three parts, and having the appearance of three small single combs placed side by side, as on the Brahma and Aseel. Figs. 11 and 26.

Fig. 26

Pearl Eyed.—See daw eyed.

Pen.—(1) An enclosure. (2) A female swan.

Penciling.—Narrow lines or markings. The term penciling is applied to several kinds of markings on poultry: (1) The bars on the feathers of Penciled Hamburgs. (2) The concentric lines that follow the outline of the feather in Dark Brahmas and Partridge Cochins. Fig. 27. (3) The fine gray markings on Rouen drakes. (4) The stippling as found on Leghorns and Black-Breasted Red Game females.

Fig. 27

Pen Manners.—The behavior of fowls in pens in the show room.

Pen of Fowls.—In the show room, a pen of one male and four females.

Peppered.—Plumage is said to be peppered when it is dotted with spots.

Pile.—The spelling used in England for Pyle.

Pinion.—(1) The outermost section of the wing of a bird, bearing the pinion feathers. (2) To cut off the outer parts of a bird's wing that bears a considerable proportion of the feathers used in flying, in order to prevent flying.

Pit.—An enclosed space in which fowls are pitted against each other; hence, a fighting place for fowls.

Plumage.—The feathers and down.

Point.—One of the tapering, sharp-ended serrations of the upper part of a single comb. See *a*, Fig. 31. Same as serration.

Poulard.—A female fowl, usually a pullet, in which the egg-producing organs have been destroyed.

Poult.—A young turkey.

Poultry.—All domestic fowls.

Prepotency.—The superiority of one parent over the other in transmitting characters to the offspring; that is, in stamping its individuality on the offspring.

Primaries.—The flight feathers. See *37*, Fig. 7.

Producer.—A fowl that produces offspring better than itself.

Pullet.—A female fowl less than a year old. Show-room practice allows a fowl to be exhibited as a pullet during the entire show season that follows the hatching.

Pullet Bred.—Bred in line from a mating made expressly for producing pullets for exhibition. Both males and females from such matings are called pullet bred. Compare with cockerel bred.

Pure Bred.—Fowls that have no alien blood in them are said to be pure bred.

Purply.—The effect produced by purple bars across a black feather.

Quill.—See feather, and *c*, Fig. 18.

Quill Bound.—A condition in which the feather is retained in its sheath, instead of the sheath cracking and falling off.

Racy.—A fowl that is slender, trim, active, alert, or tight feathered is said to be racy.

Reachy.—Said of fowls that have an upright carriage and are tall, such as game fowls.

Ribbon.—The bright-blue band across the wings of Rouen and other ducks.

FIG. 28

Roach Back.—A back with a hump; same as hump back.

Rocker Comb.—A term formerly applied to the Wyandotte comb; same as cradle comb.

Rooster.—Common name for a cock or a cockerel.

Rose Comb.—A broad, level comb. wide in front, tapering to a spike, or point, in the rear, and covered on the top with small projections, or points, as in

Hamburgs and Rose-Comb Bantams. Fig. 28. At *a* is shown the spike.

Rosy Wings.—Wings of Pyle females, which are marked with salmon color; wings of the same color were formerly called foxy colored.

Ruff.—Same as muff.

Rusty Color.—The reddish-brown shadings on the outside of the wings of Black-Breasted Red Game and Brown Leghorn females. In England, the same shading is called foxy.

Saddle.—That portion of the back of a male fowl between the middle of the back and the base of the tail.

Saddle Feathers.—The flowing feathers growing from the saddle of a fowl.

Saddle Hackles.—The long, flowing feathers that grow from the saddle of a male and hang down on both sides of the body; also called saddle hangers and saddle feathers. See *27*, Fig. 7.

Salmon.—A reddish or pinkish orange color, like that found on the breast of Red Pyle Game females and Brown Leghorn females.

Scales.—Thin, horny growths covering the shanks and feet.

Scaly Leg.—A diseased condition of the shanks and feet, caused by the scaly-leg mite.

Secondaries.—The long quill feathers of the wings that grow on the second joint or next to and above the primaries. See *36*, Fig. 7.

Section.—A distinctly defined part of a standard-bred fowl.

Self-Color.—A uniform color.

Serrated.—Notched along the edge like a saw.

Serration.—One of the points of a single comb. See *a*, Fig. 31.

Shaft.—See feather, and *d*, Fig. 18.

Fig. 29

Shafty.—A term describing a dark-colored feather with a light shaft. Fig. 29.

Shank.—That part of the leg between the toes and the hock joint. See *18*, Fig. 7.

Shank Feathers.—Feathers growing on the outside edge of the shank. See *25*, Fig. 7.

Shank Line.—A line that would be formed by drawing a straight line along the rear edge of the shank upwards through the body of a fowl.

Sheath.—The covering over a new feather; it splits and falls off as the feather develops.

Sheen.—The glistening brightness, or gloss, on plumage.

Shoulder.—The front or upper part of the wing; it is round or bow shaped and is hidden in fowls of some breeds by the breast plumage and hackle; in game fowls it stands out prominently. See *34*, Fig. 7.

Fig. 30

Shoulder Butt.—Same as shoulder.

Show-Room Form.—The form that a fowl has in the show room.

Sickles.—The top pair of curved feathers in the tail of male fowls. One or two pairs similar to these, but below them, are called the lesser sickles. See *28* and *29*, Fig. 7.

Side Spike.—Same as side sprig.

Side Sprig.—An extra point, or growth, at the side or near the end of a single comb. Fig. 30.

Silvery.—A term applied to the appearance of the shoulders of barred fowls that are deficient in barring and that have light, or silvery, markings on these parts instead of the customary barring.

Single Color.—Same as whole color.

Single Comb.—A thin, serrated, fleshy growth on the top of the head of a fowl, as in Plymouth Rocks and Leghorns. Fig. 31. At *a* is one of the serrations, or points; at *b*, the blade.

Fig. 31

Single Mating.—A mating from which both males and females fit for exhibition are produced from a single pair of breeding fowls. See double mating.

Sit.—To cover eggs for hatching; incubate.

Sitters.—Fowls that sit on and incubate eggs. The sitting proclivities are stronger in some breeds than in others. Fowls in which the sitting proclivities are weak are said to be non-sitters.

Sitting.—The act of sitting to incubate eggs; also, the number of eggs for a sitting, usually from 11 to 15. See clutch.

Slipped Wing.—A wing in which the flight, or secondary, wing feathers hang loose or out of place. Fig. 32.

Fig. 32

Smooth Legs.—Legs that have no feathers, stubs, or down on the shanks.

Smut.—A term applied to dark color overlying any section of a fowl.

Solid Color.—Of one uniform color throughout; self-color.

Spangle.—A dark marking at the point, or tip, of a feather. Fig. 33.

Fig. 33

Spike.—The rear point on a rose comb; sometimes called a leader. See *a*, Fig. 28.

Splashed Feathers.—Feathers in which there is an uneven mixture of color.

Split Crest.—A rounded crest that is split and falls over on both sides.

Sport.—A fowl that varies from the normal type; a white offspring from black parents.

Spur.—A horny growth on the inside of the shank of a cock. See *23*, Fig. 7.

Squirrel Tail.—A tail in which the feathers are carried so far forwards as almost to touch the head, like the tail of a squirrel. Fig. 34.

Stag.—A young game cock; also, a turkey cock.

Fig. 34

Standard Mating.—A mating in which the fowls conform to Standard description; sometimes called single mating when the purpose is the production of both males and females.

Station.—Manner of standing; attitude, or pose of a fowl. A fowl is said to have good station when it has a form typical of the breed to which it belongs, has good symmetry, and the proper height and reach. Station is a term applied more especially to game fowls. Compare with carriage.

Steppings.—A term used in England to describe the effect produced by the ends of the secondary feathers, each one of which is shorter than the one immediately below it, giving the appearance of a flight of steps.

Fig. 35

Stippling.—The effect produced on plumage by dots of dark and of light shades of color, as in Brown Leghorn females. Fig. 35.

Strain.—Fowls of one variety that have been bred in line for a number of generations from a few original fowls.

Strawberry Comb.—A lump comb, somewhat resembling a strawberry in shape, as in Malays and Silkies. Fig. 36.

Fig. 36

Striping.—Markings of dark color that extend down the middle of a feather and taper to a point near the tip of the feather, as in Light Brahmas, Brown Leghorns, and some other fowls. Fig. 37.

Fig. 37

Stub.—A short piece of the quill of a feather; especially, a short piece of the quill of a feather occasionally found on the shanks of smooth-legged fowls.

Style.—A fowl is said to have style when it presents a fine, spirited appearance, and has good symmetry, station, and carriage.

Supplementary Lacing.—An outside edging or lacing of a different shade or tint than the color next to it, that is found on both laced and solid feathers. When it occurs on laced feathers, as an edging of white around the outside of black lacing, it is the same as double lacing. Fig. 16.

Surface Color.—The color on the parts of the feathers exposed tc view.

Sword Feather.—A main tail feather of a Japanese Bantam male.

Symmetry.—The blending of all sections or parts of a fowl into a harmonious whole.

Tail Coverts.—The curved, soft feathers about the sides of the lower part of the tail feathers. See *30*, Fig. 7.

Tail Feathers.—The stiff, or main, feathers of the tail. See *31*, Fig. 7.

Team.—Three or more fowls shown by one exhibitor.

Thigh.—The upper segment of the leg; it is included between the body of the fowl and the upper extremity of what is known as the drumstick.

Thoroughbred.—(1) Of the best or the purest breeding; in this sense, now generally replaced by the term standard bred. (2) A term descriptive of game cocks of high courage and spirits.

Throat.—Same as gullet.

Thumb Mark.—(1) A hollow place in the side of a single comb. Fig. 30. (2) An opening or split in the front or center of a rose comb.

Ticked.—Plumage is ticked when it has spots of color different from the rest of the plumage.

Tight Feathered.—Fowls are said to be tight feathered when the feathers lie close to the body; close feathered.

Tom.—A male turkey; a gobbler.

Top Color.—The color of the plumage on the back.

Topknot.—A tufted growth of feathers on the top of the head of a fowl; a crest. Figs. 15 and 22.

Training.—The teaching or drilling of a fowl to pose in the show room.

Tricolored.—Of three colors.

Trimming.—A fraudulent way of preparing a fowl for the show room. See faking.

Trio.—Three; in poultry, a male and two females.

Trunk.—The body of a fowl, as distinguished from its appendages, the legs, neck, head, etc.

Tucked Up.—A fowl is said to be tucked up when the abdomen lacks fulness and makes a sharp upward turn to the tail, as in game fowls.

Twisted Comb.—A comb twisted into curves or some other faulty shape. Fig. 38.

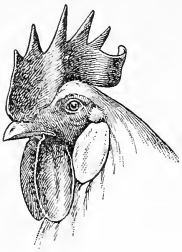


FIG. 38

Type.—The form peculiar to any breed.

Under Plumage.—The fluff or under part of the plumage, seen only when the feathers are separated. See feather, and *b*, Fig. 18.

Utility Fowl.—A fowl for egg production and market purposes, as distinguished from an exhibition fowl.

Variety.—A subdivision of a breed; distinguished from other varieties of the same breed by the plumage colors. See breed.

V-Shaped Comb.—A comb having two points or prongs; also called antler comb, and horn comb. Fig. 8.

Vulture Hock.—A hock like that of a vulture, which has stiff feathers growing from the hock joint. See *16*, Fig. 7.

Washiness.—A state or quality of a feather that appears to have had the color washed out of it.

Waster.—A fowl unfit for breeding purposes, but fit for food.

Wattles.—Pendant growths of flesh that hang on each side of the beak; most prominently developed in male fowls.

Web.—(1) The upper part of a feather where the barbs are stuck together; the flat, thin feather structure beyond the fluff part of the feather. See feather and *a*, Fig. 18. (2) The skin growing between the toes. (3) The skin between the joints of the wing.

Web Foot.—A foot with webs between the toes. When a fowl other than a water fowl has a foot with webs between the toes, it is said to have a web foot.

Wheaten.—An uneven brown like that on ripe standing wheat; peculiar to some females of the Black-Breasted Red Games and the Faverolles.

Whip Tail.—The fine, slim tail of the modern game or game bantam fowl.

Whiskers.—Feathers growing from the side of the face; same as muff. Sometimes applied to the muffling below the beak. See *6*, Fig. 7.

Whole Color.—A fowl is said to be of a whole color when all of its plumage is of one color, as buff or black, but this does not mean that all the plumage must be of one shade of the color.

Willow Color.—A greenish yellow color peculiar to the shanks of some game fowls.

Wing Bar.—A bar of dark color across the middle of a wing. See *35*, Fig. 7.

Wing Bay.—A triangular surface showing on the wing where it is folded; located between the wing bar and the point of the wing. See *36*, Fig. 7.

Wing Bow.—The surface of the wing between the wing bar and the shoulder. See *33*, Fig. 7.

Wing Butts.—The ends of the flight feathers; a misnomer for wing points.

Wing Coverts.—The feathers that cover the roots of the secondary flight feathers.

Wing Fronts.—The fronts of the wings, properly called shoulders; improperly called wing butts.

Wing Points.—The extreme outer ends of the flight feathers.

Work, Full of Work.—A term used in England to describe a well-finished rose comb, the points of which are perfect or nearly perfect.

Wry Tail.—A tail carried to one side. Fig. 39.

Fig. 39

AMERICAN FOWLS

PLYMOUTH ROCK

ORIGIN

1. The early or original **Plymouth Rock** fowls existed in several localities, and were different in each. The fowls from which they originated were mostly Asiatic—Java, Shanghai, Cochin, and Langshan. Crosses claimed to have been made for the production of Plymouth Rock fowls were: (1) Black Spanish with White Cochin fowls, the offspring being crossed with Dominique fowls; the Black Spanish used in this cross were not the White-Faced Black Spanish fowls of the present, but a fowl like the Black Minorca, with red face and white ear lobes. (2) Black Spanish with Gray Dorking fowls, the offspring being crossed with Dominique fowls; the Black Spanish fowls were the same as those just described; the Dorkings were of the original, single-comb, five-toed, gray variety. (3) Dominique males with Buff Cochin females, the offspring being mated with Dominique males, giving a double cross of the Dominique male with the Cochin female. Numerous other crosses were made, and the best offspring from all these were selected and used in the formation of the original Plymouth Rock fowls.

2. Modern Plymouth Rock fowls were produced by crossing Dominique males with Black Java females, and selecting and mating the best offspring with Dominiques; the offspring from these crosses were mated and remated until the present type of Plymouth Rock fowls was begun. The fowls so produced were described in 1874 as follows: The plumage of the

male was dark or light steel gray, and free from splashes of red, black, or white; no mention was made of barring in the males. The females were described as having dark or steel-gray plumage, mottled with black and white, with a well-defined black-and-white bar across each feather.

BARRED PLYMOUTH ROCK

ORIGIN, DEVELOPMENT, HISTORY, AND DESCRIPTION

3. Origin.—Whether the **Barred Plymouth Rock** has descended directly from any one of the original crosses or from the best that could be selected from among them, is uncertain. Many claims have been made regarding the origin of the Barred Plymouth Rock, but after examining all the authentic information it seems impossible to make any definite statement on this point. It has, however, been well established that the fowls of this variety have been developed to their present excellence by selecting and mating together the best individuals that could be bred.

4. Development.—The Barred Plymouth Rock fowls have been developed by the poultry fanciers of America. For many years there was considerable controversy relative to their form and color, and until the Standard of 1883 was established there was no definite understanding as to what their form and color should be; since that time size, shape, and color have been so well established that deterioration is now almost impossible.

5. History.—The two breeds most directly connected with the making of the Barred Plymouth Rock were the Java and the Dominique. The Java, which is of Asiatic origin, had black or brownish-black plumage, a single comb, and no feathers on the shanks or toes; the Dominique, which was of the American rose-comb variety, had about the same color and barring as now. The most successful crosses are credited to the fanciers of Connecticut. The offspring of these crosses were the foundation stock of the Barred Plymouth Rocks as

BARRED PLYMOUTH ROCKS

they exist at the present time. This variety was very generally adopted by the fanciers of New England, and later, by careful breeding, many strains were established.

6. Description.—The Plymouth Rock is a fowl of medium proportions, being midway in size and general formation between the Mediterranean and Asiatic fowls. A long, slender head in either males or females would be as improper as extreme length in body, neck, or tail. The size of the body of a fowl is too frequently judged according to its weight. Length of body, as given in the Standard, is determined largely from the lay of the feathers. In full plumage, the close feathering of the Plymouth Rock gives its body the appearance of being of greater length than that of the Wyandotte, although, in reality, both fowls are of about the same length; accordingly, the Standard gives the length of the Plymouth Rock as medium, and of the Wyandotte as short.

The most commonly accepted form and color of Barred Plymouth Rock fowls are shown in the color illustrations of these fowls.

According to the Standard, the weight of exhibition Plymouth Rock fowls is as follows: Cocks, $9\frac{1}{2}$ pounds; cockerels, 8 pounds; hens, $7\frac{1}{2}$ pounds; pullets, 6 pounds. It is not unusual for exhibition Plymouth Rocks to weigh from 1 to 2 pounds more than is specified by the Standard, according to the age, sex, and variety. However, Plymouth Rock fowls that are too large usually lack symmetry. All fowls of the American breeds and varieties seem to reach the most desirable form when of a size that conforms to the demands of the Standard. When larger than Standard size, they are frequently of bad proportions; when smaller, they approach nearer to the proportions of Mediterranean fowls than is desirable.

One of the most desirable features of the Plymouth Rock is its elegance for exhibition; the color and markings of the Barred Plymouth Rocks are especially attractive to the fancier. Narrow bars extend across the feathers from the top of the head to the end of the tail and broaden as they reach the extremities. When properly barred with light and dark, the

females are even more attractive than the males; narrow barring is preferred in both. In the color illustrations of Barred Plymouth Rock fowls, one pair is shown in which the color is as near to standard requirements as can be illustrated in this way; in these, both the males and the females have the same shade of color. In the other pair, the male has a lighter shade of plumage than the female. The light shade on the male illustrates the color and markings that can be used to the best advantage in matings for the production of exhibition females of this variety. The hen shown in the same illustration is of a shade natural to females of the male line of breeding; such hens are used in matings for producing exhibition cockerels.

MATING

7. Mating for Shape.—In selecting Barred Plymouth Rock males from which to produce exhibition offspring, those that have the most perfect type in conformity to breed description should always be chosen. The same breed characters are essential in all of the varieties. Avoid, as far as possible, extended proportions—beaks that are long, heads that are long and narrow, and long necks and legs. The beauty of the Plymouth Rock depends largely on having the head of medium size, round, and broad, and of proportions that fit well to the neck, which is of medium length, properly arched, and profusely covered with long hackle feathers. The breast must be full, prominent, well rounded in every direction, and wide in front. From the throat down in front and around to between the thighs, there should be a crescent shape that widens somewhat as it approaches the thighs. From the point of the breastbone in front to the upper line of the abdomen, the fowl should be long, well proportioned, wide between the thighs, and prominent in the abdomen. The upper half of the body must be broad, full, and prominent; the back should be built out to give it the appearance of even greater width than the abdomen. In other words, the upper half of the Plymouth Rock male, as indicated in Fig. 1, should be a covering for the body. This top formation harmonizes so well with the forma-

tion of the other parts of the body as to add to the beauty of the fowl, and in no way detracts from its utility qualities. The proper back of a Plymouth Rock male results from a series of curves that begin at the base of the comb and sweep down and back with a gradual rise from the center of the back to the highest point of the tail. This perfect back formation may be present in a fowl of otherwise bad proportions, but when it is an accompaniment of a perfect body, the fowl has the formation of the best type of Plymouth Rock.

FIG. 1

To be perfect, a back must have the formation described; it should widen from the base of the hackle and across the shoulders beneath the hackle; as it approaches the base of the tail, it must not only be broad but must curve down both sides of the tail to form the round, full back most admired. Such a back must be accompanied by the beautifully formed tail that belongs exclusively to fowls of this breed. This type of body, well placed on shanks and feet of good shape, completes the Plymouth Rock as it should be for mating with hens of the proper type to produce Plymouth Rock shape in the offspring. This same type of fowl should be selected in every variety of

Plymouth Rock fowls; from such only can the best offspring be obtained.

Prior to selecting the hens for mating to such a male, the shape of the back—the greatest difference between the male and the female—should be considered. The back of the male is concave; that of the female has a gentle incline to the tail. To equalize the back formation in the offspring is a difficult problem. It is thought to be necessary to select females that have long backs and rather low carriage of tails, from which to secure well-proportioned backs in pullets. Hens with tails that are carried too high and which have some cushion are thought to be the proper kind from which to breed cockerels having proper back formation. Females selected in this way will answer fairly well for standard matings, but they will not answer for double matings. In selecting females for producing the best type of Plymouth Rock fowls, marked attention must be given to beautiful head, neck, breast, and underbody formation. In all matings, whether standard or special, for the production of males, the body of the female, exclusive of the back and tail, should have the fullest and plumpest formation that it is possible to have in a Plymouth Rock female. This is shown by the inner line in Fig. 2, which indicates a back more like that of the male in Fig. 1. The same body formation is shown in the color illustration of the dark female used for producing males.

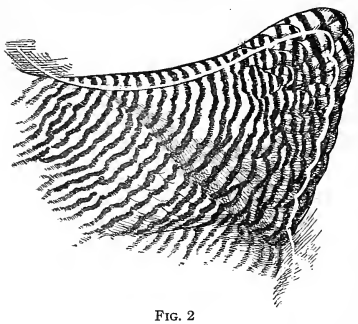
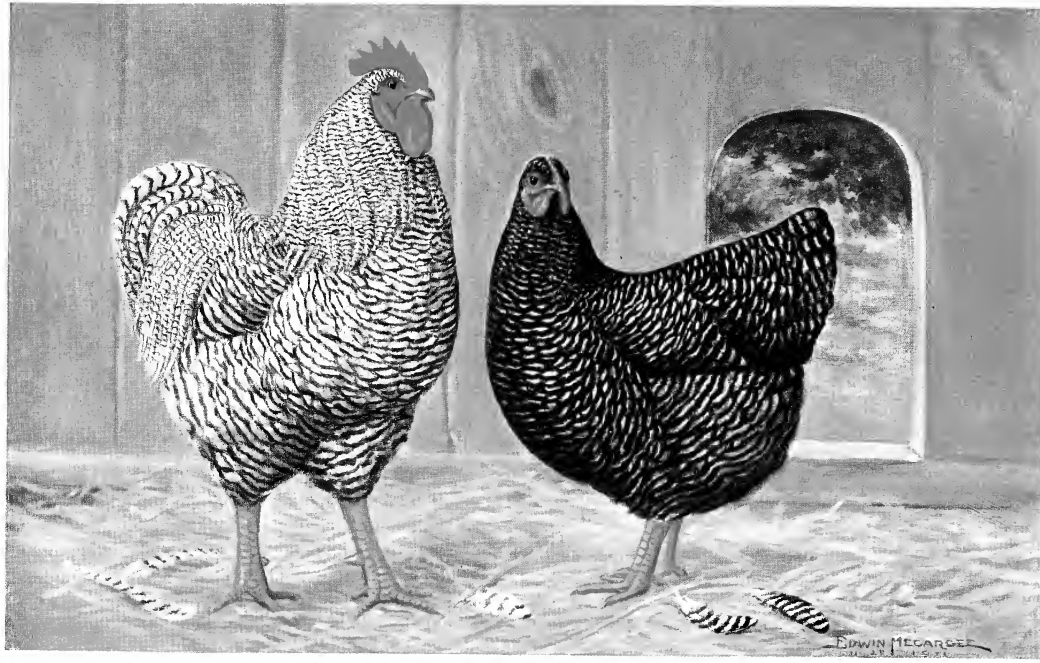


FIG. 2

Females from which to produce pullets should have the back as shown in the outer lines of Fig. 2. No deviations should be made from the body proportions as shown, and the only departure allowable is in the selection of females to improve back formation in the cockerels produced from them.



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PULLET-BRED MALE
COCKEREL-BRED FEMALE
} BARRED PLYMOUTH ROCKS

8. Standard Mating.—A standard mating is one in which a male and a number of females are paired together in a manner that will produce offspring of both sexes of an average quality, some of which will be fit for exhibition. Such a mating might be called a chance mating, from the fact that Barred Plymouth Rock fowls cannot be depended on to do even fairly well when mated without reference to their breeding.

The requirements of the Standard are that both male and female Barred Plymouth Rocks for exhibition shall have the same shade of plumage. Nature has willed it that the females produced from all matings of Barred Plymouth Rock fowls shall have a darker plumage than the males. No matter how dark the plumage in the offspring from a mating may be, the shade of color in the pullets will be darker than the shade of color in the plumage of the cockerels. No matter how light the plumage of a cockerel may be from any individual hen, the females from the same hen mated to the same male that produced the cockerel will be darker than the cockerel. This teaches that in all matings for color in Barred Plymouth Rocks, the selection of breeders must be made in accordance with Nature's law. Pullets of exhibition color can be produced only by males lighter in color than the males used for the production of cockerels.

When standard matings are made, males that are lighter in plumage than is preferred in the exhibition pen should be mated to females some of which are too light for exhibition, some of which conform in color to Standard demands, and some of which are too dark for exhibition. Fairly good pullets may come from the lightest and the medium-colored females in the matings. If cockerels fit for exhibition are produced from such matings, it will be from the dark-colored females. Promiscuous matings are made in large flocks where from fifty to one hundred females of light, dark, and medium color are permitted to run at large with males ranging in color from the very light pullet-bred cockerels to the most perfect shade of exhibition color. When bred in this way, some fowls of medium exhibition quality will be produced. This manner of mating will answer best for producing attractive flocks of market poul-

try, from which some beautiful fowls may be selected for the show pen.

Strains may be established for the production of exhibition Barred Plymouth Rock fowls from single matings by selecting and mating females that are as dark as would be permissible in the show room to males that are a shade or two lighter than is admissible for exhibition color; and by selecting, year after year, the best offspring from them—choosing the best males as they come naturally from such matings and pairing them with females of the best color that have been secured from the same matings. As soon as outside blood of uncertain quality is introduced into such a flock, the value of the strain for the production of Barred Plymouth Rock fowls for exhibition from single matings will be destroyed. To succeed in establishing a strain of single-mating Barred Plymouth Rock fowls, only fowls having clean, clear surface color and distinct markings without metallic luster should be selected, and the best offspring mated in the same manner as when a strain of any variety is to be established.

9. Double Mating.—To intensify the shade of color in the plumage of Barred Plymouth Rock fowls to an extent that will produce them of a shade of color identical in both males and females, double mating is practiced. For the production of cockerels, a male having the best form and the most perfect color for exhibition must be selected. It is better to have the plumage of a lighter shade than is considered best in the show pen than to have a metallic luster or smut in the plumage. The barring of the plumage must be clean, clear, and distinct; and it should extend the entire length of the feathers, including the fluff, down to the skin. The dark and light bars should be as nearly parallel as it is natural to have them; they should be narrow, of equal width, and free from bronze or brownish cast along the lines between the light and dark bars. Such males should be mated to females from a strain that has been carefully bred for the production of cockerels. Females of such a strain will be much too dark in plumage color and there is likely to be a tendency for the dark and the light colors to inter-

mingle in the offspring to the extent of darkening the light-colored bars. The darkest-colored cockerels will come from hens that are so strongly bred in the cockerel-producing line as to have not only a smutty appearance to their plumage but more or less cushion to the back and naturally more elevation to the tail. The tail formation of the hens bred for producing exhibition cockerels is likely to approach the form indicated by the inner lines about the back and tail of the female shown in Fig. 2. This result can be obtained only after years of breeding in this way.

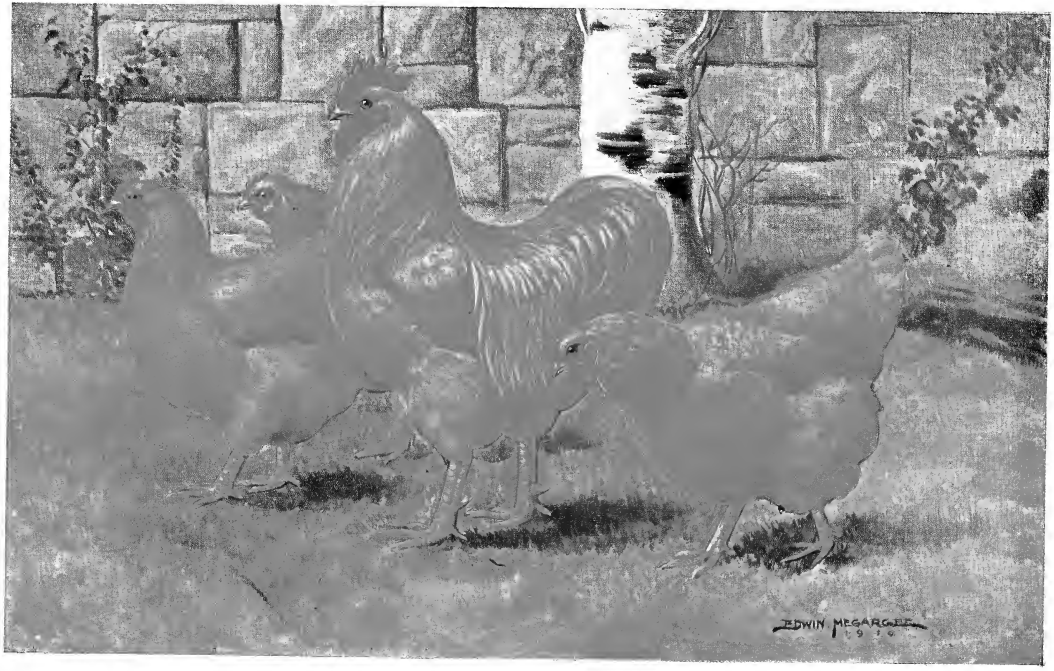
To prevent metallic luster from coming in the plumage of the offspring, males of a lighter shade of color should be mated with the cockerel-bred hens. From such matings, pullets will be produced that can be bred into the strain to freshen it. To prevent the occurrence of too much cushion in the back of the females, new blood can be brought in through the use of hens of exhibition type but slightly darker in plumage than exhibition color. From these, hens may be produced that will clear the metallic luster from the plumage of future offspring. To establish and maintain a strain for breeding cockerels, fowls must be selected from a strain that has shown its ability to produce exhibition fowls of the highest quality. Males and females from such a strain should be selected and be bred in line according to the system shown by the mating chart in *Standard-Bred Poultry*, Part 2. The same methods must be applied in forming and maintaining a strain for breeding pullets. When a strain of this kind has been established, no deviation from the rule of mating should be permitted. Mature hens only should be used to produce the eggs for hatching. In some instances, hens in their fifth and sixth year, mated to cockerels of the same strain, have produced the best exhibition males.

The hens of such breeding stock should be kept continually and be mated to cockerels in accordance with the mating chart. By following such methods, strains have been established that have continued for many years to produce cockerels that have won in the keenest competition; and there seems to be no other means whereby exhibition cockerels of equal quality can be produced. The dark hen in the color illustration

has very nearly the color of plumage required in females for breeders in the double mating system for producing cockerels; and the males that have the shade of color demanded by the Standard are the kind that should be selected to mate with them for best results.

To produce exhibition females, hens that are perfect in form and color should be selected from a strain of pullet-bred Barred Plymouth Rock fowls and mated to males from the same strain. Such males will be many shades lighter than the females; the proper shade of color for the males is shown in the color illustration. Light-colored males should be as perfect in barring as the exhibition males, the only difference being in the shade of color of the plumage. Many of the cockerels so produced are almost white in plumage, each feather distinctly barred with a very light shade of the darker color. Cockerels of this kind should be mated with exhibition hens and a strain established from them by careful breeding according to the mating chart. The greatest care must be taken not only in the selection of the original fowls but in determining their line of breeding, so that no mistakes will be made in mating their offspring. Size, shape, and color can be established in this way and maintained for years.

A different type of tail formation will be found in males of the pullet-breeding lines from that desirable in cockerels. If strict attention is given to selecting only the best of the cockerels produced for mating, a line of breeding may be established that will continually produce offspring of good shape, and at the same time a large percentage of pullets that will be beautiful in form and color. The most beautiful hens and pullets for exhibition are produced in this way. There will be no need of bringing any new blood into such a strain, except that occasionally it will be desirable to secure an infusion of new blood by selecting a mature hen that has held her color into the second and third year and mating her with one of the best cockerels in the strain. To keep the surface color of the female offspring clean and clear and free from metallic luster, cockerels of a lighter shade than have been used should be selected from the flock.



BUFF PLYMOUTH ROCKS

The dangers to be avoided in mating for both cockerels and pullets is the appearance of metallic luster in the plumage, dark spots in the beak and shanks, and a loss of color in the eyes. The darker the shade of plumage, the more distinct will be the dark spots in the beak and shanks; the more pronounced the barring in under fluff, the more likely dark spots are to appear in the shanks and metallic luster to come in the plumage. For beauty of plumage and attractiveness in the show pen, nothing equals the clean-cut bars without a trace of metallic luster. Whenever a cockerel has been produced that has the light shade of surface color and distinct barring beneath, the highest honors are awarded to it. The same is true of hens and pullets. The difficulty in the way of this is the necessity of using dark-plumaged fowls to produce the barring to the skin. Yellow shanks can be maintained by selecting fowls for breeding that have the most perfect color in their shanks and skin. No fowl that has a long or thin neck should be used to produce exhibition Barred Plymouth Rocks. Males should have very heavy shanks of medium length, according to the size of the fowl. Eyes other than bright red should be avoided in both males and females. Pearl eyes will soon show an increase if any of the fowls used for breeding have them. Breeding fowls should always have perfect combs, heads, and head points.

BUFF PLYMOUTH ROCK

10. Origin.—The **Buff Plymouth Rock** fowls have none of the original Plymouth Rock blood except what came to them through cross-breeding with Rhode Island Red fowls. There were originally two distinct strains—the Buffinton and the Wilson. The Buffinton strain was originated by R. G. Buffinton, of Massachusetts, who bred from Rhode Island Red fowls of Plymouth Rock shape. Fowls having buff or reddish-buff color were selected and the best offspring from them chosen until fairly good Buff Plymouth Rock fowls were produced. The Wilson strain was created by J. D. Wilson, of New York, from crossing a Buff Cochin and a Light Brahma. The best offspring from this cross were selected and mated.

Other strains have come from crossing the best offspring from both strains with White Plymouth Rock females that had considerable cream or yellow in their plumage. A clean, clear surface color without black in the wings and tails was secured in this way. The defects arising in the offspring from this crossing were light surface color and almost white under plumage; the surface color, in some instances, was so thinly laid on the web of the feather as to give a mealy appearance. The present type of Buff Plymouth Rock has been produced by selecting the best offspring of all these crosses.

11. Development.—Immediately following the advent of Buff Plymouth Rock fowls, a determined effort was made to develop them into fowls of Plymouth Rock shape and of perfect plumage color. In an endeavor to establish a color that would meet the approval of all, every shade of yellow from lemon to brown was considered. The poultrymen who bred Buff Plymouth Rock fowls selected the lighter shade of color, and this resulted in benefit to the variety, for when the lighter shade of buff was established, it was less difficult to intensify this in offspring, through careful selection and breeding, than it would have been to breed out the brownish-red or cinnamon shade of buff found on some of the fowls. The Buff Plymouth Rock has been developed into a fowl of the proper size and type as described for Plymouth Rock fowls, and also into a fowl having an attractive shade of golden-buff plumage.

12. History.—Part of the history of the Buff Plymouth Rock fowls is told in their origin and development. Following the admission of this variety to the Standard of 1894, the fowls became popular. To improve their color, inbreeding was followed to such an extent as to lessen their size and their popularity as utility poultry. Later, surprises came in the way of Buff Plymouth Rock fowls of better size, shape, and color. This seemed to intensify the desire to have them better, and by careful breeding they have been made into fowls that have both good size and color, and although they are not so popular as the Barred or the White Plymouth Rock fowls, they have gained in popularity as their quality has improved.

13. Description.—The Buff Plymouth Rock should be perfect in type and equal in size to fowls of the other varieties. They should have plumage of a rich, golden buff throughout, with no foreign color; the under plumage should be of a lighter shade than the surface plumage. Buff is so thoroughly described in the discussion of Buff Cochin fowls that no lengthy description of color will be given here; all that is necessary is to say that the fowls must be of the best form and color. The beak, shanks, and toes should be golden yellow; the eyes, red.

14. Mating.—In selecting Buff Plymouth Rock fowls for mating, those of the best Plymouth Rock form, as described for the barred variety, should be chosen. They must be perfect in breed characters, and special attention must be given to their head points and color. The surface plumage should be of a golden-buff color; the under plumage, all the way to the skin, should be a shade lighter; and the entire plumage must be without impurity or blemish. In mating Buff Plymouth Rocks for color, the methods described for the mating of Buff Cochins should be followed, and in establishing a strain, the system shown by the mating chart in *Standard-Bred Poultry*, Part 2, should be followed. The size of Buff Plymouth Rocks can best be preserved by using in the breeding pen only large hens.

COLUMBIAN PLYMOUTH ROCK

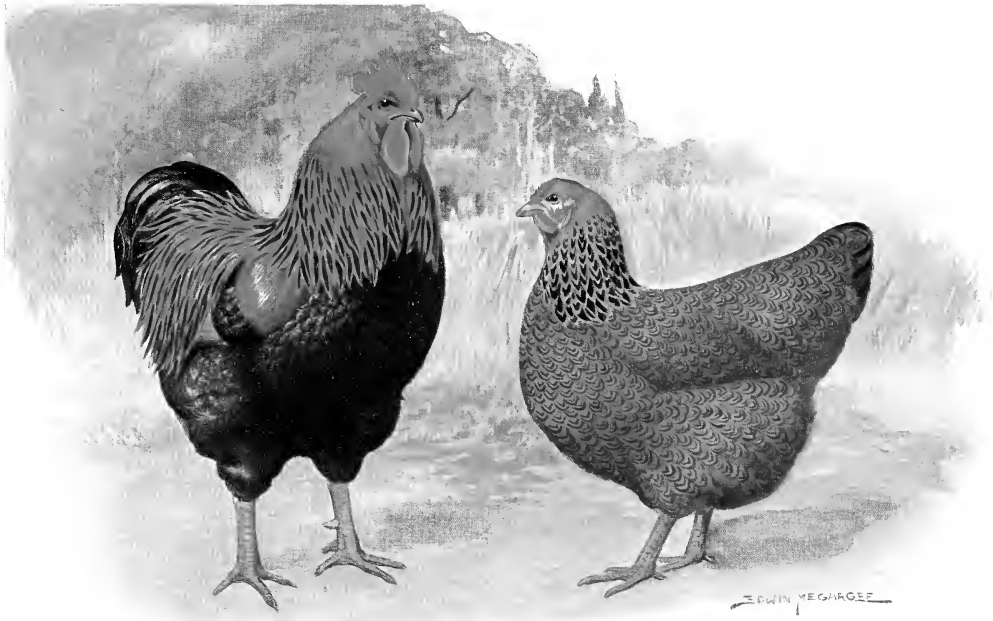
15. Origin.—The **Columbian Plymouth Rock** fowls have come from a number of sources. A chance-bred male of Plymouth Rock shape and of Light Brahma color was mated with both Barred and White Plymouth Rock females, and these matings produced a strain of Columbian Plymouth Rock fowls. Another strain was produced from a direct cross of Light Brahma males with White Plymouth Rock females. Yet another strain was originated by mating Light Brahma males with White Plymouth Rock females and recrossing the offspring with the males from the other two strains and with single-comb offspring that came from Columbian Wyandotte fowls.

16. Development.—The Columbian Plymouth Rock was developed by selecting the best fowls of their kind and mating them, in many instances without regard to their origin. These matings produced better shape in the offspring, but with it has come increased difficulty in the production of color and markings. This is the natural result of too quickly intermingling so many different strains and varieties of fowls.

17. History.—The Columbian Plymouth Rock fowls made their first appearance as sports from Columbian Wyandotte fowls. Following this, several strains of Columbian Plymouth Rock fowls were made, and when sufficient interest had been aroused in them to attract attention, the American Columbian Plymouth Rock Club was organized; a standard was adopted, and application was made to the American Poultry Association for the recognition of this variety. It was admitted to the American Standard at the meeting held in St. Louis, in August, 1910.

18. Description.—The standard description adopted by the American Columbian Plymouth Rock Club states that fowls of this variety shall have the same shape as those of the other varieties of Plymouth Rock; that in color and markings they shall conform to Light Brahmas; and that they shall be disqualified for any feathers on shanks, feet, or toes, or the unmistakable indication of feathers having been removed from these parts. The shanks and feet must be yellow or reddish yellow; and the face, comb, wattles, ear lobes, and eyes must be red. In weight and breed characters, fowls of this variety shall conform to those of the white variety.

19. Mating.—In mating Columbian Plymouth Rock fowls, those having the shape and color described in the Standard must be selected. The line of division between the white and the black in the surface plumage should be well defined; the color should not overlap and mix. The hackle feathers of the males should be white, with a distinct black stripe following the shape of the feather and extending from near the point to near the root; the less break there is in the color of the hackle feathers of a male, the greater will be the tendency to improve



PARTRIDGE PLYMOUTH ROCKS

color in the offspring. The proper proportion of black and white in primary and secondary feathers of the wings of breeders is of importance. The main tail feathers should be black; and surrounding them are black sickles and coverts. The coverts next to the tail plumage should be marked with white, as described for Brahmas. The whiter the plumage of the back, the more likely the fowl will be to produce well-marked offspring. The under plumage should be of a bluish-white or slate color.

The hackle feathers of the female should be of good length; the web should be white, with a black stripe in the center. The nearer the markings of the neck hackle approach the markings of the Light Brahma, the more valuable the fowl will be for breeding. For producing good color in the offspring, the surface plumage of breeding fowls should be as white as possible, and the under plumage should be bluish white. Fowls that have almost black under plumage will intensify the black markings in the offspring and are likely to produce black in the web of the back plumage. The primary feathers of the wings should be as black as it is possible to have them; the main tail feathers should be black and the tail coverts edged with white. Females of this kind are likely to increase the amount of black in the plumage of the offspring. It is better to increase the black gradually than to hasten it. A few of the females having dark under plumage may be mated with males that are fairly free from smut or dark shade in under plumage. The greatest improvement will come from strains established by selecting the best and breeding them in a careful manner, and thus establishing a strain from fowls that are Plymouth Rock in shape and which have proper color and markings as demanded for the exhibition Light Brahma.

A feature of marked importance in breeding Columbian Plymouth Rock fowls is to select fowls that are strongly Plymouth Rock in form and blood lines. The less Wyandotte blood in them, the more improvement will be made. Along with the careful selection of the breeding stock, records should be kept of the male and female lines. The eggs from each hen should be marked and the offspring separated and marked so

as to trace them to the mother hen as well as to the sire. More information about mating for color in fowls of the color and markings of the Columbian Plymouth Rock will be found in the discussion on mating for color in Light Brahma fowls.

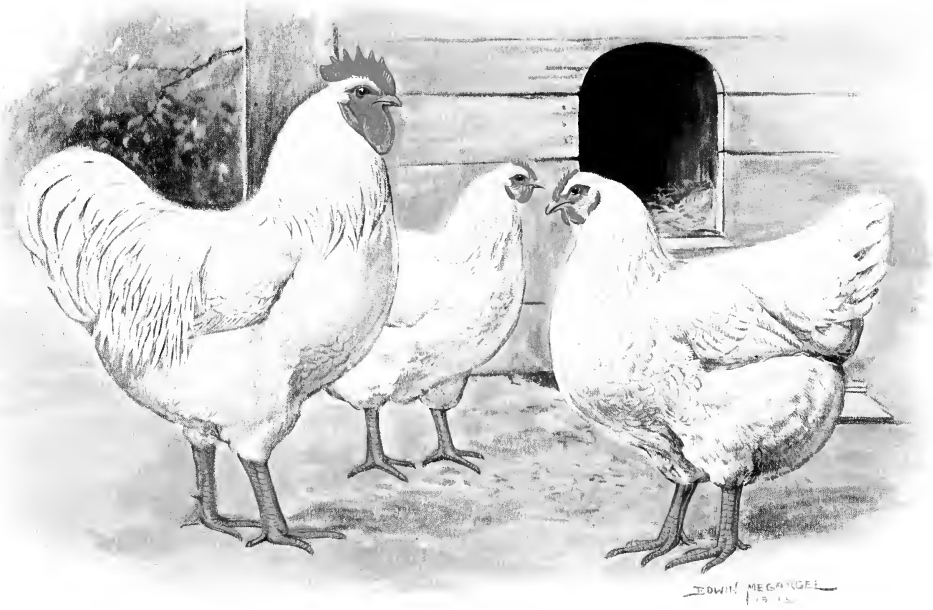
PARTRIDGE PLYMOUTH ROCK

20. Origin and Development.—The first **Partridge Plymouth Rock** fowls that can be traced in any numbers originated at Elmwood Farm, Weston, New Jersey. These came as offspring from Partridge Wyandottes of the George H. Brackenbury strain. These were separated and bred together, and males and females from the flock were distributed.

Another strain of Partridge Plymouth Rock fowls was established at North Manchester, Indiana. This strain originated from a cross made with Cornish, or Indian, Game males and Partridge Cochin females; the offspring of this cross were mated with Golden Laced Wyandotte fowls, and the best offspring from the final cross were mated and remated until the fowls possessed Plymouth Rock characters, Partridge Cochin color, and yellow shanks and feet. Other strains were made at the Hill Crest Farms, of Oxford, Pennsylvania, and at the Rock Hill Poultry Farm, Ossining, New York. These were made from a selection of the best of the other strains. The best Partridge Plymouth Rock fowls have come from intermingling the choicest of all offspring that have been produced from the several sources and mating them as Partridge Cochin fowls are mated for producing color.

21. History.—The Partridge Plymouth Rock fowls were first developed from single-comb offspring of Partridge Wyandotte fowls. Other crosses were made in an effort to obtain better plumage color and golden-yellow shanks and feet. The main defects in fowls of this variety have been dark colored shanks and toes, and imperfect breed characters.

22. Description.—The Partridge Plymouth Rock fowls must have the same breed characters as those of the other varieties of Plymouth Rocks. They should have even better



White Plymouth Rocks

form than those of the barred variety. Their beaks, shanks, and feet should be golden yellow; dark shading is objectionable. The plumage color and markings should be the same as described for Partridge Cochin fowls. The weights of fowls of this variety are the same as for those of the other varieties of the same breed.

23. Mating.—The mating of Partridge Plymouth Rock fowls for shape is governed by the same rules that apply in the case of those of the other varieties. Only those of true Plymouth Rock type should be admitted to the breeding pen. In addition to perfect breed characters, all the fowls used in the matings must have plumage color and markings as perfect as are demanded for Partridge Cochin fowls. Strains of Partridge Plymouth Rock fowls must be built up from the best fowls that can be obtained; such fowls must be line bred into a strain that can be depended on to reproduce both shape and color to a marked degree. To accomplish this, the rules for forming a strain must be followed, and matings must be made in accordance with the mating chart. A more detailed account of color mating that may be applied to fowls of this variety will be found in the description of the mating of Partridge Cochins for color.

SILVER-PENCILED PLYMOUTH ROCK

24. Origin.—The first **Silver Penciled Plymouth Rock** fowls came as single-comb offspring from Silver Penciled Wyandotte fowls. Other strains were made by mating Silver-Gray Dorking fowls with Dark Brahma fowls, with the addition of Mottled Javas and single-comb offspring from the Penciled Wyandottes. The best offspring from these crosses were mated, remated, selected, and bred in line until the present type was produced.

25. History and Development.—The first Silver Penciled Plymouth Rock fowls of which there is a record made their appearance as single-comb offspring from Silver Penciled Wyandotte fowls. They appeared about the same time at Elmwood Farm, New Jersey, and at the Valley Farm, Ithaca,

New York. These single-comb offspring were gathered and colonized on a farm adjoining Elmwood, where they were bred for 2 years; later, the flock was transferred to Owego, New York, and from there to Ossining, New York. Other strains were originated in Connecticut and Pennsylvania. This variety was admitted to the Standard of 1910.

26. Description.—Silver Penciled Plymouth Rock fowls must be true to breed characters and have the variety color of Dark Brahma fowls. Shanks and feet should be yellow, with no feathering on them; some of them show a shading on the upper side of the toes. Faults in this variety are a metallic surface color in the males, dark shanks and toes in the females, and Dorking type in both.

27. Mating.—In mating Silver Penciled Plymouth Rock fowls for the production of males with a clean, clear, silvery-white top color, and females with a beautiful, silvery surface color throughout, males with glossy black striping in the neck and saddle should be used; the stripe in each of these feathers should extend from near the point of the feather well up into the under fluff. The penciling of the plumage of the females selected for breeders must be dark colored, and follow the shape of the feather. The best surface color in females will be secured by breeding from fowls that have a light shade in the under plumage. The color of the under plumage in the Silver Penciled Plymouth Rock, according to the Standard, should be dark slate in both males and females. This is an advantage to the fancier, because it enables him to use his exhibition fowls to intensify the black markings in the neck of both sexes and in the saddle of the males of later generations. To produce the best color and markings in both male and female offspring, the under plumage of the male should be of a slaty shade, that of some of the females should be almost white, and that of the other females should be dark slate. From the females having light under plumage, the best pullets will be produced; and from the females having dark under plumage the best cockerels will come. Males having dark under plumage can be mated with females having light under

plumage. More detailed information on the subject of mating fowls of this kind of plumage is given in the discussion of the mating of Dark Brahma fowls.

WHITE PLYMOUTH ROCK

28. Origin.—The **White Plymouth Rock** fowls originated from white sports from Barred Plymouth Rock fowls. Of the many varieties of standard and non-standard Plymouth Rock fowls, only the white and the black varieties have descended directly from the original Plymouth Rock fowls.

29. Development.—The White Plymouth Rock fowls have been developed from the white sports that originated in the yards of those who bred the Barred Plymouth Rock. Considerable annoyance was experienced in their development, because of the fact that when the white sports of one strain were crossed with the white sports of another strain, dark or smutty plumage was likely to appear in the offspring. In some instances, barred feathers would appear; but in spite of these difficulties, by careful selection and mating, one of the best of all the American varieties of fowls has been developed.

30. History.—The White Plymouth Rock fowls were the first to come direct from the Barred Plymouth Rock. Prior to the Indianapolis meeting of the American Poultry Association, which occurred in January, 1888, there was a great deal of controversy over White Plymouth Rock, White Java, and White Wyandotte fowls. At that meeting these three varieties were admitted to the American Standard. The White Java and the White Plymouth Rock fowls were so nearly alike that, as a result of the survival of the fittest, the White Java has become almost obsolete and the White Plymouth Rock has become one of the most popular of all white-plumaged fowls.

31. Description.—The White Plymouth Rock should have better form than a fowl of any other variety of this breed. There is a demand for better form in these fowls than is acceptable in those of the barred variety, and although this may not be a correct rule to follow in all cases, it is the present ruling

of the show room. In addition to having perfect breed characters, they must be pure white, with no foreign color in the plumage, not even a trace of yellow or cream. They must have yellow shanks, beak, and skin, and bright, red eyes. Any deviation from these requirements will bar them from consideration in the show room, and there is no reasonable excuse for the fowls not having these qualities.

32. Mating.—In mating White Plymouth Rock fowls for shape, those that are as near as possible to perfection in Plymouth Rock form should be selected. To breed to perfection in color, the fowls must have plumage that is pure white to the skin, and the quill of the feathers must also be white. Whenever there is the slightest appearance of yellow in the web, down, or quill of the feathers of the parents, more of this is likely to appear in the plumage of the offspring. Although it is difficult to produce offspring with pure white plumage from fowls that have yellow shanks and skin, it can be accomplished by mating only such males and females as have pure white plumage. It is not infrequent that fowls having pure white plumage will have light-colored shanks and pale-colored beaks and eyes. All of these should be avoided. If all the breeding fowls have the proper color in beak, eyes, skin, shanks, and plumage, the best offspring will be produced. When fowls of this kind cannot be procured, the whitest fowls that can be obtained should be mated year after year; in this way, size, shape, and color may be improved.

Yellow corn, flaxseed, cottonseed, or iron of any kind should not be fed to white-plumaged fowls that are intended for exhibition. The color of the shanks will be intensified if the fowls have free range over grass plots, pasture lands, or clover fields.

In mating White Plymouth Rock fowls, or the white fowls of any breed, for the production of pure white-plumaged offspring, the following rules should be observed:

1. Fowls that have foreign color of any kind in the web, under plumage, or shaft of the feathers should not be used as breeding stock.

2. Males that show the least trace of yellow on surface, web, under plumage, or shaft of feathers cannot be used for producing offspring with pure white plumage.

3. Males that have pure white plumage, yellow beaks, shanks, and skin, and bright red eyes, can be mated with hens that have pure white plumage, light-colored beaks, eyes, and shanks.

4. Hens that have the slightest creamy tint in their plumage are likely to produce offspring in which the yellow tint will be intensified. Pullets are more likely to show creaminess in plumage than yearling and 2-year-old hens; and, if used in the breeding pen, they are likely to produce offspring that will show more or less of creaminess, even though mated with males that are pure white in plumage.

5. Only females that are pure white in plumage should be used for producing exhibition offspring. The less color they have in beak, shanks, and skin, the more likely they will be to produce offspring that will have pure white plumage. Such females, hens preferred to pullets, mated with cockerels that have pure white plumage, yellow beaks, shanks, and skin, and bright red eyes, should, if line bred, produce offspring that will be pure white in plumage. If strict care has been taken in selecting the breeding stock and the rules for mating in line have been followed, most of the offspring produced will be of true Plymouth Rock shape and have pure white plumage.

NON-STANDARD VARIETIES OF PLYMOUTH ROCK

VARIETIES

33. From time to time, several non-standard varieties of the Plymouth Rock family have been produced. These are the *Black*, the *Buff Barred*, the *Pea-Comb*, and the *Rose-Comb Plymouth Rock*. One of the varieties, the pea-comb, was admitted to the Standard at one time, but was later dropped. The Black Plymouth Rock has been accepted in England as a standard variety, but as it has not been so favored in America, it has been classed with the others as a non-standard variety.

BLACK PLYMOUTH ROCK

34. The **Black Plymouth Rock** fowls were first mentioned as a variety early in the decade between 1880 and 1890, when there was a contention over admitting any but the Barred Plymouth Rock to the American Standard. The Black Plymouth Rock was confused with the Black Java, and it was claimed by some that both were sports from the Barred Plymouth Rock. Later, the fanciers of England selected the best of the Black Plymouth Rock fowls and established a variety; the fowls of this variety have perfect breed characters and black plumage with a lustrous, beetle-green sheen. They are, however, rarely seen in America.

BUFF BARRED PLYMOUTH ROCK

35. The **Buff Barred Plymouth Rock** fowls have existed in several localities, and a few of them have been brought into public notice; but no attempt has been made to have them admitted to the American Standard. They have about the same shades of color in plumage as the new variety of Cornish, or Indian, Game fowls known as the White-Laced Red Cornish. In the Buff-Laced Polish, this color is described as rich buff with white lacing. Buff Barred Plymouth Rock fowls should be Plymouth Rock in shape and have golden-buff body plumage barred with grayish white; some, however, have pale buff plumage barred with grayish white. The colors are not well established in the flights and secondaries, and only a beginning has been made in developing regularity of color in body plumage.

PEA-COMB PLYMOUTH ROCK

36. It is thought that the **Pea-Comb Plymouth Rock** fowls came as sports from the single-comb variety. It has been admitted that Dark Brahma blood was infused into the Drake strain of Plymouth Rock fowls; this accounts for the appearance of the pea comb in this variety, which has Plymouth Rock form and color. Fowls of this variety were not well received,

although they were admitted to the Standard of 1888; they were dropped 10 years later, and but little mention has been made of them since that time. Their origin has been accredited to H. S. Babcock, of Rhode Island, and although he may not have originated them, he did improve and introduce them to public notice.

ROSE-COMB PLYMOUTH ROCK

37. At the meeting of the American Poultry Association, at St. Louis, in 1910, notice was received of a new variety of fowls called **Rose-Comb Plymouth Rock.** The originator claimed that they were a new variety and worthy of admission to the Standard. After a careful examination by expert poultrymen, it was decided not to consider the application, because they differed but slightly from the American Dominique fowls, and it was thought inadvisable to consider them as a distinct breed or variety. The Rose-Comb Plymouth Rock fowls have rose combs, and are of the shape and color described for the Dominiques, but they are not equal to the latter; their heads and combs are not of such marked distinction, nor do they have the long, sweeping tail so attractive in the Dominique males.

WYANDOTTE

ORIGIN

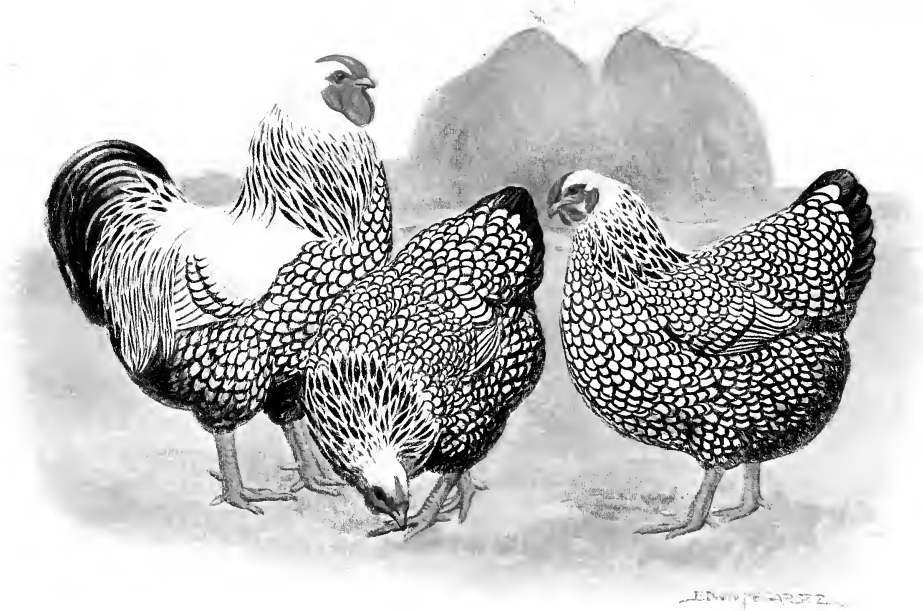
38. The **Wyandotte** fowls were originated by John P. Ray, of Hemlock, New York, from crossing Sebright with black and yellow Chittagong fowls. The Sebright fowls were descendants from two English fowls, the Yorkshire Pheasant and Lancashire Mooney fowls. The Yorkshire Pheasants had long sickles in their tails; the Mooney males had no sickles, but were hen-tailed like the Sebright Bantam males of the present. The Mooney fowls had large, double combs and red ear lobes; the Yorkshire Pheasants had better combs and some white in the ear lobes. The Chittagongs were Asiatic fowls with some feathers on their shanks and toes.

About 1870, Mr. Whittaker, of Michigan, bred some fowls having silvery hackles, plump formation, and yellow shanks, with no feathers on them. These two strains were the beginning from which the modern Wyandotte fowls were made. From 1877 to 1883, many additional crosses were made—Hamburg and Dark Brahma crosses being among the most important. The breed developed from these original strains was admitted to the American standard as the Wyandotte.

SILVER LACED WYANDOTTE

39. Origin.—The **Silver Laced Wyandotte** was originated by selecting the best fowls of the original strains that had a silvery-white color in their plumage and breeding them for the production of offspring having the desired variety color and of the proper type.

40. Development.—The Wyandotte form was originally more extended than at the present. The Standard at first



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SILVER LACED WYANDOTTES

described the plumage as having white centers, with black lacing about the edges, but most of the fowls had black in the web of the feather of the back plumage, with small white stripes or centers. Gradually the centers were widened until they resembled Sebright Bantam markings, the feathers being about half white and half black, a few having more white, with the edges of the feathers black. Difficulty was experienced in the production of males having top plumage that was not overcast with metallic black. Years of scientific mating were necessary for the development of the Wyandotte fowls.

41. History.—When admitted to the Standard of 1883, these fowls were named Wyandotte; at the meeting of the American Poultry Association, at Indianapolis, in January, 1888, the name was changed to Silver Wyandotte. They are now commonly known as Silver Laced Wyandotte fowls. There has always been a desire for Silver Laced Wyandotte fowls having feathers with large white centers, laced with black. Such markings were not produced on Silver Laced Wyandotte fowls until they had been adopted by the English fanciers, who bred them for color and markings. Since the first Wyandotte fowls were returned to America from England, poultrymen throughout the United States and Canada have produced them of better form and color than have been produced in England. In Australia, they have been bred for egg production and have won in the yearly egg-laying contests held there, in which as many as 100 pens have competed.

42. Description.—The Wyandotte might be likened to the Cochin, as both have a rotund formation, the Wyandotte being described as a fowl of curves. The most striking feature of the Wyandotte is the rose comb; this was formerly described as a rocker comb, having an oval or crescent shape on top, and which set close to the head; the spike at the end of the comb should turn down and not be straight or have a tendency to run up at the rear; the beauty of the comb is its perfect formation, medium size, and regular series of indentations or small points on the surface. The body formation, including the neck, should be short; the back and breast should be broad and deep;

in fact, the entire body should be round, as seen from both front and side; the legs should be fairly short; the tail should be full, with cushion more prominent in the female than in the male. The main tail feathers, in both male and female, should be well spread at the base; this builds out the cushion and the back and makes an oval formation about the tail, down to a line with the juncture of the plumage of the back and the fluff about the abdomen.

The best formed Wyandotte cocks usually weigh 9 pounds; cockerels, 8 pounds; hens, 7 pounds; pullets, 6 pounds. This is an average of 8 ounces more than is required by the Standard. Fowls of a size that equals these weights can be put in the show pen in a most attractive condition; fowls larger or smaller than this usually lack Wyandotte type.

All varieties of Wyandotte fowls must have the same shape and the color of each variety must conform to the description in the Standard. No fowl should be classed as a Wyandotte that does not have the breed characters described.

The top plumage of the Silver Laced Wyandotte male should be silvery white; the hackle and saddle plumage should be striped down the center with black that tapers to a fine line near the point of the feather, but should never extend into the white; the same style of black markings should exist in the saddle hackles; the color about the black should be silvery white, as free from foreign color as possible. The back plumage should be of the same color and have a white center following the shape of the feather, as shown in Fig. 3; the breast plumage should have large white centers, bordered with black; the same kind of markings should be on the feathers of the thighs and extend into the fluff, but with less regularity. The wing bows should be silvery white; the wing bays, white, with a double row of open-laced feathers forming the wing bar between them; the primaries of the wing should be black, edged with white; the secondaries, partly black and partly white, and that part of the web of the feather which forms the wing bay whould be white, edged with black; the main tail feathers, sickles, and coverts should be black, the lesser coverts edged with white. The under plumage should be dark.

The plumage in the neck of the female should be silvery white, striped with black; the feathers of the entire body plumage, except the fluff, should have large white centers laced with black, as shown in Fig. 4; the fluff should be marked with white extending into the under plumage, but not be so pronounced as in the back and body markings; the main tail feathers should be black; the coverts nearest the back plumage should be centered with white; the wing primaries should be black, marked with white on the lower edge; the secondaries should be black; and the lower part, white, with a narrow edge of black about them; the wings, when folded, should show white wing bays edged with black; the shanks and toes should be yellow; the eyes red; the face, comb, wattles, and ear lobes, red, with no enamel white.

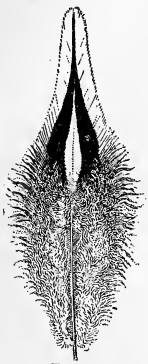


Fig. 3

Fig. 4

43. Mating.—Both single and double matings are practiced for the production of exhibition Silver-Laced Wyandotte fowls. The claim is made that satisfactory offspring can be produced by single matings, provided a strain has been established for the purpose, but that this cannot be accomplished if males or females from a line produced by double matings are introduced into the line established by single matings. To succeed in the single-mating system, dark slate color in the under plumage must be eliminated from the strain. Both males and females for breeding must be typical Wyandotte fowls—shape always having first consideration.

The females should have plumage with large open centers of pure white, laced with rich, glossy black, which should extend evenly around the feather. The feathers in all parts should be laced, and the lacing should extend under the breast and to the thighs; the small feathers, called *fillers*, that grow inside of the main tail feathers should have large white centers, with

rich, glossy-black lacing. Such females should be mated with males that have perfect breed characters, and have been bred in line for the purpose. They should have bright red eyes, perfect Wyandotte comb of medium size, and the lacing on the breast should not be too open, and should extend low down on the breast, the thighs having more or less of it; the most important point of all is clear, clean, silvery top color, including neck and saddle hackles; the feathers of the back should have white centers, as shown in Fig. 4, and the under parts of these feathers should be almost white.

The color of the under plumage of the male should be light. The shaft of the feathers, in both males and females, should be white close to the skin.

Double mating is practiced for producing in Silver Laced Wyandotte males and females a more exquisite color than is usually produced by single matings. The requirement of the Standard that the color of the under plumage of the Silver Laced Wyandotte must be dark has an injurious influence, because it is difficult to produce from Silver Laced Wyandotte breeding fowls with dark under plumage, offspring with good surface color. It is almost impossible to produce females with clean back plumage, and feathers having open centers with an oval shape, from males with dark under plumage. For this reason, females perfect in form and color are mated with males having white centers in the feathers of the back plumage, white in the under plumage of the back, and light color in the rest of the under plumage. The best exhibition pullets are bred from matings of this kind. In the continuance of this strain for the production of exhibition females, they must be as carefully line bred as possible. All offspring from such matings that are not of the best form and color should be eliminated. Only males should be retained that have perfect Wyandotte type, clean, clear top color, white open lacing, and breast well laced with brilliant black, the lacing extending into the plumage of the thighs and abdomen. To strengthen this strain, females of perfect color with dark slate under plumage may be gradually introduced according to the rules for establishing a strain. The constant use of breeders with white in

the under plumage is likely to bring white in the flight feathers of the offspring.

Silver Laced Wyandotte males fit for exhibition may come from the pullet-bred strain, and when they do, they are beautiful; the usual method, however, is to have matings especially for the production of exhibition cockerels. This has been accomplished by breeding together males and females both of which have beautiful surface plumage and dark under plumage, and by breeding in line for the production of males only, using the females so bred for producing cockerels. This scientific method has produced in the fowls so bred, clean, clear, surface color, white top color, free from metallic markings in the back; a double row of beautifully laced feathers on the wing; and a wing bay of exquisite color and markings. An example of this is shown in Fig. 5. This kind of color and markings on the male came from line breeding for the production of cockerels. In the practice of this method, the best males were mated to females having the most exquisite color and markings, and no attention was given to the color of the under plumage. The best offspring from this mating were paired again and again until a strain was established in which not only the males but the females had distinct wing bars and wing bays all of which were delicately edged with black. This same process might be generally applied for the production of males. If, however, such is put into practice, the male offspring will have the most beautiful surface color, but, if judged strictly by the American Standard, they must suffer a cut for a light shade in the under plumage. No cut, however, will be made under the English Standard.

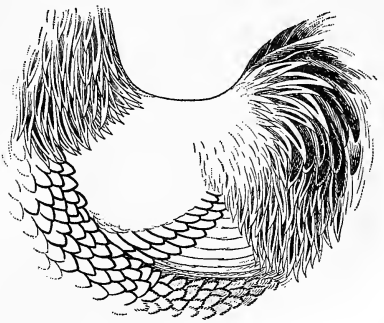


Fig. 5

GOLDEN LACED WYANDOTTE

44. Origin.—The **Golden Laced Wyandotte** fowls originated from the same line of breeding that produced the Silver Laced Wyandotte. Silver Laced Wyandotte females were bred with Partridge Cochin males, and the cockerels so produced were crossed with Silver Laced Wyandotte females.

45. Development.—The Golden Laced Wyandotte fowls were developed by Joseph McKeen, of Wisconsin, who selected Silver Laced Wyandotte females of the Whittaker strain and crossed them with cockerels that were produced from an intermingling of Pea-Comb Partridge Cochin, Brown Leghorn, Buff Cochin, and Golden Sebright Bantam fowls. From the offspring that resulted from this intermingling of breeds, a fowl was created which has been developed into the Golden Laced Wyandotte.

46. History.—The Golden Laced Wyandotte fowls have been better bred from the beginning than the Silver Laced Wyandotte fowls. There was more unity of thought as to what these fowls should be than in the case of other varieties, and a more determined effort was made for their early development. They have never been altered from the original intent of those who created them, and careful breeding has made them fowls of better form and color than the Silver Laced Wyandottes.

47. Description.—The Golden Laced Wyandotte must have the same breed characters and form as described for the Silver Laced Wyandotte. The plumage of these fowls should be a golden bay, with a black stripe or lacing about the edge of the feathers; the neck hackle of the male should be golden bay, with a black stripe down the center of each feather; the stripe should taper at the point, but it must not extend into the bay edging. The back plumage should be golden bay, striped with black and centered with golden bay; the breast, body, and fluff should be golden bay, laced with black, but there should be less color and lacing in the under-body plumage and fluff than in the plumage of other parts.

The neck plumage of the female should be golden bay, striped with black; the back, breast, and body plumage should be golden bay, laced with black; the centers of the feathers should be large and oval, forming the open lacing so much admired. The wings of both males and females should have black flights, edged with golden bay; the secondaries should be black, and part of the web should be golden bay, edged with black; in the male, when the wing is folded, a double-laced bar shows between the bow and the bay; the color of the under plumage should be slate throughout; the eyes, comb, face, wattles, and ear lobes should be bright red; the shanks and toes should be yellow or dusky yellow.

48. Mating.—A most important matter to consider in selecting Golden Laced Wyandotte fowls for breeding is the color of their under plumage. Although the Standard demands a dark slate color, the best offspring are obtained by breeding from fowls with a golden color in the lower part of the under plumage, next to the skin; this golden color in the under plumage has an improving influence on the color of the flights, secondaries, and surface color of the offspring. The bay center in the back plumage of the males is also of prime importance. Outside of these features, both males and females for breeding should be selected for breed characters and perfect plumage color. Beautiful males and females can be bred in this variety, from the same matings, provided the males have the bay markings in back and under plumage and the females are of perfect form and color, as described in the Standard. Double matings may be practiced by following the same rules described for the Silver Laced Wyandotte, and substituting golden bay for silvery white.

WHITE WYANDOTTE

49. Origin.—The **White Wyandotte** fowls came originally as white offspring from the Silver Laced Wyandotte. They appeared in many localities and were selected, separated, and bred together, and from them the White Wyandotte fowls were made.

50. Development.—Having come as white-plumaged offspring from the Silver Laced Wyandotte, the White Wyandotte fowls had the same breed characters as their ancestors and were equal in type to them. Their plumage was not pure white, nor was their shape equal to that of the Wyandotte fowls of the present. From these, as the result of scientific handling by many of the best poultry fanciers, the White Wyandotte fowls have been developed. It was said of this variety that, when they were admitted to the Standard of 1888, they were the most complete new variety that had ever been admitted.

51. History.—The history of the White Wyandotte might be written as the story of the favored son. From the beginning, they have been favored, fostered, and lauded as the most beautiful of all fowls. They have been most satisfactory from the fancier's standpoint and are highly regarded by all poultrymen on account of being excellent egg producers and market poultry.

52. Description.—The White Wyandotte fowls must have perfect breed characters, and must excel those of all other varieties in body formation; they should have profuse feathering within a reasonable limit. As there is no necessity to inbreed them for plumage color, all attention can be directed to the production of type. They must be round in body and conform in a general way to the shape described for the Silver Laced Wyandotte; their plumage should be pure white throughout, free from the slightest tinge, tint, or speck of foreign color; the beak, skin, shanks, and toes should be golden yellow; the eyes, face, comb, wattles, and ear lobes should be red, with no appearance of enamel white in the ear lobes; they should possess proper size according to the demands of the Standard, but they should not be so large as to detract from breed characters.

53. Mating.—In mating White Wyandotte fowls, the most perfect fowls should be selected and mated for the production of a strain that can be depended on to produce a large percentage of offspring that will be able to win honors in the exhibition pen. Size, shape, and form must be as nearly per-

fect in the White Wyandotte as it is possible to produce, and, in addition to this, the plumage, quills, and fluff, down to the skin, must be pure white; the head points, red; the beak, shanks, and toes, yellow. The features to be avoided in the selection of the breeding stock for the production of White Wyandotte fowls for exhibition are:

1. Imperfect combs; dark color in the shanks, beaks, or toes; creaminess in the surface or under plumage; pearl color in the eyes; and enamel white in the ear lobes.

2. Wyandotte fowls inherit metallic white in the ear lobes from the early Hamburg crosses. If fowls with this defect are used as breeders, the trouble will increase rapidly. None of it should be present in the ear lobes of the breeding stock.

3. Avoid the use of extreme types that verge on Cochin form. Have all the feathers permissible in the Wyandotte, but do not encourage an excess of cushion, and avoid extreme fluffiness about the thighs and abdomen. Plumage to the limit of the requirements of the Wyandotte is the most that should be encouraged.

4. The tail of the Wyandotte has a tendency to be narrow across the saddle. This defect increases rapidly in the offspring, and if it is not avoided the beauty of the Wyandotte will be destroyed. This can be prevented by using as breeders only fowls that are very broad across the back and saddle and which have great width between the lower feathers of the tail.

5. Never be misled by beautiful form into using in the breeding pen males or females that have straw, yellow, or a brassy color on the surface of the plumage. Avoid, as far as possible, the use of fully developed fowls that have yellow or cream color in any part of their plumage. Creaminess is apt to show in the new feathers as they grow, but this is usually lost as the feathers mature. If, however, the creaminess shows in the surface or under plumage of fully matured fowls, they should be excluded from the breeding pen.

BLACK WYANDOTTE

54. Origin.—The **Black Wyandotte** fowls originated in black offspring from the Silver Laced Wyandotte. They were first mentioned by Messrs. Clemens and Marshall, who joined in selecting and improving them.

55. Development.—The early development of the Black Wyandotte fowls was slow and uncertain. The difficulties arising from the yellowish color of the skin, shanks, and toes made almost impossible the production of rich, glossy, black plumage without the appearance of white.

56. History.—The Black Wyandotte fowls made their appearance in several localities from 1883 to 1885. They came as sports from the Silver Laced Wyandotte. When such offspring first appeared in Mr. Clemens' flock of Silver Laced Wyandotte fowls, he bred them carefully until they were brought to a perfection of form and color that attracted the attention of others, who followed his example. By their efforts, the Black Wyandotte was admitted to the American Standard at the meeting of the American Poultry Association, at Chicago, in 1893. The Black Wyandotte is the first black-plumaged fowl originated in America, and it has been adopted by the English fanciers, who recognized its true value.

57. Description.—The Black Wyandotte should be true Wyandotte in form; many of them are almost perfect in shape. The best fowls of this variety that have been bred in America have dark shanks, and the soles of the feet are yellow. In England, an effort has been made to have them intensely black in plumage, with golden beak, shanks, and toes. The American Standard demands that the beak and toes shall be black, shading into yellow, and the bottom of the feet yellow. In size, the Black Wyandotte is equal to the Silver Laced Wyandotte. The plumage should be rich, glossy black throughout, and have no foreign color, except that a rich green sheen is desirable. There is a tendency to purple in the plumage of the Black Wyandotte—a defect that exists in all black-plumaged fowls that have an excess of green sheen.

58. Mating.—In the mating of Black Wyandotte fowls for the production of exhibition offspring, only those having uniform Wyandotte type and perfect color should be selected. To follow the rules of the American Standard, the shanks may be black; with this color in the shanks, it is the least difficult to produce perfect plumage in the offspring. When there is an excess of yellow in the shanks of the parent fowls, more or less gray or white is likely to appear in the flights and secondaries, and in the under plumage close to the skin of the offspring. To produce the best offspring in this variety, the feathers of the breeding stock must be black, including the web, under plumage, and shaft of the feathers; if the color is so rich as to have the shafts glistening with sheen down to the skin, a transmission of pure color to the offspring will be almost assured, but when there is too much sheen in the breeding fowls there is likely to be more or less purple barring in the plumage of the offspring. In England, the task is more difficult, for to produce black-plumaged fowls with yellow shanks, with no foreign color in the plumage, requires great care in the matings. A strain may be established that will breed true to shape and color.

BUFF WYANDOTTE

59. Origin and Development.—The **Buff Wyandotte** fowls originally came from crossing a Golden Laced Wyandotte male with a Buff Cochin female. A cockerel from this mating had buff-colored plumage, no feathers on the shanks or toes, and a fairly good Wyandotte comb. He was mated with a Buff Cochin pullet that was beautiful in color, had but few feathers on the shanks and toes, and was fairly close feathered. The best offspring bred from this mating were selected and mated until a variety of fairly good Wyandotte type and with buff-colored plumage was established. Another strain came from Rhode Island Red fowls; still another came from Golden-Laced Wyandotte females that had but little lacing and were buff colored, mated with males from the other strains.

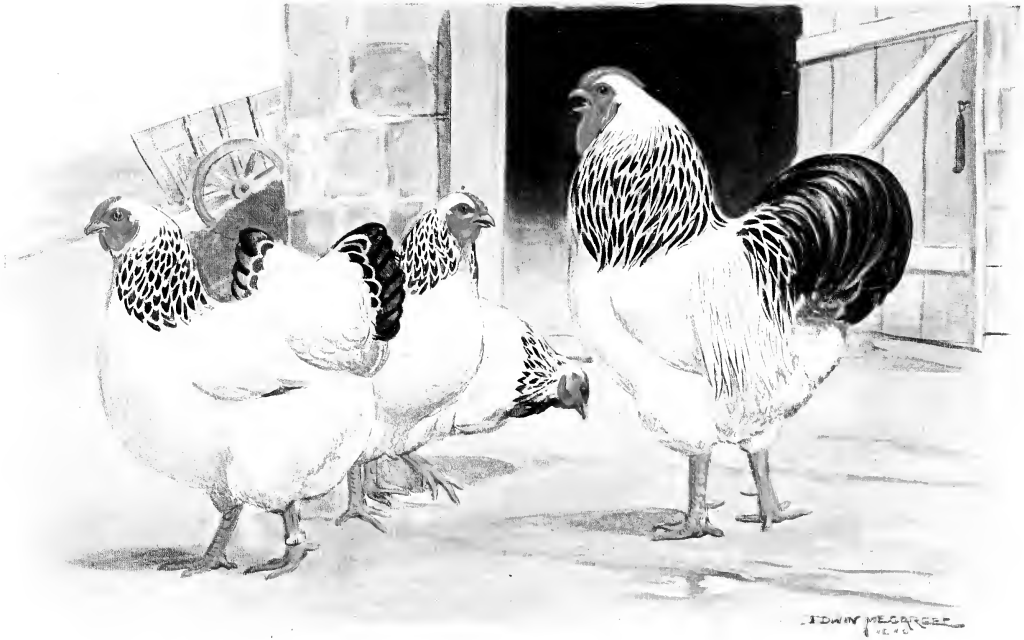
The crude originals had so many defects that they had to be almost entirely made over before they could be accepted

as a true variety. The development of the fowls of this variety began early in the decade of 1890, and was only partly complete when the variety was admitted to the American Standard of 1893. Since that time, the fowls have been greatly improved, and they have developed into one of the most beautiful of the Wyandotte varieties.

The Buff Wyandotte has been a favorite variety with poultry fanciers ever since the fowls made their first appearance. A light shade of buff was preferred from the first, and for this reason they suffered but little from the inroad of black.

60. Description.—Shape requirements for the Buff Wyandotte are the same as for other Wyandotte varieties. The fowls must have rich, golden-buff plumage, free from shaftiness or a mealy appearance; their under plumage must be a lighter shade of buff than the surface plumage, and no black, white, or other foreign color should appear in it. The comb should be the same as that of other varieties. Comb, face, wattles, ear lobes, and eyes should be red, and the shanks and toes should be golden yellow.

61. Mating.—In the mating of Buff Wyandotte fowls, special attention must be given to form and to the surface and under plumage of females. They are likely to have legs that are too long and backs that are too narrow across the saddle. These deficiencies can be avoided in the offspring by using, in the breeding pen, only females that approach the best of the white variety in body formation. Males for the production of exhibition fowls must have perfect breed characters and a rich golden-buff top color, glistening with sheen; the under plumage should be buff, a shade lighter than the surface. The plumage color of both males and females should conform to the color description of Buff Cochin fowls. The rules for mating Buff Cochin fowls for color should be applied to this variety of Wyandotte fowls. A proper mating for improving plumage color in fowls of this variety is to mate even-colored fowls; the breast of the female should be a shade lighter than the breast of the male, and both should have buff under plumage.



COLUMBIAN WYANDOTTES

COLUMBIAN WYANDOTTE

62. Origin.—The **Columbian Wyandotte** fowls have originated from crossing Barred Plymouth Rocks with Light Brahmas, from crossing Barred Plymouth Rocks with White Wyandottes, and from crossing White Wyandottes and Light Brahmas. All Columbian Wyandottes have a preponderance of Light Brahma blood in their makeup.

63. Development.—From 1889 to 1893, Mr. Briggs was the only one to breed Columbian Wyandotte fowls. Later a number of fanciers began to breed them, and they were developed into a fowl of Wyandotte type, having Light Brahma color.

64. History.—Columbian Wyandottes were first exhibited in 1894. Later, an effort was made to create new strains by cross-mating fowls from the original strains. This caused difficulties, because they sprang from so many breeds and varieties that their offspring were of uncertain plumage color and markings. The first application for the admission of the variety to the American Standard was refused; but it was admitted to the Standard of 1906, and since that time the fowls have been greatly improved both in form and color.

65. Description.—Columbian Wyandotte fowls are required to have the true breed characters of all Wyandottes; the plumage color should be the same as that of the Light Brahma; the beak should be slightly darker than that of the Light Brahma. The catalog of the National Columbian Wyandotte Club, issued in 1910, states that the under plumage in all parts should be white at the base, or next to the skin, and that the rest of the under plumage should be white, bluish white, or slate (preferred in the order named). The same shade of color should prevail throughout the under plumage of the entire body, in both males and females; otherwise, the color description for the Columbian Wyandotte is the same as that for the Light Brahma. The shanks or toes should be yellow, or reddish yellow, with no feathers, stubs, or down on them.

66. Mating.—In the mating of the Columbian Wyandotte fowls, special attention must be given to correcting defects of shape and color. To improve shape, males and females of the best Wyandotte type should be selected for breeding fowls. In selecting Columbian Wyandotte breeding fowls avoid as far as possible those that have the heavy tail of the Brahma; select those that are broad and full across the back and saddle, with a cushion fully equal to the demands of the Standard for the shape of the Wyandotte. Even though they have more cushion than is suited to the Wyandotte, this will not cause trouble, because a large percentage of the offspring from the best males are likely to be narrow across the back and saddle. It is difficult to breed color in the Columbian Wyandotte equal to that of the best Light Brahma fowls.

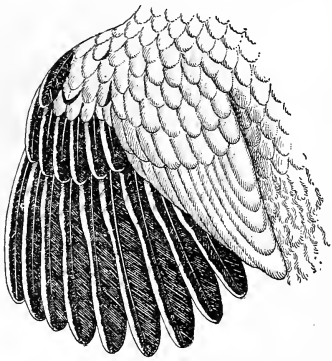


Fig. 6

For the male, the Standard demands a white neck with a black stripe on the hackle feathers, the same as in Light Brahma males. To breed this in the offspring, there must be as much of it as possible in the male selected for the breeding pen; his wing flights must be black, with an edge of white about the lower web; the small, or pinion, feathers should be edged with white; the main tail feathers, black; the tail coverts, black; the lesser coverts, black, edged with white; the filling beneath the tail, white, marked with black; the under plumage, bluish white or slate color.

The female should have hackle plumage like that of Light Brahma females. The wing flights should be black, like those shown in Fig. 6, and both flights and pinions should be edged with white; the lower web of the secondaries should be white. When the wings are folded, the white should hide the black in

the secondaries; the main tail feathers should be black, surrounded with white; the surface plumage, white. To breed exhibition offspring that will be strong in color, bluish white under plumage will be best in the parents. Clear, surface plumage will come from females having pure white surface and under color throughout.

An extreme mating consists of a male that has intense black in neck hackle, black striping in back plumage, intense black in the main tail feathers, and coverts edged with white, as

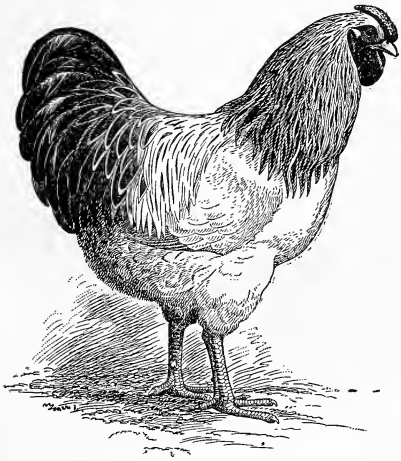


FIG. 7

shown in Fig. 7. The under plumage should have so much blue or slate as almost to show through the surface plumage. The wing flights should be black. Such males mated with females that have perfect black markings in neck, tail coverts, and wings, with strong color in under plumage, very dark wings, and an intensely black tail, will produce dark-colored offspring, many of which will be culls, and a few will be high-class exhibition fowls. The most salable offspring will be produced from males that are well striped in hackle, have dark

wings and tail, clear surface plumage, and blue under plumage. Such males mated with females that have rich black in neck hackle, wings, and tails, with white surface plumage and under plumage lightly tinted with blue, will produce offspring having but little dark marking in their surface plumage. Such fowls are shown in the color illustration. Further information that may be applied to the production of color in Columbian Wyandottes may be found in the rules for producing Light Brahmas.

PARTRIDGE WYANDOTTE

67. Origin.—One strain of the **Partridge Wyandotte** was made by crossing Golden Laced Wyandotte with Partridge Cochin fowls. Another strain was made by intermingling Asiatic, Cornish, or Indian, Game, Golden Wyandotte, and Pea-Comb Partridge Cochin fowls. The Asiatic used was a combination of Buff Cochin, Pea-Comb Partridge Cochin, and Brown Leghorn fowls.

68. Development.—The development of the Partridge Wyandotte fowls was slow and irregular. The mingling of so many kinds of fowls into one variety produced bad form, irregular color in plumage, and bad color in shanks and feet. Many of the females had shanks that were almost black, and a few of the males had yellowish-black shanks. Great difficulties were encountered when an attempt was made to improve the fowls through the union of both strains. Later they were improved by careful selection and breeding, and they now possess Wyandotte type and Partridge Cochin plumage color.

69. History.—The original strain of the Partridge Wyandotte was called Golden Penciled Wyandotte, and for some time no other strain was mentioned. With the coming of other strains the name was changed to Partridge Wyandotte, and the variety was admitted under this name at the Chicago meeting of the American Poultry Association, in 1901. The greatest obstacle to the advancement of the variety has been the demand for extremely dark color and markings in both

males and females. Even at the present, there are but few females of this variety that have yellow shanks. Shortly after its admission to the Standard, this variety was adopted by the fanciers of England, who have made it popular for both exhibition and utility purposes. The color in the males and females bred in England is much lighter than is preferred in America.

70. Description.—The Partridge Wyandotte should be a true Wyandotte in size and shape, and its plumage should be the same color as described for the Partridge Cochin. Although the Standard requires the females to have rich, mahogany-colored plumage, penciled with brown or black, they have been bred so dark in plumage as to make it almost impossible for them to have yellow shanks. The Standard demands that they shall be disqualified for shanks and toes other than yellow, but this has not been enforced or but few fowls of this variety would be seen at the present time. Partridge Wyandotte males should have the same plumage color and markings as Partridge Cochin males; the shanks and feet of both males and females should be yellow or dusky yellow. If the description in the Standard were more closely followed, Partridge Wyandotte fowls would soon regain their lost popularity.

71. Mating.—Three methods may be followed in mating Partridge Wyandotte fowls: (1) Single matings for the production of both males and females; (2) special matings for the production of females; (3) special matings for the production of males.

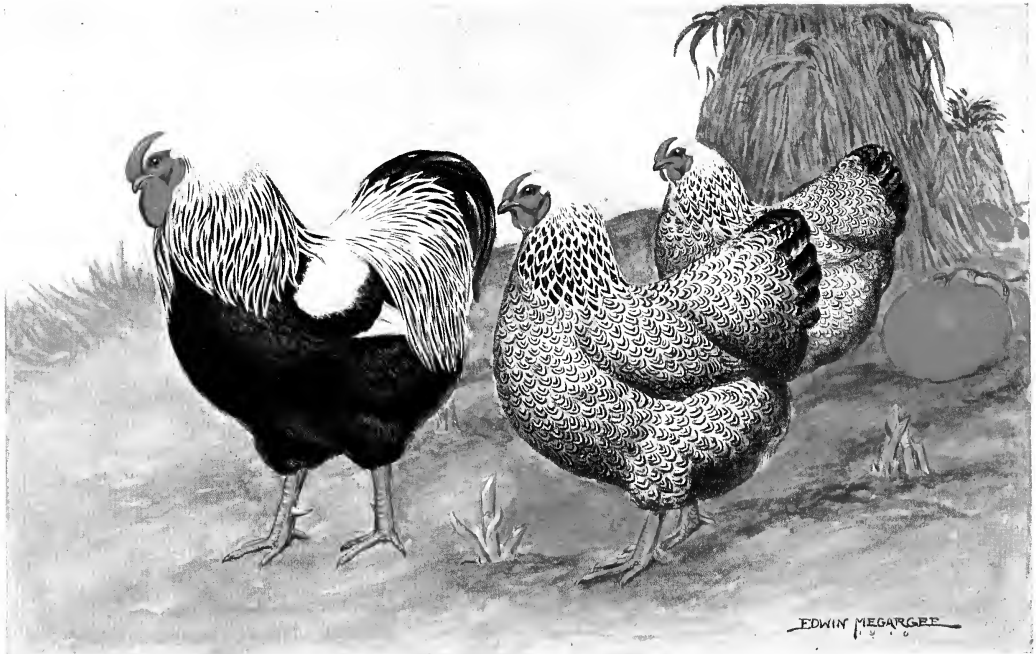
There is no known system of mating Partridge Wyandotte fowls whereby females having yellow shanks and toes and standard color in plumage can, with certainty, be produced. In this variety, single matings for the production of exhibition offspring can be made successful to a limited extent only. It is almost impossible to produce, by single mating, males with rich, red, top color, heavily striped with black, and females of a rich, deep, mahogany color, penciled with a darker shade. If single matings produce females of perfect exhibition color, the males resulting from the same mating will be too light in color to meet the demands of the Standard. If the single

mating produces males of rich, brilliant red and glistening black, the females from the same mating will be much too dark, badly penciled, and very dark in the shanks and toes. To succeed with single matings, the fancier must be content with the production of either males or females of the best quality.

For the production of exhibition cockerels, males fit for exhibition must be used in the matings. They must have perfect Wyandotte type; the neck hackle should be red, striped with black; the saddle, of the same color, striped with black; the back, a darker red; the main tail, sickles, coverts, and lesser coverts, black, with a green sheen; the lesser coverts, laced with red; the breast and under-body plumage, black, with green sheen; the under plumage, dark slate. Such males, mated with the best females that can be secured, will produce cockerels fit for exhibition. The females produced must be kept and mated again to males of the same quality, and in this way a strain can be made that will produce high-class exhibition cockerels. The size, shape, and color must depend entirely on these qualities as possessed by the parent stock. Yellow shanks are not so difficult to produce in males as in females.

To produce exhibition Partridge Wyandotte pullets, females of the most perfect size, shape, and color for exhibition should be mated to males chosen from a pullet-breeding strain. The best females produced from such a mating should be remated to the best males from the same mating. This process should be continued until a strain for breeding pullets has been established. The main difficulties in the production of pullets for exhibition will be dark color in the shanks, too great length of legs, irregular combs, and dark under plumage. To have yellow shanks in the offspring, it is necessary to use for breeders fowls that have yellow shanks and skin.

The best pullets of this variety are produced from males with light top color, and a light shade in the under plumage in the neck and saddle and about the base of the tail. The best cockerels are produced from males that are dark in surface and under plumage, mated with females of like quality. Matings as described for the production of Partridge Cochin fowls should be closely followed in all varieties having



SILVER-PENCILED WYANDOTTES

Partridge Cochin color. In all the matings described, the method for establishing a strain should be followed and the mating-chart system applied.

SILVER PENCILED WYANDOTTE

72. Origin.—The first **Silver Penciled Wyandotte** fowls were produced by Ezra Cornell, of Ithaca, New York, and George H. Brackenbury, of Auburn, New York. They were produced by blending the best strains of Silver Laced Wyandotte, Dark Brahma, and Silver Penciled Hamburg fowls. The first matings were made in 1894; they were a Dark Brahma female with a Silver Laced Wyandotte male, a Silver Penciled Hamburg female with a Silver Laced Wyandotte male, and the offspring from these crosses were mated; later a beautiful Dark Brahma female was mated to a Silver Laced Wyandotte male that had no lacing on the breast or body; the Dark Brahma female was mated to one of her own offspring; the cockerels and pullets from this mating were mated to the original offspring from the Silver Laced Wyandotte male, and the Dark Brahma female. The best offspring from all were mated, remated, and cross-mated, until the Silver Penciled Wyandotte was well established in size, shape, and color as demanded for the variety.

73. Development.—The Silver Penciled Wyandottes were developed from a source that made it possible for them to have shanks and toes of a golden yellow, and in their development special attention was given to Wyandotte type, clean, clear color and markings, and the realization of every feature required in a Wyandotte true to form and beautiful in plumage color.

74. History.—Several strains of Silver Penciled Wyandotte fowls were developed in making this variety. From the strains that were made by intermingling Silver Laced Wyandotte, Dark Brahma, and Silver Penciled Hamburg fowls, offspring with badly colored shanks were produced; from the strain that contained only Dark Brahma and Silver Laced Wyandotte, the most nearly perfect offspring were produced.

75. Description.—The Silver Penciled Wyandotte is a true Wyandotte in size and formation, and has plumage color like the Dark Brahma; the fowls of this variety have yellow shanks and toes without feathers. The elimination of the Hamburg influence, by the use of Dark Brahma females from the best pullet-breeding strains, has prevented brown or metallic black from appearing in the top color of the males, and has brightened the plumage of the females. The top color of the males is a clean, silvery white, with black striping in the hackle and saddle. The entire plumage of the females is silver gray, penciled with darker lines that follow the shape of the feather.

76. Mating.—To be successful in the production of the penciled plumage of the Silver Penciled Wyandotte, it is necessary to follow the same general rules that are necessary for producing Dark Brahma and Silver Penciled Plymouth Rock fowls. Experience teaches that but little attention can be paid to the Standard requirement of dark under plumage in this variety. Clean surface color, with a lighter shade of color in the under plumage *next to the skin*, is best suited for producing offspring with beautiful surface plumage. Special attention must be given to selecting perfect Wyandotte type in the fowls for mating, and these must be of the best color obtainable. When mated in this way, pullets of proper color will be produced, and males of excellent color will come from the same matings. When the process is continued for several generations, the cockerels will have white markings on the feathers of the breast and under-body plumage. To prevent this from appearing in their offspring, such males should be mated with females that are darker than are preferred for exhibition; in this way, better breast color in males will be obtained. Fowls having yellow skin and shanks are of advantage in this variety, for from them fowls with clean, yellow shanks can be bred. The rules for mating Dark Brahma fowls for color will apply also to this variety.

NON-STANDARD VARIETIES OF WYANDOTTE

BIRCHEN WYANDOTTE

77. The **Birchen Wyandotte** is a variety of fowls that has been bred in England for some time. In color the fowls are a compromise between the Birchen Game and the Silver Laced Wyandotte, and have been described as Black Pyle Wyandottes with lacing on the breast and the body plumage. They do not have color and markings equal to the Birchen Game fowls. The Birchen Wyandotte is said to have been produced by promiscuous matings of Black, White, and Silver Laced Wyandotte fowls. For producing attractive quality in this variety of Wyandotte fowls, the rules for mating Birchen Game fowls should be followed.

BLUE WYANDOTTE

78. The **Blue Wyandotte** was produced from an intermingling of the White, the Black, and the Silver Laced Wyandotte fowls. In color and markings, the fowls should be like the Blue Andalusian. They are difficult to produce of even an average quality. To produce and maintain proper color in this variety, the directions for mating Andalusian fowls should be followed.

BUFF COLUMBIAN WYANDOTTE

79. Origin.—The **Buff Columbian Wyandotte** fowls were made by crossing a Buff Brahma cockerel with a Columbian Wyandotte female, and the offspring from this mating were mated with Rhode Island Red fowls. The best offspring from these crosses were mated and their offspring remated for the production of this variety.

80. Description.—The Buff Columbian Wyandotte should have the same form and general breed characters as other Wyandotte fowls; the color in the plumage should be buff where the color in the plumage of the Columbian Wyan-

dotte is white, and black where the Columbian Wyandotte is black. The buff should be the same shade that is preferred for the Buff Wyandotte, and the markings should be as distinct as in the Columbian Wyandotte.

