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FANCY PHEASANTS
JUNGLE FOWL AND PEAFOWL
FOR BEGINNERS



FANCY PHEASANTS
JUNGLE FOWL AND PEAFOWL
FOR BEGINNERS

By

CHARLES H. TREVISICK, F.Z.S.

Colour Plates by Hubert J. Pepper

FIRST EDITION



CAGE BIRDS
DORSET HOUSE, STAMFORD STREET, LONDON, S.E.1

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Published for "CAGE BIRDS" by Poultry World Ltd., Dorset House, Stamford Street, S.E.1, and made and printed in Great Britain at The Chapel River Press, Andover, Hants

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Introduction

NEARLY every day people come and ask me, "What are those lovely birds? Can I keep them? Are they dear to buy?"

To me these Fancy Pheasants represent the most hardy and colourful birds that have been given into our keeping. They are highly ornamental for aviaries and collections anywhere, in the municipal park, or they are the answer to the garden aviary for the beginner.

Unlike most foreign species, which require special care and heat, these Pheasants are easy to house and feed and the chicks easy to rear. For a very small outlay a hobby can be started that will repay you a hundredfold, and give invaluable pleasure to you and your friends.

In this book I have tried to guide the novice step by step in very simple, everyday language, showing him how to succeed and, above all, how to avoid any pitfalls that otherwise might prove his undoing in this fascinating hobby.

Also catered for are the colourful and exotic Peafowls, the fantastic birds seen sometimes in the grounds of the "Stately Homes of England",

which are now becoming only a memory. And we must not forget the little game bird, the highly coloured Jungle Fowl, the ancestor of our domestic poultry.

In introducing this book may I say, "Why not join the ranks of already established bird fanciers?" These ranks are open, and the welcome you will receive, I can assure you, is very real and warm. We are a body that stands as "Four Square" as the Rock of Gibraltar.

CHARLES H. TREVISICK.

Pheasants: The First Pair

I THINK we must assume that the novice has decided to acquire a pair of Pheasants in one of the varieties to be described later, which are very hardy, engagingly beautiful, and above all within reach of the average person's pocket. I was going to say average man, but this would have been a very untrue statement indeed, for I know a lot of the gentler sex who have acquired an urge to keep these weird and wonderful birds. Yes, we all like these ornamental Pheasants.

Before actually buying any birds it is quite a good idea to visit a reputable fancier who has bred them over the years. You may take it from me that, far from being reticent about showing his wares, he will feel very honoured to have been asked to show his collection to you. Fanciers are a proud race and love to show their achievements to others. So, by all means, go along.

You can get the name of a fancier from one of the societies, such as the Avicultural Society. I know that Mr. Arthur Prestwick would be only too pleased to help. Or my very dear old friend,

Harold King, of the Foreign Bird League. They both talk, dream and live "birds".

When you have been to the chosen establishment do not try to grapple with the more expensive and exotic birds to start with; there is plenty of time. Have a good look around, see his varieties and then pick a pair of Golden, Silver, Ringnecked, Lady Amherst, or the very beautiful long-tailed Golden Reeve's Pheasants, all of which I shall describe in a later chapter.

On deciding which you will purchase it is better to buy them in the autumn as this gives them time to settle down and become acclimatised before the breeding season in the following spring.

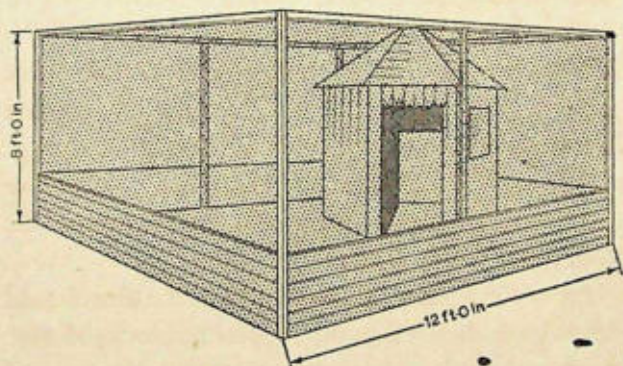
It is right to say that Pheasants will breed more easily than any other species of foreign bird outside their own native country.

Now for housing them. I think the aim should be to have these Pheasant aviaries in blocks of, say, four. They should be constructed on the lines of the sketch on the next page. The shelter at the rear of each aviary flight should be at least six feet wide and eight feet deep, and, here is a good tip, have them all high enough to allow a man to stand upright. As so many have made a mistake in this, we will say make them seven feet high.

This shelter is for rough weather, and provides a place where they can lay the clutch of eggs away from prying eyes and hatch the chicks in peace and comfort.

A fairly large outside flight should be constructed, eight feet wide and twelve to fifteen feet in length. Again I emphasise the height! Say eight feet, as all these birds thrive so much better in large flights.

The shelter is warmest and best, to my mind, if it is constructed of wood with plenty of light and ventilation, and it will require wooden perches for roosting; I find ordinary broom handles excellent for this purpose. As well as a timber



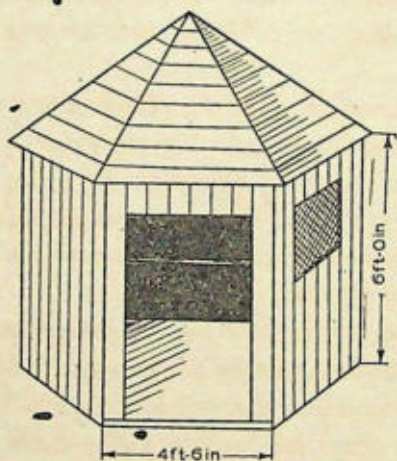
A shelter and aviary flight for housing Pheasants. The flight can be planted with a few shrubs, if desired.

lining the roof should have a covering of a good brand of roofing felt.

Another good point is to provide a wooden floor as this is easier to keep clean. Moreover, Pheasants can stand the cold but hate the damp weather. Be sure to cover the glass inside with netting or perhaps one day when the next door neighbour's cat looks them up, they will panic

and go through the glass with tragic results! After all, this is the time to take these elementary precautions.

Now on to the flight. You know, it makes these Pheasants feel very much at home to have this part planted with a few shrubs. The framing is generally constructed of wood, since, for the



A hexagonal Pheasant shelter constructed of timber. These shelters should have plenty of light and ventilation, and require wooden perches for roosting. The roof is covered with a good felt.

ordinary novice, it needs a very big pocket to go in for steel framing, however nice it may look. To my mind some really straight larch poles are the answer, as you get that natural rustic look which is very charming.

When the sides have been wired with netting small enough to keep out vermin, particularly rats and sparrows, we must turn to the bottom of the framework near the floor. It is a very wise plan

to bury the wire netting about eighteen inches with a turn-up towards the outside, for if a rat burrows it nearly always goes down straight with the wire netting side.

When the roof is put on I should also insert a few extra "bearers" or poles to give added strength, because one must allow for snow to fall at some time. This can build up and get very heavy indeed, causing the roof to give in and perhaps collapse.

Now we are getting on with our pheasantry, as a lot of these aviaries are called. On the floor of the aviary flight, if it can be grass seeded over, it is a very wise precaution to peg down wire netting over the grass bottom as this will prevent the birds from scratching up the turf.

It is usual to put a pair together or perhaps a trio, a cock and two hens, as they are very quarrelsome in the breeding season and will soon "scalp" the hens if more than one male is with them. Believe me they can inflict some very nasty wounds with their small, but very effective, spurs.

It is possible to add a few colourful birds that perch more in the aviary, and make it a mixed collection. Doves are nearly always good mixers and some breeds of the colourful Parakeets do not look amiss in a flight, but you must watch that one species does not starve the other.

It is a good plan to introduce the cock to the hens after the hens have been in residence for a

couple of weeks. Then the females can even boss or hold in check a boisterous young cock bird which comes new into the aviary.

- A little lime sprinkled over the ground once a year will keep it sweet and help to kill any gape worm grub, which can be a menace to the rearing of chicks. Do not forget a good supply of fresh drinking water at all times, placed in a cool spot in summer.

Rearing of Chicks; Feeding and General Management

WHEN rearing young Pheasant chicks I find a few Silkie fowls a very valuable addition to my collection. They seem to sit on anything I have ever had—I even had one make a nest and sit on some round pebbles for quite a long time! They will take any waifs and strays and mother them, irrespective of age and sex.

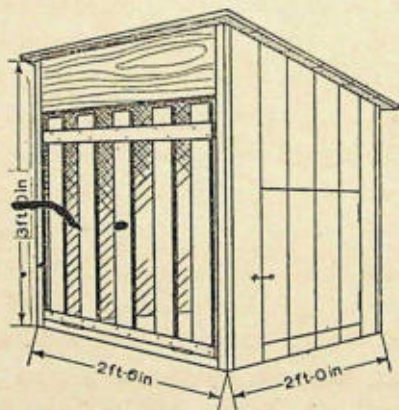
At the time of writing this book I have just come in from looking at a Golden Silkie hen walking proudly about with three Muscovy ducklings, one tiny Old English Game chick, and, bringing up the rear, her "first love", now a month old, a very robust and sturdy Chinese gosling.

Having laid her first clutch or batch of eggs in the spring, generally early April to late June, the hen Pheasant will, if left, sit on them over the three weeks. You may prefer, however, to choose my method of putting them under a Silkie. If you have no Silkie a good tempered quiet Bantam hen will do the job quite well. A Silkie or a

Bantam hen will take up to 10 Pheasant eggs. Usually a clutch consists of 7 to 10 eggs.

The nest boxes should be constructed of wood, with removable tops, set in the ground to let the eggs have the maximum amount of moisture, as this decidedly helps with the hatching results. A small movable run in the front enables her to come off and feed and have a dust bath, which is very important.

If all goes well, on the twenty-second day we find the eggs chipping and the young Pheasants start to emerge from their shells. When all are hatched place them in a coop with the same

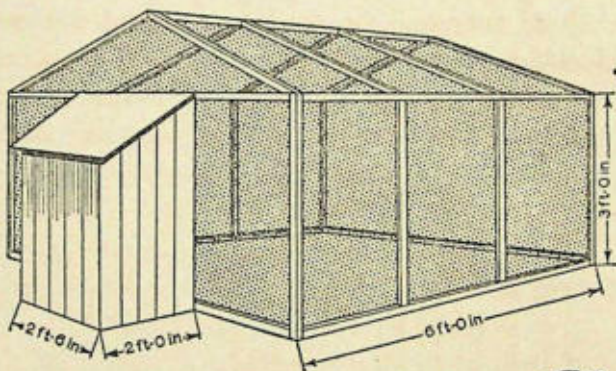


This coop for foster mothers and chicks is used with a movable run. The door in front is hinged to facilitate cleaning.

movable run (see sketch on page 11), leaving them for the first day to settle and dry off. They will have absorbed all the food they need for this short time before they left the egg.

Now be sure to move the coop and run twice

a day, if you can, as this reduces the risk of disease and keeps the youngsters picking on the fresh grass. This, by the way, must be kept short, so that a lawn is the ideal place to rear these little chicks. It also has the advantage, generally, of being near the kitchen, which enables you to step out those five or six times a day to tend them and give them a good start.



Coop and movable run for raising Pheasant chicks. A move twice daily reduces the risk of disease.

The golden rule when feeding all baby chicks, or, for that matter, with all young animals, too, is "little and often".

