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PAIR INDIAN GAME.



ROSE-COMB BLACK BANTAMS.

THE CANADIAN POULTRY REVIEW

DEVOTED TO POULTRY, IN ALL ITS BRANCHES

PUBLISHED BY H. B. DONOVAN.

VOL. XIII.

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No. 6

NOTES AND COMMENTS

PHEASANT RAISING.

A CORRESPONDENT in a private letter advises us to "incubate eggs in nests on the ground, and take care when birds are hatched that they do not run away from the nest."

MR. F. A. MORTIMER,

who is well known to our readers as the writer of "Mortimer's Monthly Morsels," is, we regret to learn, again very ill, but we hope that it may not be long before he is his wonted self again.

THE INDIAN GAME CLUB.

Mr. O. K. Sharp writes us to "urge all to join the Club. We want 100 new members before end of '90 when new Standard will be made. We want Canada well represented, they ought to push an English bird always, they are now behind."

MR. E. WARD,

of Sheffield, England, who visited Canada some time ago is now at home again and desires to be remembered to all Canadian fanciers whom he met during his stay in the Dominion.

THE WESTERN FAIR.

The poultry committee has added to the list, golden-faced Wyandottes, Red Caps, buff-faced Polands, white-bearded Polands, and any other variety Bantams. The order of the varieties has also been re-arranged.

MR. R. B. SMITH

has had the misfortune to again be burned out, this being the second time within a year; in consequence of this mishap he has been obliged to move from Owen Sound to Belleville, Ont.

MR. C. W. ECKHARDT

Unionville, paid us a flying visit on the 9th ulto, he was on his way to his new residence at Niagara Falls, Ont.

MR. R. H. TRIMBLE,

Belleville, was in Toronto on the 7th ulto.

FROM THE AUTHOR

Mr. Wm. Willis—Harris Warnham, Sussex, we have received a neat little hand book, entitled, "The Turkey, How to breed and rear successfully." It contains some seventy pages, comprising hints on incubation, rearing chicks, breeding and general management, fattening, etc., etc., and is a good shillings-worth.

THE ENGLISH STOCK-KEEPER

records the transformation of a colored Dorking cockerel into a pure white bird

Have any of our readers ever heard of a similar case, or can they account for the change? We must confess it is a complete enigma to us.

POULTRY

THE SITTING HEN.

(A paper read before the Montreal Poultry, Pig-on and Pet Stock Association, by Professor Wesley Mills, M.D.)

MR. PRESIDENT AND GENTLEMEN:

IN paving the way for a discussion of this subject it may be well to treat it systematically. Allow me to say at the outset that I am at a loss to understand why the term "setting" hen should be used as it seems to me to be incorrect English, and that it should be abandoned at once for the correct adjective "sitting."

THE CHOICE OF THE HEN.

While it is true that the ordinary mongrel hen, when left very much to herself, will do better than any of the pure breeds, it does not follow that she should be chosen in all cases or even generally. When a number of hens are to be set in a comparatively small space, the mongrel is both less manageable and more pugnacious. I have tried both and prefer the Cochins, Brahma, Wyandotte and P. Rock to the mongrel hen.

My own experience endorses much that has been so long taught that it has become almost axiomatic, such as

the preference for hens rather than pullets, of those that have had one season's experience, of individuals that have proved specially suitable, etc. But in choosing a hen to hatch out eggs, consideration must also be given to her qualifications as a mother in most instances; though the tendency now seems to be to give less heed to this, and to make the care of chicks more a matter of human provision. As another mongrel perhaps surpasses all the pure-bred fowls unless the Games and possibly some of the Bantams.

Of all creatures the hen can be made most machine-like and I have availed myself of this in a way that I have never known to be described.

It is very convenient to have hens so tame and well behaved that when given a nest and eggs they will go on and stay on till let off; will eat and drink and evacuate the bowels in just the right way and at the desired time, and then return to the eggs with that perfect though unconscious knowledge of conditions to be met which we term instinct. But such are not all hens. Perhaps when you have prepared all and set the most valuable eggs it is found, possibly on the second or third day of incubation, when the whole batch is very easily spoiled, that when the sitter is released she runs off the nest with a wild cackle, as much as to say "Oh, let the whole thing go to —" (fill in according to taste) and if your own pulse could be counted it would be found "away up in the nineties." Now I do not fear that sort of a hen a bit, though I do not like her. I never allow her to bully me, much less, to conquer me, and I venture to think my treatment of such specimens is unique. Ages ago it was discovered that a hen can be mesmerized, and the wilder the hen the more successfully. It is only necessary to hold the hen perfectly steady, head well down and covered to ensure perfect quiet of

the animal when released.

I have not usually found it necessary to completely mesmerize the fowl, but only sufficiently to render her subject to my will and I carry the process out exactly as required and repeat it or not as may be necessary. By this means a wild hen who wants to throw up the whole business of hatching can be as easily managed after a few treatments as any others.

THE NEST.

On this point I have little to add to what has appeared in the REVIEW for April, in an excellent paper by its able editor, Mr. Donovan.

We must not press the behavior of those hens that choose their nests on the ground in secluded localities, too much into service in drawing conclusions on this subject. Such specimens have retained in an extraordinary degree the instincts of their wild ancestors. The deficiencies of their nests are compensated for by special qualifications in the sitting bird.

Upon the whole I prefer a small barrel or large keg laid on its side. Into the bottom (now end) a few medium sized holes may be bored, and the front covered with a movable slat work admitting air and some light. The holes in the end allow of better circulation, which is desirable in hot weather.

Placing a sod beneath the other materials of the nest I have abandoned for sand or loam which is better not wet as it cakes and gets hard and uneven. A concavity rather larger than the body of the hen, on which the top dressings may be laid is then moulded out. Hay is preferable to straw. There are many modes of keeping the nest sweet and making it an unpleasant place for vermin to visit. I am inclined to think, however, that some of these methods may also make it disagreeable to the hen, if not deleterious to the embryo chicks in the eggs.

To see that the hen is absolutely free from vermin when set, to dust over the upper dressing of the nest from time to time with insect powder and especially before the hatching day, to make sure that the hen herself is now free from vermin, and in any case give her a dusting, has in my experience been sufficient in a *cleanly house* in which alone I assume the hen to be set. A *little* Carbolic Acid in some form sweetens the nest.

I firmly believe that sitting hens will be better managed and with much saving of time and worry if *confined to the nest* and only released (if necessary lifted off) daily, as a rule. If the sitter does not go back at the right time it is well to coax her towards the nest and get her to enter without compulsion. This will incline her to return of her own accord again. But if she takes one of those wild fits treat as above advised. Don't allow yourself to be conquered on any occasion. When once within the barrel, and the slat-work placed against it, she is safe; she will soon betake herself to the eggs. And herein lies the advantage of a barrel, beside others such as more room, better ventilation, etc. For Bantams, of course a keg answers well enough.

THE FOOD OF THE SITTING HEN.

Enough attention is not usually paid to this subject. The lack of exercise favors constipation, while the imperfect ventilation and the unnatural conditions generally, tax the health of the bird severely; and especially is this shown in the effect on the digestive tract, hence diarrhoea, a most unfortunate complication.

We think it well to feed on mild and unstimulating food at first; later, when the appetite is more capricious it will be found wise to offer the fowl several kinds of grain, not withholding even Indian corn, for the sitting hen is not likely to get fat. It is also advis-

able to give a little lettuce or such like food. It cannot be expected that a hen with failing vital powers will discharge her duty as well as one properly cared for. Moreover, if the sitter leaves the nest in a starved condition, when the chicks are hatched, the temptation to eat their food is very great. Grit and the best of water and as cold as possible in summer, should be provided.