Single-comb fowls having the same color and markings are called Buff Columbian Plymouth Rocks.

81. Mating.—Buff Columbian Wyandotte fowls used for breeding purposes should have Wyandotte shape, buff color, and markings the same as in the Columbian Wyandotte. This variety is as yet too immature to make it possible to give definite instructions for mating.

WHITE-LACED BUFF WYANDOTTE

82. Origin.—The **White-Laced Buff Wyandotte** fowls made their appearance in the yards of several fanciers who were interested in making new varieties. By crossing and recrossing several breeds, a fowl was produced much like the Golden Wyandotte, but it had white instead of black lacing on the feathers. The general color throughout was a mixture of buff and white. Some strains were made by crossing Golden Laced and White Wyandotte fowls, and remating the best offspring to produce blue lacing on a golden-colored Wyandotte.

83. Development.—The White-Laced Buff Wyandotte fowls were developed incidentally in an effort to produce other varieties. A crossing of the Buff Cochin and the Golden-Laced Wyandotte produced offspring with a buff color in the center of the feathers, and the influence of the White Wyandotte was responsible for the white lacing about the buff center. Fowls of this variety were bred to some extent in America, but the best were produced in England. Harrison Weir, of England, illustrated them in his "Book of Poultry"; the male in his illustration is reddish buff, laced with white; the main tail feathers are reddish blue; the sickles and coverts are white, marked with red. The female is reddish buff on the body, and the neck is marked with white; the body plumage is laced with violet; and the tail is violet. This would indicate that what

Mr. Weir called the White-Laced Red and the Violet-Laced Wyandotte fowls both existed in England prior to 1902.

84. Description.—The White-Laced Buff Wyandotte fowls have form resembling other Wyandotte fowls; and plumage color that is buff, laced with white. Some of the fowls have large, open centers of buff in the web of the feathers, which are laced with white. Some of the males have well-defined wing bars; the color of both males and females is lighter in the neck and tail than in the body plumage. The English Standard describes them as having yellow beaks, or yellow-tipped and horn-colored beaks; their eyes are bright bay; their combs, face, ear lobes, and wattles, bright red; their legs and feet, bright yellow. The head of the male is a rich buff; the plumage of the neck and saddle is also rich buff, each feather striped down the center with white; the breast and thighs are buff, with clear, regular, white lacing; the under plumage is white; the back, shoulders, and wing bows are solid buff of the same shade as the saddle plumage; the wing bars are buff, laced with white; the secondaries are white on the inner web, and in the fluff and the under plumage are pure white. The neck plumage of the females conforms in color to that of the males; the entire body plumage is a rich buff, with regular white lacing; the secondaries are buff, with white lacing on the outer web; the fluff and the tail are white, and the lacing on the cushion extends into the tail coverts.

85. Mating.—In the mating of White-Laced Buff Wyandotte fowls, the best males and females should be selected for breeders and mated and remated with a view to retaining Wyandotte shape and improving color and markings. One of the main difficulties in this variety is to prevent black and white from appearing in the tail feathers, bad color in the wings, and too much white in the neck hackle; dark mossing is apt to appear in the back plumage of females, and it is difficult to maintain the rich, golden buff marked with white. A strain should be established for producing the proper color and markings.

CUCKOO WYANDOTTE

86. The **Cuckoo Wyandotte** fowls have been produced in both America and England. They came from crossing Barred Plymouth Rock with Silver Wyandotte fowls, and by selecting and remating the offspring. In form, they are a composite of Plymouth Rock and Wyandotte type; in plumage they are like Barred Plymouth Rock fowls. The quality of the fowls that have been bred up to this time is not good, and hence they are not attractive; they are too nearly like the American Dominique to permit them to become popular. They may be produced by mating well-marked Dominique males with pure black and pure white Wyandotte females. The best females from this mating should be mated with their own sire, or with another Dominique male; if any males from this mating have Wyandotte type and Plymouth Rock color, the best of them may be mated to one or more of the pullets having Dominique color. The best offspring from all these matings should be selected for Wyandotte type and comb, and Dominique color and markings, and should be mated and remated until a strain has been established.

PYLE COLORED WYANDOTTE

87. The **Pyle Colored Wyandotte** fowls were produced by mating a Partridge Wyandotte male with White Wyandotte females. The top color of the males of this variety, including the neck hackle, should be red and free from striping. To obtain this, but little black striping must appear in the top color of the males used in the matings. A White Wyandotte male may be mated with a Partridge Wyandotte female that is as light in color as possible, and that has indistinct penciling and light or gray under plumage. The best offspring from these matings should be mated and remated until Pyle Colored Wyandottes are produced.

VIOLET-LACED WYANDOTTE

88. Origin.—Wyandotte fowls have been produced with the center of the feathers blue, laced with a lighter shade; others, with center colors golden bay, laced with blue or violet; and still others with center colors of a light blue, laced with a darker shade of blue.

The **Violet-Laced Wyandotte** was produced by promiscuous matings to produce Wyandottes. The offspring of these matings had feathers with a ground color like that of the Golden Laced Wyandottes and with a blue lacing about the edge. Similar markings were produced by mating a Golden Laced Wyandotte male with an Andalusian-colored female. A cockerel from this mating was paired with Golden Wyandotte females, and this mating produced blue-laced golden-colored fowls. By mating Golden Wyandotte, Buff Cochin, and White Wyandotte males with blue-laced females, pullets were produced some of which were blue laced and some of which were white laced and all having buff-colored centers in the feathers.

89. Description.—The Violet-Laced Wyandotte has the same general body formation and color as the White-Laced Buff Wyandotte. The chief difference in the two varieties is that on fowls of the former the color of the lacing is violet, and on the latter is white. The violet color is difficult to establish and maintain. When of a quality that even borders on perfection, these fowls are beautiful.

90. Mating.—The color in the lacing of the Violet-Laced Wyandotte, having been produced from the same matings that produced the lacing in the white-laced variety, is difficult to maintain in its purity. The best-colored fowls should be mated and remated for the production of good color and markings. Whenever the offspring have too dark lacing, a female of the white-laced buff variety can be crossed into the strain. A very small percentage of even fairly good-colored offspring will be produced from the best matings. Size, shape, and color must be maintained by the careful selection of the best offspring that are produced.

RHODE ISLAND RED

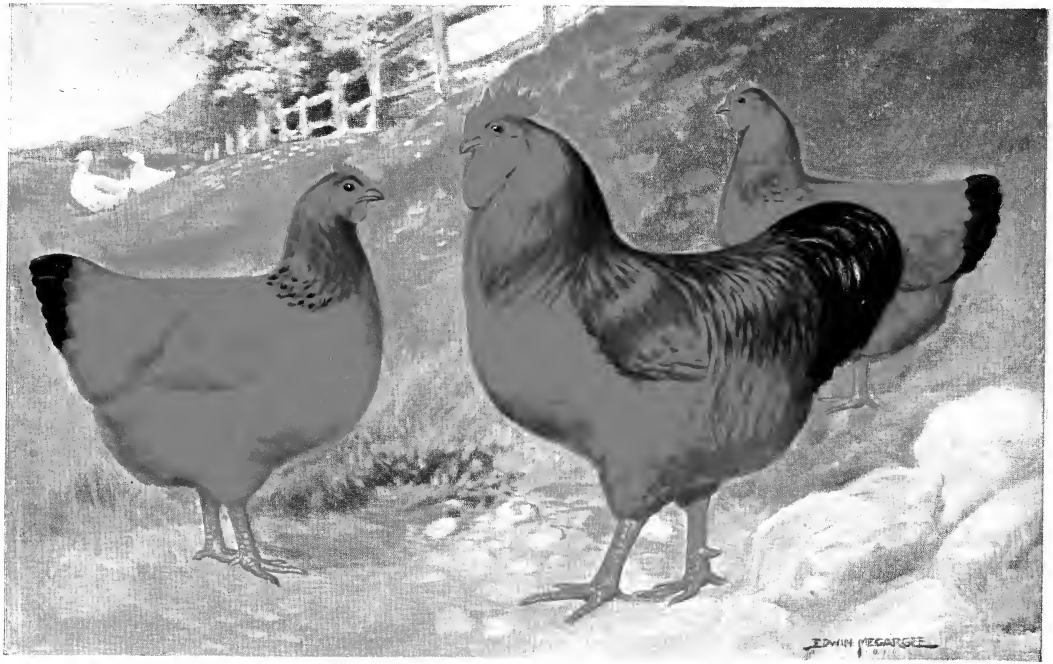
ORIGIN

91. The **Rhode Island Red** fowls originated in the farming districts of Rhode Island, near New Bedford, Little Compton, and Westport. Fowls of many kinds were brought to that locality by captains of sailing ships and were freely distributed among the farms and mingled with the domestic poultry. Many of these were Asiatic fowls strong in black-red plumage color; among them were Shanghais, which had almost red plumage; Great Malays, which had red plumage; and Javas, as they were called, which also had red plumage. As attention was directed to these fowls, they were gradually added to the stock on all the farms, until the black-red color showed its supremacy over all other colors. Fowls of this kind were soon scattered throughout all farming districts of Rhode Island and that part of Massachusetts adjacent to Rhode Island.

ROSE-COMB RHODE ISLAND RED

92. Origin.—In the catalog of the Rhode Island Red Club of America it is stated that as early as 1860 there existed in and about New Bedford, Rhode Island, fowls called the Red Java which had been brought by whaling ships from Java, and that they had red plumage and rose combs. Both males and females were a dark red, difficult to describe; their shanks and toes were reddish yellow and of medium length. From these fowls it is claimed that the present type of **Rose-Comb Rhode Island Red** fowls has descended.

93. Development.—Formerly, there were three varieties of Rhode Island Red fowls—the rose-comb, the single-comb, and the pea-comb varieties, for all of which recognition was



RHODE ISLAND REDS

claimed. Those who developed the rose-comb variety clung tenaciously to breed characters and developed a fowl of true type having the color described for the breed and a comb like that of the Wyandotte. Very little consideration was given to the development of the pea-comb variety; the quality attained in the rose-comb variety attracted the attention of those partial to low-set combs, and the result was that the pea-comb variety gained no further recognition. Fanciers adopted either the single-comb or the rose-comb variety of Rhode Island Red.

94. History.—The history of Rhode Island Red fowls is uncertain up to about 1895. From that time until the meeting of the Rhode Island Red Club in 1903, there was considerable discussion concerning the style of comb, color, and markings that would be preferred. An application for the admission of the Single-Comb Rhode Island Red was made and it was admitted to the American Standard of 1904; and at the meeting of the American Poultry Association, in Minneapolis, in January, 1905, the American Red, a rose-comb variety, was admitted to the Standard. This action was rescinded at a meeting held in Pittsburg, in April, 1905; and the Rose-Comb variety was admitted as the Rose-Comb Rhode Island Red, at a meeting of the association held in Cincinnati, in January, 1906.

95. Description.—The Standard description of Rhode Island Red fowls, as adopted by the Rhode Island Red Club of America, places the standard weight of cocks at $8\frac{1}{2}$ pounds; cockerels, at $7\frac{1}{2}$ pounds; hens at $6\frac{1}{2}$ pounds; and pullets, at 5 pounds. These fowls are described as of medium size, and closely resembling the Plymouth Rock in form. The comb most admired is that of the Wyandotte type; an unusual development in breast and body is encouraged; and they are described as having a square body formation; this means that a Rhode Island Red fowl of perfect type would be straight or rather flat in the back, full in the breast and abdomen, and nearly straight in under body. Color requirements for both the Rose-Comb and the Single-Comb Rhode Island Red fowls

are told in the description of the Single-Comb Rhode Island Red.

96. Mating.—The rules for the mating of Single-Comb Rhode Island Red fowls apply also to the rose-comb variety. The rose comb preferred is like that most admired in the Wyandotte. In selecting Rose-Comb Rhode Island Red fowls for breeding purposes, care should be taken to see that both males and females have combs as nearly perfect as possible, because all fowls of this variety have at least some Malay blood in them, and the lump comb of that breed is likely to appear in the offspring. Combs that are too large are likely to come with offspring from the best selected matings. It is always wise to select breeding fowls with small combs of the Wyandotte type, and small heads that are round rather than long. Comb, wattles, ear lobes, and eyes, and the shape of the head should have marked consideration when selecting the fowls for the breeding pen.

SINGLE-COMB RHODE ISLAND RED

97. Origin.—The **Single-Comb Rhode Island Red** fowls originated in the same locality and from the same general crosses that produced the Rose-Comb Rhode Island Red. Although the Rose-Comb Rhode Island Red may have descended directly from rose-comb Java fowls, both rose combs and single combs were produced in the offspring.

98. Development.—Single-Comb Rhode Island Red fowls have been developed to a remarkable degree. A definite body formation was decided on at the time of the admission of the variety to the American Standard, and the color was also fairly well defined. The fowls of this variety were taken up by a number of expert fanciers, and within 6 years after their admission to the Standard of 1904 they were developed to a condition of remarkable perfection.

99. History.—The history of the Single-Comb Rhode Island Red fowls has been told in connection with that of the Rose-Comb Rhode Island Red. The Single-Comb Rhode

Island Red has become more popular and more extensively bred and shown than the Rose-Comb Rhode Island Red.

100. Description.—The Single-Comb Rhode Island Red fowls are described as of medium size, having a long back, nearly horizontal, with a slightly rising curve at the neck hackle and at the tail coverts; the breast, broad, deep, full, and well rounded; the abdomen, well developed and moderately well feathered; the neck, in both males and females, rather short; the main tail feathers, in the males, of medium length and well spread; the sickles, of medium length, extending just beyond the main tail feathers; the lesser sickles and tail coverts, of medium length and fairly abundant. The tail of the female is not so long as the main tail feathers of the male; neither have cushion about the tail; the shanks and toes are of medium length and reddish yellow; the plumage of the male is of a rich, brilliant red, except where black is specified, and free from shafting or a mealy appearance; the depth of color is more prominent in the wing bows and back, with but little contrast between these parts and the hackle or breast plumage. A harmonious blending of the red in all the parts is to be desired.

The females have a lighter and more even shade of plumage color than the males. In the males, black markings will be found in the wing primaries, the lower web of which is black and the upper red; the lower web of the secondaries is red, and the upper web is black; the flight coverts are black; the wing bows and main coverts are red; the main tail feathers are black or greenish black; the tail coverts are black, overlaid with a reddish-bronze color. In the females, the neck hackle is red, the tips of the lower feathers being ticked with black; the lower web of the primaries is black; the wing bows and wing coverts are red; and the tail is greenish black. The comb, face, wattles, ear lobes, and eyes, in both males and females, are bright red; the color in the under plumage of both is of a lighter red than the surface plumage.

101. Mating.—In mating Rhode Island Red fowls, both of the single-comb and the rose-comb variety, the same rules for color mating must be applied. Shape in both varieties

should be selected to conform to Standard demands. The best females for mating to produce color will be yearling or 2-year-old hens that have held their color up to that time and have black markings and a clear, clean under plumage a shade less brilliant than is likely to be found in pullets. The under plumage must be red, and the proper shade is a less brilliant red than the surface color, but it must be red down to the skin, with no dark shading. Pullets of perfect exhibition quality are suitable for breeders; but those lacking in form and color should not be selected.

Females having the requirements of size, shape, and color should be mated to males as near as possible to perfection. If cockerels are used, they should not show any weakness in plumage color. Cocks that were perfect as cockerels and which hold their color may be mated with hens of known producing quality, even if the hens may lack in surface color. Neither males nor females of this breed lacking in color in under plumage should be mated for the production of exhibition offspring. The best matings in this variety, for the production of offspring of exhibition quality, are composed of fowls that have rich, brilliant surface color, with a softer shade of color in the under plumage that extends down to the skin, with the shafts of the feathers glistening with sheen. Only fowls of a similar shade of even-colored plumage should be mated for the production of exhibition offspring. Parents, one of which is extremely light red and the other of which is dark red will produce offspring with a mealy appearance in the plumage. No other breed will need more careful attention than Rhode Island Red fowls, when they are being bred for the production of offspring of standard shape and color.

To be successful in breeding these fowls for exhibition, a strain must be established by the selection and mating of the best fowls obtainable, and the fowls bred according to the mating-chart system. Great care should be taken when new blood is introduced into a strain of Rhode Island Red fowls, because no other breed of fowls suffers so much from the influence of new blood from foreign blood lines. It is not to be expected that fowls of this breed will all produce high quality

in all of their offspring. Even from the best fowls that can be selected, some of the offspring are likely to be disappointments, and the proportion of offspring of poor quality will rapidly increase when fowls of different lines of breeding from other flocks are introduced into a strain.

NON-STANDARD RHODE ISLAND RED

VARIETIES

102. Two varieties of Rhode Island Red fowls have never been recognized as standard varieties. One of these, the *Pea-Comb Rhode Island Red*, was mentioned in the origin of the Rhode Island Red fowls; the other, a white variety, has been known as the White Rhode Island and now as the *Rhode Island White*.

PEA-COMB RHODE ISLAND RED

103. Origin.—The **Pea-Comb Rhode Island Red** fowls were produced by intermingling Asiatic fowls with the farm flocks of Rhode Island.

104. Description.—The Pea-Comb Rhode Island Red fowls were much like those of the other varieties, except in the style of comb, which was like that of the Brahma. Both males and females have more or less black striping in the neck hackle. They might have been developed into fowls with Rhode Island Red color, and the general appearance of the Brahma. Some of them have been crosses with Buckeye fowls to establish a greater depth of color in the latter.

RHODE ISLAND WHITE

105. A white-plumaged variety of fowls of a size and shape similar to the fowls of the Rhode Island Red varieties has been called the White Rhode Island; the variety is now known as **Rhode Island White.** Those who brought them to public notice claim that they originated as white-plumaged offspring

of Rhode Island Red fowls. The Rose-Comb Rhode Island Red fowls are of Java origin, and it is said that there were red, black, and white varieties of these fowls. If this is true, it would not be unnatural for white offspring to descend from a line that had in it the blood of the white Java. So few Rhode Island White fowls have been bred as to place them in a class with other non-standard varieties of fowls.

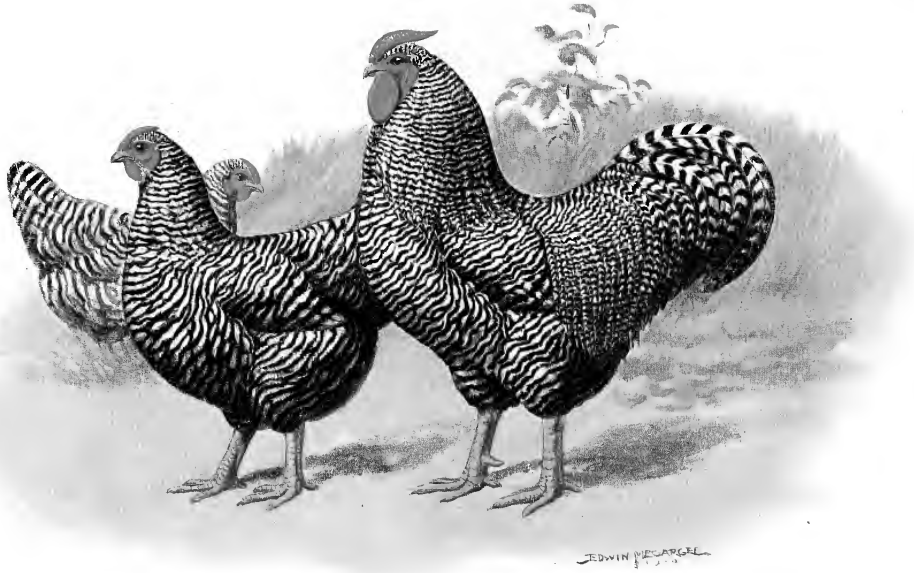
DOMINIQUE

106. The **Dominique** is thought to have been the first breed recognized in America. It was mentioned by the earliest writers, and traditions of it have been handed down for almost 200 years. The quality of these fowls has been praised by a great many poultrymen, and they have attracted attention throughout the world. This variety has become generally known as *American Dominique.*

The Dominique fowls have barred plumage, and they are thought to have been the first American fowls that had barred plumage. This kind of plumage has existed in poultry for so many years that the date of its origin is uncertain. Fowls of the same color of barred plumage as the American Dominique are called Cuckoo in England, and Coucou in France and other countries.

107. Origin.—No authentic facts are known of the origin of the **American Dominique** fowls. They might have been produced by crossing the Rose-Comb White Dorking with early Black Java fowls. Fowls of a breed called hawk colored were formerly distributed throughout Connecticut; these were really American Dominique fowls, and they originated from mating White Java with Black Java fowls such as are mentioned in the origin of Rhode Island Red fowls. The Dominique breed originated in America, and the fowls were at one time highly considered for egg production and for market.

108. Development.—The American Dominique fowls have never had the careful attention they deserve. They might have been made more beautiful than any of the Ham-



DOMINIQUES

burg fowls, and they might have been developed into a most desirable breed for egg production; but they were superseded by the Barred Plymouth Rocks and have been neglected.

109. History.—Dominique fowls were plentifully bred in the United States as early as 1820. They were seen on the farms in Ohio prior to 1850. It is also stated that they were plentiful in New Jersey in 1820, and that they were larger and more nearly perfect in formation than at the present. They have been recognized by the American Poultry Association, and are described in the Standard.

110. Description.—The American Dominiques have a body formation resembling that of the early type of Rose-Comb White Dorkings; they are of medium size; their weights should be, cocks, 8 pounds; cockerels, and hens, from 6 to 7 pounds; pullets, 5 pounds. The males have long, sweeping tails like the Hamburgs; the females have the shape and general appearance of an oversized Spangled Hamburg female. The plumage of both males and females is barred like the plumage of the Barred Plymouth Rocks, with color and markings less distinct; they have rose combs; yellow shanks and feet; the eyes, comb, face, wattles, and ear lobes are red. Their body formation, color, and markings are all shown in the color illustration.

111. Mating.—Dominique fowls should be mated to produce offspring with beautiful head points, including comb. Their body formation should be according to the requirements of the breed. Plymouth Rock form and short sickle feathers are indications of contamination with Barred Plymouth Rock fowls. All of this should be avoided in selecting Dominique fowls for the breeding pen. Color and markings should be selected according to the Standard description, which conforms to the color description of the Barred Plymouth Rock.

JAVA

ORIGIN

112. In early days, many breeds were brought from oriental countries, and were named according to the locality from which they came. The Great Malay came from Malay, but the Common Malay fowl originated in America. The Common Malay and the great Java fowls, as then known, were frequently confused with each other, but the pure Javas were plainly Asiatic fowls. The modern type of Java may have descended from the original type; but there are so many counter claims that it is doubftul whether the origin of the present type of Java will ever be known. It has been admitted that Plymouth Rock fowls originated in part from this type of fowl. Careful investigation made in 1889 disclosed the fact that the Bucks County, the Jersey Blue, and the Java fowls, as called throughout New Jersey and Long Island, were identical, except in color.

BLACK JAVA

113. Origin.—The **Black Java** fowls were made from carefully selected fowls of the proper shape and color, and from breeding, culling, and remating them until a type of fowl was developed which is almost identical with the Jersey Blue and somewhat like the Plymouth Rock fowls.

114. Development.—Black Java fowls were developed from many sources and their improvement was not of a kind that would indicate a set purpose to produce a definite type of fowl.

115. History.—The history of Black Java fowls indicates a difference of opinion as to their original type. They existed in so many localities and under so many names that there has been cause for disputing their having existed in so definite a character as to warrant the statement that there was but one original breed. Fowls called Java existed in 1840, but, like

the early Hamburg fowls, they have been known by various names, and the names have been applied to many different types of fowls.

116. Description.—In body formation, the Black Java is longer than the Plymouth Rock, having a long, deep breast that comes well forwards; the abdomen is of moderate size; the legs are short, the shanks very strong and well spread, and there are no feathers on shanks and toes; the color of the shanks and toes is almost black. The plumage throughout, of both males and females, is of a rich, glossy black; the face, comb, wattles, and ear lobes are red; the beak is black; the eyes are dark or hazel. Occasionally the face is of a shade called gypsy color in game fowls.

117. Mating.—In selecting Black Java fowls for matings to produce exhibition offspring, the best fowls should be mated and their offspring culled and remated, and this method continued as described for the mating-chart system. In this way a strain of fowls may be established that will have Java type, black plumage, and size that makes them valuable for market.

MOTTLED JAVA

118. Origin.—The **Mottled Java** fowls originated from crossing Black Java and White Java fowls, and selecting and remating the offspring to produce plumage like that of the Houdan fowls.

119. Development.—There has been no development and but little improvement in the Mottled Java fowls, other than what has come from selecting fowls and mating them in an attempt to produce Java fowls with mottled plumage, black and white throughout.

120. History.—The history of Mottled Java fowls includes a description of form and color. Fowls having black plumage were selected and mated to those with white plumage; offspring having Java type were produced, and were recognized as Mottled Java in the Standard of 1883. They have broken-

colored black-and-white plumage, black predominating. The shanks and toes are broken-colored, some being of a bluish shade. The most attractive shanks in the Mottled Java show broken black and white like those in Ancona or Houdan fowls.

121. Mating.—Only the best Mottled Java fowls should be selected and mated for the production of exhibition offspring. To prevent too much white from appearing in the plumage of the offspring, males in which black predominates can be used. The best offspring are usually obtained from mating males much too dark for exhibition with females in some of which black predominates, with others having an even distribution of color; and with some too light for exhibition. From matings of this kind, both males and females having the proper distribution of color will come. The beauty of the Java male depends on its perfect type and well-developed tail plumage.

WHITE JAVA

122. White fowls of the Java type have existed since the earliest records of the breed. The modern type of **White Java** has been developed by selecting and mating the best white fowls of the breed. The White Java was admitted to the Standard at the Indianapolis meeting of 1888, at which time the fowls were condemned by some and lauded by others. When admitted to the Standard, yellow shanks disqualified them, and they were required to have willow-colored shanks and to be yellow on the soles of the feet. They were never popular and were dropped from the Standard of 1898. No white fowls that have green or willow-colored shanks seem to have become popular.

JERSEY BLUE

123. Origin.—The origin of the **Jersey Blue** fowls has been accredited to the state of New Jersey. Prior to 1850 they were described as having about the same characters as the Java fowls. It was claimed that they were imported stock, but this has never been established; later, it was stated that they had originated from a cross of Great Malay and Black Java fowls. This does not seem a probable theory; they were more likely to have originated from intermingling three varieties, black, white, and red Java fowls. They were described as fowls of large size, having long legs, with plumage of a bluish shade. A pair of full-grown fowls of this breed have been known to weigh from 12 to 16 pounds. Fowls of this kind would come from crossing Dark Brahma with Black Spanish fowls, or pure white fowls with pure black fowls. The modern type of Jersey Blue came from the same source as the Black Java.

124. Development.—No definite information can be gained concerning the early development of the Jersey Blue fowls. The modern Jersey Blue fowls, as admitted to the Standard, were produced by selecting blue-plumaged fowls of Java type and mating them for size, shape, and color.

125. History.—A few fanciers who were thoroughly imbued with the sterling qualities of the Jersey Blue fowls selected and mated them for size, shape, and color, until a fowl was produced of Java type and plumage color like the Andalusian. They were admitted to the American Standard of 1881, but since that time they have been neglected and were finally dropped from the Standard.

126. Description.—When admitted to the American Standard, the weight requirements for the Jersey Blue fowls were: Cocks, 10 pounds; cockerels, 7 pounds; hens, 8 pounds; pullets, 5 pounds. They were described as fowls of medium

size and plump formation; the plumage was a light shade of blue, each feather being laced with a darker shade of the same color. The shanks and toes were dark blue or slate. The best known strain of Jersey Blue fowls existing in 1900 consisted of fowls of large size; some of the mature cocks weighed 14 pounds; hens, 10 pounds; pullets and cockerels, from 7 to 9 pounds. The plumage was light blue, laced with a darker shade; the top body color of the males was a very dark blue, approaching black, glistening with sheen; the shanks and toes were dark. Their eggs were of unusual size and had tinted shells, proving their Asiatic origin.

127. Mating.—The best Jersey Blue fowls should be mated for the production of offspring of a Plymouth Rock-Asiatic type that will equal the weights described for them and have plumage like the Blue Andalusians. To have them equal to the best that were bred in former days will require continued and careful selection of fowls that conform to the proper breed characters. These should be mated and the offspring carefully culled and mated until a fowl of the proper type and plumage color has been produced.

BUCKEYE

128. Origin and Development.—The Buckeye fowls were originated by Mrs. Nettie Metcalf, of Ohio, by mingling Cornish, or Indian, Game, American, Asiatic, and Black-Breasted Red Game fowls. The object of this cross-breeding was to produce a fowl that would grow quickly into large size, that would produce many eggs, and that would be attractive for exhibition. From the offspring of these matings fowls that were of American type and large size and that had red plumage and pea combs were selected and mated. The pea comb came from the influence of the Brahma and of the Aseel through the Indian Game fowls.

The development of the Buckeye fowls was under the guidance of Mrs. Metcalf up to the time they were admitted to the Standard, and after this they were bred by a few fanciers,

but they have not been developed into a type that has attracted favorable attention.

129. History.—The Buckeye fowls were admitted to the American Standard of 1905. The revision committee of 1908 advised that they be dropped from the Standard, but this was voted down at the meeting in Niagara, New York, in 1909.

130. Description.—The Pea-Comb Buckeye fowls are of medium size, and have the general appearance that would be likely to come from crossing Cornish, or Indian, Game with Rhode Island Red fowls. They are broad and strong across the shoulders; the back is much like the back of the Rhode Island Red; the tail of the males is rather short and formed like the tail of a Plymouth Rock male; the tail and back of the females are like those of a Java; the shanks and toes are yellow or reddish yellow; the plumage is red throughout; the top color of the male is a rich red or garnet, having a brilliant gloss; the breast and body color is dark red; the wing flights and main tail feathers are usually marked with black; the under plumage is red of a lighter shade than the surface color; a buff, yellow, or lighter shade of color of the under plumage is more desirable. In weight, they should equal the Plymouth Rocks. The Standard demand for weight is slightly less than that of Plymouth Rocks.

131. Mating.—Both male and female Buckeye fowls of a type that will conform to Standard demands should be selected, mated, and remated for the production of offspring that will be plump in breast and body; that will have legs of medium length, short necks, and the least amount of waste in their makeup. Long necks, legs, and shanks are to be avoided. The Malay type should be bred out of the flock. Brahma-shaped heads with pea combs and an even shade of red throughout should be closely adhered to, in order to avoid a loss of true type and a drifting into Indian Game formation.

ASIATIC FOWLS

ORIGIN

1. Although authorities still argue as to whether domestic fowls descended from one or more sources, it is generally accepted as a fact that domestic fowls originated in Persia and other parts of the country adjacent to the Red Sea, and that from there they were distributed eastwards into India and the eastern part of Asia, including Japan and the islands of the Asiatic Archipelago.

Early writings contain accounts of almost continual struggles between tribes for the possession of one another's herds, and a theory that has been advanced to account for the breeds of fowls of large size in China is that in these struggles the marauders seized and carried away the largest fowls, because, on account of their small wings and slow movement, they were easier to secure than the lighter fowls. The fowls that were thus secured were carried into China and other parts of Eastern Asia, where they remained hidden for many centuries.

The large fowls that were thus carried into Eastern Asia did not get distributed further until they were carried by trading ships to various other parts of the world. The first record of them in Western civilized countries was not made until 1816, although, of course, it is impossible to say just when the first were carried out of China. The first fowls brought from the Orient were of the commoner kinds, and were brought in trading ships as part of the food supply for the trip. Those that were not eaten were disposed of at the ports at which the cargoes of the ships were unloaded. This

created a demand for Asiatic fowls, and better kinds were brought later.

The Chittagongs, or Malays, were mentioned by Moubray in 1816, but not until after 1845 are those that had pea combs and feathered shanks spoken of. When the ports of China were opened the Chittagongs were distributed. They were large fowls with single combs, and without feathering on their shanks; these were undoubtedly the kind of fowls first mentioned by Burnham and others. Following these came Shanghais and Brahmapootras, which were the ancestors of the Brahmas.

The fowls that have been regarded by scientists as truly Asiatic are the Brahmas, Cochins, Langshans, Malays, Javas, and Black Sumatras. The Yokohama, or long-tailed Phoenix fowl, and Japanese and other bantams are not classed as Asiatic fowls, because they are ornamental and not useful. A classification made by poultry fanciers is that only Brahmas, Cochins, and Langshans are Asiatics; the Java is classed as an American variety; and the Malay, the Aseel, and the Black Sumatra are classed as Oriental game fowls. In considering them as standard-bred poultry, *Brahma, Cochin,* and *Langshan* fowls will be classed as Asiatic, and are treated in this Section in the order in which they are named.

BRAHMA

ORIGIN, DEVELOPMENT, DESCRIPTION, AND BREED CHARACTERS

2. Origin.—The original **Brahma** fowls came from the Brahmapootra districts of India. Some with pea combs were brought to the port of New York in 1846. These differed from those of previous importations in the formation of the comb and the color of the shanks and skin. These fowls were taken into Connecticut, and from them was bred the foundation stock of the present type of Brahma.

3. Development.—Brahmas with pea combs were bred throughout New England from 1850 to 1865. During this

period they were greatly improved, and offspring of both light and dark plumage were produced. Those having the clearest plumage color were called Light or Gray Shanghais; those of a darker shade were called Dark or Dark Gray Shanghais. These were not separated into distinct classes until they were known as Light Brahmas and Dark Brahmas.

4. Description.—The earliest description of Brahmas was written in 1853, and they were illustrated by Harrison Weir; a pair of these is shown in Fig. 1. In this illustration,

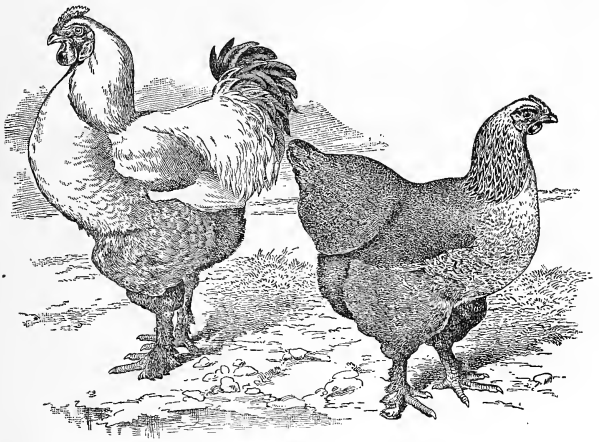


FIG. 1

the female has a low-set single comb; the male has an indication of what might be called a pea comb. Following the adoption of the pea comb in all Brahmas, fowls having this type of comb were shown in 1866 and were illustrated by Mr. Weir. A copy of this illustration is shown in Fig. 2. Those illustrated in Fig. 1 were of the type that originated in Connecticut from the fowls with pea combs that came in 1846, and from that time to the present that type of Brahma has been accepted and improved until the adoption of their description in the American Standard of 1875.

5. Breed Characters.—Breed characters were lacking in the early importations of fowls from India. These fowls were of various forms and colors, their distinctions being in the type

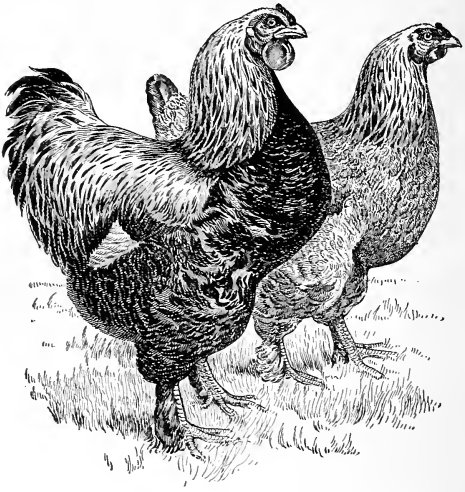


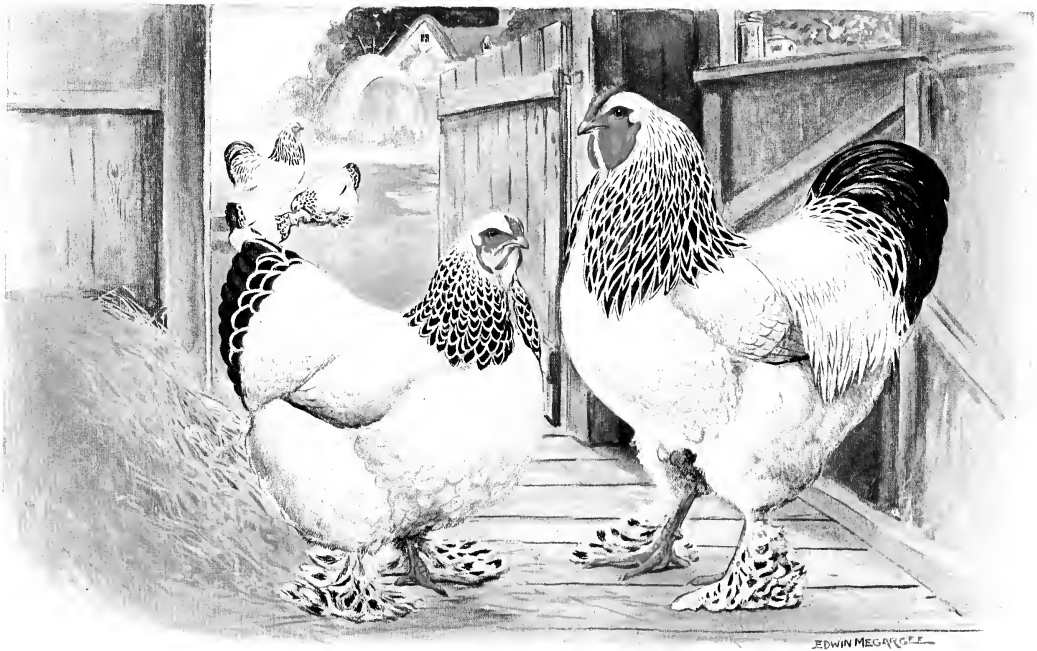
FIG. 2

of comb, in yellow shanks and skin, and in shank and toe feathering. The first distinctive Brahma type appeared in 1860 and is shown in Fig. 2.

LIGHT BRAHMA

IMPROVEMENT, HISTORY, AND DESCRIPTION

6. The **Light Brahma** was recognized as a variety of the breed in the original Standard of 1867. This may be accepted as proof that breed characters had been established and that color and markings were of a quality that could be described. The Light Brahmas of 1869 were attractive fowls, but their



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LIGHT BRAHMAS

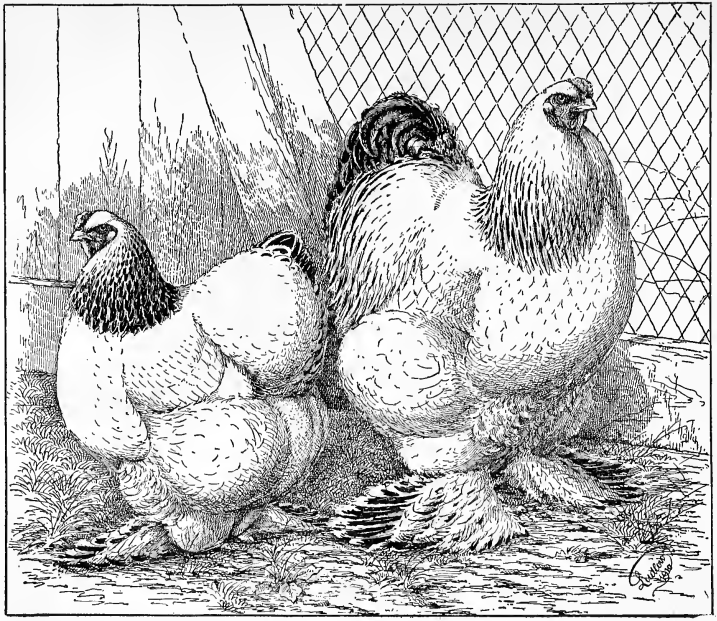


FIG. 3

exhibition qualities had been so greatly improved from that time to 1885 as to make them appear as fowls of advanced type and improved beauty in comparison with those of former days.

7. Improvement.—No other fowls except the Cochins have been so changed and improved as the Light Brahmas. The American type of Brahma has been bred for the combined qualities of egg production, market poultry, and beauty for exhibition. The English fanciers have changed the Brahmas into fowls of form and feather. The type of Brahma most admired in England is shown in Fig. 3. This illustration is made from a pen sketch by Mr. Ludlow, an eminent English artist. The fowls have vulture hocks, and are so heavily feathered throughout, including stiff leg and toe feathering, as to make them almost valueless as utility poultry. During recent years, more attention has been given, in America, to profuse feathering and exquisite markings on Brahmas. Whether or not these changes can be considered as improvements time only can tell.

8. History.—The Light Brahma was originated by American poultrymen, between 1845 and 1860, from fowls that were brought from Lakhimpur, India, to the port of New York. Offspring from these fowls were exhibited by Virgil Cornish in Boston, in 1850. He claimed that they were different from all other fowls that had been shown up to that time. A committee was appointed to consider the matter, and it was decided that the fowls should be named after the locality from which they originated; thus they were named Brahmapootra, this being the name of the river near which the fowls are said to have originated.

9. Description.—In contour, Light Brahma fowls are unlike those of any other breed. Although tall, they are of such symmetrical proportions as to be attractive. In the Standard they are described as having considerable length in every section. The head of the Brahma is like the head of the Malay, the beauty consisting in the length and breadth of the skull, which has a massive appearance and a pronounced

juncture where it articulates with the neck. The female frequently has a dewlap growing beneath her beak, and this, which has a slight inclination to lean down and forwards, somewhat as in the Cochin, adds to her beauty.

The neck of the Light Brahma is beautifully arched and covered with flowing hackle feathers, which extend down over the shoulders, forming a beautiful covering of black and white. In the male, the hackle feathers are very long; the black stripe in the center of the feather is very distinct and extends up more than one-half the length of the feather, which is edged with white, the black stripe ending just inside of the white edging. Supplementary lacing about the hackle feathers is very objectionable. The neck hackle of the female differs from that of other fowls in that the lower hackle feathers are large and round, the black center being almost an inch wide in some of the feathers, each feather being laced about with pure white. The body color, including back, breast, and fluff, of both males and females, is white. The purer and clearer they are from foreign color, the more beautiful the fowls will be. Although this is true, there is a strong inclination to encourage dark striping in the back of the male, as shown in Fig. 4, and in some localities fanciers are not averse to black spots in the back plumage of the female. Both males and females have naturally a collar of black feathers about the neck and under the hackle; these are called a cape.

In the males, the outer surface of the wings is white; the wing fronts are shaded with black; the flights are black, or black edged with white, and the secondaries are black and white. The white is so located about the lower web of these feathers as to form a white wing bay when the wing is folded. The tail is a rich, brilliant black; the sickles are of medium length and richly glossed with sheen; the tail coverts are long and flowing, and are a rich, glossy black; the lesser coverts are edged with white. The shanks and toes of both males and females should be yellow, and well covered with white feathers; black may extend down into the toe feathering, but the less of black visible in shank and middle toe feathering the more attractive the fowl will be. The face, comb, wattles, and

ear lobes of both males and females should be rich red; eyes, red; skin, rich yellow; beak, yellow, with a stripe of dark color on the upper surface. The color of the under plumage may be white, bluish white, or slate color. For exhibition, the nearer white the under plumage, the more attractive the fowl will be, provided the surface plumage is pure white and the markings on the neck, wing, and tail are as rich as can be produced in Light Brahmas.

In the females, the tail is black, with the uppermost feathers edged with white; the tail coverts are black, edged with white,

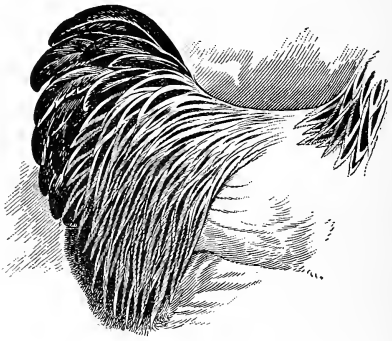


FIG. 4

and occasionally the black centers in the coverts are more than an inch in breadth. The outer surface of the wings is white; the flights are black and white; solid black flights are preferable when they can be obtained without destroying the surface color. The secondaries should be black and white, the white forming a perfect wing bay when the wing is folded. Standard weights for Light Brahmas are: Cocks, 12 pounds; cockerels and hens, 9 pounds; pullets, 8 pounds.

MATING OF LIGHT BRAHMAS

10. In handling poultry for producing exhibition fowls, the poultryman must endeavor to produce them of such beautiful form and color as to have them equal to the best in the world. To do this, he must use, for breeding purposes, only fowls that have the combined qualifications of the highest class and have been bred in line from those which have produced the best exhibition offspring. These fowls must also have producing qualities and have been bred in line long enough to have become dominant in their influence over others of their own kind. A definition of a producing fowl and an explanation of the dominating influence of a producing female has been given in *Standard-Bred Poultry*, Part 2. Brahmas of both varieties are largely influenced through the females. But little success can be achieved in producing exhibition Brahmas unless the quality of the females is of a kind that meets the requirements of a perfect Brahma, and it is also necessary that the hens have producing power.

Brahma hens used for breeding must be large and as perfect as possible in breed characters; plumage color and markings should be perfect, with the under-plumage color according to the necessities of the matings. If pure white surface color of breast, back, and body is desirable, less strength of color in the under plumage of the female will be needed. Males for all matings must be of perfect Brahma type; surface color, under-plumage color, and markings to be selected in conformity with the results desired. Clean, clear back and body color in females, and striping in back and saddle of males, will seldom if ever both be produced from a single mating. The most beautifully marked Brahmas are produced from double matings—males from one hen and females from another. The production of good offspring of both sexes from a single mating may be accomplished provided the individuals used in the mating are of the proper kind.

11. Mating for Shape.—When choosing Brahmas for the breeding pen, careful attention must be given to selecting

the shape, and in doing this the qualities most difficult to reproduce should receive the greatest consideration. Head points are of prime importance, because of the fact that the heads of Brahmas are quite unlike those of other fowls. Both males and females should have broad, full skulls, and perfectly shaped combs. The exhibition quality of Brahmas depends largely on their stately appearance; they must stand well on their feet, and, although the carriage should be rather upright as compared with that of Cochins, it should be less so in comparison with that of fowls of American breeds. The back of the Brahma is of great importance; it should be broad at the shoulders; across the back, and at the juncture of the tail and the back; the breadth should taper a little toward the tail, but not enough to give a narrow back formation. The sweep from the shoulders to the tail, in both males and females, can best be described by referring to the color illustrations of both Light and Dark Brahmas. The tail of the female should be broad at the base and have an oval formation to the upper portion of the tail, as shown in Fig. 5. The space between the main tail feathers should be well filled with soft, loose plumage. The tail formation in both males and females widens out the back to the base of the tail.

FIG. 5

Length and depth of body; width between the thighs; broad, full breast formation, which rounds up well to the throat; and a prominent abdomen, should be present in both males and females used in the breeding pen. Deficiency in any of these characters, in either the male or the female, will prevent the production of offspring having proper Brahma characters. The size of the Brahma depends largely on that of the parent stock. Large, roomy hens, are the kind from which quality is produced. A vain attempt will be made by those who try to produce Brahmas of the proper type from parents that lack true breed characters. Abnormal length of neck, thighs, or shanks, a narrow back and tail, or an extended appearance in any part of the fowl are defects that should be avoided in

fowls selected for the breeding pen. To produce offspring of large size and correct proportions, the parent stock must possess these characters in the highest degree of excellence.

Hens that are made prominent in breast and body by being very fat do not meet the requirements of proper shape. They must have these qualities reasonably prominent in natural formation and they must be of proper size without being unduly fat. Size must be selected by appearance and not by weight. The inclination to cultivate a slight bending at the hock joint should be resisted, as there must not be a tendency in the Brahmas as in the Cochins to lean downwards and forwards. Although a reasonable quantity of feathers may be encouraged in Brahmas, there should not be such an excess as to give them a fluffy appearance, nor should there be the least inclination toward heavy hock feathering in either males or females, or so much feathering about these parts as to hide the juncture of leg and toe feathering with the feathering of the thighs.

The color illustration of Light Brahmas was made from living specimens and shows the best type of Brahma for all purposes. The pair in the foreground are of proper form and color; those in the background show the extremely dark markings. The English type is shown in Fig. 3. Full-feathered Brahmas, as they are sometimes called, are a compromise between the two.

12. Mating for Color.—Both shape and color are of such importance in Brahmas as to make necessary a careful description of how both are produced. One shape description will answer for both varieties, but there is such a difference in color between the varieties as to make necessary separate descriptions of the matings for the production of Light and of Dark Brahma color. All breeds and varieties having color and markings the same as Light Brahmas can be improved through following the rules of mating for color given for Light Brahmas; and all fowls having color and markings like the dark variety will be improved through following the rules for color matings for Dark Brahmas.

13. Standard Mating.—The pairing of fowls of any breed or variety to produce offspring of fine exhibition quality of both sexes from one mating is known as standard mating. This method of mating is erroneously referred to as single mating. The term standard mating, however, is to be preferred from the fact that from such matings fowls having qualities demanded by the Standard may be produced. Shape, as described, must be selected for all matings, for without proper shape, good Brahmas cannot be produced. Color, to reproduce well, must be bred into the blood, A fowl of beautiful color but of uncertain breeding cannot be depended on to produce offspring with color equal to or better than itself. The importance of line breeding and of establishing a strain has been fully described. This method of breeding must be followed in Brahmas and blood lines be well established or success will not follow. Cockerels and pullets lose color as they grow older. The best color for breeding purposes will usually be found in fowls in their second year. Both cockerels and pullets too dark for exhibition may molt out and have beautiful plumage for exhibition in their second breeding season. These conditions must be well considered in selecting fowls for the breeding pen.

Yearlings or 2-year-old hens that have proper color and markings for exhibition are likely to produce satisfactory offspring when mated with cockerels that have Brahma type and proper color and markings. Mature males which were darker than normal when they were cockerels will answer for mating with pullets that were fit for exhibition. These same pullets are apt to molt lighter as hens, and should, if this occurs, be mated with dark cockerels. This manner of mating maintains color of plumage and prevents to a considerable extent the offspring from becoming lighter in plumage each season. Dark males mated with females, either hens or pullets, which are too dark for exhibition, are apt to produce offspring that will have more color than is demanded by the Standard. Males and females of this character are shown in the background of the color illustration of Light Brahmas. The striping in the saddle of the males and a slight marking of black in the back of the females have become more

or less popular in some localities. This manner of marking can be produced by mating males and females both of which have an excess of black in neck, wing, and saddle plumage.

Color of the under plumage is of importance, and it controls to a certain extent the shade of color of the surface plumage. Slate or blue tint in the under plumage of the back and body of females is needed for strengthening the surface color in offspring. Whenever the shade of the under plumage is smutted with black, dark-colored surface plumage will result. The most success is likely to follow standard matings when the females have a slaty-blue tint in the under plumage; a perfectly white surface color; standard color in the neck, saddle, and tail feathers; and a predominance of black in the flights. Females of this kind, mated with males that conform in color to the demands of the Standard, are likely to produce beautiful surface plumage that will be marked as described in the Standard. The use of females that have black or smut in the under plumage is likely to result in black spots in the backs of the females and dark shadings in the saddles of the cockerels. The best offspring will be obtained from standard matings in which females of proper shape and color are used, they having a slaty-blue color in the under plumage and the males conforming in every way to Standard demands.

White surface color is likely to result from dark under plumage, but the web of the feathers in the back of the offspring may be marred with black. Cream color or yellow shading may come in the plumage of offspring the parents of which have white under plumage. The blue tinge in the under plumage of females clears the surface plumage of offspring bred from them. Fowls that have pure white surface color in breast and body, the white extending down to the skin; with beautiful, white plumage; proper markings in hackle, wings, and about the tail, are most difficult to produce, but most attractive. Cream color or yellow in the plumage are defects that should be bred out of the offspring. The black stripe in the hackle of males should continue without a break from the point of the feather up more than half its length. The farther up it extends without a break, the more attractive it

will be. Males that have a break in the black of hackle feathers are apt to prove undesirable as breeding stock. If there is much of this, such males should be used in the breeding pen only when better males cannot be obtained. In mating, select rather from blood lines than from prize winners; prize winners may be selected for breeding purposes only when their blood lines are known to be true. Pullets having solid black flights may produce offspring desirable for exhibition purposes. Hens that have solid black flights, mated to males with black flights, usually produce dark-colored offspring. Flights, in both males and females, that show a small percentage of white, exercise a clearing influence over the surface plumage of offspring. Black in the surface plumage of the back of the parents is certain to darken the surface plumage of their offspring.

The hackle of female Light Brahmas should be long, broad, and oval at the point; the black center should be as large as possible; the greater the width at its broadest point, the more attractive it will appear; the black should be rich and brilliant and be edged about completely with pure white. The same style of feathers should encase the main tail. These are coverts, and the longer and broader they are, the more attractive the fowls will be. There are naturally three sets of tail coverts about the tail of Light Brahma females. When the back is normal, only one set of these appear. They may be cultivated to such an extent as to have two or three rows of black coverts edged with white lined along the space between the end of the main tail feathers and the white in the back and the body plumage. When these grow in regular formation they add beauty to the fowl; when they occur in irregular form, they are undesirable. The more a female has of this the less likely is she to produce well, unless she is mated with males of her own blood line. Such markings must be cultivated with the greatest care. But few males of a quality desirable for exhibition are to be expected from matings that produce an excess of tail coverts in females. Special matings must be made to produce and maintain this special feature in females. Males from such matings are unfit for other matings.

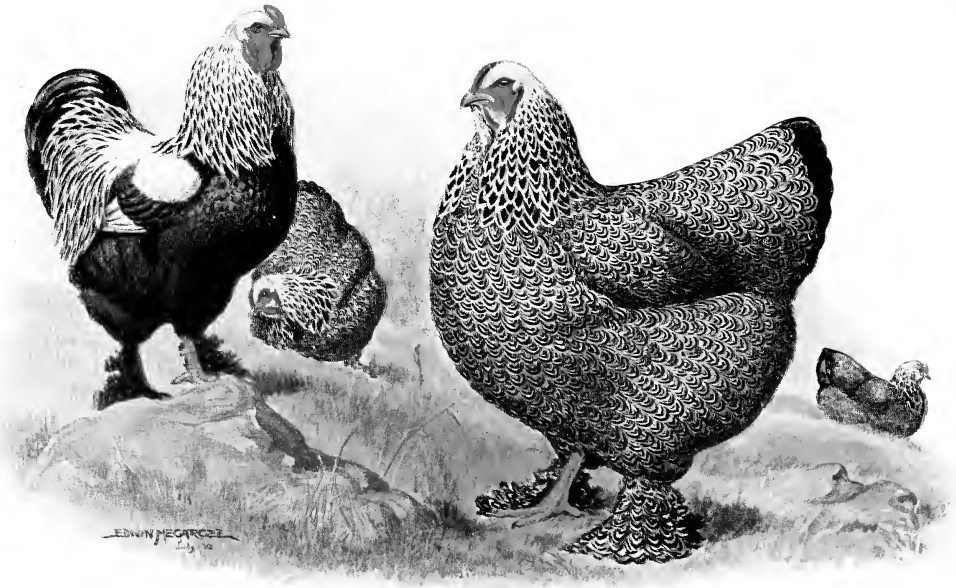
14. Double Mating.—Mating in pairs, trios, or three or four females to a single male may be followed in **double mating.** These matings may be so arranged as to produce offspring that will have extreme types of color and markings, all from one pen. To accomplish this, males of perfect Brahma type that are fairly dark in color but not too much so for exhibition can be mated with hens one of which may have good surface color and markings and very dark under plumage, another perfect in surface plumage and with slaty-blue under plumage, and the third perfect in surface color and with a bluish tint in the under plumage. From such matings cockerels and pullets that will be almost too dark for exhibition will be produced from the hen having the darkest under plumage. Fowls of an intermediate shade of color may be produced from a hen having a slaty-blue shade in the under plumage. Clean surface plumage may be produced from a female having the lightest blue in the under plumage. With such matings the eggs from each female should be kept separate and the chicks from them carefully toe-marked for identification. Where a large number of Brahmas are kept, three pens are frequently necessary, one containing females all of which have the dark shading in surface and under plumage; the second pen, those with a perfect surface color and a slaty-blue under plumage; and the third containing females having the perfect surface color with the shading of blue in the under plumage.

Such matings, however, can be handled only by those thoroughly experienced in producing the most extreme color in Light Brahmas. Many chicks of little or no value occur from such matings. Males used in breeding pens of this character must be selected with the greatest care, and their breeding must be in line with the hens to which they are mated. From such extreme matings, many of the most attractive fowls for exhibition are obtained. When the offspring so produced are distributed throughout localities where standard matings have been followed, the results obtained from them are unsatisfactory. The breeder who wishes to practice double matings for the production of the most extreme type of color and mark-

ings should secure both males and females from those who produce them and adhere closely to the blood lines so obtained. He should mingle them with his own fowls only to a limited extent. The results obtained can be gradually mingled with the offspring from the other matings. When so handled, several years of breeding will be needed to produce desirable results. The extreme in color and markings in Light Brahmas can be produced only as the result of years of experience. Even when such are produced, they must come as a result of years of careful mating; they cannot be bred in a single year from the intermingling of blood lines that are foreign to one another.

The males used in such matings must be selected to meet the desire of those who select them. When clean, clear surface color of body plumage, accompanied with beautiful neck, wings, and coverts, is desired, the males must not only be bred from this kind of fowls, but they must have in them the blood lines that will produce such markings. The same is true when the abnormally dark or the medium dark fowls are desired. In each instance the males and the females must be line bred for the production of the kind of fowls desired. There must be equal attention paid to the blood lines of Light Brahmas for breeding special color as is needed for breeding male and female lines in Barred Plymouth Rocks, Partridge Cochins, or Dark Brahmas. Whenever the attempt is made to produce extreme colors in Light Brahmas, the same regard must be shown to the blood lines for producing them as to that demanded in any kind of fowls of which the males and the females differ in color of bars, stripes, or penciling in plumage.

Extreme matings are of frequent occurrence at the present time. These are tried in the hope of producing something quite out of the ordinary. Fowls of unusual character are shown from time to time, their presence causing considerable speculation as to the manner of their production. These are often purchased by those desiring to establish a strain that will produce similar fowls. Failure usually follows such efforts. Unusual quality is seldom, if ever, produced to any extent through any means except careful breeding, which



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DARK BRAHMAS

usually brings reasonable success to those who continue the practice. Extreme matings may be successfully handled by those who have built up a strain for such uses, but extreme matings by inexperienced persons are likely to prove unsatisfactory. For these reasons, it is always best to begin with fowls selected from a strain that has been successfully bred for a number of years, and from these to breed in line and select and remate the fowls that conform to the greatest extent to the kind desired.

DARK BRAHMA

ORIGIN, IMPROVEMENT, HISTORY, AND DESCRIPTION

15. The **Dark Brahma** has always been considered as one of the most difficult of all fowls to breed to a quality approaching perfection. Although fowls of this variety originated from the same kind of stock from which the Light Brahmas have been developed, they are in no way alike, other than in conformation. As originally bred, the plumage of Dark Brahmas was not so distinct and apart from the Light Brahmas as at the present time. The color and markings of the present Dark Brahmas are quite in contrast with those of 50 years ago. The distribution of black and white throughout their plumage and their distinct separation from one another give a finish of color that is not found in any other variety, except in those having the same color and markings. No other fowl excels in beauty a Dark Brahma pullet of the highest quality when in prime condition for the show room.

16. Origin.—Mr. I. K. Felch, of Natick, Massachusetts, stated that the originals from which Dark Brahmas came were a brood of chicks produced by mating a Chittagong male with a Marsh-Shanghai hen. Offspring from this cross were shipped by George P. Burnham, of Melrose, Massachusetts, to John Bailey, of London, England, in 1853. They were perfected in England, and in 1866 specimens were sent from England to Mr. Lowrey, of Boston, and were shown in New York during the same year. By selecting and mating

the darker fowls, the Dark Brahmas were made. They did not originally have the dark markings now seen on them; their early variety characters are shown in Fig. 2.

17. Improvement.—More attention was given to the early development of Dark Brahmas in England than in America. Prior to 1865 there was no description that could be accepted as an absolute guide for form and color of Brahmas of either variety. Later the two varieties were separated and Dark Brahma males were described as having silvery-white top color, and black, slightly mottled with white, as breast and under-body color. Females were described as dull white, minutely and distinctly marked with dark penciling so close as to almost cover the ground color, the penciling reaching well up the front of the breast. As may be seen in early illustrations, the pencilings referred to stippling, the same as Brown Leghorn females are now marked.

18. History.—During their early existence, Dark Brahmas were crossed with both Partridge Cochins and Gray Dorkings. From these crosses the silver-gray tint was established, and the color and markings were improved. About 1867, Dark Brahmas had been greatly developed and improved; this is illustrated in Fig. 2, which is a copy of a painting of a pair of Dark Brahmas made by Harrison Weir. About this time American fanciers began to pay special attention to this variety, and they were remodeled to meet the requirements of the American Standard. Since that time there has been a marked difference in the types of Brahmas of both varieties as bred in England and in America. The breed characters of Brahmas as bred in England are shown in Mr. Ludlow's pen sketch, Fig. 3.

19. Description.—Dark Brahmas should have the same shape as described for the Light Brahmas. Head, comb, and body formation should conform to the description of these parts given for the Light Brahmas. In color, the males should have heads, necks, backs, wing bows, and wing bays, silvery white; hackle and saddle plumage striped with black; breast, body, and fluff, black; the fluff may be frosted slightly—solid

black breast preferred; main tail feathers, black; sickles and tail coverts, glossy black, burnished with green; shanks and toes, yellow; shank and toe feathering, black or black frosted with white; when this occurs, it will be less objectionable than white mixed with the black feathers. The wing bar of the male is well-defined black; the white in the secondaries, when the wing is folded, forms a beautiful wing bay. The flights and secondaries should be black, marked with white on the lower part of the web.

The hackle feathers of the Dark Brahma female are more tapering than those of the Light Brahma; in color, they are silvery white, with a broad black stripe in the center. Penciling frequently shows in the center of the hackle plumage. The entire body color may be gray; silvery gray is even more beautiful than the gray permitted by the Standard. The feathers of the entire body are penciled with a darker color, the penciling following the outline of the feather. In the most beautiful females, the fluff as well as the shank and toe feathering is penciled the same as the body plumage; the main tail feathers are black or brownish black, frequently powdered with gray; the leg and toe feathering is the same color as the body plumage. The shanks and toes are yellow or dusky yellow; the under plumage is black or slate color in both males and females. For the production of beautiful markings and clean, clear top color of males and females, a lighter shade in the under plumage is desirable. In females, the flight feathers should be edged or stippled with gray; the secondaries are a dull black, the lower portion of each being marked with gray, penciled with a darker shade. In many females, both primaries and secondaries are stippled with gray. Although the Standard requires that the shanks and toes shall be yellow, yellow shaded with a darker color is frequently present.

MATING OF DARK BRAHMAS

20. In mating Dark Brahmas as well as all other fowls that have the same color and markings, the most difficult results to obtain are clean, clear top color in males; solid black

breast, body, fluff, shank, and toe feathering; and black tails, surrounded with sickles and coverts that are a brilliant, glossy black. To produce males of this character and females of the proper color from the same mating has baffled the skill of poultrymen. Matings that will produce color like this in males have a tendency to produce females too dark for exhibition. Most of the pullets produced from such matings have so much brown shading in the back and body plumage as to almost bar them from exhibition; or, in place of brown, the plumage may be so invaded with black as to cast a dark shade or metallic luster over the back and body plumage.

For these reasons, double matings have been practiced for the production of Dark Brahmas for exhibition. In some cases, marked attention has been given to producing females only, and the best male offspring from such matings have been selected and shown, with the hope that their beautiful top color would overbalance the slight defect of mottled breasts, which usually occur in males so produced. If the Standard were changed to permit mottled breasts in Dark Brahma males, and in all varieties having the same color and markings, beautiful males and females might be produced from single matings; but the breast of the male would be more or less spotted with white. To produce clean, clear, silvery gray in Dark Brahma females, fowls having a light shade of color in the under plumage must be used. So long as black in the under plumage is adhered to in Dark Brahmas, the producing of a beautiful, clear surface color will be difficult, and but few offspring so produced will be fit for exhibition.

To produce exhibition males of beautiful color and markings, males having the desired color in plumage must be mated with females that are too dark in plumage for exhibition. Females fit for this purpose are frequently so dark as to be brownish gray instead of silvery gray. The entire body plumage of females used for this purpose should be very dark gray, penciled with black. When bred in this way for several generations, it is frequently necessary to introduce a light-colored male from the female line to prevent metallic black appearing in the top color of the males. A moderate shade

of breast plumage with a more even shade of top color may be produced from exhibition males mated with females that have but little brown in the surface plumage and slate in the under plumage. Such matings are likely to produce good-colored males. A strain of male-producing Dark Brahmas will be established in this way; and pullets fit for exhibition may be produced from the same kind of matings. Such pullets, however, are apt, when mature, to show brown shadings in the surface plumage. To soften the shade of color in the surface plumage of offspring produced in this way, females that have light under plumage should be introduced.

The most beautiful females for exhibition will be produced from an established strain that has been created for the purpose of breeding pullets. To establish such a strain, a beginning must be made with hens that have the nearest approach to silvery gray in back and body plumage. If these females have light-gray under plumage, greater success is likely to be obtained. To such hens, cockerels having a clean, clear silvery top color, beautifully striped with black, must be mated. If these cockerels have light under plumage, some specks of white on the breast and a frosting of white in the fluff, better results may be obtained than could be expected from males that have more black in the plumage. If the offspring from such a mating are better than the parents, this fact may be accepted as evidence of a proper beginning. If offspring of poor quality result from such a mating, a new male should be secured for mating with the hens, or other hens may be selected and a second trial made with the original male. So soon as males and females having a clean, clear, surface color, with perfect markings in the females, can be produced, a start in the right direction will be made.

To improve the breeding qualities of the pullet strain, only large females of the most desirable color and markings should be used. To these males of the same strain should be mated, using only males that have clean, clear, top color, beautifully striped with black, and wing markings as nearly perfect as possible. To establish and maintain a strain of this kind, only hens in their second or third year should be used; these

should be of the most perfect Brahma type possible to select, and should possess size and vigor in conformity with the breed. Hens of this character that have light or silvery-gray color in top plumage, marked with darker pencilings which follow the shape of the feathers, should be mated to males that have silvery-white top color that is evenly striped with black; and that have black in breast and body color, slightly spotted with white. Such matings should produce pullets that will have the most desirable shade of silvery-gray surface plumage. Some of the pullets so produced are apt to have breast color too light in shade for exhibition, and although they should not be used for breeding purposes, they frequently make the most attractive hens for exhibition in their second and third years.

Females produced in this way are likely to have gray or light-gray under plumage. Although this does not meet the requirements of the Standard, a slight deduction for under plumage of this kind can be withstood, provided the surface color closely approaches perfection. To sustain or strengthen color which may be lost in a strain of pullet-breeding Dark Brahmas, females having slate under plumage may be introduced and gradually bred into the flock. A well-established strain of pullet-breeding Dark Brahmas can be sustained with very little new blood, throughout a period of many years. One strain of this kind has been bred in the state of New York for more than 25 years. Females of the highest quality have been produced continually from them, and many males capable of winning in the keenest competition have come from this same flock.

These same methods can be applied to the production of Silver Penciled Wyandottes and Silver Penciled Plymouth Rocks. In selecting producing fowls of this kind, it should always be remembered that such as have the darker shade of under plumage are likely to produce offspring many of which will be darker in color than the parents. In the mating of fowls of a lighter shade of surface and under plumage, softer tints in the surface plumage will be produced. Fowls of these varieties that are too light in color of surface and under plumage, may produce some offspring having beautifully colored

plumage. When bred together they are likely, however, to produce offspring which fail in plumage color. Good results will always be obtained from having a reasonable amount of color in the under plumage of the females and a lighter shade of color in the under plumage of the males.

ANTWERP BRAHMA

21. Origin.—As nearly as can be ascertained, the **Antwerp Brahma** fowls were taken direct from China to the Antwerp Zoological Garden. How early this occurred cannot be determined. The reason for mentioning them here is to establish their identity, because reference is made to them later as one of the originals from which the Malines came. More than likely this fowl was of the same kind as the Gray Shanghais which were taken from China to other countries.

22. History.—The Antwerp Brahmas were sparingly bred in Belgium from the time of their first coming, up to 1800. Since then more attention has been paid to them, for the purpose of crossing them with other fowls rather than for breeding them to any extent in their purity. Their improvement has not been of a kind that will demand more than passing mention.

23. Description.—The plumage of the Antwerp Brahma is like that of a Light Brahma of indifferent quality. The color of beak, shanks, and skin is pinkish white. The fowls are sparingly feathered on the shanks and feet, and have single combs. The variety colors are white and white marked with black. The white variety resulted from selecting fowls that had the least amount of black in their plumage and mating them to eliminate the black.

There is no general rule for mating Antwerp Brahmas for shape or for color; the only rule of mating is for utility purposes.

BUFF BRAHMA

24. A variety of Brahma known as the **Buff Brahma,** having buff-colored plumage and black markings similar to those of the Light Brahmas, has been sparingly bred in some localities. This variety is thought to have originated from crossing dark or cinnamon-colored Buff Cochin males with Light Brahma females, selecting the offspring having the best buff color and dark markings, mating them, and remating their offspring for the production of better form and color. So few of them have been bred that they are a rarity rather than an accepted variety.

COCHIN

ORIGIN, DEVELOPMENT, HISTORY, AND BREED CHARACTERS

25. Among the many kinds of fowls that were brought from the Oriental countries, none were more highly considered than the Shanghai fowls. These fowls were first known as Shanghai, then as Cochin China, and later as **Cochin.** That they were brought from China in a very crude state cannot be disputed. Many of them had no feathering on their shanks; others were sparingly feathered; and some were fairly well feathered down the shank and on the outer toe, with a few feathers on the middle toe; all had single combs; long, pendent wattles, and ear lobes that were separated from the wattles and were not so long in proportion as the wattles of the original Brahmas. There were many kinds of color and markings among them; the yellow Shanghai, as originally called, had a shade of plumage that could be distinguished as yellow or cinnamon buff; another variety, called Pheasant Shanghai (now Partridge Cochin), and some fowls of black and some of white plumage all badly marked with foreign colors. The fowls of the different kinds were separated and bred together.

For many years there was more or less controversy as to whether the Shanghais and the Brahmapootras were of dis-

tinctive origin. The facts that the true Brahmapootras had pea combs and the Shanghais had single combs, and that the tail formation was different in the two varieties, all had their influence toward a reasonable settlement of the question, and from the time of their separation into breeds and distinctive varieties, the Cochins (formerly Shanghais) have prospered. At one time they were the most highly considered of all poultry throughout the world, and they have been more largely used in the makeup of new breeds than any other breed of fowls.

26. Origin.—Cochin fowls of all varieties originated in China. Beyond the fact that they were bred there for many centuries no information relative to their origin can be obtained. It was formerly thought that all varieties of Cochins had descended from the fowls that were sent by the British Ambassador, from China in 1843, to her Majesty the Queen of England; this is, however, erroneous. Many shipments of all varieties of Cochins were sent from China to England and to America during the years that elapsed between 1840 and 1846, and from a selection of the best of them, Cochin fowls have originated.

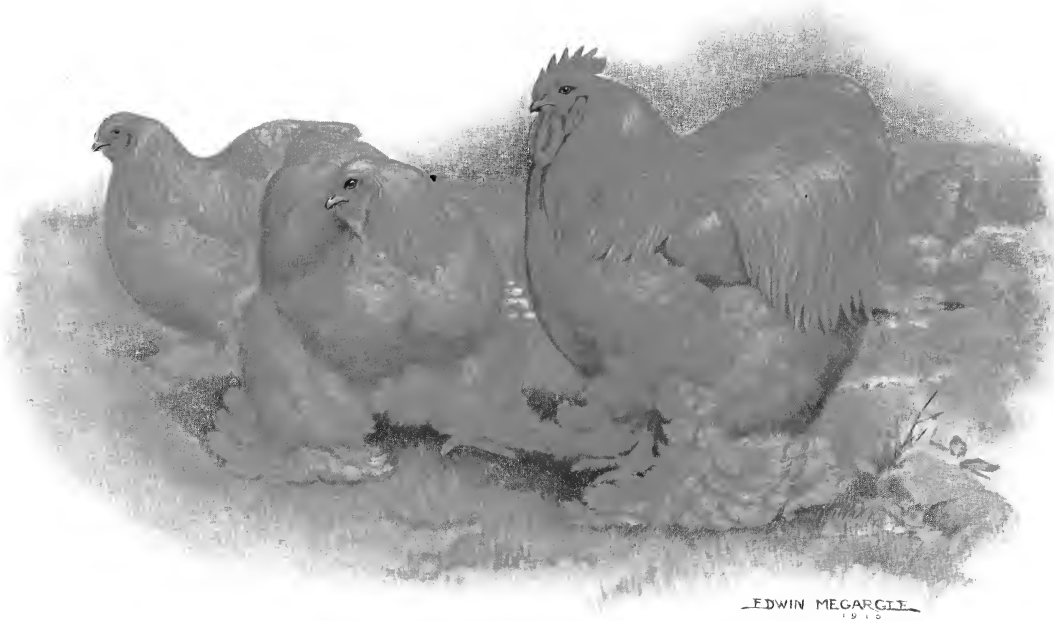
27. Development.—Cochins were developed from the Shanghais that came from China during the years intervening between 1843 and 1850. The first offspring were reddish buff in color, and from these crude originals the beautiful Cochins of the present have been developed. From 1850 to 1870 their development was carried on mostly by the English fanciers; a few of them were developed in the United States during the same period. From 1870 to the present, the development of Cochins in England and America has differed greatly, both in style of feathering and in color. The original buff variety was more attractive and the development of the fowls of this variety was more rapid than that of the other varieties. The Partridge Cochins were badly marked, and the distribution of black and red was not well defined; the markings of the female were irregular, being more like the stippling of the Brown Leghorns of the present than like the beautiful penciling that

has been developed. Many of the original females had clay-colored breasts. From matings of carefully selected fowls, the present Partridge Cochins have been developed. Black Cochins were not true to color and the white variety lacked Cochin shape and purity of plumage color.

The greatest development of Cochins in America has taken place since the compilation of the Standard of 1874; greater development in all varieties has followed the organization of the American Cochin Club.

28. History.—Cochin fowls came from China in 1845, the Queen of England probably receiving the first. Subsequent to that date, they were brought plentifully into England and a few of them came to America. Cochin history begins with those selected by Mr. Sturges, of Essex, England; these fowls were selected in 1847, and, although it has been recorded that Captain Elder sent some to England from Canton, in 1842, Mr. Sturges made the first exhibit of Cochins at the Birmingham show in 1850. From that time until the issuing of the Standard of 1867, they were bred in five shades of buff; Buff Cochins, Lemon Cochins, Silver-Buff Cochins, Silver-Cinnamon Cochins, and Cinnamon Cochins. Grouse or Partridge Cochins were bred in two colors; one was rich brown, distinctly penciled with darker brown; the other was light brown, distinctly penciled with dark brown. White and Black Cochins were also bred to a limited extent.

Cochins of early days were tall and long in the shanks and neck. It was not unusual for males a year old to be able to pick food from the top of a flour barrel. The Cochins were flat in the breast, and although they laid well and were well considered as table poultry, because of the large amount of meat on the carcass, they were of bad proportions and irregular in color and markings. The poultrymen of England have always bred for profuse feathering in Cochins; American poultrymen, up to about 1889, showed a preference for less profuse feathering, better color in the under plumage, and a development of the qualities of egg production and market poultry.



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BUFF COCHINS

From 1879 to 1890 the home of the Cochins in America was largely confined to the Middle West. About 1885, better Cochins of the Partridge variety were bred in New England than elsewhere; and immediately following 1890, the Cochins of the East, in all varieties, gradually outranked those of any other part of the United States and Canada. The profuse feathering developed by the English fanciers made fowls bred there useless to the American fancier. From that time until the present, the Cochins bred in England have been as different in form, feather, and color from those bred in America as if they were not of the same breed.

29. Breed Characters.—Breed characters must be the same in all varieties of Cochin. The true value of breed characters is that they render a type so marked as to separate one breed from another, the form being so distinctive that the fowls can be selected as belonging to that breed, regardless of variety color.

BUFF COCHIN

ORIGIN, HISTORY, AND DESCRIPTION

30. The **Buff Cochin** fowls that first came from China were not only the first of all Cochins, but the original, so far as known, of all buff-plumaged fowls. No fowl has ever attracted more attention than the Buff Cochin, and no fowl is more beautiful when of the proper color and type.

31. Origin.—The Buff Cochin variety has been made from the original fowls that were brought from China. The origin and development of the fowls of this variety is so entwined with the origin and development of all Cochins as to have made it necessary to tell of them under the origin and development of the breed.

32. History.—Fowls of no other breed have ever held such a prominent position in the history of poultry as the Buff Cochins. They were not only the original Cochins that came from China, but they were the original buff fowls. From

them all buff-plumaged fowls have been fashioned. They have been used in every land where poultry is bred, for crossing with the fowls of the locality to improve them. They were the most prolific egg producers of early days, and were remarkable for size and for the quality of their meat.

33. Description.—The Buff Cochin is a fowl of large size, profuse feathering, and rotund formation; it is distinctly a fowl of graceful curves, and each section must be more or less globular in form. Although Cochins have a dignified appearance, they should have the peculiarity of a forward carriage that drops the breast slightly toward the ground. The head points of a typical Cochin can be better illustrated than described, and they are well represented in the color illustrations shown. The neck of Cochins should be short and arched; the hackle flowing down over the back, which should rise within a short distance of the end of the hackle, forming a beautiful curve, and the cushion should rise globularly and combine with the hackle to form the beautiful Cochin back. The breast should be very prominent and rounding in all directions; the breastbone should be set well down between the thighs, which must be widened out to make room for breast formation. The body should be evenly poised on the legs; the abdomen, round, full and profusely feathered. The feathers of Cochins should be more fluff than web, the under fluff being so soft and plentiful as to build out and make more prominent the rotund form.

The typical Cochin female is fashioned much like the male, with the difference that the back of the male is very broad, and that of the female forms a perfect cushion. The main tail feathers of the female may droop a little but they stand naturally in a line that shows as if it were a continuation of the back. If the cushion sweeps down at its extreme end, the tail feathers should extend out beyond the last line of cushion. This may occur naturally, from the fact that the excessive or profuse fluff in the plumage lifts the cushion so high as to carry it above the natural line of the tail. Great width between the thighs and profuse feathering about the shanks

and thighs add to the beauty of the females. Both the males and the females should have all the feathers it is possible for them to grow without developing stiff hock plumage. This same general description will apply to all varieties of Cochins.

A complete description, section by section, of poultry for exhibition will be found in the American and English Standards. The correct shape and plumage color is shown in the color illustrations. Cochins of all varieties are shown in colors and an effort has been made to illustrate in these the several types of Cochins that are permissible in the show room. No attempt, however, has been made to show the profuse feathering of the English Cochins. The English type does not meet the approval of the American fanciers, for its stiff vulture-hock feathering is a disqualification.

MATING OF BUFF COCHINS

34. Mating for Shape.—Mating for shape in Cochins requires the same general outline to be followed in all varieties. Time will be wasted in an attempt to produce exhibition Cochins from fowls that lack breed characters and proper color. Hens 2 or 3 years old, or even older, if they are large and of perfect Cochin type, are best from which to produce offspring that will possess desirable size and vigor. Provided that stiff plumage about the hocks is absent, profuse feathering should always be preferred in the females. The male, however, is more likely to have stiff hock feathering than the female. To be successful in the production of soft feathering about the hocks, fowls having this kind of feathering to a marked degree should be selected. To improve or increase the quantity of feathering below the breast line, fowls that have an abundance of heavy feathering about the thighs, hocks, shanks, and toes should be selected. Parents of this kind will not only increase the quality of under feathering, as it is called, but will stiffen the plumage as well.

Under feathering can be better increased with the least chance of failure by the use of females that have the kind of plumage desired. Females of this kind, mated to males with

profuse and perfectly soft feathering about the hocks, will increase leg and toe feathering without losing the correct under feathering. The use of males with profuse and stiff under feathering bring quickly into the flock the influence of vulture hocks. For this reason, the use of females for improving under feathering is recommended, and in addition to this, care must be given to selecting and pairing so as to produce from year to year offspring like those shown in the color illustration of the buff variety, without having vulture-hock feathering. To have the most profuse leg and toe feathering, it will be necessary to select males and females of remarkably good shape with stiff feathers at the hocks; long, stiff quills in the plumage of shanks and toes; and long, stiff feathers on the thighs, in front, and on the lower part of the breast.

It is not easy to produce Cochin cockerels with full, rounded breasts, because the natural inclination of all Cochins with profuse leg and toe feathering is to go flat in the breast. To avoid this requires constant watchfulness. Some fanciers attempt to improve breast formation by feeding the fowls into an excessively fat condition for show purposes. This is more likely to enlarge the abdomen than to improve the breast. The only safe means of having breast formation of the most approved type is by selecting breeding stock that possess this requirement to a marked degree, and mating them together. The only safe line to follow in mating for the production of Cochins of proper type is to mate only such fowls that are as nearly perfect in every section as possible and to continue the selecting of the best offspring each year.

35. Selecting the Breeding Stock.—The proper selection of fowls for mating is the most important part in the whole routine of poultry culture. Years of experience with a certain variety of fowls, close observation of the results which some of the breeding stock have produced, and a full knowledge of the possibilities of a strain, are of great importance. Occasionally there will appear in the offspring peculiarities almost forgotten, which may have come in direct line from fowls that possessed them, and which were used many years

before. Such recurrences are not frequent, but when they do appear it is best to be rid of the offspring and the hen that produced them. A well-trained eye, special skill, and good judgment are required in selecting the fowls from which to produce exhibition poultry.

Fowls selected for mating should not only be of mature age and as nearly perfect in breed characters as possible, but no deformities in form or feather should be permitted to creep into a flock, even though the deformed fowl may have other qualities of great importance. In Cochins, only fowls that are strong and well matured should be used for breeding. Immature fowls or fowls that are more than 3 years old are not apt to prove of the greatest value. Undersized fowls or such as have the appearance of immaturity cannot be expected to produce well in any flock. It is useless to attempt to breed good poultry from poor and imperfect fowls.

36. Selecting the Male.—In selecting a male to head a breeding pen, do not imagine that his desirable qualities will impress themselves to any extent on the progeny from hens of inferior quality. The male is half of the breeding pen, but no more. He should be as good as it is possible to have him, but if he is mated to females of inferior quality he will be able to accomplish only one-half as much good as he might attain if mated with hens fully his equal. The practice of purchasing males of sterling qualities is profitable, because from such males an improved quality in the offspring may be obtained even from females of minimum merit. To succeed in producing offspring of the highest quality, the males selected must not only be of the best, but the females must be carefully selected. In choosing the male, it should be done with a view to reproducing his form, vigor, and color. He should possess the qualities of size, shape, color, and breed characters, and in addition to this he should be line bred, so as to have well established in him all the desirable qualities which make possible the reproduction of the same qualities in his offspring; his vigor should be very marked and his activity should be noticeable.

37. Selecting the Female.—The hens for the breeding pen should be as carefully selected as the males. Each fowl should be carefully examined for shape and color in every section; the more attention that is given to this, the greater will be the chance of success; for, unless the hens have all the characters required for success in the show pen, they will be of little value for breeding exhibition offspring of the best quality.

38. Parental Influence.—A principle that has been accepted is that the male has the greater influence over head points, finish, and color of the offspring; and that the female has most to do with size and form of body. Although this is true to a certain extent, and much more likely to be the case in some varieties than in others, it cannot be depended on to a certainty. Some hold the belief that such is the case only when each parent has the dominating influence over the separate powers attributed to it. According to Mendelian principles, the male should have the greater influence over females which he dominates and that this principle would fail with females that have the dominating power over the male. Years of experience in mating for the production of golden buff in plumage have proved that the male has the greater power over color in Buff Cochin fowls, and that size is largely influenced by the female. The same is true in Black and White Cochins. Line breeding applied through the double-mating system has proved the most satisfactory for the production of partridge color.

39. Buff Color in Plumage.—To be true and beautiful, the buff color in the surface plumage of a fowl should be one even shade throughout, including the tail. If there is any foreign color in the plumage it should be confined to the secondaries of the wing and the main tail feathers. Originally dark red or chestnut were permissible in sickles and black in main tail feathers of the male, but at the present time buff-colored fowls can be produced without the least foreign color in the plumage. Where black exists in any part of the plumage of breeding fowls, their offspring are apt to show more of this in the same section, and a darker shade of surface color as well.

Where white exists in the under plumage, or in any part of the plumage of the parent stock, more of this is likely to show in the offspring. The shade of color should be even throughout, so dense as to hide the color in the under plumage, and look clean and clear without mealiness. Some fowls that have the most beautiful surface color have almost pure white in the under plumage. When this occurs, unless the color in the web of the feathers is very strong, the white will show through and give the appearance of a very light shade of surface color. Males having red, brown, or pale-lemon surface color are not golden buff, and all shades of color except golden buff, are foreign.

When a buff-plumaged fowl is held in the hands and its head is moved backwards so that the hackle will sweep over the back of the saddle, the whole surface color of top plumage should be of the one even shade of golden buff, richly glossed with sheen in the males but not in the females. The under part of the body of the females should be one even shade of golden buff, the same as in the top part, and lacking the sheen of the male; the under plumage should be buff two or three shades lighter than the surface color and not more than two shades lighter in the males. The greatest strength of color will be found in fowls that have clean, clear, rich golden-buff surface color on the breast, and under plumage that shows buff to the skin. Such fowls can usually be depended on to breed more true than those that have white in the under plumage of the breast. In both males and females, flights and secondaries should show no foreign color and should be somewhat darker than the body plumage. The main tail feathers should have the same color as the flights. The sickles and coverts in the male should have the same color as the plumage of the saddle.

40. Mating for Buff Plumage.—Only one shade of buff is correct for buff-plumaged fowls. If the poultryman prefers a shade darker or lighter than the golden-buff color, he must select fowls that have the shade of color preferred. Fowls in their first year's plumage must be selected from which to pro-

duce the proper shade of golden buff. Cockerels and pullets of buff-plumaged fowls usually have better color than cocks and hens of the same variety. It should always be remembered that yearling hens and hens that are older are likely to lose more or less in plumage color, as there is a natural fading with age. Yearlings often have a slightly darker shade of color in top and body plumage than they had as cockerels, and in some cases where the color is weak in their under plumage they become a lighter shade in surface color with age and show some white in wings and tails.

Cockerels for mating should have perfect surface plumage throughout, with no foreign color. The color should be one even shade of golden bluff and the top plumage should have the proper sheen; the under-plumage color should be of an even shade that conforms to the color of the top plumage. The under plumage throughout should be one or two shades lighter than the surface plumage, with equal strength of color in the under fluff of the breast plumage; and the shanks and toes should be yellow. In Buff Cochins, leg and toe feathering must be as pure in color as the body plumage, and the flights, secondaries, and main tail feathers at least a shade darker than the body plumage. The quills of all feathers should be the same shade of buff as the web and the under plumage. In each instance, the color of the quill must match the color that grows from it, so as to have the entire feather of the same shade.

When they possess color of this kind, in both quill and web, there is not likely to be the least appearance of shaftiness in the plumage. The main tail feathers should be of the same shade as the flight feathers. In some varieties of buff-plumaged fowls, small dark-colored spots may be found in the main tail feathers and in the secondaries of the wings. Such color may be permitted to a limited extent. If fowls having dark markings of this kind are mated, more black will come in the main tail feathers, flights, and secondaries of the offspring, and a less perfect shade of surface color. Better results will be obtained from fowls that have too dark a shade of buff in the secondaries and main tail feathers than will come from

males that have less strength of color and black markings in these feathers.

The females for mating with a male of this character should be, as pullets, one even shade of golden buff throughout; the color on the breast should be one shade lighter than the color on the breast of the male. The females must have a good, even shade of buff in the under plumage of the breast, not more than two shades lighter than the surface color; the wing secondaries and main tail feathers should be slightly darker than the body plumage; the shaft, or quill, must be of the same color as the web of the feather; the buff should be so well laid on the web of the feather as to appear absolutely even throughout, and should extend down to the skin on both feather and quill, with the natural gradation best suited to the under plumage. Hens of this description, when 2 or 3 years old, are best suited for breeding purposes. Hens that lose in surface color, but which retain the proper shade of under plumage, may be used for breeding purposes; hens that have become mottled in surface plumage and which grow lighter in under plumage are not desirable for the production of buff fowls. There should be no foreign color in the plumage of females used for breeding purposes, white, black, or foreign color of any kind being objectionable.

The color of the eye has more influence over results obtained in mating for buff color than is usually conceded. Both males and females that have correct plumage color and brilliant eyes of proper shade of red—not pink, but red that approaches the shade most desirable in the comb of the fowl—will be better suited for mating than those without the proper color of eye. Naturally the eye and plumage lose brilliancy as the season advances. Females that lay well lose the richness of color in eyes and shanks; the same occurs with the males as the season advances. Cockerels and pullets at the beginning of the breeding season, or early in the spring, should have the color of the eye clean, clear, and brilliant; and shank and skin, rich yellow. These same rules apply to buff varieties of all breeds; the only difference is that in close-plumaged fowls, such as Buff Leghorns, there should be a stronger shade of

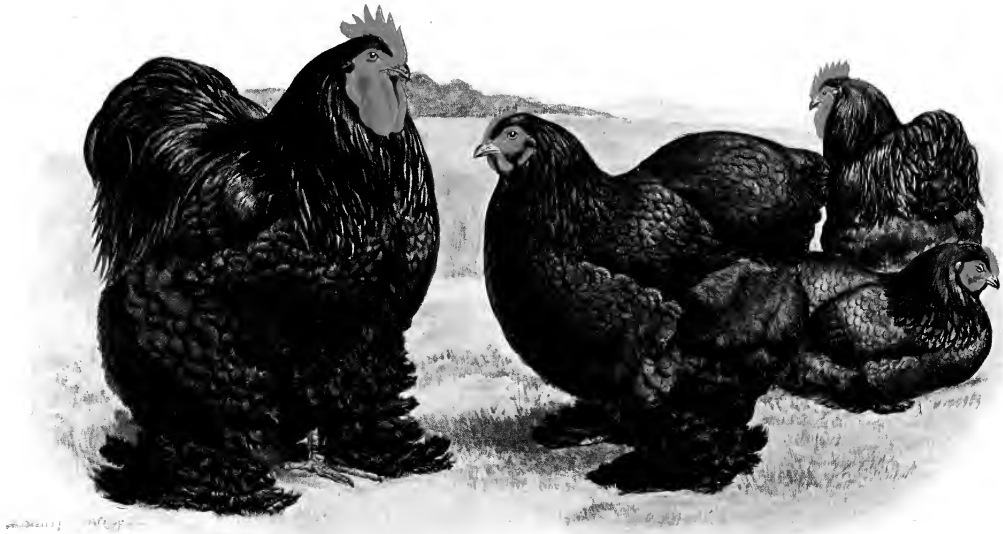
color in the surface plumage of the breeding stock. Buff Leghorns generally have less strength of color in the under plumage than other breeds, and their offspring are usually lighter in surface color than the parent stock; for this reason, more color is needed in the breeding stock.

BLACK COCHIN

41. The **Black Cochin** of the present time is a made variety. As the fowls originally came from China, they did not have rich black plumage, and were lacking in other qualities. In the Poultry Book of Wingfield & Johnson, issued in 1850, it was stated: "Black Cochins, of which so few have been exhibited, are very scarce. Several have been imported but we have reason to suppose that a large majority of those now in England have been bred between the white and buff varieties. Some of the best that we have seen have their sire of the former color, while their mother was a buff fowl. From thirteen eggs ten dusky chicks were produced, of which, in due time, several assumed the following colors: two pullets were wholly black; two pullets and three cockerels were more or less gold in hackle, and marking in the wings; and the remaining three were very darkly penciled pullets, altogether dissimilar to any Shanghais we had ever seen. The hatching of subsequent nests of eggs gave a similar proportion of color."

Some poultry authorities have claimed that pure black Shanghais, or Cochins, have never been imported from China, but that all the black fowls brought from that country were of the breed known as Langshan. Whether or not this is true, there is no doubt that many of the original partridge-colored fowls produced offspring with black plumage and considerable red in the hackle and on the wing bows of the males.

42. Description.—Black Cochins are truly Cochin in size, shape, and feathering, the difference between them and those of the other varieties of Cochins being in the color of the plumage. The plumage must be glossy black throughout, overcast with a rich beetle-green sheen on the males;



Black Cochins

and less of this on the females. All Cochins must have beautiful head formation, single combs of medium size and evenly serrated; Cochins may have attractive combs with but three points, and four points frequently occur; but the Standard demands that all Cochins have five points in their combs. The wattles and ear lobes of Cochins should be prominent and fine in texture; the eyes red; the shanks and toes of Black Cochins should be yellow or dusky yellow, but they are usually black. The soles of the feet must be yellow; this is one of the main distinctions between the Black Cochins and the Black Langshans; the soles of the feet of Black Langshans are pinkish white, and whenever this shade occurs in the feet of Black Cochins it is evidence that they have been tainted with a Langshan cross.

43. Mating.—Black Cochins of good quality may be produced by mating exhibition fowls of the best quality. Shape in fowls of this variety is of first importance. Only those that are perfect or nearly perfect in the Cochin qualities should be mated. If males and females that have rich, glossy black plumage are mated, year after year, red is likely to appear in the hackle plumage of the female offspring, and is almost certain to appear in the plumage of the males. The method usually followed is to mate females that lack the richest plumage color with males that have the richest sheen on their plumage. The best exhibition males are usually produced from females that have the rich green sheen in the plumage. To correct an excess of sheen in the plumage, females that have little or no sheen are used. The general rules for mating Buff Cochins should be followed in mating Black Cochins, the only difference being in the selection of color.

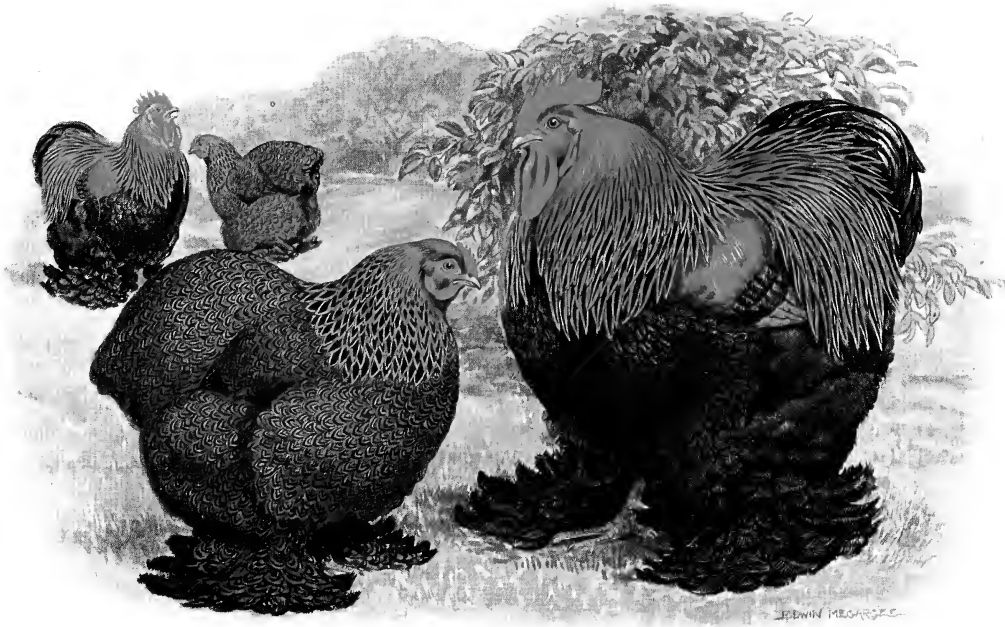
PARTRIDGE COCHIN

HISTORY AND DESCRIPTION

44. No fowls are more difficult to breed to perfection than those of the **Partridge Cochin** variety. They must be not only true Cochins in form and feather, but their color must be perfect in shades, tints, and markings as well. No other variety color is more beautiful when the shades are true and well assembled and none less attractive when of inferior quality. The value of fowls of this variety is in their exhibition qualities. Specimens that approach perfection in form and color are desirable and are readily disposed of at high prices. Those of medium quality and those below this grade have but little value other than for egg production and the price they will bring in market.

45. History.—Lewis Wright, of England, stated that Partridge Cochins had been but little bred in England up to 1870; but that the Rev. Mr. Marsh, of Massachusetts, had given special attention to their cultivation, and that he had a strain so pure and true that they improved other strains into which they had been introduced. Perhaps the best Partridge Cochins of early days were produced by Jefferson Shaner, of Pennsylvania. He, Philander Williams, of Massachusetts, and Mr. Sherman Hartwell, of Connecticut, did more for the early improvement of Partridge Cochins than any other fanciers. After form, feather, and color in this variety had been established, they were finished into their present elegance by George W. Mitchell, of Connecticut.