A proprietary Pheasant rearing food has overcome a lot of the beginner's troubles, but the birds will thrive on a change, or if the rearing food is not readily obtainable, on a diet of cleaned maggots, which can be had very easily through

advertisements in *Cage Birds*. These should be augmented with some finely chopped lettuce and hard boiled egg; some Number 1 size chick feed, with occasionally a good brand of biscuit meal to which a little millet seed is added, may also be given as a change.

The chicks do need for digestive purposes some sort of very fine grit, and water should be given *ad lib*. Remember, however, that chicks are very silly little things and drown very easily and, I am afraid, very often. The novice, time and again, will put a deep dish for these little birds to drink out of. The result? Inquest after inquest—"Found Drowned".

The way to avoid this is to use a small drinking fountain, the sort sold for Canary and Budgerigar Fanciers. Alternatively, a shallow saucer can be nearly filled with washed pebbles, leaving enough water showing at the top for the small chicks to wet their beaks.

Do not give them a lot more food than they can eat, as it is wasteful. The money could well be spent on buying another breed to branch out with. It is also very harmful, because stale and fermented food is, perhaps, enemy number one for chicks of a tender age, and will cause bowel troubles as they grow.

After a week get them on to a good balanced turkey rearing mash mixed with some milk into a crumbly consistency, not a soggy mess as some

people are very prone to do. Gradually introduce them to the larger sizes of seed, slowly grading up to an adult feed such as wheat, which is the staple diet of Pheasants. Wheat is taken at about eight weeks and adult birds will eat about $1\frac{1}{2}$ oz. daily.

Another pitfall can be avoided by the free use of minerals and phosphates, which are added to the diet to prevent crooked toes and half crippled youngsters. These are not all due to inbreeding, but often to a deficiency in the diet. Many feed mineral supplements containing trace elements, some of them based on seaweed in the form of seaweed powder, which can be purchased.

To prevent inbreeding with the adult birds of the same family, generation after generation, exchange a male bird with a friend or fancier, who would, I am sure, be pleased to render this service even if only for his own good.

A vice to be looked for, and which may also be caused by a diet deficiency, is feather picking, which is bad enough in itself, as it not only makes birds look very unsightly, but can result in fatalities. Safest policy is to isolate at once any bird seen to be feather plucking, and to check the diet.

As the chicks grow into what are called young poults at about eight weeks of age, there comes a time when they are ready to be moved into more permanent and larger quarters. As they are now on an adult diet, they should be practically trouble-free, and can be fairly safely kept together until

paired up for next breeding season. Cocks and hens of a lot of the commoner but, to me, very lovely varieties can be kept together for a time, providing they are about the same size and are not of a pugnacious species.

It will be as well to end this chapter with an important warning. Always be very careful to go among the birds very quietly as Pheasants are inclined to be silly and fly up to the aviary top and injure their skulls. Sometimes a skull has to be stitched up, and it does require someone who has tackled the job before, or, failing this, a veterinary surgeon should be called. First cleanse the wound, and afterwards put on a good healing salve or ointment.

Some Exotic Pheasants

BEFORE I introduce some of these multi-coloured creatures, let me just briefly detail the various species. There are sixteen distinct genera of Pheasants. It is very important that they should be in different groups although, superficially, all Pheasants may look alike.

There are, however, strong variations in shape and habits, so that the sixteen groups divide clearly into separate species with no obvious connections. General behaviour, voice, courtship, display, and the sterility, semi-fertility or complete fertility of hybrids, must all be taken into consideration.

The sequence of the natural genera is: (1) Blood Pheasants and (2) Tragopans, moulting from the central pair of rectrices outward (much like partridges). (3) The Koklass, which moult from the outer pair inward, as do also the following: (4) Monals, (5) Jungle Fowl, (6) Kalij, (7) Eared Pheasants, (8) Cheer Pheasants, (9) Longtail Pheasants, (10) The True Pheasants, (11) Ruffed Pheasants. Now come (12) Peacock Pheasants, (13) Crested Argus, (14) Great Argus, (15) Peafowl,

which moult their rectrices from the third pair outward and inward, and (16) Afropavo-Congo Peacock.

- In general Pheasants come under two categories:
- Game Pheasants and Fancy Pheasants or aviary birds.

Of the multi-coloured Pheasants one of the rarest and least known is the **Himalayan Blood Pheasant** (*Ithaginis cruentus cruentus*). It is much shorter than most Pheasants and of medium size. The facial part around the bars is completely bare. The short, curved beak is a useful weapon for digging among the scrub on the snowcapped heights of Nepal and the surrounding country.

Found in parties of about a dozen, they split up into pairs in the breeding season and are monogamous as far as is known.

This little Pheasant is remarkably tame and docile. Under a rocky shelf or perhaps the stump of some tree a mossy nest is made in which up to ten spotted eggs are laid. The incubation period is about a month.

A few of these birds have been brought to England but they have never lived long in captivity. The food in the natural state consists mostly of vegetable matter and insects of all sorts.

The male bird has a breast of vivid green with crimson markings. The thighs are of a greyish colour with under tail coverts of bright red tipped with yellow. The upper tail coverts have crimson

edges. The black face and buff crown are topped by a dark grey crest which is streaked with white; in all a most striking little bird. At about six months the immature males start to colour.

The hen is of a more sombre colour with a grey crest set on top of her cinnamon-coloured face and throat. The upper parts of the body are dark brown vermiculated with black; as in the male bird there is a lot of crimson in the breast. The legs are red, but get duller in winter.

Temminck's Tragopan (*Tragopan temmincki*).

This species of Pheasant, which comes from a wide area round Eastern Assam, North-east Burma and Southern Tibet, is a very popular aviary bird with breeders, perhaps because of its hardiness and longevity, as it will stand up to all cold but does not like excessive heat. It is regarded in the East as sacred, and is said to bring good fortune to those lucky enough to possess one.

It likes to nest off the ground, the male sharing duties with the female. About eight small speckled buff eggs are laid, and the incubation period is about a month.

The male has a black head with a rich orange colour around the upper back, shoulders, neck and upper breast, and has a bright orange crest. The upper parts, lower back and rump are a dull red, with many grey ocelli tinged with black dotted all over these parts.

The long tail coverts are red with grey centres, and the legs are of a pinkish tinge. It has a magnificent collar of orange with a blue lappet, outer parts paler blue marked with light red squares surmounted with greenish-blue horns.

The female has greyish-brown and red upper parts with black mottling. The throat is white with grey shading, and the upper parts are brown with white spots and some black patches. The legs are grey in contrast to the pink ones of the male.

The first year male is very like the female but has more black and red on the head than does the immature female.

The Satyr Tragopan (*Tragopan satyra*), of which there are five species, is found in the wild state on the snowcapped tops of the Himalayas, right through Burma and all the way into China. The species vary through this extensive area, but they are all exquisite. A curious characteristic is the bib, which will extend way down over the chest when the male is in full display; also the two horns which appear instead of a crest. These wonders of Nature have to be seen to be fully appreciated.

Many have expressed the opinion that this Pheasant is in some ways related to the Partridge. It is a very scarce and expensive bird that has proved not too easy to rear. The hen lays about six eggs a little late in the season, very often in a

tree nest in a hollow stump off the ground, and takes about a month to hatch them.

The adult birds do not like too hot a climate and very quickly seek the shade. They do quite well when pinioned and let loose in a fenced estate, but never survive long in congested quarters. Curiously, they are not at all quarrelsome, and will mix well with Bantams or with other Pheasants.

The young chicks prove very delicate feeders and for the first few days, as a rule, it is only the tasty insect that will tempt them to feed. To my mind this is a bird that should definitely be left to the expert who has rolling parkland and is able to give it conditions similar to its native heath.

The male of the Satyr Tragopan resembles the scarlet Cock of the Rock with its beautiful black crest and head markings, its brown wing coverts and its tail spotted with white in varying sizes. The female of this remarkable species is duller, being brown with lighter underparts mottled with black and the tail barred with brown bars.

The Himalayan Monal (*Lophophorus impeyanus*) is devoid of the long tail of the Elliot's, but is an exquisite bird coming from the snowcapped heights of the Himalayas and the grassy slopes where it digs for insects and worms. Its beak is curved for this purpose, resembling that of a bird of prey, and as it turns over the soil it is a very good example of the way Nature provides.

This magnificent rainbow coloured Pheasant has been proved to thrive only in a cold, dry climate. Under wet conditions it succumbs very quickly to any number of diseases. In the right climate it is hardy and waits for the first rays of sun in spring to display in a crouching dance to the females.

It is polygamous, needing more than one wife to satisfy it, and is gregarious, which means it lives in flocks in which, as a rule, an old male rules the roost, driving young males away, sometimes with dire results.

The Monals are a very big group with many species, and are the most beautiful of the Game Pheasants. They have been known to cross-breed with many sorts of Pheasants including the much commoner Silver and also the Lady Amherst.

The eggs are laid in clutches of about four or five, sometimes more, and for a nest they like to find a hollowed-out old stump of a tree with plenty of dense cover around it in which quietly to hatch their eggs.

In captivity they have been bred by a few specialists who have the right facilities and plenty of space. They have been recorded as living up to thirty years of age.

The colour is unbelievable. The head is a most beautiful shade of dark green with a patch of lighter green around the eye, the chest a lovely green, and an orange neck mantle overhangs the purple back and gradually blends into the mag-

nificent green coverts, cutting across the bright brown or rust tail coverts.

The female is of a buff or light brown colour with a lot of black mottled feathers, mixing with a quiet shading of whitish hue underneath; altogether much like the females of many of the Pheasant family.

The White-crested Kalij (*Lophura leucomelana hamiltoni*), another member of this family, comes from the cold heights of the Himalayas. This remarkable little bird was imported into Great Britain about a hundred years ago and was found to be a good aviary inhabitant suitable for a novice.

The male has a ground colour of brown, the same as the wing coverts, tinged with green and having orange lacing, breast feathers brownish-grey at base, light green to whitish at tip, but there is much variation. Rump and tail coverts are black with a narrow, subterminal brown line and broad terminal white fringe. A very long greyish-white crest falls over the neck. The female has a comparatively dark crest of light brown feathers with a brown body having some underparts of a buff colour.

The Black-breasted (or Horsfield's) Kalij (*Lophura leucomelana lathamii*) is a bird that lives generally in the low-lying forests of Eastern Bhutan and upper Burma at a height of about 3,000 ft.,

but many have been found higher up at nearly 9,000 ft. Usually found in pairs, with a family of young birds, they are far from tame in disposition, but, curiously enough, have proved very easy to rear in captivity.

The hen lays about a dozen rosy-white eggs which take about twenty-four days to incubate in a nest which, in the wild state, is generally under a stump of a tree, with plenty of moss as nesting material.

The male is very smart with its tall, upright appearance and very erect crest. It is of a blackish colour with shades of blue and purple glossing the whole colour scheme. The lower back and tail feathers have white edges and the legs vary from greyish to light brown.

The female has a brown throat and very upright crest and the short tail has traces of chestnut brown in it.

The Black Kalij (*Lophura leucomelana moffitti*). These birds are now very rare. Several years ago one came to the London Zoo. Its native home is in Calcutta, but little is known of its habits. The eggs, which take twenty-four days to incubate, are of a reddish hue and are pointed at one end.

The male bird is entirely black with a purplish tinge infused generously into the sombre colouring. The short black crest stands out in contrast to the red face.

The female has a much lighter colour with white borders on the feathers and a light buff throat. The immature birds take on adult plumage at the very early age of about four or five months.