THE EGGS FOR HATCHING.

These should be as recent as possible. They should be kept in a cool but not a cold place; and before being placed under the hen she should have had a preliminary trial on dummy eggs, but under exactly the same circumstances as those of the regular sitting period. The duration of the trial should not usually be less than two days after the hen has shown *decided* proclivities for sitting. The selected eggs should of course be placed under the hen at night. After early May, the sitter should not be hurried back to the eggs too soon; we have ourselves made that mistake more than once. There is, however, more need of close attention for the first 4 or 5 days and we would prefer to risk but little, allowing only 5 to 10 minutes to elapse if so much, before the siter returns to the nest. No dust bath, etc., allowed for 4 to 5 days therefore. After that it is very desirable since it affords exercise, recreation and a great deal that is of importance to a bird under such dreadfully monotonous conditions.

We do not believe in handling eggs, sprinkling them, etc. It will, however, especially in the later period of incubation be desirable, and in case of very hot and dry weather, necessary to moisten the eggs. The best method we know of is that recommended by Mr. Donovan, of moistening (not wetting thoroughly) the breast and belly of the hen with a sponge dipped in water rather above blood heat.

It is well to remove shells from time to time, as the young hatch out, but without removing the hen. Except in rare cases owing to unusual thickness of the shells or the membranes lining them it is not necessary to help out chicks. Those that require such assistance are as a rule unfit to survive. Nature is applying her relentless law "the survival of the fittest" at the outset.

Finally I have come to the conclusion that it is wiser to place fewer eggs under a hen than she can actually cover, and in the end nothing is lost even as regards number of chicks hatched. About 9 to 11 eggs are enough.

THE BREEDING AND REARING OF GEESE.

FOWLS.

THOUGH there are several distinct varieties of geese in this country, their general treatment is in most respects so similar that it is unnecessary in the present article to enter fully into the merits of any particular kind, but rather describe as clearly as possible the best way to breed any kind successfully.

It is well known that, unlike most varieties of domestic poultry, fresh grass forms a considerable portion of the food upon which geese subsist, and therefore they can only be kept profitably in such situations where they can have free range on the pasture-land surrounding their abode, or are enabled to wander in search of green herbage on the commons. Occupiers of farmsteads, of course, have these advantages at their disposal, and a pen of geese are therefore frequently included with the other farm-yard stock.

With a good grass-run, and likewise provided with a small pond of pure, clear water, a gander and a couple or three geese should be mated together some time previously in preparation

for the breeding season, which usually commences early in the year, chiefly depending on the mildness of the season. Care must also be taken in the selection of the stock, and the geese, moreover, should be of a different strain than the male bird. Previous to the breeding period, in addition to their ordinary food, it is essential to supply the geese with material to assist them to shell their eggs, and lime scraps, together with crushed oyster or cockle-shells, will prove an excellent grit for the purpose required.

When geese commence laying, the eggs should be collected daily, and particularly during the early months of the year; should the weather be cold and unseasonable, they must be taken from the nest soon after being laid, or they are liable to be chilled by the frosty air, thereby sometimes destroying their fertility. Hardshelled and properly-shaped eggs should only be retained for hatching purposes, and the best plan is to carefully select such and place them in boxes containing bran or soft hay, at the same time keeping them in a room of moderate temperature, occasionally turning them over, thus altering their position during the short period previous to incubation. Moreover, should the eggs be soiled, they must be carefully washed and dried, leaving the shell pure white; for by so doing they not only have a cleaner appearance, but can be more easily tested as regards their fertility, which a practised breeder can generally discern a few days after incubation has commenced.

For hatching purposes, large Cochin and Brahma hens are found excellent substitutes for setting goose eggs, the number placed under each hen generally varying from four to seven; but the size, not only of the fowls, but also of the eggs, must be taken into consideration, the cold weather in the

early months of the year often proving detrimental in hatching season, and it is advisable not to place too many under a hen at this period. The eggs during incubation require moisture, and ought occasionally to be sprinkled with tepid water when the hen is absent feeding, which ought not to exceed fifteen minutes; regularity in allowing her to leave the nest daily is most essential. During the last week of incubation, and when the young bird is nearly developed, the eggs should be damped daily; an excellent method is to allow them to float for a few minutes in a can containing moderately warm water. By following this plan it will be found that the goslings, when the eggs are chipping, emerge from the shell not only sooner, but with infinitely less risk of their being shell-bound.

Geese themselves are, however, often allowed to incubate their own eggs, and frequently make excellent mothers, the use of fowls as substitutes being only required for non-sitting varieties.

When hatched the young goslings will soon gain sufficient strength to wander about the meadows, though for a couple of days it is advisable to keep them under shelter, at the same time frequently supplying them with small turfs of fresh grass in addition to their other food. The different kinds of grain generally supplied to other varieties of young poultry will be found equally suitable in rearing young goslings during their early growth.

Herbage, as previously stated, is the chief food required by these birds, and that produced on rough uncultivated land is generally found to be more suitable for rearing young goslings than the rich pasture grass in the valleys. Previous to being turned into the stubbles in the autumn, a daily allowance of oats, maize, and other kinds of food should be given in order to

increase their weight and improve their condition for market.

Regarding the different varieties of geese, the two kinds generally seen at poultry exhibitions are the Toulouse and Embden, each attaining a considerable size when grown, young goslings six months old frequently exceeding twenty pounds in weight. It is perhaps on this account the above-named varieties are extensively used for crossing with the smaller kinds of common geese in the production of birds for the poulturer's shop.

THE HATCHING HEN.

(A paper read before the Montreal Association, by Mr. W. H. Ulley).

Do not be in a hurry to set your hens, a hen's life is about 10 years, so it will give you plenty of time to try her. I have written this short paper to cause discussion for I know that this theory of hatching chickens will not do for everyone. First be sure that you have a sitting hen, for it is not every hen that *clucks* that will make a sitting hen for 21 long days, yes, and nights too, and bring forth a brood of chickens; choose a fine, full, fluffy hen and also a good tame one, for this really is half the hatching and gives less chances of having broken eggs. I find that a half Game hen makes the best of mothers as well as the best guard for its young. Nature has given a hen, when broody, a look not to be seen at any other time, she becomes feverish, loses flesh, her comb becomes livid, and loses that bright redness of color it has when in full health, her eyes become dull, and she will bristle up her feathers, and in no other feathered bird is the desire to incubate thus manifested so strongly, and when the determination to sit thus becomes fixed, then let her

have the nest for a few days to see if she works well, if so, then give her a sitting of eggs, we call 13 a sitting, but I think 11 is the best number unless you have a full, fluffy hen. For, my nest, I always take a round box, sufficiently large, to allow my hen to turn easily, as I notice a hen will change her position every day. In forming the nest, I always put sand and ashes in the bottom, and form the shape, and line it with clean straw sprinkled well with Dalmation Insect powder; in putting the nest box on the floor I find the sand acts as a deafening against jars on the floor. After the hen has been sitting about a week I candle the eggs to see how many sterile ones there are and remove them, thus giving the fertile ones more warmth and also to give you some idea of the prospects of your brood, if all goes well with the hatching. Some old writers tell us that the shell of a new laid egg is nearly half as thick again as when the young chick has penetrated it, as to what becomes of the other half of the shell I am not prepared to say, but an ingenious theory is, that it goes to make up the feather and bone of the chick, the remaining part to act as a guard against injury to the chick. Sometimes chicks do not get out of the shell easily; although they succeed in making the first breach of the shell they often appear unable to get out of their dungeon, and any rash attempt to relieve them by breaking the shell is in most cases followed by a loss of blood. The cause of weakness in getting out of the shell, is caused by insufficient warmth while hatching, or too feeble a vital spark in the egg, sometimes from the eggs having been kept too long before being placed under the hen, and another cause by the eggs being handled roughly and by being shaken perhaps on the passage, if brought a distance, causing the vitality of the egg to be weakened before incubation. The breaking of chicken through the shell reminds

the same, and put it down as a Euclid problem and say truly it is one of the most wonderful works of nature. For as the old Nursery rhyme says :

"Not all the king's horses, nor all the king's men,
Could put the chick back into its shell again."