46. Description.—In breed characters, the partridge variety is the same as other Cochins; color differences, however, are marked. Breast and under-body plumage of males should be a rich, glossy, black; the fluff and feathers about the abdomen should be black, with less gloss than the breast and body feathers; the black should extend down the thighs to the hock joint; the shank and toe feathering should be



PARTRIDGE COCHINS

black, occasionally overcast with brown; the deeper the shade of black on the breast and body and the more sheen on the surface, the greater the beauty will be. The eyes of all Cochins should be red; this shade is commonly spoken of as bay, a term denoting the rich, brilliant eye, a natural belonging of all Partridge Cochins; this color is better described as red, meaning a bright color resembling blood; bay is a reddish-brown color.

The most beautiful shade of color for exhibition males is a rich deep red, the feathers being striped down the center with rich, glossy black so dense as to have the appearance of having been laid over the red; the black stripe should extend down and taper to a fine line at the point of the feather; the black should not extend to the end, but should be surrounded with the red. The hackle plumage of the male should be red or dark orange; the color of the plumage on the back of the male should be a darker shade of red than the hackle; this is called reddish brown. In the finest fowls, many of the feathers of the back of the male are striped with black or have black centers that conform to the shape of the feather; the saddle plumage should be of the same shade as the hackles, the saddle feathering being striped to conform with those in the hackle plumage; the tail plumage should be of a rich, glossy black, with sickles and coverts of the same shade, blazoned with green, and the plumage growing along the line of the back and saddle should be edged with red; the front of the wings should be black; the wing bows, red; and the wing primaries, black on the inside of the web of the feather, with bay edging on the outside of the feather; the secondaries should be black on the inside and bay on the outside of the web of the feathers; a well-defined bar of greenish black should separate the wing bow from the wing bay; legs and toes of both males and females are usually a dusky yellow.

The plumage color on the head of the females should be brown; the neck hackle, red or dark orange, striped or centered with black that conforms to the shape of the feathers. It is most difficult to have clearly marked feathers in the hackle of Partridge Cochin females; frequently the center of the feather is penciled like the body plumage; the entire body

plumage should be mahogany red, penciled with lines of brown or black, which conform to the shape of the feathers, as shown in Fig. 6. The color and markings should extend over the fluffy plumage of the abdomen and down to the end of the toe feathering; the main tail feathers should be brownish black, except that the two higher feathers may be penciled with brown; it is not unusual for them to have more or less penciling in the entire tail plumage; wing primaries should be black, shaded with brown; the inner web of the secondaries should be of the same shade as the secondaries, with the exception that they should be penciled with a lighter shade. The beauty and finish of Partridge Cochin females depends on their having one even shade of color throughout. Color and markings of an exhibition male and female are shown in the color illustration of Partridge Cochins.

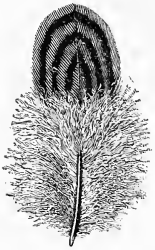


FIG. 6

MATING OF PARTRIDGE COCHINS

47. Standard Mating.—Partridge Cochins of both sexes might once have been produced of an average quality from exhibition males and females; but the present type of Partridge Cochin for exhibition can be produced only from double mating. Those wishing to have a flock of Partridge Cochins that will be valuable for producing eggs and table poultry can produce them of an average quality by mating continually for the production of females, without regard to the production of males. This may be accomplished by mating males with orange-red top plumage with females of the most desirable shade of color. To improve quality in the offspring, males from such matings should be selected from time to time and be mated with the best females. New blood for a line of breeding of this kind should be introduced through a cockerel selected from a *pullet-breeding* strain. The fowl selected should be as near as possible to Standard description of an exhibition male. Cockerels of superior quality are occasionally produced from pullet-breeding strains.

48. Double Mating.—Double mating for producing exhibition offspring in this variety is imperative. Fowls of the finest exhibition quality cannot be produced to any extent from standard matings. Matings to produce good cockerels must have in them males which in every way meet the demands of exhibition quality; the top color must be as described for males; to improve the luster of plumage in the offspring, rich, brilliant, red top color striped with glistening black will be needed, as well as rich, glossy, black body plumage. Such males may be mated to large females that have perfect form and color; but to be certain of success in producing males, the strain must be bred in line for a number of years until the females have been brought to a point where they produce the most desirable quality of exhibition males. Occasionally the breeding line may be strengthened through the introduction of large females that have come from the female line, and which have clean, black hackles and not as much color and penciling as exhibition females. To produce the best males for exhibition, hens used in the matings must have hackles that are edged with red and are solid black in the center.

Exhibition males and females of the finest quality can be produced, in this variety, only by many years of careful line breeding. The hen shown in the color illustration was obtained by breeding in line an established strain for more than 20 years. Both males and females produced in this way were so rich in the blood of the female line as to have the shade of color that would naturally follow such matings, and many of the males were penciled in body plumage. The top color of the males was of a much lighter shade than the top color of exhibition males. The difference in color is shown in the color plate of Partridge Cochins; the pair in the foreground have exhibition color and markings; the cockerel in the background is strong in the pullet breeding line; the hen with him is well adapted for producing cockerels. In selecting fowls for the production of exhibition pullets, females that are almost perfect in size, shape, and color must be mated to a male of equal quality, chosen from a pullet-breeding strain; line breeding from these must be followed closely, year after year, in

conformity with the rules for establishing a strain. Size can be maintained and color and markings improved by breeding exclusively from hens mated to the best of the cockerels each year from the strain. New blood should never be introduced directly into a pullet-breeding strain of Partridge Cochins, and under no conditions should fowls from a male-producing strain be mated for the production of pullets; new blood should be introduced only as described for establishing a strain.

WHITE COCHIN

49. Description.—The **White Cochin** should have the beautiful Cochin form and pure white plumage; there must not be even the least foreign color in the plumage. Fowls of the white variety are perhaps the easiest of all Cochins to produce, as they have always possessed good Cochin form; the difficulty has been to increase the amount of their feathering and fluff without producing heavy hock plumage, and to have their plumage pure white throughout. They have always had a creamy tinge in plumage, and formerly, when they became old, their plumage would turn lemon yellow. As the result of careful selection, the White Cochins are now of such a quality that they rival those of all other varieties in breed characters, and they have also pure white plumage.

50. Mating.—White Cochins for producing exhibition offspring must possess size, shape, and color of the highest quality, because they have no value in the exhibition pen unless they are as nearly perfect as it is possible for them to be, and this excellence can be obtained only by breeding from parent stock that has the most desirable qualities.

WHITE COCHINS

CUCKOO COCHIN

51. The **Cuckoo Cochin** is seldom, if ever, seen in America. Some cuckoo-colored Cochin Bantams have been shown in America, and a few have been exhibited in England. A Cuckoo Cochin is true Cochin in type, with color and markings like those of the Barred Plymouth Rocks. The variety has come from matings of Black and White Cochins, the

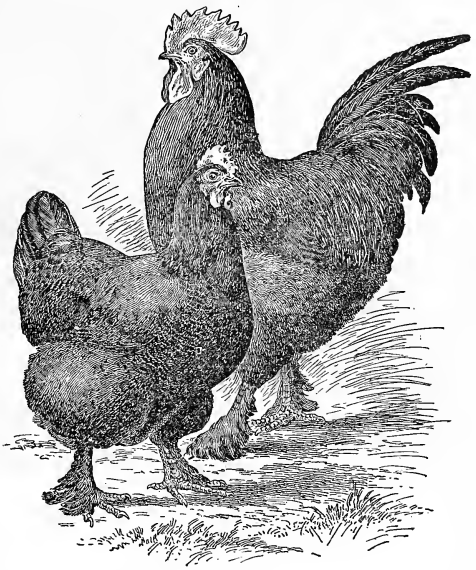


FIG. 7

offspring being selected and remated until fairly good cuckoo color has been produced. The fowls have never been perfected enough to make them desirable, and they will not breed true when mated. Cuckoo color is the name used in England, and it describes what is called Barred Plymouth Rock color in America, and Coucou in France and Belgium.

LANGSHAN

ORIGIN, DEVELOPMENT, AND BREED CHARACTERS

52. Origin.—The **Langshan** fowls originally came from a province in China, known as Langshan, and their ancestry cannot be traced. They were located by officers of the English army in 1862 and were brought to England 10 years later.

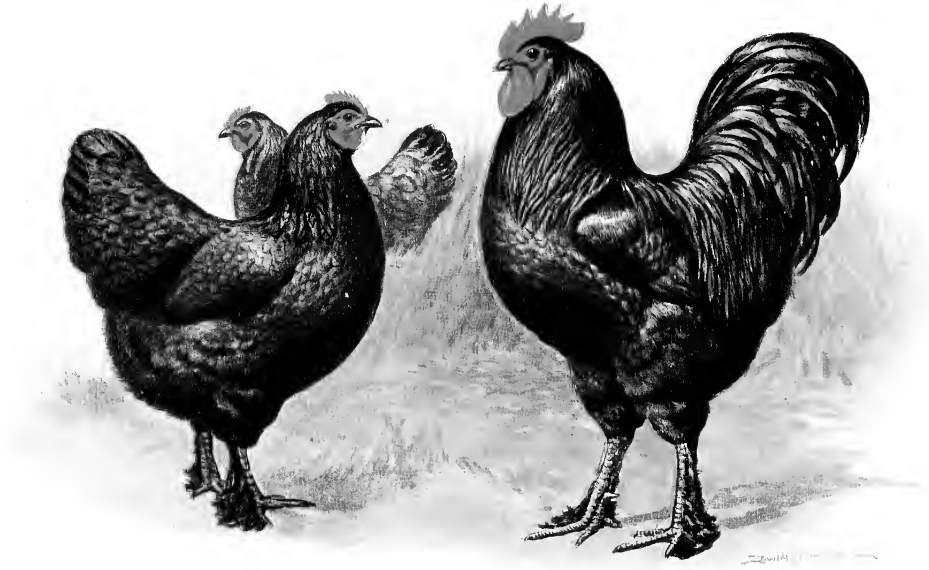
53. Development.—The first attempt at developing Langshans was made in the English colony in the northern part of China. Their sterling qualities were mentioned in letters that were sent from China to England, and later some of the fowls were shipped to England.

54. Breed Characters.—There are three types of Langshans—the original, or Croad, type, as bred in England; the medium, or modern, type, preferred in America; and the extreme type, preferred by some English fanciers. The original Croad type is shown in Fig. 7, which is taken from an illustration of the Langshans first brought to England; the extreme type, preferred by some English fanciers, is shown in the color illustration of White Langshans; the modern, or American type, is shown in the color illustration of Black Langshans.

BLACK LANGSHAN

ORIGIN, DEVELOPMENT, HISTORY, AND DESCRIPTION

55. Origin.—The modern type of **Black Langshan** was made by the poultrymen of America and England, and the many changes that have been made in the fowls have been brought about by those who worked, first, to produce a general-purpose fowl, and second, to make them beautiful for



BLACK LANGSHANS

exhibition as well as to have them of excellent utility qualities; but the extreme type has been made more for ornamentation than for utility.

56. Development.—The first marked development of this variety was made in England by Major A. C. Croad. Mrs. R. W. Sergeant began their development in America, and later the poultrymen of England and America developed them into the type of fowls shown in the color illustration.

57. History.—There has been continued controversy relative to Black Langshans ever since their coming from China. At the present time there are two standard descriptions for them in England; the type of Langshan bred in America differs so materially from either as to necessitate still another standard description. The description given is of the medium, or modern, type, as shown in the color illustration.

58. Description.—Black Langshans are fowls of more than average size; immature fowls weigh from 6 to 7 pounds, and mature fowls average from 9 to 12 pounds, according to their age and sex. They have a graceful carriage of body; the head is carried well back, and the males have a flowing hackle, which comes down over the shoulders, but is not so prominent in the females. They are active; fairly long in leg; wide between the thighs; and have great length of breast; their combs are single and have from five to six points—five preferred; their eyes are large and brilliant, and of a brown or hazel—the darker the shade, the more desirable. They are of medium length, deep through the body, and have large breasts in comparison with their general makeup. The tail of the Langshan male is carried rather high, frequently extending above the line of the top of the head; it is very prominent, and well furnished with sickles and tail coverts. The wings are carried well up; the thighs are medium in length, the greatest length occurring in the shank and first joint, or drumstick.

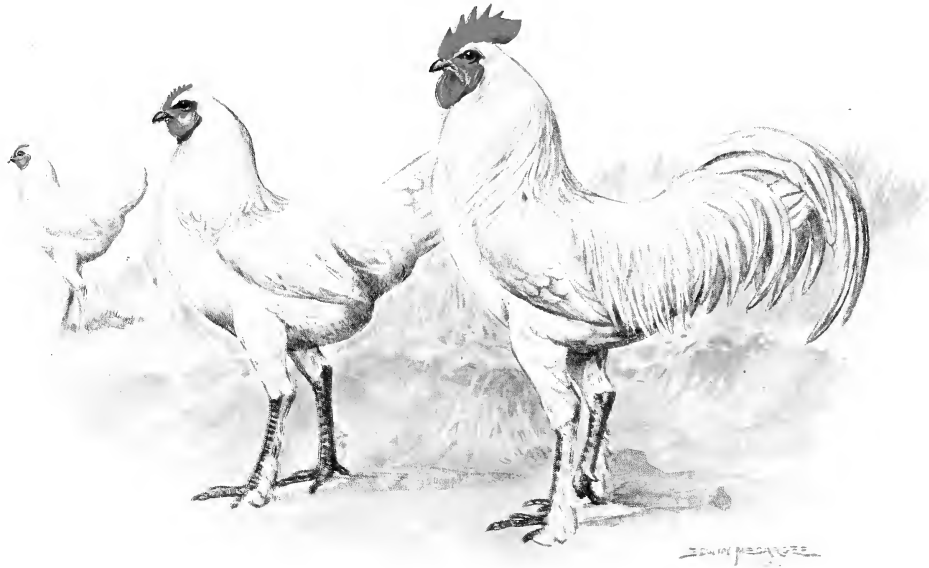
Plumage color throughout, in both males and females, is black, with a brilliant beetle-green sheen overcasting it; the color between the scales of the shanks and on the bottom of the feet is pinkish white. The females have a beautifully

formed outline, which is well rounded and free from a squatty appearance; they should be long in the breast, with the back rather long; the tail prominent and carried upright, the top line sometimes being carried almost in line with the top of her head; the comb should be of medium size, evenly serrated, with five or six points; the main tail feathers should be well spread, and the length of legs should conform to the length of legs in the males. The main defects in this variety are white in the tips of the feathers or in the ear lobes, also blue or purple barring in the plumage, and white in the shank and toe feathering.

MATING OF BLACK LANGSHANS

59. Mating for Shape.—The selection of Black Langshans for the breeding pen must depend on the type of fowls desired; if the preference is for the tall fowls, which are recognized as the English type, this style of fowls must be selected; if the American or the Croad type is preferred, that type of fowls must be selected for breeding purposes. The females should be well matured, and from 2 to 3 years old, and they must continue to have rich, black plumage without blemish. The males for the breeding pen must be as nearly perfect as possible in shape and color.

60. Mating for Color.—Both red and purple barring frequently appears in the plumage of offspring from fowls excessively rich in sheen; this results from too much of the rich green sheen having been bred into the offspring. To correct this, females that are black and do not possess any amount of sheen should be mated to males that have glossy plumage. Black Langshans of the best quality can be produced only from parents of equal character that have been produced by breeding in line for a number of years for the establishment of a strain. Color of the most desirable kind in males will be produced from hens that have the finest green sheen overcasting their entire plumage, mated to males of the richest color. Fowls with the richest sheen will be produced from such parent stock, and some that have bars of purple across the plumage are likely to result from such matings. The best



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White Langshans

females are likely to come from somber-colored hens mated with males that have plenty of sheen in their plumage. Mature hens of large size should be used in all matings.

WHITE LANGSHAN

61. Origin.—The **White Langshan** fowls came as sports from the black variety, and have been developed from that source into the present type of fowl. They were first noticed in England in 1885, and they have been more or less encouraged since, both by English and American fanciers.

62. History.—White Langshans were first shown in England, and later in America. Some have been produced in America from sports that came from the black variety. They were admitted to the Standard of 1893, and a few of them are seen occasionally at the largest shows.

63. Description.—White Langshan fowls should have the same breed characters as those of the black variety; their shanks and toes are slaty blue, with pinkish white showing between the scales and on the soles of the feet; their plumage is said to be pure white, but there is a slight bluish tinge in the plumage of most of them, and although they have been much improved in plumage color, they are not as white as the White Wyandottes.

64. Mating.—In selecting White Langshans from which to produce exhibition offspring, only fowls that are true to breed characters and as pure white in plumage as possible should be used in the breeding pen. The color of the plumage can be improved in this variety by selecting fowls that have very pale-colored shanks; skin as white as possible; and the feathers, web, fluff, and quill all as white as possible. The shape selected must be the same as described for Black Langshans.

BLUE LANGSHAN

65. The **Blue Langshan** is a non-standard variety, and but few of the fowls have ever been produced.

66. Description.—Blue Langshans must be true Langshans in form; the plumage of the neck hackle, back, saddle, tail, and sickles must be a deep slaty blue, with a sheen overcasting the feathers. The same color should be present in the wing bows; the rest of the plumage should be slaty blue, each feather laced along the edge with a darker shade that conforms to the color of the back. The contrast in color should be well defined. The females should have clear, slaty-blue plumage throughout, each feather being distinctly laced with dark slate color. To be attractive, Blue Langshans must conform to the Blue Andalusians in color and markings.

67. Mating.—Great difficulty will always be experienced in breeding blue-plumaged fowls, this color having been produced from intermingling black and white varieties. Many of the offspring will have white or partly white plumage; the best success will be obtained by mating fowls that are most perfect in color and by selecting the best of the offspring and remating them to improve size and shape and make better and better the color in offspring. The same method must be applied for the production of Blue Langshans that is required for producing Blue Andalusians. Color must be established and be kept at its best by selection, and the introduction of either black or white immediately destroys the purity of plumage color.

BUFF LANGSHAN

68. **Buff Langshan** fowls have been mentioned from time to time and persons who have seen them state that they are indifferent in form and color. It has been thought that they might be buff-colored offspring from Buff Brahmas; others think that they have been produced by crossing White Langshan males with Buff Cochin females that were long in leg and had but little shank and toe feathering.

BELGIAN, DUTCH, AND GERMAN FOWLS

BELGIAN

INTRODUCTION

1. The fowls most popular in Belgium are the Braekel, the Campine, and the Malines. Other varieties that attract more or less attention in that locality are the Bruges, the Brabant, and the Herve. All of these except the two first mentioned are shown in Fig. 1. This illustration shows, also, the Drente and the Owl-Bearded Dutch, which are Dutch varieties; the La Bresse, which is a French variety; and the Lakenfelder, which is a German variety. During the past few years the Belgian, Dutch, and German fowls have come into increased notice. A German writer claims that Belgium has twelve distinct breeds; Holland, nine; and Germany, twenty-three. Although but few fowls of these breeds have been bred in America or England, they are gradually coming into favor.

The most popular of all of the fowls mentioned, outside of their own countries, are the Campine and the Lakenfelder. The others have received very little attention in America and but little more in England, the Lakenfelder excepted. Of all the fowls included in the group, the Malines and the La Bresse have been most developed. Following these, the Lakenfelder and the Owl-Bearded Dutch have been devel-

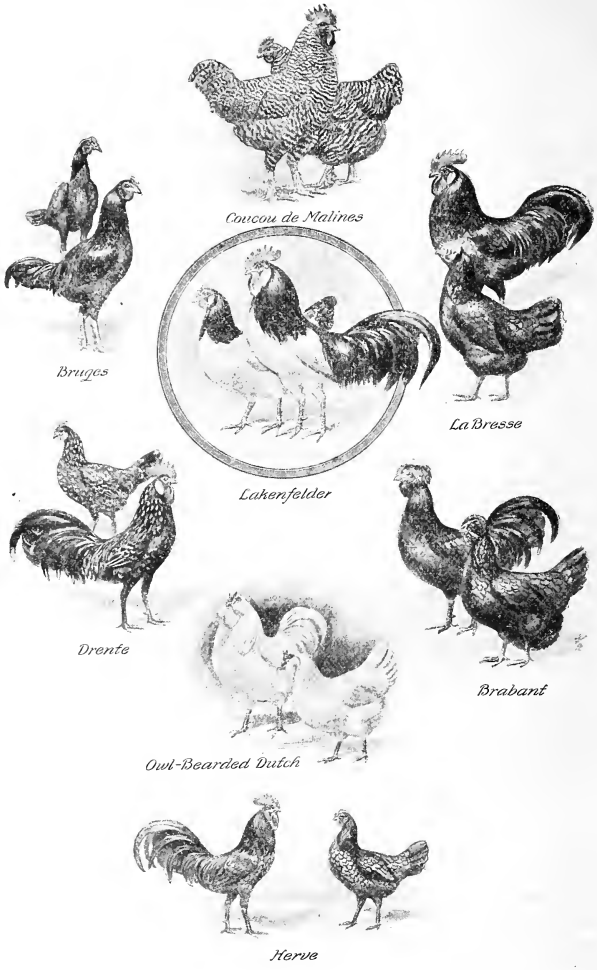

Coucou de Malines
Bruges
La Bresse
Lakenfelder
Drente
Brabant
Owl-Bearded Dutch
Herve

FIG. 1

oped in the order mentioned. Recently, the Belgian breeds have been brought into public notice, and as a result many of them have been taken into France, England, and the United States, where they are being successfully bred.

BRAEKEL

2. Origin.—It is thought that fowls of the same general characters as the **Braekel** existed in many parts of Europe as early as the 12th century. It can scarcely be doubted that they have descended from the same type of fowl that produced the Penciled Hamburg; and that they are largely Italian is indicated by their general breed characters and the style of their comb and ear lobes.

3. Development.—The Braekel fowls have been developed in that part of Belgium where the conditions are most favorable to poultry growing. Careful breeding has developed them into larger fowls than the Campines, and for this reason they are better for general purposes.

4. History.—The Braekel fowls are bred in the western part of Belgium and in some parts of France. They have been carefully bred for both egg production and market poultry, but not so carefully bred for exhibition. Braekel-Campine fowls were brought from Belgium to America and were admitted as two varieties to the Standard of 1894; they were dropped from the Standard of 1898. They were called Silver Campine and Golden Campine, the back of the male of the silver variety being a silvery white, and the back of the male of the golden variety being darker than golden bay.

5. Description.—In body formation, the Braekel is somewhat like a Leghorn or a Spangled Hamburg of large size. The official Standard of Belgium says that the comb, face, and wattles of both male and female shall be red; beak, blue or horn colored; ear lobes, almond shaped, mother-of-pearl color for the male and either white, bluish white, or mother-of-pearl in the female; head of fairly good size; comb of male, large, single, with five or more points, that of the female falling over

to the side like the Leghorn comb; breast, deep and full; body, broad and of medium size; back inclined slightly toward the tail; tail of the male well spread, sickle feathers about one-half longer than the main tail feathers.

In color, the hackle, wing bows, and saddle of the male of the silver variety are white, with some specks of black scattered through them; the rest of the body plumage should be barred, the barring extending into the sickles and coverts of the tail. The hackle of the female is white, and the rest of the plumage is barred, the barring extending into the tail feathers. The main tail feathers of both are more or less spotted with white. The distinguishing features between the Braekels and the Campines are the white back of the Braekel male, the light-colored breast, and the very dark main tail feathers of the female; both the male and the female Campine is barred over the entire body, with no white on the back of the male.

Silver Braekel fowls are mixed white and black. The black bars of the body plumage should be at least three times as broad as the white; the black should glisten with sheen, and the white should be of a grayish tint rather than pure white. The golden Braekel fowls are of a golden bay and black color. Other varieties of Braekels have been bred in Belgium, the most prominent of which are the Chamois and the Blue. The color of flesh and skin in all varieties is white; the shanks and feet are slaty blue. Males average from 6 to 8 pounds; females from 4 to 6 pounds, according to age.

6. Mating.—In Belgium, in selecting Braekel fowls for the production of offspring of proper body formation, care is exercised to mate only such fowls as have a plump body and a long, full breast that carries a large amount of breast meat in proportion to the size of the fowl. When mating for variety colors, males and females that conform in plumage, shank, and toe coloring are selected; white top coloring in males of the silver variety is considered highly desirable. Otherwise, Braekel fowls selected for mating are much like the Campine fowls.

BRUGES

7. Origin.—The **Bruges** fowls have been bred in the northern part of Belgium, in a province of the same name, for many years. No one seems to know just how they were originated. Claims are made, however, that they were produced from a cross between the Malay fowls brought from India and the fowls common to Northern Belgium.

8. Development.—The Bruges fowls have been but little cared for until recently, when they came into slight notice in other localities, and the poultry growers of Belgium have developed them more for sale as new breeds and varieties rather than for any other purpose.

9. History.—No definite knowledge as to the history or early existence of the Bruges fowls can be gleaned. Up to recently they were but little known outside of their native district in the northern part of Belgium.

10. Description.—There are four known varieties of Bruges fowls: red, black, white, and blue. All have the general appearance of the Malay family, yet they have the same traits that dominate the poultry of Belgium: the white flesh and skin, the leaden color of shanks, and the body formation general among market poultry. The comb, wattles, and ear lobes of these fowls are red; the combs are rather small. In weight, the males average from 8 to 10 pounds; the females, from 7 to 9 pounds, according to their age. They are now bred more like the Cornish Game fowl than formerly.

11. Mating.—There is no special rule for the mating of Bruges fowls other than to select the best in size, shape, and color, with uniform color of shanks, and then to breed their offspring for improvement.

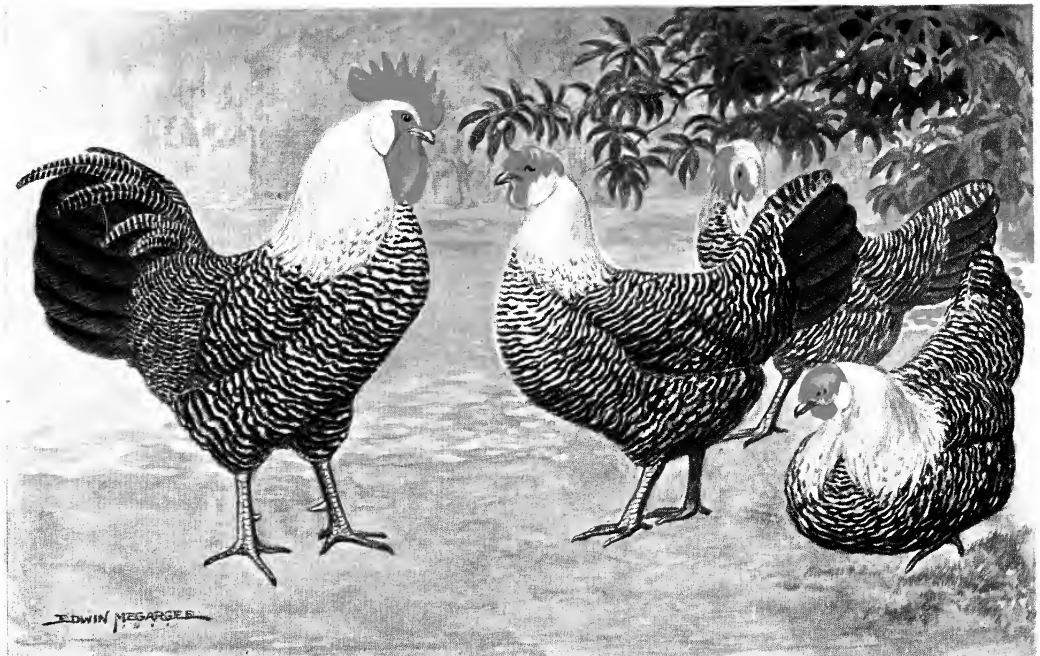
CAMPINE

12. Origin.—The **Campine** fowls have descended from fowls which were mentioned by Aldrovandi as Turkish fowls. It is impossible to state definitely the place of their origin, but it is probable that the Campine, the Braekel, and the Penciled Hamburg fowls have descended from Italian fowls that were scattered throughout the populated districts of Belgium and other near-by countries.

13. Development.—In Belgium, the Campine fowls have been developed principally for egg production. Some Campines were brought into England about 1885, and since then they have been developed in England for exhibition purposes. Two varieties, the Golden and the Silver Campine, have been thus developed. Both of these varieties are bred in America.

14. History.—In Belgium, the name Campine is given to the smaller fowls that are found in the districts of La Campine. The larger fowls of the same type found in other parts of Belgium are called Braekel. The source of both the Campine and the Braekel is identical, but generations of breeding from different lines and under different conditions of nutrition have caused them to separate. Experts will at once distinguish between them; those not so well informed notice only a difference in size. A Campine Club was formed in England in 1899, and through its influence a marked improvement in exhibition qualities has been made. Modern Campine fowls are bred in America, and a club was formed in their interest during the spring of 1911.

15. Description.—Campines are single-comb fowls with the general appearance of the Penciled Hamburgs. They are larger than this variety of Hamburgs, and both varieties have a darker shade of body color. The English Club Standards requires that the plumage of the male, including the tail, be barred or marked the same as the female of the variety to which it belongs. The ideal Campine fowl of the silver variety has a silvery-white neck hackle and barred black-and-white body plumage. A fowl of the golden variety has a golden hackle



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SILVER CAMPINES

and barred black-and-golden body plumage. The golden color of fowls of this variety is a yellowish bay, in contrast with the reddish bay in the color of the female Golden Penciled Hamburg. The black bars should be three times as wide as the white bars in the silver variety and as the golden bars in the golden variety. The tips of the feathers should be white in one variety and golden in the other. The bars should be transverse and distinct, and the lines marking the divisions between the bars should be straight and regular. Straightness and regularity of the bars is of more importance than their direction. The black should be rich in color and have a green sheen, and each color should be pure. The eyes should be dark; the comb, face, and wattles, red; the ear lobes, white. The comb of the male must be upright and of medium size, neat, and well serrated; the comb of the female should be of medium size and should fall over, or be inclined to fall over, like the comb of the Leghorn. The shanks and toes of both varieties should be leaden blue; the beak, horn colored; and the toe nails, dark or horn colored.

The Silver Campine has a white ground color and black bars; the Golden Campine has a golden ground color and black bars. The difference in these two varieties is the ground color, which is white in one and golden bay, much like the body color of the Golden Penciled Hamburg females, in the other.

The chief beauty of the Campines is their attractive form and clear color. A male of either variety that is lacking in richness of sheen on the black bars is of but little value. The hackle of both the male and the female of the silver variety must be pure white and free from spots of black, brown, or any foreign color. The main tail feathers of both male and female should be more or less barred. The sickles of the male should be long and have an attractive sweep, or curve, and both the sickles and the coverts should be barred with black. Gray spots or faint bars across the black bars must not appear in either the male or the female of the silver variety. The white must not run into the black bars of the Silver Campine, nor must the golden-bay color run into the black bars of the Golden Campine.

16. Mating.—In selecting Campine fowls for breeders, both the male and the female should possess the best Campine type that can be selected, and special attention should be given to selecting females of medium size and males of fairly large size for the breed. The females selected should possess good form and be prolific layers of large eggs. The plumage color of both should be pure and well defined, the black having a rich green sheen, and the tip of each feather should be well marked. The beauty of these fowls depends largely on the bars appearing like rings about the body. The regularity of these rings is broken by the shape of the tip of the feather. Fowls having horseshoe markings on the breast should not be used for breeding purposes.

In selecting breeding fowls for mating for the production of Silver Campines, those with a white ground color should be selected; the black bars should be almost three times as wide as the white bars. The neck hackle of both males and females should be white. The rest of the body of the male and the female should be barred. There is a tendency for males to have white backs and saddles. To overcome this, only males of the proper color and barring and that have dark under plumage should be bred from. To intensify and make more brilliant the dark bars, only males and females having dark color in the under plumage in the back, breast, and body should be bred from.

In mating the Golden Campine, the body plumage color of the breeding fowls should be a rich golden bay throughout, barred with black; the neck hackle, golden bay, free from barring and striping, and pale or yellow color. Otherwise they should have the same general breed characters and color markings as the Silver Campines. The under plumage of the Golden Campine should be darker than the surface plumage. Golden Campine fowls have dark under plumage, but to secure the best surface color, golden bay next to the skin, darkening into almost black at the upper edge of the fluff, is desirable.

HERVE

17. Origin and Development.—The origin of the **Herve** fowls is hidden in obscurity. The only indication of their ancestry is their Hamburg-like appearance. These fowls have been so little bred that it cannot be said that they have been developed beyond a meager extent. Fowls of this type have been bred in Belgium for a number of years. They are but little known outside of their own territory, and are mostly sought after by amateur exhibitors who are pleased with their small size and attractive plumage colors. There are three varieties: the Black, the Blue, and the Cuckoo Herve. The Blue Herve is the most beautiful variety.

18. Description.—The Herve is a fowl of small size not much larger than a bantam, and has the general appearance of the Hamburg. The Blue Herve is marked like the Andalusian; the Black Herve is of brilliant color and rich in sheen; the Cuckoo Herve is marked like the Malines; the Black Herve has black shanks and feet; the Blue Herve has lead-colored shanks and feet; and the Cuckoo Herve has pinkish-white color in the shanks and feet. The males weigh from 3 to 4 pounds, the females from 2 to 3 pounds. They have single combs. The color of the combs, wattles, and ear lobes is red. The males have beautiful, long, flowing sickles.

19. Mating.—In mating these fowls, the same care in selection must be given to the Black Herve that is mentioned for the Black Hamburg; the Blue Herve fowls must be mated the same as are Andalusians; and the Cuckoo Herve fowls the same as the barred varieties. In all varieties, the shanks and toes of the males and the females must match in color.

MALINES

20. The **Malines** fowls of Belgium are bred for market. They are large and have gained a wide reputation under the name of Poulardes de Bruxelles. Many varieties of Malines are recognized in their own country, and in England one variety has been accepted as an exhibition fowl. The varieties most plentifully bred in Belgium are the Black, the Ermine, the Cuckoo, and the Turkey-Headed Malines. The Turkey-Headed Malines is so called because of its peculiarly shaped head with a triple comb, such as is shown in Fig. 2. The Cuckoo Malines is the variety that has been most commonly bred for exhibition.

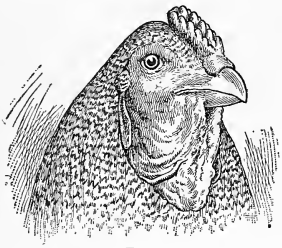


FIG. 2

21. Origin and Development.—A fowl that resembles the Malines has been known for several centuries. In recent years, some fowls of the original Malines type were crossed with Langshan and Antwerp Brahma fowls, and offspring were selected of a color resembling the Barred Plymouth Rock. The Turkey-Headed Malines came naturally from the Langshan-Brahma crosses.

The Malines fowls have been developed into large size and plump body formation, primarily for competing with fowls of other countries in the markets of France and England. Although the fowls of the various varieties of this breed have done remarkably well in their native country, they have not done so well in other countries, and in America have not proved to be any more satisfactory than the native fowls.

22. Description.—The head and neck of the Malines fowls, though strong and well proportioned, are not excessively large. They have the least amount of waste of any fowls of their size. In breast and body formation, they are broad, deep, and full; the back is long, flat, and broad across the loins; the thighs are strong, well proportioned, and set well apart,

and the breast hangs low between them. The body formation of the Malines is said to be almost square, and, when finished for market, the fowls have approximately that shape. In carriage and general appearance, the Malines are not unlike the Brahmas. According to their sex, they weigh from 8 to 10 pounds at the age of 10 months.

The color of the Cuckoo Malines for exhibition is: Beak, white or horn colored; comb, face, wattles, ear lobes, and eyes, red; shanks and toes, white. The plumage resembles that of an indifferently marked Barred Plymouth Rock.

23. Mating.—In mating Malines fowls for the production of exhibition offspring, general breed characters should have the greatest consideration. The rules for color and mating for Barred Plymouth Rocks should be applied to fowls of the Cuckoo variety, and those having the desired color should be separated and mated. Where body proportions only are desired, fowls that are not lacking in breast and body formation should be selected and mated.

In selecting to produce black offspring, Malines of the proper form and size and having perfectly black plumage must be selected. The Ermine, or Light Malines, which has plumage color like the Light Brahma, should be selected for Malines shape and color resembling the Light Brahma. Fowls of pure white plumage must be selected to produce the White Malines, which is a new variety.

MISCELLANEOUS BELGIAN

24. Other breeds of Belgian fowls are the *Antwerp Brahma*, the *Ardenne*, the *Brabant*, the *Flemish*, and the *Huttegem*. The fowls of these breeds have been bred in comparatively small numbers.

25. The **Antwerp Brahma** has been bred in Belgium mostly for crossing with other fowls, and has never been bred for exhibition. It has been described among the Asiatic fowls.

26. The **Ardenne** fowls are formed somewhat like the game fowls. They have single combs of medium size, and their plumage is somewhat like that of the Black-Breasted Red

Game fowls. The females are darker in plumage than those of the game varieties. In weight, they average from 1 to 6 pounds, according to their age and sex.

27. The **Brabant** fowls are not unlike Houdan fowls of inferior quality. They are large and of heavy body formation. There are several varieties, the principal ones being the Black, the Speckled Black, and the White. Coming as they do from the locality where Hamburg, Crevecœur, and La Flèche fowls have been bred, it is not to be wondered at that a fowl having the crest, beard, and comb of the Crevecœur, the body formation of the Braekel, and the color and markings of all should be produced.

28. The **Flemish** fowls are cuckoo colored, or barred, like the Barred Plymouth Rocks. Were it not for the peculiarities of white flesh and skin, and pinkish-white shanks and toes, they might be called the Barred Plymouth Rocks of Belgium.

29. The **Huttegem** fowls are thought to have descended from offspring created in developing the market poultry of Belgium. They are bred in three variety colors, the Gold, the Barred, and the Light Brahma. They have white skin and flesh, and bluish-white legs. They lay tinted-shelled eggs, which indicates the Asiatic blood in their make-up. They are somewhat like the Malines, and have both single and rose combs.

DUTCH

HAMBURG

30. Origin.—The **Hamburg** fowls are the most important Dutch fowls. Aldrovandi, an Italian naturalist, was the first to mention them. His first writings relative to this breed were published in 1599, in which he called them *Turkish*, and his description of them, though not complete, stated that they were white, spangled with black spots, and that their feet were tinged with blue. Another hen was described as one of the same color, except that instead of being white, she was of a yellowish color, spangled with black, her feet being blue. Although this description is rather incomplete, the illustrations, consisting of wood cuts, that accompanied it, indicated that these fowls were the forerunners of the present Hamburg fowls. Two hens, one golden and one silver, shown by these old illustrations, were clearly marked with the peculiar fleshy rose comb of the Hamburg, terminating in a sharp point behind. Mr. Dixon states that this comb is seen in no other variety of fowl, and that it is well described by *apicem in vertice gerit*, which translated into English means, "It carries a wisp of flame for its crest."

Edward Brown, of England, states that Hamburg fowls as we now have them are traceable to two distinct sources. The two Spangled Hamburg varieties and the Black Hamburg variety originated in Great Britain and have been bred in the North of England for two centuries, if not longer; the Penciled Hamburg came from the Netherlands. These fowls have been changed considerably since their introduction. It is necessary to deal separately with the Spangled, the Black, and the Penciled Hamburg varieties. Mr. Brown further states that the peculiar comb of the Hamburg is not found on fowls of any other race that can be traced, and that the

assumption is not unreasonable that the British Spangled Hamburgs are descendants of the fowls described by Aldrovandi.

The claim has been made by W. B. Dickson, of England, that the Hamburg is a variety of the Paduan (Polish) fowl. The same opinion appears in the early writings of Bonington Moubray, who wrote of poultry prior to the 18th century. In describing the Polanders (now the Polish fowls), he wrote: "They are sometimes called Everlasting Layers." This was one of the early names for the Hamburg fowls. Undoubtedly, the modern type of the Black and the Spangled Hamburg was made in England, and that of the Penciled Hamburg varieties in Holland. Evidently, all Hamburg fowls originated in Italy. Those that came to Britain in the early days were freely bred in the northern counties of England, and the Black and Spangled Hamburg varieties were derived from them. Others were taken to Holland, and we find recorded by Bonington Moubray, prior to 1816, the following statement: "Besides the Polanders, there is a small variety now imported from Holland called 'Every-Day Layers,' which are everlasting layers." From these the Penciled Hamburg varieties have been developed.

As previously mentioned, the Spangled Hamburg was developed in England. In writing of them, the Rev. E. S. Dixon, A. M., of Norfolk, England, says: "This beautiful variety is distinguished from other members of the same family by its large topknot being colored instead of white, and by the black and conspicuous muffle, or ruff, on the throat and under the beak. There are two kinds of them, the golden spangled and the silver spangled, the ground of the feathers of the former being a rich yellow, approaching an orange red, with black spots or spangles; the silver spangled differs from the preceding by having the ground of the feathers a silvery white." The early illustration of the Hamburg fowls described by Dixon indicates that they might have belonged to the Paduan rather than to the Turkish breed mentioned by Aldrovandi. In writing further of the Hamburg fowls, Mr. Dixon states that in the neighborhood of Keighley, which is in Yorkshire on the

border of Lancashire, the Bolton Grays are called Chittaprats. He also states that they were known as Bolton Grays, Golden Pheasants, and Every-Day Layers.

BLACK HAMBURG

31. Origin.—The **Black Hamburg** fowls were bred and exhibited as Black Pheasants in about the year 1800, when they were admitted at a village show in Lancashire. At that time they were thought to be of pure Hamburg origin. It is believed that they originated from the black offspring of full-tailed Silver Moonies. They were crossed with Black Spanish to improve the size and white in their ear lobes. The cross was detrimental, from the fact that white appeared in the face of many offspring, and their heads were coarse.

32. Development.—The modern Black Hamburg has been developed from the original Black Mooney. The quality of these fowls has resulted from long continued selecting, mating, and breeding for perfection of quality and beauty of plumage. The Black and the Spangled Hamburg varieties are so nearly related as to make their history and development almost identical.

33. History.—In writing of the Hamburg fowls, Charles Holt, of England, Honorary Secretary of the Hamburg Club, states: "They were exhibited long before the Birmingham show was known; they were then called Black Pheasants, and were exhibited for what I think must now be called the celebrated 'copper kettle.'" This is supposed to have been a hanging kettle that was used at that time as a champion cup for all Hamburg fowls. The meetings were held in the taverns of the town. The birds were brought in cages much like those used now for parrots. The exhibits were usually held during a half holiday and continued into the evening. All exhibitors were judges; they decided among themselves which were the best, and the awards were made with good feeling. A feast and jollification usually followed the decision. A picture of an early Hamburg show in which the copper kettle may be

FIG. 3

seen is shown in Fig. 3. Later, the Hamburg fowls were taken up by fanciers.

34. Description.—An idea of the general contour of all Hamburg fowls can best be gained by reference to the color plates. Comb and head points are of even greater importance in the Black Hamburg than in other varieties. The beautifully formed comb and head points, with their rich, brilliant color, are like a crown of scarlet and white adorning a fowl of beautiful formation and of a plumage color of glistening black throughout. A beetle-green sheen overcasting the entire plumage brings out the beauty and richness of the black, and in contrast with the beautiful sheen is the scarlet color of comb and the head points embellished with large, snowy-white ear lobes as soft as kid. The ear lobe must be enamel white, soft, delicate, and well placed against the side of the face. The shanks and toes must be leaden blue; the eyes, red; and the beak, black or horn colored.

35. Mating.—In mating Black Hamburg fowls, the best success will be obtained by breeding in line for many years for the purpose of establishing form and color. To do this, the finest fowls that can be found must be mated, and their offspring remated. This process must be followed continually without the least deviation. Henry Pickles, of Earby, England, who was, perhaps, the best breeder of Hamburg fowls of his day, stated that he had maintained a mating of them for 25 years. He said: "When the cock failed me, his best son took his place. When one of the hens failed me, her own best daughter took her place; and in this way for more than 25 years I have bred them better and better each year, until the extreme has been reached, and no more color can be permitted." In mating for black, males and females of the richest color with the greatest amount of sheen should be mated until red makes its appearance in the plumage of the offspring. When this occurs, hens of somber-colored plumage must be introduced to overcome the influence of the red.

36. Diagram for the Mating of Hamburg Fowls. The breeding of no one breed or variety has had attention

equal to that given to the breeding of Hamburg fowls in England. In writing of successful methods, the Honorary Secretary of the Hamburg Club of England states that the principle shown in the diagram of Fig. 4 is the best that can be adopted for the mating of these fowls, as the method can be followed year after year with continued success, and it might well be used for mating fowls of other breeds.

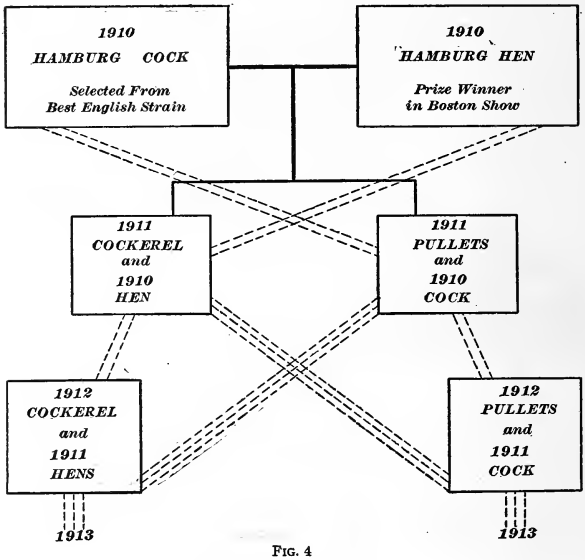
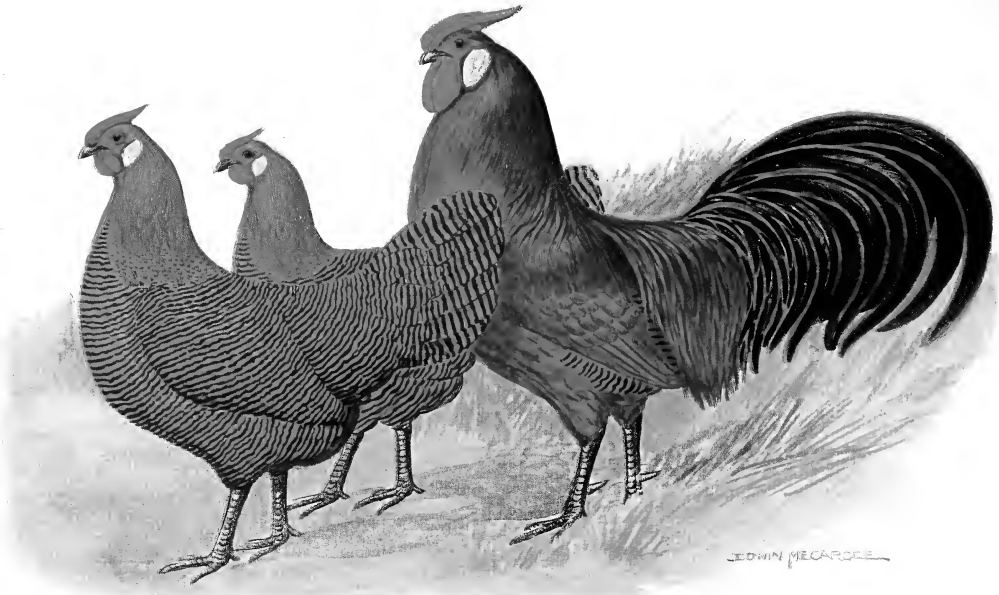


FIG. 4

The diagram is somewhat like the mating chart shown in *Standard-Bred Poultry*, Part 2, the main difference being that the fowls mated the first year are connected by a single black line; those mated the second year are connected by two dotted lines; and those mated the third year are connected by three dotted lines. This process could be continued for as many years or generations as might be necessary. It will be noticed that the foundation of the strain was a pair of carefully selected fowls.



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GOLDEN PENCILED HAMBURGS

It is thought that 4 years of breeding in this way will establish a strain of fowls that will have superior breeding qualities. This will be true, of course, only when the original fowls are perfect and the female is a producer as well.

In order to be successful, a fancier must not only be familiar with the method but must be expert in selecting each year for mating the best fowls for the purpose intended. It is necessary, under this system, to keep accurate records and to mark the fowls by toe marks or identification bands.

GOLDEN PENCILED HAMBURG

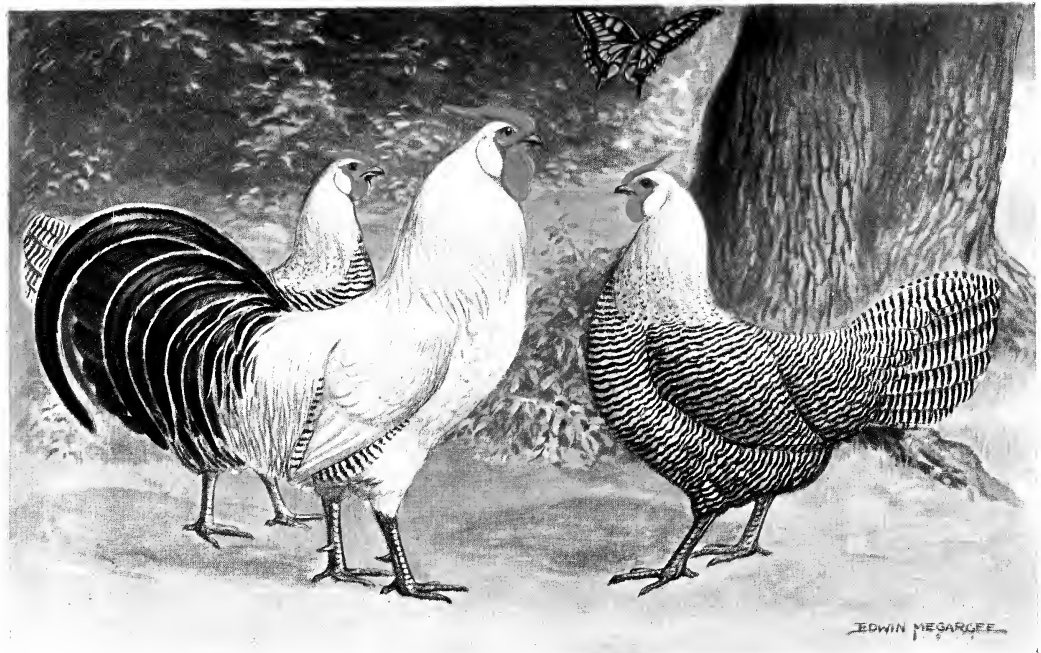
37. Origin.—Prior to 1785, penciled fowls came to England from Holland, and thence to America. Before being divided into separate classes, they were known by many confusing names. Moubray called them Every-Day Layers. When they first came from Holland, they were called Penciled Dutch; as they were scattered throughout the world, they were known as Bolton Grays, Bolton Bays, Creoles, Creels, Chittaprats, and Pheasants. It was not until the fowls had been separated into classes that the Hamburgs became known as a distinct breed and a standard was established for them. There were at first two varieties of the Hamburg, the light and the dark, which were later known as the silver and the golden. Fowls of the golden variety were selected and bred until they had been produced with color and markings so distinct as to leave them without rivals, and they were then named **Golden Penciled Hamburg.**

38. Development and History.—The Golden Penciled Hamburg fowls have been developed by establishing strains as described for the Black Hamburg. The chief aim has been to separate the golden bay from the silver, and to have the barring of the female so regular as to give it the appearance of having been laid on with geometrical precision, and the males ideal in color and free from foreign color.

The history of all Hamburgs as exhibition fowls can be told best in connection with the Silver Penciled Hamburg.

39. Description.—The general formation of the Golden Penciled Hamburg is shown in the color plate of the penciled variety. In the Golden Penciled Hamburg male, the color of the neck hackle and breast is a bright bay or reddish bay, and the body is reddish bay. In females, the body color is clear reddish bay, each feather being barred with black. The English Club Standards describes them in both sexes thus: Beak, horn colored; eyes, red; comb, face, and wattles, red; ear lobes, white; legs, leaden blue. In the males, the neck hackle, back, saddle, shoulder, wing bows, breast, and upper parts, are a bright-red bay; also the wing coverts, and the bottom web, or visible part of the feather, is generally black or coarsely penciled; the tail is black, tinged with green; the sickle feathers and tail coverts are of a solid, rich, transparent green surface color and black foundation, and are laced all around with a narrow strip of gold. In the female of the Golden Penciled Hamburg the neck hackle is of a bright golden color; all the rest of the plumage of the fowl is of a bright, golden color, each feather being penciled distinctly and evenly across with fine parallel lines of a rich green hue. The penciling and the intervening lines should be of the same width; the secondaries should be penciled as much as possible, but the markings are naturally a little coarse.

40. Mating.—A male that has the finest exhibition qualities, especially good head points, mated with hens of equal quality and from the same strain from which the males have come, will prove to be the most satisfactory breeding fowls for the production of the exhibition Golden Penciled Hamburg. It is almost a waste of time to attempt to breed Hamburg fowls of sterling quality without having stock fowls that are not only excellent in themselves but near akin and bred in line from the best. In breeding for color, the richest-colored fowls, as described in the English Standard, should be selected. The ear lobes on some of the finest males are frequently almost as large as a silver half dollar, as smooth as glass, and as white as the most beautiful enamel. The lobes of the hen should be as large, comparatively, as those of the male. The exquisite



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SILVER-PENCILED HAMBURGS

shape of the Hamburg comb cannot be lost sight of in selecting fowls for breeding. They should have eyes of a rich, bright red; the shanks and toes should be of a leaden color and as smooth as polished brass. More definite information relative to the necessities of mating Hamburg fowls is given in treating of the Silver Penciled Hamburg.

GOLDEN SPANGLED HAMBURG

41. Origin.—The **Golden Spangled Hamburg** fowls descended from about the same source as the Silver Spangled Hamburg. To avoid unnecessary repetition, and because the history of the Hamburg is more closely connected with that of the Silver Hamburg than with that of the Golden Hamburg, a more complete statement of their origin will be found in the discussion of the Silver Spangled Hamburg.

42. Development and History.—Golden Spangled Hamburg fowls have been developed from the early Mooney and Yorkshire Pheasants. Lewis Wright has stated that there was in Lancashire a variety called Golden Mooney. These fowls were smaller than the Silver Moonies, but in color and markings they excelled the latter. It is thought that the Golden Spangled Hamburg fowls have been developed from them.

The history of the Golden Spangled and the Silver Spangled Hamburg is nearly identical and is told in connection with the Silver Spangled Hamburg.

43. Description.—The Golden Spangled Hamburg fowls should be described to meet the requirements of both the American and English Standards. Being a fancier's fowl and having been made and perfected by the fanciers of England, more than passing attention must be given to the difference of description, so as to give full information concerning their dual existence. The same description as to shape will serve for the Spangled, Black, and Penciled Hamburg varieties. Notwithstanding this, they differ materially in their general make-up, the Spangled Hamburg being heavier in body than the Penciled Hamburg fowls.

The Penciled Hamburg fowls are strictly Italian or Mediterranean in form, and more like the Leghorn in their general make-up than like any other fowl. The Spangled Hamburg fowls are larger than those of the penciled varieties and more like general-purpose fowls. The females of the penciled varieties are small in comparison to the modern type of the spangled variety.

The American Standard describes the Hamburgs as of medium size with rose combs of beautiful formation, well serrated, and not so large as to extend over the width of the head on either side. The comb should be square in front, the spike of the comb tapering and extending out behind in fair proportion to the rest of the comb. The back should be of medium length, broad in front, and gradually sloping to the tail; the breast should be broad, the body round, the fluff short, the wings large and carried rather low. The English Standard says that wings are large and neatly tucked up. The American Standard demands that the flowing tail of the Hamburg shall be carried at an angle of 40 degrees and the English Standard calls for an angle of 45 degrees. In both Standards, the description of the hen conforms to the description of the male.

The English Standard describes the comb as square in front, gradually tapering toward the back, and ending with a long spike pointing in a straight line with the surface of the comb. The comb should be firmly and evenly set on the head. The top level is covered with points, and the important feature in this is that the spike shall point in a straight line from the surface of the comb. In the description of head points, the English Standard is less explicit, requiring the head to be neat in formation; the beak is to be short and small; the eyes, full and round; the wattles, thin, well rounded, and free from wrinkles; the neck, of medium length and nicely arched; the hackle, very full, of a good length, and coming well over the shoulders. As to body formation, the breast is described as prominent and round; the back, of medium length; the wings, large and neatly tucked up; the tail, of good length and carried at an angle of about 45 degrees; the sickles and secondaries, broad, plentiful, and sweeping; the thighs, somewhat short but neat; the

shanks, small boned and medium in length; the toes, slender and well spread. The Standard requires that the head shall be carried erect, the chest well out and forwards, and that the whole appearance shall be lively and graceful. In the penciled variety, the male should weigh about 5 pounds; in the other varieties, the male should be somewhat heavier. The plumage should be very profuse. Penciled Hamburg females should weigh about 4 pounds; the females of other varieties should be heavier. In other particulars, the hen should conform in an effeminate way to the male.

The color description of both sexes of the Golden Spangled Hamburg, according to the English Standard, is as follows: Beak, horn colored; eyes, comb, face, and wattles, red; ear lobes, white; legs, leaden blue. In the male, the hackle is of a rich golden bay, each feather marked down the center with a stripe of beetle green; the back and saddle, golden bay, almost maroon, with a dagger-shaped tip at the end of each feather. The wing bars should be two in number, consisting of rows of large green spangles running parallel across each wing with a gentle curve, each bar distinct and perfect; the secondaries are golden bay, tipped with large, round, green spangles that form what are called *steppings;* the breast and under-body plumage are of a rich golden bay, and each feather is tipped at the end with a round greenish-black spot or spangle (the greener the better), small near the throat and increasing in size toward the thighs, but never so large as to overlap; the main tail feathers, the sickle feathers, and the coverts are of a rich, transparent green on a black foundation.

In the hen, the head is black and bay mixed; the neck hackle, a rich bay, each feather marked down the center with a green stripe; in the saddle, shoulders, wing bows, breast, and under body, every feather is of a rich bay tipped with lustrous green spangles; each feather should be as long as possible, but never so large as to overlap; the wing bars should be two in number, sometimes three, consisting of rows of large beetle-green spangles running parallel across the wing in a gentle curve, each bar distinct and separate; the secondaries of the wing should be as in the male; the main tail feathers should be

black, tinged with green; the coverts should be spangled. In some instances only a slight lacing of gold is seen around the feathers. With reference to the English Standard, one of the prominent writers of England states that in the Golden Spangled Hamburg, the tail of the hen, and the main tail, sickles, and coverts of the male are a rich glossy green-black without spangles; the hackles of both sexes, and the saddle and back of the males are tipped instead of having spangles. The American Standard has the same requirements for the male, but the coverts of the female are required to have greenish-black spangles.

44. Mating.—In mating Golden Spangled Hamburg fowls, success will depend on the quality of the fowls used in the matings. It will be useless to attempt to produce offspring of even medium quality unless the stock is of the best and selected from a strain the fowls of which produce well and the males and females of which are of the same line of breeding. In the production of pullets, hens of the highest exhibition quality should be mated with the best males that can be obtained from a pullet-breeding strain. From these, a line of pullet-breeding males and females can be bred, and they must be kept separate as carefully as would be required for the production of any of the parti-colored varieties. Cockerels will be produced in much the same manner, except that an exhibition male of the highest quality must be mated with females descended from such a line of breeding. In other words, to succeed well in the production of Golden Spangled Hamburg fowls, they must be line bred from foundation stock of the highest quality, and the matings must be kept separate; new blood must be introduced only through a female of like quality introduced into the male line of breeding.

SILVER PENCILED HAMBURG

45. Origin.—In writing of the origin of the **Silver Penciled Hamburg,** W. B. Tegetmeier, F. Z. S., of England, states that the penciled and spangled fowls, although frequently described together, are so essentially different that they should be regarded as distinct varieties. The white body, the black

markings, the greenish-black tail, and the blue-tinged legs are all characters that prove Aldrovandi's knowledge of them when he called them Gallina Turcica, or Turkish fowl. He states also that the silver penciled variety descended from the Bolton Grays, and the golden variety from the Bolton Bays, and that the many names applied to them were of local origin and referred to the original Penciled Dutch, as they were called when they first came to England.

46. Development and History.—The Silver Penciled Hamburg has been developed from the crude originals into beautiful type. The color description of the present in contrast with the color description of early days tells of their development.

The history of the Silver Penciled Hamburg is so closely connected with that of the other varieties as to make it possible to give the history of all under that of the spangled variety.

47. Description.—The description of the originals of the Penciled Hamburg might be compared with the description of the modern variety. The early Penciled Hamburgs were fowls of small size, compactly built, and very active. The body plumage of the females of one variety was white, penciled with transverse bars of black, and the body plumage of females of the other variety was golden, penciled with black. The neck hackle of the silver variety was perfectly free from dark markings; the males were free from these markings, their plumage color being either white or bay. The earliest color illustrations of the golden variety show the males of one even golden bay without deviation, except in the tail, which seemed to be bronze and black. The neck of the female conformed in color to the neck of the male. The entire body was irregularly marked with black lines.

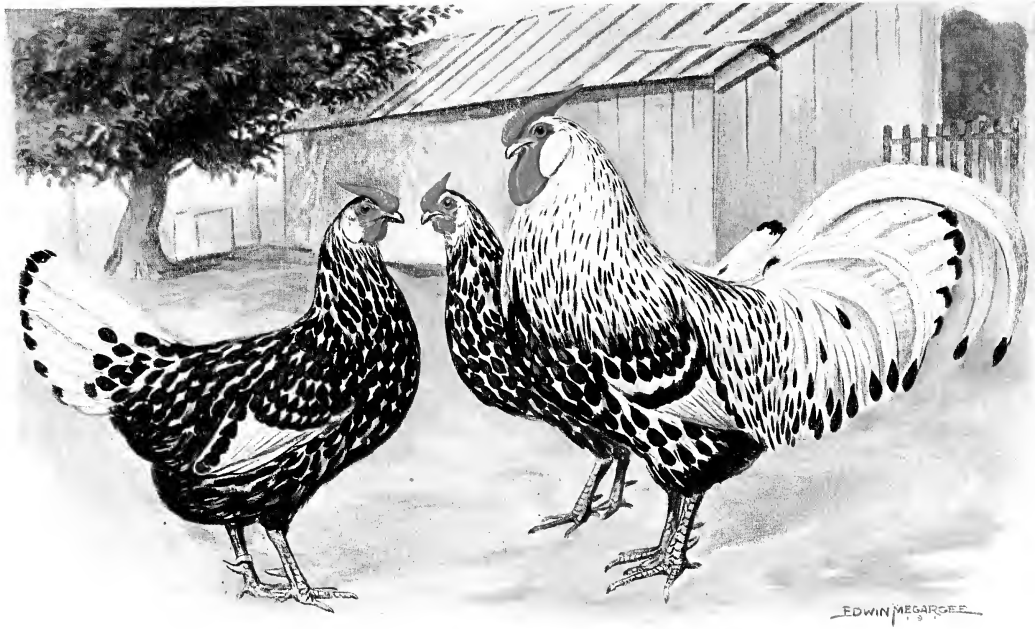
The present standard for color in the males is as follows: The hackle, back, saddle, shoulders, wing bows, breast, and under parts are silvery white; the wing coverts have the bottom web, or visible part, of each feather white, and the top web, or invisible part, of each feather coarsely penciled with dark; the secondaries are as white as possible, the top web

being generally black or coarsely penciled; the tail is black tinged with green; the sickles and tail coverts are of a rich, transparent green surface color, black laced all around with a narrow stripe of white. In the female, the hackle is silvery white; the breast, thighs, back, saddle, shoulders, wing bows, wing coverts, tail, and tail coverts are silvery white, each feather being distinctly and evenly penciled straight across with fine parallel lines of a rich green hue—the penciling and the intervening ground color being of the same width; the secondaries should be penciled as much as possible, the markings a trifle coarse. The description embodied in both the American and English Standards conforms fairly well to the preceding description; but as seen in the exhibition pen, many of the males are striped about the fluff the same as in the golden penciled variety. Many of the males and females show markings in the hackle, and the black extends into the back of some of the males.

48. Mating.—The Silver Penciled Hamburg fowls must be mated the same as the Golden Penciled Hamburg. Although better offspring can be produced from them by single matings than is the case with the Golden Penciled Hamburg, the most beautiful fowls, especially females, are bred from exhibition hens of the highest quality mated to males that have been bred in line from such females mated to males that naturally come from them. To maintain the beautiful white plumage in males, exhibition males should be mated to females from a cockerel-breeding line.

SILVER SPANGLED HAMBURG

49. Origin.—The origin of the **Silver Spangled Hamburg** can best be discussed in connection with that of several of the other Hamburg varieties. For many years fowls known under the several names of Gold, Silver, and Black Pheasants, Gold and Silver Moonies, and Red Caps were bred in the northern part of England. All of these were undoubtedly of the same general character, differing in color only. When the poultrymen of England began to exhibit these fowls, the interest in them increased, and they were separated into the three



SILVER-SPANGLED HAMBURGS

varieties, the Silver Spangled, the Golden Spangled, and the Black Hamburg. The theory that the Black Hamburg came as black offspring from the Silver Moonies has been accepted. The Golden Spangled and the Silver Spangled Hamburgs were made by mingling the blood of Silver Pheasants with that of the Silver Moonies, thus producing better spangles in the silver variety. The Golden Pheasants and Golden Moonies were used for developing the golden variety. The Penciled Hamburg fowls were produced as distinctive offspring from the Bolton Grays and the Bolton Bays by selecting the best of them and breeding in line for more than fifty generations.

50. Development.—The Silver Spangled Hamburgs have been developed from the crude originals. More skill and more persistent attention have been given to the production of the several varieties of Hamburgs than has been expended on any other breed. As the result, a fowl has been created that has a well-established type and variety color, which is beyond comparison when of the best, but which reverts almost to the level of a mongrel when neglected.

51. History.—More attention was given in early days to the Hamburgs than was bestowed on any other breed of fowls, the Cochin excepted. In the publications of Wingfield & Johnson, in 1853, are shown a color illustration of Penciled Hamburg fowls and a black and white illustration of the spangled variety. Feathers illustrating their markings and a standard description of them were included in the publications. In the race for popularity, the Cochin was their rival from the beginning. The best fanciers have given great attention to the Hamburg fowls. English and Canadian fanciers have succeeded better with Hamburgs than have the fanciers of the United States, perhaps because they have given them more attention. Hamburg fowls have never been such favorites in America as in England. Boston, New York, and the larger exhibitions of Canada are the places in America where Hamburg fowls have been shown to any extent.

52. Description.—The Silver Spangled Hamburg fowls conform in every way to the description of the Golden Spangled

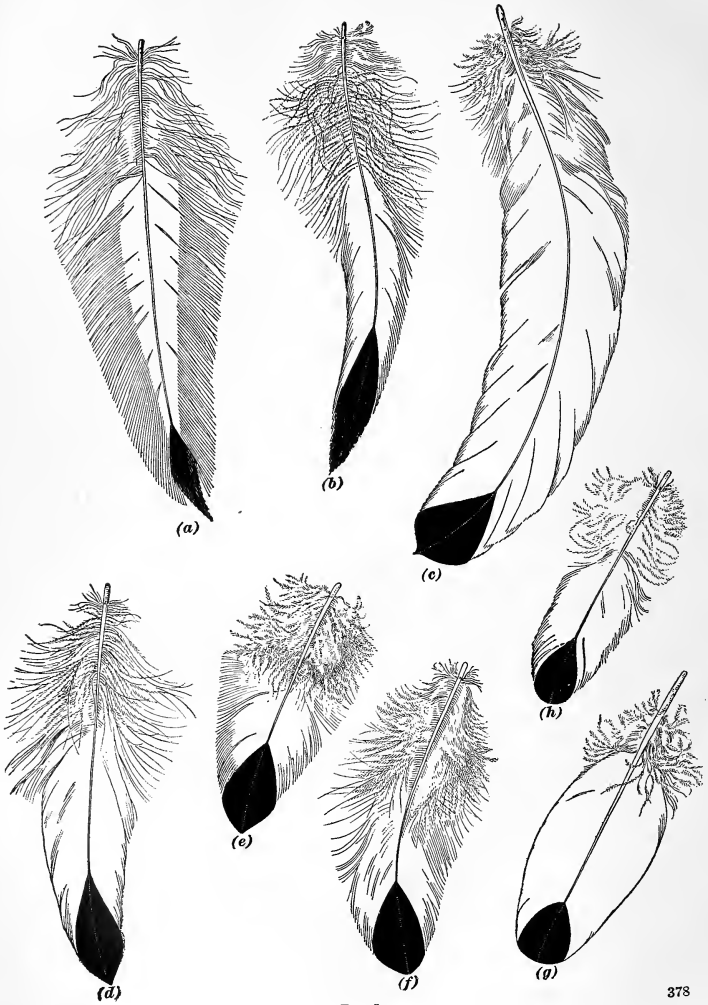


FIG. 5

Hamburg, except that the body color of the Silver Spangled Hamburg is white and the spangles are black. The main difference will be found in the back and saddle. In the Silver Spangled Hamburg males, the feathers in these parts are white, with a small, black, dagger-shaped tip at the end. In the males of the Golden Spangled Hamburg, the feathers of the saddle are golden bay, each feather being striped down the center with green. The hackle of both males and females of the Silver Spangled Hamburg is silvery white, and each feather is ticked with a small, black, dagger-shaped tip. In the Golden Spangled Hamburg, the hackles of both males and females are marked down the center with a stripe of black.

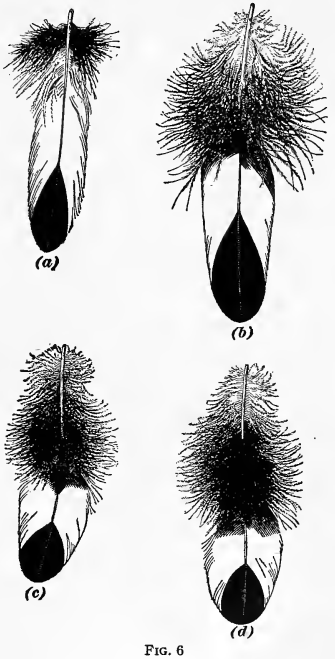


FIG. 6

53. Mating. — In the mating of Silver Spangled Hamburgs, fowls of the finest quality must be selected — those that have been bred in line from the best that can be produced. It is better to depend on well-selected fowls bred from the best breeding strains than to select from strains of unknown quality. A trio of Silver Spangled Hamburg fowls — composed of a male of the highest exhibition quality and two females, one of exhibition form and color and the other perhaps too dark for exhibition—selected from a strain known to be productive of the best, will answer well for producing both males and females of exhibition quality.

Sample feathers of Silver Spangled Hamburg males and females are shown in Figs. 5 and 6. In Fig. 5 (*a*) is shown a Silver Spangled Hamburg male hackle feather; in (*b*), a male saddle feather; in (*c*), a male main tail covert feather; in (*d*), a male lower tail covert; in (*e*), a male lower breast feather; in (*f*), a male thigh feather; in (*g*), a male secondary feather; and in (*h*), a male wing-bar feather. In Fig. 6 (*a*) is shown a Silver Spangled Hamburg female hackle feather; in (*b*), a female saddle feather; in (*c*), a female back feather; and in (*d*), a female breast feather.

No other color and markings are so difficult to produce as those of the plumage of the Silver Spangled Hamburg, and it is almost a necessity to establish a separate line of breeding for males and females, for only in this way can the best exhibition Hamburg fowls be produced.

These illustrations were made from feathers taken from Silver King and his mate, which were two noted prize winners. Although they had a much lighter shade of color in the under plumage than is demanded by the Standard, these two fowls were admitted to be among the best of their kind.

WHITE HAMBURG

54. Fowls having the same general formation as the silver penciled variety, and with white plumage, have been bred as a separate variety. They are supposed to have come as white offspring from the silver penciled variety, and are now known as the **White Hamburg.** Although they are recognized as a standard variety both in America and in England, they have never been bred to a perfection equal to that of the other varieties. This variety has the same kind of comb, face, wattles, and ear lobes as other Hamburg fowls; the beak, shanks, and toes are of a bluish shade, and the plumage is pure white to the skin, including the shafts of the feathers. To breed fowls of this variety of attractive quality requires careful selection for Hamburg type, Hamburg comb, and beautiful white ear lobes, clean, clear color in the shanks and toes, and the purest white plumage.

NON-STANDARD VARIETIES OF HAMBURG

55. There are two varieties of Hamburg besides those described, the **Buff Hamburg** and the **Speckled, or Mottled, Hamburg,** both of which may be considered as non-standard varieties. The Buff Hamburg was formerly recognized as a standard variety in England; the Speckled, or Mottled, Hamburg was not. The Buff Hamburg may have plumage of any color from lemon to rich golden buff. Of whatever shade the plumage color may be, it must be uniform throughout. It would be difficult to describe the difference between the Buff Hamburgs and the Rose-Comb Buff Leghorns were it not that the Hamburg has blue shanks and a more correct body formation. There are so few of the Buff Hamburgs as to make them almost obsolete. The Buff Hamburg fowls for breeding purposes must be carefully selected for Hamburg type and for an even shade of buff throughout. The color must be improved in the same way as for other buff fowls.

The Speckled, or Mottled, Hamburg has evidently been developed from badly marked offspring of the Spangled Hamburg. Fowls of this variety have been sparingly bred; they are never seen in America, and only occasionally in other countries. They have broken-colored plumage, black and white, more like the Mottled Java than the Houdan or Hamburg. They may be Mottled Javas with rose combs.

RED CAP

56. Origin.—It is claimed by early writers that the fowl from which the **Red Cap** fowls originated existed in the 14th century. Martin Doyle, who compiled an "Illustrated Book of Poultry," which is a revision of his book issued in 1854, gives as his authority for this statement Chaucer's description in "The Nonne's Preeste's Tale." In the early writings of Rev. E. S. Dixon, before quoted, Red Cap fowls are classed as a variety of Hamburg. The early writers that mention Red Cap fowls claim them to be mongrel Golden Spangled Hamburg.

57. Development.—Red Cap fowls received but little attention until after the Hamburg had been well developed, and the Red Cap fowls were taken up more as a separate breed than as a variety of the Hamburg. Following this, they were bred more carefully, and for a short time, beginning about 1890, or soon thereafter, they had a temporary popularity that attracted attention to them for a few years.

58. History.—Henry Belden, of England, one of the best informed poultrymen of his time, stated that Red Cap fowls were coarsely bred Golden Spangled Hamburg fowls; and that the size of the comb and body, rather than Hamburg proportion, had been developed. Other Englishmen prominent in poultry breeding agree with him; still others claim that they were produced by crossing Golden Spangled Hamburg with Old-English Game fowls. In early days, the Red Cap fowls were very plentiful in and about Yorkshire, England. They were bred almost exclusively for egg production and for market poultry. They were considered better for egg production at that time than the Leghorn fowls. They were known under the names of Pheasant fowls, Copper fowls, Yorkshire, and Derbyshire Red Caps. Very few of them have been kept in America.

59. Description.—The following description of Red Cap fowls was written for the "English Book of Poultry," 1902, by Albert E. Wragg, Edenson, Bakewell, England: "The Red Cap male is a fine-bodied bird of noble appearance, and nothing could be more ornamental than his symmetrically shaped comb full of a number of long spikes, with the leader behind. It should be well carried, firm and straight, and stand well off the eyes. The comb should be as large as can be comfortably carried by the bird. In size it should not greatly exceed $5\frac{1}{2}$ inches in length and $3\frac{1}{4}$ or 3 inches in width. The hen is shapely, very active, and a good forager; as a layer she is second to none."

The main character of the Red Cap is the immense rose comb, which stands high and has great width; the ear lobes are red. In the male, the hackle and saddle feathers are rich

red, striped with black; the breast and tail are black; the back is red, marked with crescent-shaped black spangles. The hen's tail is black; the hackles are red, striped with black; the body plumage is reddish-brown, marked with black crescent-shaped spangles. The large-sized spangles resemble those found on the old Yorkshire Pheasants.

The American Standard describes the Red Caps as fowls of large size. The cock weighs 7½ pounds; the cockerels and hens, 6 pounds; the pullets, 5 pounds. In form, they are Hamburg of large size. The males have horn-colored beaks; the eyes, face, comb, wattles, and ear lobes are red. According to the American Standard, the neck is blue-black, each feather being edged with red and the hackles shading off to black at the base. In the English Standard, the head is described as red, the hackles are red, each feather marked down the center with a stripe of black. According to both Standards, the back is red, spangled with black; the saddle is red, each feather being striped with black; the wing bows are a rich red; the coverts are red, each feather ending in a black spangle forming a black bar across the wing; the primaries and secondaries are red, tipped at the end with black; the breast and under body are black; and the tail and hangers are black, with a brilliant green sheen.

The Red Cap females are described as having the comb, face, wattles, ear lobes, and eyes, red; the beak, horn colored; the shanks and toes of both male and female, leaden blue or slate color. The head and hackle of the female is red, according to the English Standard, and brown, according to the American Standard; the back and breast, deep, rich reddish brown, free from smuttiness, each feather being tipped with a black or bluish-black crescent-shaped spangle. The color and markings of the breast, back, and wings should be as uniform as possible; the primaries and secondaries, according to the English Standard, are red, regularly tipped at the end with black; according to the American Standard, the primaries are dull black, with an edging of brown on the lower web; the secondaries have the upper web black, the lower web black, with an edging of brown, each feather being tipped with a

black or a bluish-black spangle; the tail is black; the coverts are brown, ending with a black or bluish-black tip; the color of the under plumage, in both males and females, is dark or leaden blue. The combs are described as not so large as is mentioned by Mr. Wragg.

60. Mating.—The proper spangle of the Red Cap is crescentic in shape, not round. The spangles should be as dark as it is possible to have them; the body of the female should be a deep, rich, reddish brown, each feather not regularly spangled as the feathers of the Hamburg are, but irregularly tipped with crescent-shaped black tips of irregular size. The breast of the male is of a rich, glistening black with a purplish hue. In mating for the production of exhibition fowls, combs of large size should be encouraged, but, above all, they should be of perfect form and set straight on the head; no leaning to one side is permissible. Males of the best exhibition form and color mated to females of like character are the types that should be mated for the production of exhibition Red Cap fowls. Unless they are exquisite in form and have beautiful combs and glistening plumage, the colors of which stand out bold and true, they are of no value. To gain this, a strain must be as well established for them, such as will be needed for the production of Hamburg fowls of the finest type.

Red Cap fowls are worthy of more attention than they receive; they are excellent market poultry; they grow quickly into fairly good size, and are continual layers during winter and summer; the eggs are of good size and usually have white shells, though at times they are slightly tinted.

NON-STANDARD BREEDS OF DUTCH

61. The three breeds selected from among the several that are exclusive to their country are the *Breda*, the *Drente*, and the *Owl-Bearded Dutch*. The Breda might be classed as an Asiatic, the Drente as a Mediterranean, and the Owl-Bearded Dutch as a general-purpose fowl. All have white flesh and skin, dark or slate-blue shanks, and their eggs have white shells.

All of them are bred in several varieties; the Drente is bred in all varieties common to the Mediterranean family.

Other Dutch fowls not mentioned resemble Polish and Penciled and Spangled Hamburgs. They are not known by these names, but in general appearance they are so much like inferior specimens of the fowls named that this seems to be nearest to a brief description that can be made of them.

BREDA

62. The **Breda** fowls originated in Holland. The fact that the males weigh from 6 to 9 pounds and the females from 5 to 6½ pounds would indicate that they were largely descended from some one of the Asiatic family. This breed was at one time popular in Holland. A few of them were brought to America and are spoken of by Mr. Lewis, in his poultry book of 1871, as a fowl of medium size with a peculiar head, which was destitute of comb or crest, as shown in Fig. 7. They were bred in their native land for market purposes, but of late years they have been almost lost sight of. They are of several varieties, the most common of which are barred, black, blue, and pure white. They are somewhat larger in size than are the Plymouth Rocks. They have been known in England and America as the Guelder or, as commonly called, Guelders. Early writers state that to produce barred or cuckoo color, the black Guelder cock should be mated with the white Guelder hen. They are sparingly feathered on the outside of the shanks and as pictured they were very full in breast, long in body, and resembled fowls of the Asiatic family to a slight degree.

FIG. 7

DRENTE

63. The **Drente** fowls were originated in Holland, evidently from some of the Mediterranean fowls brought from Italy to that country. They have the general appearance of the Leghorn, and they have been bred in black, blue, cuckoo, gold and silver laced, gold and silver penciled, partridge, speckled, white, and yellow variety colors; yet none of them have been bred to a type or character that would make them attractive for exhibition purposes. They are prolific egg producers. In weight, the males average from 5 to $5\frac{1}{2}$ pounds; the females, from 4 to $4\frac{1}{2}$ pounds.

OWL-BEARDED DUTCH

64. The **Owl-Bearded Dutch** fowls might be likened to the Faverolle fowls. They were originated perhaps more than a century ago, although there does not seem to be any authentic record as to where or how they were made. The top of the head, the comb, and the beak of the Owl-Bearded Dutch are like the same parts of the La Flèche; the beard and the muff, like those parts of the Faverolle fowls. The male of the silver-laced variety has light top and dark under-body color somewhat like the Dorking; the female is marked like the laced Wyandotte. They have been known in four varieties: black, gold and silver laced, and white. They are somewhat smaller in size than are the Wyandotte, weighing at least a pound less. They are so little bred, even in their home country, as to make it quite a task to find any that are of fairly good quality.

GERMAN

65. Expanse of territory considered, Germany has fewer breeds or varieties of fowls than any other country. Most of the German breeds show the influence of the Italian varieties. Edward Brown mentions eight different kinds as belonging to Germany. Sketches made by Mr. Chatterton, of England, illustrate a number of kinds, all of which indicate a lack of careful breeding, and most of them show indications of having descended from some one of the Mediterranean varieties. In some of them may be noted the peculiar formation of head and comb found in the La Flèche; others plainly reveal the influence of Polish and Andulasian crosses. Of all the German fowls, the one breed that has found most consideration outside of its home country is the Lakenfelder.

LAKENFELDER

66. Origin.—The **Lakenfelder** fowl originated in Holland, and undoubtedly came from the same source as the Campines and Penciled Hamburgs. They may have come from the union of Campines of black-and-white plumage with white Leghorns, followed by selecting the best offspring and breeding them for form and color; but there is no absolute proof of such an origin.

67. Development.—The Lakenfelder fowls were formerly developed for egg production; later they became more attractive, and English and American fanciers have done much for their improvement.

68. History.—The Lakenfelder fowls were first mentioned as existing in West Hanover, where they were shown in 1835. They were bred in the same locality as Campine fowls, which were very dark in tail and hackle plumage. It has been mentioned by some that the dark Campines were bred with white

Italian fowls, and that in this way the Lakenfelder were made. They were first brought to England about 1900, and some were brought to America about the same time. The name Lakenfelder is referred to as meaning white spread over a black field (*laken*, lac or varnish; *feld*, field). Others refer to the name as meaning a shadow on a sheet, or black on white.

69. Description.—The Lakenfelder fowls have been recognized in England and a club standard description made for them; this standard represents them as having the neck of medium length, finely tapered and furnished with long, flowing hackle; skull, short; beak, strong; eyes, large, bright, and almond shaped; comb, single and of moderate size; wattles of medium length. The head and neck of both males and females are more like those of the Campines than those of the Leghorns. The body formation of both males and females is long and tapering to the tail. The breast is broad and full; the back is broad; the wings are of medium length; the tail is full. The sickles and coverts of the males are long and carried at an angle of about 45 degrees. The shanks and feet are of medium length, free from feathers; they have four toes. Their carriage is very sprightly. The males weigh from 5 to 6 pounds, and the females from $3\frac{1}{2}$ to $4\frac{1}{2}$ pounds. A peculiarity of this breed is the erect carriage of the comb of the females.

In color, the beak is dark; the eyes are red; comb, face, and wattles are bright red; the ear lobes are white; the shanks and feet are bluish or slate color; the plumage is black and white; the hackle and tail in both and the saddle hackle of the male are solid black, free from stripes or spots. The remainder of the plumage is pure white. The plumage is beautiful, its black being clean, clear, and glistening, and its white pure and unmixed. There should be a perfect separation of these two colors; neither should mar the beauty of the other.

70. Mating.—The only rule that can be followed for mating Lakenfelder fowls for the production of exhibition offspring is to select the best and have them conform as nearly as possible to the standard description of color. Great stress

is laid on the presence of dark under plumage. This refers to the same color of under plumage necessary for producing proper surface color in Hamburg, Brahma, or Columbian Wyandotte fowls.

The difficult problem in breeding the Lakenfelder fowls is to keep the black and white separated and to have a black saddle without white on the male. This can be bred only after years of careful mating for a strain that will breed true to color and markings.

ENGLISH FOWLS

DORKING

ORIGIN

1. Although the **Dorking** fowls may have descended from the early Roman fowls of like character, evidence points to the fact that they originated among the farmers of Sussex and Surrey counties, England. It was recorded as early as 1763 that an incredible quantity of poultry was sold in the town of Dorking, and that these fowls were noted for being remarkably large and fine.

Dorking fowls are composite, in all probability deriving their size and aptitude to fatten from the large Sussex, or Surrey, fowls; their five toes and rose combs, when present, were derived from the early Roman five-toed fowls, which were crossed with the four-toed Sussex, or Surrey, fowls and produced fowls superior in size and table quality to those of almost any other breed. The composite character of fowls of this breed is perhaps the reason that so much care is required to produce them true to color, and, in many cases, uniform as to comb.

Since their development, Dorking fowls have been separated into varieties. The *Colored Dorking*, the *Silver-Gray Dorking*, and the *White Dorking* are recognized in both England and America. The English recognize, also, a *Cuckoo Dorking*. Other varieties are the *Rose-Comb Silver-Gray Dorking* and *Red Dorking*.

COLORED DORKING

2. Origin.—The **Colored Dorking,** or, as they are commonly called, the *Dark Dorking* fowls, were developed from the common fowls that were raised plentifully in and about Sussex County, England. It is thought that fowls of the Dorking type were brought from India and crossed with the fowls bred in Sussex County. Other crosses were made between the White and the Red Dorking and the very dark Sussex fowls. Black breasts were produced in the Colored and the Silver-Gray Dorkings by crossing the Spanish with the Sussex fowls. From such crosses the tendency for Dorking fowls to develop white ear lobes was introduced.

3. Development.—From the many types of five-toed fowls so plentiful in Sussex and Surrey, the poultrymen selected and mated, first to produce fowls called the Gray, or Colored, Dorking, and later for fowls darker in plumage and known as the Dark, or Colored, Dorking. These were developed into fowls that were thrifty, active, and easily prepared for exhibition. They were said to be the most satisfactory of all fowls of the Dorking varieties, because of the fact that they were always ready for the table and needed but little preparation for the exhibition pen. They were mated for improvement, and by selection they have been made into fowls of large size. They are easily developed, and are excellent for table poultry.

4. History.—Dorking fowls and their ancestors have existed in England for centuries. They have been written of as Kent, Sussex, Surrey, and Dorking fowls. About every 50 years they have been changed so as to make them each time almost a new breed. The Colored Dorking of the present has been made since 1850, and the final development of these fowls has been completed since 1885.

5. Description.—The English Club Standards states that the general characters of the males of the Colored Dorking are as follows: The head is large, free from coarseness, and broad above the eyes; the eyes are of fairly good size; the comb is

either single or rose in the Colored Dorking, single in the Silver-Gray Dorking, and rose in the White and the Cuckoo Dorking. The single comb should be moderately large, circular in arch, and finely serrated; the rose comb should be square, moderately broad in front, and free from thumb marks, side spikes, or sprigs; the ear lobes should be moderately well developed and hang down as nearly as possible to about one-third of the depth of the wattles; the wattles should be rather short; the neck, gracefully arched, with full hackle coming well over the back, giving the neck the appearance of being very broad and tapering to the head; the body should be deep, square, and massive, as large as possible, long, rectangular in shape as viewed from the side, and tightly feathered; the breast should be deep, broad, and nicely rounded; the breastbone should be long and straight; the back, broad and level, with a full saddle, moderate in length; the saddle, broad, inclining downwards to the tail; the wings, large, carried well up and close to the body.

The tail should be full, sweeping and carried well back (a squirrel tail is objectionable); the sickles, broad and well-curved; the side hangers, broad and abundant; the thighs, large, strong, and well developed; the shanks, short, strong, round in the bone, set well apart, and free from any sign of leg feathering; the spurs, set on the upper side of the shank, turning rather upwards; the toes shall be five, round in shape, the front toes long, straight, and well spread, the fourth apart from the fifth and inclining toward the ground; the fifth, coming away distinctly from the leg, firmly set in, and nicely turned up the leg. The shape and carriage should be stately, with the breast thrown well forwards.

Cocks should weigh from 12 to 14 pounds; cockerels and hens, from 9 to 10 pounds; and pullets, from 7 to 8 pounds.

The general description of the female is: The head, comb, ear lobes, and wattles should be similar to those of the males, but proportionately smaller; the body, long, level in back, deep and massive, straight in front, broad across the cushion, and tightly feathered; the tail, well developed, with broad feathers carried closely (fan tails are objectionable); the legs and feet should be similar to those of the males, although the

spurs should not be so fully developed (the English Standard provides for spurs in the females); the shape, plump, deep, and massive; the carriage, straight and matronly. The American Standard differs from the English Standard somewhat in its wording, yet the meaning is the same. The American Standard demands single combs in both the Colored and the Silver-Gray Dorking, otherwise the shape is the same.

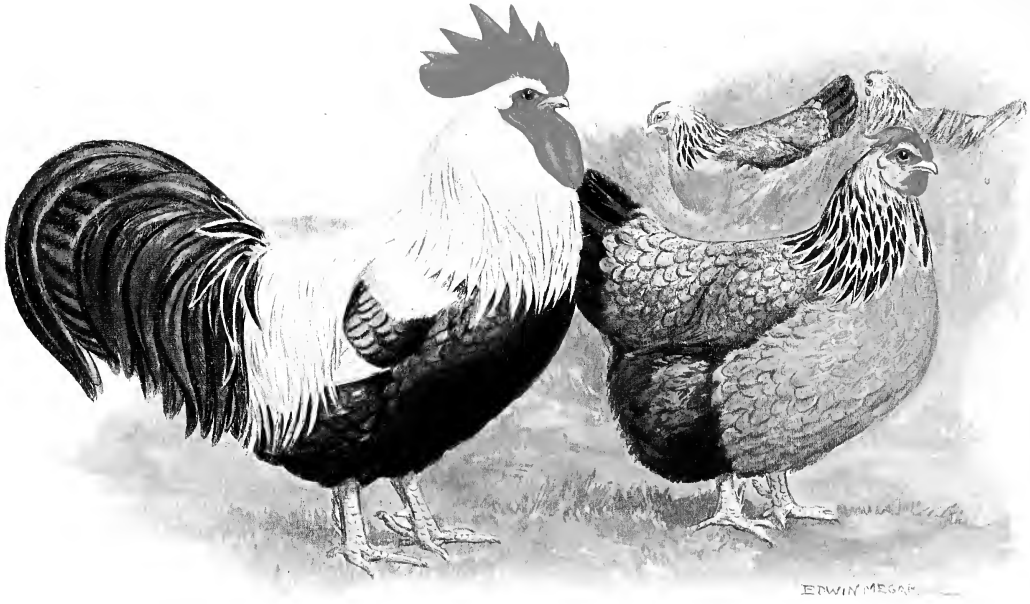
The color description of both males and females is: The comb, face, wattles, ear lobes, and eyes, bright red; the shanks, white and free from red shading or any traces of feathers; the ieet, white, free from red between the toes; the toe nails, white.

On the males, the hackles should be of a light or straw color, and more or less striped with black; the saddle feathers should resemble the hackle; the back plumage should be various shades of white, light, or gray—light or straw color preferred; the wing bows, white or white striped with black or gray—straw color preferred; the wing bars, black, glossed with green; the secondaries, light on the outer web and dark on the inner web; breast and under parts, black; the tail, black, richly glossed—a small amount of white on the primary sickles is permissible, but white hangers are distinctly objectionable.

On the females, the color of the head should be dark; the hackles, pale or straw color, heavily striped with black, and having the appearance of being black and edged with straw color; the breast, dark or red salmon, each feather being tipped with black; the rest of the body, almost black or approaching a rich, dark brown, each feather being slightly pale at the edge, except on the wings, where the center of the feather is brownish gray and is covered with small, rich markings, which are surrounded by a thick lacing of the black; the feather being free from red; the tail, nearly black or rich copper color.

The American Standard describes the Colored Dorking as a fowl of lighter color than the English Standard does. Otherwise the two descriptions are similar. The under plumage of the Colored Dorking should be dark.

6. Mating.—In mating Colored Dorking fowls for the production of exhibition offspring, fowls of large size and that



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SILVER-GRAY DORKINGS

have the proper shape, color, and markings, according to the description, must be selected. The most successful breeders select a male of a light straw color—some say the male should be almost white in top color. This light color should be tipped and striped with black or gray. All breeders object to using males that come from the Silver-Gray Dorkings, the lightest males that can be produced from the Colored Dorkings being preferred. Such males should be mated with females that conform to Standard demands. Special attention should be given to having the comb and head points of both sexes regular; the ear lobes should be red; the shanks and toes should be almost as white as chalk. The best colored shanks are usually produced by breeding from males of the lightest plumage color that occurs in the Colored Dorkings. Males dark in the hackle and top color frequently produce offspring with dark shanks. The best exhibition offspring always come from such matings. Many fanciers breed light and dark-colored Dorkings promiscuously, and select the best from those produced. The scientific breeder establishes a strain in this variety as carefully as in other varieties. In some localities of England strains of Colored Dorkings may be found that have been bred in line for more than 50 years.

SILVER-GRAY DORKING

7. Origin.—The originals from which the **Silver-Gray Dorking** has descended were the light-colored Dorking fowls of early days, then known as the Gray, or Colored, Dorking. Dorking fowls having the light-gray shade of plumage were selected and bred for producing a variety much lighter in plumage than the Colored Dorking. To improve the light-colored plumage, a cross was made with fowls of a strain of very large Silver Duckwing Game fowls. From the offspring thus produced, a type of Dorking was bred that had plumage like the Silver-Gray Dorking of the present.

8. Development.—The Silver-Gray Dorking has been developed from the Duckwing Game-Dorking cross into one

of the most beautiful kinds of exhibition poultry, and for this purpose the fowls are preferred by fanciers over those of all other varieties of Dorkings. For a long time the Silver-Gray Dorking was smaller than the Colored Dorking, but much improvement has been made, and now the size of the former is almost equal to that of the latter.

9. History.—The history of the Silver-Gray Dorking differs but little from that of the Colored Dorking. The fowls of both varieties originated from the same source, and they have been bred along different lines only as to color.

10. Description.—The general breed characters of the Silver-Gray Dorking are the same as described for the Colored Dorking. In plumage, the male must have pure white top color, but a few of the lower feathers of the neck hackle may be marked with gray; the saddle should be pure white, without striping; the wing bars, black, glossed with sheen; the primaries, black on the upper web, light on the lower web; the secondaries, white on the outer web and black on the inner web; with a black spot at the end of each feather; the wing bays, white; the breast and upper parts, black, free from white mottlings or foreign color of any kind, but in old fowls, a slight mottling on the thighs and abdomen is permissible; the tail, black and free from white; the sickles, broad and glossed with sheen; the lesser coverts, edged with white.

In the females, the head and hackle plumage should be silvery white, centered or marked with black; the breast, salmon red, shading to an ashy gray on the thighs; the back, wings, and upper body, silvery gray, finely penciled or stippled with darker gray; the tail, a darker gray than the body plumage; the primaries of the wing, dark; the secondaries, dark on the upper web and gray on the lower web; the flights are frequently powdered with gray.

The under plumage of both males and females should be dark gray or slate; the shanks and toes, white; the comb, face, eyes, ear lobes, and wattles, red.

Silver-Gray Dorking cocks should weigh 8 pounds; cockerels, 7 pounds; hens, $6\frac{1}{2}$ pounds; pullets, $5\frac{1}{2}$ pounds. Colored

Dorking fowls average almost a pound heavier than these weights.

11. Mating.—One of the most successful breeders of Dorking fowls claims that such of the White or Silver-Gray Dorking fowls as show a yellow or lemon color in the plumage should not be used in the breeding pen. Another feature mentioned by him is that they should have short, straight legs, set wide apart and strong in bone. Special attention must also be given to selecting for breeding such fowls as do not have marked defects of comb, head points, form, or feather. From the fact that the Dorking fowls have descended from a long line of ancestors, many of which possessed features foreign to the breed, it will be necessary to watch closely for such defects, as they are apt to appear in the offspring. In mating Silver-Gray Dorking fowls, the most important thing for the breeder to have is a knowledge of the line of breeding of the fowls which he selects for breeders.