Edward's Pheasant (*Lophura edwardsi*) is a member of the many coloured Kalij family, as are the Black-crested Kalij and the White-crested Kalij. Its native place is Burma, and, although expensive, it is becoming very popular in Great Britain. This glossy, rather shy little Pheasant has proved to be one that will quickly acclimatise itself to an aviary and, above all, has proved quite a prolific breeder.

The cock surpasses the hen in coloration, being of a silky purple hue with green wing coverts and a delightful white crest perched on top of its vivid red face. The hen is of a plainish buff-brown colour with pale black markings.

The Imperial Pheasant (*Lophura imperialis*) is much more rare than the foregoing and seldom obtainable. When it is to be had it is only suitable for an experienced Pheasant fancier. It resembles the lovely Edward's Pheasant, and was heard of only some twenty years ago.

The male is of a rich blue colour with wing coverts of a dark shade of brown interlaced with a black-blue barring. The tail coverts are of the same colour, and surmounting the shapely little

head with its bright scarlet cheeks is a rather thick crest of a very dark blue; in fact it is nearly black. The female is very like a Silver Pheasant, pale brown with a tail of chestnut coloured coverts, and bearing no crest whatever.

This rare species, of which a few have come to light in specialised collections, is said to have produced several hybrids.

The Silver Pheasant (*Lophura nycthemera nycthemera*), that almost tame, richly laced bird whose native heath is in Indo-China, comes, like the Golden, from a wild, cold country, which makes it an ideal bird for the novice. It is hardy and bold, and, if you like a bully with other birds, the male is very pugnacious. An old bird will always look after his own domain, frequently putting intruders to flight.

The male has a mantle of green double-laced feathers; each silver-grey feather has an outer lacing of black, while into the middle of each goes a much smaller lacing of black, shaped as the feather itself. The breast is a striking blueish-purple, and the red legs and red cushion-like face stand out predominantly, the latter surmounted with a glorious crest of blue.

The female is much duller in colouring, being

PLATE I: (Opposite.) 1. Golden Pheasant; 2. Lady Amherst's Pheasant; 3. Chinese Ringnecked (True Pheasant); 4. Elliot's Pheasant; 5. Mikado Pheasant; 6. Reeve's Pheasant.

Huber: J. Pepper.

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brownish, flecked with buff and white, and is very much heavier in build than the female Golden. She is, generally, an excellent mother.

The Swinhoe Pheasant (*Lophura swinhoei*) is a small bird, so called after the man who discovered it, way back in the eighteenth century, in Formosa. Like its cousin, the Edward's, it is very hardy and can be kept in a small aviary, an advantage to the fancier who has not much space.

It is interesting to note that since being bred extensively it has produced a mutant which, in this case, means it has undergone a change in colouring. In the old days it was called by fanciers "a sport" when such mutations occurred.

These mutants produce a poult with entirely different colouring from the parents it was bred from, perhaps going back several generations, when each bred with another bird.

The Bulwer's Wattled Pheasant (*Lophura bulweri*), a curious bird found in Borneo, has only come to light during the last few years in a few specialist zoos. It sports the unusual characteristic of a wattle, instead of a crest, perched on top of the blue head and pouched over the throat.

It is a most unusual bird of the same build as the Eared Pheasant, with a body colour of a rich chocolate hue with a reddish colour creeping in, delicately lined with a pale blue pattern. Its tail

is lily-white, curved once again as we find in the Blue Eared Pheasant.

The female is a lighter colour with chestnut markings. Showing to perfection, the legs are a very bright scarlet. These are not by any means a novice's "kettle of fish"!

Vieillot's Crested Fireback (*Lophuraignita rufa*) is a remarkable Pheasant with many sub-species attached to it, such as the Siamese Crested Fireback and the Lesser-crested Fireback.

In colour it stands out conspicuously with its crest or tuft of feathers like a Peacock. Its colours call to mind a rainbow, with its beautiful shapely body of purple striped with white spangling on its breast, its face of pale blue and, true to its name, its back of bright scarlet, like a "thing afire". The upper half of the tail coverts is white, and the lower half a greenish-blue.

A curious trait with this Crested Fireback is that the male assumes adult plumage at the end of its first twelve months. In its home in Siam it is known as a very proud and pugnacious bird, fighting to the death with that wicked spur. To me they have more than their share of this deadly and offensive weapon.

In the mating season the call is weird and penetrating. A comparatively small batch of eggs, from three to six in number, is laid.

In captivity it has proved to be a rather delicate

and unproductive bird, being sensitive to damp and, like a lot of tropical birds such as Trumpeters, Crowned Cranes and members of the Stork family, it suffers from frosted feet. If you are lucky enough to possess a pair, they are, therefore, best kept by night in a big shelter with plenty of granulated peat as a floor covering in the winter months.

The Siamese Fireback (*Lophura diardi*) is found in fairly large numbers from French Indo-China to Central Annam and, being a forest bird, nests in the clumps of bamboo which are found in this area. It is an excellent aviary bird, being hardy and not susceptible to frost. If kept dry it is nearly always a good doer.

In captivity it is monogamous and a little quarrelsome, so that it does require a rather large aviary. Many are found in zoos and private collections of the more popular variety.

The hen lays up to seven or eight eggs of a pale reddish colour, and the incubation period is about twenty-four days.

The male bird is a handsome creature with a greyish upper body with black vermiculations. The tail feathers are broad and curved and are of a dark green hue with a varied copper coloration in front. Its breast is a dark black with blue fringes, the middle of its back a vivid yellow and a long crest of purple contrasts with the large red face wattle.

The female is of a bright chestnut colour vermiculated with black on the back and white underparts. She does not have a crest visible. The young males assume adult colour the first year but do not breed until over three years of age.

The Blue Eared Pheasant (*Crossoptilon aurotitum*), or Blue Cross Optilon, as it is better known, hails from Tibet. On account of its remarkable tameness it is found in the hands of a great many collectors. It runs rather than flies, and is regarded by the native monks as sacred, and given every care and protection.

Being of such a peaceable disposition no fighting occurs, and it is an admirable inmate for an aviary, but it must be a large aviary. It is easily domesticated.

A curious trait is the keenness to be always dust bathing, and this will cut up a planted or turfed aviary very easily. Here again comes in the bright idea of covering the surface of the grass with large mesh wire netting.

There are several sub-species of this breed including the White Eared and the Brown Eared, but the Blue Eared Pheasant seems to be to the fore.

The male and female, curiously, are the same in colour, a rather dull blueish-grey with a tint of green creeping in as they parade in bright sunlight; they have very long white ear coverts that stand

erect, thus giving the name of Horned Pheasant. Another characteristic is the erect tail coverts, which curve upwards both in the male and female.

The eggs of this delightful Pheasant take as long as a month to hatch.

The Brown Eared Pheasant (*Crossoptilon mantchuricum*) is getting very popular, and many now grace the aviaries of private collectors. Coming from Western China, and living in the mountains and wooded districts, it feeds on vegetation and is very fond of insects. It is an extremely fast bird, and when pursued will run, rather than fly, at a great speed.

The hen lays from six to eight eggs, which are pale green in colour and take three weeks to incubate. The chicks are regarded as being one of the easiest breeds to rear.

The male bird has a brown neck, underparts and wings, with very pronounced white ears. The white tail feathers are brown at the ends, faintly barred with black, and the two outer pairs are completely webbed. There are twenty-two tail feathers in all, making the tail heavy in appearance.

The young male assumes adult plumage at the early age of two months, and the female of this species resembles the male bird in coloration.

The Cheer Pheasant (*Catreus wallichi*). Having had our feast of colour we must be content with character as the most outstanding feature of the

sombre-clad Cheer Pheasant. This tame little bird comes from the cold Himalayas, living on the rocky sides of the mountains and cliffs and often straying into the scrub forests in search of food.

Sleeping on the ground is another trait of this bird. It seems to do very well in restricted aviaries with plenty of shelter, as rain seems to be one of the causes of downfall in keeping it. It does not appear to want the space of its more active relations even though it is much larger.

The female is quite content to lay and brood a clutch of eggs in a hollowed-out corner of her quarters, laying as a rule a fairly large clutch of sometimes a dozen eggs of a yellowish hue, which take about twenty-five days to hatch.

The male and female are very much alike. Perhaps the female is only a little lighter in under-colour. The male has a very long brown crest on a lighter shaded head with a grey mottled breast with barred wing feathers of buff, as also is the back. The breast is a slate-grey, the tail feathers buff with very heavy black markings.

The Reeve's Pheasant (*Syrnaticus reevesi*) is the last bird of this group of hardy and inexpensive Pheasants. It is very beautiful and comes from Northern China, being one of a group known as Long-tailed Pheasants. It breeds early and is hardy, but I find it not very sociable with other inmates in a mixed collection, and its handsome tail, some

three feet in length, naturally calls for a fairly large aviary.

That awe-inspiring coloration of golden red shines like burnished gold in the sunlight, while along the front of the body the golden breast is laced with a very dark brown lacing, and further underneath it is flecked with white, with the wing coverts of black, white and brown patches. Across the head is a pencilled bar, and behind the eyes a small vivid patch of bright scarlet.

Once again the female comes in for much duller colouring of grey, and pale chestnut with patches of brown and a patchlike mark around the throat.

The incubation period is just over the three weeks, and when these little chicks appear they have a mottled pattern of black over them with a buff undercolour.

The Mikado Pheasant (*Syrnaticus mikado*) is a native of Formosa and is very uncommon in aviaries, although a few are seen in specialised collections and the odd bird in good zoological gardens. Several are said to be kept by our American friends in their aviaries, which is a very good sign as probably, like all good things, they will spread! Later on more may be imported.

It makes an uncommon feeder, sticking rigidly to its native habits. It lives in the undergrowths of forests where food is obtained from berries, greenfood and grubs. It likes, therefore, a lot of

greenery and insects, while hard-boiled eggs are a favourite food; all this is preferred to a lot of grain.

It appears to nest in much the same conditions as some sea birds, making its nests on mountain ledges in a hollowed-out hole. The hen lays two or three clutches of eggs in one season, beginning in early spring and producing up to ten in one clutch of biggish, light yellow eggs, which take nearly a month to hatch. The chicks are fairly easy to rear as they are very greedy feeders.

The colour of the male is very striking with its dark head and, once again, that lovely red plush-like centre of the face, body and chest, with a lovely shade of purple with greenish tinges on the wing coverts, ending in two distinct white bars. The tail feathers are lightly barred, very evenly, with the same pattern of white bars.

The female is very much like an Elliot's of a greenish-brown or olive shade, with darker breast and a lot of mottling going down to a lighter brown underneath the breast.

The youngsters are very easy to sex as the males develop the tail of barred white and black.

Elliot's Pheasant (*Syrmaticus ellioti*) is an exquisite Pheasant from South East China. It has been described as one of Nature's jewels, and has been a much sought-after business proposition for trappers over the years. These birds, in the wild

state, are extremely shy and generally found in pairs.

This was once a very high priced Pheasant on account of its delicate nature, and the fact that the chicks were a little difficult to rear. It was, in fact, a bird for the connoisseur, but of late these beautiful birds have begun to grace the aviaries of many zoos and several private fanciers have acquired them. This is owing to the fact that with the years experience has shown how to overcome the difficulties involved in keeping them.

The chicks of this variety are now known to possess a trait scarcely found in other varieties. They have proved to be excellent foragers, darting hither and thither especially for the tasty insect or the wriggling worm gliding over the ground. They have a definite taste for these tit-bits. Consequently, they take to maggots and larvae, and do very well indeed.