Now what must be done with the new arrival, just this and no more, leave them alone with their mother and do not fuss with them. The first meal to be of coarse oatmeal and milk to drink, as soon as they can peck, then give them millet seed and if it is an early brood a little bread soaked in ale will keep them from taking cold, also put a few drops of tincture of iron in their water.

Now I may mention here before closing, that when I have a hen which is determined to sit and I do not wish her to do so, I shut her up in a coop and feed her well on buckwheat, and give her a dose of about 5 grains of Jalap every day for 3 or 4 days and I find that the sitting fever has entirely left her.

As I have mentioned before that this paper was written for discussion I will kindly leave it in your hands thanking you for your kind attention.

To the members of the Montreal Poultry, Pigeon, and Pet Stock Association, Fraser Institute, May 1st 1890.

INDIAN GAMES.

MR. J. Henry Lee, the well known poultry artist, whose engravings have so much embellished the pages of the REVIEW these some months past, informs us that he has engraved no less than seven pictures of this variety, this year. It is making great strides in public favor.

The pair of Indian Games are the property of Mr. Aug. D. Arnold, Dillsburg, Pa., who has recently added his breed to his yards.

Bantam Department

BANTLINGS.

SUPPLY plenty of shade for the young chicks, plant corn thickly, sunflowers, etc. Cotton stretched on lath frames may be used to advantage when natural shade is not attainable.

WHEN ANIMAL FOOD

is scarce, boil a bullock's liver well and hang it up to drain, when dry it can be easily broken apart and even crumbled between the hands as bread is.—Won't they run for it!

JAPANESE BANTAMS.

A beautiful engraving of this variety appears in the *Century* for May, it represents some birds owned by Mr. Ludlow, of Yonkers, N.Y.

THE JAPANESE BANTAM.

BY H.-S. BARCOCK, PROVIDENCE, R.I.

JAPAN is a country of peculiar productions. Its people are very successful poultry breeders, especially in producing varieties of abnormal development. The long-tailed Games, with sickles extending from four to fourteen feet; the She Shi's, a white variety with a fan-tail; the black Bantam with wattles dragging upon the ground; the quail-tailed Bantam, colored like a brown Leghorn and with a tail like a quail; the muffed fur fowls with downy feathers only; and the odd variety, known in the *American Standard* as the black-tailed white Japanese Bantam; all are evidence of great skill in breeding. And among all of these there is no variety really more interesting than the one with which we are familiar.

very much of the butterfly getting through its chrysalis into life of the outer world, the process to me is very much

It seems almost unnecessary to describe the Japanese Bantam. Its high single comb, short, yellow legs, plump body, and luxuriant and very erect tail, once seen, are not easily forgotten. The earlier birds had more color than those which are now bred and which are demanded by Standard requirements. It is a questionable gain, I think, to lose the black penciling of the hackle and substitute for a clear black the faded line in the wing feathers. In Japan, as a Japanese gentleman writes me, this variety has the markings of a light Brahma. But we have decided that what is an excellence in a light Brahma shall be a defect in a Japanese Bantam, and have succeeded in nearly obliterating the hackle and saddle stripe. This marking, however, persists to some extent, and it is rarely that we find a bird absolutely free from it at the tips of the feathers, I am inclined to think that this loss is not without some compensation, and that a white-hackled bird is more likely to have a better white edging to the sickles. And the sickles are one of the most beautiful features of the variety, as they also are in the silver pencilled Hamburg.

Japanese Bantams are excellent layers. The little hens commence to lay early and they continue to do so for a long period. The egg is small to be sure, but it is not small for the size of the fowl. It does not admit of a doubt, I think, that for egg production this variety deserves to be called a thoroughly practical and highly profitable fowl.

The fowls are reasonably hardy. Their high single combs do not fit them for exposure to great cold, and in winter they should receive such care as is necessary for Leghorns and Minorcas. The chickens are rather delicate, and without good care are somewhat difficult to rear. They do well until they begin to get their plumage, but this

grows so rapidly that it is a great strain upon them, and unless well fed and kept free from vermin they are apt to succumb. A careful breeder, however, is able to rear a fine proportion of the chickens, because he will give them the care they require.

Occasionally a chicken is hatched with some slight feathering upon the shanks, but as a rule this variety breeds very true. The greatest difficulty in breeding exhibition birds is in securing perfectly upright and straight combs on the males, and clean hackles on both sexes. Still there is no greater difficulty in breeding exhibition specimens than is found in almost any breed and variety of domestic fowls. No one need be deterred from adopting the Japanese Bantam because of difficulty in breeding high scoring specimens. A breeder who cannot succeed with this variety is not likely to succeed with any Bantam.

Taken all in all, the Japanese Bantam is a very desirable acquisition to the pets of the poultry yard, and the fanciers of all lands are indebted to the little Empire of Japan for a decidedly original, interesting and valuable fowl.

HOW TO BREED MALAY BANTAMS.

IN an English paper Mr. W. F. Entwisle says this question puzzled me many years ago, at a time when there were no Malay Bantams, nor anything nearer in type to the Malays than Game Bantams.

I have for years bred all colours of Game Bantams, and one day I resolved that I would breed Malay Bantams; so I tried in various ways to obtain the first cross between large Malays and my Bantams, but for a long time I met with nothing but disappointments.

At last, however, I found that one hen's eggs were all fertile, and I had them set in a house all by themselves and reared a fine brood of chickens

from them; and from that one brood all the Malay Bantams both at home and abroad have sprung.

I may here mention that the only breeds used in the production of my Malay Bantams have been pure bred Malays, Indian Game, Aseels, and Game Bantams.

That I have been fairly successful in *practically answering the question* at the head of this paper, and showing how to breed Malay Bantams I think the results in the show pen will prove, for birds of my own breeding won the cup and all the other prizes at the Crystal Palace show last year, as well as in 1886, and 1st prizes at Birmingham, the Dairy Show, the Poultry Club Show, the Zoo, and 1st, 2nd, and 3rd prizes at nearly fifty other shows. Consequently, the question can be much more easily answered now than when I first put it to myself, for then there were no Malay Bantams; now there are hundreds of them. Then I was the only breeder, now there are many, and soon there will be more, for year by year they are steadily growing into favour, both at home and on the continents of Europe and America, as people see how little trouble they give, being the hardiest of all the Bantam tribe, having as much style and character as Game Bantams, and never having to be dubbed (that is a point in their favour). Again, they are the plumpest and most meaty of all Bantams on the table; capital layers, and excellent, careful, and courageous mothers.

In answering the question. "How to breed Malay Bantams," I would say that the easiest and simplest way would be to buy the best pen that can be had (they are not so costly as some breeds of Bantams are), and give them a small run and a snug little house with a separate nest for each hen to lay in, they will then lay ten or twelve eggs each, and then want to sit and rear their own chickens.