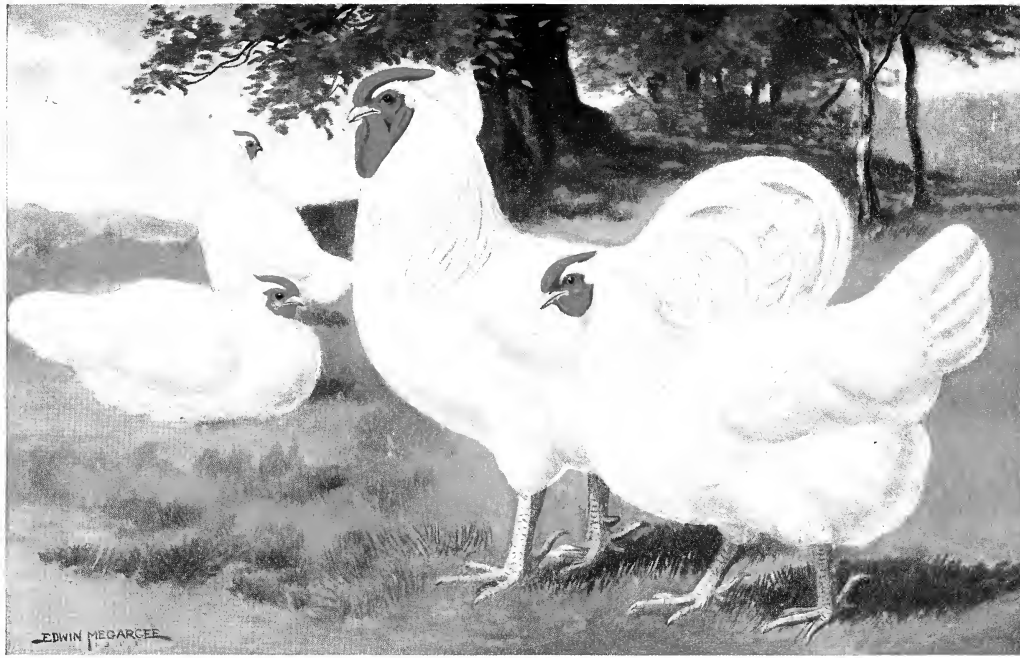
It is almost useless to attempt to breed the best exhibition type of Silver-Gray Dorking from fowls that have not been bred in line year after year for the production of a strain that will reproduce of their kind. Double matings are not necessary, but careful selection is a necessity, and unless the fowls selected for breeding have been well bred for many years, they will fail, and although they may have been properly bred, if they have not been well selected, failure will follow. Clean, clear surface color in both the males and females is needed. If the body color is silvery gray, the markings are likely to be a darker shade of gray, which gives a soft appearance to the body plumage; and if the body color is dark gray, stippled with a darker color, the fowl will have a smutty appearance and will be undesirable for exhibition purposes or for breeding for the production of market poultry. Select fowls of clean, clear colors according to the directions of the Standard, and mate, select, and remate, always using the largest females for producing eggs for hatching.

WHITE DORKING

12. Origin.—There seems to be no reason for doubting that the **White Dorking** and the Red Dorking of early times were the purest bred of any fowls of the Dorking family. Some believe that the fowls of both of the original Dorking varieties, the White and the Red, had rose combs, and that a rose comb was a true character of the original Dorking fowls. The rose comb has continued with the White Dorking; it is not now bred with any other kind of comb. It has been conjectured that at one time the White Dorking fowls were strengthened by crossing them with those of other breeds, and that as a result both rose combs and single combs were found in the offspring. The single-comb type, however, has been discarded, and the rose comb has been almost as well established in the White Dorking as in the Hamburg.

13. Development.—Illustrations of white Dorking fowls of more than a century ago show them as having the appearance of large white Leghorn fowls, with rose combs, five toes, and a slight indication of a tuft of feathers growing on the head just back of the comb. Imagine this as the original Dorking and it will be possible to realize what has been accomplished as the result of many years of careful breeding and selecting for size and market qualities.

14. History.—In the year 35, Columella advised the Romans to avoid the white varieties of fowls, because they were less robust than those of the red varieties. As this was the condition of the white Dorking fowls when they were first taken to England, years had to be spent in improving them in size and vitality. It is claimed that they were crossed with game fowls, and the statement is made that some of them, even at the present time, lay eggs having a slightly tinted shell. They have been crossed with light-colored offspring from Silver-Gray Dorkings, which had white under plumage and white markings in the plumage of the breast and body. Thus they have been built up from fowls that were condemned on account of being of delicate constitution to fowls that are



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WHITE DORKINGS

of large size, good vitality, and true to breed characters, including the rose comb.

15. Description.—White Dorking fowls should conform in size and shape to those of the other Dorking varieties. In size, they range one-half pound lighter than the Silver-Gray Dorkings. Though, according to the demands of the Standard, the White Dorking should have the same breed characters as other Dorkings, the fowls of this variety really do not conform in shape to those of the other varieties. A few White Dorking fowls have been bred that rival those of other varieties in breed characters, but in general they do not equal them. The beak, shanks, and toes of this variety are white; the eyes, comb, face, wattles, and ear lobes, red. The English Standard describes the eyes as having bright-red or yellow irises, the former preferred. The plumage is white throughout, as pure and clean as possible, and without the least shading of foreign color of any kind; the comb is rose, more like the comb of the Hamburg than that of the Rose-Comb White Leghorn or of the Wyandotte.

16. Mating.—In selecting fowls from which to breed White Dorking fowls of exhibition quality, males and females most nearly perfect in size, shape, and color should be taken for mating. Hens of large size are always to be preferred. The plumage should be white to the skin, including the quills, and the skin also should be white. To be successful in breeding White Dorking fowls, a strain must be well established according to the rules of the mating-chart system, and new blood should be frequently introduced through hens of the finest quality that have been selected from strains well known as producers of the best type of Dorkings.

NON-STANDARD VARIETIES OF DORKING

17. Three varieties of Dorking fowls will be considered as non-standard, and, although one of them is described in the English Club Standards, none is listed in the American Standard. These are the *Cuckoo*, the *Rose-Comb Silver-Gray*, and the *Red Dorking*. The last, though one of the oldest, if not the oldest, variety of five-toed fowls, has never been recognized as a standard variety.

CUCKOO DORKING

18. Origin.—The **Cuckoo Dorking** has been bred but little outside of the Surrey districts. The fowls of this variety have undoubtedly resulted from the promiscuous intermingling of White Dorkings with other fowls that have rose combs and black plumage. Cuckoo Dorking fowls were brought into New Jersey very early, and some claim that they were the originals from which the American Dominique fowls have descended. Though a few writers have mentioned the existence of Cuckoo Dorking fowls, some have considered them as identical with the Scotch Gray fowls.

19. Development.—Cuckoo Dorking fowls have never been developed beyond ordinary quality. They have existed in and about Surrey, England, and are as apt to have four toes as five. Their existence may be attributed to the fact that cuckoo color or the barred color of dark and light, the same as that found in the Barred Plymouth Rock, develops in almost every locality where white-plumaged and black-plumaged fowls are kept. Though Cuckoo Dorking fowls are recognized in England, and are described as fowls having fairly good breed characters in conformity to the Standard description of the Dorking breed, and colored like the Barred Plymouth Rock, they have never been encouraged in America.

20. Mating.—In mating Cuckoo Dorking fowls, only the best should be selected and mated and remated until size, shape, and color have been well established. The Dorking

requirements will be the same in this as in the other varieties. To breed them true to color, the same method must be followed as in mating Barred Plymouth Rock fowls.

ROSE-COMB SILVER-GRAY DORKING

21. Both rose and single combs existed in the Silver-Gray Dorking of the early days. The **Rose-Comb Silver-Gray Dorking** variety of fowls has never been encouraged in America, and it has received less and less attention each year in other countries. To breed fowls of this variety, a selection must be made for size, shape, and color like that of the Silver-Gray Dorking, and the fowls so selected must have rose combs. Mate and remate these fowls until a strain has been well established. Silver-Gray Dorking fowls with rose combs may be secured in England.

RED DORKING

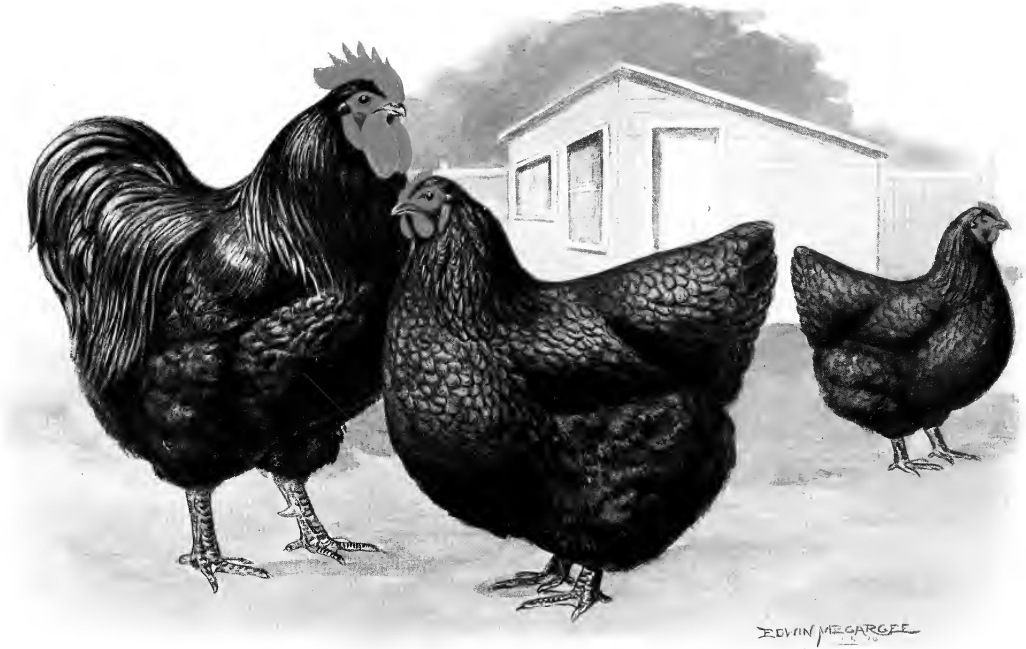
22. Origin.—The red and white varieties of Dorking were the first of the kind that existed. The **Red Dorking** was bred in the southern part of England, and although fowls of this variety have never been so generally encouraged as those of the other varieties, they have continued to exist.

23. Development.—Red Dorking fowls have not been developed in the same sense as the other varieties, but they are now receiving more attention than formerly.

24. History.—The history of the Red Dorking is embodied in the history of the other varieties except so far as the fowls of this variety have been bred in America. Some of them were brought to the United States about 1902 and were bred in New Jersey, on the same farm where some Silver-Gray Dorking fowls were bred, for the purpose of testing the utility qualities of both varieties. The Red Dorking fowls were found to be more vigorous, to lay more eggs, to lay a greater percentage of fertile eggs, and to produce chicks that were more sturdy than the chicks from the Silver-Gray Dorkings.

25. Description.—Red Dorking males are, in general form, quite like other Dorkings, with the exception that they stand more upright. Their plumage is about the same color as that of the Black-Breasted Red Game fowls, except that the color is deep reddish brown rather than rich, brilliant red. Their shanks are slightly tinged with yellow, some showing red lines down the inside. In writing of them, Harry Hamlin, of Haxted Mills, Edenbridge, England, says: "The male has a beautiful deep-red hackle; single comb; breast and tail, black; shanks, very short. The shanks of fine specimens are $3\frac{1}{2}$ inches from above the juncture of the fifth toe with the shank to the hock joint. Males weigh about 10 pounds. The hens have close-fitting plumage of a brown-red color." The yellow tinge is thought to have come from the early influence of the game fowls. Those seen in America conform generally to this description, except that the breast of the male is shaded with reddish brown and some of the females are as dark red as the favored color of the Rhode Island Red pullets, and some of them have a yellowish-brown color; the tails are black, bronzed with a reddish cast, and the main flights are edged or marked with black.

26. Mating.—It is almost impossible to outline a system of mating for the fowls of this variety. The rule followed by those who breed them is to select the best, following Dorking breed characters for shape and color as previously described, and selecting fowls of large size that have long bodies and considerable length of breast, with great width between the thighs.



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BLACK ORPINGTONS

ORPINGTON

ORIGIN

27. William Cook, of England, who originated the **Orpington,** said that when he decided to form the breed he began to look for suitable material among fowls noted for egg production, table qualities, vitality, and strength of constitution. From the Black Minorca, which had red ear lobes, he selected the best males and mated them with Black Plymouth Rock females, which were sports from the American Barred Plymouth Rock. From this cross, pullets of good shape and color were produced, but the cockerels were of a mixed straw color and were useless. He mated the black pullets so produced with Black Langshan males of the old, short-legged type.

The one difference in origin between the original Single-Comb Black Orpington and its companion, the Rose-Comb Black Orpington, is that the latter, instead of being produced as mentioned above for the Single-Comb Black Orpington, was produced by mating Rose-Comb Black Langshan males with females from the Black Minorca and Black Plymouth Rock cross. Since the original Orpington was brought to the attention of poultrymen, many varieties have appeared. All seem to have come from different sources, and each variety has been changed materially from its original type.

BLACK ORPINGTON

28. Origin.—Mr. Cook was the first to conceive the idea of uniting the blood of the Mediterranean, the Asiatic, and the American breeds and making a large fowl that would be attractive for exhibition and profitable for market purposes. That he succeeded cannot be denied. Nevertheless, the Orpington

of the present has been so thoroughly modernized as to change it into a type different from the originals. The first Orpington fowls were of Langshan type rather than like the present Orpington, and had single combs. To modernize them, or to bring them within the scope of the present breed characters, it is thought that the original type of Langshan, having no feathers on the shanks or toes, was used. The late Lewis Wright, of England, claimed that this type of fowl was called Java in America, and was used in creating the original Plymouth Rock, and that the same kind of fowl was crossed into the original Orpington fowls to modify the type, to shorten their legs, and to increase their size.

The modern **Black Orpington** was first shown in 1891, and it was claimed that the fowls of this variety were produced without using any of the original breed. Investigation has shown that they have come from intermingling the blood of the original Black Orpington with Asiatic fowls of large size that had black shanks and plumage.

29. The Rose-Comb Black Orpington came originally from the same foundation stock as the Single-Comb Black Orpington, except that fowls having rose combs instead of single combs were used. The Rose-Comb Black Orpington fowls first brought to America were better in breed characters, modern type considered, than the Single-Comb Black Orpington fowls were during the same period.

30. Development.—When Single-Comb Black Orpington fowls were first introduced, fault was found with them because they were not a distinctive breed, but were modified Langshans, having no feathers on the shanks or toes. To overcome this objection, the Rose-Comb Black Orpington was made and developed into more of an Asiatic type than the single-comb variety. Later, development was made by selection. Fowls of the most pleasing character were selected and mated for the production of better form and color. Thus, the two varieties of Black Orpington fowls were developed.

31. History.—Following the creation of Black Orpington fowls, marked interest was shown in them by the poultry-

men of England. They followed the example of the originator and by the combined effort of many fanciers, ten varieties have been created. The first Black Orpington fowls brought to America are thought to have come to Massachusetts in 1891. Later, more of the same kind were brought into the United States and Canada. In 1903, Mr. Cook brought Orpington fowls to America and exhibited them at the leading shows. Following this, the Single-Comb Buff Orpington became popular in America and was admitted to the American Standard of 1906. The Single-Comb Black and the Single-Comb White Orpingtons have since been admitted. No fowls except those of the American breeds have ever been so well received in America as the Orpington, and none have been more carefully bred either in England or in America. The outcome is a breed of fowls attractive in form, beautiful in color, and highly considered as market poultry.

32. Description.—Although both the English and American Standards describe the same shape for all Orpington fowls, yet all varieties do not possess the same breed characters; in a general way, the best of each variety are of a distinctive type, which should be more generally cultivated. The body should have good length, breadth, and depth, conforming to the body of the best type of Embden geese, which is described as being canoe shaped, that is, as being long and deep, wide between the thighs, and turning up before and behind in a graceful curve, suggestive of an abundance of desirable meat and a capacity for consuming much feed and transforming it into eggs.

The Orpington male is described as a fowl of medium size; the head is small, neat, and well rounded over the skull; the eyes, full and bright; and the combs, single or rose, according to the variety. The single comb must be of medium size, well formed, and evenly serrated; it must have five points, and be evenly poised on the head—too large a comb is objectionable. The rose comb should be of the same character as the Hamburg comb, with the exception that it should not be so extended. It must be free from thumb marks or inden-

tations, wider before than behind, and have a distinctive point at the end, not so long, however, as the spike of the Hamburg comb; it must follow the shape of the head and not stand out behind like the comb of the Hamburg. The rose comb of the modern type of Orpington is more like that of the Wyandotte than of the Hamburg. The ear lobes should be of medium size; the neck, rather short and nicely curved, with long, flowing hackle; the breast, full, broad, deep, and carried well forwards; the breastbone, long and prominent. There should be plenty of width between the thighs. The back should be rather short in comparison with the breast; the saddle should rise from the middle of the back, and this together with the long, flowing hackle, gives the back a shortened appearance. The wings should be round, well formed, and carried close to the body. The English Standard states that the skin should be thin and white, and the flesh pinkish white. The tail should be of medium size, inclined to a low carriage, as in the Cochin, rather than to an erect carriage, as in the Langshan; an angle of 45 degrees is about correct. The thighs should be short and heavy; the shanks, short and strong; the toes, four in number and well spread. In the Black Orpingtons, the shanks are comparatively small for the size of the fowl.

The cocks should weigh 9 pounds; the cockerels and hens, from 8 to $8\frac{1}{2}$ pounds; and the pullets, 7 pounds. Generally speaking, Orpington fowls are large and have more of the Cochin than of the American breed characters; they are not so full feathered as the Cochins, but more so than the Plymouth Rocks.

The female conforms in a general way to the description of the male. She has plumpness of form and a long breast that extends well forwards. Her back has been described as having but little cushion, yet sufficient to give a short and gracefully curved appearance. Her carriage is like that of a Plymouth Rock. Less fullness of feather in saddle and cushion is now required in the female than formerly. Her tail should be of medium size and carried like the tail of the Plymouth Rock female. Her shanks and feet should conform to those of the males.

The plumage of both males and females should be close rather than fluffy and their color should be as follows: Beak, shanks, and toes, black; bottom of feet, white; eyes, black with dark-brown iris; comb, face, wattles, and ear lobes, red; plumage, black throughout, with a rich, glistening green sheen; and color of skin, white.

33. Mating.—In mating Black Orpington fowls for the production of exhibition offspring, care must be taken to select only those that are perfect and that have been bred in line from a strain so well established as to show no traces of the Langshan cross. The dangers to be avoided are the appearance of Langshan type in the offspring and an excessive amount of cushion in the female. Large hens of such a strain should be mated with large males of the same strain that have Orpington breed characters and perfect plumage color.

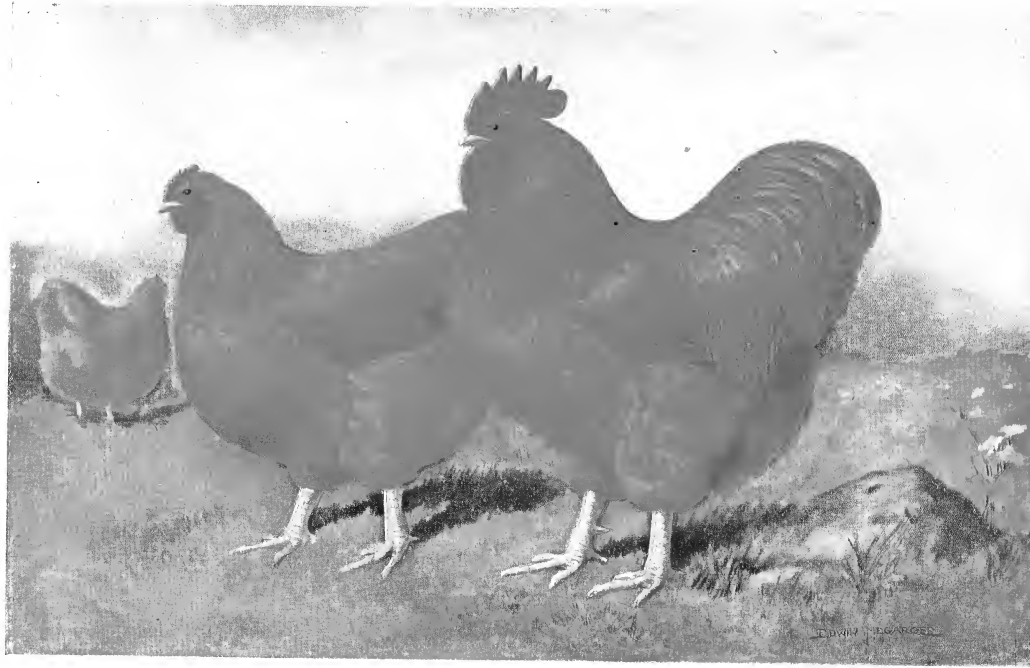
The mating of males and females excessively rich in color may produce offspring having red feathers or purple barring in their plumage. To avoid this, females of less brilliant plumage should be used in the matings. Double matings are not necessary, but close attention must be given to type, body formation, and blood lines. The points needing the greatest consideration are the following: The comb, which, in both the Single- and the Rose-Comb Black Orpington, is apt to be too large; the ear lobes, which are apt to be too prominent, with white frequently showing in them, probably from the influence of the Minorcas in the original; and a too great length of leg, and a Langshan type of breast and body formation which are apt to occur and which must be guarded against. Black Orpington fowls showing Cochin type should be preferred over those showing Langshan type. Better for breeders, however, than either of these two types are fowls possessing the true breed characters of the Orpington, as shown in the color illustration. In selecting fowls for the breeding pen, choose those with this formation and with the most nearly perfect color obtainable.

BUFF ORPINGTON

34. Origin.—The first **Buff Orpington** fowls were made by William Cook, of England, who mated a Golden Spangled Hamburg male with Dorking females. Some of the offspring from this mating had reddish-brown plumage. They were selected and mated with Buff Cochin fowls with the result that the original Single-Comb Buff Orpington fowls were produced. The Rose-Comb Buff Orpington fowls were produced in the same manner by using Rose-Comb Dorking females. Other breeders selected the best of the Lincolnshire Buff fowls and mated them for the production of fowls of the Orpington type. Still others cross-bred the original Orpington fowls with Lincolnshire Buff fowls and selected and mated the offspring for the production of buff fowls having the breed characters that had been selected as proper for the Orpington.

35. Development.—It took almost 10 years to produce a Buff Orpington fit to be sent to the Dairy Show in England. Immediately after Buff Orpingtons came into public notice, they were adopted by poultrymen of England, who joined in an effort for a greater development of this variety. However, notwithstanding the improvement that has been made in this variety, there is a difference in breed characters, or body formation, between the Buff and the other varieties of Orpington. The single-comb variety has been more completely finished than the rose-comb variety. The Buff Orpington fowls generally seem to be closer feathered than the fowls of the Black and the White Orpington varieties.

36. History.—The Buff Orpington came into its own through a storm of protests. It was claimed that these fowls were only an improvement of the Lincolnshire Buff fowls and not a new breed. Some accepted them as an original variety and mingled them with the best of the Lincolnshire Buff fowls. Others added Buff Cochin blood to them, and the present type of Buff Orpington has been made by selection from offspring of all these crosses.



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BUFF ORPINGTONS

37. Description.—All Orpington fowls are required to have the same breed characters, and the shape description given for the Black Orpington will therefore apply to the Buff Orpington. As stated, however, there is more or less difference between the body formation of the Buff Orpington and that of the other varieties. The Buff Orpington differs quite as much from the other Orpington varieties as the Penciled and the Spangled Hamburgs differ from each other.

Both the Single-Comb and the Rose-Comb Buff Orpington must have the beak, shanks, and toes white or pinkish white. In some there is a tendency toward yellow or creamy white in shanks. This should be avoided. It is far better that they should have a pinkish-white shade in the shanks and toes rather than a creamy white or yellow. The eyes should be red; the plumage should be one even shade of buff throughout, free from shafting or mealiness; the top color of the males should have a glossy appearance that reflects a darker shade of color than is proper for the breast and body plumage. The plumage of the female should be one even shade of golden buff throughout—about the same shade as the breast plumage of the male. The under plumage should be buff, a shade or two lighter than the surface plumage. The color in the web of the feathers should be so dense as to prevent the lighter shade in the under plumage from showing through. The combs, whether rose or single, must conform to the description of them given in the description of the Black Orpington. Comb, face, wattles, and ear lobes in all Orpington fowls must be red and free from foreign color.

38. Mating.—In mating Buff Orpington fowls, the best results are quite as difficult to obtain as they are in any of the other buff varieties. The proper breed characters must be present in the fowls selected for mating. Hens of large size should be selected for improving size, and only fowls should be used that have been bred in line for establishing a strain of Buff Orpington fowls conforming in shape and color with the Standard description. In mating for color, the same rules must be applied that have already been given for mating Buff

Cochin fowls and the fowls of other buff varieties. The average size of the Buff Orpington does not equal that of other varieties. To improve size, the use of large hens 2 years old or older is recommended. To avoid bad results from inbreeding, the mating-chart system should be followed as closely as possible.

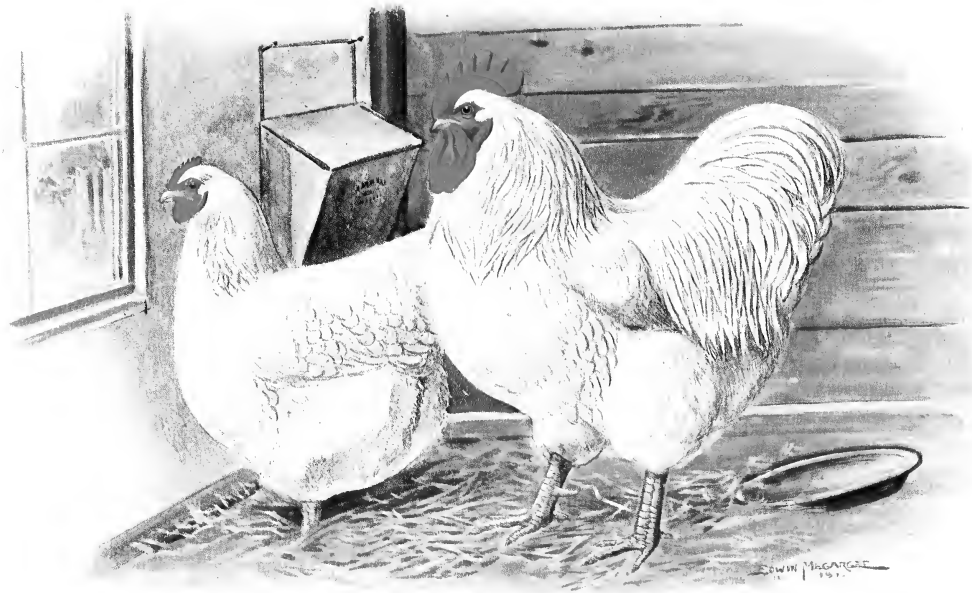
Defects to be guarded against are combs that are too large, that are apt to lop over at the heel, or that have uneven serrations, thumb marks, or side sprigs; shanks of any other color than white or pinkish white; and eyes of any other color than red or brownish red. Some Buff Orpington fowls of good quality will have shanks of a bluish tinge, and some will have yellow shanks; all such fowls should be discarded. Buff Orpington fowls having uneven colors should not be mated together; fowls having mealiness in their plumage should be discarded and only even-colored fowls should be selected. A golden buff in the surface and under plumage of Buff Orpington breeding fowls is essential in order to produce the proper buff in the offspring.

WHITE ORPINGTON

39. Origin.—There are two varieties of **White Orpington,** the rose comb and the single comb, and both are said to have been produced by crossing White Leghorn males with Black Hamburg females. The white pullets from this cross were mated with Rose-Comb White Dorking males, and some of the offspring had rose combs and some had single combs. They were separated, selected, and bred, and in this way the two varieties of White Orpington were made.

It has been claimed that White Orpingtons have also been produced by mating both Single-Comb and Rose-Comb White Dorking with White Langshan fowls; by mating white sports from Black Orpington with Single-Comb White Dorking fowls; and by intermingling with the best offspring of these crosses both close-feathered Buff and White Cochin females with the least shank and toe feathering.

40. Development.—The greatest development in the White Orpington has occurred since 1905. Prior to that time



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White Orpingtons

the fowls of this variety were sparingly bred both in England and in America. With the increased popularity of white-feathered fowls, this variety of Orpington was taken up by fanciers, who have developed the fowls into Orpington type, with white beaks and plumage and white or pinkish-white shanks and toes. To the English fanciers belongs the credit of the greatest development in size and breed characters. The main improvement in plumage color has been made in America.

41. History.—The original Single-Comb White Orpington was produced soon after the Black Orpington came into public favor. Those first seen, especially the males, had the Langshan shape of back and tail. The more recent types show evidence of having been crossed with White Dorking and White Cochin fowls. When first shown in America, the White Orpington was not well received. Following the advent of some of perfect Orpington type, however, the White Orpington became equally popular with other white-feathered fowls. The Rose-Comb White Orpington has not received more than passing attention.

42. Description.—The White Orpington must conform in every way to the shape description given for the Black Orpington. The fowls of this variety should, if possible, be even more true to breed characters than the Black Orpingtons. Some fowls of the white variety are of almost perfect Orpington type, and some have plumage that is white to the skin. They are more generally found, however, with considerable creaminess or straw color in their plumage. Females are freer from this defect than the males. The color of the skin and the shanks is more nearly perfect in this variety than in other varieties. In size and weight, the White Orpington is only slightly inferior to the Black Orpington.

43. Mating.—In selecting White Orpington fowls for mating, attention must be given to both shape and color. In a general way, both have been lacking, and there has been a surplus of poor quality. Only White Orpington females having pronounced excellence in size, shape, and color should

be used as breeders. Fowls that have white skin and shanks can have the purest white plumage, including quills, and this can be maintained without injury to the color of the skin and shanks. For this reason, there should be no difficulty in establishing pure plumage color in White Orpingtons. There is, however, more difficulty in having white plumage in the males than in the females. Breeders must be, for a time, at least, content with the best males they can get and, by breeding them with white females, establish a strain that will produce White Orpingtons of proper size and shape, with at least a near approach to pure white plumage. There is good evidence that Buff Orpington blood has been intermingled with the White Orpington blood. Though this has not changed the color of the skin and shanks, it has stained the plumage of the White Orpington, and hence the breeder must devote more time and care to the elimination of this yellow tint than would be needed if only the creamy-white tint were present.

Small single combs that conform in shape to a perfect White Plymouth Rock comb should be preferred in both male and female White Orpington breeders. To safeguard this, all fowls with bad combs should be rejected as unfit for breeding purposes. This same rule should apply to breeding fowls of the Rose-Comb White Orpington variety, and the type of rose comb that belongs to the White Dorking or the Wyandotte family should be preferred to that of the Hamburg. White in the ear lobes must be avoided. This defect has been acquired naturally from the Leghorn family, and a parent having it is apt to transmit it to the offspring for many generations. Enamel white in ear lobes of any breed or variety that should have red ear lobes is a serious defect.

To breed White Orpington fowls fit for exhibition, it is necessary not only to scrutinize carefully all fowls used in the breeding pen, but also thoroughly to investigate their blood lines. A careful examination of the under plumage of breeders should be made. Smut in the color may have come from a cross with the Black Orpington, and though in some instances it may clear the plumage, it may also prove to be detrimental if too freely infused into a flock.

JUBILEE ORPINGTON

44. Origin.—The **Jubilee Orpington** originated from among the offspring that resulted when the crosses were made for the production of the other Orpington varieties. Many of these offspring were of a great variety of colors.

45. Development.—The Jubilee Orpington fowls were developed from the fowls produced as just mentioned that had plumage color resembling that of the Spangled Old-English Game. Though no color standard was adopted for them, they were developed into a separate variety having the Orpington shape, and of beautiful plumage color and markings. Both single-comb and rose-comb varieties of these fowls have been developed.

46. History.—The history of the Jubilee Orpingtons is identical with that of the other varieties. Statements relative to their origin, however, have been disputed, some authorities insisting that they have come from intermingling Sussex and Spangled Dorking fowls. From those brought to America, fowls of more than average quality have been bred, but the variety has not been admitted to the American Standard.

47. Description.—Jubilee Orpington fowls of both the rose-comb and the single-comb variety must conform to the breed characters of the Orpington family. The color of their plumage is almost identical with the color of the Spangled Old-English Game. The general color of breast and body is reddish brown, marked with white and black. In the males, the ground color is a bright mahogany; hackle and back are mahogany color, each feather having a black center stripe, a mahogany-colored shaft, and a white tip; the rest of the body plumage is of the same shade, having black spangles and white tips. The wing bows should match the hackle, and there should be a bar of black across the wings; the primaries and secondaries are mahogany, black, and white, the primaries showing the most white; the sickles are white, black, black and

white, or black, white, and mahogany; the coverts are colored like the sickles, but usually have more white. The three colors should be distinct and well defined and so assembled as to form an attractive color combination.

The females should match the males in color; the color of the entire body and back plumage should be similar to the breast color of the males; the primaries, secondaries, and tail feathers should match the same parts in the males.

48. Mating.—It is impossible to give rules for mating Jubilee Orpington fowls that can be practiced with any certainty of success. The best Jubilee Orpington fowls that have been produced have come from mating males of perfect shape, rich, brilliant color, and the least quantity of white in any part of the body plumage with females of equal quality, perfect or nearly perfect in color, and having more or less white in the wings and the tail. From such matings good offspring may be produced.

SPANGLED ORPINGTON

49. Origin and History.—The numerous kinds of plumage color that have come from the crosses made to produce Orpington fowls have made many varieties. The Jubilee and Spangled Orpingtons are instances of this. **Spangled Orpington** fowls of both the rose-comb and the single-comb variety have been shown as non-standard varieties. They have ranged in color from black and white, like the Mottled Java, to reddish brown and white, like the Jubilee Orpington, except that they were mottled with white. "Broken-Colored Orpington" would be a more appropriate name for many of them, for it is possible to find from five to seven colors in the offspring from promiscuous matings. They do not breed so true in color as the Ancona or the Houdan fowls, but they have an attractive variety color.

Speckled Dorking, Speckled, or broken-colored, Sussex, and Mottled Java fowls are all like the Spangled Orpington, and undoubtedly all have come from the intermingling of fowls with white and dark plumage.

50. Description.—The latest English Club Standards describes the Spangled Orpington as having beak, legs, and feet black and white, or black mottled with white; toe nails and skin, white; eyes, red or brown; comb, face, wattles, and ear lobes, red. The plumage of the males is black and white; the hackle is black, with white tips; the back is slightly ticked with white; the thighs and fluff have white spangles; the breast is black with white spangles, the color showing in equal proportions; the tail is black and white; the sickles and coverts are black, tipped with white.

The plumage of the female should conform to the breast color of the male. In both, the black should be glossed with a green sheen, and the white should be true and pure.

51. Mating.—Like the Speckled Dorking, Speckled, or broken-colored, Sussex, and Mottled Java fowls, none of the Spangled Orpington fowls can be depended on to reproduce their own color in many of their offspring, or to breed a quality or type of plumage color equal to that of the Spangled Hamburg. There are no rules for mating that can be depended on to produce offspring of regular color and markings. Spangled Orpington fowls should be bred for shape the same as the fowls of the other Orpington varieties.

RECENT VARIETIES OF ORPINGTON

BLUE ORPINGTON AND CUCKOO ORPINGTON

52. Recently there were originated in England two new varieties—the *Blue Orpington* and the *Cuckoo Orpington.* As both varieties were originated together, they will be treated under one heading.

The beginning of both the **Blue Orpington** and the **Cuckoo Orpington** was in a crossing of Black Orpington males with White Orpington females. The greater part of the offspring of this cross were white fowls and black fowls. The white offspring had blue-black shanks and feet and eyes of a dark

color; the black offspring had mottled shanks and feet and red or brown eyes; a very few of the cockerels were partly cuckoo marked (barred); and a few of the pullets were black, faintly tipped on the saddle and breast with cuckoo markings.

The cuckoo-marked cockerels of this cross were mated with Spangled Orpington pullets, and the cuckoo-marked pullets were mated with Spangled Orpington cockerels. One-half of the offspring of these matings were Cuckoo Orpingtons, one-fourth were Spangled Orpingtons, and of the other one-fourth some were black, some were white, several were blue cockerels, and a few were blue pullets.

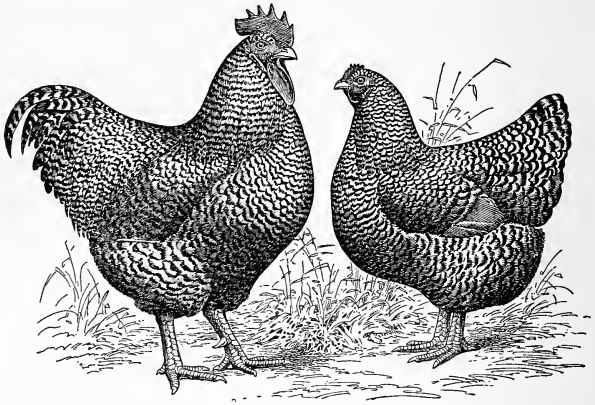


FIG. 1

One of these blue cockerels was mated with some of the cross-bred white pullets, one to some of the cross-bred black pullets, and one of the cross-bred black cockerels was mated with the blue pullets. About two-thirds of the offspring of these matings were blue.

The Cuckoo Orpington was developed by selecting and mating the best of the cuckoo-marked offspring of the first cross, and this selection and mating was continued until Cuckoo Orpingtons like those shown in Fig. 1 have been produced.

53. Description of Blue Orpington.—In both the male and the female the color of beak should be blue; eyes, black or brown, black preferred; comb, face, wattles, and ear lobes, a bright red; legs, blue; toe nails, light or white. The plumage color of the male should be in neck, hackle, saddle, wing bows, back, and tail, a dark slaty blue; the rest of the plumage should be of a medium slaty blue; each feather is laced with a darker shade of blue. The plumage color of the female should be a medium slaty blue throughout, laced with a darker shade except on the head and neck, where both the body color and the lacing is of a darker shade; the color and markings of the body plumage of the female must match the color and markings of the breast plumage of the male. The size, shape, and breed characters are the same as in all Orpingtons.

54. Description of Cuckoo Orpington.—In Cuckoo Orpingtons, the beak should be white; eyes, red; comb, face, wattles, and ear lobes, red, no white being permissible either in face or lobes; shanks and feet, white or white mottled with black, white being preferred; toe nails very light or white. The plumage color of both the male and the female should be a light bluish-gray ground color, each feather being barred across with a darker blue black, proportionate to the size of the feather, and the same on all parts of the body. The closer the color and markings come to the color and markings of the Barred Plymouth Rock, the more perfect will they be considered. The size, shape, and breed characters are the same as in other Orpingtons.

COLUMBIAN ORPINGTON

55. Another new variety of Orpington has been originated in America. The fowls of this variety were first produced in Maine and Massachusetts and were named *Ermine Orpington*. Their plumage so closely resembles that of the Columbian Plymouth Rocks that, when they are admitted to the Standard, they are likely to be called **Columbian Orpington.**

56. Origin.—The Columbian Orpington fowls were originated by Angier L. Goodwin and were bred from Orpington

sports of the color of the Light Brahma. Whether these sports came from the Black Orpingtons or from a cross of Black and White Orpingtons cannot be stated. These sports were mated with White Orpington hens and the offspring were selected, mated, remated, and bred for the improvement of color. As this variety has descended from Orpington fowls, a better type has been developed than would have been the case had Brahma or Columbian Plymouth Rock fowls been bred into them.

57. Development.—The development of the Columbian Orpington has scarcely begun, but continual care in breeding will undoubtedly make the fowls what they should be.

58. History.—The sports that came from the other varieties of Orpingtons cannot be traced to any certain matings. When a sport of the Light Brahma color made its appearance, it was mated to the best advantage and the offspring selected with care. The variety was named Ermine, after the little animal of that name. This variety was first shown in Boston during the winter of 1909.

59. Description.—The Columbian Orpington fowls should be of Orpington shape and have the same plumage color as defined in the American Standard for the Columbian Wyandotte and the Columbian Plymouth Rock, with the exception that the beak, shanks, and toes should be white or pinkish white, and the skin should be white.

60. Mating.—The only rule that can be laid down for mating Columbian Orpington fowls is to select those of the best Orpington shape and of the plumage color of the Columbian Plymouth Rock. The best of the offspring should be selected, mated, and remated, and in doing this the fancier should always bear in mind what the proper breed characters and plumage colors are.

SCOTCH GRAY

61. There are a few fowls peculiar to Scotland. The two best known are the Scotch Gray and the Scotch Dumpy. The **Scotch Gray** is much like the Barred Plymouth Rock, and the Scotch Dumpy closely resembles the Creeper. These fowls have never been bred to any extent for exhibition, though in recent years the Scotch Gray has been so improved as to bring it into public notice as an exhibition fowl.

62. Origin.—The Scotch Gray fowls originated in Scotland, but so little is known of them that it is impossible to make authentic statements regarding their origin. Undoubtedly they have resulted from intermingling fowls of dark and of light plumage.

63. Development.—The development of the Scotch Gray fowls has been more a matter of chance than of selected matings. Prior to the formation of the Scotch Gray Club in England, there was but little interest in uniformity of size and color, but since the formation of the club, a standard for them has been compiled.

64. History.—In regard to the history of the Scotch Gray the secretary of the Scotch Gray Club states: "The Scotch Gray, or 'Chick Marley,' as Scotch country people used to call it, is one of our good, all-round breeds of poultry. They are good layers of fairly large eggs of a pale cream color. They are not good broody hens, often sitting only 10 or 12 days and then deserting the nest. At a meeting of the Scotch Gray Club some years ago it was agreed, after some discussion, to class them as non-sitters. They are excellent table fowls, being finely covered with flesh of a very close texture and fine flavor, and pale cream in color. They are also very prolific fowls, and when crossed with any breed, the offspring will show distinctive traces in size, shape, and color of the Scotch Gray parent."

65. Description.—The Scotch Gray fowls are described by the Scotch Gray Club Standard as fowls of neat appearance, more like the Andalusian in formation than the general-purpose fowls. They have single combs. The males weigh from 9 to 11 pounds, and the females from 7 to 9 pounds. Both sexes have beaks white, or white striped with black; the eyes, face, comb, wattles, and ear lobes are bright red; and the shanks are white or white mottled with black. The ground color of the males should be a pale, grayish blue, finely and evenly barred with a dark metallic blue; the alternating bands of the barring should be equal in width and proportioned to the size of the feather. The color should be the same in all parts of the body; the markings should be small, even, and sharply defined. The female should be of the same color as the male, with larger and more distinct markings. Illustrations of these fowls show them colored like the Barred Plymouth Rock, the end of each feather having a marking of dark that conforms to the shape of the feather.

66. Mating.—In mating Scotch Gray fowls for color, the same rules must be followed as when mating Barred Plymouth Rock fowls. Scotch fanciers say that when mating fowls of this breed for producing the best form and color, males of perfect shape should be selected; they should be of medium size and evenly marked. They should be mated with hens or pullets of equal quality and of good color. Never breed from a male or female that has considerable white in the wing or tail. The only way to succeed with them is to have them line bred, with blood lines equal to the best Barred Plymouth Rock.

SCOTCH DUMPY

67. Origin.—The origin of the **Scotch Dumpy** is unknown. Mention of these fowls was made in Scotland and America about 1850. They were then known by many names, none of which gives any intimation of their origin.

68. History.—Fowls of the character of the Scotch Dumpy were mentioned by Rae in 1678. They have been known as *Bakies*, *Jumpers*, and originally, in England, as *Grigs*. They have not been developed or bred to any extent even for utility purposes. Harrison Weir states that the hens were good sitters and mothers, and, when very young, the chicks were tender to rear. As a breed they were particulary active, being fond of perching on trees and flying about. As table fowls they were said to be excellent, and their quaint appearance made them attractive as household pets.

69. Description.—The Scotch Dumpy fowls are of fairly good size, with single combs, red ear lobes, and heavy body formation. Their heavy body formation is more marked from the fact that their shanks do not exceed $1\frac{1}{2}$ or 2 inches in length, and are thus out of proportion to the size of the body. Some of the males weigh as much as 8 pounds; females weigh from 5 to 6 pounds. They are said to be better table meat than the Dorkings, and are highly esteemed in their native heath for hatching and brooding chicks. The English Club Standards states that the shanks of these fowls shall be not over $1\frac{1}{2}$ inches long; that their general body formation shall be heavy, and that they shall move about with a waddling gait like a duck. As the Scotch Dumpy Standard puts it, "the extreme shortness of leg gives them the appearance of swimming on dry land." The beak and shanks must match in color; the eyes, face, comb, wattles, and ear lobes must be red; the plumage may be of any color, silvery gray, Dark Dorking, cuckoo, or black being preferred. The shanks should be white, except in the

black variety, which must have shanks of black, slate, or cuckoo color, which may be mottled. Shortness of leg must not be considered as of most importance. The fowls must be large, low set on the legs, and very heavy in body. They must possess at least a moderate qualification in plumage color, that is, the plumage color must be good of its kind.

70. Mating.—There is no set rule for mating Scotch Dumpy fowls beyond the fact that in the breeding fowls size and shape must accord perfectly to Standard demands, and the variety color preferred must be of equal quality to that of the same variety color in other breeds.

SUSSEX

ORIGIN AND HISTORY

71. Origin.—In the early days of poultry growing in England, Sussex was the locality that produced the best table poultry. Fowls grown in that locality became known as **Sussex** fowls. In speaking of them, Harrison Weir groups them as Kent, Sussex, Surrey, and Dorking fowls, and from his illustrations of them, a person might be led to believe that many kinds of fowls were raised in that locality at that time; some were short in their legs and others had longer legs, but all had the body formation best suited for table poultry. A poultry expert of Sussex stated that during a period of 10 years he had fattened a large number of these fowls and shown them as dressed poultry; that he had been very successful with them, and had won many prizes. A pair of his Light Sussex cockerels won first prize and the medal as the best in the show room. He makes a point of the fact that they were barely 18 weeks old, and when killed and plucked, the pair weighed a little more than 20 pounds, and that these were not the heaviest fowls of the kind that he had produced. He states that they had not been fostered or caponized, but were ordinary chickens picked up from the farms and put through a fatten-

ing process for 3 weeks. This is the character of fowl mentioned by Moubray in early days, from which the greater part of all white-skinned poultry bred in England have a part or all of their origin.

To fanciers, until recently, Sussex fowls existed in a state of dormancy. In July, 1903, the Sussex Poultry Club was formed and three varieties of the breed were recognized, namely, Light, Red, and Speckled; in 1904 these varieties were shown in London at the Show of the Royal Agricultural Society of England. The fowls shown were not of the best; they were irregular in form and color, and showed the influence of the injudicious intermingling of many colors. Since that time, a standard has been made for them and they have become fairly popular in England as exhibition fowls.

72. History.—Edward Brown, F. L. S., of England, states that the foundation of the Sussex fowls, like that of the Dorking, is difficult to trace, and the conclusion, namely, that all were originally the same, can scarcely be avoided. In numerous publications that have mentioned poultry keeping during a period of almost 200 years, reference is made to breeds and varieties that correspond closely to the description of the fowls bred in and about Sussex, England. From them, the Dorking, the Orpington, and the modern type of Sussex fowls have been developed.

An early writer states that among the many varieties of Dorking fowls might be found some in which the fifth toe was lacking, and that these were known as Sussex, or Surrey, fowls. Another says that the old Sussex or Kent fowls were closely allied to the Dorkings. Harrison Weir remarks that the Surrey, or Sussex, fowls were generally of a gray color, often sandy brown, or brown like a Black-Breasted Red Game hen. It was the general opinion that the best Sussex fowls were those having color similar to that of the Gray Dorking. The fowls having the brown or brownish color, like the Black-Breasted Red Game hen, were called the Red Dorking or Red Sussex, according as they had five or four toes. This shows how closely they all resembled one another.

The originals of the present Sussex fowls were plentifully grown in and about Surrey and Kent, England. Their distinguishing features were white skin and shanks and perfect form for table poultry. The Dark, the Silver-Gray, and the Speckled Dorking fowls were selected from them, each having the distinguishing mark of five toes. The varieties of Sussex fowls, as now recognized, were plentiful at that time; yet not then so well separated and bred for variety color as now. A club was formed in their interest in 1903, and since that time the Light, the Red, or Brown, and the Speckled Sussex fowls have been bred to form and color.

LIGHT SUSSEX

73. Development.—The **Light Sussex** fowls have been developed by selecting the best of their kind from the large number grown in the Sussex districts. These fowls have the same general appearance as the Columbian Plymouth Rock, and they have been bred according to the rules for producing color in Light Brahmas.

74. Description.—The Light Sussex have the same breed characters as the average grade of Dorking fowls. They are more upright in form, as well as more active than the Dorking. The body formation is more extended than that of the Plymouth Rock, and they have single combs. The face, comb, wattles, eyes, and ear lobes are red; the skin and shanks are white. They average from 1 to 2 pounds heavier than the Plymouth Rock fowls.

75. Mating.—In mating Light Sussex and all other varieties of Sussex fowls, marked attention must be given to the selection of breeding fowls of the size and shape to conform to their description. To establish and improve color, the same methods of mating must be adopted as have been suggested for mating Light Brahma or Columbian Plymouth Rock fowls for plumage color. Care must be given to the preservation of the proper color of the shanks and skin in all varieties.

RED SUSSEX

76. Development.—The **Red Sussex** fowls are frequently called *Brown Sussex*. They have been developed by selecting the Red Dorking, or Sussex, fowls that had but four toes and breeding them to establish proper breed formation and variety color.

77. Description.—The Red Sussex are fowls of large size, and have a body formation somewhat like that of the largest Andalusian, with the exception that the neck and legs of both the male and the female are shorter in the Red Sussex than in the Andalusian. The English description says that they are very deep bodied, but are not so dense as the Dorkings. This is more specially noticeable in the hens. It is claimed that they average less bone and offal, or waste, than the Dorkings, and that, though the breastbone is long and carried well forwards, there is less inclination to lean forwards or downwards among the Sussex than the Dorkings. The comb and head should be of medium size; the eyes, face, comb, wattles, and ear lobes should be bright red; and the shanks, feet, toes, and skin should be white and fine in texture. The plumage of the males must be dark chestnut brown, with a greater depth of color on the saddle and wing bows; the neck hackle must be rich brown, striped with black; the wings, dark brown, with black flights; the main tail feathers, black; the tail coverts, a dark or reddish brown. In the females, the neck hackle should be dark brown, striped with black. The body color throughout should be brown; the main tail feathers and flights, dark brown or black. Preference is given to fowls of this variety that have nearly the same plumage color as Rhode Island Red fowls.

78. Mating.—In mating Red Sussex fowls it is important to select the breeders with a view to sustaining the proper breed characters in the offspring. In mating for color, if a preference exists for the color and markings of the Rhode Island Red, select the fowls for the same color as is required for Rhode Island Red fowls. If there is a demand for the color

and markings of either the Black or the Brown-Red Old-English Game fowls, select and mate fowls that may be expected to produce such colors. The best results are obtained by adhering to the reddish-brown color throughout, marked with black on the neck of both male and female, and on the wing bars and saddle feathers of the male.

SPECKLED SUSSEX

79. In the description of Orpington fowls, the fact is mentioned that both the Jubilee and the Spangled Orpington were closely related to the Sussex fowls. The **Speckled Sussex** fowls have the same general appearance and breed characters as the Jubilee and Spangled Orpingtons. There is so little difference in them as ordinarily bred that it is almost impossible to separate them. The tendency has been for tight feathering in the Sussex fowls and loose feathering in the Orpington fowls for such a length of time that these fowls are now separated more because of this distinction than because of any difference in the normal shape, color, and markings. In the breeding of the Speckled Sussex, the breeders must be selected for shape and color so as to produce fowls true to Sussex breed characters and of the chosen variety color.

FRENCH, POLISH, AND MISCELLANEOUS FOWLS

FRENCH

REMARKS

1. The French breeds that will be considered in this Section are the *Crevecœur*, the *Houdan*, and the *La Flèche*, which are recognized by the American Standard, and the *La Bresse*, or Bresse as called in America, the *Bourbourg*, or Bourborey, and the *Faverolle*, which are not recognized by the American Standard. There are other French breeds, but they are little known outside of their own country.

Edward Brown, of England, states that there were more breeds and varieties of fowls in France than in any other country with which he was familiar. The main object in France having been to conserve and improve the fecundity and the table properties, the fixity of external character was adopted, because it was found that by so doing the perpetuation of such properties were secured. There is a considerable difference in the class of fowls kept in the various districts of France, but in each district the fowls are remarkably uniform.

It is impossible to cite a common origin for French fowls. The French people were the first to give marked attention to the production of poultry. The people of no country have ever given so much attention to poultry for utility purposes as those of France. Less attention, perhaps, has been given in France than elsewhere to the cultivation of fowls for exhibition. The fowls of Belgium have been the only rivals of those of France for egg production and market qualities.

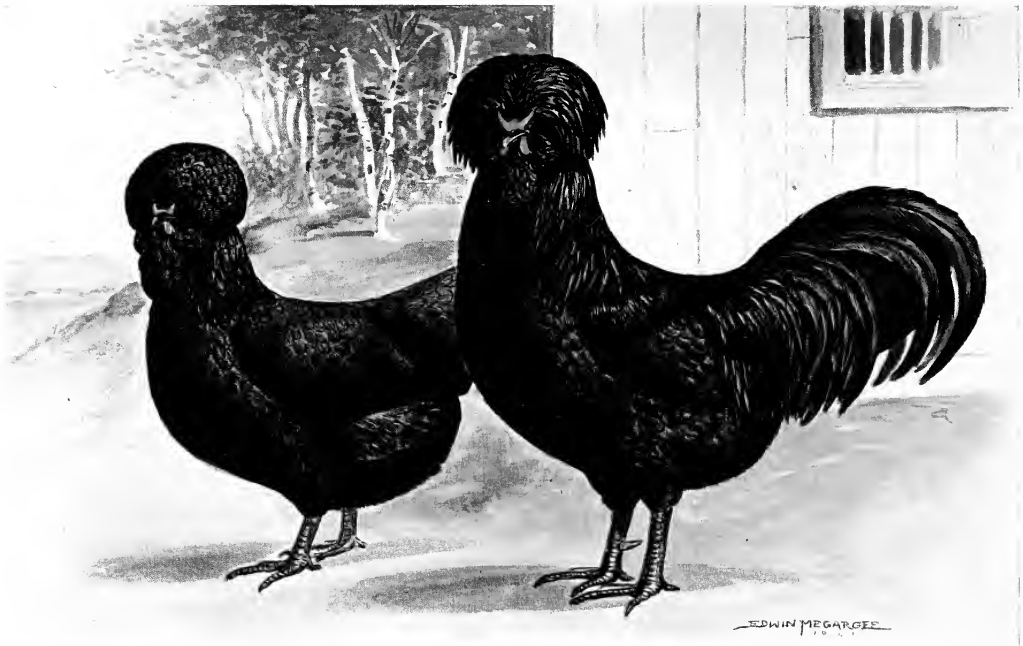
CREVECŒUR

2. Origin.—Judging from the statements made by W. B. Tegetmeier, of England, the **Crevecœur** is the oldest of the standard-bred fowls of France. He states that some idea of their value may be gained from the fact that at the first great agricultural exhibit held in Paris in 1855, two equal sets of prizes were offered for poultry, the first for Crevecœur fowls, and the second for all other kinds taken together. The Crevecœur, as seen in America, and as described in the American Standard, has been remodeled by the English from the original French type into a fowl that is extremely fanciful.

It is freely admitted that the Crevecœur breed originated in the locality in France from which it takes its name, and that it was produced by crossing Polish with fowls of one of the varieties peculiar to France. In early days, special mention was made of the fact that the Crevecœur fowls laid large eggs with white shells. This stamps their ancestors as one of the Italian varieties, and it is reasonable to suppose that they came from crosses made with the Polish and the Italian fowls, from which originated the active fowl written of by Mr. Vivian in 1853, and these were adopted by the fanciers of England, who, by mating, selecting, and remating, have created the present type of Crevecœur.

3. Development.—In France, the Crevecœur fowls were developed for egg production and market. Lemoine, a French writer, says that they are easily fattened, and that in all districts where they are extensively bred they are selected and fattened into the finest table poultry. English poultrymen have developed them into the present type of fowl, having greater proportions than formerly.

4. History.—The Crevecœur fowls were first referred to as Black Polish, or black fowls having black crests and beards; later, they were named after the village in which they originated. They were formerly bred with black, with white, and with blue plumage, and were much smaller than at present. Later, the English fanciers made them into large fowls,


EDWIN MEGARGEE

with large crests and beards, and black plumage throughout. At the present time, they are but sparingly bred outside of France.

5. Description.—A marked peculiarity of the Crevecœur, as well as of other French varieties, is their antler, or **V**-shaped, combs. In shape, the Crevecœur resembles the Cochin more than a fowl of the American or Polish breeds. The fowls are described as large, broad in the back, full and round in the breast, and having both length and breadth between the thighs. The fluff is rather short in comparison with that of members of the Cochin family. They are short in the legs and compactly built, have large oval crests and full beards, which hide the entire head except the comb, beak, and wattles. Their plumage is a rich, glossy black; their shanks and feet are very dark; their eyes are bright red. The skin of the Crevecœur, like that of fowls of all early French varieties, is white. The Standard weights for this breed are: Cocks, 8 pounds; cockerels and hens, 7 pounds; pullets, 6 pounds.

6. Mating.—The value of the exhibition qualities of the Crevecœur depends so much on the size and shape of the crest and beard as to make these features of great importance. In selecting fowls from which to breed offspring for exhibition, special attention must be given to perfect formation of the body, crest, beard, and comb. Other considerations are size, and black plumage that glistens with a rich, brilliant sheen. To obtain all these, the breeding stock must be of almost perfect quality.

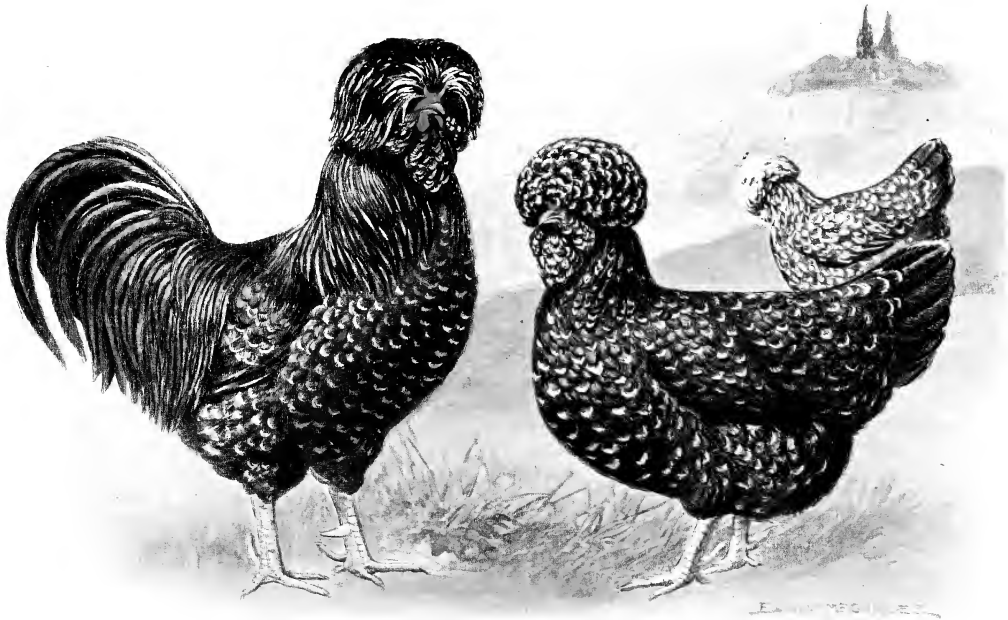
Crevecœur fowls were originally of uncertain plumage color, and even at the present time both red and white feathers are apt to show in the offspring This necessitates care in selecting the parent stock from fowls that are perfect in all requirements of the breed and that have been line bred from a strain that is known to produce offspring of superior quality.

HOUDAN

7. Origin.—The **Houdan** fowls were originated in France and named after the locality in which they have been bred for more than a century. Early poultry authorities say that the Houdan was the Dorking of France The fowls have five toes and speckled or mottled plumage, and recall the old-fashioned Colored Dorking that existed before an attempt had been made to breed them into fashionable form or color. Undoubtedly they resulted from the union of Polish, or early five-toed Roman fowls, and one of the many kinds bred in France at the time of their origin. Edward Brown has stated that they originated from intermingling Black Polish, Crevecœur, and the common five-toed fowls. From what source the leaf comb emanated is unknown.

8. Development.—The Houdan fowls have been developed from the early, sparingly built fowls with small crest, speckled plumage, and the uncertain character of five toes into fowls of larger size, regular formation, broken-colored plumage with regular markings, beautiful crests, beards, and combs, with the peculiarity of five toes so strongly established as to reproduce almost to a certainty. In their development, the French have clung to market qualities. The English fanciers have changed the Houdan in so many ways as to make it almost a distinctive breed as compared with the Houdan of France, and the American fanciers have so changed the breed as to make the fowls quite unlike either of the other types.

9. History.—The Houdan fowls were distributed through many parts of France more than a century ago. The first record of their introduction into England was in 1850. Shortly after their appearance in England, they were accepted as a fancier's fowl and were bred largely for exhibition. From England they were brought to America in early days. The Houdan, the Crevecœur, and the La Flèche are mentioned in the Standard of 1867, and the comb of the Houdan is described as a leaf comb.



HOUDANS

The type of Houdan bred in England and in America at that time was alike, including the comb, until a change was made in the Standard of 1883, which declared for the horn comb, shaped like the letter V. Daniel Pinckney, of Onondaga, New York, claimed that the antler, or **V**-shaped, comb made its appearance naturally in his flock of Houdan fowls. Others claim that Crevecœur were bred with Houdan fowls to darken their plumage, and from the introduction of this breed the antler comb made its appearance. Since 1883, the antler comb has been accepted for Houdans.

10. Description.—The English Standard describes the Houdan as more like the Dorking than any other breed. The American Standard is not so pronounced in its description, yet the statement is made that the Houdan resembles the Dorking in shape and size, and that the crest is one of the most important features. The greatest difference between the English and the American Standard is in the description of comb and plumage color. The English Standard says that the comb shall be a well-defined leaf comb, somewhat resembling a butterfly, placed in the center of the head against the crest. It must be neat and of medium size. The American Standard says that the comb shall be **V** shaped.

In color, the English Standard calls for red eyes, bright-red comb, face, and wattles, white or pinkish-white ear lobes, and black-and-white plumage, evenly mottled; the breast may be lighter than the body plumage. In young fowls, black predominates, but the mottling must be even and true. The legs and feet should be pinkish white, the white mottled with blue or black.

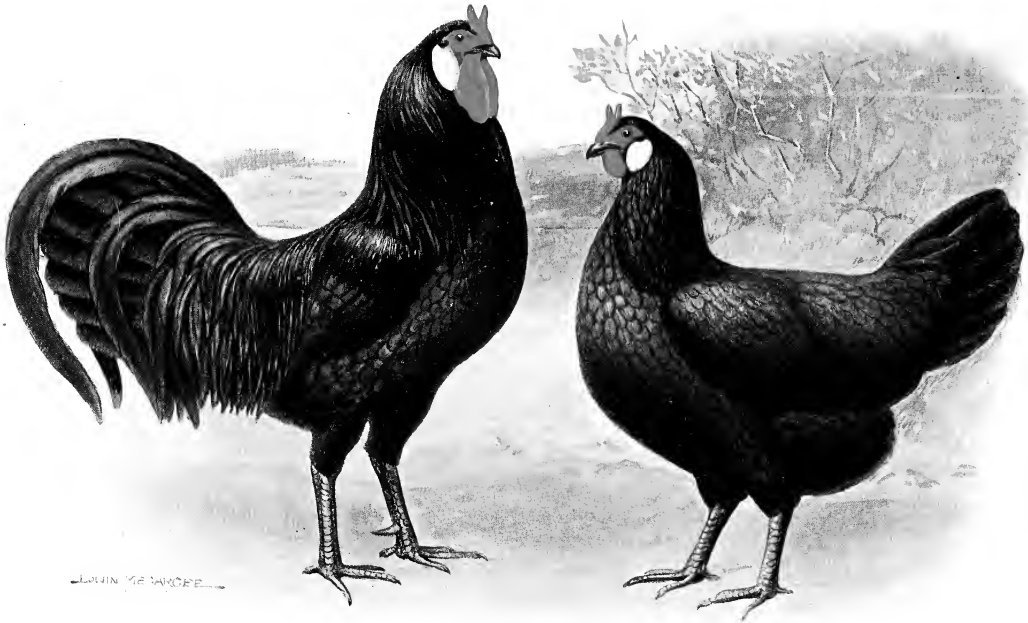
The American Standard describes the Houdan as having white ear lobes, a bright-red comb, face, and wattles; reddish-bay eyes; and black plumage mottled with white, with less white than is demanded in the English Standard. The shanks and toes must be of the same color as required in the English Standard.

The crest and head points are of importance. The crest must be large and globular, and as nearly perfect in color as

possible. Splits or divisions of any kind in the crest will almost exclude them from the show room. In addition to this, they must have a well-defined beard growing beneath the beak and about the throat, have a **V**-shaped comb, and be in perfect condition. All of these points are difficult to obtain in a fowl that conforms to the Houdan type and has generous size and proper plumage color.

In the color illustration a pair of Houdan fowls is shown that conform to the American type. These are portraits of the best that were shown in America during the winter of 1910–11. The female in the background is an English prize winner. It will be seen from this illustration that black predominates in the American type and that more white in the plumage is preferred in England. The weights of Houdan fowls are: Cocks, $7\frac{1}{2}$ pounds; cockerels and hens, $6\frac{1}{2}$ pounds; pullets, $5\frac{1}{2}$ pounds. It is not unusual, however, for Houdans to exceed these weights.

11. Mating.—The chief difficulty in breeding Houdan fowls to conform to the American Standard is the inclination to produce offspring much too light in plumage and small in size. This breed has been so persistently inbred to produce head points and plumage color that conforms to Standard description that its size has been reduced and the vitality lessened. To overcome this, mature hens of large size must be used in the mating, and equal care must be given to the selection for large, well-formed crests and satisfactory plumage color. Pullets that are too dark for exhibition are apt to show sufficient white after their first molt. All females and a number of males acquire more white each time they molt. In all matings, males that are too dark for exhibition will be safer to use than those that have light plumage. Small females of improper formation are of no value in the breeding pen. Exhibition Houdan fowls can be produced only from stock that has been carefully bred for the establishing of a strain that will reproduce better than themselves. The Houdan is one of the most difficult breeds to produce in perfection; it is almost impossible to breed fowls of good quality from any but the best.



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La Flèche

LA FLÈCHE

12. Origin.—So little is known of the origin of **La Flèche** fowls that it is impossible to tell of them with any certainty. What is known can be told better in their history.

13. Development.—But little is known of the early development of the La Flèche fowls. Since about 1850, they have been bred in England to Standard requirements. But few have been bred in America. Aside from the development that would naturally follow market requirements, but little change has been made in them for many years, except to improve their beauty for exhibition.

14. History.—French writers state that the La Flèche has been known as a separate breed for more than 500 years, and it is thought that it has existed for even a longer time. Modern writers credit its origin to the crosses of black Spanish and Polish fowls that were bred in the La Flèche district of France. They had **V**-shaped combs and stately carriage, and for a time had small crests and the peculiar skull formation of the Polish. La Flèche fowls were brought to England at about the same time as the Houdans, and were bred to Standard requirements. Those that were first brought to America had small crests, and but little has been done for their improvement since that time.

15. Description.— In writing of the La Flèche fowls, Lewis Wright states that in general appearance they were more like the Spanish of that time than they were like any other fowl. Although they were not as tall as the Spanish, they were larger, often weighing from 8 to 10 pounds. The La Flèche fowls of the present have the carriage of the Minorca, and are larger in body but not as long as the Minorca. The American Standard requires the hen to have less weight than the Minorca, but the fowls are frequently bred to a weight 3 or 4 pounds heavier than the Standard requires. The peculiarity of fowls of this breed is their **V**-shaped comb, white ear lobes, stately carriage, large size, black shanks, white skin, and rich,

glossy black plumage. They lay large white-shelled eggs. The American Standard describes them as fowls of medium size, having long, powerful shanks, and full, prominent breasts. The standard weights are: Cocks, 8½ pounds; cockerels and hens, 7½ pounds; pullets, 6½ pounds. Although the La Flèche fowls are of attractive appearance, they have never been popular in America.

16. Mating.—So little is known of the La Flèche breed and so little has been done in respect to exhibition qualities as to make it almost impossible to describe the fowls best suited for matings. All that can be done is to select some of the best fowls that can be secured in England, mate and remate their offspring, and select the best to conform to size, shape, and color of the breed. The difficulties are the tendencies to colds, to which these fowls are subject when exposed to dampness. In localities where the weather is changeable, trouble is experienced in growing crested fowls, and the La Flèche fowls seem to be troubled in the same way.

LA BRESSE

17. France has paid more attention than any other country to the improvement of fowls for egg production and table poultry. In referring to this, in his Book of Poultry, Lewis Wright, of England, wrote: "Among the varieties of French fowls, the **La Bresse** fowls occupy the premier position in respect to table quality, if the prices obtained for the best fowls may be taken as evidence. The district where these fowls are bred comprises part of the department of Ain and Seine-et-Oise that is to the south of the old province of Burgundy, and in that district the poultry industry is a very important branch of agriculture."

18. Origin.—When and how the La Bresse originated has never been determined, but the fowls are undoubtedly of Italian origin. French writers differ on this subject, some claiming that they have come from the intermingling of Andalusian and French fowls; others believe that they were

the natural result of an interchange of fowls from Italy with France. As they now exist in Southern France, they resemble the Leghorn fowls.

19. Development.—The development of the La Bresse breed has been only such as would follow careful breeding to improve the fowls as egg producers and for market.

20. History.—As mentioned, much of the poultry of France is named for the locality from which it comes. The southern districts of France have been noted for more than 100 years for the production of poulards, capons, and market poultry of remarkable quality known by the name of La Bresse. Although this breed has existed in that locality for a long time, the fowls have been but little distributed in other parts of the world.

21. Description.—The La Bresse are bred in numerous varieties—the Black, the Blue, the Gray, and the White Bresse being the only varieties that are mentioned as being separate. They are fowls of medium size, in form like the utility Leghorn, but more prominent in breast and body. They weigh from $4\frac{1}{2}$ to 7 pounds, according to their age and sex. The color of the skin and flesh is the beautiful pinkish white so much admired in France. The shanks and feet are of a bluish tint; the eggs have bluish-white shells. They have single combs, and white ear lobes that are frequently mixed with red.

The Gray Bresse is mentioned as the original variety. There seems to be no proof of this, but such is the accepted theory. In this variety, the color is mostly white, with dark or gray markings; the ear lobes are white. The pure white variety is thought to have been bred by selecting the whitest fowls of the gray variety. The black and the blue varieties seem to be bred more for egg production, and the white and the gray varieties for market poultry.

22. Mating.—No attention has been bestowed on breeding La Bresse fowls for exhibition purposes. The only rule of mating that has been followed has been to select the best of

an accepted type that produced offspring that laid well and matured into the most desirable market poultry. In France, this would be a fowl having length, breadth, and depth of body, with an abundance of breast meat. This would necessitate width between the thighs and breadth of back. Such fowls can be readily fattened, and will fill out well in the back—a feature highly considered in France.

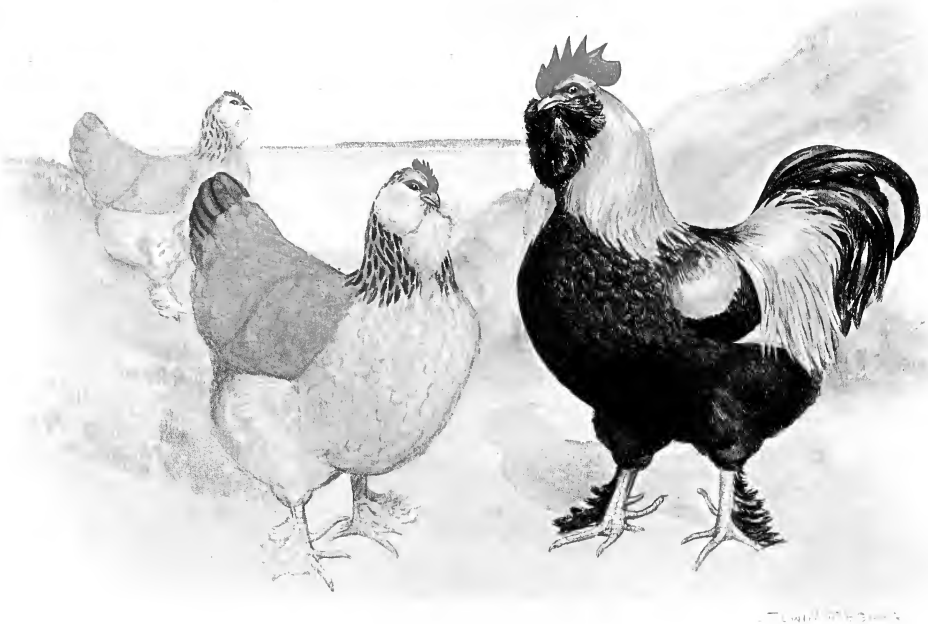
BOURBOURG, OR BOURBOREY

23. Origin.—The **Bourbourg,** or Bourborey, breed of fowls has evidently been made by crossing Light Brahma fowls with fowls of other breeds, with the object of producing a better fowl for market. The claim has been made that the Bourbourg fowls are part Malines. Both the Malines and the Bourbourg fowls show the influence of Asiatic blood.

24. Development.—The Bourbourg fowls were originated and developed for the purpose of having a fowl of desirable proportions for market. As they are used to a considerable extent for capons, a round, plump body formation, with the greatest length of keel, or breastbone, has been sought.

25. History.—The Bourbourg fowls are natives of that part of France lying near the border of Belgium. The Belgian fanciers have become so proficient in the growing of poultry as to have sorely pressed the people of France for supremacy. Naturally, under such conditions, and where so much attention is given to the production of market poultry as is devoted to this line of agriculture in both Belgium and France, every effort would be made to excel; the result of this has been a great improvement of all the poultry of those countries.

26. Description.—The Bourbourg fowls resemble the Columbian Plymouth Rocks in many ways—in size, or weight, they are about the same, also in plumage color. The color of their skin is white, and their shanks and feet are pinkish white and sparingly feathered. The shells of their eggs are tinted.



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Salmon Faverolles

27. Mating.—The Bourbourg fowls have never been bred for exhibition. For this reason, plumage color is not well defined. In mating for the purposes intended, perfect body formation is the one requirement for success. If bred for exhibition, type must be well defined in the fowls used, and the same methods should be applied as are necessary for producing plumage color in Light Brahma fowls.

FAVEROLLE

ORIGIN, DEVELOPMENT, HISTORY, DESCRIPTION, AND MATING

28. Origin.—The **Faverolle** fowls originated in the northern part of France, and in the neighborhood of the place called Faverolle. They are said to have been created to improve or increase the egg production in that locality. Brahma, Cochin, Dorking, Hamburg, and perhaps Malines fowls were made use of in some of the crosses. The peculiarity of fowls of this breed is that those containing Light Brahma blood have the plumage color of that variety; those largely Dorking, favor the Dorking color; and the same is true of those of the Cochin, the Cuckoo, or the Malines crosses.

29. Development.—The Faverolle fowls were developed in France for egg production and for market. As the result of development, they lay large, tinted-shelled eggs, and the carcass, for all market purposes, can scarcely be excelled. They have been adopted by the fanciers of England for exhibition purposes, and are described as such in the English Standard. They are but sparingly bred in America.

30. History.—To meet the demands for large size in market poultry, the poultrymen of France crossed Cochin, Brahma, and Dorking fowls into the common fowls of the land. From these crosses, the offspring most likely to prove satisfactory as market poultry were selected. The characters of the Dorking, the Cochin, and the Brahma were most favorably

considered, and from among these four varieties were selected—the Cuckoo Faverolle, the Dorking Faverolle, the Saumon, or Salmon, Faverolle, and the Light, or Brahma, Faverolle. The Salmon Faverolle has become the most popular variety.

31. Description.—The type of the Faverolle can best be understood after a study of the color illustration of these fowls. The English Standard describes one variety that is commonly known as the Salmon Faverolle, the color of which is: Beak, horn color or white; eyes, gray or hazel; comb, face, wattles, and ear lobes, red; shanks and feet, white; plumage of the males, beard and muff, black; hackle, straw color; back and shoulders, a mixture of black, white, and brown; breast, body, tail, and shank feathering, black; secondaries, white on the outer edge of the feathers and black on the inner edge; primaries, black. In the female, the beard and muff, breast, thighs, and fluff are cream color; the rest of the plumage is wheaten brown, and the neck hackle is striped with a darker shade of the same color. So far but few of these fowls have color so nearly perfect as the Standard describes. The general color of the males of this variety is like that of the Dorking male. The female is a mixture of yellow or cream and salmon color.

A number of varieties are mentioned as existing in France. Of these, there is a variety that is said to be entirely, or almost entirely, black in plumage. The light variety copies in a moderate way the color and markings of the Light Brahma. The Cuckoo Faverolle is mentioned as a variety having plumage color resembling the markings of the Barred Plymouth Rock. Presumably, from its color description and photographs, the Cuckoo Faverolle and the Malines of the same color are alike. The weights are as follows: Cocks, 7 to $8\frac{1}{2}$ pounds; cockerels and hens, 6 to 7 pounds; pullets, 5 to 6 pounds.

32. Mating.—In describing Faverolle fowls suitable for mating, an English fancier, who has been successful with them as exhibition fowls, advises the selection of fowls of both sexes that have perfect single combs of medium size and evenly serrated. Fowls of this breed inherit faulty combs from their ancestors, and to avoid the recurrence of this blemish in the off-

spring requires careful breeding. The second feature of importance is beard and muff. These must be almost perfect, or the fowls will have a ragged appearance about the head. Otherwise, form and color as described in the Standard should be selected as nearly as can be, and these mated; the best offspring should then be selected and remated with the object of establishing a strain that will breed true to form and color. The color most admired in the females is what game fanciers call wheaten color, with the exception that in the Faverolle it is called wheaten brown. An effort is being made to have the plumage color of the males resemble that of the Silver Duckwing males, and the females resemble the Wheaten Game females, as nearly as possible.

WHITE FAVEROLLE

33. Origin and Development.—The **White Faverolle** fowls are thought to have come originally as sports from the other varieties of Faverolle fowls, presumably from the Light Faverolle. They have been developed since 1907 by the poultrymen of England, who have given marked attention since that time to their improvement.

34. History.—Some Faverolle fowls produced offspring that were white or almost white in plumage color. Some of these white offspring were selected and mated about 1905 for the production of the White Faverolle. As a result of breeding from these carefully selected fowls some fairly good white fowls were produced. Some of these were mated with the best of the Light Faverolle, others with the best of the Salmon Faverolle. From these matings offspring were produced that had the proper size and shape and white plumage color, and from them the distinctive breed characters of the Faverolle were well established in later offspring. The excellence of the Faverolle quality in the White Faverolle is shown in Fig. 1.

35. Description.—White Faverolle fowls are the same in form as the other varieties of the same breed. They, like the old or original Salmon Faverolle fowls, are very short in leg,

heavy in body formation, and have very large muffs about the throat. They are more like the Dorking than the Orpington type, although, in form, they are different from any of the American or English fowls. They are very long in body, deep and full in breast, have a long breastbone, and are wide between the thighs. Their plumage is pure white. The skin, flesh, shanks, and toes are of a delicate pinkish white.

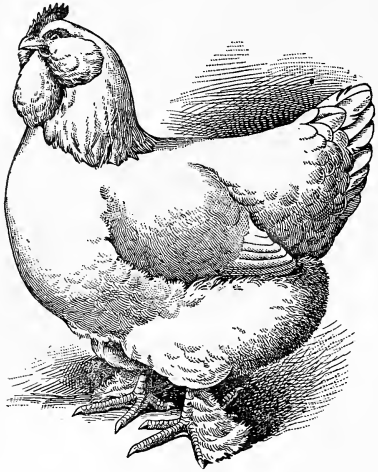


FIG. 1

36. Mating.—In mating White Faverolle fowls for the production of exhibition offspring, males and females that have pure white plumage and the very best Faverolle breed characters should be selected. It will be possible to make more rapid advancement in the development of a strain of this variety if yearling hens instead of pullets are selected for mating with well-grown cockerels. In this variety, only the best that have been bred should be selected for breeding; by consistently following this policy year after year great improvement may be made in these fowls.

POLISH

ORIGIN

37. Fowls with tufts of feathers on the top of their heads and a growth of feathers beneath their beaks have been mentioned for centuries. Naturalists refer to a crested fowl that was mentioned and illustrated by Aldrovandi in the 16th century. This was a large fowl having a crest that was fan-shaped and flat, not oval or round as at the present time. These were called Paduan or Patavinian fowls. Moubray said of them in 1816: "The Poland fowls, as they are generally called, were imported chiefly from Holland. Their color was shining black, with white tops on the heads of both cocks and hens. Their form is plump and deep, and the legs of the best species are not too long. Perhaps the genuine sort has always had five claws and, as the Poland cocks will occasionally produce white stock from white English hens, it is not improbable, the similarity of form likewise considered, that our famous Dorking breed may have been originally raised from that cross."

There is no doubt that the original tufted Hamburg fowls and the fowls mentioned by Dixon and others as having crests, all belonged to the same family. Polish fowls have always been more commonly bred in France than elsewhere. They were made use of in crosses from which the crested fowls of France originated. That they were bred in Spain at an early day and distributed from there into other countries is now admitted. In France, they have been cultivated for utility purposes; in England and in America, only as exhibition fowls. The earliest record of them calls attention to the peculiar skull formation, which is illustrated in Fig. 2. The drawing was made from a dissected head. There has been but little change in the skull formation during the past 60 years. The

skull formation shown was accepted as evidence of the existence of a crested jungle fowl.

Early authorities have mentioned ten varieties of Polish fowls: White-Crested Black; Golden, bearded and unbearded; Silver, bearded and unbearded; Cuckoo, bearded; Gray or Grizzled, bearded; Black-and-White Spangled, unbearded; Blue, with white top knots, unbearded; Yellow Spangled, bearded; Black-Breasted Black, bearded; White, bearded.

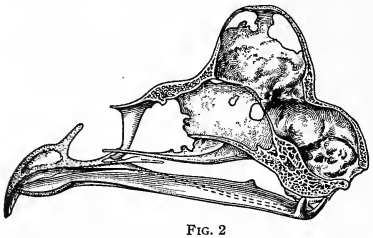


FIG. 2

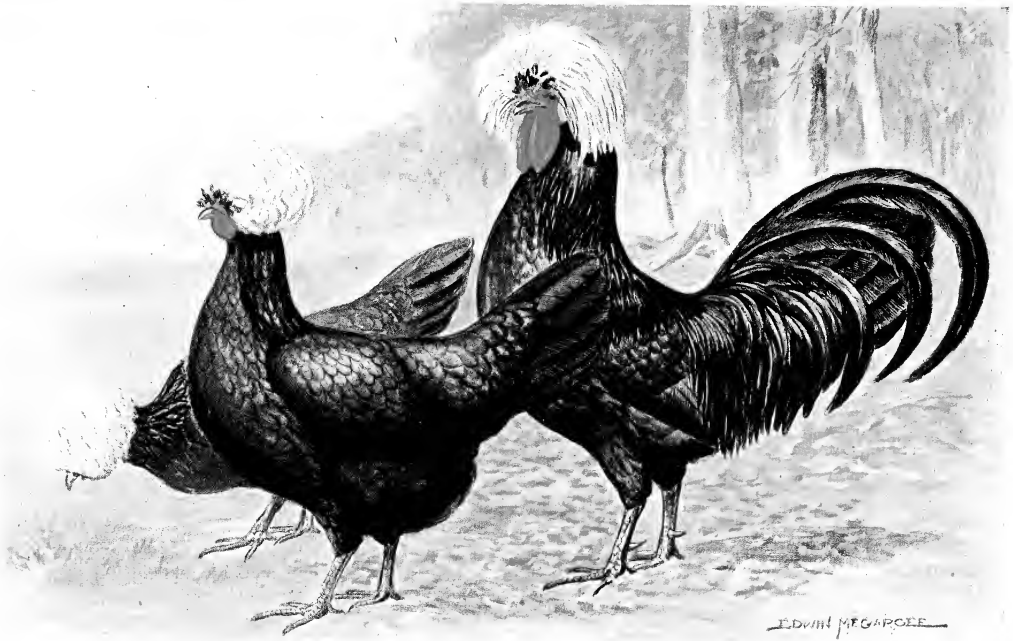
At the present time but eight varieties are recognized: White-Crested Black, Buff Laced, Bearded Golden, Non-Bearded Golden, Bearded Silver, Non-Bearded Silver, Bearded White, Non-Bearded White.

In England, the White-Crested Blue Polish is included in the Standard. Originally Polish fowls had **V**-shaped, or antler, combs the same as the Crevecœur and La Flèche, but from careful breeding and perhaps from the influence of the feathers growing entirely over the head, many specimens have no combs, or combs so small as to be almost imperceptible among the feathers.

WHITE-CRESTED BLACK POLISH

38. Origin.—All Polish fowls have a common origin, which has been told. The **White-Crested Black Polish** was originally more common than any of the other varieties. As described and illustrated in early publications, they had but little crest. Those with beards might be described as having a few feathers growing the wrong way beneath the beak. As they now are, they were originated by poultry fanciers of America and England.

39. Development.—The recent development in the White-Crested Black Polish began about 1880, at which time



WHITE-CRESTED BLACK POLISH

fully one-fifth of the crest was composed of black feathers and most of them grew in front. Since that time, improvement has been made in form and plumage color, and their crests are more than twice the former size.

40. History.—Crested fowls were plentiful at an early date throughout all sections of the world where poultry was raised. At that time, the fowls were not pure black in body plumage, nor were their crests large or entirely white. The English fanciers were the first to cultivate them as exhibition fowls. Later, marked interest in their improvement was shown in America, and between 1880 and 1890 many of them were bred in the United States. Of recent years fewer of them have been bred, but the quality has been improved.

41. Description.—The Standard describes all Polish fowls as having the same body formation, yet they do not all conform to the one shape description. The Standard describes them as fowls of medium size, having an upright carriage and resembling the Spangled Hamburg more than any other fowl. In breast and body formation, including the abdomen, they are plump, as well as full and well rounded. Their peculiarities are the crest and beard, which should be large, full, and of globular formation. The carriage of the head and tail is shown in the color illustration. The difference in the appearance of the varieties is governed largely by the size of the crest and beard, or of the crest alone in the non-bearded varieties.

The plumage of the White-Crested Black Polish is rich metallic black throughout, with no white or foreign color of any kind, except in the crest, which is pure white with a few black feathers bordering the front. The shanks and toes are dark blue or almost black; the comb, face, and wattles are red. In the English Standard, the eyes are described as red; in the American Standard, as brown or black. The ear lobes are white and the beaks dark.

42. Mating.—The best results in breeding White-Crested Black Polish fowls have been obtained from mating the most perfect individuals and selecting and remating the best offspring for the establishment of a strain that will produce

offspring having Polish breed characters, black body plumage, and large white crests of perfect formation, with as little black as possible about the edges. The chief difficulty in breeding fowls of this variety is to separate and hold the white in the crest without any of it appearing in the flights or in any part of the body plumage. In addition to this, records must be kept of both parents of all offspring so as to separate and mate them to avoid inbreeding as far as possible.

In caring for fowls of this breed, special attention must be given to protect them from cold, dampness, and rain. If the crests become water-soaked, the fowls are apt to take cold, unless the crest is dried or the fowls are kept in warm quarters. During the breeding season, the crests may be trimmed about the eyes or clipped to within an inch of the head. A split crest is most undesirable. This may be corrected by binding up the crest and leaving it bound during the breeding season. It is best not to use for breeding purposes fowls that have split crests. If, however, they have other desirable qualities, the fault may be corrected. When the crest is bound up in this way, it should be opened at least every 3 or 4 weeks and thoroughly cleansed by washing; it should then be dried and bound up again. This is to prevent filth from gathering and irritating the head, and also to soften the skin and flesh of the head and influence the next growth of feathers.

BUFF LACED POLISH

43. The differences in description in the English and American Standards are greater in the case of the Buff Laced Polish than in the case of the other Polish varieties. In the American Standard they are called Buff Laced Polish, and in the English Standard, the Chamois, or White Laced, Polish. They are really buff-colored fowls with white markings. In some instances they are buff, marked with white in body plumage, and have white predominating in the tail feathers. The body color is very light in females and almost a cinnamon buff in males. Formerly, many of the females were of a light lemon color, with the body color and lacing so similar as to be scarcely

distinguishable. Some were buff and white spangled or mottled more like the Ancona than the present Buff Laced Polish.

44. Origin.—The Buff Laced Polish fowls are thought to have been originated by crossing the golden with the white Polish. Early writers mention a buff Polish. Dixon refers to the muff or beard as an early appendage mentioned by Albin in 1736 as whiskers; he describes it as a tuft of feathers that covers the ears. Naturally there would be buff Polish where the golden Polish existed, but the present Buff Laced Polish fowls are extremely artificial and have been made by fanciers who worked to make them beautiful.

45. Development.—The Buff Laced Polish fowls have been developed from the badly marked buff and white varieties of early days, step by step through a period of buff and spangled plumage, to buff plumage tipped with white.

46. Description.—In body formation and shape of crest, the Buff Laced Polish is the same as the other varieties of Polish fowls. The general make-up and plumage color of this variety is shown by the color illustration of Buff Polish Bantam fowls. In the males, the under portion of the feathers of the crest is white, and the web is buff, laced with white. The rest of the plumage of both males and females is buff, laced with white.

47. Mating.—The mating of Buff Laced Polish fowls for best results is a difficult task. The males naturally have a darker shade of buff than the females. As the result of careful selecting and mating, a few males and females of nearly the same shade of color have been produced. Fowls as nearly alike as possible should be chosen for mating; when it is impossible to get fowls nearly alike, the best that can be selected for shape, crest, and plumage color should be mated, and their offspring remated continuously in an effort to improve plumage color.

BEARDED GOLDEN POLISH

48. The variety called **Bearded Golden Polish** by the American Standard is known by several names; the English Standard calls it the Gold Polish; and some writers call it Spangled Polish. On account of the marking of the plumage, it might appropriately be called Laced Polish. All of these refer to the variety of Polish that has markings such as are shown in the color illustration of the Bearded Polish.

49. Origin and Development.—Originally, the Bearded Golden Polish were spangled. As they now exist, they are thought to have had a common origin with the Spangled Hamburg; that is, the same process was followed in making the present Spangled Polish and the Spangled Hamburg. All Polish fowls had the one common origin as previously described. The Bearded Golden Polish described in the American Standard has been made from the crude originals, which had a few feathers, called a topknot, growing on top of the head, and a few feathers called whiskers growing under the throat. As a result of careful selection, mating, and breeding, fowls such as are shown in the color illustrations of the Bearded Polish have been produced.

50. History.—From the beginning of poultry exhibitions, Polish fowls have attracted attention throughout the world. The Spangled Polish has always been an attractive variety. The golden variety is thought to be the original, and the silver variety is supposed to have been made from it. Evidence that seems to favor this is that fowls of the silver variety have been bred from the golden variety, but fowls of the golden variety have never been bred from the silver variety. The silver variety is far more popular and more generally bred than the golden variety, and since buff varieties of other fowls have become popular, the buff variety of Polish has also become more popular than the golden variety. The best of the Bearded Golden Polish have been bred in England and Canada, but in recent years some good ones have been produced in the United States.

51. Description.—The Bearded Golden Polish has a crest of large size and but little comb. The crest of a fowl of the bearded varieties is usually larger than that of the non-bearded varieties. The beard, which grows beneath the beak, is separated into three parts, one part hanging down between the wattles, and the other parts growing from the cheek below the eyes on to the side of the neck. The hackle in the male is long and flowing, and in the female appears to be more a part of the body plumage than a separate division. The saddle plumage in males is long and flowing; the tail is very full; the main tail feathers are well spread; the main sickles extend beyond the main tail feathers; the covert and saddle feathering is profuse. In the females, the tail is well spread and is surrounded at the base with double rows of coverts. The breast and body are round and full. These fowls should be wide between the thighs and have a medium length of shanks.

The plumage of both males and females is golden bay throughout, each feather laced with brilliant black; the under plumage is dark or black. The crest of the male is black in under plumage and golden bay in surface color, tipped with black. The crest of the female is like her body plumage. The hackle of the male is tipped or striped at the ends with black. The muff of cockerels is usually dark, approaching black, but showing more of the golden color as mature cocks. The markings of the wings form a double bar and a wing bay in both males and females. The shanks and toes are dark blue; the eyes are dark. The plumage color of this variety is more in conformity with that of the Laced Wyandotte than of any other fowl.

52. Mating.—The rule of mating to be followed to produce Bearded Golden Polish exhibition offspring is that like will produce like, or that the best offspring will come from fowls that are almost perfect according to Standard description. The rules for mating Bearded Silver Polish will apply to this variety, color excepted.

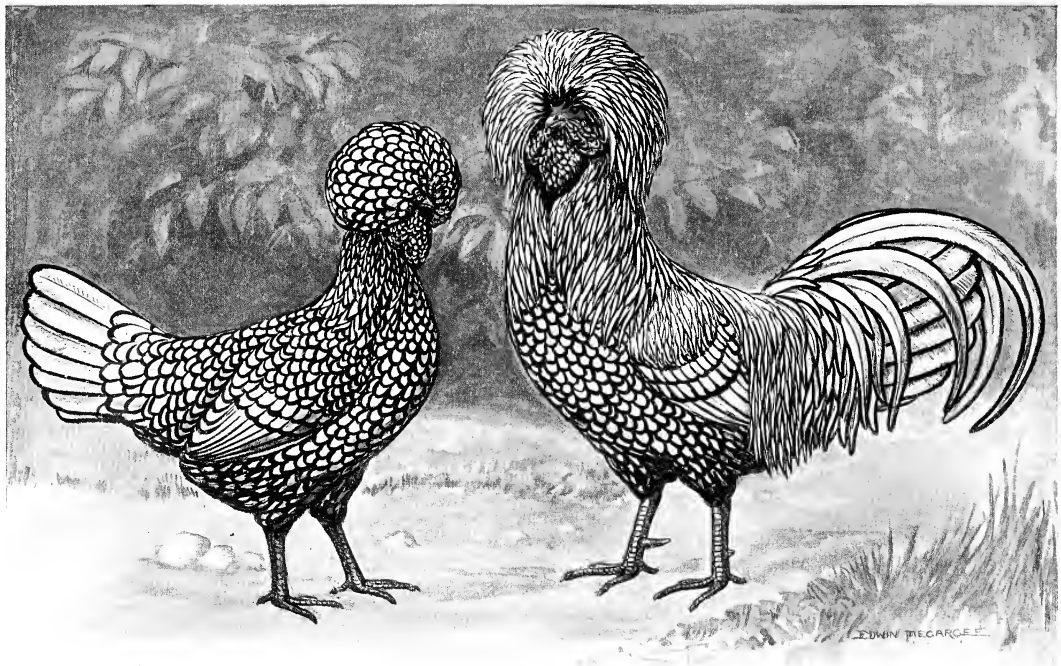
NON-BEARDED GOLDEN POLISH

53. Whether the Bearded or the Non-Bearded Polish have the priority claim of originality cannot be settled. If the Paduan fowl of Aldrovandi is the ancestor of all Polish, not only was the original fowl without muff or beard, but it had a fan or lark crest (a narrow strip of feathers that grew on the top of the head like a single comb), as shown in Aldrovandi's original picture of the Paduan hen, which is given in Fig. 3.

Game fowls having beards were illustrated in the 16th century. Some having a small tuft of feathers on the top of the head back of the comb were illustrated at about the same time. The term *muff* has been used for a certain breed of game fowls of an early day. That fowls with crests and no beards, fowls with beards and no crests, and fowls having both beards and crests have been known for centuries is an established fact; yet, in the absence of proof other than the knowledge of the early existence of the Paduan fowl, it is fair to conclude that they might have existed originally with both or with one, and yet may have belonged to what might be called the Paduan family.

FIG. 3

54. The **Non-Bearded Golden Polish** fowls are the same in every way as the Bearded Golden Polish, except that they have no beards or extra growth of feathers of any kind under the throat; the absence of this gives them as trim an appearance as is shown in the White-Crested Black Polish. Their origin and development are the same, and to produce form and color, they may be mated the same as the Bearded Polish. They have not been bred in such large numbers, nor are they equal favorites with the Bearded Polish.



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BEARDED SILVER POLISH

BEARDED AND NON-BEARDED SILVER POLISH

BEARDED SILVER POLISH

55. Origin.—The **Bearded Silver Polish** variety has the same origin as other varieties of the Polish family. The color of these fowls has been established by years of careful breeding.