The long tail is magnificent, and of a grey colour with bright chestnut bars. The neck and lower parts are white with a brilliant red chest. The female, in drab contrast, is of a yellowish-brown on the body, with feathers on the neck and a spot on the throat of black. The mantle is spotted with white tips very much like the female Reeve's.

Generally about six eggs are laid, and the incubation period is approximately twenty-four days.

Here, indeed, is a Pheasant which may well come

in the top group to grace our aviaries one day in the near future.

The Blacknecked Pheasant (*Phasianus colchicus colchicus*) is a member of the True, or Game Pheasants. It is of a brownish or copper colour with a liberal amount of purple infused into it, and having no white ring whatever. The female is of a much duller appearance.

It was introduced as an aviary bird by the Greeks and Romans during the ninth century. In the wild state it is accustomed to flying freely; also, at night it roosts high, usually on branches of trees, so that when confined in an aviary it is better if it is hand reared so that it will not injure itself by flying blindly into the wire netting. Another good plan that will lessen the risk of injury is to pinion it. It is well worth taking the trouble to do this.

A cock will run with several hens, and here we find a breed that has been commercialised on big estates. As it is easy to rear the odd pair is to be found in the collections of most Pheasant enthusiasts.

The eggs, which are of a pale olive tinge and number up to over a dozen, take just over three weeks to incubate. Young Pheasants of this variety that hatch in the morning leave the nest before evening, and are very swift of foot even at this early age.

The Chinese Ringnecked Pheasant (*Phasianus cholchicus torquatus*) is also a True Pheasant, and has much the same habits as the Blacknecked. It is heavily built and has a very distinctive marking in the form of a wide collar intercepted in the front. The body colour is a light chestnut colour with a blue patch around the abdomen. The centre of the breast is reddish purple.

Like the Blacknecked it comes from China; it is steady and easily tamed and is found in most collections and zoos. Being of a hardy nature, the chicks are particularly easy to rear and like a varied diet with a generous amount of live food. They grow quickly, and are favoured very much as an estate bird.

The Green Pheasant (*Phasianus versicolor*) is less common than the two previous species and originates from the Japanese Islands. It is essentially a bird of the lowlands and plains, and only occasionally is it found on the mountain slopes.

It is found also in forests, and is particularly fond of human society, growing tame and frequenting villages and farms where it will associate with the humble domestic fowl in complete harmony. This is a common occurrence during a hard winter.

The native rice fields and sweet potato patches are favourite feeding grounds, and here it may be found in the early morning and again in the evening.

The hen lays about twelve eggs of a dull olive colour and very small in size.

The male bird has a green crown, green underparts, a purple neck and throat and green mantle with buff vermiculations. The rump and back are green tinged with a light blue. The scapulars are buff, green tipped and fringed with chestnut.

The female is much more heavily mottled and the underparts are very much more blotched than any of the other True Pheasants.

The Green Pheasant is a very swift flyer but lends itself admirably as an aviary bird for the novice.

The Golden Pheasant (*Chrysolophus pictus*), or Ruffed Pheasant as it is sometimes called, is ever popular, easy to acquire and inexpensive to buy. It comes from China and nests freely in its native country in bamboo plantations or scrubland in holes hollowed out in the ground. It is a good flyer and extremely hardy, often preferring to roost outside in its aviary flight rather than in its shelter.

Breeding occurs early in the year and the hen will sit in a sheltered corner of her aviary, especially if she has a bit of brushwood around her nest to give her privacy. If preferred, the eggs can be incubated under a Bantam and this proves an easy method; in fact a winner, for the novice.

The male has a lovely crested head covered with

bright golden feathers and a reddish face with a bright orange ruff when he displays, interlaced with black bars behind the ruff in a patch of vivid green. The breast is bright red blending into a sea of yellow on its back, the scarlet under-coverts running back into his long spotted tail of brown and chestnut hue.

These birds do not get their coloured plumage until after the first year. The poults are very much like the female with a light coloured buff face and dull greyish-brown colouring elsewhere with black markings.

The Lady Amherst's Pheasant (*Chrysolophus amherstiae*) is a very elegant bird. It is found in flocks in Western China and feeds a good deal in the wild state on bamboo shoots. A very hardy bird it is, indeed. Perhaps a little more shy than the Golden but of much the same build and shape.

The male has a vivid green and blue wing blending into a whitish grey breast, and a long beautifully grey tail heavily barred with chestnut under-coverts. The Lady Amherst cock is very reminiscent, to me, of a judge's wig, for the ruff, when in full display, very much resembles this, capped with scarlet crest.

The female is of a dull brown colour very much like the Golden Pheasant, and is very hard to distinguish from it. These ruffed Pheasants all colour in the second year of their lives. It has

been found with the Lady Amherst that the hens make rather nervous mothers, so here again the Bantam or a Silkie comes in very handy.

The Grey Peacock Pheasant (*Polyplectron bicalcaratum*) is, perhaps, the most beautiful of living creatures, its cry resembling that of the Peafowl itself. Many species are known to live in dense forests and are very shy but, unlike the Tragopans, become friendly when aviary-bred.

Although very expensive for the novice, it settles down remarkably well in a modest sized aviary with other birds, but in winter is apt to suffer from frosted feet if an adequate shelter with plenty of peat moss or floor covering is not provided. It has been found that in very severe weather a small electric heater is a great boon.

Being monogamous, they live in pairs when in aviaries, but the eggs are said to hatch with far better results with a small Silkie or Bantam. They appear also to lay prolifically, having up to three complete clutches of off-white coloured eggs that take only twenty-one days to incubate. Another characteristic, which is very quaint indeed, is that the female Peacock Pheasant will, if allowed to brood her own young, feed the young chicks very much like a Pigeon, that is, from the beak.

The display is very much the same as an ordinary

Peacock. The cock disports himself near the ground with tail raised with its many ocelli, the under eye, as one says, on the actual tail covert ringed around again with a complete ring of brown and black.

The male of the Grey Peacock Pheasant is very much larger than the female, of a lovely soft grey colour, the tail being tinged with chestnut tipping. The ocelli are of green and purple circled with a line of black and brown, and its head is covered with a silky crest of fine feathers of pale grey.

The sombre female is much less ornately clad in darker grey with small spots on a tiny crest, and is much smaller than the male.

The Malay Great Argus Pheasant (*Argusianus argus argus*). Although a charming, delightful and truly exotic bird the Great Argus is not seen as much as one would like, although it is found in considerable numbers in the Malay Peninsula and Sumatra; a few, however, grace the aviaries of some of our great Pheasant breeders, such as Jean Delacour.

This wonderful Pheasant chooses a specific spot in the Malay jungle where it displays to the many females who are flattered by this unusual performance. For this purpose it prefers the dry forest areas or rocky land, and a curious habit of the male is that he clears the whole spot, twig by

twig, until it is perfectly clear, and this he repeats day in and day out.

He spends his time in the area, calling in a loud mournful wail to his many female admirers who come to see him perform, and his display of dancing in which he spreads his wings to the very limit and carefully flutters them, finishing with a mighty quivering.

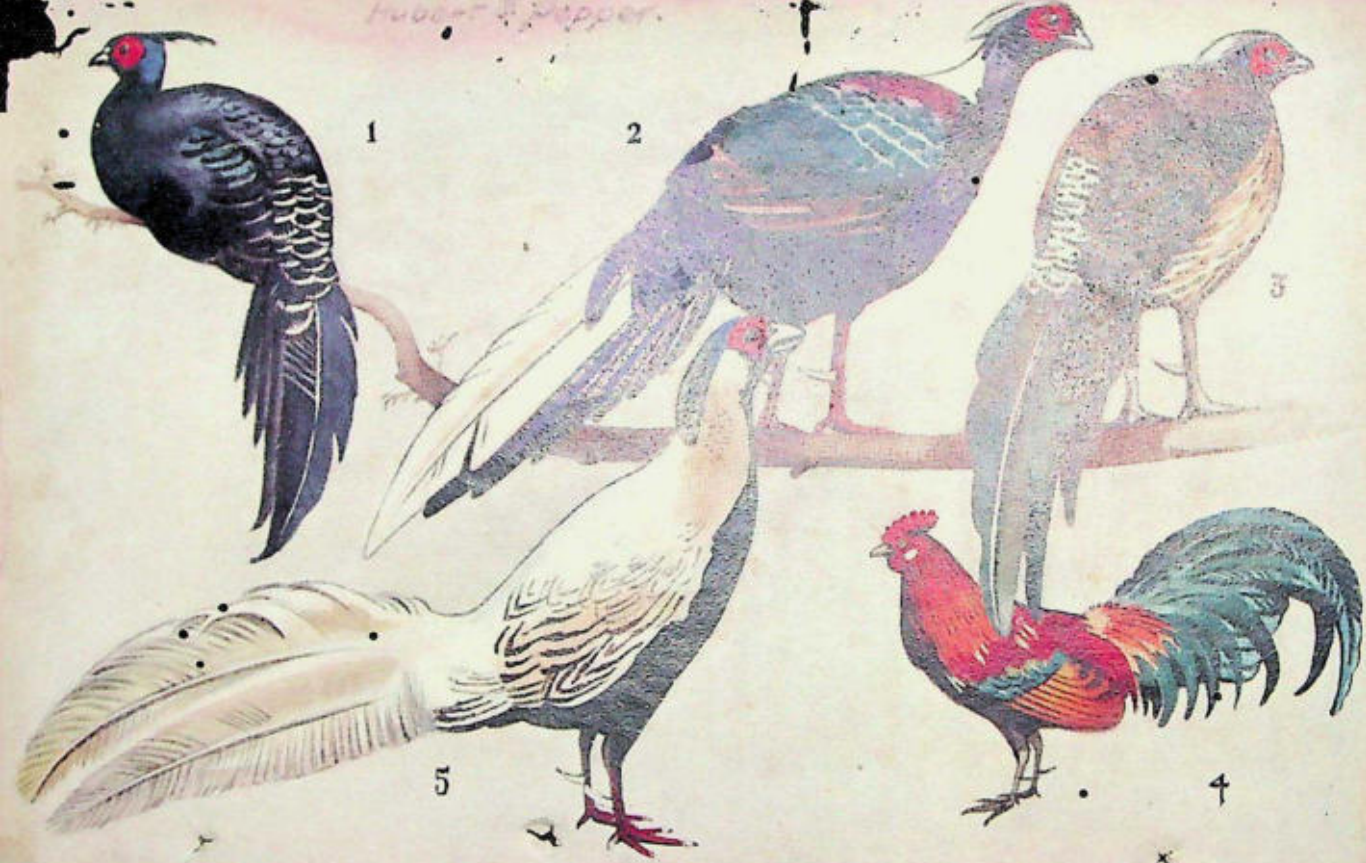
The Argus Pheasant feeds in the wild state on over-ripe fruits and wild seeds, and is very fond of live food, grubs, slugs and all insects that can be found.

The female is a very tight sitter when she broods her eggs and rarely, if ever, leaves the nest to feed. The eggs are of a pinkish-buff colour and take about twenty-four days to hatch. The young males attain full adult plumage in the third year and the wing and tail feathers increase in length up to the eighth year.

The chicks are not difficult to rear in captivity, if given plenty of live food, maggots, etc. These birds, however, do need very large aviary accommodation, and only one hen should be kept in each aviary as they fight bitterly among themselves.