A still less expensive plan is to buy a

sitting or two of eggs, and thus for a guinea, or a couple of guineas, a first class stock can be raised.

A little caution is necessary in purchasing, that the proper colours are mated together, *i.e.*, that if you are purchasing red Malays the cock is cinnamon bred, or you may have a very uneven lot of pullets as to colour.

And in choosing whites, too much care cannot be taken in selecting cocks perfectly free from sandy or buff feathers on the back and wing bow and shoulders, the hens free from any colour in hackle, breast, wing or back. The whites originally sprang from the reds and cinnamons, and they have a tendency to revert or throw back to their coloured progenitors. Two or three years since pure whites were exceedingly rare, but now they are more plentiful.

If your choice or preference be for reds, see that the colours be clear and well defined; the cock should be several shades darker than the fashionable colour for black-red Game, but his feathers should be bright and lustrous as well as short, close fitting, narrow, hard and wiry looking. The hen may be medium or dark cinnamon or partridge feathered, but if cinnamon remember they always moult lighter in color after the first year.

Pheasant Malays are still rare; they have only been exhibited ten or a dozen times. In colour they should be the same as the Indian Game, shown by Mr. Frayn; both the cock and hens as nearly as possible solid, dark, green-black with peacock blue reflections in the hackles and tail. The cock very dark maroon on back and wing bow and maroon and black saddle hackles, dark bay on the wing coverts, and if clearly laced with green-black all the better. If he shows black lacing on the feathers of the shoulders and wing bow, he will be all the more valuable for breeding well-laced pullets. The hen's breast, wings and back should be deep

rich cinnamon. distinctly laced with green-black. Such colours mated together give very satisfactory results, though some of the chickens will invariably come too light coloured, or short of lacing.

The legs and feet and beaks of all Malays must be yellow, and the richest orange yellow is the best of all. But in the case of white Malays it will seldom be found that the pure white feather is accompanied with rich orange colour of legs; they are oftener pale lemon or straw coloured. Of the two, I should give the preference to purity of white in feather and rather pale legs, rather than orange legs and yellowish feather.

But if anyone put the question to me, How would you advise me to start now to breed down from large Malays and make a strain of Malay Bantams of my own? I would answer: If you have time and patience to do it, you will obtain in the end the best results in this way. First select a highly bred typical-headed Malay cock, as short feathered as possible, and hard and wiry looking in tail; showing bare red spots on the shoulder and breast, and having broad, flat skull, heavy overhanging eyebrows, and a very firm and flat comb, *i.e.*, not a loose or high comb. Mate such a cock with a couple (not more or they will kill each other) of the smallest Aseel hens you can get, each of them having broad, flat skulls with heavy eyebrows, sunken eyes of the clearest pearly white, low carried close tail, that moves from side to side in a nervous manner with every step taken.

From these you will obtain some cockerels and pullets with correct Malay type of head, strawberry comb etc. Select the smallest of these cockerels that has Malay character, especially in head, and mate with him one or both of the Aseel hens above described, and breed from them when he is six or seven months old.

The cockerels from this mating should be small enough (say three pounds, at seven or eight months old) to breed with Game Bantam or Malay Bantam hens; and the pullets with Malay Bantam cocks. And now by breeding both early in the year and late, and always choosing the smallest chickens of Malay character to breed from you will obtain show winners.

The white eye is easily retained, and also the strawberry comb and the hard, wiry feather. In this manner, and unless you add too much of the Game Bantam cross, you will have no difficulty in retaining the broad, flat skull and overhanging brows. To keep the chickens small, suitable food such as dari and rice should be used as well as oatmeal. I know of no surer way to succeed than the above.

ROSE-COMB BLACK BANTAMS.

THE pen of ROSE-COMBED BLACK BANTAMS we illustrate were winners of highest honors at New York, Feb'y. 1890. The cockerel, especially, being considered a magnificent specimen. Bred and owned by J. Teller DeGraff, Amsterdam, N.Y., President of Mohawk Valley Poultry and Pet Stock Association.

ROSE-COMB AND SEBRIGHT BANTAMS.

Editor Review:

PLEASE answer the following questions in the "Bantam Department" of the REVIEW for June and oblige.

A FANCIER.

Montreal, May 14.

1. What are the standard weights and disqualifications for golden Sebrights?

2. What are the standard weights for R. C. black Bantams and what are the disqualifications?

ANS. 1.

GOLDEN SEBRIGHT BANTAMS.

Disqualifications.

Combs other than rose; natural absence of spike; decidedly wry tails; crooked backs; shanks other than slaty blue in color; cocks or cockerels having hackle feathers extending over the shoulders; sickle feathers extending more than an inch and a half beyond the tail proper; cocks weighing over thirty ounces; hens weighing over twenty-six ounces; cockerels weighing over twenty-six ounces; pullets weighing over twenty four ounces.

Standard weights.

Cock - - 26 oz. Hen - - 22 oz.
Cockerel - 22 oz. Pullet - 20 oz.

ROSE-COMBED BLACK BANTAMS.

Disqualifications.

Any feathers on shanks or toes; red ear-lobes; combs other than rose; natural absence of spike; decidedly wry tails; crooked backs; shanks other than black or very dark leaden blue in color; cocks weighing over thirty ounces; hens weighing over twenty-six ounces; cockerels weighing over twenty-six ounces; pullets weighing over twenty-four ounces.

Standard weights.

Cock - - 26 oz. Hen - - 22 oz.
Cockerel - 22 oz. Pullet - 20 oz.

Editor Review:—

IF any doubts were entertained by your readers as to the propriety of establishing a Bantam Department in the REVIEW they must have been dispelled as soon as the new column made its appearance. It abounded in practical information and the article on the

partridge Cochin Bantam was most interesting.

A writer in the May number of the *Century* discoursing on "Chickens for use and beauty" says:—"The time is not far distant, if the present activity in producing new varieties of Bantams continues, when for nearly every well-established variety of chickens there will be a Bantam counterpart."

To prepare your readers for this contingency I would suggest the insertion from time to time of illustrations in the *REVIEW's* new department.

Yours truly,

E. F. MURPHY.

Ottawa, May 17th, 1890.

AMERICAN INDIAN GAME CLUB.

AT the American Institute during the New York Show, February, 1890, representative breeders of the INDIAN GAME met in Convention and formed an Association to be known as the "AMERICAN INDIAN GAME CLUB." The object of this Club being the advancement of this noble fowl, the preparation of a Standard whereby they may be systematically judged and by a united effort secure for the fowl separate classes at the American shows.

At this meeting the following officers were elected to serve one year: President—H. S. Babcock. Secretary and Treasurer—O. K. Sharp. Executive Committee—F. W. Gaylor, C. A. Bowman, Irving Crocker. Committee to prepare Standard—O. K. Sharp, H. S. Babcock, J. Y. Licknell, F. W. Gaylor, J. H. Drevenstedt.

It is the desire of the founders of the Indian Game Club to make it the largest and strongest specialty Club in America.

Every breeder of Indian Games who has stock of known purity, whether he breeds them extensively or only for

pleasure, should join this Club, and in every honorable way work for the advancement of this noble fowl.

All petty strifes and individual difference should be laid aside, and all work in harmony for the general good of the breed. This was the expressed intent of the founders of the Club.

It is also intended to make it truly American, as implied by its name, and we hope to have every Breeder and Fancier of the Indian Game in the Union, Canada and Provinces with us, in our effort to place this breed upon the top of the ladder.

To enable all to join, the admittance fee and yearly dues have been placed low. Membership fee \$1.00. Yearly dues 50 cents, payable at end of year.