56. Development.—Careful breeding has developed the Bearded Silver Polish into the type of fowl shown in the color illustration.

57. History.—The history of the Bearded Silver Polish variety is identical with that of the Bearded Golden Polish variety.

58. Description.—The shape of fowls of the Bearded Silver Polish variety is shown in the color illustration, and their general make-up as to crest, beard, and body formation is identical with that of the Bearded Golden Polish; but in color they differ materially. The body color of this variety is white or silvery white; the under plumage is dark or slate. The crest of the male is black at the base, or in under plumage, and silvery white in the web, which is tipped or spangled with black at the points. In the finest males, the crest feathers are laced with black. The hackle of the male is silvery white, laced with black. The entire body color of the males and females is white, as in the Silver Sebright, and is marked with Sebright lacing of black. The main tail feathers are white, laced with black; the wing bow, wing bar, wing bay, flights, and secondaries are white, tipped or laced with black; the females have a double row of tail coverts with large white centers laced with black; the saddle plumage of the male, including the tail coverts and sickle feathers, are long and flowing, and are white, edged with black. The shanks and toes are blue or slaty blue.

In the cockerels and pullets, the beard and crest are darker than in mature fowls. The crest, in both males and females,

should be perfect in formation, without breaks or separations of any kind. The center coloring and lacing of both the Bearded Golden and the Bearded Silver Polish are more like the plumage of the Silver and Golden Sebrights than like that of other laced varieties. The only difference between the Bearded Golden and the Bearded Silver Polish is in the ground color, which is golden bay in one and white or silvery white in the other.

59. Mating.—In mating the Bearded Silver Polish, success can come only from fowls of the best quality. The color and markings are similar to those of the Silver Sebright, and are quite as difficult to produce in their purity. The mossing of feathers, which is the term applied to black appearing in the center of the white, is difficult to obviate. If the parents are deficient in black markings, they are apt to produce offspring with plumage that is much too light for exhibition. In selecting males for breeding, only those of large size and of perfect breed characters should be considered, and they must have large oval crests of perfect formation. In the Bearded Silver Polish the growth of feathers beneath the beak must not only be profuse but regular in formation. These feathers should be dark and be marked with white.

The feathers of the body must have clear white centers and be laced with a narrow edging of black that glistens with sheen. Tail coverts and main tail feathers must be marked as shown in the color illustration. The same color and markings must exist in both the Bearded Golden and the Bearded Silver Polish. The females used for breeding should be hens in their second or third year that have sustained their color and continued to be of good form and of perfect color markings. Their crests must be globular in form and have a proper distribution of white and black; the feathers in the body plumage must be clean and clear in the centers and be evenly laced with a narrow line of glossy black. Care must be taken to select fowls that have the proper shade of color in the under plumage, and shanks and toes that are smooth and have a clean, clear, slaty-blue shade.

NON-BEARDED SILVER POLISH

60. The **Non-Bearded Silver Polish** is the same in every way as the Bearded Silver Polish, except for the beard. It is claimed that both the Bearded and the Non-Bearded Silver Polish fowls have been bred from the same matings. Whether or not this is true has not been proved; but it is known that Houdan fowls without beard or muff have been bred from the same matings that produced offspring having beautiful crests and full beards. The bearded varieties of fowls usually have more profuse feathering in the crest than the non-bearded fowls. This is a natural result of selecting and breeding for a profuse beard. Selecting for non-bearded matings would naturally result in less profuse feathering and less crest; otherwise, the matings for this variety are the same as for the Bearded Silver Polish.

BEARDED AND NON-BEARDED WHITE POLISH

BEARDED WHITE POLISH

61. Origin.—The **Bearded White Polish,** although having a common origin with the other varieties, has come as white offspring from the silver variety of bearded Polish. They are also said to have come from the black variety, but the most acceptable solution of their origin is that specimens that were white or nearly so were selected and mated for white plumage.

62. Development.—The Bearded White Polish fowls have not been developed to a quality equal to that of the other varieties. Their plumage color is so plain, not even the little red in the head points showing to embellish them, that they have not been favorites.

63. History.—The history of the Bearded White Polish conforms to that of the other varieties of Polish.

64. Description.—The Bearded White Polish fowls have the same breed characters, crest, beard, and body formation

as fowls of the other bearded varieties. The only difference is in the color of their plumage, which is pure white throughout. Their eyes are reddish bay; their face and wattles are red; their ear lobes, white; their shanks and toes, blue or slaty blue. The comb and wattles of all varieties of Polish are red; their ear lobes are white or red and white; and their eyes are red or reddish bay.

65. Mating.—In the mating of Bearded White Polish unusual care must be given to selecting both males and females that have pure white plumage and shanks and toes of a clean, clear slaty-blue shade, with smooth surfaces. Breed characters must be marked in these fowls, and the beard and crest of both males and females must not only be profuse but of large size and perfect formation. There are no color or markings to select for in this variety, and the only requirements are perfect form, proper size, and clean, clear color in plumage, shanks, and toes.

NON-BEARDED WHITE POLISH

66. The **Non-Bearded White Polish** fowls are identical with the Bearded White Polish, with the exception that the beard is absent. Otherwise, they should be selected for exhibition and for breeding the same as the Bearded White Polish. Offspring having crests and fairly good beards, others having crests and but little beard, and still others having crests of medium size and no beard, have been bred from the same strain of Polish. It might not be safe to state that all three kinds have been bred from a single pair, but it may be said that offspring having full crests and beard and offspring with fairly good crests and but little beard have been bred from a single pair of White Polish.

MISCELLANEOUS

SULTAN

67. Sultan fowls, which have more peculiarities of form than any other fowls, have been called the Polish fowls of Turkey. They originally had but little beard, but this has been developed until they are now heavily bearded. They are white fowls of medium size and came from the Oriental countries.

68. Origin.—It is reasonable to suppose that Sultan fowls originated in Turkey, although they may have come from other parts of the Orient. The Sultan and the Silky fowls may have originated in the same place.

69. Development.—So few Sultan fowls have been bred and so little attention has been bestowed on their development that but little progress has been made in their improvement.

70. History.—The history of the Sultan fowls contains the statement that they were brought from Constantinople about 1850. Only a few of them were brought into England, and a search in Turkey yielded no fowls of superior quality. Those originally brought from Turkey were of medium size; in shape and appearance they are much like the white variety of Polish, but they had feathers growing above their eyes, something like a mustache, as well as a slight growth of feathers below the eyes and under the throat, like a beard. They had vulture hocks; shanks and toes feathered; white plumage; and five toes. To improve the quality and retain vitality, they were crossed with the White Polish. Just how they have been bred during recent years cannot be told. Those recently exhibited at poultry shows have the form and appearance of an overgrown Booted White Bantam.

71. Description.—Sultan fowls should have the general appearance of Polish fowls. The males have a large, round crest, with a small growth of feathers near the front of the crest on each side of the comb, which gives the appearance of a heavy mustache, and in front of this is a **V**-shaped comb; growing from both sides of the beak are feathers conforming to the side growths of the beard in Polish fowls; beneath and between the wattles is a beard; they have a long, flowing hackle, full breasts, short backs, and profuse tail feathers. The females conform to this description in an effeminate way. The wings of both males and females are large and strong, hanging down below the line of the hock; vulture hocks grow from the joint, and in many fowls drag on the ground. The shank and toe feathering is like that of the Cochin. They have five toes on each foot; blue shanks and toes like the Silky, and pure white plumage throughout. The males weigh about 5 pounds, and the females about 4 pounds. The Standard states that both thighs and shanks shall be short; accordingly, the fowls seem to have a low-set carriage, but they really have considerable length in both thigh and shank, and stand quite erect.

72. Mating.—The only rule that can be applied in the mating of Sultan fowls is to select and mate the best that can be found.

FRIZZLE

73. Origin.—In writing of **Frizzle** fowls, Moubray, in his "Treatise on Domestic and Ornamental Poultry," states: "This fowl is not infrequently called 'Friesland,' under the popular but erroneous idea that it has been brought from that country. It is, however, thought to be a native of Batavia, in the island of Java, and is found in Japan, Sumatra, various parts of Southern Asia, and the Philippines. It derives its name from the peculiar characteristic plumage, the feathers being curled or frizzled, and presenting the reverse way to that of ordinary fowls. The prevailing color is white, and it is stated that there are specimens of almost every shade from a

gray or dun color to a brown or even black. The feathers on the back of the head form a sort of erect crest over an ambiguous comb that is indented and of dual formation, connected at the base but extending laterally apart."

74. Development.—The Frizzle fowls have been developed only to the extent of breeding a few without regard to special form or color.

75. History.—Frizzle fowls have been fairly well distributed throughout the world and have been described in the American Standard since its beginning. The Japanese have made from them fowls of miniature size that are even more striking in their peculiarity of plumage than the larger fowls. T. Farrar Rackham, of New Jersey, bred a strain of Frizzle fowls that produced specimens of remarkable quality, with buff plumage color. The hood in these fowls was so highly developed as to form a crescent about the head; the combs were single and fairly well formed.

76. Description.—Frizzle fowls should conform to the size and type of the American breeds. They should be black, bay red, or white; whatever their color, it must be even and true throughout. The combs should be single; all the feathers should have a tendency to curl in the opposite direction from that usually followed in poultry. The most popular varieties are the pure black, the pure white, and the red, which are in fact of a reddish-buff or cinnamon color.

77. Mating.—Frizzle fowls that are used for producing exhibition offspring should have compact body formation, perfect combs, and profuse feathering that is curled as much as possible. The Rackham strain was made after years of careful mating, by selecting and mating the best offspring produced each year. This method was followed until the offspring had feathers that rolled like shavings and were so intense about the head as to form a hood. By continually selecting the best, these features might be intensified to almost any degree.

SILKY

78. Silky fowls, or Silkies, as they are commonly called, are oddities. Early writers speak of them as having come from India and China, and some trace them to Japan and the Philippines. Fowls having plumage the same as the Silky have occurred among the Cochin and other breeds. One peculiarity of these fowls is that their plumage is more like wool or hair than like feathers. They are mentioned as having white plumage, black plumage, and brown or rust-colored plumage. Another of their peculiarities is the color of the skin and flesh, which is a dark violet or blue, and extends to the bone. Their general appearance was originally like that of the early Cochin, and at that time they had but little crest and but few feathers on the shanks and toes. They are now considered among the miscellaneous fowls of the American Standard. By common consent, they are usually exhibited among the bantams and will be more fully described with the miscellaneous bantams. They are mentioned here only as a member of the crested family.

YOKOHAMA

79. Yokohama fowls were called Phœnix by the Germans; they have been known also as Long-Tailed Japanese Game and as Long-Tailed Japanese fowls. They are thought to be among the oldest types of fowls, and it may be that they are of the same race as the Black Sumatra.

The original variety color of this breed is thought to have been that of the Duckwing, as this variety is the most plentiful. Fowls of this breed are said to have existed in Japan with tail feathers over 12 feet long. Males with sickle feathers more than 7 feet long have been seen in America.

80. Origin.—Japan is undoubtedly the original home of this remarkable breed of fowls, and they are known there as the Tosa fowls. No other definite information can be gained relative to their origin.

81. Development.—The Japanese have developed the Yokohama fowls for beauty of plumage and for length of tail feathers. In Japan they are kept in cages on elevated places to prevent their plumage from becoming soiled and to encourage greater length. The modern development of this breed has been made in England.

82. History.—The first of the Yokohama fowls that attracted attention were those mentioned in 1874 as having been seen in France and in Germany. Later, a few were brought to America and some have been scattered throughout the world; but little attention was paid to their breeding prior to the organization of the Yokohama Club of England. Since that time a standard has been compiled in England, and they have been so much improved by selection and careful breeding as to have been separated into a number of varieties, the most popular of which are the duckwing, the spangled, and the white.

83. Description.—In general body formation, the Yokohama is more like the Sumatra than other fowls. The neck is long and beautifully curved; the tail, long and flowing, with an abundance of side hangers; the sickles and coverts, narrow and hard; the entire tail forms a graceful curve and is carried rather low. The tail feathers of cockerels range from 2 to 3 feet long, and those of mature males from 4 to 6 feet, and, in a few instances, somewhat longer. The females are almost identical in body formation with the Black Sumatra. The long tail feathers and coverts of females have a graceful curve somewhat like the coverts of the males. The carriage of both is described as pheasantlike. The fowls are long and extremely graceful. Males weigh from $4\frac{1}{2}$ pounds to 6 pounds; females, from $2\frac{1}{2}$ to 4 pounds.

The Golden and the Silver Duckwing Yokohama fowls have plumage color the same as the corresponding varieties of game fowls. The Spangled Yokohama fowls are white and black in plumage, the black marking for the greater part running lengthwise of the feathers, which are white. The wing bows of the male are white, and the wing bars are black, with a white

lacing. The tail feathers of the males and females are black, laced more or less with white. The White Yokohama has white plumage throughout. The wattles and ear lobes of all varieties are red, but little if any of the wattle showing. More value is placed on carriage and length of tail than on the variety color.

84. Mating.—In the mating of Yokohama fowls for best results, more attention must be bestowed on body formation and length of tail in both males and females than on plumage color. Selection can be made from among the best that have been bred; these should be mated, their offspring remated to increase the length and beauty of the tail feathers, to maintain variety color, and to improve vitality. The profuse growth of feathers can be maintained only in fowls that are perfectly healthy and possess all the vitality that can be obtained in the breed.

NAKED NECK

85. A peculiar breed of fowls called **Naked Neck** has come from Austria, where it is said to have originated. The name comes from the fact that the fowls are destitute of feathers from within an inch or two back of the head down the entire length of the neck and on to the shoulders. This peculiarity of plumage is very marked, and the neck and shoulders have an unnatural appearance. They are not attractive; in fact, they are very unattractive, and the peculiar sensation to the hand when grasping the naked portion of the neck is very unpleasant. The skin of the neck is smooth, and, when exposed to the sun during the summer months, turns red and has a raw appearance, as if the blood were gathered beneath and close to the skin. They are very hardy; are but seldom seen, and have been bred in America only as novelties. The illustration of these fowls shown in Fig. 4 was made from a pair resulting from a cross of a full-blooded Naked Neck male and Barred Plymouth Rock hens.

RUMPLESS

86. The **Rumpless** fowls are very ancient. Tailless fowls were mentioned by Temminck in his earliest writings. They are also mentioned as the Rumpless or Persian cocks of Latham. Nearly 300 years ago this variety was known to Aldrovandi, who called them Persian fowls.

Sonini and Temminck state that this fowl is a native of the Ceylon forests and is called by the natives Wallikikilli

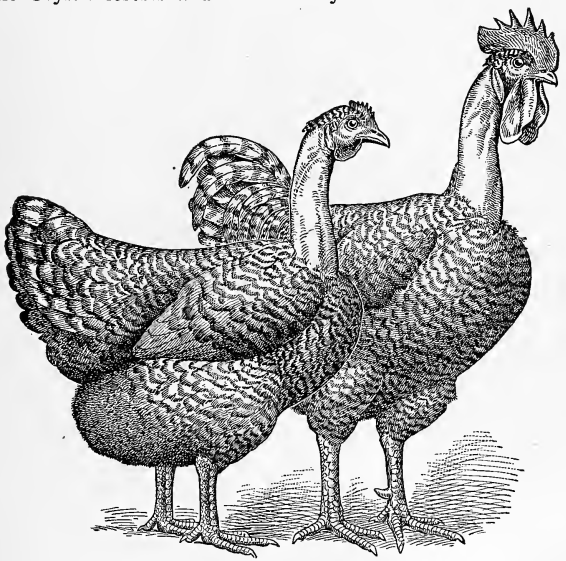


FIG. 4

or Cock of the Woods. This statement is disputed by E. L. Layard, who, when writing from Ceylon in 1850, says that the Rumpless fowl is not a wild inhabitant of the island, but is a rare, tame introduction from Cochin. That they did exist and do exist at the present time cannot be denied, but from what and from where they originally came is uncertain.

Rumpless fowls are bred in several variety colors, and they are usually quite like the Brown-Red and the Duckwing Game fowls in color. Recently, some of them have been bred by Professor C. B. Davenport, Director of the Station for Experi-

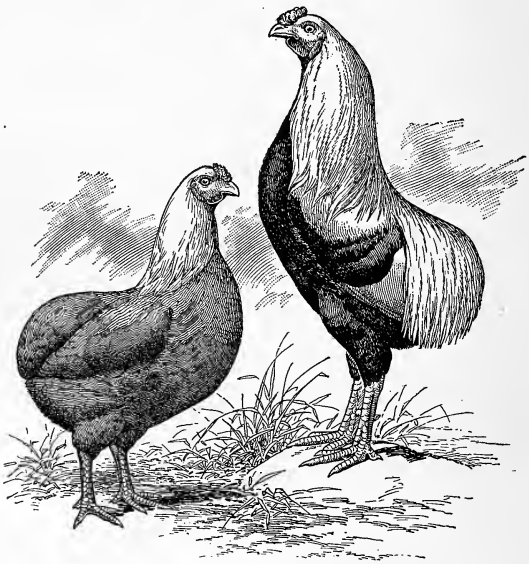


FIG. 5

mental Evolution, Cold Spring Harbor, Long Island, New York. In variety color these are like the Duckwing Game fowls; they have no tail feathers, and appear as if the rump were cut off. At the left in Fig. 5 is shown a Rumpless female, and at the right a Rumpless male.

GAME FOWLS

INTRODUCTION

1. It is generally conceded that the game fowls were the ancestors of all the domestic fowls. As wild fowls, they must have been capable of defending themselves from their natural enemies. Whether the miniature type of the jungle fowls, as we now know them, or the mammoth type of the Malay is considered, the same natural conditions would exist. The pugnacious character of these fowls has gained for them the name of **game fowls.**

As classed in the American Standard, they are *Games,* and in the English Club Standards they are now *Game, Modern Game,* and *Old-English Game,* the Modern Game of the English Club Standards conforming to the exhibition game fowls of the American Standard. The Old-English Game of the English Club Standards is the Pit Game of America, which is not recognized in the American Standard.

Games, as defined in the American Standard, are the modern types of game fowls that have been developed from the Old-English, or Pit, Game type. Five stages of the development of game fowls are shown in Fig. 1. This illustration shows the changes that have occurred from time to time, as depicted by the artists of the day, and, although they may not be absolutely correct, they reflect the character of the fowl as bred for exhibition since 1800.

2. In addition to the modern type of game fowl for exhibition, the American Standard admits the Indian Game (under the name of the Cornish Game), the Black Sumatra

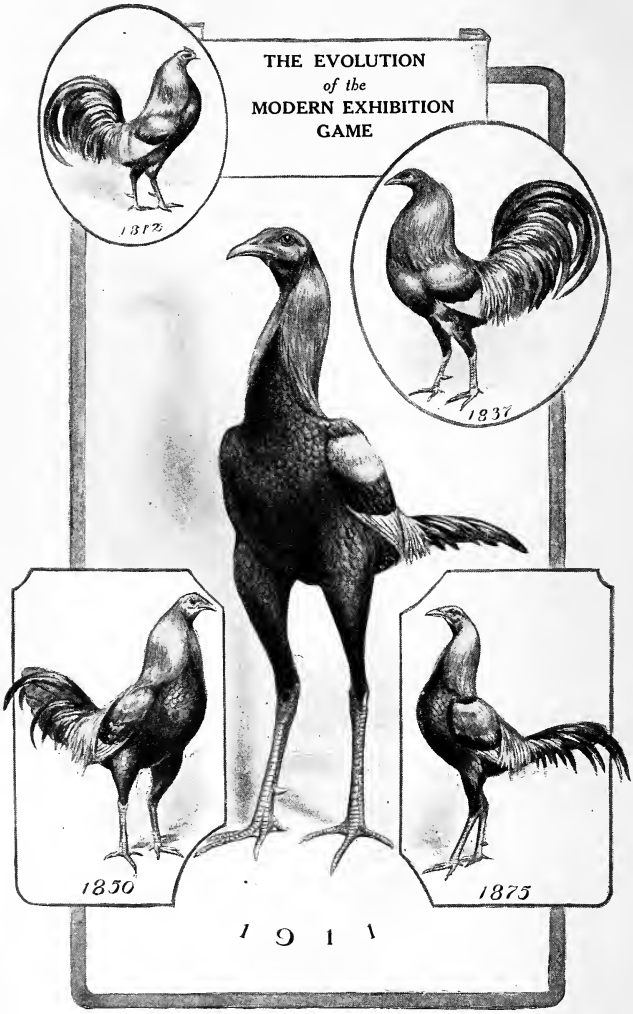

THE EVOLUTION
of the
MODERN EXHIBITION
GAME
1812
1837
1850
1875
1911

FIG. 1

Game, and the Malay Game. The Aseel Game, which is perhaps of equally ancient origin with the Malay, has not been admitted to the American Standard, neither has the Old-English Game. Both of these, however, are bred to standard, and numerous varieties are mentioned in the club standards of England.

To follow the form made use of in the description of other breeds and varieties, the game fowls described in the American Standard will be considered as of four general classes, namely, *Exhibition Game*, *Cornish Game*, *Malay Game*, and *Black Sumatra Game*. The *Aseel Game* and the *Old-English Game* will be considered as non-standard varieties.

EXHIBITION GAME

GENERAL DISCUSSION

3. With the beginning of poultry shows in England, the Old-English Game was the only type of game fowl, and fowls were shown in the varieties that are now considered as standard. Gradually, and with great care, the type was altered. At first the changes took the form of more nearly perfect plumage color. Lewis Wright, in his "Book of Poultry," states that at first changes in both color and form were very moderate. He says: "Exhibitors and judges alike understood that the game fowl was different somehow from the breeds that were often termed, in comparison, 'the heavy, cart-horse style.' The tendency was natural to prefer the somewhat taller and more reachy fowls; and to a certain extent, the modified type did naturally, although confined to the earliest and more moderate degree, appeal even to the general public with a beauty of its own, and was welcomed by many for the very reason that it was somewhat different from the original cock-fighting model."

The first change in exhibition game fowls worthy of note was in 1850. At that time they had much the same body formation that now belongs to the Old-English Game, with the

exception that the separation of color was more pronounced, their carriage was less erect, and their combs and wattles were more closely trimmed than was usual for the Old-English Game. From then to 1875, greater differences were found in body formation, length of shanks, and carriage of body and tail. About that time the first mention of the "slim tail" occurred. The Standard of 1875 describes the tail of the male as being carried well together and at a moderate elevation. The thighs and shanks were rather long. From then to the present time, the development has been gradual. The type of exhibition game fowls most admired at this time is shown in the color illustrations.

The Black-Breasted Red Game has always been considered the model in form and color, and is, perhaps, the original from which all other game fowls have descended. The games are described in alphabetical order. The origin and development of the exhibition game fowls is told in connection with the discussion of the Black-Breasted Red Game, and the origin and development of each variety will be given under its proper heading.

4. One of the important requirements in the breeding of exhibition game fowls is the selection of both males and females with the breed characters of the modern exhibition game fowls. One of the breed characters of exhibition game fowls is large bone formation in the shank and thigh, and to produce this in the offspring they must have certain environments that cannot be found in all localities. A limestone subsoil is well suited to them, and they will grow quickly in localities where this condition exists. Persons experienced in breeding game fowls have failed with them in some localities and have succeeded remarkably well in others.

To succeed in the production of game fowls, not only must the matings be of the best and the feeding for bone development be well suited to them, but the care and surroundings must be such as to make them prosper. It is almost impossible to breed exhibition game fowls in damp places.

BIRCHEN GAME

5. Origin.—The **Birchen Game** was made by mating fowls of two varieties, the Brown-Red Game and the Silver Duckwing Game, and then selecting and remating the offspring for the production of a fowl in almost exact contrast to the Brown-Red Game. Judging from the various claims that have been made, several kinds of matings were effected to produce them. The original, perhaps, from which the present Birchen Game has descended was known as the Silver Birchen Gray Game. By crossing fowls of this variety, which were more or less like those of the Silver Duckwing Game variety, with Brown-Red Game fowls having a pale lemon or straw color, the birchen color was obtained.

6. Development.—The recent development of the Birchen Game fowls has been more rapid than might have been expected, due to the fact that they breed true to color. Good offspring of both sexes are produced from single matings, it being necessary only to select with care the fowls of this variety that have the type and color most admired; from such fowls, improvement is rapid.

7. History.—Birchen Game fowls have never been so plentiful nor so popular as fowls of other varieties. They have been considered as kindred to the Brown-Red Game fowls. It has been asserted that both Brown-Red Game and Birchen Game fowls of superior exhibition quality have been bred from a single mating, but this can scarcely be authenticated. When a Silver Duckwing Game or a Birchen Game male is mated to Brown-Red Game females, both Brown-Red Game and Birchen Game fowls have been produced, but not from the one hen.

8. Description.—The shape and general make-up of all exhibition game fowls should be the same; the only difference should be in plumage color. In the Birchen Game male, the top color, including hackle, back saddle, shoulder coverts, and wing bows, is silvery white; the feathers of the neck hackle are

marked down the center with a narrow stripe of black (a hackle free from black is most admired); the rest of the body plumage is a rich, glossy black; and the breast feathers have a narrow lacing of white, but this lacing grows narrower and narrower until none of it appears on the under part of the breast and body plumage.

The female Birchen Game has a light-colored hackle striped with black; the rest of the body plumage is black; the feathers of the breast are laced with white. The eyes of both males and females are black; the head and its attachments are dark purple, or *gypsy* color. The shanks and toes are black. The beauty of the Birchen Game is due mainly to the clean, clear, silvery-white top color of the male, the neck hackle of the same color in the female, and the narrow, silvery-white lacing on the breasts of both sexes. The main tail feathers of both sexes should be black; and the sickles and coverts of the male should glisten with sheen. The general body formation of game fowls is shown in the color illustrations.

9. Mating.—To succeed in breeding Birchen Game fowls for exhibition, it is necessary to establish a strain that can be depended on to reproduce good quality. To establish such a strain, only Birchen Game fowls of the proper type and color must be mated. When color needs strengthening, a Brown-Red male or female may be selected and bred into the strain. When this is done, the Brown-Red fowl should be as pale in markings as can be selected. To avoid too much lacing on the breast, males having but little of it can be used in the matings.

Other methods of mating, however, are followed. It is not unusual for Brown-Red Game, Birchen Game, Silver Duckwing Game, or Golden Duckwing Game females to be mated to either light-colored Brown-Red Game or dark-colored Birchen Game males for the production of exhibition fowls of several kinds. No dependence can, however, be placed on the breeding quality of even the most beautiful fowls that are produced in this way. It is best, for continued success, to keep the strains true and pure, only strengthening them when

necessary from the Brown-Red or the Silver Duckwing Game varieties, and to leave the chance matings and experimental work to those who have acquired this art by years of experience.

BLACK GAME

10. Origin.—The **Black Game** fowl was made by selecting and mating black fowls of different varieties of game fowls.

11. Development.—The development of the Black Game has been accomplished by selecting and mating the best game fowls that had black plumage throughout, and selecting and mating the best offspring for shape and color.

12. History.—Black Game fowls are considered more as a novelty than as a true variety. English writers of 50 years ago mention them as possibilities for the "any other variety" classes, but state that they are not considered a true variety in the same sense as the other kinds.

13. Description.—The Black Game fowls are black throughout, including the beak, shanks, and toes. The blacker the plumage and the greater the show of sheen, the more desirable they are. The eyes are brown; the face, wattles, and ear lobes, deep red, almost as dark a red as those of the Birchen Game fowls.

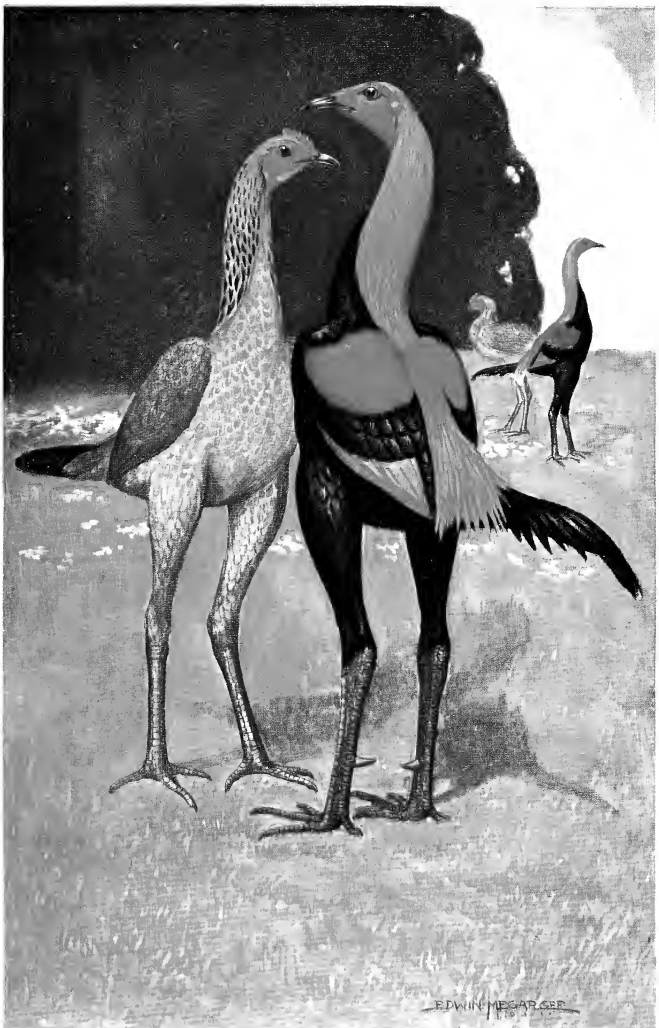
14. Mating.—In mating Black Game fowls, only those of the best form possible should be selected, and special attention, also, should be given to selecting those of pure, lustrous black plumage throughout, with considerable sheen, black shanks, toes, and beak, and dark eyes and face. If such fowls are systematically bred, it is possible to establish a strain of beautiful Black Game fowls that will consistently reproduce desirable offspring.

BLACK-BREASTED RED GAME

15. Origin.—In making the present type of **Black-Breasted Red Game** fowls, Malays were liberally used in the crosses. This was to give greater length of leg, to elevate the carriage, and to shorten the plumage and make it more compact, as well as to modify the color. These changes brought objectionable features, such as coarse heads, necks, combs, and eyes, all of which have been bred out by careful selection.

16. Development.—The development of the Black-Breasted Red Game fowls has been continued until a greater length of leg has been established than is found naturally in the Malay. These fowls have more erect carriage and a different shape of body than is found in other kinds of game fowls. They have been altered in color and body formation to such an extent that they have been transformed from dark-colored fowls with a heavy, low-set body to light-colored fowls of tall and slender proportions. The change in the carriage of the head and tail has also helped to give them a distinct appearance.

17. History.—The history of the Black-Breasted Red Game fowls differs but little from that of the other varieties of game fowls. With the banishing of the pit from royal patronage, the game fowl ceased to be generally admired. Then came the desire to make game fowls popular by producing beautiful specimens for exhibition. With this in view a beginning was made, and their improved form and color attracted the attention of persons fond of exhibition poultry. The first marked improvement was recorded when John Douglas, of England, won the cup at the Crystal Palace Show in 1870 with a Black-Breasted Red Game cock of such remarkable quality that it attracted world-wide attention. This variety was so changed as to make the game fowls of 1900 marvels in the way of exhibition fowls. This, however, deprived the average fancier of the pleasure of keeping game fowls, and a desire sprang up for a fowl less difficult to breed, with the result that the Old-English Game type was revived.



241-I L T 117 § 10 BLACK-BREASTED RED GAMES

18. Description.—The carriage of game fowls is called *station.* A game fowl with good station stands in an upright or erect position and has a great length from the tip of the toe to the end of the beak. When a Black-Breasted Red Game fowl stands as it should for exhibition, an almost direct line can be drawn from the center of the eye down through the wing and along the thigh to the ground. The positions, or stations, of the game fowls most popular for exhibition are shown in the color illustrations.

In each of these illustrations a different position is shown, any one of which may be accepted as correct for a game fowl, and, although one of these positions is demanded for the exhibition pen, the fowls do not conform to this general make-up when seen in their natural condition. The exhibition type of game fowl is so largely artificial that it can acquire its most correct position only by careful training. The Standard describes the natural form and color of game fowls, but the type that wins in the show room is made by the fanciers best able to train them to assume the positions shown.

The modern exhibition game cock is of unusual length in every section; its carriage is upright, and it is active and alert. The comb, wattles, and ear lobes must be shaved off so close to the head as to give the head the appearance of having been skinned, thus making it long and flat on top and extending it to the point of the beak. The neck is arched and slim. The body formation is described as egg-shaped, the larger end of the egg being at the shoulders and the point of the egg at the rump. From the rump grows a slim, narrow tail, the main feathers of which are almost straight and very slender for the size of the fowl. The thighs and shanks are long, but there is a greater length in the thigh from the body to the hock joint than in the shank from the hock to the ground. The bones of the shank are strong, and the toes are well spread or separated, and no deformity of feet is permitted. The females should conform in a general way to the shape of the males.

The weight of modern English game fowls varies from 6 to 8 pounds, the lighter weight being that of pullets, and the heavier weight being that of the largest males.

The head points, including the eyes, are bright red; the beak, shanks, and toes are of a willow color. In the American Standard, the beak is described as horn colored; in the English Club Standards, as dark green. The hackle of the males is preferably orange yellow, but ranges from orange red to a light, golden color, with no striping; the back and saddle are rich crimson or bright red, with a lighter or golden-orange shade in the saddle; the wing bows range from orange to red; the wing bars are greenish black; the secondaries are rich bay on the outer edge and black on the inner edge and tips, the bay showing when the wing is folded; the primaries are black, with a bay edge; the body color is black, glistening with sheen; the main tail feathers and the tail coverts are black, glistening with sheen.

The hackle of the females is light orange or gold, striped with black; the breast is a rich salmon, shading to grayish brown on the thighs; the tail is black, the topmost feathers matching the body plumage; the rest of the plumage is of a rich partridge color, finely penciled with a slight golden tinge. This is the color demanded by the English Club Standards; the American Standard requires a grayish-brown body color, stippled with golden brown. Of whatever shade the body plumage of the female may be, it must be even and free from reddish shadings or lacing. The preference is given to an even shade of light brown throughout the body plumage, which is stippled with a shade of golden brown.

19. Mating.—Single matings of males and females of the best exhibition quality may produce remarkable results, but no fowls lacking in form or color should be used. To produce more certain results, double matings must be practiced and strains of male producers and female producers must be established. In mating for the production of exquisite color in males, a line must be established by mating and remating until the proper color is obtained. When this has been accomplished, no new blood should be introduced into a strain. A line for the production of females must be established in the same way.

The lighter and more brilliant shade of red in the males can be bred only from the brightest-colored males mated with females that have light lemon-colored hackles; but such males are likely to have too little color in the wing bays, back, and wing bows. This can be improved by selecting and breeding from only the best. Beautiful females will be produced from these same matings. The orange yellow in the hackle, back, and saddle plumage can be maintained only in this way, and no other variety should be crossed into them. The practice of using Wheaten Game fowls for breeding Black-Breasted Red Game males, and brick-red males for pullet breeding should be discontinued.

To have the clear, clean back and wing color so much admired in females with proper breast color, it is necessary to eliminate red from the body plumage. No females having red in the back or wing or lacing on the edges of the feathers should be used in matings for pullets; nor should males having deep-red plumage be used. Only females of the desired color should be mated with males having orange-yellow hackle and saddle plumage and a light-red top color.

BROWN-RED GAME

20. Origin.—The **Brown-Red Game** fowl was made from what were formerly known as Brown-Breasted Red Game fowls. Their ancestors were so called from the fact that the breast color of the males was brown or reddish brown. The color distinctions were at that time less pronounced than at the present. Having descended from the Old-English Game fowls of the same name, they inherited from them the reddish-brown color of breast and other markings peculiar to that variety.

21. Development.—The development of the Brown-Red Game fowls is described in connection with their history. They are perhaps more artificial than fowls of other varieties.

22. History.—With the development of the modern type of game fowls came a desire to have the Brown-Red Game more beautifully marked than formerly. Beginning with what was

known as starling-colored breast plumage, which was bay or brown or brown streaked with bay and a crimson top color, or a black breast with a narrow lacing of bay and a top color of orange red and crimson, they have been changed and improved until both males and females now have black breast plumage, the feathers being edged with a light lemon or straw color. In the transformation from the intermingling of red, brown, and black in breast and body plumage, and the same parts marked with bay, a fowl has been developed whose breast and body plumage is black, or as the English describe it, greenish black, and whose feathers are laced with lemon color. The Brown-Red Game fowls have never been as popular in America as in England; as bred in America, the bantams of this variety are of better quality than the larger fowls.

23. Description.—The English Club Standards and the American Standard differ somewhat in the descriptions of the color of the Brown-Red Game fowls. The English Standard states that the beak should be dark, preferably black; the eyes, comb, face, wattles, ear lobes, legs, and feet, black; and that there should be but two colors in the plumage—lemon and black. In the cock, the lemon should be rich and bright; in the hen, light; the black in both males and females should have a bright green gloss known as beetle green. The American Standard states that the beak and eyes should be black; the comb, face, wattles, and ear lobes, dark purple. The top color of males should be bright lemon. The feathers of the neck hackle should be striped through the center with black; the rest of the body plumage is black, the breast feathers being laced with lemon; the sickle and tail coverts are lustrous black.

In the females, the entire body plumage should be black; the neck hackles, lemon color, with a narrow striping of black; the breast feathers, laced with lemon. In both males and females, the lacing should extend down the breast, gradually growing less as it approaches the thighs. In some fowls, the lacing extends down the entire breast and on to the thigh. This, however, is not desirable, as it should end where the thigh joins the breast plumage.

24. Mating.—The mating of Brown-Red Game fowls for producing exhibition offspring of good quality is most difficult. Persons who have succeeded in breeding this variety claim that they can be produced only by having separate matings for males and females. To produce males for exhibition they mate a male that is perfect in exhibition qualities with females deficient in breast markings but having an excess of black in their hackles. If the feathers on the head of the female are almost black, such would be preferred for this mating. A male that is laced down into the thighs and along the side beneath the wings, mated to a female lacking in this respect may produce good cockerels. Exhibition pullets may be bred from exhibition females mated to males lacking in breast markings. Such matings are made on the assumption that a defect in marking in one parent may be improved in the offspring if an excessive amount of marking is present on the parent of the opposite sex.

Better results will be obtained in the greater proportion of the offspring from single matings of fowls correct in form and color, and then in turn mating their offspring until a strain has been established that will produce color and markings of a better quality than can come from chance matings in which one fowl has excessive color and the other too little. Many experiments have been made by crossing Duckwing and Birchen Game fowls with Brown-Red Game fowls, and although some desirable exhibition offspring have been produced, the results from them are very uncertain.

To produce Brown-Red Game fowls of a clean, clear black throughout and having lemon-colored markings, only males and females possessing such color and markings in the highest degree should be used. Too much lacing on the throat and breast is apt to appear. To overcome this, males with very little lacing on the breast should be mated with females that are properly marked. Color and markings can be governed through the males, and for this reason males should always have color as nearly perfect as possible, and not too much lacing on their breasts. Marked attention must be given to having the head, shanks, and toes, a bright, clean, clear black.

It is best to follow the rule of color in the English Club Standards when mating for the production of the best color; and, although the American Standard describes combs, face, wattles, and ear lobes as dark purple, the nearer they are to black the better they will appear, and the more certain the fowls will be to produce offspring of the best color.

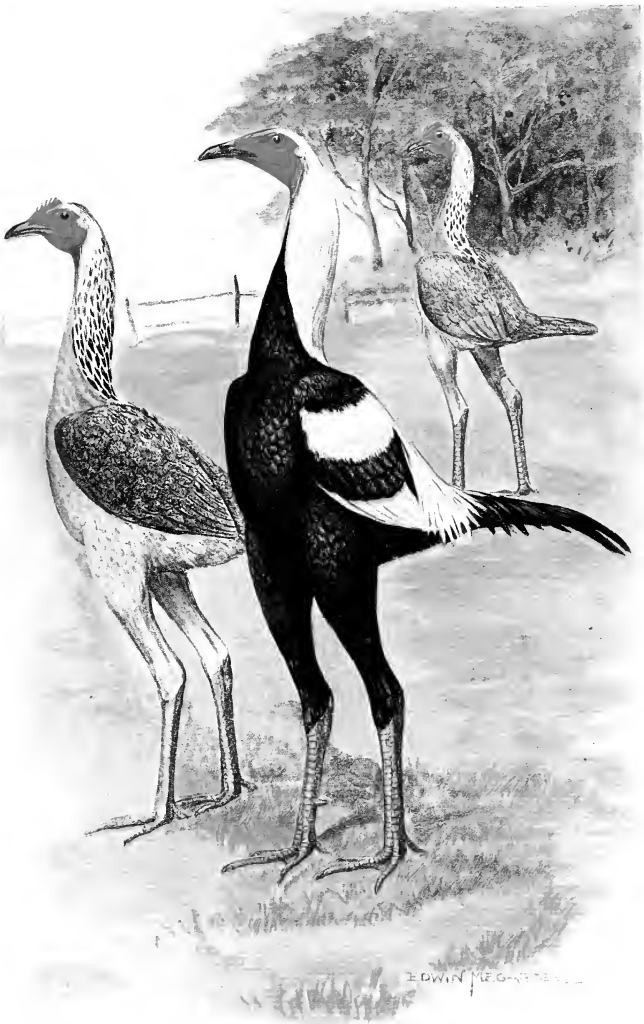
DUCKWING GAME

25. Origin.—The origin of the **Duckwing Game** fowl is the same as the origin of other varieties. They are cross-bred fowls, and, although they are not cross-bred as the term is generally understood, they are game fowls that have come from crossing Black-Breasted Red Game, Duckwing-bred Black-Breasted Red Game, and Duckwing Game fowls. The Silver Duckwing Game fowls were at one time an original race, but as now bred, they are artificial in the extreme, as are also the Golden Duckwing Game fowls. They are so closely allied to the Black-Breasted Red Game fowls as to make them almost one and the same, but in some respects they are quite different.

Duckwing Game fowls are bred in two varieties, the Golden Duckwing and the Silver Duckwing. The Silver Duckwing Game fowls have descended from a well-established strain of the Pit Game type, but, like the Black-Breasted Red Game fowls, they have been subjected to crosses with the Malay fowls. The Golden Duckwing Game fowls have been made through the intermingling of the exhibition types of Black-Breasted Red and the Silver Duckwing Game fowls, the darker specimens of the Silver Duckwing Game being used to soften the golden color of the Golden Duckwing Game fowls for exhibition.

26. Development.—The development of both the Silver Duckwing and the Golden Duckwing Game fowls is described in connection with mating them for the production of exhibition offspring.

27. History.—The history of the Duckwing Game fowls goes back to the general history of the Old-English, or Pit,



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Game fowls. The history of the modern exhibition Duckwing Game fowls is identical with that of all varieties of exhibition game fowls, except that this variety has been less popular and has received less attention than might have been expected when their beauty is considered.

28. Description of Golden Duckwing Game Fowls. Both the male and the female Golden Duckwing Game fowls have beaks of a dark horn color; the eyes, head, comb, face, wattles, and ear lobes are red; and the shanks and toes are a willow color. The hackle plumage of the male is creamy white and free from striping; the back and saddle, including the wing bows, are orange, ranging from a pale to a rich shade; some persons describe this orange as golden. The finest exhibition fowls usually have wing bows of a rich orange; wing bays, pure white; neck hackle, creamy white; and wing primaries, white on the outer edge and black on the inner edge and tips. When the wing is folded, the white shows more plainly in the wing bays, and above that are black bars, embellished with a glistening sheen. The rest of the body plumage of the male is black; the sickles and coverts of the tail are lustrous black, shading to blue rather than to green. The hackle of the female is white, striped with black; the throat and breast plumage is salmon, shading into gray as it approaches the thighs. The main tail feathers are black; the rest of the body plumage is French, or steel, gray, slightly penciled with black, according to the English Standard; and gray stippled with darker gray, according to the American Standard.

29. Description of Silver Duckwing Game Fowls. The color of head points, eyes, and shanks is the same in the silver as in the golden variety. In fact, about the only difference in the color and markings of these varieties is that the male of the silver variety has white markings, including the hackle, and the female is of a lighter shade of gray. The English fanciers describe the plumage of the female of the golden variety as French, or steel, gray, slightly penciled with black, and of the silver variety as light French gray, with almost invisible black penciling.

The Golden Duckwing Game males have the orange markings that influence a darker shade of plumage in the females of that variety. The intermingling of pure white with the black-red has softened the color of the silver variety, giving the female a most delicately tinted surface color. The distinction between these two varieties is plainly shown in the color illustrations of the Duckwing Game and the Duckwing Game Bantam fowls. In the color illustration of the Duckwing Game fowls, the male is of the silver variety, the female with him is of the golden variety, and the female in the background is of the silver variety.

30. Mating.—Several methods of mating to produce Golden Duckwing and Silver Duckwing Game fowls are practiced by those skilled in the art of producing exhibition game fowls. All of these methods, which are given in the following paragraphs, are necessary for producing and maintaining the several shades of color and markings sought in exhibition fowls.

1. A pure-bred Black-Breasted Red Game male with no trace of markings in hackle or saddle plumage and the less red the better, may be mated with a Duckwing Game female. If a Black-Breasted Red Game male that has clean, clear black where that color exists, the red very mild and verging to an orange shade, with purple rather than green wing bars, can be selected and mated with a Duckwing Game female, it may produce offspring fit for exhibition as Golden Duckwing Game fowls. It may be that only the cockerels from such a mating will answer for exhibition. Pullets so produced can be mated with Duckwing Game males.

2. A Duckwing Game male mated with Duckwing Game females is likely to produce both males and females fit for exhibition. Exhibition fowls of both the golden and the silver varieties may be produced from this kind of mating. This is likely to be true when the male is strong in Golden Duckwing Game coloring and the females range from very dark Golden Duckwing Game coloring to the very lightest tint permissible in the Silver Duckwing Game females.

3. To produce pullets for exhibition, a Duckwing Game male is mated with Duckwing-bred Black-Breasted Red Game females. From such matings pullets of both the golden and the silver varieties will be produced. Any cockerels of either variety that are produced in this way and that are fit for exhibition should be kept not only for exhibition but for breeding with hens strong in the Black-Breasted Red Game blood. The pullets so produced may be mated with either a pure-bred Black-Breasted Red Game or a Golden Duckwing Game male. When such pullets are mated with Golden Duckwing Game males, they are more likely to produce dark-plumaged offspring than when they are mated with a Black-Breasted Red Game male that has light-colored markings.

4. A Silver Duckwing Game male of perfect color and markings mated with Duckwing Game or pure-bred Black-Breasted Red Game females is likely to produce pullets with delicately colored body plumage. The more delicate in color the males and the softer in color the females, the lighter will be the body color of the offspring. The most expert breeders of game fowls claim that more success will come from breeding Golden Duckwing Game males with Golden Duckwing and Silver Duckwing Game females and then selecting and mating the best offspring. To intensify the color, only Black-Breasted Red Game females of the cockerel-bred line should be used.

5. The delicate colors of Duckwing Game fowls are produced by a Black-Breasted Red Game male of a cockerel-breeding strain that has rich, black plumage, clear hackle and saddle feathers, and a good color in the wing bays, mated with Duckwing Game females of excellent type that have coarse or heavy markings and are rusty on the wing bows. All cockerels produced by such matings will be Duckwing Game of both varieties, and most of the pullets will be Black-Breasted Red Game, which will be useful only for breeding with good-colored Duckwing Game males. The Black-Breasted Red Game males used for pullet breeding are much lighter than those used for cockerel breeding, and have but little color on the back and wings. If the Duckwing Game females used have

deep color, or if the pullets from the cockerel matings are used, they must be mated to a pullet-breeding Silver Duckwing Game male.

RED PYLE GAME

31. In conformity with the American Standard, the name **Red Pyle Game** is used here. The English Club Standards call these fowls Pyle Games, and states that they are identical with the Black-Breasted Red Game except that they are red and white instead of red and black.

32. Origin.—Red Pyle Game fowls originally came from crossing the Black-Breasted Red Game and the White Game varieties and selecting and mating the best offspring.

33. Development.—The development of the Red Pyle Game has been gradual and persistent. Formerly all of the fowls had willow-colored shanks and feet, but at the present time only yellow beaks and shanks are permissible. The modern type of Red Pyle Game has been made by careful selection and mating for shape and color.

34. History.—The history of the Red Pyle Game fowls tells of years of persistent work to drive out the black in their plumage, to change it to white, to produce yellow shanks and beaks, and to establish a variety color in the male of pure white and red, and in the female of pure white and salmon.

35. Description.—The Red Pyle Game males have a bright-orange hackle. According to the English Club Standards, the back and saddle plumage is a rich maroon; as described in the American Standard, it is red shading into a light orange. The secondaries of the wings are white on the inner edge and tips, with dark chestnut on the outer edge, which forms rich-colored wing bays when the wings are folded. The rest of the plumage should be pure white. The females have a white body color throughout; the neck hackle is white, tinged with gold; the breast is a rich salmon; the eyes, in both males and females, are bright red; the comb, face, wattles, and ear lobes are red; and the shanks and toes are yellow. Other-

wise true-colored Pyle Game fowls have many or few spots of black scattered through their plumage, and others have so little red in their plumage as to give them, among amateurs, the grade of Lemon, Light, and White Pyle fowls. None of them, however, are worthy of consideration except the rich red and white known as Red Pyle Game.

36. Mating.—Two methods are practiced in mating Red Pyle Game fowls. Breeding by the Standard, as it is called, refers to the mating of males and females both closely approaching the Standard description in size, shape, and color. Whenever the red markings of the offspring lose their brilliancy, Black-Breasted Red Game blood must be bred into them. But so long as good color can be obtained from a single mating of true Red Pyle Game fowls this will be the most satisfactory practice. When this fails, a Black-Breasted Red Game male, perfect in exhibition color, can be mated with Red Pyle Game females. The pullets from such a cross almost invariably have willow-colored shanks, and are likely to have a good breast color. Both the males and the females produced from such a cross may be gradually bred into the strain of the Red Pyle Game; in this way color will be strengthened and maintained.

To produce the most beautifully colored Red Pyle Game cockerels, a Black-Breasted Red Game male with clean, clear, rich color on the back and wing bows should be mated with a Red Pyle Game female or with Red Pyle Game females that have been bred from Black-Breasted Red Game fowls and that have yellow shanks. To produce good males and the finest of females, a Red Pyle Game male that has been bred from a Black-Breasted Red Game male mated with Red Pyle Game females should be mated with good-colored Red Pyle Game females. Both males and females must have yellow beaks, shanks, and toes. Willow-colored shanks will occur frequently from all Red Pyle Game matings, and this must be overcome by using fowls that have rich golden yellow in beak, shanks, and feet. In this variety, the color of the eyes is an indication of the color of the plumage; light-red or cherry-colored eyes indicate a softer shade of plumage than eyes of a darker red.

WHITE GAME

37. Origin.—Whether **White Game** fowls have always existed or whether they came as sports from some of the dark-plumaged varieties or from the Red Pyle Game fowls is not important. The White Game as they now exist, were made by selecting white-plumaged game fowls of unusual size and station and mating and remating them, having in mind exquisite proportions, beautiful plumage, and rich, golden-yellow beaks, shanks, and feet.

38. Development.—The White Game fowls have been bred in such small numbers that they cannot be said to have been developed other than as a novelty for the "any other variety" classes.

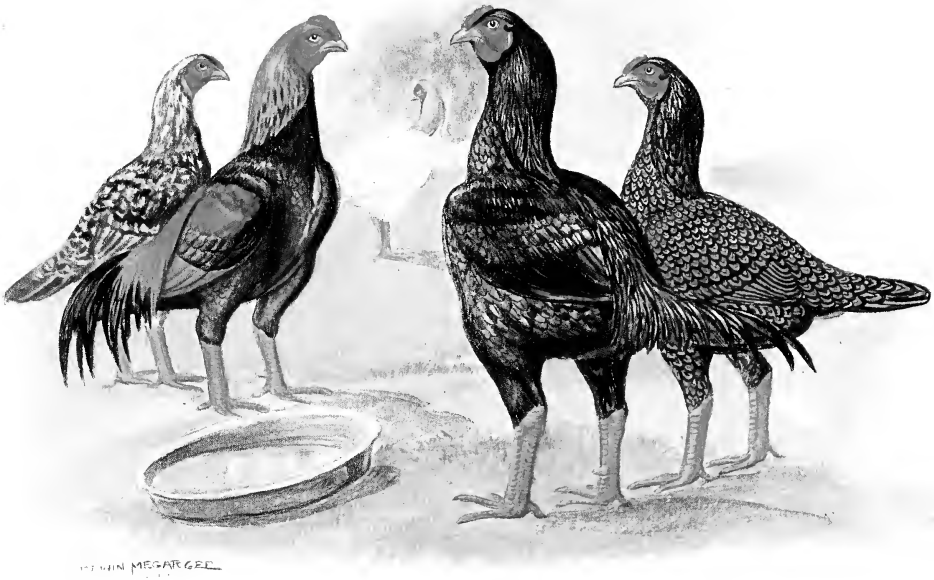
39. History.—Other than that they have been bred of a quality acceptable as a Standard variety, the White Game fowls have no history.

40. Description.—White Game fowls have yellow beaks, shanks, and feet; and red eyes, comb, face, wattles, and ear lobes. The plumage should be pure white throughout.

41. Mating.—The rule for mating White Game fowls is to select for breeders both males and females that have as nearly as possible perfect game type, pure white plumage, and shanks and feet of a rich golden yellow. The offspring from such fowls should be mated, selected and remated, care being taken always to select fowls with true game characters and pure white plumage.

WHEATEN GAME

42. In the production of Black-Breasted Red Game fowls for exhibition, female offspring of peculiar color known as a **Wheaten Game** will sometimes be produced. These fowls were formerly considered valuable for the production of males of the highest quality. Of recent years, they have been so little considered that but few of them are kept. One of these females,



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ASEEL AND CORNISH GAMES

known as the Red Wheaten Game, has willow-colored shanks, a golden or a lemon-colored hackle, very slightly striped with black; breast and thighs, a light fawn or cream color; body color and secondaries, a pale cinnamon or wheaten; and a tail, black, except the top feathers, which match the body color. Another offspring from the Black-Breasted Red Game, known as the **Silver Wheaten Game,** has shanks of the same color as the Red Wheaten hen; silvery-white neck hackle, slightly striped with black; breast and thighs, pale fawn or light buff; body color and secondaries, a pale cinnamon; and a tail, black, except the top feathers, which match the body color. The Silver Wheaten Game fowls are used for breeding with males of the Duckwing Game variety.

CORNISH GAME

DARK CORNISH GAME

43. As early as 1820, a breed of fowls known as **Cornish Game** was bred about Devonshire and Cornwall, England. The fowls were bred for fighting more than for any other purpose. They were made by intermingling Malay and Aseel with Pit Game fowls of that locality, selection being made of the Earl Derby type, which had yellow shanks and feet. Later, these fowls were improved for market. Following this, they were developed into exhibition fowls and named *Indian Game.* This name is retained in the English Club Standards. When first admitted to the American Standard they were called *Cornish Indian Game.* In the American Standard of 1910 they are called *Cornish* fowls.

44. Origin.—The origin of the modern type of exhibition Cornish Game fowls was undoubtedly from the best of the Cornish Game, by mating and remating, and then selecting and crossing with the Aseel. Crosses were also made with Malay and other types of game fowls. The claim is made that the originator, Sir Walter Raleigh Gilbert, of England, crossed

a Red Aseel imported from India with English Black-Breasted Red Game fowls of the Lord Derby type. Later, crosses were made with Black Sumatras and with what were known as Pheasant Malay fowls, the last-mentioned cross being made to improve the plumage color in the females. As they now exist, they have originated from selecting and mating the best that could be chosen from the several types that were developed from the numerous early crosses.

45. Development.—The Cornish Game was made in its development. The most expert fanciers of England and America have devoted years to this work. Marked attention was given to amalgamating all their desirable exhibition features into a breed of fowls that combine size, beauty, usefulness, and attractive show qualities. This has been accomplished by a rigid selection for size, shape, color, and markings.

46. History.—The history of Cornish Game fowls begins with the appearance under the name of Indian Game fowls in the show rooms of England about 1870. Aseel Game fowls brought from India and the Black-Breasted Red Game fowls were used for crossing with the best Cornish Games. It has been claimed, but not verified, that the rich markings of both males and females have been intensified by the use of Black Sumatra and Black-Breasted Red Game fowls. Although in the females the narrow pencilings of lustrous black were called for in the back, breast, and body, but few of them had such markings.

47. Description.—A complete description of the Cornish, or Indian, Game fowls is taken from the Welsh United Game Club Standard, which describes the head and neck as rather long and thick; the eyebrows, broad and square, giving a cruel expression; the beak, rather short, stout and well curved; the eyes, full and bold; the pea combs, close fitting; the face, smooth and fine in texture; the ear lobes, small and neat; the wattles, smooth and free from wrinkles; the neck, of medium length and slightly arched; the body, thick set and broad, with prominent shoulder butts; the breast, wide, deep, prominent, and nicely rounded off; the back, fairly flat, gradu-

ally tapering from the shoulders to the tail; the wings, short, muscular, and well tucked up; the tail, of medium length and tight feathered; the secondaries, or coverts, a trifle narrow; the legs and feet, of medium length, strong, and thick; the toes, four in number, long, strong, and straight; the general shape and carriage, upright, commanding, and courageous, with sloping back and tail carried well down at an angle of about 45 degrees. In general appearance they are broad, muscular, active, vigorous, and sprightly.

The plumage of the male is close, narrow, and hard. The females conform in a general way with the males, except that the tail is short and fine, each feather nicely overlapping. The tail is carried well down, but is slightly higher than the tail of the male. The general shape and carriage is upright, commanding, and vigorous, and the back is sloping. The general appearance of the female is broad and muscular, active and sprightly.

Adult males weigh 8 pounds and upwards; adult females weigh 6 pounds and upwards.

The color of the Dark Cornish Game of both sexes is as follows: Beak, horn color or yellow, with a mixture of both; eyes, varying from pale yellow to pale red; comb, face, wattles, and ear lobes, a brilliant red; shanks and toes, a rich yellow or orange color. In the cock, the head is of a rich, glossy, greenish black; the neck hackle, back, saddle hackle, and shoulders, a rich, glossy greenish black, intermingled with rich bay or chestnut; the wing bows, the same mixture of rich, glossy, greenish black with rich bay or chestnut; the wing bars, a rich, glossy, greenish black; the secondaries, a rich bay or chestnut on the outer web and a rich black or green on the inner web and end of feathers, only the rich bay or chestnut showing when the wing is folded, thus forming a triangular patch of wing bay; the primaries, black with a short, narrow fringe of light chestnut color on the outer web; the breast, under body, and thigh plumage, a rich, glossy, greenish black; and the tail, sickles, and coverts, a rich, glossy, greenish black.

In the female, the head is a rich, glossy, greenish black; the neck hackle commences with a rich, dark green, but as the

feathers broaden, the center of the feathers is chestnut color edged with a green border; the breast is a rich bay or chestnut brown, every feather edged with green, and where the size of the breast feathers permits, they should be double laced; the abdomen and thigh feathers are the same, though less distinctly marked; the back, saddle, shoulder, and wing plumage is similar in markings to the breast, only much more distinct, especially on the shoulders and wing bows; the wing bars are heavier in lacing; the secondaries, on the lower or visible web, are a rich bay or chestnut, edged with a narrow strip of green, and the inner web is black; and the tail and tail coverts are a rich bay or chestnut, the ground color being clear and distinctly laced with green.

One English Standard describes the ground color of females as chestnut brown, nut brown, or mahogany brown. It also states that triple lacing, though beautiful, is not desirable and may be due to the influence of Dark Brahma blood. The description of the Cornish fowls in the American Standard conforms in a general way to that of the Indian Game fowls in the English Standard. In the American Standard, the color, which approaches mahogany, is called bay, and pencilings of lustrous black are required to follow the shape of the web of the feather. The eyes are preferred of pearl color in the American Standard, but eyes varying from pale yellow to pale red are admissible in the English Club Standards.

A later color description for females is ground color of a rich bay or chestnut, each feather edged with a rich beetle green; the best fowls have double lacing similar to the markings of the Partridge Cochin. The neck hackle is black at the top, shading into bay, and edged with black; the back and wings are distinctly laced; the wing bows are heavily laced.

48. Mating.—When mating fowls for the production of exhibition Cornish Game fowls, the most nearly perfect form as described must be selected in both males and females. Dependence can be placed in large, well-proportioned females having heavy thighs and strong bone formation in the shanks and feet. Only those fully understanding the proper propor-

tions of a Cornish Game fowl can select breeders from them for producing exhibition fowls. Females lacking in body formation are not likely to produce offspring of much value. When the Malay traits are dominant, offspring of a Malay type are likely to follow; but the breed characters of the Aseel should dominate. The males selected must have the massive body formation peculiar to the Aseel or they will not answer for breeding purposes. The color and markings, although second in importance, must be as described in the Standard; otherwise, there is likely to be a confusion of color in the offspring. The color in well-bred Cornish Game fowls is usually good. Males of good color are likely to come naturally from well-bred stock, but great care and attention must be given to selecting color matings to produce exhibition pullets.

Both sexes can be bred from the same matings, but it is best to use heavily laced hens for the production of males, and those of a lighter ground color and narrower lacing for the production of pullets. This has led to separate matings; some breeders select cockerels with light red on the wing bows and distinct red lacing in hackle and saddle plumage to produce pullets. This line of mating should be about the same that is followed for the production of color in Partridge Cochin fowls; that is, to use the males most distinctly marked with chestnut brown throughout the body plumage for mating with the best penciled females for producing pullets, and the darker males and females for producing cockerels.

WHITE CORNISH GAME

49. Origin.—The White Indian Game, now called the **White Cornish Game,** originated from much the same source as the Dark Cornish. Evidently the fowls were bred by intermingling the blood of the White Malay, the White Aseel, and other white game fowls.

50. Development.—White Cornish Game fowls are of recent development. At first they were almost identical in form with the White Malay fowls, which led to the belief that they came originally from India. Their recent development,

however, has resulted from crosses made with White Aseel, and from selecting the best so produced and breeding them for the mammoth proportions that have been acquired in the dark variety.

51. History.—The history of the White Indian Game, or Cornish, fowls, describes their uncertain existence up to the time of their admission to the American Standard of 1898. Since that time they have been brought to the attention of poultrymen through having been improved in form and general make-up, and because they have been exhibited at some of the largest poultry shows. However, they have not as yet acquired the prominence of the dark variety.

52. Description.—The general outline for breed formation is the same in the White as in the Dark Cornish fowls, the only difference being in plumage color. The Standard demands that the entire plumage, including the quills, shall be pure white. Why so rigid a demand has been made for plumage color is not explained; these fowls do not naturally have plumage so clean and pure as the Wyandottes and some other white-plumaged fowls.

53. Mating.—To improve the quality of the White Cornish Game fowls, marked attention must be given to selecting fowls that possess the body proportions of the Aseel Game fowls. In addition to this, the fowls must have clean, pure, white plumage and yellow shanks and skin. Pearl, or Aseel, eyes are a requirement for these fowls, and should be bred for with care.

WHITE-LACED RED CORNISH GAME

54. A variety of Cornish known as the **White-Laced Red Cornish Game** fowls was admitted to the American Standard of 1910. This variety was originated by W. H. Card, of Manchester, Connecticut.

55. Origin.—Mr. Card states that in forming this new variety he intermingled Shamo-Japanese Game and the Dark Cornish Game fowls and also fowls of a Brahma-Cornish cross.

The females from such crosses were mated to a White Wyandotte male and the best offspring were mated, remated, and inbred to intensify color and markings and to obtain, as far as possible, Cornish Game breed characters.

56. Development.—The development of the White-Laced Red Cornish has been left almost entirely with the originator, who has continued to develop them along the same lines as he followed in making them.

57. History.—The history of the White-Laced Red Cornish Game fowls has been largely given in their origin. They have not been developed with such distinctive Cornish Game breed characters as to stamp them as such at sight. They have been unusually favored by the standard makers, who have not only admitted them as standard fowls but have illustrated them with as much care as the other varieties.

58. Description.—The White-Laced Red Cornish Game fowls should have the same breed characters and body formation as fowls of the other varieties of the Cornish Game, and in color and markings they should be almost identical with the Buff Laced Polish, the main difference being that there is a deeper shade of color in the Cornish than in the Buff Laced Polish. The standard calls for rich, bright-red surface color, with each feather in every section except the tail completely and delicately laced with white; the tail should be white with a red shaft in each feather. Not many of them, however, are produced that have quality equal to this. The eyes, shanks, feet, and beak should be yellow. The body color of both males and females should be a rich, bright red, laced with white; they should have small pea combs of regular formation.

59. Mating.—Only the best White-Laced Red Cornish Game fowls that can be selected should be mated. The breeder should have continually in mind a selection of proper Cornish Game breed characters, with color and markings as described for them.

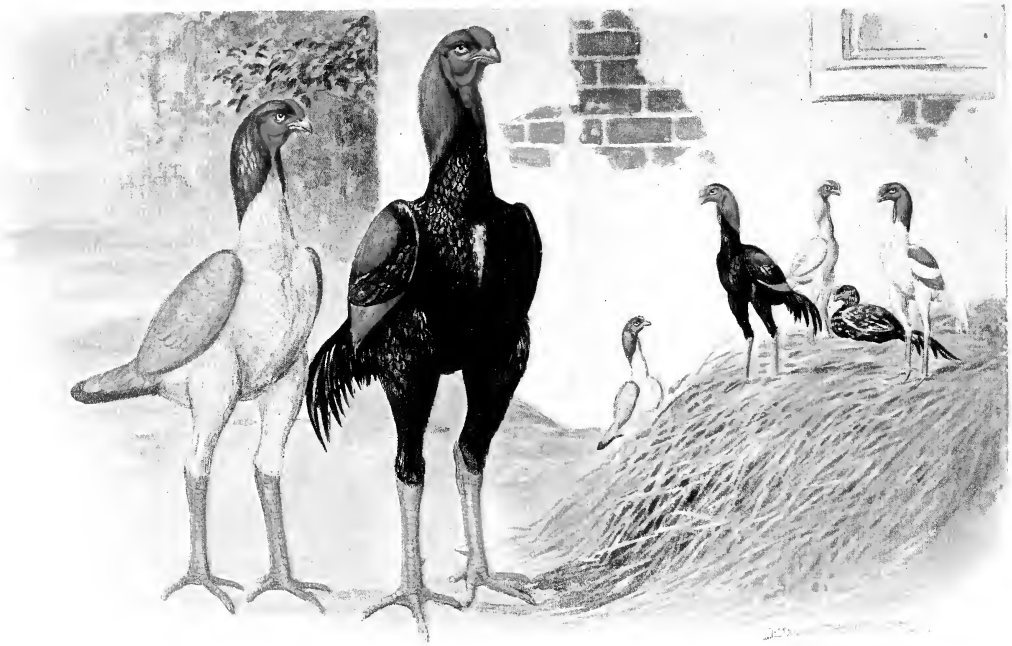
MALAY GAME

60. Origin.—The **Malay Game** fowls are supposed to have descended from the Great Malay, or Kulm, fowls of India, which are supposed to have descended from the Gigantic Cock, previously described. Whether the original Malay, or Kulm, fowl or the Aseel were first will probably never be known.

61. Development.—The fanciers of England have developed the Malay fowls into exhibition Malay Game fowls and, although they are recognized in the American Standard, they are seldom seen in America. The wicked disposition of the Malay fowls has prevented them from becoming popular.

62. History.—The early history of the Malay is uncertain, there being a question as to whether the Malay or the Aseel was first. As a modern breed, the Malay Game fowls have been greatly changed within the last 50 years. They were formerly uneven in color and markings, and the type was different from that of the present. Beginning with 1880, an effort was made, without much success, to advance the Malay Game fowls to a more desirable position as exhibition fowls, but only a few attractive specimens have been seen in recent years.

63. Description.—In carriage, the Malay Game fowls are upright. Prior to the make-up of the modern exhibition game fowls, they were more leggy in formation than any exhibition poultry, but now that the modern exhibition game fowls have been made such long-legged fowls the Malays are considered to have legs of moderate length. The body formation of the Malay Game fowls is compact and heavy; they are strongly built and have great strength in the thighs and shanks. They have the skull formation peculiar to the Asiatic fowls. Overhanging skulls, sunken eyes, yellow shanks, and skin are



all characters of these fowls. Only the Black-Breasted Red Malay variety is recognized in the American Standard. Originally there were many varieties, the most plentiful fowls being those of the Red Malay, the Black-Breasted Red Malay, and the White Malay varieties. The plumage color of the Black-Breasted Red Malay Game fowls is described in the American Standard as much the same as that of the Black-Breasted Red Game fowls, except that the colors are not so well defined. The fowls rarely conform to their color description. This is due to the fact that they have never been bred to any extent for color and that, as now kept, what are known as wheaten colors are bred with them, and variety colors not recognized as standard will appear from such matings.

The English Club Standards for Malay Game fowls describes the color of the eyes as pearl, daw, or yellow; the beak, yellow or horn color; the comb, face, throat, wattles, and ear lobes, brilliant red; and the shanks, rich yellow. In the Black-Breasted Red Game variety, the head and hackle of the males should be a rich, dark red; the wing bars, glossy and greenish black; the secondaries, bright bay on the outer web, and black on the inner web and the ends of the feathers, the bright bay showing when the wing is closed; the primaries, black on the inner web with red edging on the outside; the breast and under parts, glossy black, frequently mixed with reddish brown; and the tail and tail coverts, greenish black.

The body color of females are any shade of cinnamon or wheaten color; the hackle is a dark purplish shade, or partridge marked. The plumage should be free from ticks, spangles, or penciling. More complete information relative to varieties will be found in the discussion of the Malay Bantam fowls.

Standard weights in America for Malay fowls are: Cocks, 9 pounds; cockerels and hens, 7 pounds; pullets, 5 pounds. According to the English Standard, males weigh 11 pounds; females, 9 pounds.

64. Mating.—In mating Malay Game fowls for the production of exhibition fowls, the best that can be obtained should be selected and mated, and the offspring of these mated for

improvement in shape, color, and markings. Those with markings as nearly as possible like the markings of the Black-Breasted Red Game fowls should always be chosen. Both male and female Malay Game fowls, however, are darker in plumage color than the Black-Breasted Red Game fowls, and cinnamon brown occurs frequently throughout the plumage of the female.

BLACK SUMATRA GAME

65. Origin.—Many claims have been made relative to the origin of the **Black Sumatra Game** fowls, none of which is supported by sufficient evidence to establish it as trustworthy. There seems to be no authority for any of the statements relative to their origin except that Black Sumatra Game fowls were brought from the island of Sumatra to America and named for the locality from which they came.

66. Development.—The development of Black Sumatra Game fowls from an unfinished type of fowls into their present beauty of form and feather has been accomplished largely by Nelson A. Wood, of the Smithsonian Institution, of Washington, District of Columbia. Before other fanciers had given any attention to these fowls Mr. Wood had developed them into the present type.

67. History.—The Black Sumatra Game fowls were brought to America from Oriental countries. The actual date of the first importation is not known. Fowls similar to them were mentioned in 1847. About 1885, their development was begun and they were selected and bred until they became such attractive exhibition fowls that others began to breed them; since their development by Mr. Wood, they have been scattered throughout the world. No other fowls will reproduce more true to breed characters than the pure-bred Black Sumatra fowls. A mistake was made some years ago when an attempt was made to improve them by a cross with a black game fowl from India. This injured the quality of all offspring from this cross. The Black Sumatra Game fowls have received marked attention from the English fanciers.

68. Description.—The Black Sumatra Game fowl has a formation peculiar to itself; this is more like the general formation of the Yokohama fowls than like that of fowls of any other breed or variety. The males have long, flowing tails, but not so long as the tail feathering of the Yokohamas; the females also have tails of considerable length. Some of the older females have the uppermost feathers extending beyond the other main tail feathers, with a slight downward curve at the point of the feathers. The plumage of both males and females is a rich, glossy black, glistening with sheen. No other fowl has more brilliancy of plumage than the Black Sumatra. Black Sumatra fowls should have the triple, or pea, comb, but some occur with the lump, or strawberry, comb like the Malay. The eyes are dark. The comb, face, and wattles are described in the Standard as purple, but in some of the best fowls the face, wattles, and ear lobes are dark red; gypsy color in the face and head is preferred in England. The shanks and toes should be black or nearly so; originally, they were dull, or leaden, black, but this has been almost bred out of them; an olive color in the shanks and feet is preferred in England.

69. Mating.—In mating Black Sumatra fowls for the production of exhibition offspring, care must be taken in the selection for head points. The comb should be small, triple in formation, and should fit close to the head; the wattles should be very small in the males and scarcely perceptible in the females; a rich red is preferred to purple in the comb, face, wattles, and ear lobes; the plumage throughout, including the quills and under fluff, should be black, the surface glistening with brilliant sheen; and the shanks and feet should be black, smooth, and shiny. The greater length of tail and tail furnishings the males have the better they will be for producing beautiful offspring. The tails of the females should be long and extended; those that are strong in the male line of breeding show the influence of the sickle in their uppermost tail feathers; those having tail feathers of equal length are considered best for producing females.

NON-STANDARD VARIETIES

ASEEL GAME

70. Origin.—The more the origin of poultry is investigated, the more reason appears for the belief that there was a large original fowl from which the Asiatic breeds have descended. The natural color of the shanks and skin, the head, comb, and body formation of the **Aseel** fowls leads to the conclusion that perhaps they are in the direct line through which all large fowls have descended. In discussing the question of whether the Aseel should be regarded as the ancestor of the Malay type of fowls or whether it has been developed by long and assiduous care in breeding, Lewis Wright states: "The Aseel is of another character, and there can be little doubt that the birds whose battles are alluded to in the Institutes of Menu, 1000 B. C., if not the Aseel as now known, were at least their ancestors." An incident that may be referred to in this connection occurred during the time of Socrates, who was born 469 B. C. and was poisoned about 400 B. C., by order of the judges of Athens. His last words, as reported by Plato were: "Crito, we owe a cock to Esculapius; pay it, therefore, and do not neglect it." Chickens are frequently mentioned by Aristophanes, who lived about that time. The most probable solution is found in the theory that the Aseels were the original game cocks of which mention was made by the early writers, and which have been kept pure and untainted by the princes of India, who valued them for their pugnacious qualities, and who frequently held them up to youths as examples of courage and self-protection.

71. Development.—It can scarcely be said that the Aseel has been developed to any extent. The fowls have been kept and bred for centuries by persons who like to keep

the most pugnacious fowls that could be produced. Since they have come into notice as exhibition fowls, they have been bred only in limited numbers and with more care than formerly. What development has been brought about has been by a few English fanciers.

72. History.—The early history of the Aseel, like that of the Malay, is largely conjecture. Prior to the coming of the Asiatic breeds from their native land, Malay fowls were plentiful in some parts of England. These were largely displaced through the coming of the Brahma and the Cochin fowls. Later, Aseel fowls were brought from India, and the claim was made that until that country was brought under British rule the fowls had been carefully guarded by the people of India to prevent their general distribution. Since that time, Aseels have been distributed in small numbers throughout England and America, and a standard for them has been established by the fanciers of England. When it is remembered that the word Aseel is an Indian, or Hindu, adjective meaning high born or aristocratic, it may readily be seen that the term might originally have been applied to any type of fowl that would meet the requirements of such a description.

73. Description.—The English Club Standards describes the Aseel as follows: General characters of the cock: Head, short and small though broad between the eyes and jaw, and thick at the base; beak very strong, fine grained, and somewhat short; lower mandible, thick and slightly curved; eyes, bold, prominent, and brilliant, set back in the head; comb, triple, or what is termed a pea comb, the smaller the better, very hard and horny; face, fine of texture though hard in substance; ear lobes, as small as possible; no wattles; neck, round, hard, muscular, and powerful, of medium length and uniform width throughout, curved slightly at the back and seated between high shoulders; throat, clean and not prominent or fleshy; breast, wide, short, and flat, carrying no fluff and almost naked at the point of the breastbone; back, broad at the shoulders, short and quite straight; no tendency to roach back; stern, narrow in comparison with the shoulders, but thick and

strong at the root of the tail; wings, strong, short, and carried level, standing well out from the shoulders, often showing a bare spot at the first joint; tail, slightly drooping and short, with narrow, hard feathers; sickles, very fine, hard, and short, tapering like a scimitar to within 3 or 4 inches from the ground—in an old cock the sickles will appear parti-colored, but this is no detriment; coverts, short, spare, very hard, and difficult to break; thighs, thick, strong, and muscular, set well apart, with but little covering; shanks, short but not dumpy, straight and quite clean, with close, regular scales; feet, short, thick, and straight; toe nails, the same; straight hind toe to be preferred, though what is termed duck footed is not a disqualification. The general shape is angular throughout; the general appearance is not too gamy; the carriage is straight and upright; the body is very firm, hard, heavy, and evenly balanced; and the plumage is hard, close, wiry, and devoid of fluff.

The general characters of the hen are the same as those of the male. In color, both sexes are described as having beak and legs to match, though of no definite color. The eyes are pearl, all shades of white, pink, and yellow; the comb, face, jaw, and throat are red. No final standard of color can be given for Aseel fowls, as they are of no fixed hue. The principal colors are red, black, gray, red spangled, black spangled, yellow, and white. Cocks are mentioned as weighing 6 pounds; hens, 5 pounds.

74. Mating.—So little attention has been given to the production of Aseel fowls as to make it impractical to suggest methods of mating, except to state that it is advisable to separate them into variety colors and to mate and select for a variety color that will reproduce its kind. The chief value of Aseel Game fowls to poultry fanciers is in the benefits derived from their use in the upbuilding of breed characters in the Cornish, or Indian, Game fowls.

OLD-ENGLISH GAME

75. Since the beginning of the Roman Empire, a breed of fowls has existed that was formerly bred exclusively for fighting in the pit. From them the modern type of Old-English Game fowls have descended. English writers trace the origin of these fowls not only to the early records of the Chinese, but to the Phenicians as well. Some authorities have expressed the opinion that the Assyrian war god, Nergal, was symbolized by a fighting cock. Whether or not these statements are true is unimportant, but the facts are that the Old-English Game is the nearest approach to a thoroughbred fowl of any known kind. This type of fowl has been carried into every part of the world and has usually closely followed the explorer.

76. Origin.—The Old-English Game fowl is a descendant of the same ancestors as the Aseel, the Malay, and the fighting cock of ancient Rome.

77. Development.—The development of the Old-English Game fowls ceased when the development of the modern type of exhibition game fowls began; they were neglected until about 1890, when a disposition was shown to bring them into prominence for exhibition.

78. History.—The history of the Old-English Game fowls began with their employment for fighting in the pit. This practice has been discontinued by process of law, and the Old-English Game can now be considered only as an exhibition fowl. In England, a standard has been written for them, but their admission to the American Standard has been continually denied. When shown, they are judged by the English Club Standards, but in the show room of America the distinction between variety colors has not been so marked as in England.

79. Description.—The following description of the Old-English Game fowls applies to the varieties accepted as standard by the Game Club of England. In the males, the head is of medium length and tapering; the beak is slightly curved and strong at the base; the eyes are large, bright, prominent, full

of expression, and alike in color; the comb is single, small, upright, of fine texture, and evenly serrated; the face, ear lobes, and wattles are fine and small. It is customary for Old-English Game fowls to be dubbed, as described for exhibition game fowls. The neck should be long and very strong at its juncture with the body, and furnished with long hackle feathers that cover the shoulders; the breast, broad and well developed; the back, short, flat, and tapering to the tail; the shoulders, broad; the wings, long, full, and round; the primary, or flight, feathers, extending well back and amply protecting the thighs; the sickle feathers, abundant; the main tail feathers, broad, curved, with hard, strong, quills, and carried well up, but not of the squirrel type; the thighs, short, thick, and muscular, well set and held wide apart; the shanks, of medium length, finely and evenly scaled, and round, with the spur set low; the toes, four on each foot, long, clean, even, and spreading, the back toe standing well out and flat on the ground; the carriage, bold and sprightly; the movements, quick and graceful; the plumage, hard and glossy.

With the exception that the tail is inclined to fan shape, the general characters of the hen are similar to those of the male, allowing for sexual differences.

The weight of a cock is from 5 to 6 pounds; the weight of hens, from 4 to 5 pounds.

Many variety colors are recognized in the English Club Standards, all of which conform in a general way to the color and markings of all breeds of game fowls and their subvarieties; and, although the colors are not so uniform and distinct or the markings so well divided as in the modern type of exhibition game fowls, there are various colors in them which form beautiful combinations.

Black-plumaged fowls are found in almost every breed. Some of them are rich glossy black and others are dull black. The Standard description for the Black Old-English Game calls for black or very dark color in the beak; the eyes, comb, face, wattles, and ear lobes, red; in some, the comb, face, and wattles are very dark red, approaching purple. The legs are described as round, and the plumage as glossy black throughout.

Another variety called the Brassy-Winged Old-English Game fowls are dark or more usually black, and, with the exception of a little dark lemon color on the shoulders of the cock, they are similar in color and markings to the Black-Breasted Red Old-English Game fowls of the Pit Game type; they are not similar to the exhibition type of Black-Breasted Red Game fowls, which have delicate or lighter shades.

The Silver Duckwing Old-English Game fowls should have beak, shanks, and toes of one color; this is usually blue, olive, white, or yellow. The eyes, comb, face, wattles, and ear lobes should be red; hackle, back, and shoulder of the cocks, silver, free from dark streaks; breast and thighs, black; wing bows, silvery white; wing bars, steel blue; secondaries, white on outer web, and black on inner web, only the white showing when the wing is folded; primaries and ends should be black; tail, black. The hackle of the hen should be silver, striped with black; the breast and thighs, fawn; the back and wings, dark gray; the tail, gray and black.

In the Red Pyle Old-English Game fowls, the beak, shanks, and feet should be white, yellow, or willow; the eyes, comb, face, wattles, and ear lobes, red; the hackle of the cock, orange red or chestnut red; the back and shoulders, deep red; the wing secondaries, bay on the outer web and white on the inner web, only the bay showing when the wing is closed; the rest of the plumage is white. The hackle of the female should be chestnut, with a light shade toward the thighs; the rest of her plumage, white.

In the Black-Breasted Red Old-English Game fowls, the beak, shanks, and toes may be of any sound self-color; the eyes, comb, face, wattles, and ear lobes should be red; the neck hackle and saddle of the males, orange red, free from dark feathers; the back and shoulder coverts, a deep red; the wing bows, deep red; the wing bars, rich, dark blue; the secondaries, bay; the primaries, and wing ends, breast, and under parts, black; the tail, black, with a lustrous green gloss; the neck hackle of the female, golden red, streaked with black; the breast and thighs, shaded salmon color; and the tail, black, shaded with brown.

The Bright, or Ginger-Red, Old-English Game has beak, shanks, and toes of any sound, self-color; the eyes, comb, face, wattles, and ear lobes should be red; neck hackle and saddle of the male, light golden red, free from stripes; back, shoulder, and wing bows, bright red; wing bars, rich, dark blue; secondaries, bay; primaries and wing ends, black; breast and under parts, shaded with brown; tail, black or black shaded with brown; neck hackle of the female, golden red; breast and thighs, light wheaten; back and wings, a darker shade of wheaten than the breast; and tail, black with a shading of brown.

In the Brown-Red Old-English Game, the beak and shanks should be dark, almost black; the eyes, dark; the comb, face, wattles, and ear lobes, dark; the neck hackle in the males, orange red, streaked with black; the back and shoulders, dark red; the wings, dark brown or black; the breast and thighs, brown, or brown marked and shaded with black; the tail, black. The neck hackle of the female is black, striped or shaded golden; the body plumage, black or of a uniform brown mottle; the tail, black.

In the Spangled Old-English Game fowls will be found some of the most beautiful colors and markings known in fowls. The English Game Club Standards states that both males and females have beaks, shanks, and feet colored alike, usually mottled, though self-color, or solid color, is permissible; the eyes should be red or dark colored; the face, comb, wattles, and ear lobes, bright red; the plumage, black, red, blue, or buff, spangled with white, the spangling as even as possible; the tail is usually black and white. Some of the Spangled Old-English Game fowls are marked even more beautifully than the best of the Jubilee Orpington fowls; others are spangled or mottled like the Java, the Ancona, or the Houdan. Almost every kind and character of light and dark markings are admissible in them, provided the intermingling of colors is attractive.

The White Old-English Game fowls are rare and are not usually of a quality equal to the other varieties. In both the males and the females the beak, shanks, and toes should be white or yellow; eyes, red, or pearl; face, comb, wattles, and ear lobes, red; plumage, pure white throughout.

In all varieties of Old-English Game fowls, the shanks and feet of both males and females should be alike in color. The eyes in fowls of the different varieties are of uncertain color; in the White Old-English Game they may be red or pearl; in the Spangled, red or daw, but of whatever color they may be, both eyes in each fowl should be of the same color.

80. Mating.—In mating Old-English Game fowls for exhibition offspring, both males and females must be carefully selected for variety color; in both parents, the eyes, beak, shanks, and toes must be alike in color, and the plumage color and markings correct according to the description for the variety. Game fowls of this type will, if bred in line for a few years, reproduce true to feather.

In mating for the purpose of producing stags for the pit, the safe plan is to have a strain of both males and females that will stand the gaff—the steel spur. No dependence should ever be placed on unknown fowls for this purpose. Known producing females are most highly esteemed.

MEDITERRANEAN FOWLS

ORIGIN, CLASSIFICATION, AND DISTINCTIVE CHARACTERS

1. In the division of races of poultry, Edward Brown classes Leghorns and Anconas as Italian fowls, and considers Andalusians, Spanish, and Minorcas as Spanish fowls. The American Standard includes all these under the head of **Mediterranean fowls.** Mediterranean fowls are among the most generally distributed domestic fowls. These fowls must have existed in their original form in all countries bordering on the Mediterranean Sea, in Greece, Asia Minor, Egypt, Italy, and Spain. They have been generally distributed, and their peculiarities of white ear lobes, lopped combs, and non-sitting proclivity have been stamped on many varieties of fowls derived from them. The Mediterranean breeds and varieties of fowls have the distinctive character of producing white-shelled eggs; they have but little inclination to sit, and have wonderful activity, coupled with great strength and vitality.

Many theories have been advanced as to the cause of the non-sitting proclivity of fowls. During their earliest existence, when the hatching ovens of Egypt and near-by countries were used for incubation and the hens were urged to lay and were not encouraged to hatch their eggs, the instinct, if they had it, may have been bred out of them. From time to time other theories have been advanced. There is no need, however, to discuss this matter further than to say that it has been satisfactorily proved that fowls of any breed or variety can, by selection and care to prevent broodiness, be trained into having but little inclination to hatch their eggs. On the other

hand, those of almost any breed or variety may be bred and fed into a strong predilection for brooding.

The claim has been made that the Black Spanish was the first of all the Mediterranean fowls to be seen in other countries than Spain. Later investigation has developed evidence that the Spanish fowls as now known were unknown in Spain until taken there from other countries. The primitive Castilian, the Minorca, and the Black Spanish may have been of one origin. The Castilian and the Minorca were as nearly alike in early days as the Leghorns of England and America are at present. The Black Spanish, as originally known in America, were not unlike the existing Black Minorcas. Leghorns and Minorcas are now seen with as much white in the face as was characteristic of the Black Spanish of 1850. Many of the Leghorns of 1870–80 had more red than white in their ear lobes; and as late as 1883, there was considerable controversy as to whether or not white ear lobes should be encouraged in Rose-Comb Brown Leghorns. Although one peculiarity of the Mediterranean fowls is white ear lobes, there is also a tendency in them to show considerable red in the ear lobes as well as white in the face. It is not infrequent for as many as 10 per cent. of the females in a large flock to show a disposition to be broody at some time during the year. This will occur in flocks where Leghorns have been permitted to hatch a brood of chicks only when they have hidden their nests and brought them forth unnoticed.

Leghorn and other Mediterranean fowls will occasionally hatch and rear chicks and mother them until they are almost half grown, but it is scarcely safe to depend on them to continue faithful to a nest of eggs. Even though they may begin with all the appearance of broodiness, they are apt to leave their eggs before the period of incubation has terminated.

No fowl is more precocious than the Leghorn. It is not unusual for Leghorns to begin laying at the age of 4 or $4\frac{1}{2}$ months and to continue to lay after they are 4 years old. Large, well-selected flocks of Leghorns have laid well for three consecutive winters and produced more than enough eggs to pay for their maintenance during the fourth winter. Individual Leghorn

hens have laid more than 500 eggs in three consecutive years, indicating that there are great possibilities in breeding, feeding, and caring for them in a manner that will make them profitable for four laying years. Such tests of their ability at egg production lead to the belief that, by careful breeding, fowls may be produced of a type that will continue to lay well into the third and fourth years. And this may be accomplished in a type of fowls that will rank well as exhibition fowls. Although continual laying is injurious to condition, brothers and sisters of the heaviest layers have often won honors in the exhibition pen, showing to what extent the production of fowls for exhibition, for egg production, and for market may contribute to the profit of those who produce them.

The type of all varieties of Mediterranean fowls differs materially in America, England, and Australia. In America, the Mediterranean fowls, including the Minorca, are more of the Old-English Game type than in other countries. In Australia, a type that is medium between the American and the English types is preferred, and in England all varieties of Leghorn and other Mediterranean fowls are more like the American Minorca. The Minorcas themselves differ materially in England and America. One great difference between the Mediterranean fowls of America and those of England will be found in the comb formation. English fanciers breed for combs much larger than are acceptable in America. Leghorns and Minorcas that have come from England to America are usually condemned for the excessive comb and for bad comb formation. English writers are disposed to class Leghorns and Anconas as Italian fowls and others to class them as Spanish fowls, but here they are taken up and discussed in alphabetical order and classed under the general heading of Mediterranean fowls.

ANCONA

SINGLE-COMB ANCONA

2. The **Single-Comb Ancona** is, in reality, a mottled Leghorn, although the fowls are classed as another breed and are considered as distinct from other Mediterranean fowls, such as the Minorca and Black Spanish. At an early day a type of Leghorn or Italian fowl, called splashed or mottled, that greatly resembled the Ancona of today, was known to be in existence. Like the Mottled Java and similar fowls, these mottled fowls undoubtedly came from the intermingling of black and white varieties in their native land. Years ago it was not uncommon to see some of the Mediterranean fowls with black and white plumage. These occurred in Black Spanish as well as in the Leghorns, and at the present time there is in Scotland a new variety—a broken-colored black and white Leghorn, called the Exchequer Leghorn. This is claimed to be superior to all other Leghorns for egg production, but there is no proof that this is true.

3. Origin.—The Single-Comb Ancona was originally named after the locality in Italy from which it came. The fowls of this breed are said to have been plentiful in the districts of Eastern Italy, about the port of Ancona. When first brought to public notice, the Anconas were irregularly splashed in plumage, and were really splashed Leghorns, or Italians, as they were called, and undoubtedly originated from the promiscuous intermingling of the different varieties of fowls in the portion of Italy whence they came. The claim is also made that they descended from the promiscuous matings of black and of white Minorcas. Their size and general make-up at the present time would indicate, however, that they were of Leghorn, or Italian, rather than of Minorca

origin. The modern type of Single-Comb Ancona was developed by the fanciers of England.

English writers are divided in opinion regarding the origin of Anconas, but an examination of the best information obtainable leads to the belief that they have descended largely from Black Leghorns. Of late, Black Leghorns have been used for crossing with the light-colored Anconas to darken the surface plumage.

4. Development.—The Single-Comb Anconas have been developed from the mottled or splashed Italian type of fowls. The color of their shanks and skin would indicate Leghorn rather than Minorca origin. Their early development was carried on almost exclusively by the fanciers of England, only a few of them having been bred in America, for exhibition purposes.

5. History.—Attention was first called to the Single-Comb Anconas about 1880. Prior to that time, mention was made of a type of fowls that would indicate a variety of Italian fowls having mottled black and white plumage. The earlier type was inclined to have shanks of a brighter shade of yellow than the present Anconas. The shanks of these early Anconas were mottled with a dark shade of yellow and with black. Since 1885, importations from Italy into England have been frequent, and a number of Anconas have been brought from England to America. In England a club was formed in their interest, and about 1900 a new standard was made for them. They were admitted to the American Standard of 1898; in the description in this book it was stated that their shape was about the same as that of the Leghorns, and that their plumage color was broken black and white, evenly distributed. A better description of them is embodied in the American and in the English Club Standards of 1910.

6. Description.—The 1910 English Club Standards states that the ground color of the plumage of Single-Comb Anconas should be a beetle green, and that the ends of the feathers should have **V**-shaped white tips; it also states that laced ends on feathers are to be avoided. Formerly, the tail feathers of

Anconas were mostly white, but the tail is now black, tipped with white; the shanks and toes are yellow, mottled with black. The American Standard of 1910 describes Anconas as fowls of Leghorn type, and states that the plumage of the males should be lustrous black, with about one feather in five tipped with white. The **V**-shaped white tip described in the English Club Standards and the white spangle at the end of every fifth feather described in the American Standard are somewhat similar. The beak, shanks, and toes of Anconas should be yellow, spotted with black; the comb, face, wattles, and eyes should be red; and the ear lobes should be white.

The Anconas are virtually Leghorns, yet there seems to be a determination to change them into fowls more like the Braekels in body formation. This would undoubtedly be of advantage to them. The Campine is the Leghorn of Belgium, and the Braekel is more of a general-purpose fowl of the same country.

7. Mating.—The latest directions for mating Single-Comb Anconas according to the English method state that fowls having Leghorn breed characters should be selected. To meet the Standard requirements in England, the Leghorn fowls must have a heavier body formation than is approved in America. In addition to this heavy body formation, Anconas for mating should have body plumage of a lustrous black, with a rich beetle-green sheen to it; the under plumage should be dark; all the white in the feathers should be confined to the tip, and the ear lobes should be as white as it is possible to have them; the eyes should be brilliant in color; the shanks and toes should be yellow, marked with dark or black spots; the beak should be horn color or yellow, marked with a darker color. Strict attention should be given to the selection of fowls having fairly good size and a perfect development of **V**-shaped white tips on the feathers. Lacing or spangling like that found on a Hamburg on the ends of the feathers or in any part of the plumage should be avoided. The darker the breeding fowls are in under plumage, the greater will be the chances of producing a rich, lustrous, black surface color in their offspring.

Anconas are difficult to produce in perfection, yet this difficulty has attracted fanciers to them. Anconas have not received as much attention in America as in England. The fanciers of America have recently seen the need of greater perfection in them and have declared against the spangled plumage as described in the Standard of 1910, and in favor of the **V**-shaped markings, which are proper. To breed them correctly, parent fowls must be very dark in plumage, with a rich, brilliant sheen on the surface plumage; they must have dark under plumage and distinct white markings of correct shape at the ends of the feathers. Even from matings of the best fowls obtainable, many of the offspring will be much too light for exhibition. To intensify the color and increase the amount of black, Anconas must be crossed with Black Leghorns. When this is done, the English type of Black Leghorns should be used to increase the size.

ROSE-COMB ANCONA

8. Origin.—The **Rose-Comb Ancona** is said to have originated from the Single-Comb Ancona, by crosses with Silver Hamburg and Silver Laced Wyandotte fowls. There is no authentic record of their origin.

9. Development.—The Rose-Comb Ancona was originated in England and developed by a few fanciers who had keen interest in the improvement of the fowls.

10. History.—The Ancona Club of England recognizes the Rose-Comb as well as the Single-Comb Ancona, and both have been admitted to their Standard. The Rose-Comb Ancona has not been admitted to the American Standard. Fowls of this variety do not now possess quality equal to those of the single-comb variety.

11. Description.—In size, shape, and color the Rose-Comb Ancona conforms to the Single-Comb Ancona, the only difference being that the former has a rose comb of medium size, low and square in front, and tapering to a point in the rear, the heel of the comb following the shape of the head.

12. Mating.—Fowls for mating for the production of the Rose-Comb Ancona should be the same kind, comb excepted, as for the Single-Comb Ancona. From the fact that there are not many Rose-Comb Anconas of good quality, the best that can be selected must be used, and the best offspring selected and mated until breed characters, color, markings, and comb have been perfected.