The handsome male has a tiny velvet crest and a neck of pale grey and black with blue face; the mantle and wing coverts are dark brown spotted with buff, and the middle of the inner web is grey with very large ocelli in the outside web.

Robert G. Hepper



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The long central tail feathers are chestnut and grey with white spots. The upper breast is of a rich chestnut colour and the underparts brown streaked with black and buff.

The female has a buff spotted crown with a crest which is much longer than that of the male. The neck, back and breast are dark chestnut and the mantle and wings are reticulated with buff markings traced with some reddish buff. The length of the central tail feathers sometimes measures as much as four feet.

The ocelli which mark this delightful variety are one of the wonders of the bird kingdom.

Crested Argus Pheasant (*Rheinartia ocellata*).

This very shy but beautiful creature, which is found in the foothills and mountains of Central Annam, is polygamous and thrives in the damp forests of the surrounding country. It lives usually about 3,000 feet up, and is seldom seen, by human beings, in the wild state. Living singly, it lives on vegetation and berries and insects or grubs as they are available.

Only one species of Crested Argus is known, with two sub-species. Like the Great Argus, a playground or clearing is made by the male to

PLATE II. (Opposite.) 1. *Black-breasted Kalij*;
2. *Swinhoe's Pheasant*; 3. *White-crested Kalij*;
4. *Cochin-Chinese Red Jungle Fowl*; 5. *True Silver Pheasant*.

display to a mate who comes in answer to his far-reaching whistle or call. The display starts with the male extending to the full his whole crest which looks exactly like a round white powder puff. He circles the hen many times, and finishes with a violent rustling of feathers.

The hen lays a clutch of light pink coloured eggs, which take twenty-five days to incubate. Sometimes she will lay three clutches in one season. Several youngsters have been reared, it has been recorded, on millet seed and lettuce with little or no live food.

In the wild state it is a strong flyer and likes to roost in the highest branches of the trees. It is hardy, but needs plenty of dry shelter when in captivity; also a very roomy aviary, with places in which to hide, such as shrubs, which are ideal and form an ideal shelter from wind and sun.

Only one female should be introduced to a male as these also will fight to the death, as is the case with the Great Argus. Numerous perches should be erected as even the youngsters, at a week old, will try to perch on the low ones.

They will mix with other Pheasants, except with the Peacock and Argus. Small varieties of Cranes mix well with them, also Doves, Quail, Jungle Fowl and most varieties of Bantams. They prove an excellent bird for the enthusiast with a mixed collection.

The male Crested Argus has a long dark brown

crest with the centre and back parts white, which resemble a powder puff when opened. The neck is of a chestnut colour with dark brown back and mantle. The feathers are spotted with buff and on the secondaries very faint ocelli are to be seen. The four central tail coverts are much larger than the outer ones with a pronounced array of chestnut splashed with white.

The female is much duller in colouring and has a shorter dark brown crest with a paler inside centre. The mantle and underparts are dark brown vermiculated with black. The wings, tail and back are covered with faint black bars and small brown spots.

The immature males have much the same colour as the parent birds, but the age is judged by the tails which grow longer each year up to the third season, when they have matured.

So here I leave you with, I am sure, a very great desire to keep them all, as they are some of the most beautiful birds with which we are blessed. We are fortunate, indeed, to be able to have them to grace our lawns and parks, or simply our own garden aviaries. Jungle Fowl and Peafowl are dealt with in subsequent chapters.

Diseases of Pheasants

A GREAT deal has been written to warn novice fanciers about pinioning Pheasants that are to be released in new aviaries. The importance of approaching Pheasants and birds of this family with considerable caution has also been emphasised and, above all, the need for gentleness when handling them. Much injury is caused by rashness and over-anxiety.

Broken legs are, in fact, quite common. If the break is clean, it is easily put in plaster by a veterinary surgeon. The old-fashioned and uncomfortable splint is no longer used; instead, the plaster is applied in bandage form slightly damped so that the plaster powder soon hardens. Some Vaseline, or similar salve, gently rubbed around the top of the leg or thigh, will ensue against irritation, which can cause a very sore wound and a septic condition.

When the leg is thus set the bird should be placed in a small hospital cage in a quiet shed where it will avoid all unnecessary movement.

Then, we find the case of the newly purchased

Pheasant which flies up into the roof of the aviary and badly damages its skull. This is a common occurrence, and when it happens the bird should be caught, held firmly and the injury bathed with a solution of a teaspoonful of boracic powder dissolved in warm water. Then it should be thoroughly dried and a good salve applied.

If the bird is then put in the hospital cage the affected part will soon heal. Before returning it to the aviary remember to cut one wing, as this will lessen the risk of future damage.

Sometimes we find a bird that has been badly savaged, and this will occur even among young chicks or poults. The foregoing treatment is again operative, but in summer protection against flies is imperative, otherwise they will torment the wound.

A good antiseptic powder is indispensable for dispelling the flies, and at the same time it will dry up the wound if it is not too deep. In dealing with bad gashes it is quite common for a veterinary surgeon to stitch them up. These are often caused by the spurs of a vicious old male bird.

One of the most common diseases in young Pheasants is *roup*, the symptom of which is an evil discharge coming from the beak and nostrils. The head of the infected bird should be immersed in a solution of permanganate of potash, and a little should be included in the drinking water for a time.

Diphtheria is another scourge very prevalent in young chicks. Yellowish lesions or wartlike growths appear on head and face, and there may be yellowish ulcerated growths in the mouth. These yellowish growths leave a raw bleeding area when removed. With modern methods it can be checked by vaccines which are freely advertised by good bird dispensing chemists.

This is a highly contagious disease, and it would be best to destroy the victims first showing symptoms and to treat the remainder. It has been found that the Great Argus and Crested Argus, and even the Peacock Pheasant when young, are susceptible to this disease. A good plan is to disinfect the drinking water with corrosive sublimate.

Gallopheasants have been found prone to various ailments, including tuberculosis of the liver, when three months old. They should be inoculated with a good serum by a veterinary surgeon who will prescribe and do the job for you. Generally anticholera is used for this immunisation.

Rickets is another common form of ailment and is largely due to lack of calcium. The bones of the poult fail to develop and are soft and misshapen. The hock joints may become enlarged. Here phosphate of calcium can be added to the food.

Gape Worms can give young poults quite a bit of trouble; a sure sign is when a young Pheasant

has a bout of coughing and straining to get the irritating worms out of its system.

Here again many good gape remedies are in circulation. But it is better to avoid this trouble by rearing young birds on freshly grass-seeded ground that has never carried stock before. Change it each year and give it a really good spreading of lime. Clean land is, of course, of great importance when rearing stock.

Other diseases such as *colds* and that "*sneaking cough*" can be cured by isolating the bird in a warm and, above all, a dry pen in a house or shed with plenty of sunlight, and avoiding all draughts. Give a varied diet of food that is high in protein content.

Cholera is a disease that is fortunately not very common, but when it does appear will often put a whole batch of young chicks out of circulation in the first few days of their lives. The disease is rapid in its course, and the symptoms are congestion of the head, moping, greenish diarrhoea, the droppings later becoming greenish-red, emaciation, and leg weakness.

With this form of the disease it is recommended to destroy the infected birds and carry out thorough disinfection.

There is also a chronic form in which the wattles appear infected and become swollen and wrinkled. Mortality may be low. Treatment may be carried

out with injections of antibiotics, and your local "vet" will prescribe for you.

Be sure if you do have any such troubles that you move the chicks to dry ground where there is plenty of sunlight. As soon as a bird is seen to be ailing, isolate it from the others. In this way infection may be nipped in the bud. But if disease does occur all litter and droppings must be removed and burnt, and the house and fittings thoroughly disinfected.

Prevention is always better than cure. If chicks are kept in a damp coop that has accumulated a lot of droppings disease germs are encouraged to breed, while lice and other parasites will thrive. Miserable chicks with drooping wings are the first sign of disease, usually accompanied by poor appetites. Sometimes they will even refuse to eat at all.

A friend of mine, who has been a big breeder of dogs and pheasants for many years, told me of a method he has used to help rear healthy youngsters. He is a great believer in herbs to keep them in condition, and keeps regular supplies of herb remedies and garlic tablets.

At the beginning of each breeding season he crushes up these tablets and gives them to his Fancy Pheasants. Also twice a week he gives some with biscuit meal to his Pheasant chicks and, believe me, his losses have been practically a thing of the past since doing this.

- I believe this will cover the diseases one may encounter in the rearing of Pheasants to maturity; they are not numerous, and much trouble can be avoided if adequate precautions are taken. When trouble does arise it should be tackled without delay.

Jungle Fowl

WE come now to the ancestor of all our domestic poultry from which we derive so many benefits; in fact, many industries have laid their foundations squarely on the descendants of these ancient birds. Poultry farms, hatcheries, egg packing stations, even the humble grocer and poulterer to some extent, depend for their livelihoods on the domestic poultry established today in such great profusion.

When one looks at the Red Jungle Fowl and sees in contrast the Houdan with its spangled body, its rich and luxuriant crest, or compares it with the Indian or Cornish Game shaped like a bulldog, or yet again with the very ornamental Old English Pheasant Fowl, the delightful Silver Campine or the Old English Game Fowl, one can but be entranced at the transfiguration of the ancient Jungle Fowl, which was recorded as early as 1400 B.C. in China. Domestic fowls followed in their wake about a thousand years later in Indian countries.

The original Jungle Fowl is held as sacred in many Eastern lands, and as it is related in a way

to the Pheasant family I do think it should be included in this beginners' book, especially as many novice fanciers have probably never seen one of these birds.

They are said to have been kept in Egypt in great numbers at about 1500 B.C. Today they are found in the wild state in India, Ceylon and in parts of Asia where they live in forest areas up to a very great height on the mountain slopes and abound near the villages, where they may be seen mixing with the native curs around the primitive huts.

They are rarely molested as they are regarded with awe and held sacred; so they remain free to scavenge around the village. They are seen generally in fairly large groups, but are very unsociable, the leader of a group of females guarding them jealously and fighting for them at the approach of other males.

These birds are still used for cock fighting by some native tribes and it is easy to see where our fighting cocks originated. A friend of mine had a pair and put them in a mixed aviary. The next morning he found Doves and even small Finches which used the top part of the large aviary horribly mutilated and strewn all over the floor. Let this be a warning!

General Management.—Jungle Fowl are not good birds for an aviary where other species are kept. They should be kept apart, as they are

deadly fighters, with a separate place for breeding. A much better way, if the area is free from foxes, is to liberate them in an estate park. At Whipsnade Zoo they abound and breed well; on sunny days they can be seen gracing the lawns and patches of clearing.

They can be kept in an aviary of 6ft. high by 6ft. wide and 12ft. long. The wire netting must be of a mesh that will exclude sparrows and other vermin. A good plan, as with so many breeds of Pheasants, is to arrange a hard surround about a foot wide round the sides of the aviary to combat mud in wet weather.

The centre part of the aviary can be seeded down to grass. A better way, however, is to cut some turfs, lay them in squares, and when they have rooted well cover them with wire netting, as the Jungle Fowl is very prone to scratching and will soon make a mess of a nice new aviary; use a fairly small mesh, not more than $1\frac{1}{2}$ in. is recommended, so that they can do little or no damage to the top of the turfs.

They will like a few shrubs planted for shade, which also sets off the aviary, making it look more ornamental and less like a poultry run.