Send your application, accompanied by \$1.00, to the Secretary, or any officer of the Club. (Stamps taken)

O. K. SHARP,

Sec'y and Treas'r, Lockport, N. Y.

LONDON POULTRY AND PET STOCK ASSOCIATION.

THE regular monthly meeting of the London Poultry and Pet Stock Association was held in their room, Albion Block on the evening of the 13th inst. The President in the chair. A fair number of members were present. After the minutes of the last meeting had been read and confirmed Mr. McCormick reported the proceedings of the poultry committee for the Western Fair, which included the addition of five new varieties to the prize list for this year also some less important matters which was talked over and will be brought before the notice of the Western Fair Board. Dr. Niven gave notice that at our next meeting he would move that a Homing Antwerp loft be established in connection with No. 1 military district and that flying matches be indulged in. It is

the intention to have some Antwerps brought up at our next meeting for inspection. The members reported their young stock of chicks plentiful and doing well. It was decided to discontinue scoring through the summer months.

The meeting then adjourned.

R. OKE, Sec.

London, Ont., May 23rd, 1890.

TORONTO POULTRY, PIGEON AND PET STOCK ASSOCIATION.

ON Thursday, May 8th, the above Association held its usual monthly meeting in Richmond Hall, the president in the chair. The minutes of the previous meeting were read and adopted. There were some birds on exhibition and the prizes were awarded thus: Black-red Game, 1st E. F. Doty, judges, Messrs. Miles and McDermott. Black-red or pyle Game, Bantams, 1st Geo McDermott, 2nd J. Miles, judges, Messrs. W. Barber and C. R. Bache. Pigeons: Antwerps, and Dragons, 1st, 2nd and 3rd W. Fox, Judge, M. Parmenter. The debate was on the different methods of rearing prize fowls. The meeting adjourned at 10 p. m.

E. F. Doty,

Secretary.

AN UNUSUAL CASE.

WE consider the case explained below so much out of the common that we desire to give it more than usual prominence and get opinions from breeders who may have had similar experience. Our own experience has been that it is harder to kill ducklings than any other species of domestic stock. Our plan

has been never to give water to swim in till 8 or 10 weeks old, feed plenty of soft food and green stuff, and all grain in a pan of water (shallow) half-filled with sand and gravel. This is our correspondent's plaint :

Could you tell me what is the matter with my ducklings? I hatched 28 in an incubator and put them in a box with a tin pan in middle of it; the pan was soldered to another reversed, and filled with water, heated by a lamp underneath. Half of pan is on a level with bottom of box, half below. The ducks did splendidly for three weeks, then a froth appeared over eyes, closing them after the second day, then their legs became weak, toes turning inwards, and the upper bill began to get shorter than the lower one, and also to turn up. It seemed quite soft when handled. Two or more have died every day for the last two weeks. I forgot to say that the nose became stopped entirely, when the eyes closed up. They are eager for their food and water, right up to the very last. Some of them lingered a week or more, wabbling on their legs or walking on their elbows, their upper bill did not turn up, but the lower one became much longer, nose stopped up also.

I thought it was because the water in the pan was too hot, so I took off the glass sash cover, then they huddled on top of the pan, and would run out to get their food and come right back again to the box. I shut off the lamp but still they became affected and died just the same. Then I took away the tin pan and lamp and put the box in the grass run, but it does not seem to make any difference. They all take one of the symptoms, either closed eyes, crooked upper bill, longer lower bill, and invariably the weak legs.

I would like to save four splendid fellows if I could. Please write me as soon as possible giving remedy.

DUCK.

The medical man to whom such cases are referred by us advises as follows:—

We have ourselves had symptoms like the above when no incubator or brooder was used. There seems to be a total failure in the digestive powers and some radical defect of nutrition. We have sought for the fly in the ear in vain, and in fact for any organic change that would account for the symptoms.

Some would not allow ducklings any water to bathe or swim in till feathered fully. To us this seems a great departure from nature. We have tried both plans and have had the evils complained of above with both, though not satisfied with all of our other conditions. We believe in 1 to 3 opportunities to bathe during the warmer hours of the day—only, at first. We doubt if birds bred from stock that had no water to swim in are as good. We have ourselves raised ducks under very different conditions, and with at times complete freedom from disease, and again with troubles it was hard to account for or remedy. A number of intelligent breeders in Eastern Canada have had very bad luck with ducklings after numerous trials.

We think the subject one of great importance and much obscurity, and should like to hear from those of experience in breeding ducks in different parts of Canada as to the cause and remedy of the evils complained of above, and so well described.

Will our friend try the following treatment, experiment and report results:—

(1). No water to swim in till fully feathered.

(2). Only soft food till 4 or 5 weeks old.

(3). A shallow pan of water half filled with sand and gravel.

(4). Access to ground oyster shells and a pile of coal ashes.

We are also impressed with the importance of good ventilation at night, and of a little plot of ground with some grass and a few plants for them to run about in when the weather is good.

Since receiving above "Duck" again writes us "your letter re Duck's does not at all strike at the root of the matter. The ducklings never saw water except for drinking, in their lives; have always had soft food and gravel in drinking water; have had the run of a grass plot with sand at end, and I have always kept the sash of box slightly open at night, besides leaving the door 3 x 4 inches open.

We invite correspondence on this matter, especially from any who may have been unfortunate enough to have had a similar experience.

NOTES.

BY BLACK WYANDOT.

DUCKS and geese are always hardy and get away with feed that other fowls don't care for. As a rule, farmers and poultrymen give too little attention to raising water fowls. One does not need a fancy house for their accommodation or a great amount of water for them to swim in. They are ready to take kindly to common every day fare and if necessary will stand more hard knocks and neglect than other domestic fowls. A fat young duck is a delicacy not to be despised and is a luxury every American farmer can produce cheaply and profitably. The improved breeds so far surpass the old mongrel sorts that no one should judge of the possibilities of success in raising water fowls by the results he has obtained with the old fashioned birds. The Pekin ducks while they are much larger than the common ducks are also quicker to mature and will be ready for market ahead of any other unless it be the Aylesbury.

The great value of Embden geese as feather producers places them in our opinion ahead of the Toulouse as a profitable breed. Their pure white feathers are always in demand at the highest price and as flesh producers they are fully equal to the Toulouse.

Although geese are profitable, they are naturally more objectionable than ducks and are not a fowl that can be so generally cultivated. Ducks do not require water to swim in, but geese should be furnished with that luxury whenever it is possible.

"A BANTAM DEPARTMENT"

in the REVIEW should receive hearty support from every fancier of these beautiful and useful pets. The Bantams are not only ornamental but they are valuable for eggs and meat and often fill a place that larger fowls could not fill. For city residents who can devote only a little space to fowls they fill the bill exactly. The different varieties of Cochin Bantams will undoubtedly become very popular.

EXTRACTS FROM THE REPORT

OF THE POULTRY MANAGER OF THE
CENTRAL EXPERIMENTAL
FARM, OTTAWA.

TO WILLIAM SAUNDERS, F.R.S.C.,
F.L.S., F.C.S.,
Director Experimental Farms.