ANDALUSIAN

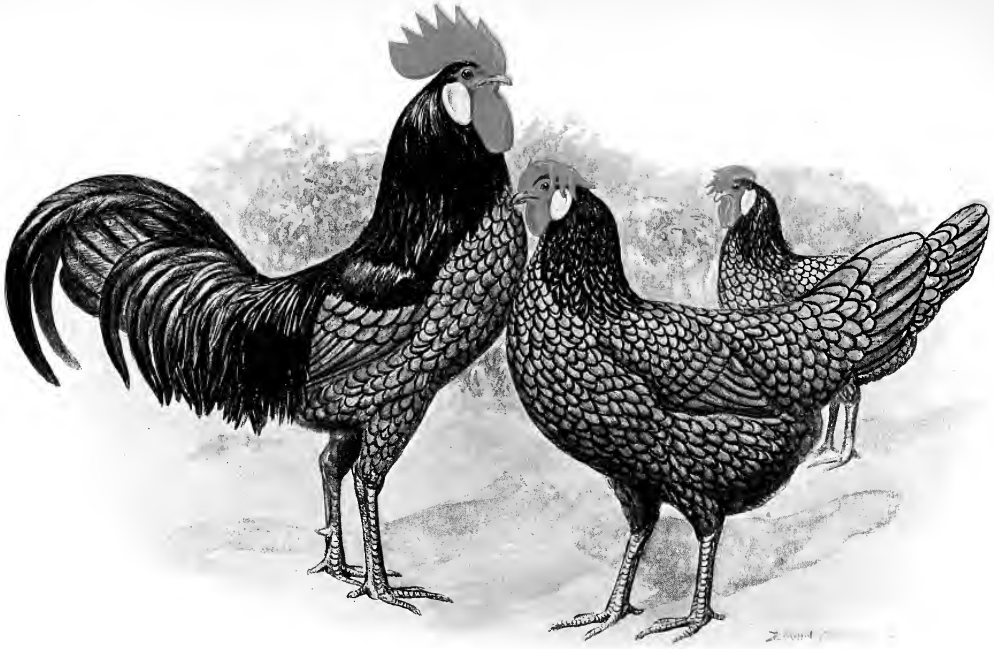
13. The **Andalusian** is one of the oldest of the Mediterranean breeds of fowls. Andalusians are mentioned in the earliest classifications of poultry. They are larger than fowls of any of the other Mediterranean breeds, the Spanish and the Minorca excepted.

14. Origin.—The Andalusians of the present were made by the fanciers of England, and the fowls from which they have been developed came from the Mediterranean region. Undoubtedly they have resulted from the promiscuous intermingling of white and of black fowls in their native lands, and the best were selected and bred until they were brought to their present state of perfection.

15. Development.—Poultry fanciers all over the world have taken part in the development of the Andalusians. They were brought from England to America and have been more or less cultivated by the fanciers of the United States and Canada. In their development, special attention has been given to large size, to breed characters, and to beautiful plumage color.

16. History.—The Rev. E. S. Dixon, M. A., wrote of them in early days as follows: "Some of the birds are of a blue or gray or slaty color. Their growth is so rapid and their eventual size is so great that they are remarkably slow in obtaining their feathers. Although well covered with down when first hatched, they look almost naked when half grown and should therefore be hatched early in the spring."

Moubray's treatise on "Domestic and Ornamental Poultry" states: "No other of the Spanish family has a better title than



ANDALUSIANS

the Andalusians to be viewed as a distinct subvariety. The name has of late been applied to the recently imported Gray and Spangled Spanish. It is proposed, however, to confine it to a perfectly black subvariety, long known in this country, which has been imported from the same district of Andalusia as the Grays."

The same writer states that the appellation of Ancona is also frequently applied to fowls of the Andalusian and Minorca subvarieties, and he questions the right of appropriating the name Andalusian to other fowls than those to which it originally belonged. Later, Martin Doyle stated that "the Andalusian is unquestionably a cross of the Gray Manx, which is now rarely seen." He goes further and states that the Manx was the original domesticated species in Spain.

Later writers state that the Andalusians were originally called Blue Spanish, and that they were of a blue or dove color, some of them having fairly good black lacing. From the information that can be gathered, and viewing them in comparison with the early Spanish fowls, which have but little more white about the head than is now seen in the Minorca, it is fair to assume that the Andalusian, the Spanish, and the Minorca were derived from the same source. It is thought that Andalusian fowls were first brought to England in 1851, and were known by the various names of Blue Spanish, Blue Minorca, and Andalusian, and that all of them were fashioned after the game fowl, some claiming that they were a blue variety of game fowls. Notwithstanding this statement, they are mentioned prior to 1850 by the Rev. Dixon.

17. Description.—The Andalusians differ materially from the Leghorns in shape, being more like the Spanish in form and breed characters than fowls of any of the other Mediterranean breeds. The comb, face, wattles, and eyes are red; the beak is dark; the shanks and toes are of a bluish tinge—the more distinctive the blue, the more desirable are the fowls; the top color of the males, including sickles and tail coverts, is a rich black, overcast with a bluish tinge; the rest of the plumage is silvery blue, as described in the English Club Stand-

ards, and slaty blue as described in the American Standard; the feathers are edged or laced with a darker shade, approaching black. The head and hackle of the female is bluish black, gradually lightening into a bluish slate color about the neck; the body plumage is described in the American Standard as slaty blue, and in the English Standard as silvery blue laced with a darker shade, approaching black. The main tail feathers and the secondaries are greatly improved if laced about the ends with the darker shade of color. White in the face, rusty color in the plumage, and bad-colored shanks are serious defects.

The Standard weights for Andalusians are: Cocks, 6 pounds; cockerels and hens, 5 pounds; pullets, 4 pounds. The English Standard calls for from 7 to 8 pounds in males and from 5 to 6 pounds in females.

18. Mating.—The most discouraging feature of breeding blue fowls is the tendency natural to them not only to produce many badly marked offspring but many that are marked with white. This has been overcome to some extent by encouraging in the show room a darker shade of top color in the males and dark hackles in the females. Formerly, it was not unusual for more than half the offspring to be splashed with white. Some strains at the present time will produce offspring 50 per cent. of which will be fit for breeding and exhibition purposes and more than half the rest will have fairly good plumage color. Such fowls, however, can be produced only from those that have been bred in line from a selection of the best each year. To overcome the tendency to lose color, the males used in the matings should be heavily laced with dark blue or black about the edges of the feathers of the breast and body. Some of the hens that are selected for the matings may be light silvery blue, laced with dark blue; others in the same matings should be darker; all should be true in color and markings, with no trace of white or gray in their plumage. It has taken years of careful breeding to have the Andalusian fowls so nearly perfect. Constant watchfulness and care must be practiced to improve their quality and to keep them equal to what they now are.

LEGHORN

ORIGIN AND HISTORY

19. Italy was undoubtedly the home of the original **Leghorn** fowls. Early literature shows that poultry of several kinds was bred at least 3,000 years ago, and the records state that fowls were used for food by the Romans 2,000 years ago. The earliest detailed description of them indicates that there were fowls with five toes and some with fewer, and of various shades of plumage. According to some of the earliest records, game fowls were known to exist, and it is natural to suppose that their existence was known to the Romans and to their ancestors. They were no doubt distributed throughout the Roman Empire, and from such an ancestry the many plumage colors of the Leghorn fowls can be traced.

Leghorns, as they now exist, were developed by the poultrymen of the United States. Fowls of various kinds were purchased from sailing vessels that came from Spanish countries to American ports. At that period, supplies of fresh meat were carried alive, and poultry was most convenient for this purpose. The captains of ships landing with a surplus stock of fowls were willing to dispose of them and take on a new supply that would be better able to stand the strain of the return trip, and in this way Leghorns were brought to the United States.

There has been a great deal of contention as to which was the original variety of Leghorn and which was first brought to America. Personal investigation by an officer of the United States Navy furnishes the information that about 1815 Leghorn fowls were of all kinds of colors of the game fowls and were all more or less alike in shape. This investigation was made in response to a request to learn the variety colors of poultry exposed for sale in the Mediterranean ports.

This would indicate that the Leghorn fowls, as they existed in Italy prior to 1815, were a mongrel lot and that they had come from the promiscuous breeding of all kinds and colors of fowls that conformed to a single type. They had the peculiarity of white ear lobes and the production of white-shelled eggs. Martin Doyle, one of the earliest writers on poultry, refers to a fowl, which he calls Manx, as the original Spanish fowl. Some writers claim that black, some that brown, and others that white Leghorns were the first to be brought to America. Some allege that there were no black fowls resembling Leghorns in the Spanish countries in early days. All such claims seem to rest entirely on individual investigation. There does not seem to be any doubt that wherever white fowls have existed, there were black fowls of the same character, and that wherever black fowls existed, white ones of the same kind were almost certain to be present. Undoubtedly, the foundation blood of the White, the Black, and the Brown Leghorn fowls was early brought to America. It has been fairly well established that the Rose-Comb Leghorn did not exist in the Spanish or Italian countries, and it has also been stated that the Brown Leghorns were not a natural product of Mediterranean districts. It can scarcely be questioned, however, that among the poultry natural to the Mediterranean districts there were fowls of the Leghorn type, from which all the varieties have been originated by selecting and mating for a purpose.

BLACK LEGHORN

SINGLE-COMB BLACK LEGHORN

20. Origin.—As all Leghorn fowls originated from the one source, it is unnecessary to repeat the origin of the **Black Leghorn.**

21. Development.—Black Leghorn fowls have not gained as much favor in America as in other countries, but little attention having been given to their development. English fanciers have done most for their improvement.

22. History.—It is now generally admitted that White, Brown, and Black Leghorn fowls were brought direct from Italy to America, and were first developed in the United States. Black-plumaged fowls never having been favorites in America, the Black Leghorn fared badly, and, although the variety was included in the first authorized Standard of the American Poultry Association, the fowls never became popular. Their shanks and toes were originally described as being yellowish black. This same description is maintained in the present American Standard of Perfection. The English Standard states that shanks and feet shall be yellow or orange, with yellow toe nails.

A rose-comb variety of Black Leghorn is recognized by the English Standard, all requirements except the comb being the same as for the single-comb variety. In writing of them in his "Poultry Manual," the Rev. T. W. Sturges, M. A., of England, states that the Black Leghorns are of pure Italian blood; that they have long been bred not only in Italy, but in Germany, Switzerland, and Belgium, and that some of the best that have come into England have been brought from Belgium. The Black Minorca has been bred into the Black Leghorn to increase the size. The Single-Comb Black Leghorn has become popular in England during recent years, although it has gained but little favor in America.

23. Description.—All Leghorns should conform in a general way to one shape, which is portrayed in the color illustration. Notwithstanding this, a slight difference does exist in the general formation of some of the varieties. Fowls of the white variety have been bred in the highest state of perfection, or nearest to the Standard description. Those of the brown variety diverge a little from this description; the Duckwing, or, as it is now called, the Silver Leghorn, conforms less to this Standard description than the Leghorn of any other variety. A general description of shape is given in the discussion of the white variety.

Comb, face, wattles, and eyes are red; the beak, shanks, and toes are yellow, or yellowish black; the ear lobes are white; the surface plumage throughout must be glistening black in this

variety—the more sheen on the surface plumage, especially in the males, the more beautiful they will be. The under plumage should be very dark or black; white or other foreign colors are not permissible in any part of the plumage.

24. Mating.—In mating Black Leghorn fowls for the production of exhibition specimens, those having perfect Leghorn type and black plumage glistening with sheen are likely to produce offspring having the richest plumage color. Red may appear in the hackle and saddle of some of the males produced from such fowls, but otherwise, good color in the surface and under plumage should prevail. The main difficulties to be avoided are pinched tails in the females, tails carried too high in the males, and too much dark color on the shanks and toes. It is less difficult to produce yellowish-black shanks in males than in females. Some breeders have introduced Black Leghorns with yellow shanks from England to improve the color of shanks.

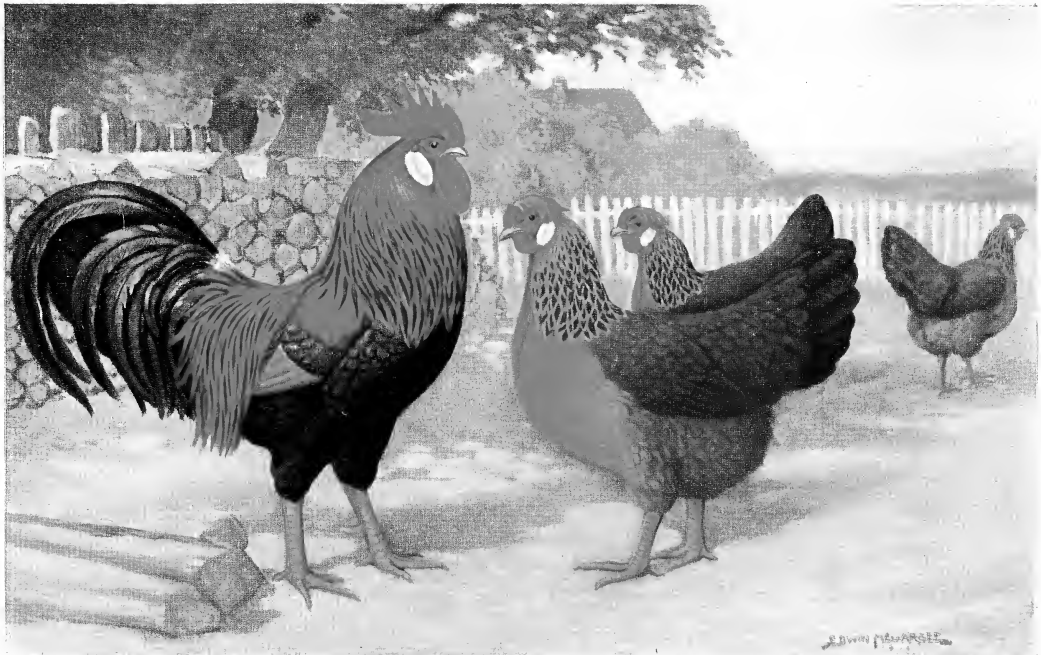
ROSE-COMB BLACK LEGHORN

25. Rose-Comb Black Leghorn fowls of beautiful form and color have been produced by crossings of the Single-Comb Black Leghorn with the Black Hamburg. The offspring from these matings have been selected and mated, and this process continued until a variety of Rose-Comb Black Leghorn has been produced that is fully the equal, and, in many instances, the superior of other rose-comb varieties. To improve the shank and toe color, Rose-Comb White Leghorn females have been bred with the Rose-Comb Black Leghorn males.

The only development that the Rose-Comb Black Leghorn has received has been along the lines mentioned, and the history of these fowls tells only of a few fanciers who have paid attention to their development for beauty and finish from a fancier's standpoint.

The description of the Rose-Comb Black Leghorn is the same as that of the Single-Comb Black Leghorn, the only difference being in the shape of the comb.

The fowls selected for mating for the production of exhibition fowls should be of the same form, with the exception of



Brown Leghorns

the comb, and of the same color as the single-comb variety. Special attention should be given to the comb, ear lobes, and the color of the shanks and toes.

BROWN LEGHORN

SINGLE-COMB BROWN LEGHORN

26. Origin.—Like the other varieties, the **Single-Comb Brown Leghorn** originated in Italy. The fowls of this variety have been developed to their present state of perfection in the United States from the crude fowls brought from their native land. Their origin is more fully explained in connection with their history.

27. Development.—The Brown Leghorn fowls were largely developed by A. M. Halsted, of Rye, New York, who produced the best that were known prior to 1870. Since that time they have been improved year after year by a number of fanciers in many parts of the United States. As bred in England, they are so different in general characters from those bred in the United States as to appear like fowls of another breed.

28. History.—It is generally admitted that the first Brown Leghorns were brought into Massachusetts between 1850 and 1853. The first authentic record of their appearance as a distinct variety is credited to F. J. Kinney, of Worcester, Massachusetts, who secured them from a ship in Boston harbor in the spring of 1853. Following this, he had some brought direct from the city of Leghorn, in Italy; these he described as being "not brown-red games, nor black-red Leghorns, but brown-red, the cocks being dark brown spotted with lighter brown." The hens were colored much like the cocks. This described the former color of the Brown-Red Game, to which the early Brown Leghorn conformed. It has been claimed but not proved, that Leghorns were brought into the ports of New England as early as 1833. This is undoubtedly true,

but there does not seem to be any satisfactory proof that the Brown Leghorn was known as such in the United States prior to the record made by Mr. Kinney.

29. Description.—The Brown Leghorn for exhibition should conform to the shape description of all Leghorns. They do not, however, have shanks as long as the white variety. Both the males and the females are usually larger than the fowls of the other varieties, and the tail carriage of the males differs from that of the white variety. The male in the color illustration of Brown Leghorns is a portrait of the best male shown in 1910, and the female is a composite portrait of the three best females shown during the same year. The color and markings have been made as nearly like the original as possible. Body formation, comb, and general make-up are copied from life.

The top color of the Brown Leghorn male is red; the hackle and saddle are striped with black; the red should be as rich and brilliant as possible, the black stripe having the appearance of having been laid on top of the red. The breast and body color of the male is glossy black; the tail throughout is a rich, glossy black, burnished with a greenish sheen; the shanks and toes in both males and females are yellow or dusky yellow. The plumage of the female is light brown, stippled with a darker shade; the breast feathers are salmon, shading lighter as they approach the thighs. The beauty of the female depends largely on one even shade in the plumage, the lighter shade predominating, with no reddish tinge. The face, comb, wattles, and eyes in both males and females are red; the ear lobes are white, and the color of the under plumage is dark.

Brown Leghorns are bred in both single- and rose-comb varieties, the only difference being in the style of comb. Those of the single-comb variety have a beautifully formed comb that stands erect on the male and droops on the female. The comb of those of the rose-comb variety conforms in general make-up to the comb of the Hamburg, but is usually not so large, and shows more tendency to follow the shape of the head. Size, shape, color, and markings are the same in both varieties.

The rose-comb variety is a made variety and will be mentioned more fully in the discussion of the White Leghorn.

30. Mating.—Two methods of mating are necessary for the production of the best Brown Leghorns of both sexes. For the production of a flock of even color and attractive appearance, single, or standard, matings may be practiced, though but few fowls fit for the keenest competition can be produced in this way. For this reason, it is best, where but one flock is kept, to have this of the pullet-breeding line, and to be satisfied with the production of beautiful pullets and such males as will naturally come from them.

To produce a flock of fairly good males and females of an even color by single mating, it is necessary to select females of good form and color, and to mate them with males that have little or no striping in the saddle and not much striping in the hackle. From such matings, fowls of medium quality will be produced. When the offspring from such matings are too dark, males selected from a well-established pullet-breeding line should be introduced into the flock.

When Brown Leghorn fowls are bred for utility purposes, they should be selected from the female line and bred for the production of female offspring with the beautiful plumage color of the standard-bred female and without regard for the color and markings of the male. In this way females of uniform color and show quality will be produced, and the pullets will also be great egg producers and satisfactory as market poultry. Only males bred in line from beautiful females should be used in such matings, and neither males nor females from cockerel-breeding strains should be introduced into such a flock.

The double mating system is practiced with Brown Leghorns to overcome the differences in color, shape, and comb between the sexes. Color is the main difficulty and needs the most attention. The exhibition males must have deep, rich, red plumage, with intense hackle and saddle stripings; the breast and fluff must be free from brown. Rich red males are required to produce such males. Males for breeders should have (but usually lack) brilliancy. Purple in any part of the plumage

is highly objectionable. Other bad colors common to Brown Leghorn males are found in the hackle, which will often show several shades lighter than the back and saddle plumage; or the black stripe in the hackle will run out at the tip and not be completely encircled with red edging. When the black striping runs out at the tip of the hackle feathers, there is a smutty appearance, or a circle of black, at the end of the hackle. The points of all feathers that have striping should be edged with red, and no striping should run out to the edge of a feather. The top plumage of the male should be an even shade of rich, brilliant red, striped with black, and have a brilliant, greenish sheen. The breast and body plumage and wing bars should be a rich, glossy black; the shanks and toes should be yellow.

Such males should be mated to females that have come from the same line of breeding. They should have heavily striped hackles edged with red, and a green sheen over the back and wings. This point should be more carefully looked after than is usual. Females that have a dark partridge color on the body plumage should not be discarded even though their breasts are almost black. Records should be kept of the males produced from each hen, and all hens that do not produce cockerels of the most satisfactory exhibition quality should be discarded, and only hens and their offspring that produce well should be continued in the flock. No males or females from the pullet-breeding line should ever be introduced into a strain of fowls bred exclusively for the production of exhibition males.

In the pullet-breeding line, only males that have been bred in line for three generations from the finest exhibition females should be used. Such males mated to females perfect in exhibition form and color will be almost certain to establish a line of breeding fowls that will produce, almost to a certainty, a number of females that are quite alike and fit for exhibition. Males bred from such matings are the only kind that will be fit for use in mating for the production of females. No matter what the color and markings of such males may be, if they have been bred in line for three generations from a strain that produces exhibition pullets, they are best for this purpose.

To avoid the dangers of too much inbreeding, two of the finest exhibition hens should be selected each year, and from their offspring the cockerels should be selected for the next year's matings. Other hens should be selected for the same purpose the following years. For the introduction of new blood into a flock of this kind, the finest females from another pullet-breeding strain should be selected and mated to a cockerel from the best hen in the fancier's flock. If this mating produces pullets of superior exhibition qualities, pullets from this line may be mated to the fancier's own best males, and if these pullets continue to produce females of superior quality, cockerels from this line may be sparingly introduced into the flock.

In breeding for the production of exhibition Brown Leghorns, only fowls that conform to the shape described for the Leghorn breed and to all the color requirements of the variety should be selected for each mating.

ROSE-COMB BROWN LEGHORN

31. Origin.—There was formerly a great deal of controversy over the origin of the **Rose-Comb Brown Leghorn.** Y. C. McDaniel, of South Hollis, Maine, who was perhaps the first to breed fowls of this variety, has never given an account of their origin. Fred Ayres, of Connecticut, went to Italy in search of Leghorns, but failed to find the rose-comb varieties. It is probable that they, like all rose-comb varieties, resulted from crossing the single-comb fowls with Hamburgs, presumably the golden variety.

32. Development.—In the development of the Rose-Comb Brown Leghorns, a number of crosses have been made. Golden Laced Wyandottes were crossed with Brown Leghorns, but this resulted in destroying beauty of the comb and body formation, and the strains so produced laid eggs with tinted shells. The best Rose-Comb Brown Leghorn fowls have been made by carefully selecting the breeders for breed characters of comb and color.

33. History.—The history of the Rose-Comb Brown Leghorn is about the same as that of all other Leghorns having rose combs. At first they had bad color and faulty comb formation, but of late many have been produced that fully equal those of the single-comb variety in breed characters. As early as 1903, a pen of Rose-Comb Brown Leghorn fowls was sent from America to Australia, by Mrs. Hansel, to compete in an annual egg-laying contest, and they did remarkably well.

34. Description.—The Rose-Comb Brown Leghorn must conform in size, shape, and color to that of the single-comb variety, and, in addition, must have a beautifully formed rose comb of the Hamburg type.

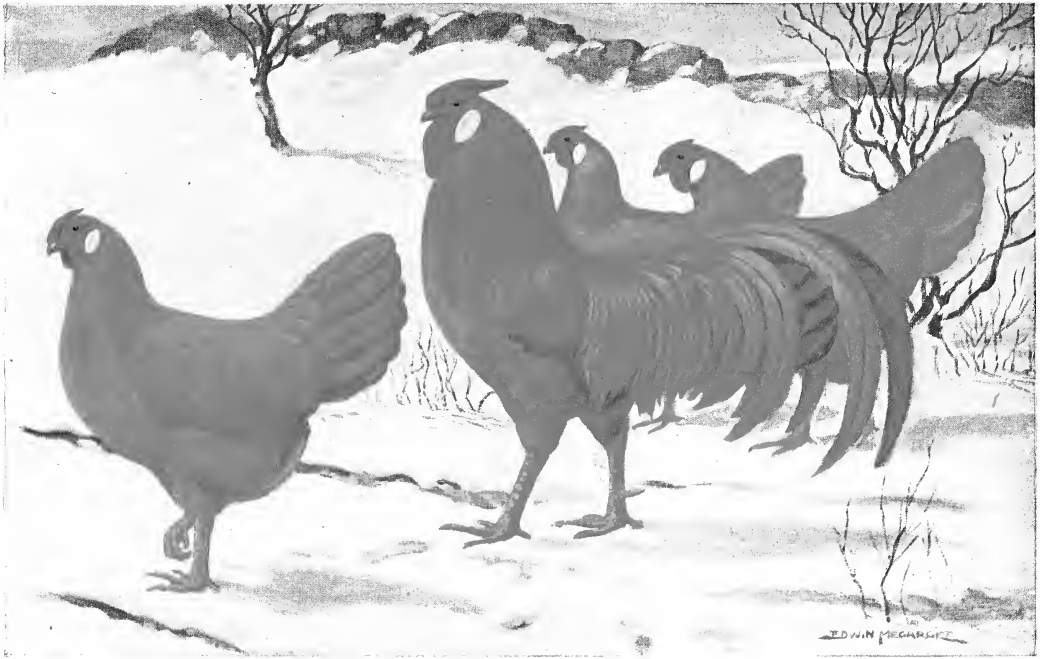
35. Mating.—Rose-Comb Brown Leghorn fowls for breeding purposes must be selected for size, shape, and color, as demanded for those of the single-comb variety. More than usual care must be given to selecting for comb formation, ear lobes, and plumage color. The fowls of the rose-comb variety must be considerably improved in all these features before they will equal the best of the single-comb variety. This can be accomplished if as much care is given to them as was given to those of the single-comb variety.

BUFF LEGHORN

SINGLE-COMB BUFF LEGHORN

36. Origin.—The **Buff Leghorn** first existed in Italy and was taken from there to Denmark. The origin and development of the Buff Leghorn is more fully explained in its history.

37. Development.—The development of the Single-Comb Buff Leghorn that was accomplished prior to 1888 was made in Denmark and, although this development did not bring the fowls in line with those of other varieties of that period, it separated them into a variety that attracted the attention of the poultrymen of England.



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ROSE-COMB BUFF LEGHORNS

38. History.—For some unknown reason the yellow Italian fowls were first taken from Italy to Denmark, where they were bred for market poultry. When first taken into England they were much darker than they should be. They have been known both as Chamois and as Yellow Leghorns. They were bred and selected in England until fairly good buff-colored fowls of the Leghorn type were produced. When first brought to America, they were of bad form and irregular in the color of their shanks, and their plumage was badly marked with white and black. By careful breeding and selecting they are now of true Leghorn type, and many of them are golden buff throughout.

39. Description.—The Buff Leghorns are of two varieties, the single-comb and the rose-comb, the only difference in the fowls of the two varieties being in the style of comb. Both are of the type demanded for all Leghorns. Special features to be desired in Buff Leghorns are yellow shanks and beak and perfect plumage color. They have always been deficient in these requirements, and also in the color of the ear lobes. The color illustration of the Rose-Comb Buff Leghorns shows the type and color that is most desirable.

40. Mating.—In mating Buff Leghorns for the production of exhibition fowls, marked attention must be given to the careful selection of fowls that have the proper breed characters, true golden-buff plumage, and shanks of a rich, golden yellow. In mating for color, the same rules must be applied that are necessary for producing the best color of plumage, as described for the mating of Buff Cochins. Neither black nor white should exist in any part of the plumage of the fowls selected for the matings. Marked attention must be given to the selection of properly shaped combs. The main difficulties to be overcome are defective combs, uneven and improperly colored ear lobes, and deficiency in the color of the plumage and shanks.

ROSE-COMB BUFF LEGHORN

41. Origin.—All varieties of Leghorns having rose combs have been produced in about the same manner. In some instances they were produced by crossing Rose-Comb White Leghorns with Single-Comb Buff Leghorns, and by crossing Single-Comb Buff Leghorns with both White and Golden Hamburgs. Desirable **Rose-Comb Buff Leghorns** were then secured by selecting the best of the offspring from these crosses and breeding from them.

42. Development.—The Rose-Comb Buff Leghorn has been largely developed by the fanciers of America, and although the fowls are not equal in quality to the Single-Comb Leghorns, if carefully selected and bred, they will be made as beautiful as any of the Leghorn family.

43. History.—The history of the Rose-Comb Buff Leghorn is coincident with that of the Single-Comb Buff Leghorn.

44. Description.—Rose-Comb Buff Leghorns must conform to the Single-Comb Leghorns in every way except in the comb, which must equal in quality the rose comb of any of the Leghorn varieties.

45. Mating.—The same general methods of mating must be applied in mating Rose-Comb Buff Leghorn fowls as are necessary for success in the case of the Single-Comb Buff Leghorns. Unusual attention, however, must be given to selection for combs and ear lobes. These are the weak points in fowls of this variety, and if a breeder is to be successful, they must be watched and improved by careful selection.

SILVER LEGHORN

46. Since 1894 a variety of Leghorn, now known as the **Silver Leghorn,** has been described in the American Standard as the *Silver Duckwing Leghorn.* This variety has also been commonly called *Duckwing Leghorn* and *Golden Duckwing Leghorn.* In the revision of the American Standard of 1910

the name was changed to Silver Leghorn. Only one variety is recognized by the American Standard, but the English Standard recognizes two varieties, the Silver Duckwing Leghorn and the Golden Duckwing Leghorn.

47. Origin.—The Silver Leghorn is said to have been originated by G. Payne, of England. It has been stated that this variety was made by crossing Leghorns with the Yokohama, or Japanese, game fowls having the same colors as the Silver Duckwing. Other crosses have been made with Leghorns and Silver-Gray Dorkings, and with Leghorns and Silver Duckwing Games. Mr. Payne was also the originator of the Pyle Leghorn, and both varieties were in process of development at the same time.

48. Development.—The Silver Leghorn was developed largely by Mr. Payne and Mr. Terrot, of England. For a long time the fowls lacked Leghorn breed characters, but their defects have been greatly improved, and good specimens have recently been seen.

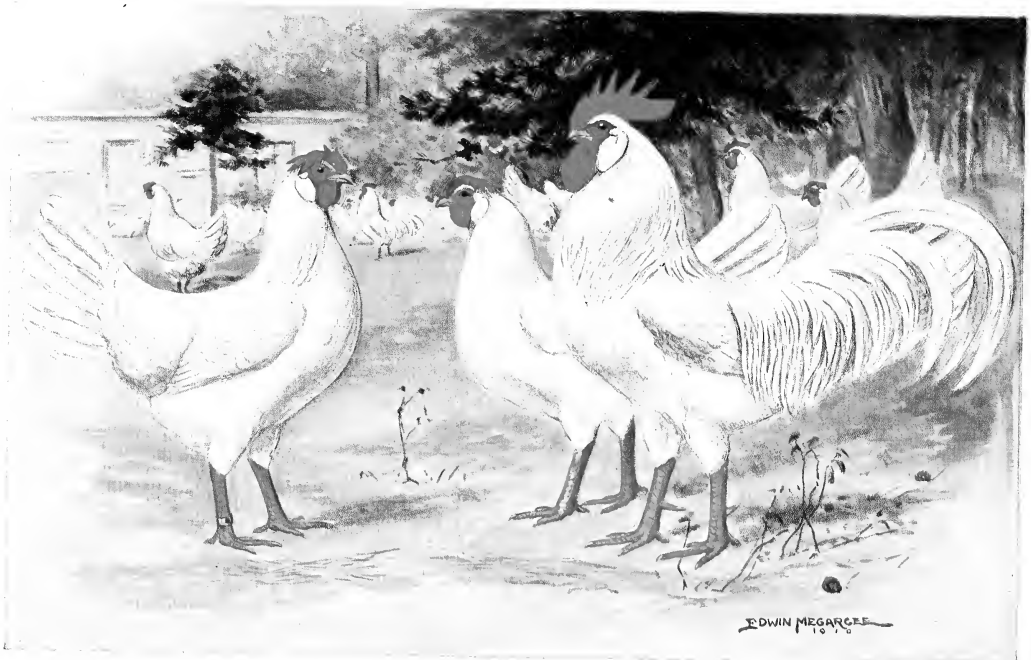
49. History.—In the development of the Pyle Leghorn, offspring were produced, especially females, having a light-gray instead of a brown body color. It has been stated that such females were mated with Yokohama males of the color of the Silver Duckwing. Other matings were made of Silver Duckwing Game females with males from the crosses made to produce the Pyle variety. In other attempts to produce Silver Duckwing Leghorns, White Leghorns and Duckwing Game males were bred together, and White Leghorns were also bred with Silver-Gray Dorkings. Bad comb and body formation and red ear lobes in the offspring resulted from all these crosses. Following their introduction at the Crystal Palace show, London, in 1886, these early Silver Duckwing Leghorns were taken up by a few fanciers, who gradually developed them into fowls of Leghorn shape having the same plumage color that is required for both the Silver and the Golden Duckwing Game fowls. Duckwing Leghorns of medium quality were shown in the United States about 1890, and a description of them appeared in the American Standard of 1894. In the English Standard

they are known as Silver Duckwing Leghorns and Golden Duckwing Leghorns.

50. Description.—The Silver Leghorn should have the same breed characters and body formation as other Leghorns. The color description is the same as for the Silver Duckwing Game fowls. The male has glossy black on the throat, breast, and body, including the tail plumage; the top color is silvery white, with white hackle marked with a narrow black stripe; the wing bars are black, glossed with a metallic blue; the beak, shanks, and toes of both males and females are yellow; the ear lobes are white; and the face, comb, wattles, and eyes are red. The only difference in the color of the Golden Duckwing and the Silver Duckwing Leghorn males is that the top color of one is a deep, rich golden, and of the other is a silvery white.

As described in the American Standard, the Silver Leghorn females have a silvery-gray hackle, and in the English Standard they are described as having a silvery-white hackle, both striped with black. The body plumage, according to the American Standard, is light gray; according to the English Club Standards it is a delicate silver or French gray. In both, the body color is described as stippled with a darker shade. The breast and under parts are salmon, shading to a lighter color at the thighs; the tail should be a darker gray than the body color. The American Standard permits black tail feathers, the topmost ones to be penciled with gray. The most beautiful exhibition specimens shown in England have dark-gray tail feathers that grow lighter on the uppermost feathers. The difference between the Golden and the Silver Duckwing Leghorn females is that the Golden Duckwings have a dark-gray plumage color, penciled with a darker gray or black, and the Silver Duckwings have a very light-gray plumage color, penciled with a darker shade.

51. Mating.—The great difficulty in breeding Silver Leghorns is to produce females of a clean, clear, French gray as called for in England. Under the American Standard, light gray is permissible. This description permits a darker shade than would be desirable in the golden variety. Some males,



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SINGLE-COMB WHITE LEGHORNS

acceptable for exhibition as Silver Leghorns, may be bred from matings of fairly dark fowls, but to produce the beautiful surface color in females, very light-colored males must be used. The American Standard calls for gray under plumage. The most beautiful fowls are produced from mating fowls that have very light under plumage; for the production of the golden variety, it is necessary to have the same shade of color in the male breeding fowls that is most desirable in the Golden Duckwing Game males for exhibition. The same shade of color should exist in the females that exists in the most desirable females of the Golden Duckwing Game fowls. Both the males and the females for the production of the silver variety, which is the only one recognized by the American Standard, should have the clear surface color of the kind described in the Standard.

WHITE LEGHORN

SINGLE-COMB WHITE LEGHORN

52. Of all the many varieties of Leghorns, none has ever been so popular or bred in such large numbers as the **Single-Comb White Leghorn.** Careful investigation reveals the fact that the first white fowls of Spanish or Italian ancestry that were brought to America had white shanks and skin. Judging from the color of shanks and skin, the first Black Leghorns brought into New England were, like the whites, of Minorca ancestry. This fact is mentioned in support of a belief, which has been entertained to some extent, that the Minorca was the original Spanish fowl, and that it had the peculiarity of white skin and shanks, and that, on the other hand, the Leghorns belonged exclusively to Italy and possessed yellow shanks and skin. In substantiation of this, William Simpson, of West Farms, New York, in a letter states that in the year 1853 he purchased from a ship a White Leghorn cock, four White Leghorn hens, and one Blue Leghorn hen. They differed from the Leghorn fowls of the present in that they were somewhat larger and had white shanks. In 1860, Mr.

Simpson and others imported White Leghorns having yellow shanks and toes. The claim has been made, and it is fully substantiated, that Spanish and Italian fowls were brought into the United States as early as 1835, or earlier.

53. Origin.—The making of the exhibition Single-Comb White Leghorns of America was begun with the careful breeding of the White Leghorn fowls that came from Italy, by a few fanciers in the state of New York. As made by the fanciers of the United States, the White Leghorn was recognized by the American Standard of 1875, and from time to time, as the fowls have been improved, the Standard has been altered.

54. Development.—Leghorns have been developed very differently in America, in England, and in Australia. The type of Leghorn most admired in America is one with distinctive breed characters. It has been developed into a fowl of ideal character, both for exhibition and utility purposes. The English fanciers have altered the Single-Comb White Leghorn, by the introduction of Minorca blood, until they have made a fowl of different type—one much larger and less prolific than the American type. In Australia, Single-Comb White Leghorns have been developed midway in type and size between the English and the American types.

Where they are bred in America entirely for egg production and market purposes, more size has been developed than is usually sought in fowls for exhibition, yet the size of the utility Leghorns in America does not equal that of those bred in Australia.

55. History.—Leghorns, as bred in America in 1890, were of indifferent size; in fact, they were much too small either for market poultry or for producing eggs of size that would compare favorably with the eggs of fowls of other breeds. Since that time, the size of these fowls has been gradually increased until it is not unusual to have flocks of yearling hens that will average 4 pounds each, and males that will weigh over 6 pounds each. The eggs produced from a well-selected flock of Leghorns will average over 2 ounces each, or from 24 to 26 ounces per dozen.

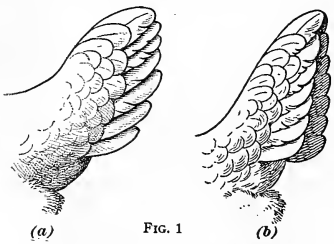
At about the same time, the English fanciers began to change the Leghorns, and, in fact, all the Mediterranean fowls into larger proportions, greater weight, and a body formation more like the Dorking. They have also bred larger combs on Leghorns than have ever been countenanced in America.

In Australia, the poultry breeders first attempted to improve the Single-Comb White Leghorn by producing as large a fowl as possible without diminishing its egg-producing powers. The Australian breeders have accomplished their purpose well, and in addition have secured a good type of Leghorn for exhibition. Though the Australian exhibition Single-Comb White Leghorn does not conform entirely to the description in the American Standard, it comes nearer to the American than to the English type. The experts of Australia now declare that they have reached the limit of size in the Leghorns that it is possible to get without sacrificing any of the prolific egg-producing powers of the breed; the English experts admit that they have developed the Leghorn beyond the size that will give the most prolific egg yield. The results of the breeding operations in these two countries emphasize the fact that each breed and its varieties have been made for a definite purpose, and that to get the best results out of the fowls of the different breeds it is necessary to keep their size within reasonable limits.

56. Description.—The first description of Leghorn fowls published in America was printed in the Halsted Standard of 1867, which mentioned both Single- and Rose-Comb White Leghorns, and the Dominique Leghorn. The Halsted Standard described the head of the males as short and deep; the eyes, large, and full; the neck, long and well arched; the breast, full, round, and carried well forwards; the body, rather square but heaviest forwards; the tail, large and full, and carried upright; the shanks, long; the carriage, upright and pleasing. The description of the female conformed to that of the male. In the original Standard of the American Poultry Association of 1875, no Rose-Comb Leghorns were mentioned, but in the Standard of 1893, rose-comb and single-comb varieties of both the Brown and the White Leghorns were described. From

that time to the present, the general form of the Leghorn has been undergoing a gradual change, until this fowl now has a longer body formation than formerly, more length in front and in rear of the shank line, and an abdomen to conform with the breast and body formation. The head is of moderate length, the neck is long and arched, the back and body formation is of medium length, and is deep, round, and full. The greatest alteration in Standard description recently has been in the description of the tail formation.

The back of a well-formed Single-Comb White Leghorn exhibition male should form a half moon from the hackle to the base of the tail; the tail should be carried well back and down, but not so low as is preferred in the exhibition games or in the Hamburgs. The Standard states that the tail should be carried at an angle of 45 degrees, but many judges, in placing awards, give preference in the show room to lower tail carriage than this. The tail of the females should be spread like a half-opened fan, as shown in Fig. 1 (*a*), and, as viewed from the rear, should be slightly Λ-shaped, as illustrated in Fig. 1 (*b*). This tail should not be so much Λ-shaped as the tail of the Brahma or that of the Wyandotte, but enough to build out the saddle and coverts about the tail, thus forming a more attractively shaped back. The breast and body formation of both males and females should be full and rounding; the breast should be wide between the thighs; the abdomen should be full for the size of the fowl, and of a shape that makes a rounding body formation from the point of the breast in front of the shoulder down between the thighs and up to the lowest feather of the tail; the body should be fairly long, deep from the top of the back to the bottom of the breastbone, and wide at the center of the wing; all of these parts should, however, be in proportion to the size and the breed characters of the Leghorn fowls.



(*a*) FIG. 1 (*b*)

The head points of all Leghorns should be carefully considered, as in the Standard they are valued at 34 points. To secure credit for all, or even for the greater part, of these points, the head, and particularly the comb, of a Single-Comb White Leghorn must be of attractive formation. The comb should be of medium size and evenly serrated, with five points; the heel of the comb should round up from the base and stand away from the head. The comb of the Single-Comb White Leghorn male should not follow the shape of the head and neck, but should grow in an almost straight line back from the top of the head. The wattles must be of beautiful formation, and the ear lobes should be almond shaped, large, and smooth, like kid, in texture, and of pure enamel white. The comb of the female should be of the same general formation as that of the male, except that four of its points should fall over to one side, the first or front point standing erect. A single loop only is permissible in the comb of the female. The wattles and ear lobes should be as beautifully finished as those of the male. The eyes of both sexes should be round, full, clear, and bright red; and the beak, shanks, and toes should be golden yellow.

The color illustrations of Leghorns show the three types most popular in the show room. The color illustration of the Single-Comb White Leghorns represents the style of Leghorns most popular from 1908 to 1912. The color illustration of the Single-Comb Brown Leghorns is a portrait of living fowls that were the best during the same period. The color illustration of the Rose-Comb Buff Leghorns shows the body formation that has been most popular; and in addition it shows the style of rose comb considered best for all Rose-Comb Leghorns.

The plumage of White Leghorns should be pure white throughout, including the quill and the under fluff of the feathers. The skin, beak, shanks, and toes should be yellow; the ear lobes, white; and the combs, face, wattles, and eyes, red. It has always been difficult to maintain pure white in the ear lobes and a golden color in the shanks and toes. A number of the offspring will have a creamy tint, and many a distinct yellowish tinge in their ear lobes. Pure white ear lobes are an absolute necessity in the show room.

57. Mating.—In mating Single-Comb White Leghorns for the production of exhibition fowls, only males and females having perfect breed characters, pure white plumage, beautiful heads, combs, wattles, and ear lobes, and bright red eyes, should be selected. It will be impossible to succeed in producing good offspring unless the males and females in the matings are practically perfect. Special attention must be given to the selection of breeders with beautiful combs. Only fowls with ear lobes of perfect shape and color can be depended on to reproduce offspring with ear lobes of the proper type. It is possible to succeed with old hens that have white, or nearly white, shanks. From such females, fowls with beautiful plumage color are often bred. The color of the shanks in the offspring will be much improved if they are permitted to range through grass and clover fields.

Tail plumage is of prime importance in Single-Comb White Leghorns for breeders. Only females that have well-spread tails are suited for the matings. The males should have an excessive amount of saddle plumage, long, flowing sickles, and a full main tail that is well spread and carried somewhat lower than is described in the Standard. The tails of the females used for breeding exhibition males should be carried lower than is necessary in females for producing exhibition pullets. Leghorn fowls that conform closely to the Standard description when seen at freedom and posing in a natural position are the ones that can be depended on to reproduce offspring of the finest exhibition quality.

ROSE-COMB WHITE LEGHORN

58. Origin.—Many theories have been advanced concerning the origin of the **Rose-Comb White Leghorn.** The accepted opinion at the present time is that this variety originated from crossing Single-Comb White Leghorn with Rose-Comb White Hamburg fowls, and was developed by selecting and mating the best offspring of this cross.

59. Development.—The Rose-Comb White Leghorn has been developed not by any one fancier, or by any group of fanciers, but by poultry fanciers throughout the world.

60. History.—The home of the original Rose-Comb White Leghorns in America was in New England and in New York State. The secretary of the Rose-Comb White Leghorn Club of America, writing the history of this variety of fowls, states that he has been unable to trace definitely their origin, development, and history; and that after a diligent search for authentic information, he has accepted as final the belief that they were originated as just stated.

61. Description.—The Rose-Comb White Leghorns should have the same general breed characters as required for all Leghorns, except that they must have a rose comb of medium size fashioned after the Hamburg comb, but smaller and more delicately formed.

62. Mating.—Fowls having the same general breed characters necessary for producing Single-Comb White Leghorns, must be selected for matings of the Rose-Comb White Leghorns, and careful attention must be given to selecting fowls having small, beautifully formed, and evenly serrated combs, with small, projecting points; the heel of the comb should stand out from the back of the head, but not so much as the comb of the Hamburg. If satisfactory results are to be obtained, equal attention must be given to selecting both males and females with the proper comb formations. The combs on the fowls in the color illustration of the Rose-Comb Buff Leghorn are of the proper formation.

NON-STANDARD VARIETIES OF LEGHORN

BLUE LEGHORN

63. Blue Leghorn fowls have frequently appeared in many localities throughout the world, but it was left for the English fanciers to bring them into public notice. Many of them were shown at the International Show of 1908 in London. At this show more fowls of the blue variety were shown than of any of the other varieties. A few weeks afterwards there was a noticeable display of Blue Leghorns at Leeds, England.

It is said of this display that the quality was splendid and that there also the blue fowls outnumbered those of all the other varieties shown.

64. Origin.—The Blue Leghorn was produced in the same manner as the Blue Andalusian and all the other blue-plumaged fowls; that is, by the promiscuous intermingling of black and of white fowls in their native lands. The make-up of fowls of this color is fully told in the description of the Andalusian fowls.

65. Development.—During recent years, unusual care has been given in England to the development of this variety. In fact, more attention has been bestowed on them there within the past 10 years than ever before. Since blue fowls have been increasing in popular favor, Blue Leghorns have been developed by selecting and mating the best specimens that could be found.

66. History.—Since the increased popularity of blue-plumaged fowls, the English poultry press has given them much publicity and has said much in their favor. As a result of this, the Blue Leghorn is one of the most popular Mediterranean fowls in England.

67. Description.—The Blue Leghorn is a perfect Leghorn in form and general make-up, according to the Mediterranean type, which is most highly esteemed in England. The fowls are of large size, bordering on the Minorca type, with larger combs than are admired for Leghorns in America. Their plumage is blue throughout, with a darker metallic shade of blue in the hackle and saddle of the males; the beak is horn color; and in the shanks and feet, yellow or orange is preferred. One English club standard says that the shanks and toes shall be yellow or orange; the plumage, one even shade of blue from head to tail; and the hackle and saddle of males, darker blue. Any trace of foreign color is objectionable.

68. Mating.—For mating with Blue Leghorns, Cuckoo, or Dominique, Leghorns have been used. The alien blood in this variety may have done more or less harm to the Blue Leghorns.

Andalusian blood can be used with greater safety. Those who have succeeded best with the Blue Leghorns advise the selection and mating of only the best fowls that can be secured. In some instances the best males are bred from females that are much too dark for exhibition, and the best females are sometimes bred from males having the proper shade of color, mated with females perfect in color, both males and females having perfectly colored wings and tails. The color of the under plumage of these fowls is of great importance; it should be of a lighter shade of blue than the surface color. Some call this slaty blue; others call it a dark or bluish gray, but it should be blue, a tint or two lighter than the surface color.

DOMINIQUE LEGHORN

69. The **Dominique Leghorn** was described in the Halsted Standard, and also in the original Standard of the American Poultry Association, but was omitted from the Standard of 1898, and since that time has not been recognized in the American Standard. In England the variety is known as *Cuckoo Leghorn*, and the fowls are described in the English Standard as Leghorns of true form and as having plumage color the same as the Barred Plymouth Rocks.

70. Origin.—How the original Dominique Leghorn fowls were made can only be surmised. It is logical to suppose that they would occur naturally in mixed flocks of Black and of White Leghorns. Those that have been produced during recent years have come from crossing Black Leghorn males having fine, white ear lobes and good colored shanks and feet with Black Plymouth Rock females. Their offspring have been selected and bred for breed characters and Cuckoo color (barred plumage), until a variety of more than ordinary quality has been obtained.

71. Development.—The development of the Dominique Leghorns during recent years has been carried on entirely by the fanciers of England, who have made and developed the fowls to their present type.

72. History.—The early Cuckoo, or Dominique, Leghorns, as seen in America, were small and unevenly barred or marked with the plumage color of the Dominiques. But few had distinct bars across their plumage. They deteriorated so much that they were dropped from the Standard of 1898. Later, the English fanciers renewed their interest in them, and since 1900, a few good specimens have been seen at some of the leading English exhibitions.

73. Description.—The English Standard describes the Cuckoo, or Dominique, Leghorn fowls as having the general breed characters that are desirable in all varieties of Leghorns. Their plumage should have color and markings throughout the same as in the Barred Plymouth Rocks. Only a few have been produced that have met the requirements of the Standard. In America, they should have the same form as other American Leghorns, and plumage like the Barred Plymouth Rocks.

74. Mating.—To succeed with this variety, only the best males and females that can be obtained must be selected and bred. The breed characters must have due consideration, and careful attention must be given to the selection of fowls having desirable combs and ear lobes, and yellow beaks, shanks, and toes. The fowls are usually more or less deficient in these respects. In breeding for the production of color, the same methods of mating should be followed that are practiced in standard matings for Barred Plymouth Rocks.

MOTTLED LEGHORN

75. There are several varieties of **Mottled Leghorn,** the most prominent of which are the Black-and-White Mottled and the Red-and-White Mottled. The Black-and-White Mottled Leghorn has plumage marked like the Mottled Java or the Spangled Orpington. The Red-and-White Mottled Leghorn has a mixture of white and brownish red evenly distributed. There is no proof that these two varieties had a common origin. It may be that the Black-and-White Mottled have

come from the Anconas and the others from badly marked offspring that occurred in an attempt to produce the Pyle Leghorn. These varieties are not considered as standard bred in any locality, but are mentioned from time to time more as a novelty to be exhibited in the "any-other-variety" classes than as separate varieties.

PARTRIDGE LEGHORN

76. Origin.—The **Partridge Leghorn** has been known to exist in Denmark for many years. It is thought that the first of these fowls seen in England were brought from Denmark. As they now exist, they have been made by crossing Brown Leghorn males with Partridge Wyandotte females.

77. Development.—The greatest development in the Partridge Leghorn has been accomplished in England, and some attempts toward the improvement of the variety have been made in New York State.

78. History.—When first brought to America, Brown Leghorns were of irregular color and markings. Later, when a strain of cockerel-breeding Brown Leghorns had been established, many of the female offspring had irregular markings in their plumage. These were selected and from them a strain of partridge-colored Leghorns was started. The penciling in the females has been acquired by mating Brown Leghorns with Partridge Wyandottes, and selecting and remating the best offspring, year after year, until partridge-colored Leghorns having fairly good color and markings were obtained.

79. Description.—The Partridge Leghorns should be the same in form and head points as the other varieties of Leghorns. The plumage color should be the same as described for Partridge Wyandottes.

80. Mating.—In mating Partridge Leghorns, the breeder has the same difficulties to contend with as in mating for plumage color in Partridge Cochins and Partridge Wyandottes. The same rules for the selection of breeders and for mating apply to the mating of all three varieties. In mating Partridge

Leghorns, unusual care should be taken to select fowls that have proper head points, including the ear lobes. The beak, shanks, and toes should be yellow.

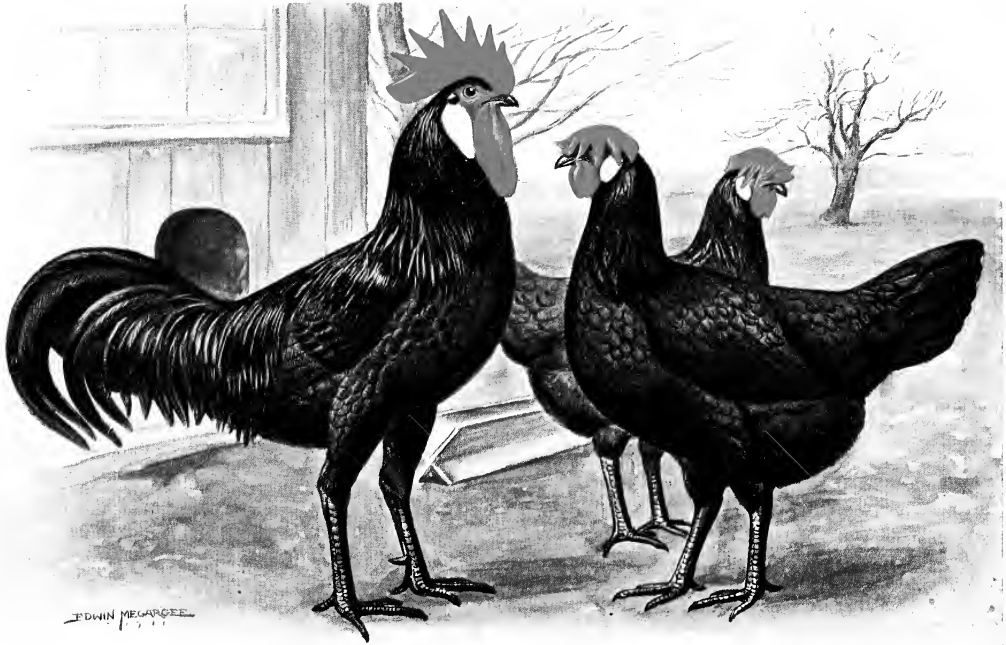
PYLE LEGHORN

81. Origin.—The credit for having originated the **Pyle Leghorn** belongs to G. Payne, of England, who mated White Leghorn males with Brown Leghorn females. The offspring thus produced were carefully selected and the best were mated, the breeders being selected on the same lines as Pyle Game fowls for producing proper color and markings are selected.

82. Development.—In the development of Pyle Leghorns, Brown Leghorn females showing more or less white in their plumage were bred with White Leghorn males; Brown Leghorn males were mated with White Leghorn females, and the best offspring from these crosses were selected and mated in a manner that has produced fowls of color and markings equal in beauty to the Pyle Game fowls.

83. History.—The Pyle Leghorn has been bred by various fanciers throughout the world, who have made and developed the fowls into creditable quality. Some of the Pyle Leghorn pullets that have won at the leading shows of America have come from the promiscuous intermingling of Brown and White Leghorns.

84. Description.—The Pyle Leghorn has the same breed characters as other varieties of Leghorn, with color and markings like the Pyle Game fowls. In both males and females, the beaks, shanks, and toes are yellow; the eyes, comb, wattles, and face, bright red; and the ear lobes, white. In the males, the head and the hackle plumage are bright orange; the breast, body, and thighs, white; the back, wing bows, and saddle, red, dark red, or maroon; the wing bars, white; the wing bays, chestnut; and the main tail sickles and coverts, white. The plumage of the females is white throughout, except the neck hackle, which is tinged with gold, or orange; the breast is salmon, shading to white at the thighs; both males and females



SINGLE-COMB BLACK MINORCAS

should be free from markings or splotches of any kind in the white plumage.

85. Mating.—Pyle Leghorn males that have a dark shade of red, mated with females that have a deep or rich shade of salmon on the breast produce offspring of better color than are likely to come from matings of lighter-colored fowls. To increase or intensify this color, in future generations males selected from a pullet-breeding strain of Brown Leghorns that have little or no striping in the hackle or saddle plumage should be selected for breeding with the Pyle Leghorns. No striping is permissible in the hackle or saddle feathers of the Pyle Leghorns, and bright yellow shanks and beaks are necessities. To improve the color, the methods necessary for the production of the best color in Pyle Games should be applied to this variety.

MINORCA

ORIGIN AND DEVELOPMENT

86. Origin.—Some writers have claimed that the **Minorca** fowls were the foundation stock from which the Black Spanish have come. Others claim that the Minorcas were the first fowls brought to America, and that they were called Leghorns. At all events, Minorcas were formerly much smaller than at the present time. In writing of Minorcas, Edward Brown, of England, claims that a fowl known as the Castilian was the original type, not only of the Minorcas but of the other Mediterranean fowls as well. He states: "We have no direct evidence as to the origin of this fowl, but in Spain it is believed by many that it was introduced during the time when the Moors held that country, and it is often called the Moorish fowl. It was widely distributed throughout old Castile, which comprises a great part of the tablelands to the north of Madrid, as well as Andalusia; and Don Salvador Castello, director of the poultry school at Barcelona, says that it was formerly known in the provinces of Ciudad Real and Zamora; in the last named, it is frequently known under the name of Zamorana,

but, as already noted, birds more or less of the same type have been widely distributed and may be accepted as the common fowl of the country. Although the majority are black in plumage, there is considerable variety in colorations and markings, as is customary where care in selecting has not been observed."

The early illustrations of the Castilians and the Minorcas show the former to be a more finished type of fowl than the Minorca, and the illustrations of 1800 show the Minorca to be a black fowl of early Leghorn type, with an abundance of comb and a very small, partly white ear lobe. The Castilians, as shown by illustrations, were distinctively Leghorns in the comb of both males and females, in the body formation, and in the shape and color of the ear lobes, which were shown as white.

87. Development.—The Minorcas were developed in England more than in America. In America, they were transformed from the English type of fowls into the type of Minorca shown in the color illustration of Black Minorcas. They were originally of many colors, and the first that were developed to any extent were the single-comb blacks, then the single-comb whites, and, following these, the rose-comb blacks and the rose-comb whites. Recently the cuckoo, or barred, and the blue varieties have been developed.

BLACK MINORCA

SINGLE-COMB BLACK MINORCA

88. Origin.—The modern type of **Single-Comb Black Minorca** originated from the best fowls of their kind that could be selected from the importations from their home country. The credit for their origin belongs to the fanciers of America and England.

89. Development.—The Single-Comb Black Minorcas have been developed along different lines in America and in England. In England they have been developed into larger

fowls than are preferred in America. The fanciers of England encourage larger combs than the fanciers of America. Of necessity, the methods of feeding for heavy body formation materially increases the size of the combs and wattles.

90. History.—More than a century ago large, black-plumaged fowls having ear lobes partly white were brought from the island of Minorca, in the Mediterranean Sea off the coast of Spain, into England, and were bred for egg production and for market poultry. Shortly after their introduction into England, English travelers visiting the island of Minorca, selected fowls of a type that suited them, and took them to England. These fowls were known as Minorcas, as Spanish, and as Red-Faced Black Spanish, proving that there were fowls of about the same type, though some had red and some had white faces. John R. Wood, secretary of the Minorca Club of England, has stated that he could trace the existence of Minorcas as far back as 1870. The most reasonable information obtainable warrants the statement that the early Spanish, the Minorcas, and the Leghorns were more or less intermingled.

When the Minorcas became exhibition fowls, efforts were made to develop them into fowls of larger size than those of any other Mediterranean breed. Crosses were made with the Black Spanish and the Black Langshans. The claim has been made that the Langshans used had black eyes and shanks without feathering. Following these crosses, a system of selection and of feeding for size and better form was followed, until the present type of Minorca fowl was produced. It has been claimed that fowls known as Minorcas were brought into the state of New York about 1870, but they did not exist in any numbers in America until about 1890. Since that time, rapid improvement and marked changes have been made in them both in England and in America. The English fanciers have adopted a more bulky type than the American fanciers. The fact that they bear confinement well and lay well under such conditions has made them popular in England. Their beauty for exhibition and their utility as producers of large eggs has made them popular in America.

91. Description.—The shape of the Single-Comb Black Minorcas as bred in America is shown in the color illustration of them. The accepted type as bred in England and acknowledged by the Minorca Club of that country, is shown, by permission, in Fig. 2. The head of the Minorca should be of good length and of fairly good breadth, in order to support the large comb. The comb is single; its width should be such as to conform to its length, height, and thickness; it should have enough

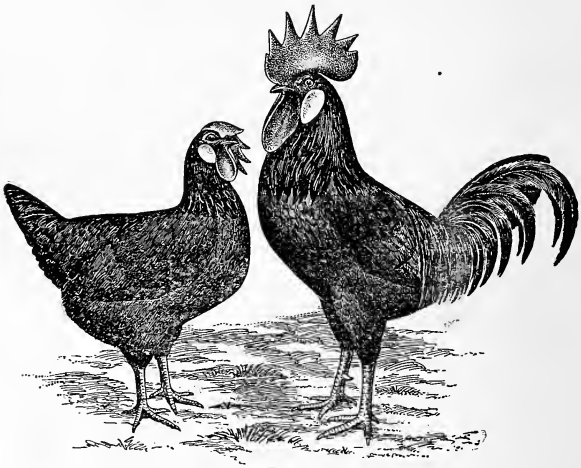


FIG. 2

strength to stand erect and yet be of fine texture, smooth, and evenly serrated. Six points are best suited to the Minorca comb, although some of fairly good appearance have five, and some have seven points. The ear lobes should be rather large and of proportions suited to the size of the head and its attachments.

Large combs, wattles, and ear lobes are best suited to the largest males, and the same is true, proportionately, of the females. The neck should be long in comparison with the body, well arched, and profusely covered with hackle feathers

that grow well down over the shoulders; they are naturally longer in the male than in the female. The comb of the female should hang over to one side. There should be a double fold at or near the end of the comb of the female; and, although the comb is large, it should not entirely obstruct the eyesight. The eyes of the Black Minorcas should be dark or nearly black; dark brown is permissible, but red or light-colored eyes should almost disqualify a Black Minorca for exhibition, though such is not the ruling of the Standard. Light-colored eyes indicate that alien crosses have been made in a strain to improve size or color. The body formation, including the back, should be long, deep, and well rounded, with a full breast, long breastbone, and good abdominal development.

The main tail feathers, in both males and females, should be of reasonably good length and be moderately spread; sickles and coverts of the male should be of fairly good length. The tail carriage should be about as shown in the color illustration of the Black Minorcas. The thighs and shanks should be of medium length, as compared with the great length of leg sought in the modern type of Langshans; to conform with body formation, they should be proportionately longer than the thighs and shanks of Leghorns. The general carriage of the male should be upright, and the female not so much so. The shanks should be smooth and the scales even. The color of the shanks and feet should be as dark as it is possible to have them; shiny black is preferred; slaty black is objectionable. Slaty black shanks have come to the Black Minorcas from the Black Spanish. The plumage throughout should be a lustrous black, brilliant with sheen. Purple, red, or other foreign color of any kind in the plumage is objectionable. Red in the ear lobes is also objectionable. Formerly, the Minorcas showed more or less white in the face. This came from a crossing with the Black Spanish. After a reduction in the size of the ear lobes had been accomplished, less white was found in the face.

Single-Comb Black Minorca cocks should weigh 9 pounds; cockerels and hens, $7\frac{1}{2}$ pounds; pullets, $6\frac{1}{2}$ pounds. Single-Comb White and Rose-Comb Black Minorcas should weigh 1 pound less than these weights.

92. Mating.—In mating Single-Comb Black Minorcas for the production of exhibition fowls, hens of large size and perfect type should be selected. For producing pullets, hens with combs that hang over nicely to one side, with perfect loops in them, should be selected. For producing cockerels, females having combs that stand erect should be used. By carefully selecting and mating for such results, a line of females with straight combs that are strong at the base and evenly serrated, will be established. Such hens should be mated with males that have perfect combs and that have been bred in line from hens of the same type. Cockerels with combs of delicate formation are best for mating with hens for producing pullets.

Size, Minorca breed characters, and perfect plumage color are the main points to look for when selecting breeders. It is useless to attempt to produce Minorcas of the finest exhibition quality without having hens of large size that conform to the foregoing description and are nearly perfect in all Minorca requirements. In addition to this, strains for breeding both males and females must be established. Dark under plumage and perfect surface plumage, with plenty of sheen, are necessities. In mating for color, red is apt to appear in the plumage of the hackles and the saddle. To relieve this, hens without sheen should be introduced into the matings. Males having very large combs may be dubbed (the combs cut off to within half an inch of the head), when used for breeding purposes.

To get good results from breeding Black Minorcas, the novice must depend on the experience of older breeders and have them select the fowls for the matings. Records should be kept of the offspring from each hen, and from the results obtained it will be possible to tell which hens are best for producing cockerels and which for producing pullets. After a careful study of the results obtained, the breeder can be guided by these results in selecting the males and females for future matings. Few fowls require more careful handling than the Minorcas, and only those willing to pay the most attention to their selection, mating, feeding, and general care will succeed with them. They will not stand crowding, and the males

must have plenty of room to move about on the roost. Obstructions that are apt to bend or break the wing or tail feathers should not be permitted where Minorcas are kept.

ROSE-COMB BLACK MINORCA

93. Origin.—The **Rose-Comb Black Minorca** originated from offspring that came from the single-comb variety and that had combs of irregular shape, more like a rose than like a single comb. These fowls were separated and bred to establish a rose-comb variety. Black Hamburgs were bred into them, and although such crosses showed bad results at first, the outcome has been a Black Minorca of good quality with a rose comb.

94. Development.—The early development of the Rose-Comb Black Minorca was made in America. For some time these fowls were bred only in the state of New York. Later they were distributed and crossed with Black Hamburgs.

95. History.—The Rose-Comb Black Minorcas originated with George H. Northup, of Raceville, New York, who bred them until they were fairly well established, when they were distributed throughout the world. About 1895 some Rose-Comb Black Minorcas were sold and shipped to Germany. Since that time the Rose-Comb Black Minorcas have been popular.

96. Description.—The Rose-Comb Black Minorcas are identical with the Single-Comb Black Minorcas, with the exception of the comb. This should be of fairly good size, formed in front like the comb of a Hamburg, but larger and heavier in proportion; the spike should extend well back and show a tendency to follow the shape of the head and neck. The plumage color in all sections should be the same as in the Single-Comb Black Minorcas.

97. Mating.—The same kind of fowls, with the exception of the comb, should be selected for mating to produce both the Rose-Comb and the Single-Comb Black Minorca. Rose-

Comb Black Minorca males or females that have badly formed combs, that is, combs that are crooked or rough in general formation, should not be selected for producing the finest exhibition specimens. Males and females are bred from the same matings; this simplifies the selection of the breeders and the work of breeding. Only fowls having the proper breed characters, good color, and the best combs should be selected.

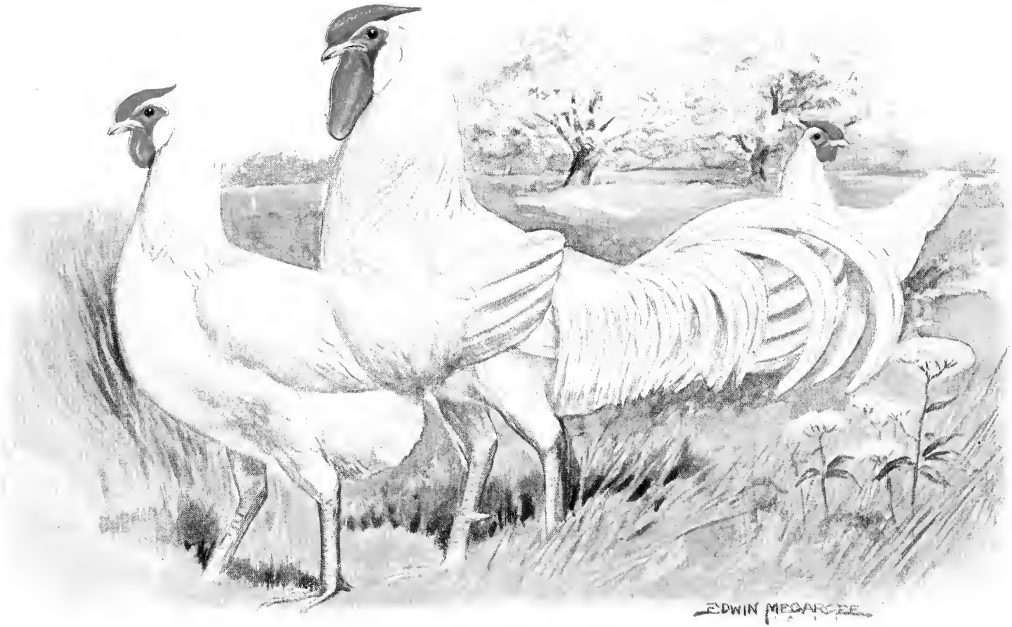
WHITE MINORCA

SINGLE-COMB WHITE MINORCA

98. Origin.—In early poultry writings mention is made of the White Spanish and the **Single-Comb White Minorca.** One of the earliest breeders of Minorcas stated that in 1835 he had some white offspring from his Black Minorcas. But earlier than this the statement was made that all colors of Minorcas were found in their original home. Many years ago they were more plentiful than in 1895. Since that time they have been reestablished as a variety by selecting and carefully breeding the Minorcas that came with white plumage.

99. Development.—The Single-Comb White Minorcas have been developed in both England and America from sports that came from the Single-Comb Black Minorcas.

100. History.—The first Single-Comb White Minorcas that were bred in America originated in the central part of New York. After their appearance they were sparingly bred throughout the United States and Canada, and they are mentioned as having appeared in England at about the same time. The type of White Leghorns and that of White Minorcas bred in England are so nearly alike that they can be distinguished only by the color of their shanks, which are yellow in Leghorns and pinkish white in Minorcas. This variety has never become popular in any locality, but it has been admitted to both the American and English Standards.



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ROSE-COMB WHITE MINORCAS

BLUE MINORCA

108. **Blue Minorca** fowls having the same plumage color as the Andalusian have been produced. It is thought that they have been made by selecting the largest Andalusian males and crossing them with females with slaty-blue plumage, which has come from Black Minorcas. They must have the breed characters of the Minorca family, and plumage color like the Andalusian.

To produce the proper color in the blue Minorca, the same general rules must be applied as are necessary for the production of the Andalusian. Little or no progress has been or can be made in these fowls, because of the fact that they are looked on as large-sized Andalusians. As they have no variety distinctions except color, there will be no certainty of their popularity if admitted to the Standard as a variety of the Minorca family.

SPANISH

ORIGIN, DEVELOPMENT, AND HISTORY

109. Of all the varieties of fowls that have been accredited to the Mediterranean districts, only the **Spanish** fowls were mentioned in the earliest publications. Bonington Moubray mentions them in his earliest writings (1816). He says: "The Spaniard is very large; the plumage is black, the flesh white and delicate, and the new variety equals in size the old Duke of Leeds breed." In 1834, in a revision of his earliest publication, he describes the Spanish fowls as large fowls with black plumage, flesh white and delicate, but inferior in size to the old Duke of Leeds breed. He states that they are well adapted for capons, and that they produce eggs nearly equal in size to those of the Malay hens. He says: "This breed is now common, particularly in London. They are all black, with black legs, and rich, red combs and gills, and far too high on the leg." He illustrates them in colors, showing them with white faces. Rev. Edmund Saul Dixon, M. A., writes of them in his book

on "Ornamental and Domestic Poultry," published in 1850: "The Spanish breed is in all probability of ancient and remote origin, and does not seem to have reached us from the country after which it was named. In North Devon they call the Spanish fowls Minorcas; others call them Portugal fowls, and neither term removes them far from their old established location, if not their original home. * * * The thoroughbred birds of the fancy should be entirely black, and when in high condition, should display a greenish, metallic luster. The combs of both cocks and hens are exceedingly large and of a vivid and most brilliant scarlet; that of the hen droops over on one side. Their most singular feature is a large white patch or ear lobe on the cheek, which, in some specimens, extends over a great part of the face. It is of a fleshy substance similar to the wattles; it is smaller in the hens, but very large and conspicuous in the cocks."

He further states: "Such birds are occasionally produced handsomely streaked with red on the hackle and back. This is no proof of bad breeding. On the contrary, it is as near as may be the sort which Columella's relatives might have kept in Spain at the time when he was improving the native sheep by the importations from Morocco, 1,800 years ago." He also says: "The Blacks were not the only valuable race of Spanish fowls." And he mentions the existence of gray or speckled fowls, the latter being of a slaty gray with white legs. He mentions importations that were made into England in 1846–47, among which were speckled, black, and white fowls, in shape and carriage very much like the Speckled Polish (except that they were much longer in the leg), that had top-knots, a tuft of feathers hanging under the throat, and white legs. The others were pure white, in shape and carriage like the Black Spanish, lacking only the white cheek patch.

Following the statements of Dixon in 1850, there is evidence of the existence of black, speckled, and white fowls with white faces and white ear lobes, and of others having the same colors and white ear lobes, but lacking the white faces. The white fowls had the shape, carriage, and length of leg of the Spanish, and in addition to this, the crest and beard of the

101. Description.—The Single-Comb White Minorca must conform in every way to the breed characters of the Black Minorca. The only exception is that in the White Minorca the beak, shanks, and toes are pinkish white, the eyes are red, and the plumage is pure white.

102. Mating.—To be successful in the breeding of Single-Comb White Minorca fowls, the males and females selected for breeders must have quality equal to the best Single-Comb Black Minorcas. The fowls selected must have pure white plumage, red eyes, ear lobes of large size and perfectly white in color, and shanks and feet of a pinkish-white color. Size, shape, color, and head points must all have careful attention. If the rules for mating the black variety, with the exception of color, are applied to the white variety, offspring of improved quality will be produced.

ROSE-COMB WHITE MINORCA

103. Origin and Development.—The **Rose-Comb White Minorca** is said to have been originally produced by crossing some Rose-Comb White Leghorns with White Minorca females that had combs like the Malay or the Aseel. Such combs might have occurred by atavism, because of the fact that White Malays were used in crossing with the White Leghorns of England to gain greater length in shank in the White Leghorns. Splashed white-and-black offspring are said to have been used, and finally a rose-comb black male was crossed with the best rose-comb white females that could be selected. From these crosses, the best offspring were selected, mated, and remated until Rose-Comb White Minorcas of good quality were produced.

104. History.—The Rose-Comb White Minorca is a variety that has not been recognized by the American or the English Standard. It is a comparatively new variety that has been improved since 1906.

105. Description.—The Rose-Comb White Minorca must conform in a general way to the requirements for the other varieties of Minorcas. They must have combs the same

as described for the Rose-Comb Black Minorcas; the eyes, shanks, and plumage color should be the same as in the Single-Comb White Minorcas. A bluish tinge is sometimes seen in the shanks of specimens that are otherwise of good quality. This tinge in the shanks indicates a cross with the Hamburgs, and is detrimental to breeding qualities.

106. Mating.—The best fowls of the Rose-Comb White Minorca variety should be mated. Only those having white skin, pinkish-white shanks, and pure white plumage should be used. Head points and proper breed characters should receive marked attention. The comb is one of the most attractive features of this variety, and all fowls having irregularly formed combs should be excluded from the breeding pens.

NON-STANDARD VARIETIES OF MINORCA

BARRED MINORCA

107. Barred Minorca fowls have been produced that have plumage color like the Barred Plymouth Rocks. These fowls have but recently come into notice. A request was made to the American Poultry Association at its meeting in 1910 to admit the Barred Minorca to the Standard, but the application was rejected. The fowls of this variety that were sent to St. Louis for examination by the revision committee of the American Poultry Association, were but little, if any, larger than the Dominique Leghorns, and their color was mottled or splashed rather than barred. In England some were shown in 1908, and they were called Cuckoo Minorcas. They have made but little progress in the way of development.

The coloring of the Barred Minorca would be a natural result of the promiscuous intermingling of Black and of White Minorcas. To breed fowls of this variety of satisfactory quality it is necessary to carefully select the breeders for shape and color, year after year, until size, shape, and color have been well established.

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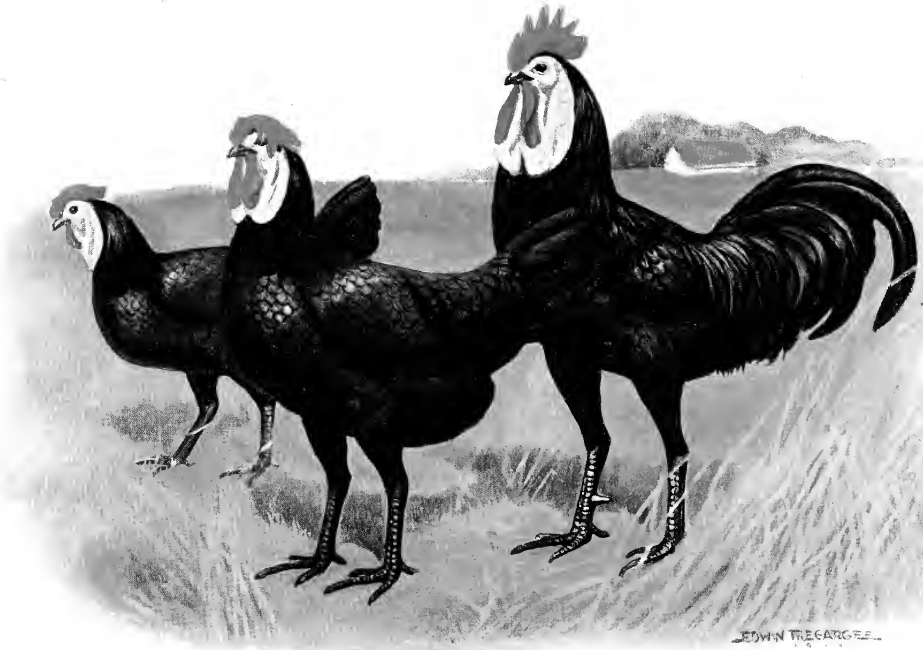

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WHITE-FACED BLACK SPANISH

Polish, with no white cheek patch, indicating that there were all kinds and colors of fowls in the Spanish countries. These are now included in the list of Mediterranean and Polish fowls.

Martin Doyle, in his book, "Domestic Poultry," published in London about 1850, writes many pages about the Spanish fowls, and sums up their origin in the following statement: "The fowls called Spanish are not aboriginals of Spain, but were imported into that country either from some portion of the East through the Mediterranean or, as has been affirmed, from the West Indies, by Spanish merchants and subsequently propagated and naturalized in Spain, and from these into European countries. Those birds differed from the present Spanish in having a smaller and less white face and darker feet and shanks. We find that previous to the introduction of birds for egg production, a diminutive species known by the name of Manx was the common class of fowls reared in Spain. These two breeds were crossed, varieties were thence raised, and the present subvarieties of the Spanish fowls are partly the result. In Holland, before the naturalization there of the Spanish fowls, a domestic bird—in color a dun, or bluish slate—though not much inferior to the other, prevailed. But if we carefully observe the variations in this latter class, it becomes evident that such differences are the results of admixture with the primitive breeds."

In early days, a Black Spanish cock weighed from 7 to 8 pounds, and a hen from 6 to 7 pounds. The cock was from 21 to 22 inches in height and the hens about 19 inches in height. This measurement from the ground to the top of the back is about the same as that of the present type of Langshans.

Harrison Weir states that the Spanish fowl might be the kind alluded to by Columella as having large white ears and more given to laying than to sitting. Perhaps the fowls referred to may have been the ancestors of those mentioned by other writers. Spanish writers speak of the Spanish fowl as a rare breed, the origin of which is difficult to trace. Martin Doyle's reference to them, in which he states that they were brought from the West Indies, might be true, as the Spaniards would naturally carry the fowls of their country into all their

possessions. The Spaniards were great traders. Their wines were freely used in every inhabited land, and naturally their poultry would go with the trading ships.

The variations in the early descriptions of Spanish fowls, different writers stating that they had white faces, white patches on the cheeks, white ear lobes, and red ear lobes, seem to be natural, considering the fact that at that time there was great confusion in distinguishing between varieties of all fowls. These were not, by any means, the only variations mentioned. For instance, it was stated by one writer that the plumage and shanks were black in the Black Spanish and white in the White Spanish fowls; Minorcas were described as having both white and red ear lobes, and also as White-Faced and Red-Faced Minorcas and Spanish.

After reviewing all the information on the subject, it seems safe to conclude that all fowls having white faces or white ear lobes have descended from the early fowls mentioned by Roman writers in the year 35 A. D. as having large white ear lobes.

WHITE-FACED BLACK SPANISH

110. Origin.—The **White-Faced Black Spanish** variety as it now exists had its beginning with some one of the many kinds that came from Spanish countries, and has been made since 1850. Its beginning was in fowls selected for their breed characters and pure white faces, the white extending over the entire face and, as shown in color illustrations of 1850, down half the length of the wattles on the males and below the wattles on the females.

111. Development.—The development of the White-Faced Black Spanish has been gradual. From year to year improvements have been made in the size and distribution of the white in the faces, until so much of this has been developed as to be objectionable to a great many fanciers.

112. History.—Two varieties, the white-faced black and the white-faced white, have been mentioned since the beginning of poultry literature. The white variety has never

become popular. In both the original English Standard and the Halsted Standard, only the black variety was described, but in the Halsted Standard the White Leghorn was described as having a white face, thus emphasizing the confusion that existed as late as 1863 in the individuality and separation of the breed. At one time the White-Faced Black Spanish was the most popular exhibition fowl in England, but of late these fowls are kept as novelties and not for utility. They were originally bred in England for egg production and for market poultry and were highly considered for capons.

113. Description.—The color illustration of the White-Faced Black Spanish shows the breed characters, the white face, and the plumage color of the modern White-Faced Black Spanish. The description of these fowls found in the earliest Standard conforms to their description at the present in both the American and the English Standard. From the first they have been mentioned as large fowls having an upright and attractive carriage. They have always been remarkably long in leg, an indication of relationship to the Malay.

The color of both the males and the females is identical. The combs and the wattles are bright red; the eyes, dark; the shanks and toes, preferably black or nearly black, but frequently of a bluish-gray cast. The plumage is black throughout and brilliant with a greenish sheen. The wattles of the male are frequently white on the under side. The face is opaque white and pendent, on the male hanging down almost on a line with the back, but not so large in the female. In some instances males have white faces more than 6 inches long and 4 inches wide on each side, and the females are proportionate in size. The chief difficulties to be avoided in breeding White-Faced Black Spanish are red in the face and any rough, corrugated growths on the face, which are apt to cover the eyes. The face should be smooth and the eyes unobstructed.

114. Mating.—In mating the White-Faced Black Spanish for exhibition, only fowls having perfect or nearly perfect breed characters, large faces, that are long, pendent, and per-

fectly smooth, should be selected. Perfect combs and black shanks should always be preferred. During the winter months the Black Spanish fowls should be protected from the cold, so that their faces will not be frozen. If this part should be frozen the beauty and value of the fowl will be destroyed. It is not unusual for the combs of Black Spanish used in breeding to be dubbed or cut off to within half an inch of the top of the head. All females used for breeding should have perfect combs that fall over to one side, but not so much as is usual with the Minorca females.

WHITE-FACED WHITE SPANISH

115. As stated, the **White-Faced White Spanish** had a common origin with the Black Spanish. They have never been popular, nor have they been developed to any extent. They are not recognized as a standard variety either in America or in England. The fact that their white faces and white plumage form no contrast has prevented their cultivation. The coming of the White Leghorns and the White Minorcas made their presence unnecessary, and it is very doubtful whether a pair of White-Faced White Spanish fowls could be found that would be of a quality worthy of consideration. It would, however, be possible to renew them by careful breeding and selection for breed characters and white faces.

BANTAM FOWLS

GENERAL REMARKS

1. Origin.—Bonington Moubray, in his earliest writings, states: "Bantams belong to a well-known small breed, originally from India, valued chiefly for their grotesque figures and delicate flesh. * * * There has lately been obtained a variety of bantams extremely small and as smooth legged as a game fowl. From size and delicacy they are very convenient, as they may always be used in the place of chickens when small ones are not to be had. They are also particularly useful for sitting on the eggs of partridges and pheasants, being good nurses as well as good layers."

Rev. Edmund Saul Dixon, of England, states that bantams came from a locality on the island of Java, known as Bantam, and he refers to the yellow, or Nankin, bantams as the most prominent of that time. The term Nankin will be misleading unless it is understood as referring to the buff or nankeen color of the fowl; it has no reference to the city in China known as Nankin, or Nanking. He describes them as yellow fowls with dull-blue legs and feet and small combs, and also says that there are subvarieties in which there is more brown after the fashion of some game hens. The Nankin bantams must have been of the same origin as the Pekin bantams, which came from China, and both must have been related to the Silkies, for all had the bluish tinge in shanks and feet and many had five toes.

The Creeper is another type of bantam mentioned by Dixon. He quotes from a number of writers relative to it, and accredits Aldrovandi with having said: "But the hens which Longolius

calls pigmy exist here and there; they creep along the ground by limping rather than walking; we call them dwarfs." It would seem from this that many centuries ago a fowl existed that closely resembled the Japanese Bantam of the present and was called the Creeper. The earliest report of it is accredited to the 15th century.

2. Distribution and Development.—The first bantam, or pigmy, fowls are said to have come into English possessions in trading vessels known as the King of Bantam's ships. These were of but few varieties. Perhaps the Nankin, or yellow, bantam and the black and white bantams were the first to come.

The dwarf Creeper, now known as the Japanese, and the woolly hen, now called the Silky, came with the earliest importations from Oriental countries. Frizzle bantams from Japan were mentioned early. All of these were crude, and were not separated into distinct breeds or varieties. The Nankin, or yellow, and the black and the white bantams were mentioned by name because these plumage colors were predominant in them.

Bantams as they now exist originated about 1796, when the foundation for the first made breed was laid. Following this, poultry fanciers began to improve bantams and to separate them into varieties, the first of which were the Golden Laced and the Silver Laced Sebright Bantams.

Wm. Flamank Entwisle, of England, originated Asiatic, Malay, Indian Game, and Aseel Bantams, and did much to improve all breeds of bantams, and a tribute of respect from the bantam fraternity of the world is due to him. As his great work is acknowledged here, his name will not be mentioned when the different varieties of bantams are described.

3. Size.—The general rule now accepted for size of bantams is that when fully matured they shall weigh one-fifth as much as the standard fowls of corresponding name. Although this rule for size or weight is given, the smaller they can be bred and retain breed characters and the power of reproduction, the more valuable they will be. The danger that follows

minimum size is the difficulty experienced by pullets in their first laying period. Many of the smallest die in the effort to expel their eggs.

4. Classification.—A general classification that may be made of Bantam fowls is *Booted, Brahma, Cochin, Game, Japanese, Malay, Old-English Game, Polish, Rose-Comb, Sebright,* and *Silky* Bantams, and these are treated in this Section in alphabetical order. It is usual, in official Standards and other publications, to give the Game Bantam first. Other bantams are classified under the heading of Miscellaneous as follows: *Andalusian, Aseel, Frizzle; German, Langshan, Leghorn, Minorca, Nankin, Rumpless, Scotch Gray, Spanish, Sultan,* and *Yokohama.*

BOOTED BANTAM

5. The **Booted,** or **Feather-Legged, Bantam** was one of the earliest varieties. It was known as far back as the time of Albin, who stated in his writings that feather-legged bantams were becoming unpopular. The originals of this breed were crude in formation and sparingly feathered on the shanks and toes; some were tall and leggy in appearance, and others were very short and of a formation more like the Japanese than the Booted Bantam of the present. They were bred with muffs, with vulture hocks, and with both white and yellow shanks. The modern Booted Bantam was made by selecting the best offspring and mating them for form and plumage color.

6. Development.—For a long time Booted Bantams were bred without reference to form or color. Black, white, speckled black and white, speckled red, white whiskered, and Dutch bearded Booted Bantams were bred more or less to selection for feather, without effort to separate them into varieties. Later, all kinds were discarded except the white booted, with white shanks and beaks, and the black booted, with black shanks and beaks. Some of the white booted were bearded and some were not. When a standard was made for the Booted Ban-

tams, both white and yellow shanks were permitted, although white was preferred. Since 1883, a number of varieties have been bred, but only the White Booted Bantam is described in the American Standard. Both Black Booted and White Booted Bantams are described in the English Standard, and beards, or whiskers, as called in the English Standard, are permissible, the preference being for no beard.

7. Description.—Booted Bantams are bred in two distinct types; one having low carriage and short shanks somewhat like the Japanese type of fowls, but larger; the other having the upright carriage described in the American Standard. The peculiarities of the Booted Bantams are their compact body formation, with neck longer than the Cochin Bantam, tail rather full, carried upright, with sickles only an inch or two longer than the main tail feathers. The thighs are short and heavily feathered at the hock, the feathering frequently extending to the ground; the shanks are of medium length, very heavily feathered on the outside, with long, stiff feathers; the outer and middle toes have a growth of stiff feathers, which are unlike those on a Cochin Bantam, are fewer in number, and are long and very strong in quill. The feathering of the Booted Bantams is profuse, but not loose as in the Cochin Bantams. In some of the best specimens the shank and toe feathering, if spread on the palm of the hand, will almost cover it. In many specimens, however, the feathering is scant.

The plumage of the White Booted Bantam is pure white to the skin; the shanks, feet, and skin are also white. In the Black Booted Bantam the plumage is a rich glistening black; the shanks and feet also are black. In both varieties, the eyes, combs, face, wattles, and ear lobes are red. The comb is single, of good form, rather small, upright, and evenly serrated.

The cocks weigh from 26 to 30 ounces; the cockerels and hens, from 22 to 24 ounces; the pullets, from 20 to 22 ounces. Disqualifying weights are 28 ounces for cocks, 24 ounces for cockerels and hens, and 22 ounces for pullets. The modern type of Booted Bantam is shown in the color illustration.

8. Mating.—The best Booted Bantams that can be selected should be mated continuously, marked attention being given to the length of the booting; fowls with long, stiff leg and toe feathering should always be selected. The soft feathering suitable to the Cochin Bantam is not permissible on the Booted Bantam. In the White Booted Bantam, the plumage should be chalk white; the quills, white to the skin; the skin, beak, shanks, and toes, white. In the Black Booted Bantam, the plumage should be equal to that of the Langshan in brilliancy; the shanks and toes should be black; the beak, dark or horn color; the eyes, deep red; the breed formation as previously described.

BRAHMA BANTAM

ORIGIN AND CHARACTERS

9. The Brahma Bantam was made in England by intermingling Brahma, gray Aseel, and Cochin Bantams, and finally some dark-tailed Japanese Bantams. Offspring from these crosses were selected and mated, and this process was continued for many years until bantams were produced of Cochin form and of Light and Dark Brahma plumage colors. Some of these were brought to America and mated with both Light and Dark Brahma fowls, and after a series of years of mating and remating, the American type of Brahma Bantam was established.

There are two varieties of Brahma Bantam, the *Light Brahma* and the *Dark Brahma*, both of which conform to the general breed characters of the Brahma fowls. In America, the Brahma Bantam conforms in a general way to the large Brahma, and the same is true in England; but, in England, both the large Brahma and the Brahma Bantam is, in type, more like the Cochin than the American Brahma. They are more profusely feathered on hocks, shanks, and feet than those of America, and vulture hocks are not a disqualification. Those that have been brought from England to America are in type quite like the American Cochin Bantam.

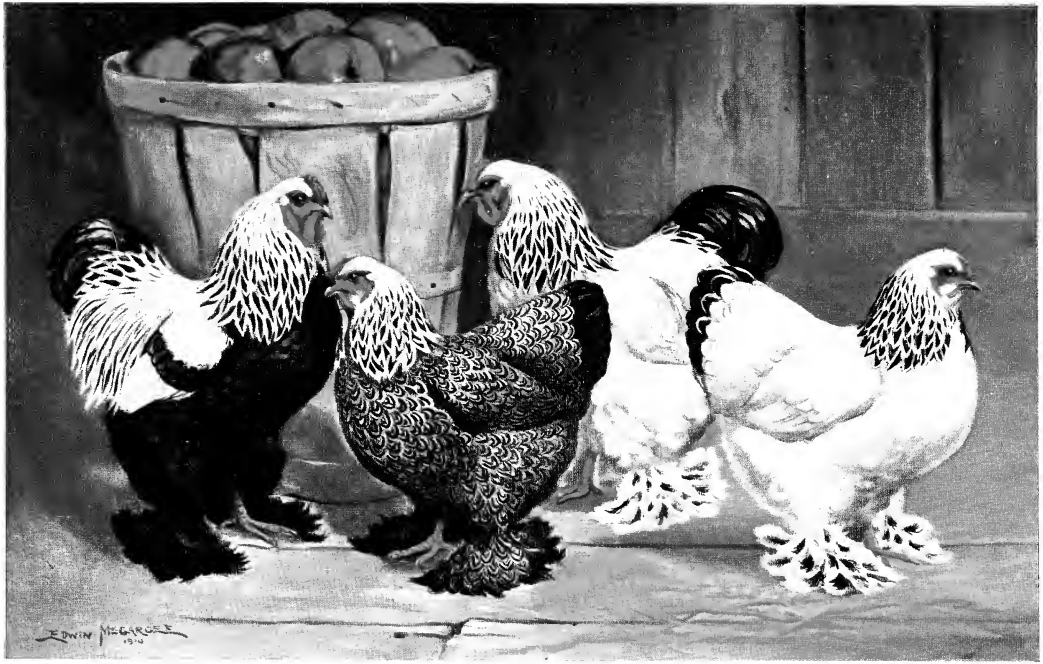
DARK BRAHMA BANTAM

10. Origin.—The American type of **Dark Brahma Bantam** originated at Weston, New Jersey, from a Dark Brahma female mated with a Dark Brahma Bantam cockerel from England. Two cockerels of beautiful plumage color and average American Brahma type were produced the first year from the hen. The two cockerels were mated with about twenty hens and pullets of the English type of Dark Brahma Bantam. The hen was mated the second season with an English male; some chicks were hatched from these matings early in February, and more in March; the best of all the offspring from both matings were selected in the fall, remated in a large enclosure, and chicks were hatched from them in September and October; twenty-seven of these survived the winter, and from them was established the McGrew strain of Dark Brahma Bantam, which has been distributed throughout the United States and England.

11. Development.—The Dark Brahma Bantam was developed by intermingling the English strain of the Dark Brahma Bantam with the American Dark Brahma, and from the offspring selections were made for the purpose of improving type and color.

12. History.—The Dark Brahma Bantams were first bred in England, where they have been greatly improved in color and markings, but the shape preferred there is too much like that of the Cochin to be popular in America. Importations were made from England, and from them the American type of Dark Brahma Bantam was developed as described. Since that time, they have been distributed throughout the United States and Canada, and from them bantams having proper Brahma form and beautiful Dark Brahma color and markings have been bred.

13. Description.—The Dark Brahma Bantams should conform in shape, color, and markings to the description of the Dark Brahmas. They should have the carriage of the



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Dark and Light Brahma Bantams

Brahmas, and not the low carriage of the Cochins; they should have soft, close-fitting hock plumage, and a plentiful supply of shank and toe feathering. The females should be of the same beautiful gray color described for the Dark Brahmas; the penciling of the feathers, as shown in Fig. 1, should be found in every portion of the plumage, including that of the shanks and toes.

Fig. 1

14. Mating.—The rules given for mating Dark Brahma fowls for producing exhibition males and females should be applied to the mating of Dark Brahma Bantams. Breed characters must have marked consideration in selecting the Bantams of this variety for breeding purposes. The strong tendency toward Cochin formation and stiff hock plumage must be bred out of them by selecting fowls perfect, or nearly perfect, in these respects. No tendency toward other than Brahma formation should be encouraged in the mating.

LIGHT BRAHMA BANTAM

15. Origin.—Perhaps the best strain of **Light Brahma Bantam** in America was made by intermingling the English type of Light Brahma Bantams with a small male and female selected from one of the oldest strains of the Light Brahma bred in Massachusetts. The result of the first year's mating was one cockerel of fine form and color, and two pullets of small size and beautiful markings. The pullets were mated to a male from England, and the cockerel was mated to two English hens and five English pullets. More than one hundred chicks were raised in one year from the later mating, and a few were raised from the two half-bred pullets. The best offspring from both matings were selected and mated in the fall of the same year; and in October, more than forty chicks were hatched from them, fourteen of which survived the win-

ter. From these, a strain of Light Brahma Bantams was established.

16. Development.—The Light Brahma Bantam has been developed by the bantam fanciers of England and America for the improvement of type and plumage color as preferred in the two countries.

17. History.—The Light Brahma Bantam was originated in England and in America as described. For a number of years but few of them were seen in America. Following 1895, they were sparingly distributed throughout the eastern part of the United States and in Canada. After the formation of the National Bantam Association of America, renewed interest was displayed in them. A standard was made to meet the requirements of the American type of Light Brahma Bantam, and for several years a number of them were bred, but since 1905 less interest has been shown in this variety.

18. Description.—The Light Brahma Bantam should conform in every way, size excepted, to the type of Light Brahma, as described in the American Standard. The chief defects found in bantams of this variety are Cochin breed characters, vulture hocks, and improper back and tail carriage. The early influence of Japanese bantams shows frequently in straight sickle feathers that are pointed at the end. Drooping wings and extended, stiff hock feathering are not proper characters of Brahma Bantams. They should have Brahma back and tail formation; the feathers should be profuse, soft, and round about the hocks, with no stiff plumage. The shanks and toes may be profusely feathered, but for beauty and Brahma finish, the shank and toe feathering should conform in color and markings to that of the larger Brahma. Their carriage should be upright and stately like the Brahma, not stooped like the Cochin.

The weight of cocks must not exceed 33 ounces; of cockerels and hens, 29 ounces; and of pullets, 27 ounces. One ounce heavier than these weights disqualifies them for exhibition; 3 ounces less than these weights is proper for them.