A trio is admirable in such conditions, and in the shelter at the back one can put a couple of nest boxes, well apart, for the two females to nest in if you would like the chicks to be hatched and reared naturally. They make really good mothers

and will readily attack any intruder who dares to touch their young.

The hen lays up to forty eggs each season, which are about the size of a Bantam's egg and have the curious characteristic of extremely hard shells. This is an advantage if one wishes to transfer them to a Bantam or perhaps a Silkie as foster mother. Alternatively, they may well scoop out a hole in the earth floor of the shelter and lay there as they are not at all particular about the nest. A broody Jungle Fowl hen, a Silkie or a Bantam will take eight to ten eggs, which take 20 days to hatch.

The shelter itself should be made draught proof in every way, having a pop hole for the birds to enter, thus ensuring the whole inside area is bone dry. A good plan is to put a wheelbarrow full of fine sand on the floor so that they can have a dust bath; at the same time it supplies plenty of grit to enable them to lay a good sound-shelled egg. If sand is not used in this way a fine poultry grit, as sold by one of the well-known firms, may be used.

In the side of the shelter a window could be put about 2ft. square, preferably of a glass substitute which is rapidly becoming very popular because it is absolutely safe should the birds fly against it. Moreover, it is easier for the novice to cut, as with ordinary scissors the job is done in a few minutes. The shelter should be 6ft. square, and the same height with ample perch accommodation

because in the wild state these birds roost pretty high in the trees.

The basic feed for Jungle Fowl is a mixture of wheat, kibbled maize and, for a change, some poultry pellets which they relish. Greenfood should be given as they eat a lot of it in the wild state. As a tonic or another change I recommend a small portion of buckwheat and hemp seed. When at any time, such as moulting, one gets the odd bird off-colour, a never-failing tit-bit is a few groundnuts and some worms.

A friend who keeps several varieties of these lovely little birds has given them seaweed powder sprinkled on a little scalded biscuit meal. This is an excellent way to tighten up the plumage as there is a lot of iodine in it which is greatly beneficial to the birds.

So far as corn is concerned, a heaped handful is enough for a trio of adults and should be given twice daily. Do not forget to put drinking water in a nice cool corner, easy to get at, inside the door, as they are easily upset if one goes in and walks about the aviary. I use for my aviaries a good type of water fountain that can be taken apart to clean. This lessens the risk of disease, and keeps the birds from fouling the water.

Rearing the Chicks.—To my mind the best method of rearing chicks is the coop and run used for ordinary chicken rearing, made with a movable

floor to enable one to clean the corners thoroughly, as it is in these that disease is most likely to occur. The coop should be about 2ft. square and about the same height. It should have bars in the front to keep the hen or foster mother from taking all the food, especially the live food in the form of meal worms, which are very beneficial to the youngsters but too expensive to allow the mother to consume.

The outside sun parlour or run should be of a light construction of 2 in. \times 1 in. battens with half-inch mesh wire netting attached. The bottom also should consist of wire netting, since if it is placed upon irregular ground the chicks are very liable to get out as they are small and soon get taken by vermin—or even the house cat! The length of this run should be about 5ft. and the height and width about 2ft. to come level with the coop, at the top of which should be a hinged flap or door to enable the owner to feed the birds easily.

When the chicks are hatched, place them, with the mother or foster-mother, in the coop and confine them for the first two days as they are inclined to stray outside in the run and get chilled. Remember they want nothing whatever for the first thirty-six hours, having sufficient nourishment from the yolks of the eggs which they have taken before hatching.

When they go out into the run it is a good plan, for the first few weeks, to board up the sides of

the run portion to protect them from cold winds. A frame of glass substitute material for the top of the run is the answer for a wet day. It ensures ample light besides giving protection. Be sure also to move the coop and run each day if possible, as foul ground soon leads to trouble. It is far easier to move the run than to have to doctor weakly chicks.

In the very early days the food should consist of chick crumbs as a staple diet, as they are undoubtedly a wonderfully balanced feed that the amateur has neither the time nor the knowledge to mix for himself. As a variation a good blend of biscuit meal should be scalded to a crumbly state, and I do mean not a sloppy state as that is both wasteful and harmful to young chicks.

A little canary and millet seed and a small brand of No. 1 chick feed always make a welcome change, or perhaps a little boiled rice. I always add a drop of cod-liver oil to a food such as this as it greatly strengthens the chicks to my way of thinking, but remember, only a little drop.

For a greenfood, especially if the coop and run cannot be put on a lawn, some chopped lettuce or dandelion leaves will be readily taken.

During the first month, at least, little and often

PLATE III: (Opposite.) 1. *Cheer Pheasant*; 2. *Temminck's Tragopan*; 3. *Grey Peacock Pheasant*; 4. *Vieillot's Crested Fireback*; 5. *Blue-eared Pheasant*.



is the golden rule for feeding. Give the food a few times each day and as early in the morning and as late in the evening as possible, for the chicks are much like a baby and cannot carry a great lot in those minute crops. Be sure, also, to give some fine chick crumbs. Do not forget that a very good idea is to put a leafy branch of some tree over part of the run for shade, especially in hot weather, and underneath it put the water fountain. This is the safest drinker to use as the chicks cannot drown in it, but failing a fountain the next best thing is an ordinary saucer with a stone in the centre. The stone serves two purposes: it keeps the saucer upright and steady, and prevents fouling as the chicks have to drink around the edges.

Now as the chicks get older, at about seven weeks they become what is known as poults. At this stage they can come on to a rather bigger grade of chick feed or, perhaps, a little whole wheat, which makes a splendid basic feed for all birds as it is not heating for their small bodies. Never feed more than can be cleared up in a few minutes as the poults foul it and it sets up complications.

A little ordinary common sense is all that is needed, plus a little patience, and judging by the majority of fanciers I have been fortunate enough to meet they have more than their fair share of these or they would never undertake the job of keeping these delightful little pets.

Diseases.—A few common diseases may come the way of the fancier whose particular hobby is the breeding of Jungle Fowl.

Gapes is number one enemy in chicks, and sufferers will stand about spasmodically opening their beaks. The cause is a worm that is picked up, and as prevention is always better than cure, if the chicks are kept on fresh, sweet ground that has been thoroughly limed, this will rarely occur.

Nowadays, there are several proprietary brands of material that can be put in the drinking water; also gape tablets can be given.

Diarrhoea is another cause of many deaths, and is really a very bad form of scouring generally caused by stale food or perhaps a cold. For this many remedies are advertised very widely by reputable firms in *Cage Birds* week by week.

A simple treatment is a little powdered chalk in the food and a few drops of chlorodyne a couple of times a day in the drinking water of an infected bird.

It is most important that an infected bird should be removed and isolated from the healthy birds until it has completely recovered.

Crop Binding is another trouble that shows up sometimes and is caused, as a rule, by the bird bolting a lot of grain—much more than it can manage. An easy remedy is to add a few drops

of glycerine to the crop through the beak. Then, gently massage the crop until it is fairly soft, and add a little warm castor oil, which should enable the bird to pass the material naturally.

Roup is another scourge and is usually caused by damp or cold surroundings. It is very contagious to other birds. The symptom is an evil smelling discharge coming from the beak and eyes.

Bathe in a weak solution of a good brand of safe disinfectant and warm water, and nothing better can be given than a gape pill. The trouble should then clear rapidly in about a week.

Lice, if present, will make chicks and adults lose flesh rapidly on account of their not being at all comfortable. Get a really good brand of lice powder and shake it over the feathers, being very careful not to get it in the eyes, and gently rub it right into the skin.

Here again you will see the affected bird or birds thrive quickly, and become once again eager feeders. It is a good idea always to have a suitable powder at hand.

Moulting. This, of course, is not strictly a disease but a natural occurrence. When a bird starts to moult, generally in August, be sure to give something extra in the food to make good the deficiency of the lost feathers. Birds want, perhaps, a little more maize, which is heating, and a little warm mash with cod-liver oil added.

These simple things make it much easier for the poor bird, and hasten on the moult and the production of new feathers.

Egg Binding. Sometimes you will notice a particular female which continually goes to the nest day after day, yet there is no egg. You may think she has eaten it, but on closer examination you will find she has an egg, probably a little on the large size, which she cannot pass.

Now, catch the female in question and hold her in front of a hot fire for about ten minutes, but be sure you do not burn her. You will be able to feel with the naked hand what is forthcoming, so get a little olive oil and gently massage the vent. Put her in a quiet enclosed nest and before long she should pass the egg.

Worms are the only other likely cause of trouble. You will notice an infested bird standing about listlessly with drooping wings, coming over when you feed, pecking once or twice at the food, then walking away and perhaps putting its head down under its wing. It may be either scoured or constipated. Sometimes an infested bird will cough a little.

A simple, old-fashioned cure was two parts olive oil and one part turpentine given, in isolation, twice daily, and it worked well. Today, with modern science and medicines, the old, messy way is largely a thing of the past, for manufacturers of good veterinary products produce a worm powder

or capsule that will do the job more easily than in the old days.

But, frankly, if the general hints I have given step by step through the early stages of chick rearing with the Fancy Pheasants, the Jungle Fowl, or with the Peafowl, which are dealt with in the following chapter, are carried out with proper care and attention, few, indeed, if any, will be the sickly chicks or birds that even the amateur will have to care for. Never hesitate, however, to seek expert advice if in any doubt.

Now let us consider the members of this interesting family.

The Cochín-Chinese Red Jungle Fowl (*Gallus gallus*). This magnificent little bird, between the size of an ordinary Old English Game Fowl and an Old English Game Bantam, is the stereotype of all the Red Jungle Fowls.

They come from Cochín-China, Cambodia, parts of Annam, middle and lower parts of Laos and East Siam, where they have proved to be, in the wild state, the best layers of the whole Jungle Fowl family. The clutch of white eggs, somewhat round in shape, are laid in the hollows of the scrub forest. Being gregarious they go about in quite large flocks. Here is the originator of all breeds of domestic fowl.

The male of this spirited family is of a bright orange with red neck hackles, a red single comb

with the two milk-white ear-lobes on a red coloured head. The underparts of the bird are a dull black, the wings a very dark red with green tips, the back a dark fiery red and the long tail coverts are brown blending into a dark green.

The female has a much smaller comb and lobes of bluish-white, the neck feathers of brown with a rich yellow tipping to them, the breast of bright brown, in some, perhaps, even a red, and the tail a light brown. Both birds are lightly made, and exceedingly graceful as they walk around. Indeed, they have a sprightly grace that is very attractive.

The Green Jungle Fowl (*Gallus varius*). Here we have a slightly heavier built bird that comes from Java and which, I am told, never goes far from the areas bordering the sea and lives in low-lying country. It is a very quiet bird, and will cross quite easily with the ordinary domestic fowl.

Feeding mostly in the early morning and late evening they live in smaller groups and sometimes are quite content to go in pairs, but in aviaries they have not been found to breed so freely as the Red and in cold climates are given a little artificial heating to help them during the winter months.

They lay, in the wild state, generally about eight yellow eggs in the bamboo roots, and these take the same time to hatch as those of the ordinary

domestic hen, just twenty-one days. It has been found that the chicks of this charming variety are also on the difficult side to rear and need a lot of extra care. They are very fond of meal worms and maggots, and the latter should always be thoroughly cleaned in ordinary bran.

The male bird, true to its name, has green neck hackles with yellow single lacing on a brown and green back with a heavy green tail. The throat has a red base blending into a blueish or dark purple with just a single lappet. The wings in contrast are black, with bright orange on the shoulders.