IT is desirable, when practicable, to keep the breeding stock, male and female, apart, in compartments away from those containing the layers, and treated in such a manner that, while robust health is secured, the hens are not stimulated to lay until mated at the proper season. Chickens from hens which have been laying actively all winter, are not likely to be possessed of that vitality so necessary to vigorous

growth. Again, the shells of the eggs from winter layers are apt to be so thin by springtime as to be unfit to put under early sitters. When the winter laying stock have to be used as breeders, they should be given a rest and run outside, if the weather permits, before the eggs to be used for hatching are laid. As the poultry building did not afford space for separate pens of breeders and layers, the hens were given the necessary rest, and in all cases the breeders were mated with a male bird of a different strain. It may be mentioned that it is, I believe, intended to provide such addition to the present poultry house as to allow of the laying and breeding stock being kept in different compartments. The male birds were not placed with the hens during the winter season, and should under no circumstances be permitted in their company. Apart from the fact that impregnated eggs lose their finer flavour, the male birds will not be in the desired condition when mated in early spring, besides the risk that no breeder would care to run of having fertilized eggs, from his best birds, sold promiscuously at the price of eggs for eating.

THE BENEFIT OF NEW BLOOD.

The benefit of having, at the first establishment of the poultry department, procured eggs from different strains with the view of future breeding, was particularly instanced in the case of the buff Cochins, which, after laying during the winter months, were only eleven months old when mated, after a short rest and run, to a cockerel of the same breed and age, but of a different strain. The result was patent in a large percentage of the eggs producing hardy chickens of large size.

SITTING HENS AND THEIR MANAGEMENT.

The first two hens to become broody were Wyandottes. One was set as early as the 2nd March, but egg shells being thin broke frequently, and although the

remaining eggs were carefully washed in lukewarm water and reset, only one chicken was hatched. The other Wyandotte was given eight Plymouth Rock eggs on the 17th of the same month (March) and the result was fairly satisfactory in the shape of four fine chickens, the remarkable progress of which is noted elsewhere. As other hens became broody they were given eggs as soon as possible. Every effort was made to rid the broody hens of any vermin that might be on their bodies before putting them on eggs. To effect this the nest, which was made of straw, in boxes specially arranged, was well dusted with carbolic powder. China eggs were placed in the nests and the sitter put on them for 24 or 36 hours. The china eggs were then taken away and the real eggs substituted for them. All lice meanwhile were most probably driven from the hen and she could then sit in ease for the remaining period of incubation. The nest boxes were made without bottoms so as to be placed on the floor of building in early spring, or on the ground in the warmer weather. At another season it is intended to set a number of hens on the dry floor and others in nests on the damp ground in order to thoroughly test both methods, each of which have their enthusiastic advocates. In the early season it is beyond question that the dry floor is preferable to the cold ground. As the weather becomes warmer, the cooler earth may be best. In order to arrive at a satisfactory conclusion, the eggs must be thoroughly tested and the unfertile ones removed. Unless the eggs are so tested, no definite result can possibly be arrived at, for some nests will be sure to contain a greater number of fertile eggs than others. The conditions must be the same in both cases. We have no statement from the advocates of either of the methods mentioned to show that any conclusive trials were even attempted.

Corn in a trough, water and a dust bath were always kept near the sitters. Some of the hens were confined to their nest and allowed out at a certain hour every morning to feed, drink and enjoy a dust bath. Others were kept in open nests and allowed to come off and return at pleasure. The former is the better way in the early season when the weather is cold and it is an object to get the hen on the eggs again before

the latter are chilled. In the dust bath a small quantity of sulphur was mixed to aid in the prevention of lice. As previously stated, when eggs were broken under a sitter the remaining ones were carefully washed in lukewarm water and re-placed in the nest.

The following table will show the number of eggs put under hens and the results therefrom:

EGGS SET AND CHICKENS HATCHED.

Date when Eggs were Set.	No. of Eggs Set.	Description of Eggs.	No. of Chickens hatched.	Date when Chickens were hatched.
1889				
Mar. 17..	8	Plymouth Rocks.....	4	April 7
April 10..	9	5 White Leghorns, 4 Houdans.....	4	May 1
do 11..	11	Brahmas (from London, Ont).....	4	do 2
do 30..	11	Houdans.....	5	do 21
do 30..	11	Brahmas.....	2	do 21
do 30..	9	White Leghorns (hen got sick on nest).....	1	do 21
do 30..	11	5 Wyandottes, 6 Buff Cochins.....	6	do 21
May 1..	9	Game Cross.....	4	do 22
do 2..	11	7 Plymouth Rocks, 4 Buffs.....	5	do 23
do 7..	11	6 Game Cross, 5 Buffs.....	6	do 28
do 9..	11	Plymouth Rocks.....	5	do 30
do 9..	13	7 Buffs, 6 Game Cross.....	8	do 30
do 15..	11	Black Hamburgs.....	7	June 7
do 15..	13	do Minorcas.....	9	do 7
do 17..	13	Redcaps (from London, Ont).....	4	do 9
do 17..	11	Andalusians.....	5	do 9
do 20..	11	Houdans.....	9	do 12
do 23..	9	Wyandottes (purchased in Ottawa).....	4	do 15
do 28..	11	6 Houdans, 5 Mixed.....	7	do 20
June 3..	11	Black Hamburgs.....	5	do 24
do 4..	9	Mixed.....	4	do 25
do 8..	11	9 Andalusians, 2 White Leghorns.....	7	do 29
do 11..	11	7 Plymouth Rocks, 4 White Leghorns.....	6	July 1
do 22..	13	Wyandottes (purchased in Ottawa).....	11	do 13
do 26..	11	6 Leghorns; 5 Black Hamburgs.....	5	do 17
July 6..	11	Pekin Bantams (purchased in Ottawa).....	3	do 27
May 26..	.....	Incubator chickens.....	6	June 6
			146	

market for a sitting hen.

DEMAND FOR STOCK AND EGGS.

As spring advanced the demand for stock and eggs became brisk. It was decided after due consideration to sell eggs to farmers for hatching at a reasonable price, also spare cockerels for breeding purposes. This is done with the view of inducing them to cultivate a better class of poultry for eggs and sale on the market, care being taken that the interests of regular poultry breeders were not interfered with. In several cases thoroughbred cockerels were exchanged with farmers, in order to afford them opportunity to introduce new and better blood into their much inbred stock. A demand for thoroughbred stock, and the business of the high-class poultry-breeder cannot fail to be correspondingly enhanced. [This should result in great good.—ED. REVIEW.]

EGGS SENT TO DIFFERENT POINTS.

Eggs and stock were shipped to different places in the Provinces of Ontario, Quebec, Nova Scotia, New Brunswick, the North-West and British Columbia, and the branch experimental farms at Indian Head, N. W. T., and British Columbia. It is to be regretted that in some cases the eggs sent to a distance did not hatch well, although packed according to the most approved method. There is always a certain amount of risk and disappointment attending the despatch or reception of eggs for hatching. So much so, indeed, that several breeders of note, prefer to send live stock rather than eggs to their customers. It may be remembered that in June of last year, eggs received from England, for the poultry department of this Central Farm hatched out 50 per cent, and the eggs sent by express to the branch experimental farm at Indian Head, in May last, did very well. In many cases eggs are not fertile when sent, and the carriage is blamed for disastrous results that would have been the

With the exception of the eggs obtained from outside sources as stated above, all were furnished by the farm

stock. A feature of the early breeding season was the scarcity of sitters, as much as one dollar being offered on the

same at home. All that can be done is to use every means to have the eggs fertile; pack according to best plan in light basket with handle; apprise the carriers by conspicuous letters on package of the care required in handling and give the consignee to understand that he is to share a certain amount of the risk.

THE CHICKENS, THEIR GROWTH AND TREATMENT.