8. Mating.—The best Booted Bantams that can be selected should be mated continuously, marked attention being given to the length of the booting; fowls with long, stiff leg and toe feathering should always be selected. The soft feathering suitable to the Cochin Bantam is not permissible on the Booted Bantam. In the White Booted Bantam, the plumage should be chalk white; the quills, white to the skin; the skin, beak, shanks, and toes, white. In the Black Booted Bantam, the plumage should be equal to that of the Langshan in brilliancy; the shanks and toes should be black; the beak, dark or horn color; the eyes, deep red; the breed formation as previously described.

BRAHMA BANTAM

ORIGIN AND CHARACTERS

9. The Brahma Bantam was made in England by intermingling Brahma, gray Aseel, and Cochin Bantams, and finally some dark-tailed Japanese Bantams. Offspring from these crosses were selected and mated, and this process was continued for many years until bantams were produced of Cochin form and of Light and Dark Brahma plumage colors. Some of these were brought to America and mated with both Light and Dark Brahma fowls, and after a series of years of mating and remating, the American type of Brahma Bantam was established.

There are two varieties of Brahma Bantam, the *Light Brahma* and the *Dark Brahma*, both of which conform to the general breed characters of the Brahma fowls. In America, the Brahma Bantam conforms in a general way to the large Brahma, and the same is true in England; but, in England, both the large Brahma and the Brahma Bantam is, in type, more like the Cochin than the American Brahma. They are more profusely feathered on hocks, shanks, and feet than those of America, and vulture hocks are not a disqualification. Those that have been brought from England to America are in type quite like the American Cochin Bantam.

DARK BRAHMA BANTAM

10. Origin.—The American type of **Dark Brahma Bantam** originated at Weston, New Jersey, from a Dark Brahma female mated with a Dark Brahma Bantam cockerel from England. Two cockerels of beautiful plumage color and average American Brahma type were produced the first year from the hen. The two cockerels were mated with about twenty hens and pullets of the English type of Dark Brahma Bantam. The hen was mated the second season with an English male; some chicks were hatched from these matings early in February, and more in March; the best of all the offspring from both matings were selected in the fall, remated in a large enclosure, and chicks were hatched from them in September and October; twenty-seven of these survived the winter, and from them was established the McGrew strain of Dark Brahma Bantam, which has been distributed throughout the United States and England.

11. Development.—The Dark Brahma Bantam was developed by intermingling the English strain of the Dark Brahma Bantam with the American Dark Brahma, and from the offspring selections were made for the purpose of improving type and color.

12. History.—The Dark Brahma Bantams were first bred in England, where they have been greatly improved in color and markings, but the shape preferred there is too much like that of the Cochin to be popular in America. Importations were made from England, and from them the American type of Dark Brahma Bantam was developed as described. Since that time, they have been distributed throughout the United States and Canada, and from them bantams having proper Brahma form and beautiful Dark Brahma color and markings have been bred.

13. Description.—The Dark Brahma Bantams should conform in shape, color, and markings to the description of the Dark Brahmas. They should have the carriage of the

19. Mating.—For producing exhibition offspring, Light Brahma Bantams having form and color as described for the large Brahmas must be selected. If improper form and carriage prevail in the breeding stock, the same will be increased in the offspring. It is very difficult to breed Light Brahma Bantams of the accepted shape and color. But few of the best quality will come from well-selected matings, and only poor results can be expected from bantams of this variety that do not possess the proper breed characters, shape, and plumage color. The color and markings will be controlled in this variety the same as described for the large Brahmas.

COCHIN BANTAM

ORIGIN

20. The **Cochin Bantam** has become one of the most popular of all varieties of bantams, and it has been distributed into every section of the globe. Nankin bantams that had yellow plumage, blue shanks, and were sparingly feathered on shanks and toes are mentioned among the earliest of the small breeds of fowls. A Chinese legend said to have been written more than 1,000 years ago mentions a bridal present of a pair of diminutive fowls of a golden color, somewhat larger than doves, placed in an oval cage that was decorated with flowers of a golden hue. This may be accepted as evidence of the existence at that time of small yellow-plumaged fowls. The first Cochin Bantams came from China, and were of a dark cinnamon color. They were called Pekin Bantams and they frequently had greenish shanks and five toes. The same is true of the Nankin and Silky Bantams; the latter had blue shanks and five toes, and the former had greenish shanks and frequently five toes, which indicates that all may have had the same origin.

The first Pekin Bantams came from China into England about 1860, but they were not brought to America until 10 or 12 years later. For many years only the buff variety was

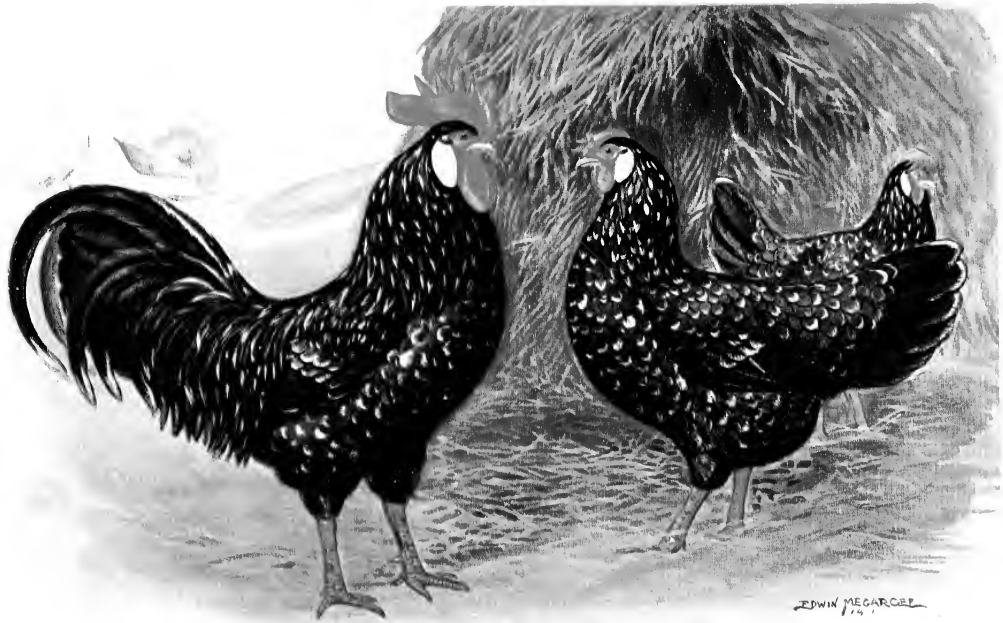
known; but later, other varieties were brought from China, and some varieties were made both in England and in America. There formerly existed a marked difference of opinion as to the shape, color, and feathering of the Cochin Bantams, the bantam breeders of England selecting one type and those of America another. When it was proved that as perfect shape and color could be bred in the Cochin Bantam as in the larger Cochin, Standard descriptions were changed, or rather their application was altered, and only Cochin Bantams having true Cochin form and plumage color were recognized.

The first Cochin Bantams that came from China were of the buff variety. For many years it was thought that this was the only kind known in China, but later black Cochin Bantams were brought to England. Mr. Entwisle states, relative to the buff variety: "Many years elapsed before Cochin Bantams of other color than buff were heard of, and by that time the buffs had almost died out and were in the hands of only one breeder. The new ones were black, badly marked with white or straw color in hackle and red in wings." It has been claimed that no new blood in Cochin Bantams was brought from China, and that all that were bred for 20 years came from the original pair of buffs. A cross with Nankin Bantams was made to invigorate them, and it is claimed that from this cross greenish color was bred into the shanks, and that five toes resulted in the same way; others claim that later importations from China had the same defects.

BLACK COCHIN BANTAM

21. Origin.—The **Black Cochin Bantam** was bred from fairly good-colored bantams that were brought from China.

22. Development.—The first Black Cochin Bantams that were brought into England from China had white on the surface and in the under plumage of the hackle; gray or white under plumage in the back; and in some the shanks and feet were yellow and in others dusky yellow. They have been developed by years of careful breeding into a variety having beautiful Cochin form and almost perfect plumage color.


EDWIN MEGARGEE

COCHIN BANTAMS

23. History.—The Black Cochin Bantam did not become popular until it had been improved in form and color. This was begun by the breeders of England, who bred the fowls to Cochin form with good surface color, but defective in color of under plumage. The American fanciers were the first to produce them with plumage that was black to the skin. With this came black or very dark shanks, and toes that are objectionable, as the American Standard requires the shanks and toes to be black, gradually shading into yellow, with the bottom of the feet yellow. Years of labor were given to further perfecting form and plumage color and a proper color of shanks and feet.

24. Description.—The Black Cochin Bantam should be of perfect Cochin form and profuse in feather; the plumage should be a rich glossy black throughout, with no foreign color; the shanks and toes, black, shading into yellow; the bottom of the feet, yellow; the beak, the same color as the shanks; the eyes, dark brown.

25. Mating.—The best Black Cochin Bantams that can be selected must be used for breeding. The form must be perfect and the plumage, including the quill and under plumage, must be black. The surface plumage should glisten with a brilliant finish that rivals the sheen of the Langshan. To prevent red appearing in the surface plumage, females with no sheen in the surface plumage should be used. The defects to be avoided are described in discussing the Buff Cochin Bantam. A great deal of attention should be given to the proper color of the shanks and toes; they should be shaded with yellow, and the soles of the feet should be yellow.

BUFF COCHIN BANTAM

26. Origin and Development.—The **Buff Cochin Bantam** was developed from buff-colored bantams that were taken from China to England. They were small, lacking in breed characters, narrow in tail formation, and deficient in plumage color. It has been claimed that but a single pair was

taken from Pekin to London; but a counter claim is made that more than these were taken to England and that some were taken to America also. The peculiarity of form and color of the early fowls led to a belief that there were many varieties of them in their original home. This theory has been substantiated by persons who saw numerous varieties in China prior to 1870. An early writer stated that, when in China, he saw as many colors of Cochins and Cochin Bantams as would be seen in mongrel flocks in America. Buff, however, seemed to be the predominating color.

27. The origin of Buff Cochin Bantams has been given previously, and it is necessary here only to tell of the origin of the present type. It was begun in England and finished in America. One of the most prominent bantam breeders of England said, after having received a shipment of Buff Cochin Bantams from America, that they were the first bantams of a uniform, even shade of buff throughout, with buff under plumage, that had ever been seen in England. Bantam breeders of England made them of fairly good Cochin type, and the bantam breeders of America greatly improved Cochin type and made the color of the surface and under plumage perfect.

28. History.—Cochin Bantams became so popular in the United States as to place them in advance of other breeds of bantams. More Buff Cochin Bantams were bred and shown in the 10 years following 1895 than any other variety of bantam. The first Buff Cochin Bantam males having an even shade of buff to match the color of the female were produced by crossing a Buff Cochin Bantam male with White Cochin Bantam females, and from the offspring of this cross a strain was established that produced males and females of one shade of color, which has now been made golden buff, the same as in all buff-colored fowls.

29. Description.—Buff Cochin Bantams should have the body formation and profuse feathering that are most desirable in Cochin fowls. This should be pronounced in all varieties, but especially so in the buff variety. The perfect rotundity of

form that is so much admired in the large Buff Cochin fowls should be carried out in every section of the Buff Cochin Bantams. The plumage of this variety should be golden buff throughout, as even as possible; the top color of males and the hackle of females should be glossed with a rich finish that gives these sections a darker appearance than the breast and body plumage; the under plumage should be buff, a shade or two lighter than the surface color. No white, black, or foreign color of any kind should appear in the surface or the under plumage. Profuse under fluff such as is shown in the feather in Fig. 2 is necessary to build out the plumage formation. There should be double the quantity of feather in the under fluff as in the web, and the color of the web should be so dense as to hide the lighter shade of color in the under plumage, thus avoiding a mealy appearance in the surface color. The shanks and the outer and middle toes should be covered with feathers; the quills of these feathers should be stronger in the males than in the females, but strong enough in both to make the kind of toe feathering shown in the color illustrations. Scant shank and toe feathering is a glaring defect, and a bare middle toe is a disqualification.

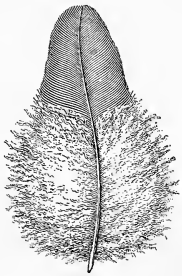


FIG. 2

The standard weights for all varieties of Cochin Bantams are the same: 30 ounces for cocks; 26 ounces for cockerels and hens, and 24 ounces for pullets. Four ounces heavier than these weights will disqualify.

30. Mating.—In selecting Buff Cochin Bantams, and in fact all varieties of Cochin Bantams, for mating, special attention must be given to the beauty of head formation and comb, as well as to perfectly shaped Cochin back. No division or split in the body and fluff formation is permissible. Where the lower part of the tail and body formation joins with the fluff feathering about the vent and thighs, and where the wing folds in between them, there is liable to be an open space or break

in the plumage. This is one of the most objectionable features in Cochin Bantams, and should be guarded against. The body, as viewed from the rear, should be as perfect in form and feather as when viewed from the front or the side. Each section of a Cochin Bantam must blend into the others; and to preserve such formation, it must be perfect in the breeding stock. To produce Buff Cochin Bantams requires the same process of mating that is described for Buff Cochin fowls.

PARTRIDGE COCHIN BANTAM

31. Cochin Bantams of many colors came from China. The first partridge-colored or brown-red fowls that came from there were unfinished in color and markings. The plumage of the males was like that of the original brown-red game fowls; the females were like poorly colored Brown Leghorn females. It has been claimed, but not proved, that such colors existed in Cochin Bantams in China. Males have been bred from early black Cochin Bantams, which had more or less red in the top color, and females mixed with brown and black came from the same matings. Whether or not there was originally partridge-colored plumage among them matters not, for the **Partridge Cochin Bantam,** as it now exists, was made in England and America.

32. Origin.—The Partridge Cochin Bantam was made in England by crossing black and buff Cochin Bantams, from which offspring of fairly good brown-red color resulted. These were selected and crossed with Partridge Cochin fowls, producing offspring of bantam size. In America, they were made by crossing English-bred Partridge Cochin Bantams with the Mitchell strain of Partridge Cochins, the offspring being of bantam size.

33. Development.—The Partridge Cochin Bantam has been developed in America to meet the color requirements of the American Standard. In England, it has been developed to meet the color demands of the Standard there, which describes a lighter shade of red in the males and in the body color of

females, with less striping on the males and a lighter shade of penciling in the females. The males that came from England had color and markings like the black-red game bantams, with striping in the hackle and saddle. The females had a gray-mahogany shade of body color, penciled with brown.

34. History.—Partridge Cochin Bantams were bred in England for a number of years before they were brought to America. Three of them were imported from England in 1897 and taken to Elmwood Farm, Weston, New Jersey, where they were cross-bred with Partridge Cochin fowls from the Mitchell strain. This strain has since been distributed among the most successful bantam breeders of America.

35. Description.—The Partridge Cochin Bantam must conform in shape, profuse feathering, color, and markings to the large Partridge Cochin. The Partridge Cochin Bantam has a more profuse feathering than any of the other Cochin Bantams. This has resulted from the crosses made with the Cochin fowls. Males of beautiful color and markings have been produced, as well as some females that equal their large ancestor in plumage color, but many of the latter show a grayish-brown tinge.

36. Mating.—The Partridge Cochin Bantams are usually mated for the production of males and females from a single pair. For this kind of mating, the best that can be selected for shape and color are mated to produce bantams of good form in both sexes, with fairly good color and markings. To be most successful with them, the same line of matings described for Partridge Cochin fowls must be followed.

WHITE COCHIN BANTAM

37. Origin.—Originally, some of the Buff Cochin Bantam females were so light in color as to be called cream colored. From them the start for the **White Cochin Bantam** was made. In America, some of the cream-colored buff variety were selected by A. P. Grove, of Philadelphia, who was

very successful with them. His efforts resulted in some that were white. Later, some very good white bantams were imported from England, and these, bred with the American product, produced White Cochin Bantams, which were bred with some beautiful White Cochin pullets weighing about 4 pounds. The same method of cross-mating was followed in England, and thus in both countries the White Cochin Bantam has been made.

38. Development.—After years of careful handling, the White Cochin Bantam was developed from the crude originals mentioned in connection with their origin. It has been developed into a Cochin Bantam that rivals other varieties in Cochin form and perfect plumage.

39. History.—The history of the White Cochin Bantam parallels that of the other varieties. Bantams of this variety were originated, developed, improved, and bred into Cochin type before their plumage color was perfected. Finally, they were crossed with Booted White Bantams to obtain pure white plumage. White shanks and toes resulted from this cross. White shanks were made a disqualification for them, and following this action, a return was quickly made to yellow shanks and beak, and they are now bred with beautiful form and proper color to conform to the standard for White Cochin fowls.

40. Description.—White Cochin Bantams must conform in shape and color to large White Cochin fowls. They must have perfect Cochin type, profuse feathering, plenty of fluff and cushion, yellow shanks and feet, beautiful heads, comb, wattles, and ear lobes, and bright-red and brilliant eyes. Beautifully formed head, comb, wattles, and ear lobes are necessities.

41. Mating.—In selecting White Cochin Bantams for breeding exhibition offspring, only those having perfect or nearly perfect Cochin form, with a profusion of feathers, chalk-white plumage, including the quill down to the skin, bright-red eyes, yellow beak, shanks, and toes, should be used. From no

other kind will anything like perfection be bred. White Cochin Bantams must be more nearly perfect in form and color than bantams of other varieties or they will not attract equal attention.

CUCKOO COCHIN BANTAM

42. Origin.—The **Cuckoo Cochin Bantam** made its appearance in many localities where both Black Cochin and White Cochin Bantams were bred. By intermingling these two varieties, the black-and-white Mottled and the Cuckoo varieties have been obtained.

43. Development.—The Cuckoo Cochin Bantam has been developed from offspring that were indifferently marked or colored like the Dominique fowls.

44. History.—One strain of Cuckoo Cochin Bantam was developed in America from some fairly well-marked offspring that came from cross-breeding a Cochin Bantam male that was half buff and half black with both Black Cochin and White Cochin Bantam females. Some of the offspring so produced resembled in color the Barred Plymouth Rocks. The best male and the best female from them were cross-bred with a pair of Cuckoo Cochin Bantams imported from England; the offspring were selected and remated, and, as the result of several years of breeding, Cuckoo Cochin Bantams were produced. They have never been recognized as a standard variety in America, but are so considered in England.

45. Description.—The Cuckoo Cochin Bantam should have Cochin Bantam shape and plumage color and markings like standard-bred Barred Plymouth Rocks. In all other respects it should resemble the Cochin Bantam.

46. Mating.—The best Cuckoo Cochin Bantams that can be selected must be mated for the production of offspring with Cochin Bantam form and Barred Plymouth Rock color. In general form, the Cuckoo Cochin Bantams are usually well proportioned and have good Cochin Bantam type. This they

have inherited from the other varieties, but the great difficulty with them is the production of good plumage color, which can be obtained only by following the rules for mating Barred Plymouth Rock fowls.

DEFECTS IN COCHIN BANTAMS

47. The principal defects that are likely to be found in Cochin Bantams are:

1. Long backs in the females. This is caused by a lack of profuse down, or under fluff, in the feathers. In Fig. 2 is shown a feather that is two-thirds down, or under fluff. Cochin Bantams that have feathers of this kind will have a large, round cushion, and this will give them the short back that is so desirable in fowls of this variety. The proper markings for the feathers of a Partridge Cochin Bantam are shown in the feather in Fig. 1.

2. Narrowness between the thighs. This gives the fowl a pinched appearance when viewed from the rear, and also causes the fowl to have a flat, narrow breast instead of a full, rounded one. This defect destroys the beauty of a Cochin Bantam.

3. The combination of too great length of shanks, erect carriage, and a long head. This gives a Cochin Bantam a crow-like appearance, which is a glaring defect.

4. A too great length of tail in either males or females. This should be corrected by selecting breeding fowls that are so profusely feathered with down and soft plumage as to soften the quills of the main tail feathers and form the round, curving tail formation in the males and the short growth of main tail feathers in the females, surrounded by fluff and cushion.

5. Badly colored plumage. This should be avoided in all varieties of Cochin Bantams.

GAME BANTAM

ORIGIN AND CARE

48. Of all the varieties of Bantams, none is more popular or more generally bred than the **Game Bantam.** Game Bantams are selected by the most expert fanciers, who breed them to a type that is more artificial than that of any fowl or bird, unless it is the English carrier pigeon or the crested canary. Although they miniature the modern type of exhibition game fowls, they are more attractive from the fact that they are so small, so delicately built, and so well trained for exhibition as to have the appearance, when in the show pen, of models posing rather than of fowls for exhibition. Game Bantams have, of necessity, been so closely inbred and line bred as to have made them more delicate, or rather more susceptible to weather conditions and changes, than other bantams. They must be comfortably housed during cold weather, and must at all times be protected from dampness. They cannot withstand the bad influence of damp houses or drafty and cold houses. Notwithstanding this, they are bred successfully in the oppressive climate of the tropics and in the coldest climates of the north.

49. Origin.—The original Game Bantams were produced by selecting and inbreeding the smallest game fowls, remating the offspring, hatching the chicks late in the fall, rearing them during the winter months, and then selecting the smallest so produced and mating them. Another method was mating the small game fowls so produced with the white bantams of early days, which were undoubtedly the originals from which the Rose-Comb Bantams were made. Messrs. Tegetmeier and Doyle state that the Game Bantams were made by inbreeding small game fowls and cross-mating them with white bantams.

A color illustration made by Harrison Weir about 1860 shows white and game bantams side by side. The females of both varieties are quite alike in shape, but they differ in plumage color, and the males of both varieties have the same general tail formation. The game bantams illustrated by Mr. Weir were referred to by Mr. Tegetmeier when he stated that a small game cock was crossed with a Bantam hen. From this cross, offspring of small size were obtained, but the game bantam type was lost and was regained only by careful breeding. Mr. Entwisle credits John Crosland, of Wakefield, England, with the earliest production of Game Bantams.

The modern type of Game Bantam of all varieties has been produced in much the same manner as the modern type of exhibition game fowls. Their history has been told in that of the game fowls, and need not be repeated here.

50. Game Bantams have been bred in every variety color known to game fowls. Since descriptive standards for them have been issued by clubs and associations, they have been modeled in accordance with such Standard descriptions, and only varieties mentioned in these Standards have been bred to any extent during recent years. White and Black Game

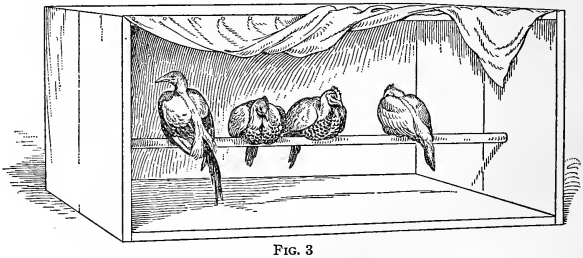


FIG. 3

Bantams are mentioned in the American Standard but not in the English Standard. These two varieties are, however, recognized in the English Standard for Old-English Game Bantams.

According to the English Standard, Game Bantam males are admitted to competition at 22 ounces, females at 20 ounces;

males of the Old-English Game type at from 18 to 22 ounces, females at from 16 to 20 ounces. Game Bantams are admitted to competition by the American Standard at 22 ounces for cocks, 20 ounces for cockerels and hens, and 18 ounces for pullets; 4 ounces in excess of these weights will disqualify them.

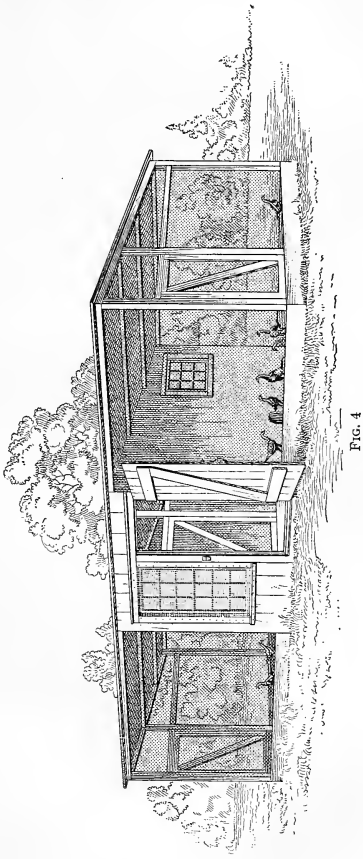


FIG. 4

51. Care.—To protect Game Bantams from cold, they should be kept in well-built houses that have a perfectly dry interior, and if the weather is likely to be very cold they should be provided with hooded roosts. The hooded roost shown in Fig. 3 is suitable for this purpose. This hooded roost is made from a light packing case; it is 18 inches high, 2 feet wide, and may be 3 or 4 feet long. When the temperature of the outside air goes below 10° F. above zero, the cotton or burlap curtain attached to the front of the hooded roost should be dropped over the opening in the front of the box; this will provide ample protection during the coldest weather. There should be suffi-

cient spaces between the meshes of the cloth in the curtain to admit of the passage of fresh air into the box, because if Game Bantams are shut up too tightly they may smother, even in the coldest weather.

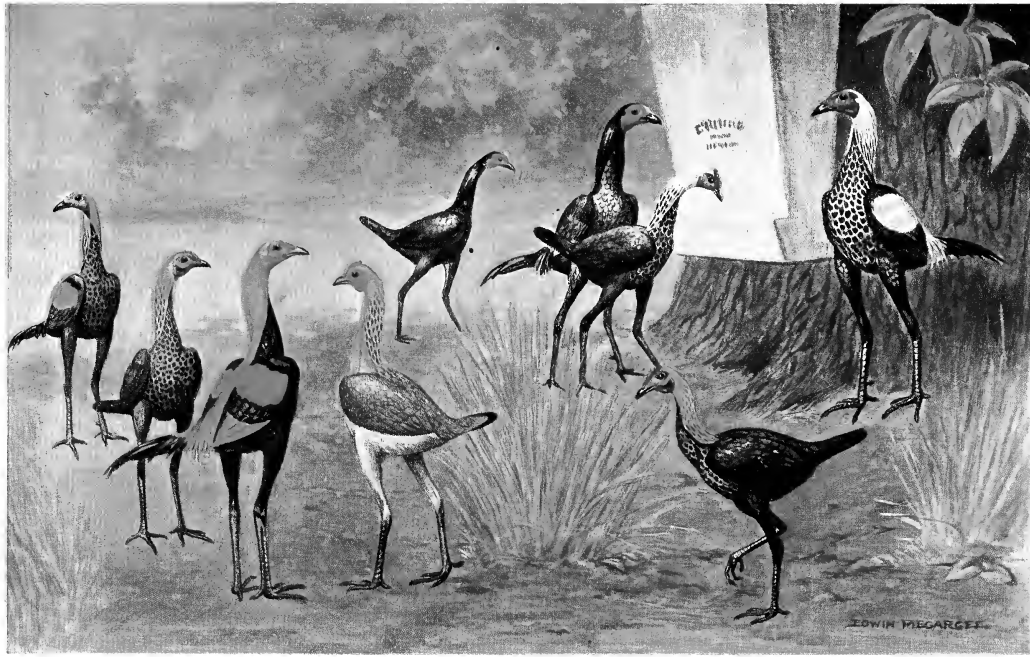
Game Bantams should not be exposed to outside weather conditions during cold, or even cool, weather, or when it rains or snows. Houses for them should be built with a connected shelter or roofed runway covered on the sides with galvanized-wire netting, such as is shown in Fig. 4. The meshes of the wire netting should be small enough so that it will be impossible for a mouse to go through it. Such a netting will protect both the old and the young bantams from enemies of all kinds. During cold or stormy weather, an additional shelter of cotton cloth may be fastened down on the inside of the wire netting. This will protect the bantams from wind, snow, or rain, and yet will admit enough light for them to see to scratch about in the litter inside on the floor.

BIRCHEN GAME BANTAM

52. Origin.—The **Birchen Game Bantam** was made by crossing Brown-Red and Silver Duckwing Game Bantams and by selecting for breeding purposes the offspring showing the nearest approach to the color and markings desired, and continuing to remate them from year to year until they attained a quality fully equal to that of the large fowls of the same variety.

53. Development.—The Birchen Game Bantams have been gradually developed into a variety that will breed almost true to plumage color.

54. History.—The Birchen Game Bantams, like the larger fowls of the same color, have never been so plentifully bred nor have they become so popular as bantams of other varieties. These Bantams are not easily bred and controlled within the color and markings required for them. Although they are frequently exhibited at the larger poultry shows, they are seldom seen at the smaller ones.



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GAME BANTAMS

55. Description.—It must be remembered that all varieties of Game Bantam must have the same breed characters. The proper type and variety colors for them are shown in the color illustrations. The ground color of the Birchen Game Bantam is black; the top color and markings of the male are silvery white; the breast feathers, on both the males and females, are laced with white; this lacing should not extend below the thighs; the hackle of both males and females is the same color, lightly striped with black; the eyes of both sexes are black; the head and its attachments are dark purple or gypsy color; the beak, shanks, and toes are very dark or black; the sickle feathers of the male are very fine and glisten with sheen.

56. Mating.—The methods of mating Birchen Game fowls, told in connection with the discussion of that variety, should be applied to the Birchen Game Bantams. In mating bantams of this variety, special attention must be given to selecting for perfect Game Bantam type, and to have the top color in males a clear, silvery white. Both males and females must have hackles of the same color, as free from striping as possible, and, when striped, they should be lightly marked with a fine black line running down the center almost to the point of the feather. If only the lower feathers of the hackles of the breeders are so marked, the offspring will be more attractive. The body color of the parent stock should be black, the lacing on the breast feathers, a fine or narrow line, the white gradually running out until it disappears at the juncture of the legs and the breast. The lacing is likely to increase in successive generations, and when too much of this occurs, males having little or no white below the shoulders can be used in the matings. It must be understood that the two colors of the Birchen Game Bantam are black and white. Lemon and black belong to the Brown-Red Game Bantam, and the distinction between these two varieties should be nearly as perfect as can be drawn between white and lemon or straw color.

BLACK GAME BANTAM

57. Origin.—The first **Black Game Bantam** fowls of proper form and color that were produced in the United States were made from black or very dark offspring from both Birchen and Brown-Red Game Bantams. They have been made elsewhere in much the same manner.

58. Development.—The development of the Black Game Bantams has come through a careful selection of the best offspring from the originals, mated afterwards for form and color.

59. History.—Black Game Bantams were first shown in America, and there accepted as a Standard variety. They have been much improved since, and some have been shown that were the equal of other varieties.

60. Description.—The Black Game Bantams must have the same type and breed characters as other Game Bantams. The plumage is glossy black throughout; the beak, shanks, and toes are black; the eyes are nearly as dark as those of the Birchen Game Bantam; the face, wattles, and ear lobes are dark red.

61. Mating.—To succeed with the breeding of the Black Game Bantam, unusual care and attention must be given to selecting breeders of proper size and Game Bantam type; rich, glossy plumage having considerable sheen; beaks, shanks, and toes very smooth, and glistening black, if possible. The difficulty in breeding these fowls is to avoid a tendency toward black-red in the plumage. To prevent this, females with grayish-black plumage should be used occasionally in the matings. Males with rich glossy black plumage, dark under plumage, dark eyes, and smooth, glossy black beak, shanks, and toes, may be mated to females less brilliant in plumage, one or more of them having the grayish-black tinge. Males without sheen may be mated to females that have rich glossy black plumage, shanks, and toes.

BLACK-BREASTED RED GAME BANTAM

62. Origin.—The **Black-Breasted Red Game Bantam** was made by breeding down from the larger type of modern exhibition game fowls. This was accomplished by crossing game bantams of the earlier type with very small males selected from the modern type of exhibition game fowls and by then mating the smallest females of both the early and the modern type of Game Bantam with small black-red Malay Bantam males.

63. Development.—The Black-Breasted Red Game Bantam was made by a process of development carried on by expert bantam breeders. They were produced by selecting the best of the variety and mating and remating for type and color without the introduction of blood from any other variety. Black-Red game color cannot be improved through the introduction of any other variety color. Black-Breasted Red Game Bantams are the foundation stock from which all varieties of Game Bantams have been made, and they can be improved only by selection.

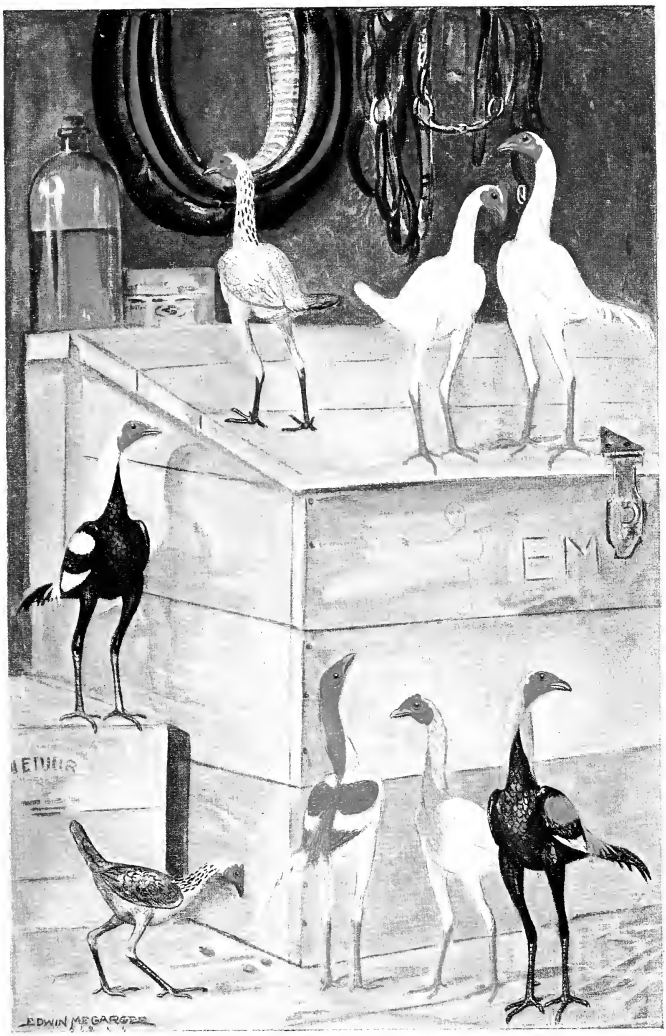
64. History.—The history of the Black-Breasted Red Game Bantam covers a century. It had its beginning in small fowls much like Rose-Comb Bantams in shape, the females colored and marked like the Brown Leghorn and the males colored like the Black-Breasted Red Game. From time to time improvement has been made in them in much the same degree as in the large game fowls. The improvement of the latter is illustrated in *Game Fowls*. The interesting part of the history of the Black-Breasted Red Game Bantam begins about 1890, when they had been developed into miniature fowls having all the breed characters of their large ancestors, and, if possible, more beautiful color and markings. Since that time no other bantam has been so popular as the Black-Breasted Red Game.

65. Description.—The Black-Breasted Red Game Bantam is accepted as the model for type in all varieties. In the

color illustration, which was drawn from life, are shown Black-Breasted Red Game Bantams and Duckwing Game Bantams that have won at the Game Bantam Club shows of America; they illustrate, therefore, Game Bantam type and color as defined by experts. The other varieties have been modeled to conform to them.

66. Mating.—In selecting breeders for the production of Black-Breasted Red Game Bantams for exhibition, special attention should be given to type, which must conform to that of the large exhibition game fowls. This type is the same in all Game Bantams, and is shown in the color illustrations. The special features of importance to be considered when selecting Black-Breasted Red Game Bantam breeding fowls are the position of the legs, which should be well forwards, and the length of leg from the body to the hock joint, which should exceed that of the shank from the hock joint to the ground. Frequently the reverse is true, but the greater beauty comes with more length above the hock joint than below. The wings should be carried as shown in the color illustration. The shoulders should be broad and prominent; the back should slope away and become narrow at its juncture with the tail; the tail should be gathered close together and be no larger than a lead pencil at the end; the sickles, very fine and delicate; the abdomen well cut up so as to have the Game Bantam type or under-body formation, as shown in the color illustration. The tail of the female should be set high and have the appearance of being a part or a continuation of the back. Although these features might be included in the description of this variety, they have been omitted there and mentioned under the heading of mating because they are not part of any Standard description. It is better to state them here than to confuse Standard descriptions with the breeder's art in the selection of fowls for matings.

The special features and general directions mentioned in connection with the mating of Black-Breasted Red Game fowls should be applied to the matings for the production of exhibition offspring of this variety.



Duckwing, Pyle, and White Game Bantams

BROWN-RED GAME BANTAM

67. Origin.—The origin of the **Brown-Red Game Bantam** is identical with that of the larger type of fowls of the same variety. The reduction in size was accomplished in the same way as with other varieties of Game Bantam.

68. History.—The Brown-Red Game Bantam became popular when it was first shown with type, station, carriage, and color equal to the Brown-Red Game fowl. For a few years its popularity continued, but of late it has waned. It is a fancier's fowl and difficult to breed.

69. Description.—The Brown-Red Game Bantam has the same type as other Game Bantams. In color, it should be lemon and black; the top color should be lemon where red exists in the Black-Breasted Red Game Bantam, and black where black exists in that variety. The breast and body color should be black; the throat and breast plumage, laced with lemon; the hackle, lemon of a darker shade in the male than in the female, frequently cream color in the female, the center of the hackle feathers, in both males and females, lightly striped with black. The color description of this variety of bantams to accord with the demands of both the English and the American Standard will be found in the discussion of the Brown-Red Game fowls, and is further portrayed in the color illustration.

70. Mating.—The rules for mating Brown-Red Game fowls should be followed in the mating of Brown-Red Game Bantams. Those selected for the matings must have delicate color and markings.

DUCKWING GAME BANTAM

71. The **Duckwing Game Bantam** conforms so closely to the large Duckwing Game fowls, in respect to origin, development, history, and description, that there is no need to repeat the information here. It should, however, be borne in mind that the Duckwing Game Bantam must have Duckwing Game

characters, bantam size, and, if possible, color and markings more delicate than in the larger fowls.

72. Mating.—Full directions for mating both Golden and Silver Duckwing Game fowls are given in connection with those varieties, and these directions may be followed in the mating of Duckwing Game Bantams. The colors of the two varieties of Duckwing Game Bantams are produced in the same way as these variety colors are produced in the large Duckwing Game fowls, but great care should be taken to select those with more delicate shades than seems possible to secure in the larger fowls. When a Silver Wheaten Game Bantam female can be secured and mated with a delicately marked Black-Breasted Red Game Bantam cockerel, beautiful Duckwing Game Bantams can be bred from them. The Wheaten is used to strengthen the color in both the golden and the silver varieties. Most persons who breed Duckwing Game Bantams will be satisfied with matings of pure-bred Silver Duckwing Game Bantams and pure-bred Golden Duckwing Game Bantams for producing the two varieties, but for the production of the most delicate tints in these varieties, the matings mentioned for the large Duckwing Game fowls and the use of Wheaten females can be resorted to.

RED PYLE GAME BANTAM

73. In origin, development, and history the **Red Pyle Game Bantam** conforms to the large Red Pyle Game fowl. The only difference is in the size and the finer development which naturally belongs to the Game Bantam. Formerly, they had dark-colored beaks, shanks, and feet. This has been bred out of them, and since then they have become very popular in the United States as well as in England. Some of the best that have been bred were produced in America.

74. Description.—The Red Pyle Game Bantam is fully the equal of the Black-Breasted Red Game Bantam. Its form and color is quite attractive. The beautiful white body color

of the male, with color markings of red, is a beautiful combination of colors for a Game Bantam. The breast, body and tail plumage of the male is white. The red markings of the Pyle Game Bantam male are identical with the red markings of the Black-Breasted Red Game Bantam male. The Pyle female has pure white body color, with breast markings of salmon; the neck hackle is white, the feathers edged with gold; the face, wattles, ear lobes, and eyes, of both male and female, are bright red; the beak, shanks, and toes are yellow.

75. Mating.—The detailed description for the mating of Red Pyle Game fowls applies with equal force to the mating of Red Pyle Game Bantams. The most beautiful of the Red Pyle Game Bantams should be selected for the matings. The richest colors permissible in the exhibition pen, in both males and females, should be selected for breeding cockerels. Less brilliantly colored males will answer best for the production of females. The most delicately colored Black-Breasted Red Game Bantam males may be bred with Pyle females for the improvement of color. Males having yellow shanks and toes should be selected if possible. The yellow color of these sections indicates a previous cross with the Pyle variety.

WHITE GAME BANTAM

76. Origin.—The **White Game Bantam** was made from white offspring of Pyle and other Game Bantams.

77. Development.—The development of the White Game Bantam has been toward the improvement of color of plumage, beak, shanks, and toes and the maintenance of proper type.

78. History.—About 1900, the first White Game Bantams worthy of the name were shown. These had perfect type, but their plumage was spotted with black and the shanks were dark or willow colored. They were improved afterwards, and within a few years thereafter some having better quality were shown.

79. Description.—To have quality that will attract attention, White Game Bantams must be more nearly perfect than bantams of other varieties. To conform to such requirements it is necessary to use breeding stock of perfect form, pure white plumage, and carriage and general make-up fully equal to fowls of any other variety.

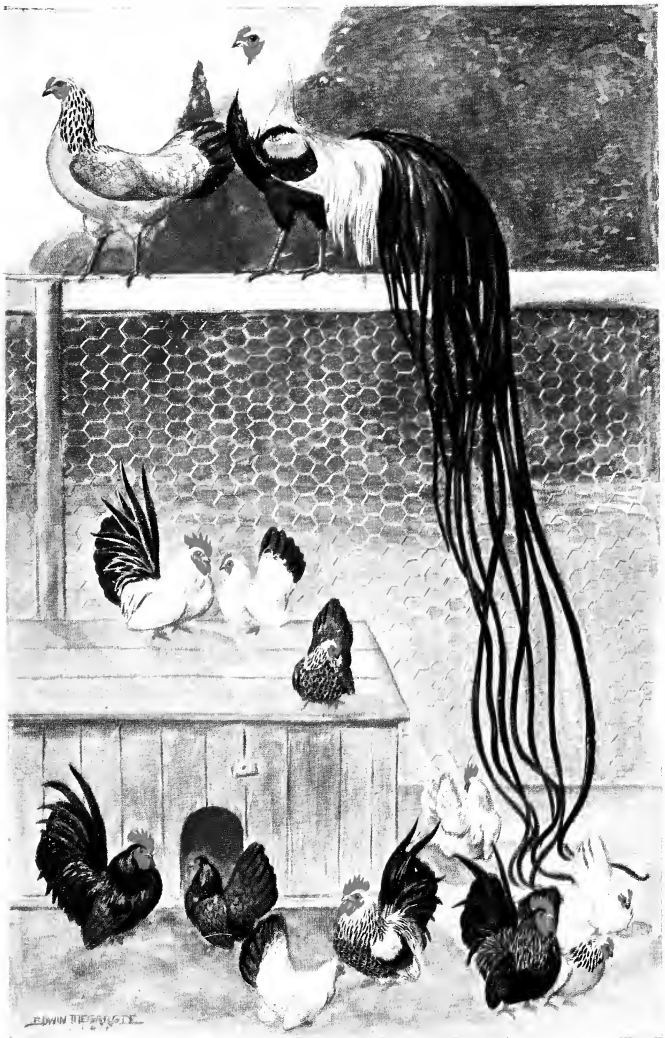
WHEATEN GAME BANTAM

80. Wheaten females are produced in Game Bantams the same as in large game fowls. They are of the same variety colors, and are almost perfect in form and color. They are useful in breeding Duckwings, the lightest shade of Silver Wheaten being used for breeding the lightest shades in Duckwings, and the darker shades for breeding the Golden Duckwings.

JAPANESE BANTAM

81. Japanese Bantams were taken to England from Japan about 1860. The first that came were of the variety now called the Black-Tailed White Japanese Bantam. Later, other varieties were brought and distributed throughout England and America. Solid-colored black, and solid-colored white, silver and golden duckwings, gray, buff, and splashed Japanese Bantams have all been brought from Japan at different times. These were not so distinctly separated by color into varieties as to come actually within the scope of the names applied to them, yet they had the color and markings from which such varieties have been made. The varieties of Japanese Bantams recognized in the American Standard are the Black, the Black-Tailed White, and the White. In addition to these, the English Standard describes the Buff, the Cuckoo, the Gray, and the Speckled Japanese Bantam.

82. Origin.—All varieties of Japanese Bantams originated in the country for which they are named. They came in many indistinct variety colors, the most pronounced of which



Yokohama and Japanese Bantams

were the black and the white. Other colors were brown, gray, splashed, and yellow, such as would naturally come from promiscuous breeding.

83. Development.—The bantam fanciers of England did most to develop and separate the Japanese Bantams into varieties. The first to be developed was the Black-Tailed White Japanese Bantam, which has continued to hold the most prominent place among them. Solid-colored Black and solid-colored White Japanese Bantams were next developed into variety distinctions that made them popular; and then the other varieties were sparingly developed. None has become so popular as the Black-Tailed White Japanese Bantam, or has been bred to equal this variety in quality.

84. History.—Japanese Bantams were first taken to England about 1860, and some years later they were imported into America. The Black-Tailed White Japanese Bantam was described in the original American Standard of 1875, and both the Black and the White Japanese Bantam is mentioned in the American Standard of 1894. Since their admission to the Standard, these three varieties have been considerably bred and greatly improved by bantam fanciers of the United States and Canada. Some unique bantams have been produced by promiscuous crossing of varieties.

85. Description of Shape.—When mentioned by the earliest writers, the Japanese Bantams were called Creepers, and were said to have legs so short as to give them the appearance of sliding along on their wing flights, which seemed to serve as runners. This description might be applied with some degree of accuracy to the females, as the bodies of some of them seem to rest on the ground as they move about. The males carry their heads and breasts upright rather than down and forwards. The head and comb of a Japanese Bantam are larger in proportion than the same parts in other bantams; the head is round and rather broad; the beak is strong and curved; the eyes, large; the comb, of more than average size for bantams, single, straight on the head, and evenly serrated. In all varieties, the beak, shanks, and feet are yellow.

The neck is short and carried back more than forwards; the body is short, round, and compact; the breast, prominent and full, and carried forwards. The back is very short, which is due to the fact that the head and tail come almost together when the fowl stands erect. The wings are unusually large and long for the size of the fowl, and are carried low, the points or ends extending back of the body, and frequently the lower part of the wings touch the ground. The tails of both males and females are large and carried erect, the forward feathers reaching the head. The sickle feathers of the male are long, tapering to a point, and but slightly curved. These are called sword feathers, because they are shaped more like a sword than a sickle. The legs are very short; the shanks and toes are smooth and shiny. Both males and females are profusely feathered, the hackles being unusually long for a bantam, and the saddle plumage of the male very profuse.

The standard weight for Japanese Bantam cocks is 26 ounces; for cockerels and hens, 22 ounces; and for pullets, 20 ounces. Four ounces in excess of these weights will disqualify them. The shape and carriage of the Japanese Bantams are well portrayed in the color illustrations.

86. Description of Variety Colors.—The **Black Japanese Bantam** has the beak, shanks, and toes yellow or yellow shaded with black; the eyes, comb, face, wattles, and ear lobes are red. The plumage is lustrous black throughout.

The **Black-Tailed White Japanese Bantam** has yellow beaks, shanks, and toes, and bright-red eyes, comb, face, wattles, and ear lobes. The plumage of both males and females is white, with black markings; the primaries are slate or black, edged with white; the secondaries are of the same color and markings as the primaries, except that they have a wide edge of white on the upper web, and, when the wings are folded, the black does not show. The main tail feathers of both males and females are black; the sickles and coverts of the male are black, edged with white; the coverts of the females are white, some marked with slate color or black. The rest of the plumage of both males and females is white.

The **White Japanese Bantam** has head points, shanks, and feet of the same color as the Black-Tailed White Japanese Bantam, and its plumage is pure white throughout.

The non-standard Japanese Bantam varieties are the Buff, the Gray, and the Speckled, or Spangled.

The **Buff Japanese Bantam** should have the same color in the head points, shanks, and feet as the Black-Tailed White Japanese Bantam. The plumage should be buff throughout, but is usually marked with more or less slate color or black in the flights, secondaries, and tail feathers.

The **Gray Japanese Bantam** might be separated into two varieties, the Birchen and the Brown-Red, as they correspond in color to these varieties of game fowls. These variety colors are shown in the color illustration of the Japanese Bantams.

The **Speckled, or Spangled, Japanese Bantam** is mixed with black and white and reddish brown and white. The colors and markings are more like those of the Ancona than of any other fowl, the ground color in one being black splashed with white, and in the other reddish brown splashed with white or straw color.

87. Mating.—Unless the Japanese Bantams selected for breeding purposes are perfect or nearly so in shape and feather, they are apt to fail in the production of exhibition offspring. It is equally essential that they should have color and markings that are almost perfect. The type best suited for the production of good offspring is shown in the color illustration of Japanese Bantams.

In mating for the production of Black Japanese Bantams, the head points must be perfect; the beaks, shanks, and toes as nearly perfect as possible; plumage, a rich glossy black, with very dark under plumage; carriage, low, with body close to the ground.

Unusual care must be given to the selection of the Black-Tailed White Japanese Bantams for breeding purposes. The features of prime importance are perfect tail formation, profuse sickles and tail coverts, each feather being laced with white. The black and the white in the wings must be well separated,

and the more intense the black, the more likely the fowls are to produce good color markings. The wing markings and main tail feathers of the females should conform to those in the males, with the exception that the wings need not be so dark. If the tail coverts of the females are white throughout, with no dark markings, better surface color will appear in the offspring. The breeding stock must be low set and have yellow beaks, shanks, and toes. Head and tail should be carried erect and the wings carried close to the ground.

Japanese Bantams mated to produce the white variety must be excellent in breed characters and have pure white plumage throughout. They must have clear, bright-red eyes, and golden-yellow beaks, shanks, and toes, free from dark markings.

Buff Japanese Bantams should be selected from the best that can be bred. So little progress has been made with them that a strain must be established by carefully selecting the best and breeding them, and again selecting from their offspring and continuing to mate and breed until perfect Japanese Bantam breed characters and buff color have been established.

Birchen and brown-red color have been produced in Japanese Bantams by mating grays with blacks. From such matings offspring have been produced with dark body color, some males and some females being laced about the breast with light gray or straw color; the top color of some males was gray, and of others straw color or yellow, and the breasts were laced to conform to the top color. Birchen and brown-red variety colors can be established in the same way as in game and game bantams. From the promiscuous matings of white, gray, and yellow Japanese Bantams, variety colors without distinction will be produced.

88. **Frizzle Japanese Bantams.**—The original **Frizzle Bantams** were brought from Japan with the early importations of Japanese Bantams. They were in form like the Japanese Bantams but had feathers like the Frizzle fowls. They are mentioned as having the same variety colors as were common with the Japanese Bantams. They had the same general

characters and tail formation that belong exclusively to the Japanese Bantam. Mr. Entwisle mentions that he has seen them of almost all variety colors seen on Cochin and Japanese Bantams. The Frizzle variety has been so neglected as to have been almost lost sight of. The few specimens that do exist are of inferior quality.

MALAY BANTAM

89. The **Malay Bantam** conforms in type and color to the large Malay fowls. When bred of the most delicate type, Malay Bantams are more slender in form and taller on the legs than the Game Bantams. Those that have been bred in America are too bulky in body formation to be considered with the more delicate type bred in England. The Black-Breasted Red Malay Bantam is the only variety recognized in the American Standard, but many other varieties are mentioned in the Malay Bantam Club Standard of England.

90. Origin.—The Malay Bantams were made by intermingling Malay fowls with Aseels, Indian Games, and Game Bantams. The best that could be produced were selected and inbred to reduce their size.

91. Development.—Following their origin, the Malay Bantams were developed into their present form and were reduced to bantam size by inbreeding.

92. History.—The first Malay Bantams were made by Mr. Entwisle, of England. Later the Malay Bantam Club of England was formed and by careful breeding the bantams have been produced of many variety colors and of perfect Malay type.

93. Description of Shape.—The following description of Malay Bantams is taken from the Malay Bantam Club Standard of England. In the males, the beak is strong and curved downwards; the comb is small, set well forwards, shaped like a half walnut, and as free from irregularities as

possible; the skull is broad, with deep-set eyes and overhanging brows; the profile of the skull and beak approaches the shape of a segment of a circle; the wattles and ear lobes are small, the bare skin extending down on to the neck, which is long and carried well upright, with a slight curve; the hackle is scant except at the base of the skull. The body is very wide and square at the shoulders and tapers to the tail; the shoulders are prominent, carried well up, and are usually bare of feathers at the points; the back is sloping and convex in outline; the saddle is narrow and drooping; the feathers, hard, short, and scant; the breast, deep and full, usually bare at the breastbone. The thighs are long and muscular, with but little feathering, leaving the hock exposed; the shanks, long and evenly scaled, flat at the hocks, and gradually rounding to the point where the spurs are set on; a downward curve in the spurs is preferred; the toes are long and straight, the back toe being close to the ground. The tail is drooping but the feathers in it are not carried close together; the sickles are narrow and slightly curved.

The females should resemble the males in type and station, except that the tail should be carried horizontally and formed much like the tail of Game Bantam females. The flesh of all Malay Bantams is hard and firm to the touch; their plumage is hard and lustrous, and their general appearance tall and gaunt; they are tall in front and drooping in the rear; they have an erect carriage—the position as erect as possible at the hock.

The Standard weights in England for exhibition Malay Bantams are: Cocks, $3\frac{1}{2}$ pounds; cockerels and hens, 3 pounds; pullets, 2 pounds. In America, the weights are: Cocks, 26 ounces; cockerels and hens, 24 ounces; pullets, 22 ounces; 4 ounces more than this in each will disqualify. Such small size is rarely if ever attained.

94. Description of Variety Colors.—All varieties of Malay Bantams with the colors of the large Malay fowls—Red, White, Black, Pyle, and Spangled—are recognized by the Malay Club Standard.

In the Red and Spangled Malay Bantam, the beak should be yellow or brownish—yellow preferred; in the Black Malay

Bantam, yellow or blackish—yellow preferred; in the White and the Pyle Malay Bantam, yellow. In all Malay Bantams, the comb, face, throat, wattles, and ear lobes should be bright red; the eyes, pearl white daw (with a greenish shade) or yellow, but the lighter in color the better, a red tinge being very objectionable; the shanks, rich yellow, though in the Black Malay Bantam, a slight duskiness may be overlooked.

In the Red Malay Bantam males the breast and underbody plumage is lustrous black; the hackle, saddle, back, and wing bows, rich red; the wing bars, black; the secondaries, bright bay; the flights, black on the inner web, with red edging on outside; the tail, green black. Females of this variety may be of any shade of cinnamon or wheaten, preferably with a purplish hackle; those with partridge markings, clay color, and golden hackle are also allowable. In fowls of all these shades, black is found in the flights and tail.

In the White Malay Bantam, both males and females have pure white plumage throughout, free from yellow, black, or ruddy feathers.

In the Black Malay Bantam, both males and females have glossy black plumage throughout, with brilliant green and purple luster, green predominant, free from any brassy or white feathers.

In the Pyle Malay Bantam, the males are similar to the males of the red variety in markings and color, except that they are creamy white where the others are black. The female has golden hackles; the breast is a salmon color; the remainder of the plumage is creamy white.

In the Spangled Malay Bantam, both males and females have ground color much like that of the Red Malay Bantam, except that in the males an admixture of red and white with the black of the breast, under parts, thighs, and tail is desirable. The color of the female should be rich chestnut, boldly marbled with black and white. Each feather in both males and females should somewhat resemble tortoise shell in the blending of the red or chestnut with sheeny black, and should have a white tip or spangle; even the long feathers of the tail and wings should be as tricolored as possible.

There are also Wheaten-Pyle Malay Bantam females that resemble Wheaten-Red Game females in every respect except that the flight and tail feathers are creamy white instead of black. The Wheaten-Spangled Malay Bantam female resembles the Wheaten-Red Malay Bantam females, with the addition of a plentiful powdering of white spangles. These wheaten females are not attractive, but they produce beautiful males.

95. Mating.—The mating of Malay Bantams for the production of exhibition quality requires that the parent fowls shall be carefully selected for size, shape, and variety color. True-colored fowls should be mated according to the variety color requirements for males and females.

OLD-ENGLISH GAME BANTAM

96. The English Standard contains a description of many varieties of Old-English Game fowls and recognizes bantams of the same varieties. It states that the general characters of the **Old-English Game Bantam** are similar to those of the large fowls of the same breed. The weight of males is given as from 18 to 22 ounces; of females, as from 16 to 20 ounces. None of the Old-English Game Bantam varieties are mentioned in the American Standard; one or two varieties have been shown in America, but the Spangled Old-English Game Bantam is the only one that has been bred to any extent.

97. Origin.—Bantams of the Old-English Game type were made by breeding down from the large Old-English Game fowls. Many varieties were bred; those most popular in England are the spangled and the black-red. For novelty in color, the blue-red takes first place. The black-reds have color and markings the same as the Black-Breasted Red Game; the Blue-Reds have a bluish tint marked with red. The spangled is the only variety that has been bred to any extent in America. This variety was made from the Spangled Old-English Game, which is among the most beautiful plumaged of all the game fowls.

98. Development.—The Old-English Game Bantams were originated, developed, and improved in England, where they have been bred to a set type of form and color.

99. History.—Old-English Game Bantams having the breed characters of Pit Game fowls have been bred for almost a century. Prior to 1900, there was so little of distinctive character in them that they were eliminated from Standard consideration. Since that time they have been so improved by the fanciers of England as to warrant their recognition by the Game Club of England.

100. Description.—All variety colors that are bred in the larger fowls are bred or recognized among the possibilities of Old-English Game Bantam fowls. To describe all the varieties would be a repetition of what has already been said under Old-English Game fowls. Spangled Game Bantams have become fairly popular in America. They are bred in several shades. In both males and females, the beak, shanks, and toes should conform in color; the eyes should be red or light-colored like the Aseel; the face, bright red; the plumage may be black, red, blue, or buff spangled with white, the spangling as even as possible. In all varieties, the tail should be black and white. Some of the most beautiful resemble the Jubilee Orpingtons in plumage; others are mottled black and white, but are not so attractive as the red, blue, or buff spangled varieties. Full information relative to other variety colors will be found in the description of Old-English Game fowls.

101. Mating.—To succeed in producing any variety of Old-English Game Bantams requires careful selection of perfect type and variety colors. Males and females having the same color of eyes, beaks, shanks, feet, and plumage should be mated. This rule should be followed in every variety, for in no other way can a line of breeding be established that will produce offspring of the same color as the parents.

POLISH BANTAM

102. From time to time, new varieties of miniature Polish fowls have been produced. Some of them have been much too large to be considered as bantams, yet their beautiful form and attractive colors have always gained the highest praise and more or less public attention. Mr. Entwisle was the most successful producer of these in England, and F. B. Zimmer, of New York, in America. The White and the Buff Laced Polish Bantam are the two varieties that have been made and accepted in America as standard. The English Standard admits, as worthy of consideration, all Polish Bantams that conform to the breed characters and colors of the large Polish fowls.

103. Origin.—The Polish Bantams were made by crossing Polish males with bantam females.

The **White-Crested Black Polish Bantam** was produced by mating Polish males of the large variety with Black Rose-Comb Bantam females.

The **Buff Laced Polish Bantam** and the **Golden Polish Bantam** was produced by crossing Golden Spangled Polish males with Golden Sebright Bantam females, and selecting the best for making Golden Laced Polish Bantams. Such as were indifferently marked were mated with very small Buff Laced Polish fowls.

The **Silver Laced Polish Bantam** was made by crossing Silver Laced Polish males with Silver Laced Sebright Bantam females.

The **White Polish Bantam** was made by crossing White Polish males with White Rose-Comb Bantam females.

Thus it will be seen that all varieties of Polish Bantams were originally made by crossing the several varieties of Polish, selecting small males with large crests and mating them with Rose-Comb Bantam and Sebright Bantam females; the product of these several crosses were selected and remated, and this

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Polish Bantams

was continued until bantams of all variety colors known in Polish fowls were produced. Trouble was experienced in getting rid of the comb in the Polish Bantams.

F. B. Zimmer, who made the Bearded White-Crested White Polish Bantams in America, began with some Non-Bearded White Polish Bantams that originated by accident in Massachusetts. He mated a White-Crested White Polish fowl with them, and bred them down until he had Bearded White Polish Bantams with V-shaped combs, and shanks and toes of a bluish shade.

104. Development.—The Polish Bantams, with the exception of the white variety, have been so sparingly bred throughout the world as to make it almost impossible to tell of any development in them, other than as stated in the account of their origin.

105. History.—About 1883, several varieties of Polish Bantams were mentioned, and the same year one variety, the White-Crested White Polish, was included in the American Standard. This bantam was described as having a single comb, and a large, abundant crest, with no beard. In the American Standard of 1900, White-Crested and Buff Laced Polish Bantams are mentioned, both having single combs, or leaf combs. In the White-Crested Non-Bearded Polish Bantams, the shanks and feet are white; in the White Bearded and the Buff Laced Polish Bantams, the shanks and feet are blue or slaty blue. In the Standard of 1905, the combs of Polish Bantams are described as very small and V shaped; the shanks and toes, as blue or slaty blue in all varieties. Since the issuing of that Standard, Buff Laced Polish Bantams have been seen but seldom, and but few White-Crested White Polish Bantams have been shown.

106. Description.—All varieties of Polish Bantams, whether bearded or non-bearded, must conform in a general way to the shape and color description of the Polish fowls. Polish Bantams must be small and perfect in breed characters and plumage color. The weights of Polish Bantams are:

Cocks, 26 ounces; cockerels and hens, 22 ounces; pullets, 20 ounces; 4 ounces more than these weights will disqualify.

107. Mating.—The same general rules that are given for mating Polish fowls of all varieties must be applied to the matings of Polish Bantams, and the breeder must always have in mind the fact that the bantams must equal the large fowls in crest, beard, and plumage color. In addition to this, they must be small. Whenever they exceed disqualifying weights, they should be discarded as bantams. The best method of controlling size is to hatch only from mature hens that do not exceed the limit of weight, and are smaller if possible. These hens should be mated with males of the same variety that are small and perfect in all qualities that are most desirable in Polish fowls.

ROSE-COMB BANTAM

ORIGIN

108. The original bantams from which the **Rose-Comb Bantam** is said to have come were known as Black Bantams and White Bantams long before poultry literature began to appear. They are said to have existed both with and without feathers on their shanks, and were, perhaps, of the same blood as the Hamburgs. They are frequently mentioned by the earliest poultry writers, and some authorities have claimed that they were the originals of all bantams. From the best information that can be gathered, it would seem that priority should be divided among the Nankin, the Silky, the Black, and the White Bantams. All of these existed centuries ago and seem to have had a separate origin.

Although the Black and the White Bantams were of such early origin and have continued to be called Black and White Rose-Comb Bantams, as they now exist they are small Hamburgs. They were made by the bantam breeders of England, who have continued their improvement.

BLACK ROSE-COMB BANTAM

109. Origin.—The present type of **Black Rose-Comb Bantam** was made by crossing Black Hamburg males with Rose-Comb Bantam females. In this way they were changed from their former bulky appearance to the slender and trim bantam of the present.

110. Development.—E. Hutton, F. Z. S., of England, was the first to develop the Black Rose-Comb Bantams, and he continued their improvement until he made them miniature Hamburgs.

111. History.—Improvement began in the Black Rose-Comb Bantam about 1850. At that time some were mentioned as having double and some as having single combs. Those having single combs were called Game Dandies. The difficulties in the Black Rose-Comb Bantam were the tendencies to red in the ear lobes and splashes of red and white in the plumage. This was partly overcome by mating together the Black and the White Rose-Comb Bantams for the improvement of ear lobes. These early efforts brought poor results in comparison with what has since been accomplished by the introduction of the Black Hamburg blood. White and Black Bantams are mentioned in the earliest Standards. They have been called African Bantams and Crow Chickens. A marked change has been made in them since 1890, and all or most of the improvements have been brought about through the special efforts of a few bantam fanciers in England; and although some of sterling quality have been bred in America, the credit for their beautiful form and feathers belongs to England.

112. Description.—The Black Rose-Comb Bantam is a miniature Black Hamburg, and its beauty of form and plumage is shown in the color illustration. The main feature for consideration is neat formation of head, including comb, wattles, and ear lobes. The ear lobes should be round, of uniform thickness, close to the side of the face, smooth, and as

soft and white as possible. The surface should have a texture like the finest finished white kid. English breeders state that the lobe should not be smaller than a sixpence nor larger than a shilling. This description will need altering, as some are now bred with ear lobes twice as large as a shilling, which is about the size of an American quarter. The eyes should be hazel or brown; the shanks, black, perfectly smooth, and free from feathers or down.

The tail formation is of more importance, beauty considered, than any other section. The sickles should be long, broad at the base, well circled, and without sharp points at the ends. The inner or lesser sickles should not overlap the main tail feathers. The lesser sickles, including the coverts, should be profuse, with long, flowing saddle feathers and neck hackle reaching almost to the base of the tail. All features desirable in the males should be present in the females in an effeminate degree. Beauty of comb, carriage of wing, and graceful carriage of the body are attractive features. Long legs, close body formation, hollows in the comb, wings tucked up, and irregularly formed or small ear lobes are the most serious faults. White in the face or foreign color of any kind in the ear lobes should not be countenanced. The plumage should be rich glossy black throughout, with no trace of foreign color and with under plumage dark in comparison with the surface plumage.

113. Mating.—Average quality will be produced in the Black Rose-Comb Bantam by mating males and females that are fit for exhibition. Scientific matings, however, require double or separate matings for producing males and females. Matings for producing cockerels must be made from males perfect in Hamburg breed characters, with long flowing tails, the sickles of which overlap the main tail feathers. The females in this mating should have tails longer than are desirable for exhibition. Such females can be produced only from matings for the production of the latest type of exhibition males, and then only when the male-producing type has been well established in a strain.

Matings for producing females must consist of exhibition females absolutely perfect in every section, mated with males that result naturally from pullet-bred matings. The main tail feathers of such males usually extend an inch or more beyond the sickle feathers. The sickles, lesser sickles, and tail coverts are considerably shorter than the same in exhibition males. If this manner of mating is continued long enough, the males from the pullet-bred line may eventually become hen-tailed like Sebright males. As yet, this process has not gone far enough to have so influenced their plumage, but it has shortened the main tail feathers of the males and so reduced the saddle coverts and the lesser and greater sickles as to have produced a line of breeding of which the males are more like females and the females of the male line are more like males in many respects than is usual in any other variety of bantam.

The tail plumage of Rose-Comb Bantams usually has more length and is more profuse in cockerels than in cocks. This difference in the plumage of the males must not be accepted as evidence that all the cocks with short sickles are from a pullet-bred line. The only assurance of pullet-bred males is to breed them as described, or to secure them from a strain that is known to have been well established for the production of males and females from separate lines of breeding.

WHITE ROSE-COMB BANTAM

114. Origin.—The original home of the greatest number of fowls of the **White Rose-Comb Bantam** variety was Yorkshire, England. This variety seems to have been a prime favorite with the early bantam fanciers of that locality. The White Rose-Comb Bantam, as bred in Yorkshire, was taken up by E. Hutton, who bred them with Black Rose-Comb Bantams for the improvement of both. The White Hamburgs at that time did not have quality equal to the Black Hamburgs, and, for this reason, a cross of White Hamburgs and white bantams did not prove as successful as the cross of the two varieties of Rose-Comb Bantams.

115. Development.—The White Rose-Comb Bantam was finally developed by selecting the best and crossing them with White Hamburgs, and then selecting and mating the offspring for improving their quality.

116. History.—The White Rose-Comb Bantam was developed at about the same time that the Black Rose-Comb Bantam was improved. For lack of new blood suitable for breeding with them, the bantams of the white variety did not improve as rapidly as those of the black variety, and they are less vigorous and more susceptible to ailments. Finally, a cross with the black variety was resorted to; this resulted in greatly improving the vitality and reproducing powers of bantams of the white variety, which are now almost equal in quality to those of the black variety.

117. Description.—White Rose-Comb Bantams must conform in every way to Black Rose-Comb Bantams, color excepted. Their beak, shanks, and toes are white, usually showing a pinkish tinge. Their plumage is pure white throughout, including the under plumage; the comb, face, and wattles are red; the ear lobes, white. The eyes in this variety are reddish bay.

Although Rose-Comb Bantams should be small, it is possible to have the males much too small to carry the proper amount of tail feathering. A little more size associated with beautiful body and tail plumage is more desirable than small size with deficient tail. Serious faults in the White Rose-Comb Bantam are dark color in the shanks and toes, wings carried too high; foreign color of any kind in the plumage, including yellow or cream color. The proper wing carriage in all Rose-Comb Bantams is shown in the color illustration.

The weights of Rose-Comb Bantams are: Cocks, 26 ounces; cockerels and hens, 22 ounces; pullets, 20 ounces; 2 ounces in excess of these weights will disqualify.

118. Mating.—The finest exhibition White Rose-Comb Bantams are best for producing offspring for exhibition. Better tail and body formation in both males and females

might be produced if the same plan of mating were adopted that is followed for the production of males and females of the Black Rose-Comb Bantam. The White Rose-Comb Bantam has never become so popular as the Black Rose-Comb Bantam, and for this reason equal attention has not been given to improving them.

SEBRIGHT BANTAM

ORIGIN

119. Sir John Sebright, M. P. for Herts, England, originated the **Sebright Bantam.** Much has been written relative to this breed and its origin, and some theories have been advanced by those not well informed on Nature's laws of reproduction. In 1860, W. B. Tegetmeier recorded in his "Poultry Book," the following statement furnished by Sir Thomas Sebright, who lived at that time: "It was about the year 1800 that the late Sir John Sebright began to fashion the Sebright Bantams. The first cross was between a common bantam and the Polish fowl. The offspring resulting from this alliance were bred in-and-in until the required markings and size were secured. Sir John then accidentally found a hen-tailed bantam cock in the country where he was traveling. This short-tailed fowl he inbred with his new bantams. Thereby the progeny gained their present form of square tails."

Sir Thomas was quite satisfied that it was the Polish and not the Golden Pheasant (now called the Spangled Hamburg) with which the bantam was first crossed. For more than 50 years the theory of this method was combated by poultry writers. Crosses were finally made with Golden Polish males and Nankin, Cochin, and Rose-Comb Bantam females. From such matings, small fowls were produced, some of them having buff color and some white, and laced about the edges of the feathers. Within a few years, both crests and single combs were gone as a result of selection and careful mating. Since that time the statements made by both Sir John and Sir Thomas Sebright have been accepted.

Later research has discovered records showing that the first matings for the production of this variety of bantams were made in 1796 and that Sir John was so thoroughly interested in their production that he frequently traveled many miles to see and consider the value of certain kinds of fowls for assisting in perfecting what he was desirous of producing. The Rev. Mr. Dixon states that Sir John traveled many thousand miles to inspect small fowls, and it is supposed that in some of these travels he found the hen-tailed bantam male mentioned by Sir Thomas. One who was associated with Sir John stated that the original hen-tailed fowl was not only small but possessed spangled plumage. Spangling at that time indicated half-moon markings about the ends of the feathers.

From the matings made, the varieties were selected, one having very light or white ground color, the other with salmon or yellow ground color, both laced, or, as Mr. Moubray said in 1834, "beautifully striped and variegated." One of these was named the Golden and the other the Silver Sebright Bantam.

GOLDEN SEBRIGHT BANTAM

120. Origin.—The **Golden Sebright Bantam** was made from the early Sebright Bantams as a result of care being given to selecting and mating to produce bantams having the breed characters, color, and markings portrayed in the color illustration.

121. Development.—The Golden Sebright Bantam has been developed from small fowls that resembled the present type of Sebright but that were larger, longer in the leg, and had tail feathers with an indistinct ground color of yellow or buff. The feathers were marked with what is called horseshoe lacing, which was irregular in form and width and circled like a crescent about the end of the feather, not going back more than two-thirds of the web. From such fowls the Golden Sebright Bantams were developed, and many of them are so beautifully laced about the edges of the feathers that the lacing seems to have been laid on with geometrical precision.

122. History.—The history of the Golden Sebright Bantam begins with the original Standard description, which was printed in 1863. It describes them as having plumage of a rich golden yellow, every feather being laced with black. From then to the present, improvements have been made in them until Standard demands are so rigid in respect to form and color as to make their production most difficult.

123. Description.—The Golden Sebright Bantam has head points like the Hamburg and the Rose-Comb Bantam, the main difference being that the comb is smaller, with shorter spikes. The wings are carried low; the tail is erect and well spread; the tail formation is alike in both males and females, there being no sickles permissible in the males; and the hackle and saddle of both males and females are alike, no saddle feathers growing on the male. The peculiarity of color in this variety is the purple or gypsy color of the face; the ear lobes are the same color or mixed with red, some of them being burnished with enamel white. The shanks and toes are blue or slaty blue.

In general formation, they are short in the back and upright in carriage; the top of the tail and head are carried at about the same height. The eyes are brown, large, and bright. The plumage is golden yellow throughout, each feather laced with black; the under plumage is dark or slate. The surface color in females is not so rich or deep a shade of golden yellow as in the males. The shade of plumage color described for this variety in the English Standard is different from that described in the American Standard. The English Standard states that the ground color should be golden bay with glossy, green-black lacing, and dark gray color in under plumage, each feather being evenly laced around the edge with a narrow margin of black.

The weights of Sebright Bantams are: Cocks, 26 ounces; cockerels and hens, 22 ounces; pullets, 20 ounces; 4 ounces more than these weights will disqualify.

124. Mating.—A breeder who has been most expert in the production of exhibition Sebright Bantams states that they are more uncertain of production than the Golden and

the Silver Laced Wyandottes. Although they have been bred for more than a century, the only way to produce them of a good quality is to establish a strain and inbreed them to the limit; only when such a strain has been established should new blood be introduced; such new blood must be made from several years of careful breeding from another strain of equal quality. This means that a fancier should breed and inbreed his own strain in one place and should have a few of another strain in other pens which are inbred to the same extent, and that from time to time he should refresh each strain with blood from the other.

In mating the Golden Sebright Bantam for the fine line markings, the under plumage in the back of the female should be of a yellowish shade. The most difficult problem in breeding Sebright Bantams is to establish and maintain perfect plumage color, which should be golden bay or golden yellow, not pale yellow. Bantams with rich yellow plumage can be bred from golden-bay males, but few of even passing quality in color and markings will be bred from those with a yellow body color, even though it may be laced with black. The color of the males should be rich golden bay as dark as the body color of the Golden Laced Wyandotte males. Each feather must be laced with brilliant glossy black, and this lacing may be somewhat wider than is desired in the exhibition pen. Females may be one and even two shades lighter in body color than the males, and they may have a black edging of less width than is required in the males. The head points should be as nearly perfect as possible. More details in regard to mating will be found in connection with the mating of Silver Sebright Bantams.

SILVER SEBRIGHT BANTAM

125. Origin, Development, and History.—The **Silver Sebright Bantam** had the same origin, development, and history as the Golden Sebright Bantam.

126. Description.—The color markings of the Sebright Bantams are the same in both varieties, with the exception of

the ground color, which is golden yellow or golden bay in one variety, and silvery white in the other variety. In the Silver Sebright Bantam, the ground color of the entire plumage should be white, but not so transparent as to permit a reflection from the dark color of the under plumage to show through. A creamy or yellow tint may at times mar the purity of the white, and the cross-mating of the two varieties causes the washed-out or faded yellow shade of body color in the Golden Sebright Bantam.

The lacing of the feathers is of prime importance. To conform to Standard description, this should be narrow. Some Silver Sebright Bantams have a fine line of black about the edge of the feather, this line of black being so intense with a shining green sheen as to make the marking brilliant. This is the proper style of marking for Sebright Bantams, but it is most difficult to obtain. The Standard requires a dark shade of color in the under plumage of exhibition fowls, and this cannot be depended on for best results in matings. The head, comb, wattles, and ear lobes must be of perfect formation, and in accord with the Standard description. The eyes of the Silver Sebright Bantam are brown, the same as in the Golden Sebright Bantam, although they frequently show a reddish shade.

127. Mating.—In the mating of Silver Sebright Bantam fowls for best results, every feather of those selected should be surrounded with a line of greenish black; the black lacing of the males should be wider than is desirable in the exhibition fowls. The lacing of the females should not be so wide nor so heavy as in the males, but it should be wider than the Standard requires, and the ground color should be absolutely free from mossing or foreign color of any kind.

Where matings are made to produce the extremely narrow lacing, care must be taken to have enough lacing in the males to prevent the absence of lacing in the offspring. Color will be best sustained from the strength of the color of the under plumage of the fowls used in the matings. To breed very dark, intense markings of medium width, dark or slate color in the

under plumage will be needed. For the production of fine black lines on the edge of the feathers, males having slate color in the under plumage and females that have slate color in the under plumage of the breast and body and are almost white in the under plumage of the back will produce best; but some of the offspring so produced will be so lightly laced as to be of but little value.

One of the most difficult problems to overcome in the production of Silver Sebright Bantams is faulty color and lacing in the tail feathers. To produce males and females with clean, clear, white tail feathers, with no smut on the under side of the feathers, and each feather laced with a line of black, requires matings that cannot be described, but which can be made only by years of experience in breeding and mating a strain for the production of such color. From the introduction of new blood, many badly marked offspring are likely to occur.

SILKY BANTAM

128. The **Silky Bantam** has been made by selecting Silky fowls of the smallest size and inbreeding them to reduce size. Silky Bantams have not been developed enough to equal other bantams in size or breed characters.

129. History.—Silky fowls are known to have existed centuries ago, at which time they were called woolly hens. It is thought that they originated in India, and they have been found in many of the Oriental countries. They have been used for hatching bantam, pheasant, and guinea-fowl eggs, as they are good mothers for this purpose.

130. Description.—The breed characters of the Silky Bantam are shown in the color illustration. The peculiarity in this variety is the walnut, or strawberry comb, as it is called. The beak, comb, face, wattles, and ear lobes are blue, purple, or gypsy color; the shanks and toes are much the same color; the plumage is white; the skin and flesh are of a peculiar bluish tinge. Sample feathers of the Silky Bantam are shown in

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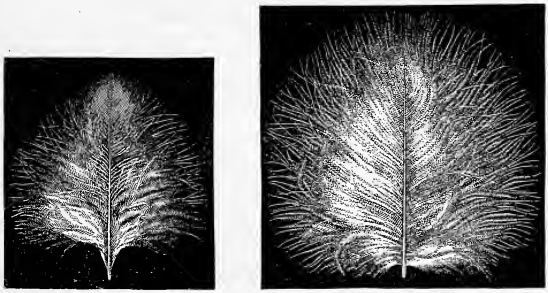
OLD-ENGLISH GAME BANTAMS
BOOTED BANTAMS

FRIZZLE BANTAMS
SULTAN BANTAMS

Fig. 5; in (*a*) is shown a male hackle feather, and in (*b*) is shown a feather from the body plumage of a female. In size, the Silky Bantam should be about the same as a Cochin Bantam. The female has a small oval crest, and the crest of the male grows back of the comb and extends out in the rear. The shanks and the outer toe are sparingly feathered. The Silky has five toes.



(*a*) (*b*)

FIG. 5

Other varieties such as gold, brown, and black are mentioned by Mr. Entwisle, who states also that he had white Silky Bantam fowls that were red faced, and some that were purple faced; some had single and others had walnut combs. Brown Silky Bantams are occasionally seen, but golden and black varieties do not exist at the present time.

131. Mating.—In the mating of Silky fowls to produce small or bantam fowls it is necessary to select small females and to mate them with small males, hatching the chicks late in the season and rearing them during the winter months. Special attention must be given to the selecting of fowls with perfect combs and crests; the crests should be as perfect in form and as large as can be found. In addition to this, the fowls should have profuse feathering, with as much down as possible; their legs, shanks, and toes should conform to the requirements of the breed.

MISCELLANEOUS BANTAMS

ANDALUSIAN BANTAM

132. Bantams having the general breed characters and the color and markings of Andalusian fowls have occasionally been shown. These are called **Andalusian Bantam.** The origin and development of these bantams cannot be traced, They may, however, be produced by inbreeding the smallest Andalusian fowls.

ASEEL BANTAM

133. The **Aseel Bantam** has been mentioned among the varieties seen at some of the English shows. Bantams of this variety conform to the shape and color of the Aseel fowls, but in size they are much too large to conform to the weights that would be natural for the Aseel Bantams. They are said to have been produced by crossing Old-English Game Bantam hens with small Aseel males. The variety colors would naturally conform to the variety colors generally found in the Aseel Game fowls.

FRIZZLE BANTAM

134. There is bred at the present time a variety of bantams having feathers like the Frizzle fowl. This variety is called the **Frizzle Bantam.** Just how the Frizzle Bantams have been produced is uncertain. It is claimed that some of the Frizzle Bantams that came from Japan were crossed or mated with some Frizzle fowls of small size, and as a result of selecting and mating the smallest and the best of the offspring, the Frizzle Bantam was created. Frizzle Bantams are bred in several variety colors—black, buff, red, and white. The most

attractive of all are those of the pure white variety. In form they range from the natural shape of the Frizzle fowl to the Cochin and Brahma Bantam.

GERMAN BANTAM

135. Several varieties of bantams are bred in Germany, and although they are not, as yet, generally known, they are of attractive appearance and have breed characters peculiar to themselves. In general make-up the **German Bantams** are more like the Booted than other varieties of bantams. Some have crests, others have muffs, and the greater part of all have shank and toe feathering like the Booted Bantam. Some have vulture hocks without shank and toe feathering. Most of them droop their wings like the Sebright Bantams. All of them are short in leg, upright in carriage, and as aristocratic in their bearing as are the Rose-Comb Bantams.

LANGSHAN BANTAM

136. About 1890 some black bantams were shown that were a fairly good imitation of Langshan fowls. The variety is known as **Langshan Bantams,** and is said to have been made by selecting, inbreeding, and reducing in size from Langshan fowls to Langshan Bantams. It was claimed that they descended from a Langshan hen of small size. They had the Langshan type to a limited extent and beautiful black plumage.

LEGHORN BANTAM

137. Several efforts have been made to bring into public notice bantams that are a fair imitation of Leghorn fowls. Among the best of these were the **Rose-Comb Black** and the **Rose-Comb White Leghorn Bantam.** The bantams of these varieties were evidently produced by mating Rose-Comb Black Leghorns with Black Rose-Comb Bantams and White Rose-Comb Leghorns with White Rose-Comb Bantams. But few have been bred.

MINORCA BANTAM

138. Bantams that were a poor imitation of Minorca fowls were shown some years ago. Following these, some black fowls called **Rose-Comb Black Minorca Bantam** were shown. There was so little difference between them and the Rose-Comb Black Leghorn Bantams as to lead to the conclusion that both were of the same origin.

NANKIN BANTAM

139. Origin.—The **Nankin Bantam** is thought to be one of the oldest varieties, if not the oldest variety, of bantam. In what place or from what source the bantams of this variety originated is not known.

140. Development.—Nankin Bantams have never been developed to any extent. They have largely been bred promiscuously as was done prior to the introduction of other varieties.

141. History.—Nankin Bantams have been mentioned for several centuries. They were used as a part of the base from which to produce bantams of many kinds. They have been referred to as having feathers on their shanks, and also as having shanks without feathers. As part of the foundation blood for making variety bantams, they have been most useful.

142. Description.—The Nankin Bantams are small; their plumage is dark cinnamon color, with considerable black in the flights; the tail is heavily bronzed with dark cinnamon color, approaching black. In some instances, the shanks are dark yellow; in others, of a bluish cast. Some have four toes and others have five.

143. Mating.—The Nankin Bantams have become almost if not entirely extinct, and are not likely to be revived. If some could be found and mated, and their offspring selected and remated, they might be revived into a bantam to resemble the Cochin, the Silky, or the Booted Bantam.

RUMPLESS BANTAM

144. The **Rumpless Bantam** has been made by nipping the rump from bantam chicks as soon as they were hatched. Rumpless Bantams can be made from Rumpless fowls by selecting the smallest, inbreeding, selecting the offspring, and rearing the chicks during the winter months.

SCOTCH GRAY BANTAM

145. The **Scotch Gray Bantam** has the size and shape of the Rose-Comb Bantam, with plumage the same as the Barred Plymouth Rock. It has been bred and shown in England as the Scotch Gray Bantam, and in America as the Barred Plymouth Rock Bantam. The bantams of this variety are said to have been made by selecting the smallest Scotch Gray males and mating them with several kinds of Cuckoo Bantam females, and selecting and reducing them in size by breeding from small offspring. One strain is said to have been produced entirely by mating a beautifully colored Dominique Leghorn male with a very small Scotch Gray female, and perfecting the size, color, and markings by careful matings of the resulting offspring.

SPANISH BANTAM

146. A fairly good imitation of Spanish fowls of bantam size has been shown as **Spanish Bantam.** None of them are known to exist at the present time, but they might be made by selecting small Spanish fowls, mating them with small Leghorn fowls of the same color, selecting the smallest of the offspring, inbreeding, hatching late in the fall, and rearing the chicks out in the cold.

SULTAN BANTAM

147. The **Sultan Bantam** is said to have been made by mating White Polish Bantams with White Booted Bantams, and then remating the smallest of the female offspring with Sultan males. The offspring are novel in appearance, but they have never been bred to any extent.

YOKOHAMA BANTAM

148. Some exceptionally small Yokohama fowls have been selected and inbred until very small offspring have been produced. These have been shown as the **Yokohama Bantam.** A few have been seen at the leading shows of England, but up to the present none has been shown in America.

FOWLS OF THE PHEASANT FAMILY

VARIETIES AND HABITS

1. The pheasant family of fowls is a group of fowls of the Gallinæ order to which the domestic fowls belong. The family includes, in addition to the true pheasants, the partridge, grouse, quail, turkey, guinea fowl, peafowl, and a number of others. To poultrymen, the most important differences between the fowls of the pheasant family and other gallinaceous fowls are in their habits. They do not readily lend themselves to domestication, although some members of the family, the turkey for instance, have been domesticated to the extent that they can be raised profitably. When bred in domestication, the fowls of this family require conditions more or less closely approaching those of the wild fowls of the same kind. They cannot be so successfully raised in close confinement as the domestic fowls. The turkey, especially, must have ample range, where the soil is uncontaminated and where it can pick up at least a part of its subsistence. Even under such conditions, domestic turkeys have deteriorated to the extent that many of them are smaller and less hardy than wild turkeys. The prairie chicken of the West, the grouse, the quail, and the various birds known as partridges cannot be domesticated. However, their eggs may be hatched under a hen and the young enclosed and fed in a coop. In this condition, they may be grown to maturity, but the wild instinct is never overcome so that they can be liberated in the poultry yard. At the first opportunity they escape and seek their native environment.

The only fowls of the pheasant family that will be discussed in this Section are the *turkey*, the *guinea fowl*, and the *peafowl*.

TURKEYS

ORIGIN

2. The originals of all turkeys were native to America. The **North American turkey** (*Meleagris americana*), the **Mexican turkey** (*Meleagris mexicana*), and the **Honduras turkey** (*Meleagris ocellata*) are all well-known wild varieties that still exist. It is thought that a fourth variety, a black turkey, might have existed in Cuba and Porto Rico, and that this may have been the variety discovered by the Spanish explorers, who took specimens with them on their return trips home. Whether or not this is true, the turkeys first found and taken from America to Spanish countries were darker in plumage than any of the existing wild varieties.

The North American turkeys were found in the United States from Mexico to Canada, also through the southwestern and eastern states. As late as 1873, large flocks existed in the Middle West. An unusually large flock of about 3,000 turkeys was seen in Central Iowa during the fall and winter of 1873. They were large and vigorous and their plumage was as rich and beautiful as it is possible to have in this variety. Shortly after this date they began to disappear, and 10 years later but a few could be found in the same locality.

Mexican turkeys were plentiful below latitude 35°, and the Honduras turkeys are still found in that part of Central America adjacent to Honduras.

The Honduras turkey has not been successfully bred away from its native heath. Neither has it reproduced when kept with other varieties. The North American and Mexican varieties have been prolific with all varieties of domestic turkeys, but they were not taken to Spain until many years after the black or dark-plumaged turkeys that were first taken.

VARIETIES AND THEIR DEVELOPMENT

3. The original Norfolk turkeys of England were black and must have descended from the black turkeys that were first taken from the West Indies to Spain about 1518, and later to England. Subsequently, Mexican turkeys were taken to England, and by crossing them with the black Norfolk turkeys the Cambridge turkey may have been made. Early writers state that some of the Cambridge turkeys were gray, some were black, and some were white, and frequently they approached the coloring of the North American wild variety. Other writers describe them as varying in color, being gray, pied black and white, and rusty brown, the gray being the most common. This would indicate that gray plumage was prevalent in the Cambridge turkeys. This color would come naturally to them from the Mexican variety.

The same shade of plumage existed in the turkeys that were bred in France, in England, and in their near-by colonies, and the Germans bred much the same kind of turkeys. When America was settled, the pioneers brought the kind of turkeys that were bred in their homes. Some were taken to the West Indies, some to Mexico, and some to North America, where they mingled with the wild varieties of the localities, and in this way began the natural crosses from which the Bronze and Narragansett turkeys were made. Later, both North American wild and Bronze turkeys were carried into England, and from them the Cambridge Bronze turkey was made.

It has been claimed that white turkeys intermingled with wild turkeys of Kentucky, and that from such crosses the Bourbon Red turkeys have descended. Buff turkeys were probably made from crossing white and other varieties. Of whatever variety color turkeys may be, all have descended from the original wild varieties found in America.

4. The remarkable attractiveness of the American turkey is fully proved from the fact that in less than 25 years after the discovery of America it was in use on the table of the royalty of Spain. The preference of the turkey as a beautiful bird is

mentioned by Martin Doyle, who says that, according to Norfolk tradition, an ancestor of Sir George Strickland, Bart., first brought it into England; as a proof of this statement, the crest of the Strickland family, given by Edward VI about 1550, is a turkey cock. Edward Brown, of England, quotes the fact that the first turkey was eaten in France at the wedding feast of Charles IX and Elizabeth of Austria. A number of turkeys had been sent from Boston to St. Malo, and when the ship reached that port the provincial governor despatched a dozen to the chef of the king's kitchen. These were stuffed and served. Charles IX was so pleased with them that he began to breed turkeys in the forests of St. Germain. From that time to the beginning of the 19th century, turkeys were kept in all parts of the world for table purposes only. Following this, more attention was given to their selection, and about 1850 the people of America began to breed them more carefully for the separation of plumage color; and from then to the present time marked attention has been given to the careful breeding of the several varieties, none of which, however, has ever equaled the popularity of the Bronze turkey.

5. The wanton destruction of wild turkeys throughout North America almost annihilated the race, and the careless inbreeding of domestic turkeys so destroyed their vitality as to open the way for their speedy destruction through a disease called blackhead. The alarm was sounded against such destruction when it was too late to save them in their wild state. Some landowners in Virginia and Pennsylvania restricted their estates for the protection of the few turkeys that were left in that locality. The introduction into the domestic turkeys of new blood from the few remaining wild turkeys started a reviving influence. In addition to this, turkey breeders who had given special attention to variety colors began the strengthening of their flocks by culling the weakling females and by the use of wild males. Although the domestic turkeys still lack their original vitality, so much has thus been accomplished as to warrant the statement that their original vigor can be restored. England, France, Belgium, and other countries have

joined in the work of improving their reproducing qualities and in strengthening their vitality. In addition to this, an effort has been made to improve their domestication, until at the present time it is possible to keep, breed, and rear turkeys in closer confinement than formerly.

6. Turkeys were described, but were not mentioned by variety names, in the original Standard that was compiled in England in 1865. Bronze turkeys were described in the American Standard of 1867, and in the Standard of 1874, the Black, Bronze, Buff, Narragansett, and Slate turkeys were described; the White turkey was added to the Standard in 1875. This should prove that the variety colors of turkeys were well established before they were considered as standard varieties bred for exhibition.

The turkeys mentioned in the Standard of 1875 have all been developed into varieties worthy of the name given them. The work of developing them has been accomplished almost entirely in America. The fanciers of England have made the Norfolk, or Black, turkey and the Cambridge Bronze turkey; the poultrymen of Belgium have made the Ronquieres turkey. But little attention has been given to the development of turkeys in Spain and Italy. In these countries, the turkeys are small, have dark plumage, are regularly colored, and of remarkably good quality as table poultry. The best of the European breeds that reach the London markets are said to come from Normandy, and some of fairly good quality are sent from Russia. All of the Continental turkeys that reach the London market, with the exception of those from Normandy, are of the same type as the Italian turkeys.

In England, the Black, the Bronze, and the White turkeys are considered as true varieties, and the others are accepted as subvarieties that would naturally be expected to come as sports from these varieties as a result of promiscuous breeding. In America, seven varieties are described as standard; the Black, Bronze, and White turkeys are the favorites.

BREEDING OF TURKEYS

7. Turkeys were formerly kept in a semiwild state, and this practice is still followed in many localities. From Missouri to California and as far south as Texas, large numbers are bred, and most of the breeders permit their turkeys to roam at will during the day, encouraging them to return at night and to roost in the open or partly open sheds, on outdoor roosts, or in trees near the barns and poultry houses. When this method is followed, breeding can be controlled to a certain extent by having only the best grade of females, selected for their size, health, and vigor. Strong, healthy females 2 or 3 years old are best for use in such flocks. Such females mated with wild or half-wild males have produced offspring from which strains of the Bronze turkey have been renewed or established. Females bred in this way have reached a weight of 34 pounds, and males from 40 to 48 pounds. These extreme sizes are not best for breeding purposes, but such proportions prove that they can be brought back to their original size, health, and vigor. In Belgium, in France, and in England they are more closely confined than in America.

Pedigree breeding may be carried on with such certainty as to enable the breeders to select the offspring from each female, as well as to know the sire of each offspring. Pens for pedigree breeding of turkeys are shown in Fig. 1 on a $\frac{1}{2}$-acre tract. The females are confined together in the large enclosure at the right, and a nest for each is hidden beneath the growing shrubbery or under branches cut from pine trees. A box or frame of reasonable size is either slipped under the shrubbery or covered with pine branches. Occasionally two hens will lay under the same shelter. Usually, when this occurs, each hen will make her own nest, and, by watching them, the breeder will avoid confusion in gathering the eggs. The eggs from each hen should be marked and female chickens used to hatch them. Large Brahma hens can cover from 5 to 7 eggs, Plymouth Rock hens from 4 to 6 eggs. One or two turkey hens should be set at the same time, usually each on her own eggs, and when the poults are hatched, they should be toe-marked, and all that are

Fig. 1

hatched by hens and by turkeys should be given to the turkey hens to brood.

The small yard on the left is for one of the male turkeys used for breeding purposes. In the rear of the small yard are two larger yards for confining one or more male turkeys. In addition to these special pens, other flocks of five females and one male can be confined in an orchard enclosure divided into two pens, each surrounded with an 8-foot fence. In this way, five hens in each pen can be successfully mated with males selected for their size, strength, and freedom from disease. In the special pens, shown in the large enclosure, individual or pair matings are practiced, and from such careful matings many of the finest turkeys are produced.

The color illustration of the pair of Bronze turkeys was painted from life. These turkeys were said to be the best of their kind. The male was 7 years old when the illustration was made, and the female was in her fourth year. Only a few days before the sketch was made the male had been brought back from Kentucky, where he had been sent to gain the advantages of the environments of that locality and to be bred with a flock of females that were half wild and half Bronze. From this change of climate, the vigor of the male was strengthened and the turkey crop of the locality where he wintered was greatly improved.

8. **A Method of Mating Turkeys.**—In one method of mating turkeys, each male is kept by himself in a small yard next to a main enclosure in which the females are confined. The males will strut up and down in their yards and call to the hens. They, however, until they feel disposed to mate, will take but little notice of the toms. At such times, a hen turkey will come close to the fence that separates her from a male, squat, spread her wings, and call to the male. After she has done this several times, the male selected for pairing with her is driven into the enclosure where the female is confined, and the two are watched until copulation has taken place. To copulate with a hen, the male turkey hops up on her back, tramps with his feet and beats with his wings until she lifts her tail.

When she does this, complete service is given. The whole operation may take 5 minutes or it may be finished in half a minute. When the operation is prolonged there is danger of the female getting over on her side. For her safety, in such cases the tom should be pushed off. Sometimes the position of the tom prevents the female from lifting her tail, and no matter how long he stays on her, copulation is impossible. Old toms are more likely than young ones to lacerate the back and sides of the female.

As soon as service has been completed, the tom must be returned to his enclosure; otherwise he will return to the female and tramp the flesh from her back and sides in an attempt to renew intercourse with her. One copulation is usually sufficient for a hen turkey, and she may not permit another. If, however, the female continues to solicit the attentions of the male, the tom may be returned to her for a second service. One satisfactory service from the male will ordinarily fertilize all the eggs for that period of laying up to the time the female becomes broody, yet some hens will accept frequent copulations from the male. If a turkey hen is not permitted to sit after she has laid her clutch of eggs and becomes broody, she must be again served by the male in order to have her next clutch of eggs fertile.

BLACK TURKEY

9. Origin.—The **Black turkey** was the first of the domestic varieties of turkey, and was originally known as the Norfolk turkey. It was brought to America by the early settlers, and has since been bred as a distinct variety.