The female has a glossy coloured brown back and wings with light outside lacing of pale yellow surrounding each feather, a light throat and the breast of brown feathers with black tips. The female of this variety has a much longer tail of green with black underparts and a very small single comb.

La Fayette's Jungle Fowl (*Gallus la fayettei*). These aristocrats of the Jungle Fowl family come from Ceylon and are very scarce, so that it is only in the collections of specialists that they are found. Imported into Great Britain in the late eighteenth century, they proved difficult to rear and keep in aviaries. Being extremely shy they constantly sought cover in the shelter whenever human beings approached. Of late they have been

reared extensively in some collections on the Continent.

In their native Ceylon they nest all the year round in coastal districts where they live in small families, never in large groups. Sometimes only two lightish brown eggs are laid, and it is no uncommon sight to see a hen with just the odd single chick.

The male takes two years to attain adult plumage, and is very beautifully coloured with two lappets and a bright red head, bright orange neck feathers blending into a brownish-red breast. The back is a very bright red and the hackles a lovely bright violet colour. The wing flights, as also the tail coverts, are purple and black and the legs a beautiful vivid yellow.

The female of the species is beautifully laced on the light underparts, and, indeed, the breast also with black lacing; the back and the tail are of brown. The wing coverts are heavily barred with black on a pale buff under colour. Altogether a very attractive and smart little bird, although lacking the full colour of the male.

The Sonnerat's Jungle Fowl (*Gallus sonnerati*) is the most beautiful of the group. Its native home is in the southern part of India where the feathers of the male are used commercially for the making of flies for fishing in the streams and rivers. Consequently they are hunted and shot by the

natives, who find this a remunerative source of income.

The eggs vary from white to even a lightish red in colour, and the hen lays rather larger clutches than the La Fayette's, sometimes up to ten in a brood. Not being of a gregarious nature they live peaceably in pairs and make as good aviary birds as one would wish to find, though the Indian dealers charge a high price for this beautiful variety if one is lucky enough to find a pair.

In their wild state, also in aviaries, they nest in early summer and if given plenty of shelter should do well in this country. In the wild state they live very much on grubs found in the bamboo plantations and on the young shoots.

The highly decorative male comes to full adult plumage in the second year and has a bright red comb and two lappets; the face is entirely bare and the neck hackles of a delightful pattern of a multitude of spotted feathers in brown, yellow and white, an unusual combination. The lower chest and back are of blueish-grey, the feathers having a distinct white line through each. The shoulders are a bright rust colour with blackish-blue flight feathers, and the tail a bright purple with longer feathers of green.

The female is a delightful bird with black spotted wings on a brown base, the mantle mottled in light brown, the breast and lower parts white

with black and brown lacing of a most beautiful pattern, with a dark brown tail.

These Jungle Fowls are, indeed, lovely and interesting, and the Red, as previously mentioned, is the ancestor of our domestic poultry. Incidentally, apart from the Cochin-Chinese, the Red family has four other members—the Indian (*G.g. nigrhi*), the Burmese (*G.g. spadicens*), the Tonkinese (*G.g. jabouillei*) and the Javan (*G.g. bankiva*).

Peafowl

FROM a vast area, in Ceylon, Burma, India and Malaya, comes that magnificent jewel of Nature, another of the wonders of the world, the flamboyant Peafowl, resplendent in a mantle of vivid colours. This bird is, no doubt, familiar to all of us, having seen it in zoos, or in parklands belonging to the village squire, one who, I am afraid, is rapidly disappearing. He, most of all, perhaps, is the one who kept and cherished this beautiful creature.

What a sight they make around the stately homes of England! Strutting about the lawns and the broad drives on which, several years ago, turned the carriage and pair with its prancing greys, now a thing of the past. Whenever I go to London and see the few pairs of these magnificent horses so faithfully kept up in condition by a few City firms, perhaps of brewers, I stop and always want to raise my hat to these survivors of a bygone age. They seem to me to be linked with the Peacock in his ancestral home.

These birds are still imported quite a lot to these

shores, but years ago were much prized by rich potentates of the East and were reputed to have been kept by King Solomon himself. Being regarded as sacred by Eastern peoples, they were religiously guarded and diligently watched over; hence they bred prolifically and multiplied a great deal. * Because of this, they are very numerous today and breed easily in parkland with its surrounding coverts. As they are good mixers they are useful for introducing into a less colourful mixed enclosure of birds and animals.

At Ilfracombe, I keep them with Fancy Geese and a group of those wonderful birds from West Africa, the Crowned Crane, while with them in the same enclosure run the little Wallaby and the Fallow Park Deer. In summer with the sun's rays pouring down on an adult Peacock in display, what a magnificent sight it is. Then is the time to take a coloured photograph, and what an opportunity for the connoisseur who can make a coloured transparency to show his friends over a projector.

The call of these creatures can be heard for miles on a quiet evening. It is a very harsh, penetrating note which sounds like "Help! Help!", and can be very disturbing.

In keeping these birds they can either be given their liberty on a well fenced lawn or in a flight. If the former the birds should be pinioned. This means getting someone to hold the bird while you cut the long flight feathers of one wing half-way

with a good sharp pair of scissors, the idea being that if the bird tries to fly it will over-balance and after a few attempts will settle down and rarely try again.

- This must be done every year after moulting, unless they have been reared from chicks and the outer joint of the long flights removed when only a couple of days old. It is quite easy for this to be done by an expert or a veterinary surgeon, preferably, who will charge only a few shillings for doing this worthwhile job.

If the alternative of keeping them in a flight is chosen, it should be large with a roomy shelter of not less than eight feet square and the same height, because if it is smaller they damage their tail feathers when perching, and to see them with broken tail coverts spoils the wonderful display value of this beautiful creature.

The flight outside should not be less than 20ft. long and 10ft. wide, and in order to make a real show give them plenty of height, say 10ft.

In this structure a splendid show of various birds can be introduced, such as a pair of Doves, a pair of Fancy Pheasants, a few Silkies, and perhaps a pair of Parakeets. One fancier I know has his aviary planted with fairly large shrubs, and a tiny stream runs through a pond where he has some of the most colourful of the Duck family—the Mandarin—disporting themselves on the small stretch of water.

Here is your opportunity for something in the larger display of birds. Being hardy they roost outside quite a bit. Even bad weather will seldom drive them indoors but they have the shelter if they wish to use it. The shelter will be suitable, too, if you want to hatch the youngsters with their own Peahen mother, though many prefer to take the eggs away and put them under a broody hen.

Be sure to keep plenty of clean water available for them, and see that they have free access to plenty of flint grit and oyster shell for digestion purposes, and for shelling the eggs firmly in the breeding season. Generally they lay about six eggs in each of two clutches, starting as a rule in the early spring of the year.

Not being of a tidy nature, they sometimes just scrape out a hollow in the ground and lay and subsequently hatch the chicks, even if a nesting box is provided. To me much the best way is to take the eggs away, replacing them with china pot eggs. Otherwise, when the hen turns about on the hollowed out nest invariably one or more eggs roll away and are lost. Moreover, when the first chick is hatched it strays away, the mother comes off the nest to follow it and consequently the rest of the clutch chills.

My advice, therefore, is to use a broody hen for hatching and rearing. In that case the mother's movements can be kept under more rigid control and the chicks taken away and put beside the fire,

much as you do with the ordinary domestic chick, until the last has hatched. Then replace them in a house or shelter not less than 3ft. square with an attached run or sun parlour.

- Here people differ in their views. Some prefer the new method of letting the chicks come out on a raised, close-slatted floor where they say they are more immune from picking up disease. In my opinion, if one has the space, provided the ground has been recently limed and is sweet and above all has had no domestic poultry running on it, the best way is to have a movable house and run which is constantly changed to fresh ground.

For the first day or two the chicks will eat little or perhaps no food at all, having had their fill from the yoke of the egg before they hatched, which stands them in good stead. By the second day they should be tried with a mixture of chopped worms, hard boiled eggs and a little of a really good turkey biscuit meal mixed to a crumbly consistency, to which is added a little chopped onion top and lettuce.

As a rule, once they have started, they will gobble it up very greedily and should always be given just that little bit short of a big meal so that when the next feeding time comes they are ready and willing to clear the food up once again.

If any is left lying about on the floor real disaster will be your lot, because they are rather like turkey chicks, very silly little things who seem to run all

about in the food and are inclined to foul it quickly. Have, the same as in Jungle Fowl rearing, a fountain in which they cannot puddle their little feet and legs, or a stone in a $1\frac{1}{2}$ inch deep flower pot saucer, to enable them to drink around the edges.

Modern methods of feeding have produced several good brands of turkey pellets and foods which are admirable for the rearing of Peafowls. If one of these is used in conjunction with the mixture already suggested and a blend of dust-proof chick seed and small grains, good healthy chicks should be produced. Always be sure you can keep them dry in a run with a movable top in wet weather, for they are the most miserable little things on earth if allowed to get wet and bedraggled, with wings that droop and trail on the ground.

When they are about six weeks old they are getting on in size and should look like a smart Golden Pheasant female, though a little smaller perhaps, with wings held firmly in place, breast and body well fleshed and eyes alert.

At this stage they could be released on free range, if you have a good sized lawn. The hen should be kept in the shelter and the chicks given access to her through a few bars in a frame placed over the door. In this way they do not stray too far.

Care must be taken, however, to see that marauding cats and dogs cannot get near enough to frighten or kill them. Hawks and other vermin should also be taken into account, as in a country

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district the present scarcity of rabbits makes these birds of prey very bold indeed, and all can be over before one gets to the spot. So, if danger lurks around make a big outside run say 10ft. long, something like a poultry laying ark. These are made by firms who specialise in poultry appliances.

If, in the evenings, you want to have a rest and a smoke, then is the time to give the poults an extra run in the garden. You can then watch the special flower garden, as Peafowl can make very poor gardeners, not being at all fussy when they dig for a dust bath.

As they grow to adults their food requirements are very simple, a good diet consisting of three parts wheat and one part split maize, with, if you have it, a handful of Dari as a special treat from time to time. They also like poultry pellets, and, not too often, a little bread, but only as a special treat. From about eight weeks it is best to keep chicks to a grain diet. As a guide each adult will eat about $1\frac{1}{2}$ oz. daily.

Being very much like a turkey, the Peafowl chick is prone to colds and has, therefore, to be kept scrupulously clean and dry in the shelter or coop. Droppings always are inclined to breed insects and disease if not regularly removed. A little peat moss

PLATE IV: (Opposite.) 1. Malay Great Argus Pheasant; 2. Green Peafowl; 3. Indian Peafowl; 4. Himalayan Monal Pheasant.

litter is a fine warm bedding for Peachicks, as it is able to absorb surplus moisture and provides a means of scratching for the active little birds.

Diseases.—One of the most deadly diseases known to Peafowl is *Coccidiosis* which attacks young birds, as a rule, about ten weeks of age. The symptoms are generally a discharge on the face below the eye, wings are drooped, the feathers are ruffled, the head becomes pale and the chick moves slowly, pecking at its food and losing flesh rapidly, unless it is taken right in hand.

After isolating the infected birds do not hesitate to call in your veterinary surgeon as his advice will be valuable. Moreover, fowl pest shows similar symptoms, and is a notifiable disease.

In these days much can be done for coccidiosis by quick treatment. One of the most effective, procurable on a veterinary certificate, is sulphamezathene which can be added to the infected bird's food or water as indicated by the manufacturers. With warmth and care, if not too greatly infected, the bird should recover.