On the chickens hatching, they were allowed to remain for 24 or 26 hours under the hen until they were completely "nest ripe." With the mother they were then placed in coops of improved pattern specially designed for the poultry department. The mothers were confined to the coops, but the chickens could run at large, or return to brood at pleasure. The coops became the homes of the chickens until they were removed in the fall to winter quarters. On the chickens feathering sufficiently to keep themselves warm by nestling together at night (generally at the age of four or five weeks,) the mother was removed to her quarters in the poultry house to resume laying, and each colony of chicks returned to their own coop without hesitation. The coops were so arranged that on being closed for the night the inmates were secure against all enemies in the shape of rats, weasels, skunks, &c., while proper ventilation was not lost sight of. In rainy weather a double roof on each coop was drawn forward and made an excellent shelter. It could also be used as a shade in the hot season. Care was taken to prevent lice on the chickens. These pests are insidious and deadly foes to the young chicks and cannot be too energetically guarded against. A great deal of this precaution can be well observed at the time of setting the hen, by ridding her body of all such tenants. (See setting hens, above.) In the early summer of the year 1888, two methods of feeding newly hatched

chickens were tried, viz., the dry (hard boiled eggs and bread crumbs) and the wet (bread and milk), but with one or two exceptions in the past year the bread and milk system was adopted, and with excellent results. This method is particularly adapted to farms, where large quantities of butter are made and there is plenty of curdled milk to feed. The bread was put into milk, squeezed nearly dry and so fed. It contained moisture enough to do for drink, and in consequence, water was not given to the chicks until they were several days old. Sour milk was left for them to take when desired and was always enjoyed with great relish. Feed was given as frequently as they would eat and as much as they would take. Too much importance cannot be attached to the fact that the first few weeks of the chicken make the future fowl. A chicken half starved or stunted from any cause in the first five weeks of its existence never regains the loss afterwards. Chickens for table use should be pushed from the first day they are able to eat. As the chickens grow up, the last feed in the evening was gradually changed to wheat and crushed corn, and pains were taken to see that every chicken went to its coop with a crop full. The bread and milk gave way to shorts, cornmeal, ground oats, bran, and other suitable materials mixed in boiling water with a handful or two of ground meat to the chickens which could not get grasshoppers, or other form of insect life. The mortality among the earlier chickens did not reach beyond 5 per cent.

The growth made by the chickens of different breeds is shown by the following table:

WEIGHT OF CHICKENS.

Plymouth Rocks—A cockerel hatched on 7th April, weighed, on 7th May (one month afterwards), 1lb. 6ozs.; on 7th June, 2lbs. 15ozs.; on 12 July, 4lbs. 12ozs. (making 4¾lbs in 3 months).

On the 24th of the same month (July) the same bird weighed 5lbs. 8ozs.; on 15th August, 7lbs. 10ozs., and on the 18th October, 8¾lbs. Another Plymouth Rock, hatched on the 30th May, made equal rapid growth, showing a weight of 8lbs. 4ozs. on the 30 of October (5 months from date of hatching), thus making weight of nearly one and three quarter pounds per month.

Brahmas—Four chickens, hatched on 2nd May, from setting of eggs from London, Ont., turned out pullets, so in this case we have to take the female; one, grew at the rate of 1lb. 2ozs. per month, weighing at the end of October 7lbs.; another, at the same date, weighed 6lbs. 8ozs. A Brahma cockerel, hatched on the 21st May, weighed, on 21st August (3 months later) 2lbs. 15ozs., showing a gain of a little over 15ozs. per month.

Buff Cochins—Two cockerels, hatched on 21st May, weighed, on 21st August (3 months afterwards) 3lbs. 6ozs. and 3lbs. 4oz., making progress at a rate of 1lb. 2ozs. per month.

Wyandottes—Chickens hatched on 21st May, weighed 3lbs. 7ozs., on 21st August, (three months latter), gaining a little over 1lb. 2ozs. per month. A white Wyandotte made the same gain during the same period. Eleven Wyandottes hatched on 13th July, did not make quite such rapid progress during the hot term, showing, on 20th August following, only 13ozs., but on 23rd September, cooler weather, reaching 1lb. 5ozs., and, on 23rd October, 2lbs. 14ozs.

Houdans—Hatched on 1st May, showing a gain of 1lb. per month.

Game-Cross—Two cockerels of a cross between a black-breasted-red Game male and black Minorca hen, and hatched on the 22nd and 28th of May respectively, weighed, on 22nd August (three months), 3lbs. 7ozs. and 3lbs. 4ozs., making almost 1lb. 3ozs. per month.

Incubator Chickens—The chickens hatched in incubator on 16th June, and reared in a brooder made 1lb. and 1lb. 20zs. per month. The majority of these chickens were crosses between Plymouth Rock and Wyandotte, except one, a white Plymouth Rock, which made 1lb. 60zs. per month.

From the above it will be seen that the Plymouth Rocks made the greatest headway, reaching a development, in some instances of nearly one and three quarter pounds per month, far distancing all others. The difference in progress made can be more easily seen by the following figures:—

COMPARATIVE RATE OF PROGRESS PER MONTH.

Breed	Lbs.	Ozs.
Plymouth Rocks.....	1	12
Brahma Pullet.....	1	02
do Cockerel.....	1	00
Wyandottes (laced and white).....	1	02
Buff Cochins.....	1	02
Houdans.....	1	00
Game-Minorca Cross....	1	03
Incub. Hatched Chicks. {	1	04
	1	02

EARLY LAYERS.

Of the four Plymouth Rock chickens hatched on the 7th April last three were pullets. The early development and laying of these pullets are worthy of note, as showing what care and good feeding will do to bring about desired results. One of the pullets began to lay on the 28th of August, four months and twenty-one days from date of hatching. The second pullet laid three days after the first and the third a short time after. A number of pullets of the same precocity would give a supply of eggs when the older stock is moulting and eggs are becoming scarce and dear in consequence.

NUMBER OF EGGS LAID BY CERTAIN BREEDS.

The following will show the number of eggs laid in twelve months by nine of the best known of the Standard breeds

It must be borne in mind that the majority of the layers were pullets, and that none of the laying stock were forced as much as they might have been, for the reason that the greater number were to be used as breeders in spring. As the sitters became broody they were given eggs, and the number of layers was correspondingly reduced. Twice during the later portion of the winter the buff Cochins, Leghorns, Minorcas, and Houdans were stopped laying on account of eating eggs. A certain number of hens were sick, some died, and some were sold. In the months of August, September, October and part November few eggs were laid, because the hens were in full moult:—

Breed.	Totals												
	Jan	Feb	March	April	May	June	July	August	Septemb'r	October	Novemb'r	Decemb'r	
15 White Leghorns	99	40	210	162	166	56	40	71	10	14	18	9	895
10 Plymouth Rocks	24	44	67	95	54	26	33	37	31	12	15	29	467
8 Brahmas	27	7	39	70	66	9	19	17	1	1	15	7	278
8 Black Minorcas	47	10	51	51	52	8	10	27	29	2	12	5	304
5 Black Hamburgs	53	31	59	16	39	9	45	65	12	17	12	12	358
5 Buff Cochins	8	10	36	49	25	...	5	36	17	7	5	13	211
10 Houdans	43	6	56	77	92	...	...	15	2	3	3	...	294
2 Wyandottes	28	12	13	10	24	5	2	2	3	...	10	9	111
5 Dirigos	49	21	28	41	87	14	8	12	...	11	...	...	281
Total	3199												

The result aimed at was to have the hens lay when eggs were high in price and the sitting breed hatch chickens when the price was below eighteen cents

per dozen. The early pullets should begin to lay when the older hens are in moult and the new laid eggs are becoming scarce and high in price, as was done in the case of the three Plymouth Rock pullets hatched on 7th April, 1889. (See sub-head early layers.) A point to be considered is, that all the laying stock had limited runs compared with what one or two breeds could enjoy on a farm where a poultry department is made a source of revenue.