10. Development.—The Black turkey was first developed about Norfolk, England. It was brought to America where it was bred in small numbers, but was soon almost lost sight of through intermingling with the wild variety. Later, the Black turkeys were separated and were improved in size by being bred with dark-colored offspring of Bronze turkeys. Turkeys of this variety, when fat, had the peculiarity of yellow skin, and for this reason they were much admired.

11. History.—The early history of the Black turkey has been told in the origin and history of all turkeys. During the earlier existence of these turkeys in America, they were neglected and became small and undersized. A few breeders brought them forward by selecting the largest specimens and mating them with very dark offspring of Bronze turkeys. They have been greatly improved, but interest in them has not increased as it should. They are excellent for market purposes from the fact that they are very tame and mature early into marketable sizes.

12. Description.—The Black turkey is of medium size. Mature males weigh 27 pounds; young males and hens, 18 pounds; and females less than a year old, 12 pounds. The Black, Buff, and Slate turkeys are of the same Standard weights, but the Bronze turkey is many pounds heavier. In color, the beak, shanks, and toes of the Black turkey are dark or slaty black; the head is red; the eyes are dark; and the plumage is lustrous black throughout. When fat, the skin is yellower than in any other variety.

13. Mating.—In selecting Black turkeys for the production of exhibition offspring, hens in their second or third year, which weigh from 16 to 18 pounds, should be mated to young males that weigh in their first year from 16 to 18 pounds and in their second year from 25 to 28 pounds. All should have full, round, plump, and heavy body formation, and beautiful black plumage throughout, with a brilliant luster of green sheen.

BOURBON RED TURKEY

14. Origin.—It is thought that the **Bourbon Red turkey** originated in Kentucky through the promiscuous breeding of the wild variety that is found in the mountains of Kentucky with turkeys of the white variety. Some claim that they were an original buff variety that is indigenous to the mountains of Kentucky. Naturalists believe that all buff, brown, or reddish-brown turkeys have come from the intermingling of a wild variety with the domestic White turkeys and the Bourbon Red may have come from such crosses.

15. Development.—Bourbon Red turkeys were bred in small numbers in a few localities until they were taken up and bred in opposition to the Buff turkey. They were also used to improve the size and vigor of the Buff turkey. Their unusual vigor attracted attention and they were separated and developed into their present type.

16. History.—Bourbon Red turkeys were first bred in Kentucky and were distributed from there into Ohio and other localities. Their valuable qualities were brought into public notice and they were admitted to the American Standard in 1910 as a variety likely to supersede the Buff turkey.

17. Description.—As described in the American Standard, the Bourbon Red turkey should have head, beak, eyes, and neck the same as other turkeys; the body plumage should be dark brownish red; the wing feathers and tail almost white; the shanks and toes are described as reddish pink. They are large turkeys with cinnamon plumage, many of them being marked with black lines near the point of the feathers. Their plumage is more or less intermingled with white, and their shanks and toes are reddish brown, shading into yellow. Their plumage color is such as would be expected to result naturally from crossing the Buff and the Bronze turkeys and selecting for and breeding from offspring with dark-red or cinnamon-colored plumage. They are not true in color and markings of plumage, neither do they conform to the Standard color description.

18. Mating.—The only rule of mating that can be applied to Bourbon Red turkeys is to select those conforming to the Standard description and to mate and remate them continually until a strain has been established that will produce offspring approaching perfection. The greatest value from this variety will be derived from crossing it into other varieties to strengthen vitality sufficiently for producing turkeys for market purposes.

BRONZE TURKEY

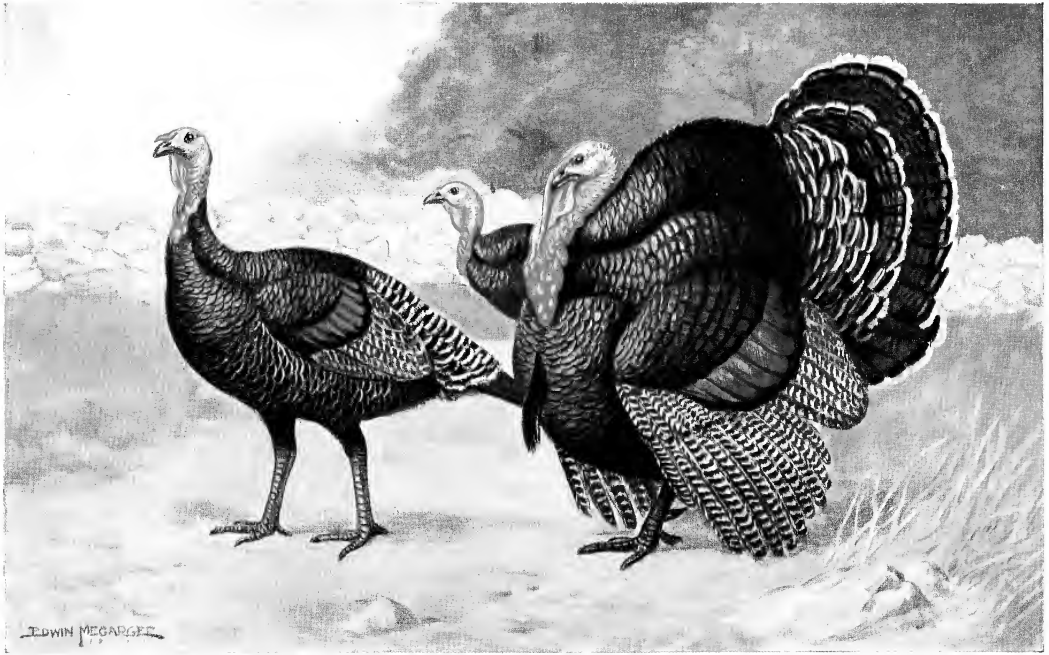
19. Origin.—The **Bronze turkey** has been made by crossing the wild North American turkey with the Black turkey and by selecting and breeding the offspring thus obtained and recrossing them with the wild variety.

20. Development.—The Bronze turkey has been developed by similar methods in America and England. In America, the Bronze turkey was made and developed, and in England the Cambridge was changed into the Cambridge Bronze by crossing the original Cambridge variety with the American Bronze. Owing to this development, the Bronze turkey is the same throughout the world.

21. History.—In his earliest writings, Audubon mentioned the fact that the wild turkeys of North America would come from their haunts to the farms and feed and mate with the domestic turkeys. Such matings produced turkeys with plumage that was almost as rich in color and markings as that of the wild variety.

The most probable theory of the beginning of the Bronze turkey is that the few domestic turkeys that were brought from other lands to America mingled with the North American wild turkey, and that from such matings the Bronze turkey was established. Farmers living in Central Iowa in 1869 killed all their male turkeys and depended entirely on the wild variety to come into the barnyards and mate with the turkey hens. Size and quality were so much improved in this way as to attract the attention of others, and it is reasonable to suppose that like matings occurred in other localities. In this way the domestic turkeys of North America were transformed into the most vigorous and the most prolific of all turkeys.

22. Description.—The Bronze turkey has the same general shape or formation as all turkeys, which is exemplified in the color illustrations. The head is long and of peculiar formation, being bare of feathers well down the neck of the male, but showing a rough, uneven growth of lumps, called



BRONZE TURKEYS

caruncles. A similar but less conspicuous growth occurs on the females. Instead of a comb, male turkeys have a small, round growth on the top of the head. This growth enlarges to many times its natural size when the turkeys strut; at the same time the head and face assume a red or reddish-purple hue, and the growth down the throat and down the neck becomes enlarged. But little of this is seen in the female turkey. The neck is well curved in the male, which carries the head upright and arrogantly; the female shows less of this. The breast is round, broad, and deep from the throat down under the breastbone to the thighs, and along from the point of the breast to the rear of the abdomen; the back is broad and long, with the tail carried in a direct line with the back. When standing erect in a natural position, there is a regular incline from the base of the neck to the tip of the tail. The shanks should be strong and set well apart; the toes, strong. The greater the width between the thighs, the more vigorous the turkeys will be. The body formation should be round, deep, broad, and full. A tuft of hair called a beard grows from the breast of the males after they are 9 months old. Such growth may appear on the breast of females after they are a year old.

The weight of the Bronze turkeys is, for adult males, 36 to 40 pounds; for young males, 33 to 35 pounds; for males less than a year old, about 25 pounds; for hens, 20 pounds; for hens less than a year old, 16 pounds. Although such weights are standard for this variety, it is not unusual for turkeys to weigh even more.

The head of both sexes of turkeys of all varieties is a rich red, and the red extends well down on the neck of the male. The beak, shanks, and toes of the Bronze turkey are dark; as it grows older, its shanks and toes change and become brightened with pink or red. The plumage of the male is black, embellished with bronze sheen, each feather having a black bar across the tip and the end fringed with white. The females have more white in their plumage, thus giving them a lighter appearance. They are well described as having a surface color of black, brilliantly shaded with bronze and

glistening green sheen, the richness of which is exceeded only by that of the North American wild turkey.

23. Mating.—Females that average 16 pounds or more, that are more than a year old, and that have every feature required by the Standard description should be mated with males that have every feature that is most desirable in the Bronze turkey. All turkeys used for breeding should have a good length of breast and body; they should measure well around the breast, back, and body, just forwards of the thighs, which should be set well apart. They should be prominent in the breast and have beautiful plumage.

Too much encouragement has been given to length of shanks and legs in the Bronze turkey. The breeding turkeys should have shorter legs than are common in this variety. Shanks, toes, and excessive length of leg add considerably to the waste product, which lessens their value as market poultry.

BUFF TURKEY

24. Origin.—The origin of the **Buff turkey** cannot be definitely traced. Turkeys of this color have appeared in every locality where turkeys have been grown. The French call them Chocolate; the English, Buff or Fawn; and in the American Standard they are described as Buff turkeys. Buff and cinnamon color, either or both, is apt to appear in flocks where Bronze and White turkeys intermingle. Both the Buff and the Bourbon Red turkey probably had about the same origin. Evidence of the uncertainty in color of the Buff turkey is shown in the fact that specimens with clean, clear plumage free from black, white, or other foreign color are rare.

25. Development.—Buff turkeys have never been developed to a condition in which they can be depended on to produce offspring having a clean, clear shade of color that might be termed buff, fawn, or chocolate color. A few fairly good ones have been produced from time to time, but they have received so little attention that they have never been finished into a perfect variety.

26. History.—Buff or red turkeys have been mentioned occasionally since the beginning of the domestication of turkeys. In Pennsylvania, they were known as the Tuscarawa Reds. Moubray mentions turkeys that had plumage of a light buff or delicate fawn color and were exceedingly neat and Quaker-like in appearance when the shade was unbroken, but it was sometimes mixed with white. He also mentions a variety known as Copper or as Dutch Red, some of the darker shades of which were called Cinnamon. He mentioned another variety that had dark brownish-red plumage, the webs of the feathers being penciled and tipped with a darker olive brown or rusty black.

These descriptions seem to refer to turkeys having plumage color like the Buff or the Bourbon Red. Moubray also mentions the fact that they were found in Holland and in several localities of England.

27. Description.—Buff turkeys are described in the American Standard as having a body formation and a general make-up the same as other turkeys, the main difference being that the shanks and the toes of the turkeys of this variety are bluish white or flesh colored. The plumage is buff colored throughout, the wings and tail shaded with a lighter color. They range in plumage from a light fawn to a cinnamon brown more or less broken with white in wings and tail.

28. Mating.—In mating Buff turkeys, large hens having a plumage color as perfect as can be selected should be mated with males as nearly perfect in breed characters and plumage color as can be found. To strengthen vitality, increase size, and improve plumage color, the finest colored Bourbon Red females mated with the best Buff males will produce offspring that may safely be bred with the Buff turkeys.

CAMBRIDGE TURKEY

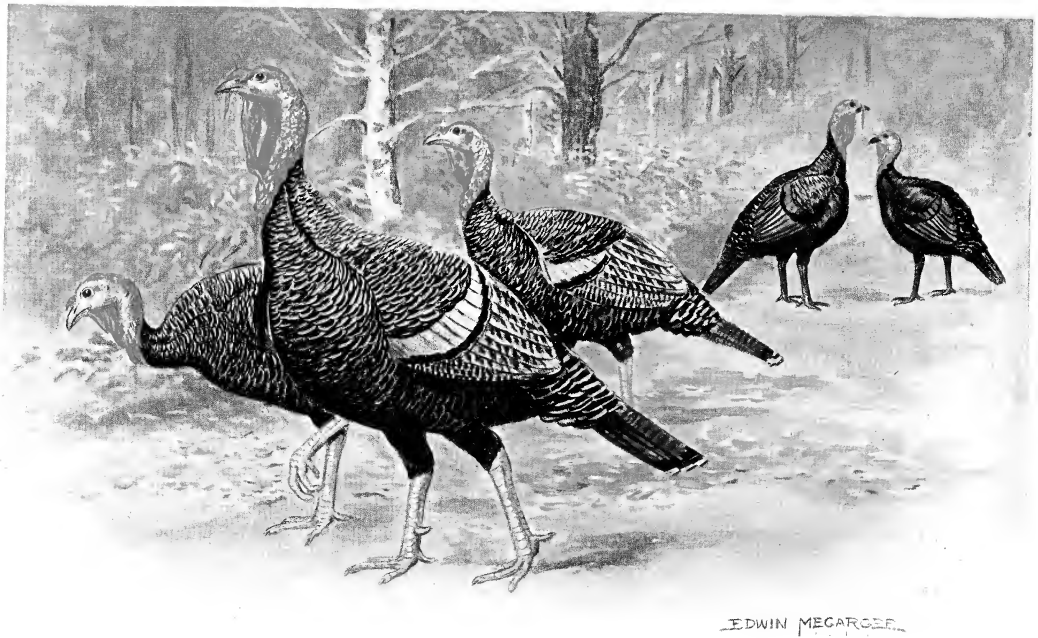
29. The original **Cambridge turkey** was more like the Narragansett than any other turkey. The Cambridge turkeys were large and prolific and were made, perhaps, by intermingling the Mexican wild turkeys and the Norfolk turkeys, of England. They were popular in England for many years and were the choicest turkeys bred in England and other near-by countries.

When American Bronze turkeys were introduced into England, they were bred with Cambridge turkeys, and this intermingling of the Bronze with the Cambridge was continued until the Cambridge turkey was transformed into the *Cambridge Bronze*. It is now described in the English Standard as the *Bronze turkey*, and the description in the English Standard conforms with the description of the Bronze turkey in the American Standard. In fact, Bronze turkeys are now identical in England and America.

NARRAGANSETT TURKEY

30. Origin.—Although it is evident that the **Narragansett turkey** originated in Rhode Island, there is no trustworthy information concerning its origin. Some claim that these turkeys were made by crossing Cambridge and Black turkeys; others affirm that they occurred naturally as offspring from several kinds bred in that locality; and still others state that they came from crossing Black turkeys with turkeys from Mexico. It has also been claimed that they have been made by crossing Mexican wild turkeys with light-colored Bronze females. A natural conclusion would be that they had been made by crossing turkeys having a mixture of gray in their plumage with Mexican wild turkeys. This conclusion is supported by the fact that the Mexican wild turkeys had white markings in the back and body, and tail feathers. Such turkeys crossed with the lightest colored Bronze females would naturally produce offspring marked like the Narragansetts.

Turkeys having gray plumage have been seen in every locality where turkeys have been grown. Moubray mentions



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NARRAGANSETT AND BLACK TURKEYS

them as the bustard variety. They were formerly plentiful in Ireland, in the German provinces, and in parts of France. They have never been considered as a separate variety, and they are more like badly marked light-colored Narragansetts than those of any other variety. Turkeys are frequently offered for sale in the markets that have plumage that might be described as gray, grayish black, or grizzled slate.

31. Development.—Narragansett turkeys were developed in that portion of Rhode Island adjacent to Newport and Narragansett Bay. They were bred also in several parts of New England and in Central Ohio. During recent years, the best specimens have been bred in the western part of Rhode Island and about New London, Ohio.

32. History.—Narragansett turkeys might be called a local product, as they have never been generally distributed throughout the United States, and but few if any have ever been seen in England. At one time they were considered the best turkeys for market purposes, and much of the reputation gained for Rhode Island turkeys was established through them. Following the persistent claim of unusual value for the Bronze turkeys, the Narragansett was neglected. Turkeys of no other variety are superior to them for any purpose.

33. Description.—The Narragansett turkey bears the same relation to the Bronze turkey as the Wyandotte bears to the Plymouth Rock. The Narragansett is a close, compactly built turkey as compared with the larger and more lengthy formation of the Bronze turkey. The Mexican wild turkey, from which they are thought to have come, is shorter in body, thighs, and shanks, and more compactly built than the North American wild turkey. The color and markings of the Narragansett are described in the Standard as black, dull black, and metallic black. The most beautiful coloring is the rich, metallic black ground color, emblazoned with bronze and plainly marked at the ends of the feathers with a light shade of gray, verging on white. The color illustration of them was made from life and shows the distinctive color and markings of the best exhibition specimens of this variety.

34. Mating.—In selecting Narragansett turkeys from which to breed offspring for exhibition, the main features for careful consideration are correct body formation and proper size, which should not be less than 16 pounds for old hens; pullets, if used, should weigh 12 pounds; males, from 18 to 25 pounds, according to their age. These weights are for turkeys in good condition for breeding and not fattened for market. Color and markings should be carefully selected to conform to Standard description. At the present time no better guide can be followed than to have them as nearly as possible like the turkeys in the color illustration. After a strain has been established, they can be selected for improvement in body formation and plumage color. A strain must first be established that will breed true to form and color, and special attention should be given to maintaining and improving the plump, compact body formation and preserving the low-set carriage natural to them.

RONQUIERES TURKEY

35. Origin.—Edward Brown, of England, gives it as his opinion that the **Ronquieres turkey,** which originated in Belgium, was made by intermingling black turkeys from France with gray and white turkeys, and crossing the offspring with Bronze turkeys.

36. Development.—The Ronquieres turkeys have been developed in Belgium with the end in view of having the greatest amount of meat and the least amount of offal, of having them with short extremities and the body lengthened along the breast line, and also of having them of a body formation that will respond quickly to the process of fattening so extensively followed in that locality.

37. History.—For many years Ronquieres turkeys were bred without consideration for form or color, the purpose being to produce the best market poultry. Recently, they have been bred to a more uniform shape and color. They have not been brought to America.

38. Description.—Ronquieres turkeys have the same general formation as other turkeys. In color, the males range from dark gray to yellow and black, some having feathers penciled with fine, black, crescent-shaped lines bordered with a brilliant black bar; others have the ends and edges of the feathers marked with light gray or white. The females are irregular in color and markings, ranging from yellow to black, many of them being gray, with each feather marked with a dark bar. Both males and females always have white feet and toe nails.

The following statement in regard to the Ronquieres turkey is from Louis Vander Snickt, of Belgium: "This variety is divided into three subvarieties: the gray-brown; the buff, which is the most beautiful; and the white and black. In the last named there are pure white or white with a little black spot or a black lacing on each feather, and also finely ticked with black, until some specimens are almost entirely black. So long as the legs are white, this does not matter, but when the plumage becomes totally black, the legs are black also, and the turkey can no longer be called a Ronquieres."

39. Mating.—Ronquieres turkeys are mated for size, shape, and length of breast and body formation best suited for market. But little attention is given to selection for color. In some localities where they have been selected and mated for plumage color, they are black with gray, somewhat like Narragansett turkeys.

SLATE TURKEY

40. Origin.—The **Slate turkey** originated from flocks where all varieties were permitted to intermingle. Turkeys with slate plumage will come from cross-mating Black or Bronze turkeys with Buff, Fawn, or White turkeys.

41. Development.—Slate turkeys have never been developed to any extent. Although they have been recognized as a distinct variety with slaty-blue plumage, they are irregularly marked and cannot be depended on to breed true to color.

42. History.—But little can be said about the Slate turkeys, except that they have always been recognized as a separate variety, but they have never been handled in a manner that would make them popular.

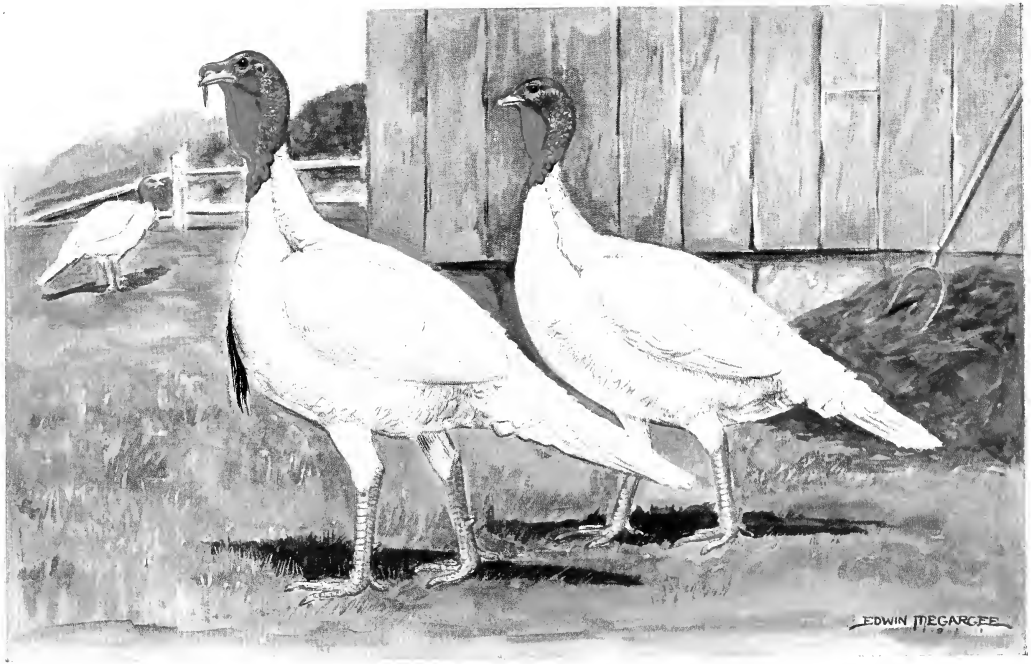
43. Description.—In general formation, Slate turkeys should be the same as turkeys of other varieties. Their plumage should be slate, dark slate, or slaty blue throughout, and usually dotted with black spots. Their shanks and toes are either light or dark slaty blue to match the plumage. Although this description meets the requirements of the Standard, but few turkeys conform to it. The plumage is usually of a slate color and marked and splashed with black; their shanks range in color from a light to a dark slaty blue. But few of attractive color have been bred.

44. Mating.—If as much attention were given to Slate turkeys as is necessary to produce the color and markings of the Andalusian fowls, they could be made attractive. To establish slate color would require years of careful breeding from the best that could be found, and then mating and remating the offspring until in color and markings they had become the same as the Andalusians.

WHITE TURKEY

45. Origin.—Early writers state that white turkeys came from Holland, and in respect to the place of their origin they were named White Holland turkeys. They are generally known as the **White turkey.** Turkeys with white plumage might come as sports from any of the dark-plumaged varieties, and it is well known that such sports have come from both Bronze and Narragansett turkeys.

46. Development.—For many years White turkeys were considered too delicate for general-purpose breeding, and for this reason they received but little attention. Their recent development in America has greatly improved them.



White Turkeys

47. History.—At one time White turkeys were nearly obsolete. Later, more attention was bestowed on them, and white sports from Bronze and Narragansett turkeys were crossed with them. Continued crossing with white sports from other varieties strengthened their vitality, increased their size, and darkened their shanks and plumage. Defects in these respects have been removed by selecting the best offspring, and White turkeys are now proportionate in size to those of other varieties. They are strong and vigorous, and have pinkish-white shanks. More of them have been bred during recent years than formerly, and they have become a favorite variety for both exhibition and market.

48. Description.—White turkeys are heavier than the Black, Buff, or Slate turkeys. The Standard weight for mature males is 28 pounds; for young males, 20 pounds; for hens, 18 pounds; and for pullets, 14 pounds. Mature males sometimes reach a weight of 34 pounds; mature hens, 24 pounds; young males, from 22 to 24 pounds; and young females, from 16 to 17 pounds. Such unusual size may be attained only by the use of the largest hens for breeding purposes.

The beak, shanks, and toes are pinkish white; the eyes are brown, but not so dark as in other varieties; the plumage is white throughout. Pure white plumage without foreign color is unusual; the plumage is apt to show both creamy-white and dark markings. In all varieties of turkeys, except the White and the Black, white skin prevails. Some strains of the Black turkey have yellow skin and flesh. White turkeys bred directly from other varieties are likely to have flesh and skin conforming to the color of the parent stock. White turkeys having pinkish-white beak, shanks, and toes are almost certain to have skin of the same shade.

49. Mating.—To succeed in breeding White turkeys for exhibition, large hens weighing from 18 to 20 pounds, with pure white plumage, pinkish-white beak, skin, and feet should be mated with males of equal quality that weigh not less than 20 pounds when young, and from 26 to 30 pounds when matured.

Both should have well-proportioned bodies and perfect health. No ailing turkeys should be used for breeding purposes.

To improve size, strength, and vigor in the offspring, white-plumaged hen turkeys that have come as sports from the darker varieties may be mated with White males, and the male offspring that have pinkish-white beaks, skin, shanks, and toes may be bred directly into the flock. No attempt should be made to breed directly into a flock of White turkeys a male turkey with dark shanks. When such males are to be used, they should be mated with the best White females, and the offspring should be introduced through the use of the best females so produced. Male turkeys that have bad body formation and are deficient in color of beak, shanks, feet, or plumage are unfit for general use in a flock of White turkeys kept and bred for exhibition.

PEAFOWLS

VARIETIES

50. Peafowls are indigenous to Asiatic countries. They are plentiful in the large forests of India and inhabit the mountainous regions also. Their domestication has been recorded through many centuries, and their outline can be traced in ancient Greek paintings. Large numbers have been distributed to all parts of the world, and they have been domesticated in Europe and America. They seem to do best where the winters are not severe, yet they can be bred successfully in the Eastern and Middle States, and some have been bred as far north as Central Canada.

Four varieties of peafowls are recognized by persons who breed them for ornamental purposes. These are the *Black-Winged*, the *Common*, the *Javan*, and the *White*. Perhaps the Common and the Javan were the original varieties and the others were formed by sports from them.

51. Development.—Peafowls have not been developed by man. Those kept in domestication never equal the wild

varieties in their natural state. The only development they have received, or perhaps the only domestication, has been from keeping them in gardens and parks more for ornamentation than for use.

52. History.—P. Martin Duncan, M. P., F. R. S., F. G. S., of London, locates the original peafowls in India, where they are seen in large flocks. He says they are even more beautiful in a wild state than in domestication and that they frequent forests and jungle places, naturally thriving in hilly and mountainous districts. They come forth in the open glades and fields to feed in the morning and evening, retiring to the jungle for shelter during the heat of the day, and roosting at night on high trees. They ascend the Nilgiri Hills and other mountain regions in Southern India to an elevation of 6,000 feet or more, but do not ascend the Himalayas above 2,000 feet. Many Hindu temples have large flocks of peafowls, and shooting them is forbidden in some Hindu states. Peafowls breed according to the locality, generally from April to October.

BLACK-WINGED PEAFOWL

53. The **Black-Winged peafowl** has been known as the peafowl of Japan. It differs from the Common peafowl in having black wings burnished with a bluish-green tinge; the flight feathers of the wings are of a cinnamon color, striped with a darker brown or black; the plumage of the female is a grayish white, splashed with black.

COMMON PEAFOWL

54. Origin.—The **Common peafowl** is the variety most common in India. Fowls of this variety are found there in large numbers, and it is almost certain that they originated in that locality.

55. Development.—The Common peafowls have been developed only for domestication, and they can be kept in any locality where turkeys will prosper.

56. History.—It is said that long before the Christian era peafowl tongues were considered the daintiest of all dishes. If this statement is accepted as a fact, and there is no reason to doubt that such dishes were served at the banquets of ancients, it is amazing to think of the number of peafowls that would have to be killed in order to serve the guests at a single banquet.

57. Description.—The Common peafowl is not unlike the turkey in body formation. In head and neck it differs from the turkey in having a crest of twenty or more feathers on the top of the head and a growth of feathers over the head and neck. The females are more somber in color than the males and do not grow the long tail feathers so much admired in the males. The color of the female is mostly chestnut brown, shaded with bluish white; the flight feathers of both males and females are light chestnut color. The peculiar feature of the peacock is the long, flowing tail that grows from the back and spreads profusely, some of the feathers being of great length. These are called a train and are bluish green, shaded with a beautiful marking at the end of each feather. The body plumage is emblazoned with blue, and the thighs and sides are marked with gray.

58. Mating.—The only method of mating that can be applied to peafowls is to select the best and most beautifully plumaged fowls (not akin, if possible) and give them their freedom, either in a park or in an enclosure that is large enough to permit them to wander about. When kept in a small enclosure, one male and two or three females will answer best. Where they have the freedom of a large estate, twelve or fifteen females with as many or half as many males may be kept. When the number of males and females is the same they are likely to mate in pairs. Where there are more males than females there will be fighting in the flock. The female will hide her nest under brush or among bushes, and her mate will wander about, remaining close at hand during the period of incubation, and will help her care for the young when they are hatched.

241-I L T 117 § 13 PEA FOWL AND GUINEA FOWL

JAVAN PEAFOWL

59. The **Javan peafowl** is said to have originated on the island of Java, but there is no certainty as to this. The fowls of this variety are unlike those of other varieties, which would indicate that they are of a different origin than the others. They are said to inhabit both Siam and Borneo. They are larger than the Common peafowl, and both males and females have beautiful plumage, the gound color of which is green, emblazoned with coppery bronze, blue, and greenish blue. But few have ever been seen except on private estates or gardens where such fowls are kept for ornamentation. Although they might be bred in any locality where the winters are reasonably mild, there is no evidence that this has been accomplished.

WHITE PEAFOWL

60. The **White peafowl** had its origin in sports from other varieties. The fowls of this variety have pure white plumage and are very rare. A few have been seen in America, but they are more numerous in European countries. Whether or not they will breed true to plumage color has not been established, and it is impossible to affirm that they will produce their own kind. Evidence of their ancestry will be seen by holding before a strong light the tail feathers of the male. When this is done, the peculiar markings, or ocelli, of the darker varieties can be traced in outline.

GUINEA FOWLS

61. There are several varieties of **guinea fowls,** and it is claimed that all have been found in Africa. Whether they are all distinct varieties or whether some have come from intermingling two or more original varieties is not known. It is thought by some persons that the Pearl and Vulturine were the original varieties and that all others sprang from them. The best known varieties are the Pearl and the White. The Vulturine guinea is one of the most beautifully plumaged of all fowls.

PEARL GUINEA FOWL

62. Origin.—Guinea fowls are said to have originated in Africa. It is also claimed that they were found in other localities, but whether they were carried thence from Africa or were indigenous to those localities cannot be stated.

63. Development.—For centuries guinea fowls have been bred in many localities. They have been kept wherever man existed, but so little attention has been given to their breeding that it might be said that they are self-developed.

64. History.—In writing the history of guinea fowls, Moubray says: "According to mythology, the Meleagrides, the sisters of Meleager (son of Ceneus, King of Macedonia), who were cruelly put to death bewailing the death of their unfortunate brother, were metamorphosed into guinea fowls; the showers of tears they shed bedecked their otherwise sable plumage with white spots; and, were it not too grave a subject for jest, we should state that this melancholy origin may account for the mournful cry of 'come back,' which the guinea hen utters to this day."

Later writers styled the guinea fowls Numidian fowls. In Portuguese they are called Pintada, and in Spanish, Pentates, both words signifying *painted.* Later, they become known as

Pearly fowls, because of the pearl-like spots on their plumage. They are now called **Pearl guinea fowls.**

65. Description.—The body formation of Pearl guinea fowls is round and compact; the back is arched into a half circle from the shoulders to the tip of the tail; the neck is rather long in proportion to the body; the head is of medium size; the face, wattles, and helmet, which grows on top of the head in place of a comb, are red, burnished with purple; patches of white grow from the sides of the face and neck; the body plumage is slaty blue throughout, with pearl-like spots. The distinguishing features between the males and the females are the larger helmet and the more erect carriage of the male, and their habit of running about on tiptoe calling loudly.

66. Mating.—The mating of Pearl guinea fowls to produce large offspring with perfect color can be accomplished only by selecting the best that can be found, and mating and remating their offspring, always selecting the largest and best females.

VULTURINE GUINEA FOWL

67. Origin.—The **Vulturine guinea fowl** originated in Africa. It is the most beautiful of all the varieties that have been brought from that country. Guineas of this variety are rare, and but few have been brought to America.

68. Development.—But little is known of the habits of the Vulturine guinea fowls in their wild state, and only a few have been kept in confinement. Some kept by Homer Davenport, of New Jersey, became so tame that they would eat from his hand. They have been bred in Europe but never in America. It is thought that they could be established and would do well in Florida or Southern California. They are more beautiful than the common kinds of pheasants, and they would serve a better purpose in the destruction of bugs and be valuable as table poultry.

69. Description.—It is difficult to describe the Vulturine guinea fowl, since it does not conform in shape or plumage color

to any other variety of the family. It has been known as the Vulturine Royal Guinea, referring perhaps to its kingly appearance and to the shape of its head, which is fashioned much like the head of a vulture. About its neck and growing down over the shoulders and breast is a cape of long, pointed feathers, which have the appearance of a hackle. These feathers are beautifully colored, having white stripes down the center, with an edging of black finely dotted with white and bordered with blue; the feathers of the back are of similar form and color. The rest of the body plumage is said to be a blackish-brown, ornamented with pearl-like spots. Its appearance is that of a fowl clad in beautiful plumage with a long, flowing circle of feathers extending down the neck and on to the breast and back, covering the shoulders; and the entire body color is emblazoned with a rich, glossy polish, which at times reflects blue, purple, or a bluish-bronze sheen. The tail feathers are longer than those of the other varieties of guinea fowls.

70. Mating.—Man cannot select and mate Vulturine guinea fowls better than they will mate naturally. If two or three females and one or two males are kept in an enclosure they will live peaceably, but two pair kept in a small enclosure during the breeding season may quarrel. If the enclosure is large enough for each pair to have their own part and their own nest, many pairs may be kept. Guinea fowls can be acclimated in any country where the temperature is not colder than is it at night in the mountains of Africa, and where there is plenty of woodland, open fields, and natural food for them. If kept in confinement, special attention should be given to their health and to selecting females having size and vitality.

WHITE GUINEA FOWL

71. Origin.—The **White guinea fowl** is supposed to have originated from sports from Pearl guinea fowls.

72. Development.—To develop the White guinea fowls, white or nearly white fowls were selected, mated, and remated for the production of guinea fowls having white plumage.

73. History.—Naturalists state that wherever dark-colored peafowls, guinea fowls, or turkeys are bred, albino, or white, offspring sport from them. White guinea fowls are mentioned as having existed from the beginning of the domestication of guinea fowls.

74. Description.—The White guinea fowl has the same general body formation as the Pearl guinea fowl; the plumage is pure white; the shanks and toes are usually red, or red shaded with a darker color.

75. Mating.—The most that has been done in mating White guinea fowls has been to select for white plumage without regard to other conditions. A few have been selected for size, shape, and color, and in this way size has been improved. If more attention were given to selecting large females with perfect color and mating them with males of the best form and color that are not akin to the females, improvement would quickly follow.

OTHER VARIETIES OF THE GUINEA FOWL

76. A number of variety colors have come from intermingling or cross-mating Pearl and White guinea fowls. The **Gray guinea** has a ground color of grayish blue or dull lavender, irregularly spotted throughout. The **Mottled,** or **Pied, guinea** has a white breast and white wing flights, but otherwise it is quite like the Pearl guinea. There is a **Laced,** or **Black-Penciled guinea,** but it is exceedingly rare. It has a ground color of white, marked with black spots; some of this variety are said to have markings like the Sebright lacing in their plumage. At one time a **Black guinea** existed; this was so dark that the spots on the plumage were almost obliterated. In addition to these, there is a **Purple guinea,** which has a light purple shade throughout the plumage, marked with spots. Records show that all of these varieties have existed within the last two centuries.

Moubray mentioned a **Tufted,** or **Crested,** guinea. He stated that this was similar to the Pearl guinea fowl except in the head and neck, which were more like the head and

neck of a turkey, and that a tuft of feathers grew on the head, forming a black crest instead of a helmet; the feathers were spotted with grayish dots, the number varying from four to six on each feather. Whether this was a true variety or an unusual offspring from other varieties has not been told.

DUCKS AND GEESE

DUCKS

ORIGIN

1. Naturalists have claimed that the wild Mallard duck is the original from which all domestic ducks have descended, but they have failed to discover an ancestor for the Mallard. There are various kinds of wild ducks, but the Mallard is the only kind that has breed characters that conform to those in domestic ducks. The Mallard and the Rouen have the same general body formation and plumage color. The earliest illustrations show that the plumage of the wild or Mallard duck was the same then as now, and this color is strongly present in the Rouen breed. By careful selection and mating, the Rouen ducks have been made larger, more bulky in body formation, less agile, and less inclined to fly. Whether or not all ducks have descended from one original variety may never be known.

It is impossible to state definitely just how early the domestic duck was developed. The ancestors of the Aylesbury were perhaps the first variety of white-plumaged ducks, and they are said to have existed for centuries before their development or improvement began. All variety colors in ducks may have descended from one breed of wild ducks, for sports are as likely to come from them as from the black-red varieties of poultry. White offspring may have appeared centuries ago, and these, bred again with the Mallard, may have produced blue or fawn-colored plumage, and, as a natural result, other colors have been developed from them.

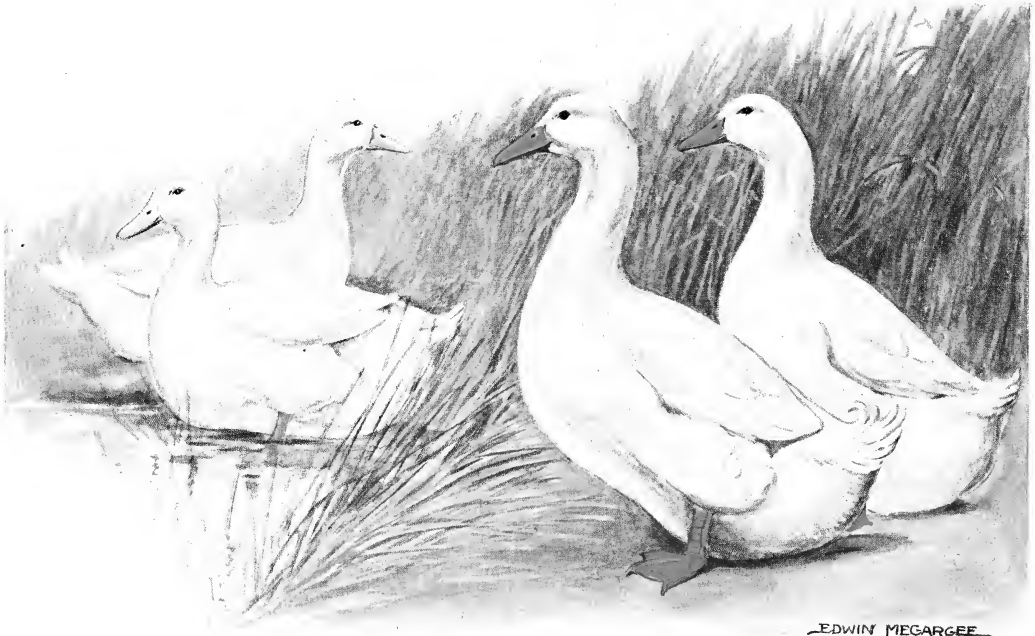
All breeds and varieties of ducks have been greatly improved in size, body formation, and plumage color during the last century. The Call ducks, which were naturally small, have been reduced in size and beautified in plumage; the Muscovy, the Runner, and the newer varieties of Buff Orpington and Khaki ducks have been so improved within the last twenty-five years that they are favorites in many localities.

AYLESBURY DUCK

2. Origin.—The **Aylesbury duck** has come from white ducklings that from time to time have appeared among the offspring of wild varieties. An occurrence of this kind was reported as late as 1900. Three white ducklings came in a lot that had been hatched from wild duck eggs. The white offspring were bred together, and white-plumaged ducks were produced from them. Other such occurrences have been reported. The best of all the white-plumaged ducks that could be found in that locality were selected by duck growers living near the town of Aylesbury in England. They were bred, fed liberally, selected, and mated until a breed of white-plumaged ducks was established, having white bills and orange shanks and feet. The best offspring were selected, and in this way the breed was made and was named for the town in which the ducks originated.

3. Development.—Aylesbury ducks were first developed for exhibition by the fanciers of England. They were bred and improved, and they became famous for their beautiful form and clean, clear, white plumage. Large numbers of them have been bred and shown in England; fewer of them in America.

4. History.—Aylesbury ducks have been most highly considered for market poultry since prior to 1860. Beginning at about that time, large numbers were sold annually from the territory about Aylesbury, all of them being killed when 8 weeks old and sent to market at the season when they would bring the highest prices. Their popularity continued until they



AYLESBURY AND PEKIN DUCKS

were supplanted by the Pekin ducks. About 1870, the breeders of fancy ducks conceived the idea of making the Aylesbury beautiful for exhibition. Some were selected with reference to size and color and for light-colored bills and bright orange shanks. They were bred and fed until they attained enormous size, and in the exhibition hall they were for years even more popular than the Rouen. Since the coming of the Pekin ducks, the popularity of the Aylesbury has waned.

5. Description.—The Aylesbury duck appears to have a longer body than is usual with either the Rouen or the Pekin. This is caused by its straight and elongated back, with like formation along the breast line, giving the body the appearance of great length in proportion to size, which is large. The ducks weigh from 7 to 10 pounds, or more. The bill is white or flesh colored; the eyes, dark; the shanks and feet, orange; the plumage, pure white and free from creaminess or other foreign color. The beauty of the Aylesbury duck for exhibition is its snow-white plumage and pinkish-white bill, with shanks of a bright orange.

6. Mating.—In the mating of Aylesbury ducks, the largest males and females that have great length of body, pure white plumage, pinkish-white bills, and bright orange shanks and feet should be selected. Ducks of this quality that are 2 or 3 years old can be mated to yearling drakes that are as nearly perfect as possible.

All ducks will breed well if they are permitted to have the freedom of a range and swimming pool. But few will lay in nests or hatch their own eggs, and they will do this only when they have been taught. They should be housed at night and not released until about 10 o'clock each morning; by that time most of the ducks will have laid their eggs on the floor, which should be covered with straw. To be successful with ducks, the floor of the house must be sanitary, the straw must be removed and dried in the sun, the floor swept clean, strewn with sand to a depth of $\frac{1}{2}$ inch, and the dried or clean straw spread over this. A house suitable for ducks is shown in Fig. 1. If the ducks are permitted to run about without

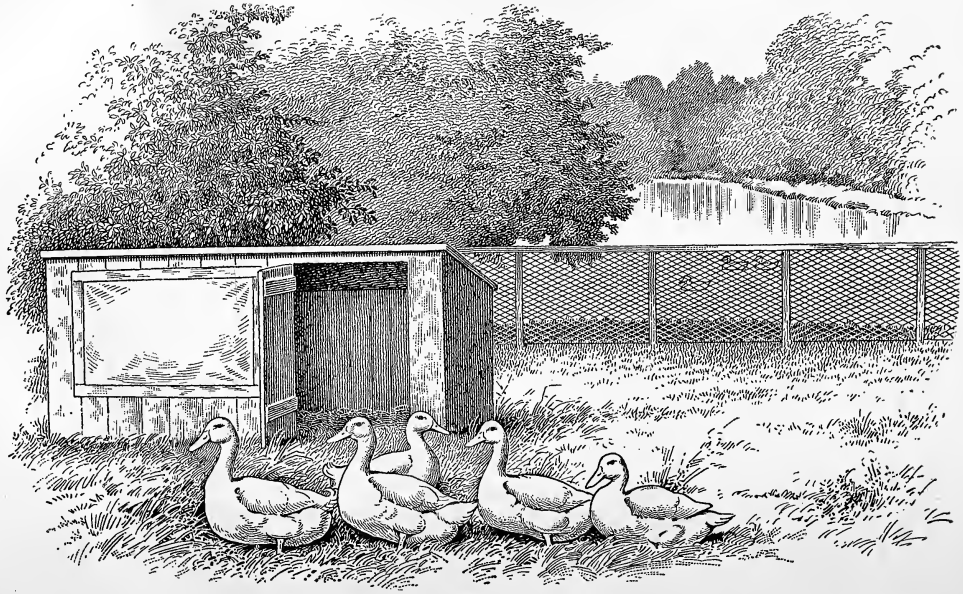


FIG. 1

restraint, most of the eggs will be lost on the ground or in the swimming pool. Eggs from ducks that have a swimming pool are more likely to be fertile and the ducklings will have more vitality than when they are deprived of this, or grown entirely on dry ground.

To teach ducks to lay in a nest or to hatch their own eggs, they must be hatched and reared by mother ducks, and from the beginning they must be shut into the house with the mother ducks at night. Nests should be made on the floor, and from this training some of the young ducks will acquire the habit from those that incubate their eggs. Some breeds of ducks do this naturally and others can never be taught to do it.

CALL DUCK

7. Origin.—The **Call duck** is a bantam duck that is said to have been made by selecting the smallest Mallard and small white ducks and breeding, inbreeding, hatching late, and rearing them on dry land with but little feed. In this way two varieties were made, one the Gray Call, which is colored like the Mallard; the other, the White Call, which has white plumage.

8. Development.—The Call ducks were developed from the smallest ducks that could be selected, with plumage color like the wild Mallard, and the smallest white ducks. Their offspring were remated for the purpose of reducing size and having bantam ducks of two varieties.

9. History.—Moubray stated that in early days there was a marsh duck in Norfolk, of a rather diminutive kind which resembled the Mallard both in appearance and plumage, and that in the cottager yards specimens of a small Dutch breed were frequently seen. These were of a pretty and peculiar appearance. The plumage was of a whole color, either a slaty-blue or dun shade, or a sandy-yellow or cinnamon, and sometimes it was like the color of a tortoise-shell cat. These were called Rotterdam ducks on account of having

been obtained from that place. Moubray further stated that the Call ducks, also from Holland, were very small, and that they were kept or valued only, as their name indicates, to serve as call, or decoy, ducks among artificial, or imitation, decoy ducks. They were of two sorts, one with pure white plumage and the other with a grayish-brown plumage like that of the Mallard.

10. Description.—There are two varieties of Call ducks. One, the **Gray Call,** has shape and plumage quite like that of the Mallard duck, dark-brown eyes, and a greenish-yellow bill with dark shading. The other, the **White Call,** has pure white plumage, bright-yellow or orange bill, shanks, and feet, and blue eyes. There is no standard weight for Call ducks—the smaller they are the greater their value.

11. Mating.—In the mating of Call ducks of either variety for the production of exhibition offspring, the smallest that can be found with perfect plumage color and markings, according to the variety, should be selected. Special attention should be given to having small females. From them, offspring may be bred that will be an improvement on the parent stock, provided the parent stock has been bred in line long enough to have established breed characters, color, and markings best suited to them.

CAYUGA DUCK

12. Origin.—The **Cayuga duck** is thought to have been made by crossing black ducks with the wild Mallard.

13. Development.—The Cayuga ducks have never been developed to any extent, except that they have been bred so as to free their plumage of foreign color and to make them into ducks that have black plumage throughout, and that breed reasonably true.

14. History.—About 1851 black ducks made their appearance on Cayuga Lake, New York. Later, they were distributed throughout America and England. Although they were first

brought into prominence in Cayuga County, New York, they are thought to have originated in South America from a black duck now called the Black East India.

15. Description.—Cayuga ducks average a pound less in weight than is required in Rouen ducks. Their bills, shanks, and toes are dark or black; the eyes, dark; the plumage, brilliant black throughout, glistening with sheen; the wing primaries may be tinged with brown.

16. Mating.—Large females that weigh from 7 to 9 pounds when 2 years old and from 6 to 7 pounds when yearlings should be mated with drakes 1 or 2 years old that average a pound heavier than the females. They must all have beautiful black plumage throughout, glistening with sheen. If the wing primaries of the females are overcast with brown, those of the males should be very dark. Special attention must be given to having perfect black surface and under plumage; this will avoid the appearance of gray or white in the offspring. The bills, shanks, and feet should be black, including the soles of the feet, with no indication of yellow or orange in them.

CRESTED WHITE DUCK

17. Origin.—The **Crested White duck** has been known for a long time. Early writers have stated that ducks frequently appeared with tufts of feathers growing on the top of the head. Some have mentioned the fact that these crests almost equal in size the white crests of the Polish fowls.

18. Development.—Crested White ducks have not been developed in large numbers. Only a few have been selected and bred for the improvement of size, shape, and color.

19. History.—Frequent mention has been made of white ducks that had feathers on their heads, and other breeds of ducks have occasionally been mentioned as having a crest. Crests have appeared in flocks of Pekin ducks that were bred for market. Some of the most beautiful crested ducks that

have been shown in America were selected from a flock of Pekin ducks that were bred in Pennsylvania for market.

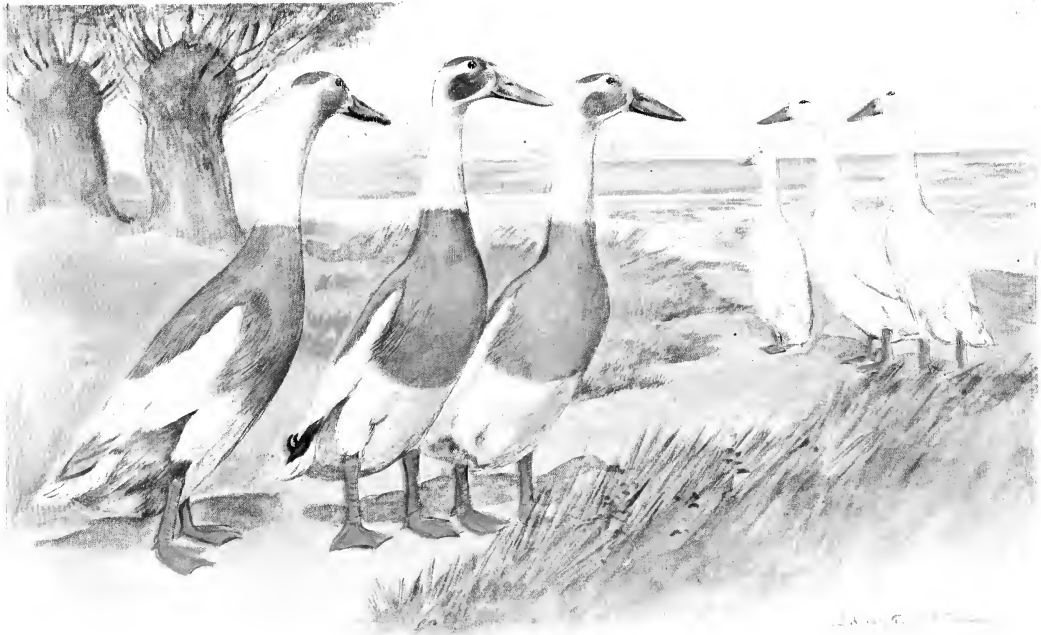
20. Description.—Crested White ducks may have a body formation like either the Aylesbury or the Pekin. They have an upright carriage, yellow bills, shanks, and toes, dark or blue eyes, and pure white plumage throughout, with a crest of feathers growing on the top of the head. The crest should be round and evenly balanced, and should grow close to the top of the head. When there is too much space between the top of the head and the lower part of the crest, it is called a bouquet crest, because of the stem beneath. Mature drakes of this breed weigh 7 pounds; mature females and young males, 6 pounds; immature females, 5 pounds.

21. Mating.—Females that have true breed characters, pure white plumage, and perfectly shaped crests that are evenly balanced on the head should be selected and mated with males that equal them in quality. Crests that are too large are apt to lop over to one side. Offspring from such stock are liable to have the same defect.

EAST INDIA DUCK

22. Origin.—The **East India duck** is said to have originated in India.

23. Development and History.—The East India ducks have been known by many names, among them being Buenos Ayres, Labrador, Black East India, and Black Brazilian. They are thought to have come as sports from the Mallard ducks, and in many localities they are considered as identical with the Cayuga ducks. The English Standard describes the Cayuga, and the American Standard describes both the Cayuga and the East India. It is reasonable to suppose that all black ducks have come from the wild Mallard, their difference in size and plumage emanating from the influence or environment of the locality in which they were bred.



FAWN AND WHITE RUNNER DUCKS WHITE

24. Description.—East India ducks are of the same general appearance as the Mallard. They have an upright carriage and move quickly. Their plumage is a deep, rich black, with a brilliant green sheen; their bills are very dark; their eyes, shanks, and feet are black. The main differences between the East India and the Cayuga ducks are in size (the Cayuga being larger) and in richness of plumage color. It is claimed that ducks of either the Cayuga or the East India breed can be shown in either or both classes. The smallest offspring that have the most brilliant plumage may be shown as East India ducks, and the largest and less brilliantly colored offspring may be shown as Cayuga ducks.

25. Mating.—The best East India males and females should be mated, special attention being given to having their plumage black to the skin and brilliant with green sheen, the bills very dark green, and their shanks or feet very dark or black.

RUNNER DUCK

26. Origin.—The **Runner duck** has descended from originals that were brought from India, the first importations being made into England about 1835. It is claimed that ducks of the same type still exist in India, and that some of them were brought into England as late as 1906.

27. Development.—Although the general appearance of the Runner ducks is the same now as when they were brought from India, they have been changed, developed, and improved into better form and color, and a body formation best suited for prolific egg production.

28. History.—Runner ducks are generally known as Indian Runner ducks. This name was given to them on account of their place of origin and their habit of running about continually. Runner duck is an appropriate name for the breed and is the one adopted here. The ducks might properly be called fawn-and-white Runner ducks. When first brought from India, Runner ducks were valued chiefly for

their peculiarities and were bred in a careless manner until about 1890, when it was found that some of them laid about 14 dozen eggs in a year. A club was then formed and a standard made for them. Later, they were brought to America. About the same time special attention was given in Australia to breeding them for egg production, without regard to plumage color. Following this, a controversy began concerning the color of plumage, one faction claiming that the English type was correct, the other making the same claim for the American type. In reality they are so much alike that it is difficult to distinguish between them. Some claim that only those laying white-shelled eggs can be considered pure; others insist that only those laying tinted-shelled eggs are of proper breeding. Scientific investigators state that eggs having white shells are proper for the Runner ducks. It has been asserted, without proof, that small Rouen females have been crossed into some strains of the Runner ducks.

29. Description.—An unmistakable feature of purity in the Runner ducks is their head formation, which is flat, long, and lean; they differ materially from other ducks in the crown of the head and the location of the eye. The head is so flat and lean as to give the eye the appearance of being almost on a level with the top of the skull, as shown in Fig. 2. English writers state that the long sweep of the top line of the head should be continued without an indentation or a break down to the tip of the bill, there being no dent even below the nostrils. The neck should be long, slender, and straight from the back of the head to its juncture with the body, the upper part being covered with short, fine feathers; the body should be long and narrow; the wings of medium length and carried close to the body; the back, straight from the shoulder line to the end of the tail; the breast, round, well proportioned, and straight from below the point of the shoulder to between the thighs. There should be a slight

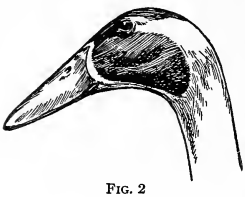


FIG. 2

enlargement of the abdomen between and directly in the rear of the shanks, with a taper from there to the under point of the tail. The English Standard describes their body formation as like an old-style soda-water bottle.

The body color of both males and females should be fawn and white. The color of the head in the males should be dark, with cheek markings of a lighter shade, approaching fawn; the neck, white, without spots or markings. In the females the markings should be the same, except that they should conform in color to the remainder of the body, which should be fawn, with as little dark shading as possible.

The wing bows in the male are darker than those in the female; the under cut, or markings on the under part of the body, should be straight and distinct, the white extending beyond the vent; the primaries and secondaries, pure white; the rump may have dark shadings in the feathers; the main tail feathers may have a white under color. In close competition, black curly feathers have most consideration, but they may be either black, white, or mixed fawn and white. In young ducks the bill is lemon or orange colored, spotted with green. These spots gradually spread over the bill, and when the duck is 2 years old, the bill is cucumber green, with a black bean at the tip, slightly hooking over the lower mandible. This is especially true in the females, and any other color should count against the specimen. The shanks and feet in both males and females are orange red; the eyes are dark brown.

Neither the American Standard nor the English Poultry Club Standards recognizes dark markings in the female. They demand fawn and white as the only permissible colors. The fawn in the head of the drake is darker than in other parts of the body. Those having markings in plumage like that of the Rouen females are discarded under these Standards as unfit for the exhibition pen.

One English Club Standard states that the body markings of the females should correspond with those of the males, except in the shade of fawn, each feather having two distinct shades of fawn, with beautiful lacing and penciling and very faint lines of white dividing the two shades, especially in the

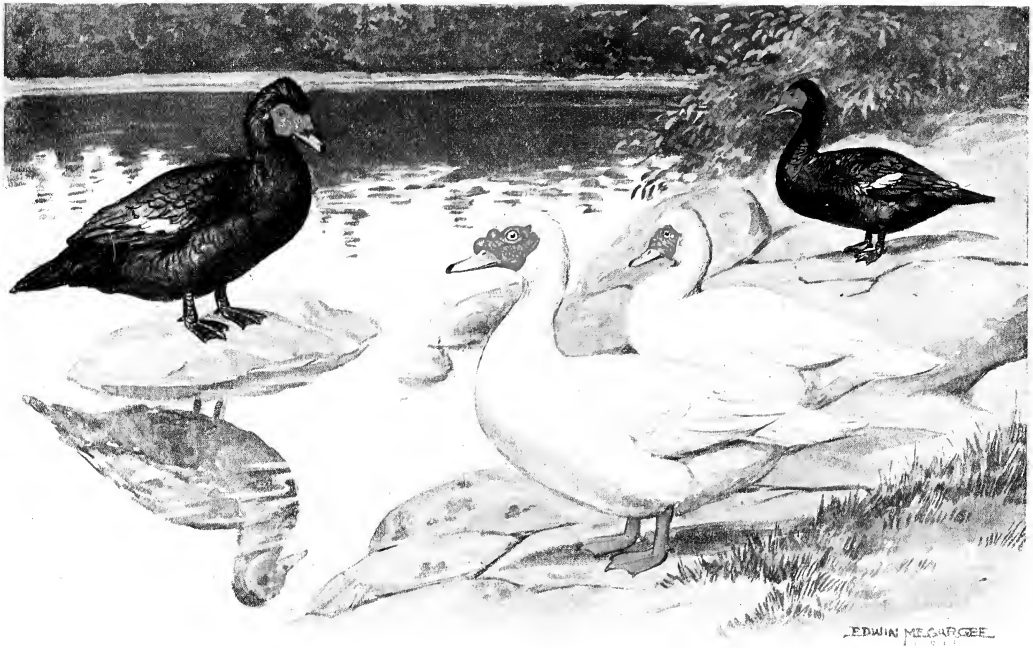
overlap. The neck and breast feathers should show the same penciling when handled and separated; the back and rump feathers should be a shade richer in color, but as the penciling is covered by the overlapping it is not in evidence when the duck is at liberty. The feathers of the tail should match the shade of color in the back and rump. White tail feathers are considered a defect. Ducks so marked should be described as a separate variety and not classed as fawn-and-white Runner ducks.

30. Mating.—For the production of exhibition Runner ducks, males and females that conform to breed characters and have perfect plumage color should be mated. To conform to the fawn-and-white type, the females should have fawn-and-white plumage, and the males should have the same colors of a slightly darker shade. If males with the darker shade of plumage color are used it will prevent the loss of color markings in the offspring. No males or females bred from females having penciling in the plumage should be bred into ducks of the fawn-and-white variety. To produce those having darker shades of color in the males and the pencilings in the females, males and females having color and markings as desired should be mated together. The males in this mating should be darker in shade of plumage color than the females with which they are mated. To establish in a strain the propensity for laying eggs having white shells, only eggs with white shells should be used for hatching. When mating for egg production only, females of the best body formation should be selected from strains that produce from 12 to 15 dozen eggs in a year.

WHITE RUNNER DUCK

31. Origin.—The **White Runner duck** was made by crossing fawn-and-white Runner ducks with a breed of white ducks, and they have come also as white offspring from the fawn-and-white variety.

32. Development.—The White Runner ducks have been developed through selecting the best from the cross-bred



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Muscovy Ducks

varieties and mating them for form and color; but the greatest improvement has come from selecting, mating, and breeding in their purity the white offspring from ducks of the fawn-and-white variety.

33. History.—White Runner ducks are of recent origin, and the meager information that can be gathered relative to them has been given in their development.

34. Description.—White Runner ducks should have the same body formation and breed characters that are natural to those of the fawn-and-white variety. The color of their eyes is slate or blue; their bills, pale yellow; their shanks and toes, orange; the body plumage, white throughout. White offspring from the fawn-and-white variety are shown in the color illustration. These specimens have body formation fully equal to the best of the fawn-and-white variety.

35. Mating.—The most dependence can be placed in breeding White Runner ducks in a direct line through the white offspring of the fawn-and-white variety, or in selecting those having perfect breed characters, yellow bills, shanks, and feet, and beautiful white plumage. All ducks that have white plumage are more attractive when their bills, shanks, and feet are yellow.

MUSCOVY DUCK

36. Origin.—The **Muscovy duck** was found wild in South America; other than this its original source is unknown.

37. Development and History.—Early explorers of South America found the wild ancestors of the Muscovy ducks. Experiments made by cross-mating them with other breeds proved that they were a distinct species; such matings produced sterile offspring. They were formerly called Wild Musk ducks, and are occasionally called Brazilian ducks. They inhabited the wildest localities in South America, feeding in the marshes and lowlands and nesting in high places. Their early domestication cannot be traced. But little attention was given to

their improvement prior to 1870. Since that time they have been distributed throughout the world, and have been not only domesticated in America and European countries, but have been bred to form and color for exhibition. The females are kind and tractable, and the males under 2 years old may be controlled, but when older than this they are cross to children and during the breeding season they will savagely attack persons or animals that trespass on their domain and disturb them or their mates.

38. Description.—There are two varieties of Muscovy ducks, the Colored and the White. Both of these are of the same general body formation, the males being larger than the females. Their shape, size, composition, and color are shown in the color illustration. The Standard requires that the Colored Muscovy duck shall have a pink bill, shaded with dark or horn color; eyes, brown; shanks and toes, yellow, shaded with a darker hue, some being almost black; body plumage, lustrous black, emblazoned with sheen and marked with white, black predominating. The original, or wild, specimens were almost entirely black, and the other varieties are thought to have descended from them.

The White Muscovy duck has a pinkish-white bill, blue eyes, orange or yellow shanks and toes, and pure white plumage.

Some offspring having blue plumage somewhat like the Blue Swedish ducks have come from promiscuous crossing of the Colored and White Muscovy ducks. Also some having blue plumage barred with a darker shade have been bred from these varieties.

About the head and face of ducks of this breed is a growth like the caruncles on the head of a turkey. When they are young, there is but little of this; as they grow older, it increases until the head and face are overgrown with a heavy, red, corrugated formation. This is especially true of the males. Both males and females show a growth of feathers on the top of the head which they can elevate at will.

39. Mating.—When mating Muscovy ducks for exhibition, the breeder must make careful selection for color and

markings. In the Colored Muscovy ducks, black should predominate in both males and females. Special attention must be given to selecting females that are larger than the average.

In mating White Muscovy ducks, ducks with good breed characters, large size, and pure white plumage must be selected. To improve size, large females 2 years old or older should be used for breeding. These ducks will continue to breed for more than 12 years, and it is claimed that they have produced offspring when more than 20 years old. They prefer to select their nests, lay, hatch, and rear their own young, but they can be domesticated to such an extent that they will lay in coops, under boxes, or on the floor in the corners of a duck house.

PEKIN DUCK

40. Origin.—The **Pekin duck** was originally bred in China; its origin is unknown.

41. Development.—The Pekin duck has been developed largely in America.

42. History.—Pekin ducks were brought from China into both England and America about 1870. These ducks were distributed throughout the United States and made use of in breeding broiler ducks. Crosses were made with the Aylesbury ducks to increase size, improve table qualities, and invigorate the strain. A final sifting out of all but true Pekin ducks brought the greatest improvement.

43. Description.—Pekin ducks have moderately upright carriage with round, plump, and full breast and body. A peculiarity of this breed is the shape of the rear part of the abdomen. This is flat, having the appearance, in the female, of having been pressed up, as if molded in that position and held there. There is less of this in the male. The main tail feathers of both males and females have a tendency to turn up at the points. The long, straight body of the Aylesbury or Rouen is not correct for the Pekin. The bill, shanks, and feet are deep yellow or orange and free from black markings; the eyes are dark; the plumage is creamy white.

44. Mating.—In mating Pekin ducks for the production of exhibition offspring, it is necessary to select for breeders males and females that have breed characters strongly exemplified. The bills, shanks, and toes must be a rich, orange yellow; the plumage, as white as possible, with no creamy tinge on the surface. The males are usually larger than the females, and this should always be true in the breeding stock; the females should be large and well formed. Pekin ducks seldom become broody, and but few hatch and rear their young.

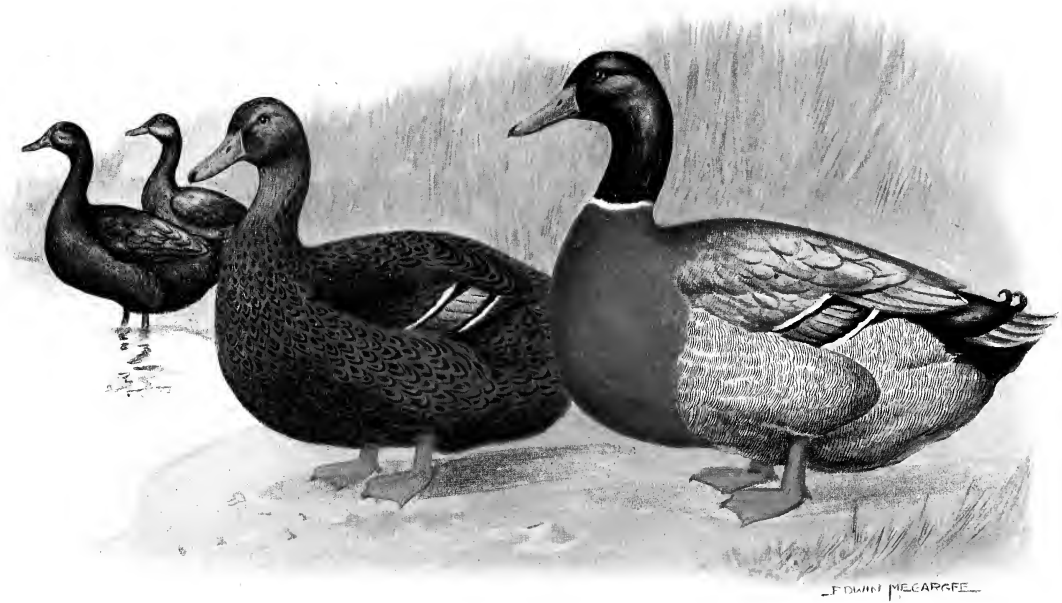
ROUEN DUCK

45. Origin.—It is generally conceded that the original home of the **Rouen duck** was Rouen, France.

46. Development.—The Rouen ducks have been developed from small ducks resembling the Mallard into one of the best ducks for the table and one of the most beautiful of all ducks for exhibition.

47. History.—Moubray mentions the Rouen as the first common duck that came into England, and states that it came from France. Others have claimed that it existed in many localities and was domesticated from the Mallard duck. These ducks have been known by many names, the most common being the Rhone and the Rouen ducks. They were developed in France, and were taken from there into England, where they were changed into large ducks having beautiful plumage color and markings, and exceptional quality as table poultry. They are generally used for crossing with other breeds, and their influence is visible in most of the ducks commonly bred for market.

48. Description.—The general appearance of Rouen ducks is shown in the color illustration. They have long, heavy body formation; full, deep breasts, and low-set keel. Their legs are short and their carriage is almost horizontal. In the males, the bill is green, shaded with yellow; the eyes are dark or hazel; the shanks and toes, dark orange red; the



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ROUEN DUCKS

head and the neck to near the shoulder are a rich, brilliant green, bordered below with a ring of white; the breast is claret color, which extends down between the shanks, where it gradually changes to an ashy-gray shade, and spreads over the abdomen and up the sides in a line with the dark markings between the tail and the lower edge of the wings. The English Standard describes this as French-gray ground color, penciled with grayish black. The American Standard describes it as steel gray, penciled with black. The center of the back is of a gray shade conforming to that of the under-body color. This is bordered on both sides with a rich, lustrous green which extends to the wings. The flights are dark or brown; other parts of the wings are gray; the wing bars are bordered with white and very dark blue; the tail is brownish black, edged with white. The entire body plumage is rich in luster and sheen; the head of the males changes from glossy green to dark gray when the breeding season is over, and resumes its natural color in the fall.

In the female, the bill, shanks, and feet are orange; the eyes, dark; the plumage of head and neck is brown, shaded with darker colors from the top of the head well down on to the neck; the wing bars are quite like those of the males; the body plumage is brown, each feather penciled with a darker shade. This color extends from the throat throughout the entire body plumage. In the English Standard, the body plumage of the female is described as golden, almond, or chestnut brown; in the American Standard it is given as golden brown. The body of both males and females should have rich, brilliant plumage, and the colors should be well defined and distinctly separated. The size of the Rouen conforms to that of the Pekin and the Aylesbury.

49. Mating.—In mating the Rouen ducks for the production of exhibition offspring, equal attention must be given to the selection of color and markings with that required for breeding the most beautiful plumage color in Partridge Cochin fowls. Strains of Rouen ducks have been established that breed so true that but few offspring have to be discarded.

To establish a strain of this kind requires that a start shall be made with males and females selected from a strain of Rouen ducks that is known to have bred well for many years. To improve or strengthen a strain of this kind, large Rouen females that are perfect in color and markings can be safely bred into it.

Where Rouen ducks are most successfully bred, they hatch and rear their own young. An enclosure for this purpose is shown in Fig. 1. In such an enclosure a drake and three or four ducks are confined. Nests are made inside of the house for the females to lay their eggs and hatch their young. The yard will serve as an enclosure for them throughout the entire year. The house can be used as a laying and breeding house during the spring and summer months, and as a shelter during the winter months. When the ducklings are partly grown, the fence is extended to the swimming pool.

SWEDISH DUCK

50. Origin.—The **Swedish duck** is said to have come from Germany, and is thought to have had a common origin with all other blue ducks.

51. Development.—Swedish ducks, like all other blue-plumaged varieties, have been developed chiefly for market; a few have been bred for exhibition.

52. History.—The original of all blue ducks may have been the Blue Termonde, which originated in Belgium, probably from intermingling dark and light-colored ducks. Dickson mentions a variety of blue ducks found about Norfolk, England, and the Huttegem ducks, which are blue and white, are said to have been made by crossing Blue Termonde with Runner ducks.

Blue ducks were brought from Germany to America, where they have been bred, improved, and admitted to the American Standard as Blue Swedish ducks. Although they differ somewhat in body formation from other blue varieties, it is thought that all breeds and varieties of ducks with blue or with blue

and white plumage have been made by crossing the original Blue Termonde with other kinds, the difference in body formation resulting from the difference in the kinds mated with the Termonde.

53. Description.—Swedish ducks have body formation and carriage somewhat like the Rouen ducks, but they are smaller. The color of the bill in the male is dark willow green; that of the female is shaded with brown. The eyes of both are very dark; the plumage is a slaty blue, with a patch or apron of white on the lower part of the throat. The color of the male is darker than that of the female. The feathers should be laced with a darker shade; the shanks and toes are a grayish slate color.

The Blue Termonde has greater length of body than the Swedish ducks, a more extended breast, and a curved under body. The plumage color and markings are the same as in the Blue Swedish breed.

The Huttegem ducks are blue and have a long body formation. They are somewhat like the Runner ducks in appearance, except that their carriage is less upright. Their plumage is broken-colored blue and white; the throat and breast are white; the remainder of the body plumage is mostly blue and is marked with white at the ends of the flights and tail. Huttegem ducks are not regular in coloring; some show the influence of Runner ducks by fawn shadings in parts of their plumage.

54. Mating.—The chief difficulties to overcome in the breeding of blue ducks is the maintenance of color. Steel blue, as it is called in ducks, and slaty blue, as it is termed in Andalusian fowls, is very difficult to produce in a pleasing shade and maintain both color and proper markings. Black and blue are kindred colors in blue ducks. The edging of black must be separated from the more delicate shade of center plumage color. This has always proved to be a master task in all fowls that have dark lacing or dark or black edging bordering the plumage. To maintain such color and marking requires line breeding of the strictest character. No one can hope to produce blue ducks having steel-blue or slaty-

blue plumage, edged around with the darker shade approaching black, without breeding them so close in line according to the chart mating system as to establish a strain that will produce offspring true to color.

The softer shade of blue without dark edging is less difficult to produce, except that a large percentage of the offspring are likely to show considerable white and the most perfect of all so produced will have more or less white in the plumage. This is strongly represented in the Huttegem ducks, which are broken blue and white; the blue, a very soft tint, is best described as smoke blue or grayish blue color. To produce this shade of color and marking, males and females having a predominance of the blue color, which is considerably darker in the male than in the female, may be mated and the best offspring from such matings selected and used for breeding purposes.

To produce the darker shade and markings of the Andalusian color requires the selection of ducks that have the shade of color and markings desired and mating them to drakes having this same character and color a shade or two darker than the female. The head markings of the male should be of a very dark blue, approaching black; and both the male and female should have a small patch of white at the throat. As the white is apt to show more in the offspring than in the parent ducks, less than is desirable in the offspring should be present in the breeding ducks.

To produce offspring of the proper breed formation, ducks having this to a marked degree should be selected. Blue ducks may be bred to either the Rouen, Aylesbury, or Runner duck types. To produce any of these requires a careful selection of ducks and drakes that have the shape desirable in the offspring and the color and markings desired.

NEW BREEDS OF DUCKS

55. Several new breeds of ducks have been made within the last few years. Among the most prominent of these are the *Blue Orpington*, the *Buff Orpington*, the *Khaki*, and the *Partridge*. All of them have been made by cross-mating other breeds.

BLUE ORPINGTON DUCK

56. The **Blue Orpington duck** was produced by the intermingling of several breeds of ducks for the production of the Buff Orpington duck. The offspring from some of the crosses came with blue plumage color intermingled with white. These were selected and mated for the production of color, and the Blue Orpington ducks developed from them. They have the same breed characters as the Buff Orpington duck, and their color and markings are quite like those of the Swedish ducks. When mating them, the shape of the breeders must conform to that of the Buff Orpington duck; the breeders should be selected for color and markings the same as described for blue ducks.

BUFF ORPINGTON DUCK

57. Buff ducks came from matings made to produce Khaki ducks. Some offspring from the crosses showed a tendency to buff plumage; they were selected, mated, and their offspring remated for color. Mr. Cook, who originated the first buff ducks, claims to have produced them from the intermingling of Runner, Rouen, and Aylesbury ducks. He named the variety the **Buff Orpington duck** to conform to the name of his farm and his Buff Orpington fowls.

58. Origin.—The Buff Orpington duck was made by intermingling Runner, Aylesbury, Rouen, and black ducks. The buff offspring coming from these matings were selected and bred for color.

59. Development.—The Buff Orpington ducks were first developed for egg production, but little attention being given

to color and markings. Later they were bred and improved for exhibition color.

60. History.—The first Buff Orpington ducks were produced in England. Later other strains were made, some of which were started in Australia, where they were bred for egg production. They have been entered in competition with the fawn-and-white Runner ducks in the egg-laying contests held in that country. From there and from England they were brought to America, where they have been bred for exhibition and for egg production. They were brought prominently into public notice as exhibition ducks through having been exhibited at the Crystal Palace Show in England. About the same time they were introduced in like manner in both the United States and Canada, since which time they have been more carefully bred for the dual purpose of egg production and beautiful plumage for exhibition.

61. Description.—The shape or breed characters of Orpington ducks is a compromise between the Rouen and the Pekin duck. They have great length of body and are broad, deep, and well rounded in body formation. They are remarkable for length of breast and for the production of meat for table purposes. The drakes weigh from 7 to 9 pounds; ducks from 6 to 8 pounds. Their plumage color is described as an even shade of fawn-buff throughout. The upper portion of the neck and the head of the drake is several shades darker than the body plumage; the bill, yellow with a dark bean at tip; the shanks and feet, yellow or orange yellow; the eyes, dark, with a blue pupil. In fact, the body color of this variety is a mild shade of fawn-buff, the drakes having head color similar to the Rouen drakes. Their carriage is more upright than that of the Rouen, but not so erect as that of the Runner duck.

62. Mating.—In selecting Buff Orpington ducks for producing offspring of the richest plumage color, both the male and the female must have an even shade of rich fawn-buff having sheen or gloss upon the surface; the head of the drake

should be considerably darker than the body color; the bill, shanks, and feet, a bright orange yellow. Bodies of great length are to be preferred, as this is indicative of prolific egg production. The neck of the Buff Orpington duck is short in comparison with that of the Runner duck. This should be considered when selecting ducks for breeding purposes. Ducks of this character are apt to produce offspring that will be attractive for exhibition and prolific egg producers as well.

KHAKI DUCK

63. The **Khaki duck** is thought to have been made by crossing Rouen and fawn-and-white Runner ducks. Through these crosses, ducks were produced that resembled the Rouen in general body formation but were smaller and had Khaki, or buckskin, plumage color. It has been claimed that some of the best ducks so produced were selected and bred again with Runner ducks, and from such crosses were produced females of the Runner type having penciling in the back and body plumage, some of which were again crossed with Runner males to establish a variety of Runner ducks having more or less marking in the body plumage.

PARTRIDGE DUCK

64. The Partridge duck was produced from the matings made to produce the Khaki ducks. From the offspring produced from these matings specimens were selected which had color and markings resembling the partridge color in poultry. These offspring were mated and remated until a variety color was established, the drakes having color and markings somewhat like the Mallard, and the females resembling in color and markings the Brown Leghorn females. These, like the Khaki and the Orpington ducks, were developed for egg production, no attention being paid to color or markings other than to have them distinguished from the other breeds. But few of them have been bred even in their native land of Australia. They belong to the class of ducks that have been

bred there for egg production and they, like others, have become popular from the fact that they have produced more than 12 dozen eggs per year, some of them being credited with having produced as many eggs as have been produced by the Runner and Orpington ducks.

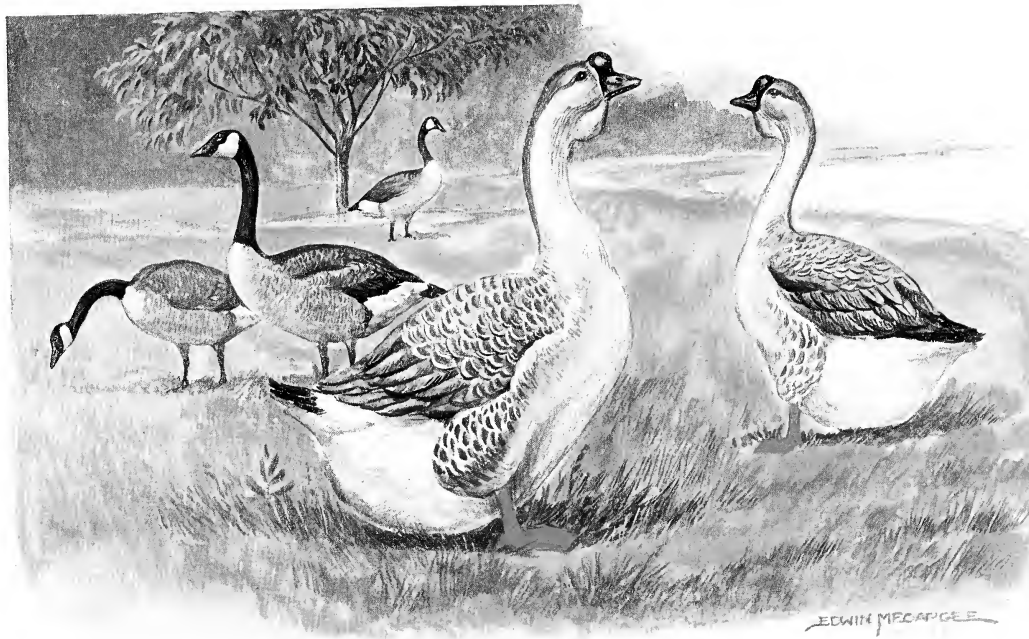
GEESE

ORIGIN, DEVELOPMENT, HISTORY, AND DESCRIPTION

65. Origin.—Nothing definite is known of the origin of geese. They were domesticated many centuries before the Christian era. They were sacred to the goddess Juno, and it was regarded as a sign of her favor that in 365 B. C. they aroused the Roman soldiers and saved the capital city. Italy seems to have been the home of domestic geese, and although they have been mentioned since the beginning of history, no reference has been made to the originals from which they descended. Scientists refer to the Graylag goose as the ancestor of all domestic geese. This may have been suggested by the fact that such geese have been known to exist for centuries, and all of the earlier geese were gray or gray marked with white.

White-plumaged geese were not mentioned in early days. There is a legend to the effect that a small, white swan was wounded and dropped into a lake where domestic geese were kept. Being unable to fly, the swan remained with the geese, all of which were gray. Later white-plumed offspring were hatched and were named Snowdrops. In this way white geese are said to have originated—doubtless a fanciful origin.

66. Development.—The earliest development of geese was directed toward having them of attractive appearance and for the advantages derived from their feathers. But little attention was given to them other than to have them beautiful, so that they might be a credit to the goddess Juno, to



CANADIAN AND AFRICAN GEESE

whom they were held sacred. Later, they were selected and separated into variety colors, and following this, different breeds were made.

67. History.—Geese are said to have been held sacred in Egypt more than 4,000 years ago, and they have been connected with many of the historical events of the world. They are credited with having attained the age of a century, and were considered as oracles, because they would announce the coming of storms and unusual occurrences. At the beginning of the Christian era, the agriculturists of Rome gave special attention to rearing geese for domestic purposes, some of which were later sent to England. Although it may not be safe to say that domestic geese, as we now have them, originated in England, they were made in that country.

68. Description.—The body formation of geese has changed so little as to make the statement credible that they are the same today as they were 1,000 years ago. The earliest illustrations of them show about the same body formation that exists today in the common goose. There is so little difference in the formation of the Embden and the Toulouse as compared with the common goose as to suggest that the former are an enlarged product of the latter. The color of the geese in early days was gray, and gray and white; a slight reference is made to geese with black plumage. A natural conclusion is that the early geese were very dark gray approaching black, light gray, and gray mixed with white. This description would account for the three colors mentioned. They are said to have weighed from 4 to 12 pounds each. Such records might refer to both ducks and geese, since both were known as water fowl. Two varieties of geese are described as having existed in Italy; one was white, with bill, shanks, and feet of an orange color; a pair weighed from 20 to 24 pounds. The other variety had broken colors, white and gray; otherwise the geese were like those of the white variety.

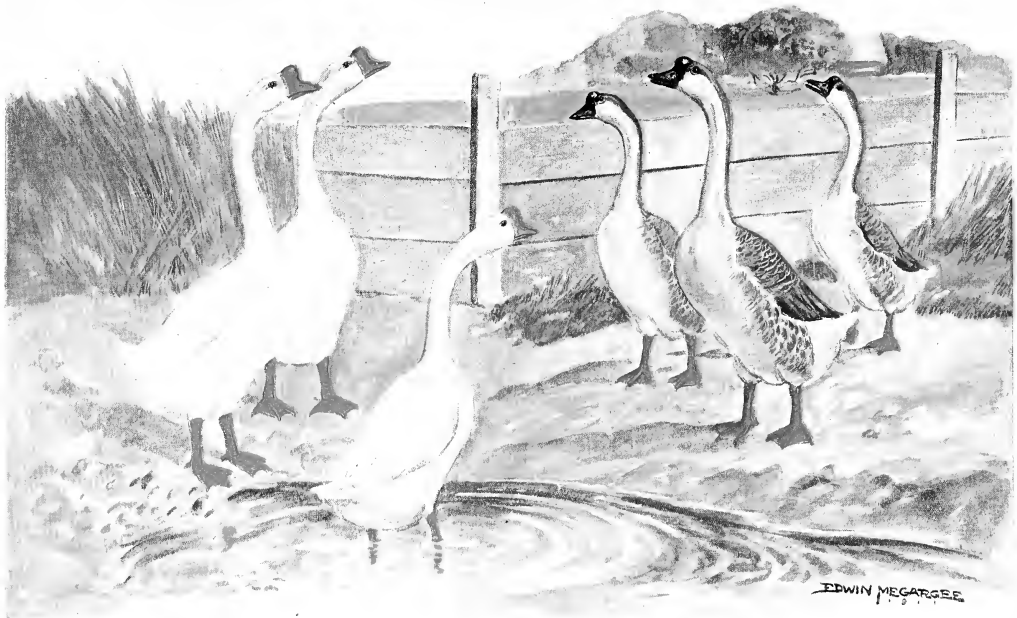
AFRICAN GOOSE

69. Origin.—The **African goose** is claimed to be native to Africa; it is regarded as a distinct breed, and was named for its place of origin.

70. Development.—The African geese have been developed in America, where they have been made from originals of questionable quality into one of the best breeds of geese.

71. History.—The African geese have also been called Hongkong geese; they are sometimes confused with the brown Chinese variety. The theory has been advanced that the African geese were produced by crossing brown Chinese with Toulouse, and improving the offspring by selection. Edward Brown, of England, states that they were made in Africa by crossing the brown Chinese with some other breed, perhaps the Toulouse, and were then brought from Africa to America. However this may be, they are one of the most highly considered of all breeds of geese, and are bred in some localities for market.

72. Description.—The body formation of African geese is plump and compact, having both length and depth; the neck is fairly long; the head, long, broad, and deep, with a strong bill, and a considerable knob at the base of the bill in front of the eyes, and a prominent dewlap. The head, bill, and knob of both males and females are very dark or black; the eyes, dark; the body plumage, gray, lighter in the breast than in other sections; there is a dark line down the back of the neck, reaching on to the shoulders; the shanks and feet are dark orange. Adult males weigh 20 pounds or more; young males and adult females, from 16 to 18 pounds; young females from 12 to 14 pounds. This breed of geese has a dewlap growing beneath the bill down on to the throat. This is more prominent in the males than in the females, but it becomes quite prominent in both as they advance in years. Offspring less than a year old may have but little knob, and so little dewlap as to be imperceptible.



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WHITE AND BROWN CHINESE GEESE

73. Mating.—In selecting African geese for breeding purposes, the body formation should receive marked attention. The breast and the under part of the body should be prominent; the head points and breed characters must be well displayed, and the plumage should be a soft, attractive shade that inclines toward yellow rather than toward a smutty shade of gray. The stripe of dark gray or brown that begins on top of the head and continues down the back of the neck to the shoulders should be very pronounced. No male or female of this breed should be used in mating unless breed characters are so marked as to stamp it on sight as an African goose.

CHINESE GOOSE

74. Origin.—The **Chinese goose** is of two varieties; both originated in the Oriental countries and are credited to China.

75. Development.—The Chinese geese were first developed in China and India, and from those countries were scattered throughout the world. The most recent improvement in these geese has been made in England and America.

76. History.—The Chinese goose has been known by various names, among them China, Knob, Hongkong, Asiatic, Guinea, Spanish, and Polish. Many kinds of geese may have been included under these names. They were separated into two varieties, the Brown and the White, and were named Chinese geese. During recent years many of them have been bred for market, and they have also been selected and bred for beautiful plumage color.

77. Description.—The peculiar form and general appearance of the Chinese geese is shown in the color illustration. The Brown Chinese geese have color and markings the same as the African geese, except that the Chinese are darker. The White Chinese geese have pure white plumage; the bill, knob, shanks, and toes are orange; the eyes are blue. Geese of both varieties have a knob with but little or no dewlap until more than a year old.

78. Mating.—Two methods of mating are practiced for the breeding of the two varieties of Chinese geese. One method of mating is used for the production of small geese that conform to standard weights, which are 12 pounds for mature males, 10 pounds for young males and mature females, and 8 pounds for young females. For such matings, small mature females are mated with males that are proportionately small. In the other method of mating, which is used for obtaining larger offspring than would naturally be produced in this breed, the largest geese are mated with large males of the same variety. By the selection of the small females, geese that are small and trim are produced for exhibition. From the other matings, market geese are bred. In each kind of mating, color and markings must conform to standard demands, and breed characters must be conformed to without the slightest deviation.

EGYPTIAN GOOSE

79. Origin.—The **Egyptian goose** was first found wild in Africa. The Egyptian geese were plentiful along the Nile, and were well distributed throughout Egypt.

80. Development.—The development of the Egyptian geese was brought about by their domestication. But little trouble was experienced in accomplishing this, and the Egyptian is now numbered among the standard varieties of geese.

81. History.—The Egyptian geese are said to have been held sacred by religious orders. It is thought that their outline can be traced on the tombs and sarcophagi of ancient times. They have been gradually distributed throughout the world, and are bred principally for their beauty.

82. Description.—The Egyptian geese are unattractive in form but have beautifully colored plumage. They have long shanks and upright carriage. Their body plumage is a mixture of gray and black, emblazoned with rich metallic luster; their breasts are shaded with chestnut and buff. Most of their plumage is marked and stippled with a darker shade

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EMBDEN GEESE

of color. They have reddish-blue bills and reddish-yellow shanks and toes.

83. Mating.—Male and female Egyptian geese are so nearly alike in body formation and plumage color that it is difficult to distinguish between the sexes. They prefer to mate in pairs, and if two or three females are kept with one male, he may mate with all, or he may refuse to notice more than one. If more males than females are kept in a flock during the breeding season, they will quarrel continually. Egyptian geese will breed in confinement, but they are so ill-natured that they cannot be kept in confinement with other breeds. They will build their own nests, lay 6 or 8 eggs, sit on them for 4 weeks, and when the goslings are hatched will care for them. Geese of this breed are kept more for ornament than for any other purpose, and should be fed and housed the same as other wild varieties.

EMBDEN GOOSE

84. Origin.—The original **Embden goose** came from Holland, where the breed was made by intermingling large white Italian geese with other white geese. Some were taken from Holland into England, where they were bred and improved.

85. Development.—The early development of the Embden geese was for improvement for table use. They were bred and fed for increased size, and were selected later and beautified for exhibition.

86. History.—The Embden geese were named for a town in Hanover. The same kind of geese were brought to America and were named Bremen geese, having come from the port of Bremen in Germany. Later, they were named Embden geese, and as such they have been admitted to all Standards.

87. Description.—Embden geese are large and beautifully formed. The under part of their body is crescent or canoe shaped; their backs are fairly straight; their bodies are

rounded and well proportioned. They should not grow a dewlap until they are several years old, and even then the dewlap should be small. Loose skin that hangs in pouches under the body is undesirable in this breed of geese. Embden geese have blue eyes, orange bill, shanks, and toes, and pure white plumage. They are of medium size, the males weighing from 18 to 20 pounds according to their age, and the females from 16 to 18 pounds.

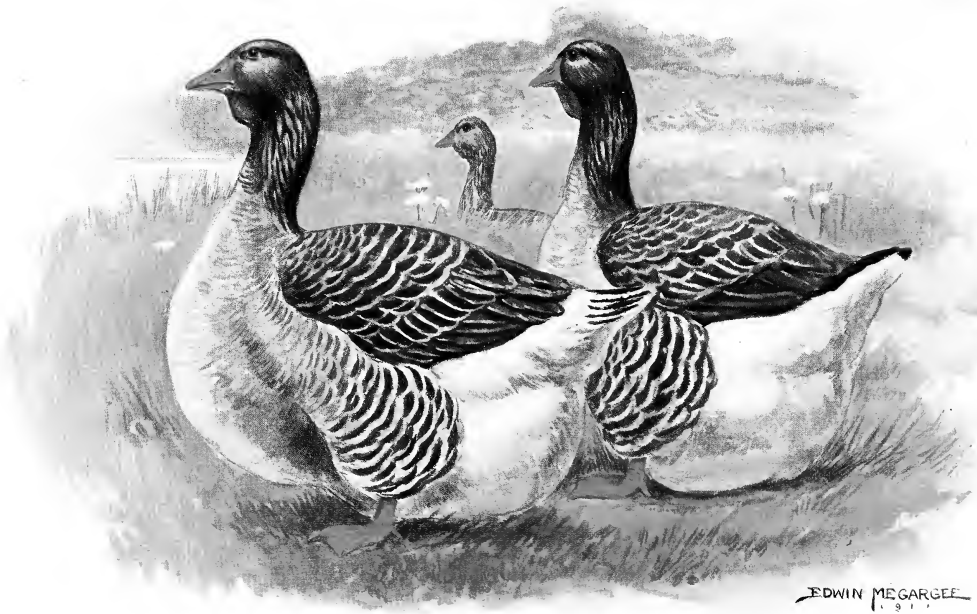
88. **Mating.**—When mating Embden geese for the production of market poultry, size and vigor are the chief considerations. When mating them for the purpose of producing offspring for exhibition, large females that have bright orange-colored bills and shanks and pure white plumage should be selected and mated with young males that are large and have perfect color; both males and females should be entirely free from dewlap or loose pouches of skin under the body. Perfect body formation should have the greatest consideration when the breeding stock is selected.

To increase size in Embden geese, mating with the Toulouse geese has been resorted to. From such crosses, large white geese have been produced, but such offspring are apt to have such defects as dewlap, dark feathers in body plumage, and a smoky appearance in the under plumage. Geese that have been so produced will, in their second year, show the peculiar pouchy appearance in the under part of the body that is so marked in the Toulouse geese. All such defects should be avoided in selecting breeders to produce the best quality in Embden geese.

TOULOUSE GOOSE

89. **Origin.**—The **Toulouse goose** was made by selecting the best from among the original gray variety and improving them by breeding and feeding for size and color.

90. **Development.**—Toulouse geese were first developed in France. They were greatly improved in England, and are plentifully bred in America. They are the largest of all domestic geese, and are highly valued for their many uses.



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TOULOUSE GEESE

91. History.—In early days, Toulouse geese were selected and bred only for market. They have since been adopted throughout the world, and have been both crossed with other breeds of geese and bred in their purity.

92. Description.—The most useful type of Toulouse geese is shown in the color illustration. Form and color are displayed without an unusual amount of dewlap, and but little pouchiness on the under part of the body. Toulouse geese are both light and dark gray, marked with white. The upper part of the body, about the abdomen, is very light gray—almost white. Their eyes are brown; their bills, shanks, and toes are deep orange. Mature males weigh 25 pounds; immature males and mature females, 20 pounds; immature females, 16 pounds. These weights can be increased by selecting and feeding for speedy growth.

93. Mating.—Toulouse geese reproduce true to form and color. For the production of exhibition stock, large, mature females that have a perfect body formation should be mated with males 1 or 2 years old that are not only large but are perfect in form and color, and have a rich glossy plumage. Toulouse geese will continue to breed for many years, but it is always desirable to use males that are less than 4 years old. The females may be used as breeders as long as their eggs are fertile.

WILD, OR CANADIAN, GOOSE

94. Origin.—The **Wild, or Canadian, goose** originally existed in a wild state in the northern parts of America.

95. Development.—The Wild, or Canadian, geese have been captured, their wings pinioned to prevent their flying, and bred in domestication. Their size has been increased by care and regular feeding.

96. History.—Large flocks of wild geese like those of Canada existed in many parts of the world. Some were captured and confined in parks for ornamentation. Following this, they were bred in domestication, and later they were

crossed with other breeds; from such crosses, the mongrel hybrid geese have been produced.

97. Description.—The Wild, or Canadian, geese have long, slender bodies, and long, slim necks. Their bills, shanks, and toes are black; their neck is black, with white markings about the throat; their body plumage is dark, marked with gray; the under plumage of the rear part of the body is mostly white. Mature males weigh 12 pounds; young males and mature females, 10 pounds; immature females, 8 pounds.

98. Mating.—Wild, or Canadian, geese will mate in pairs and will be constant in their domestic relations. Sometimes they will mate with geese of other breeds, and when this occurs they are as constant as with their own kind. When left to themselves they will select their mates, build their nests, and rear their young.

When they are bred true, special attention must be given to selecting large males and females that have the most attractive plumage color. The difference that exists among them is that some have plumage of a more brilliant finish than others. The more brilliant plumage results from a better environment and proper feeding, and the reverse is caused by lack of care.

To keep geese of this breed in confinement, the first joint of the wings from which the flight feathers grow must be severed. This is called pinioning, and is practiced with all kinds of wild water fowl that have their liberty in domestication.

NEW BREEDS OF GEESE

99. An attempt has been made to create a breed of geese with buff-colored plumage. This has been accomplished with a slight degree of success. Those so far seen are yellow or cream colored, with deeper buff markings on the back and wings and on parts of the breast. But few of these have been shown, and their cultivation has been so slight as to attract but little attention.