WEIGHT OF EGGS.

From time to time the eggs laid by the different breeds were weighed singly and in dozens, as follows:—

	Single Egg.	Per Dozen.
Plymouth Rocks, hens.	2 1/4 ozs.	1 lb. 11 ozs.
do pullets.	2 ozs.	1 lb. 09 ozs.
Wyandottes, hens.	2 ozs.	1 lb. 09 ozs.
do pullets.	2 ozs.	1 lb. 07 ozs.
White Leghorn, hens.	2 1/4 ozs.	1 lb. 10 ozs.
do pullets.	2 ozs.	1 lb. 08 ozs.
Brahmas, hens.	2 1/4 ozs.	1 lb. 11 ozs.
do pullets.	2 ozs.	1 lb. 09 ozs.
Buff Cochins, hens.	2 1/4 ozs.	1 lb. 11 ozs.
do pullets.	2 ozs.	1 lb. 08 ozs.
Black Minorcas, hens.	2 1/4 ozs.	1 lb. 11 ozs.
do pullets.	2 ozs.	1 lb. 09 ozs.
Black Hamburgs, hens.	2 ozs.	1 lb. 06 ozs.
do pullets.	2 ozs.	1 lb. 04 ozs.
Dirigos, hens.	2 ozs.	1 lb. 10 ozs.
do pullets.	2 ozs.	1 lb. 08 ozs.
Brahma-Minorcas, hens (not laying yet).	...	...
Brahma-Minorcas, pullets.	...	1 lb. 14 ozs.

It will be noticed from the above that the pullets of the Brahma-Minorca cross laid exceptionally large eggs. The hens have turned out larger than either the average Brahma or Minorca hen. The eggs were mostly weighed in February and March of last year (1889). Some of the eggs from the white Leghorn hens, laid in the beginning of March, were remarkably large, as those who saw them on exhibition in the poultry house may remember. Taking two of the largest of these Leghorn eggs, one weighed 2 1/2 ozs. and the other 2 1/4.

The lesser weight has been put down, as best representing the weight of the majority.

MISHAP TO INCUBATOR.

On the 26th of May last one hundred eggs were put into the Bessey Incubator. The hatching went on successfully until the sixth day when the lamp of the incubator burst into flames and was injured beyond immediate repair. The eggs were removed to another machine operated on the hot water principle without lamp, but in so doing several hours' delay unavoidably occurred and what eggs were not spoiled before were chilled by the long waiting. The machine was, however, attended to for the full period but only ten chickens came out.

(To be continued.)

ANSWERS TO CORRESPONDENTS ON DISEASES, BREEDING, MANAGEMENT, ETC.

Correspondents are requested to make full use of this column. The answers to enquiries as to diseases will be answered by a well-known medical man and breeder. Please read the following rules carefully.

1. Give a concise, clear and exact statement of case, always stating age, sex, and breed.
2. Enclose 3 cents stamp for reply.
3. Report result, not necessarily for publication. *This is absolute.*
4. Acute cases requiring immediate treatment to be answered by mail in the first instance, later through POULTRY REVIEW for the benefit of our readers.
5. Write legibly and on one side of the paper only.
6. Answers to be in name in full, initials or *nom de plume*, the first preferred.

QUE.—I will have to trouble you for advice again concerning my Langshans. One of my hens has a thick coating in the mouth resembling dough, quite hard, on removing it it bled some, the hen is very poor, she has had soft feed, turnips, clover, onions, in fact been well attended to, I am afraid I will lose her, she does not run at the nose, comb and wattles are good color, she is very stupid. Enclosed you will find stamp for reply, please answer by return mail.

I followed your instructions before and it cured my fowls.

PHILIP HART,

Belleville, Ont.

ANS.—Your fowls have canker, which is liable to become roup.

Beware of draughts, cold and wet; but at the same time nothing disposes to all sorts of ailments like foul air, so you must ventilate more than was necessary in winter.

Treatment:

Powdered chlorate of potash. 3 grains.

Tincture of iron 5 drops.

To be given twice or thrice daily. This may be given in gelatine capsules, No. 00, the iron dropped on a piece of bread, the powder sprinkled over this and the whole placed far back in the mouth of the bird.

As a local application use the following three times a day:

Glycerine, - 8 parts	} Mixed well together and painted on.
Tincture of iron 4 "	
Carbolic acid 1 "	



Mr. J. H. Cayford, Box 1,168, Montreal is our Agent and Correspondent for the Province of Quebec. Any correspondence relating to subscriptions or advertising may be addressed to him.

U. S. OFFICE.

We have established a branch office at Boston, Mass. U. S., readers will receive prompt attention to their enquiries when addressed to P.O. Box 1879 Boston.

We want agents in every town in Canada, liberal terms will be made.

AN EASY WAY TO GET FELCH'S GREAT BOOK.

To any one sending us five new subscribers with \$5 we will send a copy of "Poultry Culture" by I. K. Felch, value \$1.50, a book no fancier should be without. We have lots of these, books so don't be afraid the supply will run out.

We call your attention to the change in the advertisement of Francis A. Mortimer Edgewood Poultry Farm, Pottsville, Pa. It will

pay all who want bargains in Langshans, Minorcas and Ancoas to write to him at once. *He can suit you both in quality and price.*

ONE MORE SAMPLE.

I might say though in justice to REVIEW that the last ad. I had in of my Games, brought four customers from Omaha, Neb., Victoria, B.C., and several other answers from Ontario and Quebec, could have sold some of them three times, wishing the REVIEW every success.

Yours truly,
R. B. SMITH.

Belleville, Ont.

BREEDERS' ADDRESS CARDS.

WM. B. SCOTT, MILFORD, ONT.

Breeder of pure Plymouth Rocks and large Pekin Ducks. Eggs \$2 per 13 or \$3 per 26.

W. M. SMITH, FAIRFIELD PLAINS, ONT.

Breeder of all varieties of Land and Water Fowls.

J. H. RICHARDS, GODERICH, ONT.

Breeder of Americas Choicest Houdans, Red Caps and Langshans, Partridge Cochins (A. Bogue's strain). Eggs from all of my breeds at \$1.50 per 12. Don't Exhibit.

JOHN HORD, PARKHILL, ONT.

Breeder of 15 different varieties of Land and Water Fowls. Toulouse Geese a specialty.

H. GODDARD, LISTOWEL, ONT.

Breeder of W. & B. Leghorns, B Javas and S. S. Bants. Eggs \$2.00 per sitting or \$3.00 for 26.

R. E. BINGHAM, STAYNER, ONT.

Breeder of Plymouth Rocks, Light Brahmas, and Houdans. Eggs, \$3.00 per 13.

W. S. ODELL, OTTAWA, ONT.

S. S. Hamburgs and Pekin Ducks.

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ADVERTISING RATES.

Advertisements will be inserted at the rate of 10 cents per line each insertion; 1 inch being about 10 lines.

Advertisements for longer periods as follows, payable quarterly in advance:—

	3 Mths.	6 Mths.	12 Mths.
One page.....	\$30 00	\$50 00	\$75 00
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One column.....	12 00	20 00	35 00
Half column.....	8 00	15 00	25 00
Quarter column.....	6 00	10 00	15 00
One inch.....	3 00	5 00	8 00

Advertisements contracted for at yearly or half yearly rates, if withdrawn before the expiration of the time contracted for, will be charged full rates for time inserted.

Breeders' Illustrated Directory, 1-5 col card, 1 year \$8; half year \$5.

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