Blackhead is another scourge and was once treated by arsenical injections, but now it is more customary to use a drug, known as Entramin, which is obtainable from a qualified veterinary surgeon. It is added to the water in the correct dose as stated by your vet.

The first signs of this disease are much as for

coccidiosis. The sickly bird is off its food, has a swollen face, but results are soon seen if it is isolated and placed in a warm cage. I find a cage which is draught proof with plenty of light and has fitted in the top an infra-red bulb, a wonderful boon giving both warmth and light at the same time.

Sinus Disease is the next and third worst of the Peafowl diseases. It affects the bird from the nose to the sinus, making it difficult for it to breathe freely. Here again sulphamezathene given quickly is the surest way yet found to effect a cure. Again the manufacturers' instructions should be followed closely, or better still seek the advice of your vet.

Rickets are also encountered in some weakly chicks, the birds squatting and appearing to lose the use of their legs. Incorrect feeding, lack of vitamins, is the direct cause of this. Place the chicks or birds in a very sunny position, and in bad cases an infra-red lamp is a very great help. Plenty of greenstuff also helps and a little cod-liver oil makes a wonderful contribution.

Bumble Foot is sometimes found, generally in an adult bird. It is a swelling on the bottom of the pad of the foot, usually caused by a neglected splinter or a prickle that has been picked up. If of a hard nature, paint regularly, until the swelling goes, with a good brand of tincture of iodine, which should ease it.

Perhaps it is a soft swelling; if so treat it in a

completely different way. Poultice the foot with cold poultice, which can be bought without prescription in a chemist shop. Being a paste it is easy to put on. Cover the infected foot with a bandage and put the bird in a pen where it is easy to catch, preferably the "sick bay". Bring the swelling up to a ripe head and you will find you can, with gentle pressure, squeeze out the hard core in the centre. When cleaned out, put some antiseptic ointment on the wound and wait until it is completely healed before releasing the bird.

Scaly Leg is sometimes prevalent in aviary birds. The scales have a rough, raised chalky appearance. Get a long tin or glass and put in it a mixture of half and half linseed oil and paraffin, well mixed together. Then stand the infected leg in the mixture for a minute or so, but be very sure not to let the flesh come in contact with the contents. After a few days scrub with warm soapy water, and the leg should then be clean and free from these scales.

These are the chief diseases found in Peafowl, and any minor ones should be treated in much the same way as the ones described in the Jungle Fowl Diseases.

But if the golden rules are strictly adhered to once more, that is good feeding, clean water and dry quarters, I feel you will have accomplished the art of rearing successfully these delightful and worthwhile birds. The great advantage of having

these diseases and symptoms pointed out in detail is to be forewarned, and there is then less risk of casualties. These points are very important in the keeping of any form of livestock.

Now let us consider the known varieties of Peafowl.

The Indian Peafowl (*Pavo cristatus*). First we will deal with the easiest and the most numerous of the Peafowl found in zoos and on estates, and which is well known to us all. It is a very hardy bird having a definite homing instinct and staying for all time where it has been reared. Rarely, if ever, is it pugnacious with other birds as it is extremely good tempered. In flight it is very powerful indeed.

A cock when in full display is a wonderful sight. One unfortunate fact is that in the summer when thousands of visitors view these magnificent creatures in zoos, they have, like the Pheasants, gone into the moult. This starts at the end of June and goes on until the end of winter, generally in late February and early March when the bird is once more transfigured into the resplendent creature of the previous spring.

The feathers of the tail coverts, which are used very much commercially these days, are regarded by some as of bad omen and unlucky but the vast majority of people would like to have a few as souvenirs or to use for decorative purposes.

In their native countries, India and Ceylon, they

are found in and around the villages, and even among the temples, where they are deemed sacred. Several years ago, before the turkey was exploited so much, these birds were regarded as a delicacy, being roasted at feasts.

They frequent open country, as long as plenty of natural cover is available for the nest in the long grass-like vegetation. A clutch of six or eight white eggs each the size of a turkey egg is laid in a quiet hollowed-out nest, camouflaged at the side by wild pampas grass and young scrub. The eggs take a full month to hatch.

The youngsters do not colour until the second year, and the tail does not reach full length until the third year. In the second year no ocelli, or spots, are seen on it as in the adult male.

The male bird of the species has a crest shaped like a fan of blue with a brilliant blue neck and breast on which the green glistens in the sunlight. The lower wing flights are a chestnut brown, the inner wing coverts a darker blue, the shoulders a mottled silver-grey with buff bars. The long "train" of an adult Peacock can be anything up to four feet, or even more. I have seen an adult male displaying to the hen, and having the top of his "train" showing over a six foot high fence.

The colour of this remarkable "train" is made up of green and purple with eyes, or ocelli, having a centre spot of blue in a light and dark shade, shaped like a heart, with a brilliant green

band around, and an outer lacing completely surrounding the whole in a beautiful bright shade of chestnut. The male bird has a white eye patch, the flanks a darkish brown shading even into black, the upper back having a remarkable pattern of a series of small metallic green laced feathers. The feet are a light grey and adult birds have a sharp spur.

As I have indicated, the youngster or yearling is very much the same colour as the female Peafowl, having a small crest with a brown head and neck interlaced with green on the outside of the feathers. The top of the breast and the back are of a light green hue, the lower breast and thighs brown with the wing feathers a dark brown with white tips.

The Javanese Green Peafowl (*Pavo muticus muticus*). A native of Java this bird differs from its Indian cousin in being much taller and more of a fighter. They live in fairly large flocks of as many as twenty birds, usually led by the odd adult male. These Green Peafowl, curiously enough, are not protected as are the Indian species, and are shot much more by the natives both for food and for the large market there is in the brightly coloured feathers.

In their native country they live in the tall grass and vegetation of the jungles, and, not liking the cold of the mountains, they keep very much to the more sheltered valleys. They are not good nest makers and like to lay in the hollows of trees, and

frequently lay in any sort of hollow in the side of the mountain slope itself. The egg is larger than that of the Indian and is of a buff colour, and generally there are from four to six in a nest.

A great many of these Peafowl have been sold by dealers in Singapore, with whom American customers place their orders.

• In captivity they are fairly rare and are not good inmates for a mixed aviary as they fight all and sundry. They are also somewhat difficult to rear if not kept warm and given a lot of attention. The adults themselves must also have very sheltered quarters as they feel the cold a lot in winter.

The male is a strikingly coloured bird with a green and blue neck, and, instead of the crest of the Indian species, it has a green tuft on the head and various blue and yellow patches around the eyes. The breast is much more brilliant still, each blue feather having a green border or lacing. The "train" itself is very much like that of the Indian, but has a circle around each ocellus of much more vivid golden colour, which shows off the inner blue circle very distinctly indeed.

The female, in contrast to the Indian, is very much more colourful, being like the male himself, but slightly less gaudy, the tail consisting of short green feathers with buff patches or bars on each.

The White Peafowl (*a mutant of *Pavo cristatus**).

• This bird so often admired in the various zoo

collections is really an albino, having been bred down from the Indian Peafowl and it has now spread all over the world.

The body is entirely white with the tail and wing marking shown very slightly. The cock, with its long "train" is a magnificent bird, and the hen has a shorter tail as in the other species.

They appear to be slightly less hardy than the common blue Peafowl, but if care is taken they can be bred. I find them a good deal softer and certainly very tame, never quarrelling with anything that is put in the aviary with them. They are ideal for a mixed collection, and have been known to breed quite easily with an ordinary white turkey, but the progeny is, as one would expect, sterile.

This bird lays on the same lines as the blue and the eggs take the same time to hatch, that is twenty-eight days. The females, however, appear to be a little nervous, hence the need to take the eggs away as laid and place them under a foster-mother. By doing this the parent birds are induced to lay a second batch of eggs.

The Congo Peafowl (*Afropavo congensis*).

Little is known, as yet, of this very beautiful Peacock which has been found in Africa. It is much like a large Pheasant and has been tried in certain collections with little luck, the few chicks that were hatched having died.

Along the Congo basin they have been found to lay small clutches of eggs, just three or four in number, which take three or four days fewer to hatch than those of ordinary Peafowl.

A few birds were shipped several years ago to America, but they have not acclimatised themselves at all well so that big results cannot be expected yet. However, time will show and, as it is such a beautiful bird, many more experienced aviculturists will take up the fight to achieve this very desirable goal.

The male bird has a rich purple breast and lower neck with a bright green upper back. The wing flights are dark brown, and the tail feathers are short and tipped with a rich purple hue. The crest of the male has a striking appearance, the front being a tuft of upright white feathers, the rear one a very dark green.

The female has a brown breast and neck, a pale shade of green back with several brown feathers appearing at regular intervals, and the tip of the tail is also a light green. A small tuft of brown shows this little bird off as she is really attractive and decorative.

Several sub-species are found of the various Indian and Green Pheasants, but only this one species has as yet come to light in this vast, mystic continent of Africa.

The Black Winged Peafowl (a mutant of *Pavo oristatus*) is a bird which is very often seen

in our British collections. The first mutant of the breed was recorded in the early part of the eighteenth century. They are very hardy and many say they are more beautiful than the Indian, though this is very much a matter of opinion.

They breed and lay much as the Indian. The colours of the male bird are also much as the Indian except that the wing coverts are black with dark green and blue tips and the thighs are a very dark brown—in fact, nearly black.

The female is very much lighter in colour than that of the Indian, the crest being of a bronze-red colour, the upper parts a yellowish-white flecked with grey and brown. The underparts are nearly white, the wing coverts white on the outside and secondaries heavily marked with dark brown. The tail coverts are white with black markings.

Another green peafowl sometimes seen is the **Indo-Chinese Green Peafowl** (*Pavo muticus imperator*) from Indo China, Siam and East Burma, where they are found on the high mountain ranges.

The male is of a sombre green colour and has a brownish tinted back and breast which, with the flanks, is much duller than that of the Green Peafowl. The wing coverts are a dull blue with much less green on the edges. The female has different colouring, having the edges of the breast feathers heavily marked in a bright brown colour.

Making an Ornamental Garden

MANY people, maybe bird fanciers, have just bought a new house or bungalow with a great depth of garden at the rear, or perhaps own that thatched cottage with its patch of rough land at the bottom, through which, maybe, runs a stream of crystal clear water. Or perhaps you have decided to replan your garden. What a wonderful opportunity to incorporate some Pheasant aviaries, making them an integral part of their surroundings. They can be arranged to blend with the other parts of the layout, and will certainly add to the pleasure to be derived from a well planned ornamental garden.

Let us assume that a start is to be made with a piece of rough land. This will give us something definite to consider, but the suggestions put forward can be adapted to any particular purpose.

The first thing to do is to cut all the overhanging trees and rough foliage, and to see that we have a really stock proof fence that will give protection against marauding dogs and foxes. This should be at least 6ft. high with the top turned outwards,

so if any of the animals come along and start to climb they cannot clamber over the top of the fence but are thrown backwards. The bottom should be turned outwards for twelve inches at a depth of eight inches to prevent them digging underneath.

If you can terrace the ground on two complete levels the effect will have a very great charm, for on the higher ground one can concentrate on making a background of highly ornate aviaries constructed preferably with fir poles. These are easy to get in country districts in which the Forestry Commission operates or from a large estate which sells them as "thinners"; that is the woodmen thin out the very thick growth of larch trees to give the others more air room and sunlight to grow into larger timber.

As a rule one can buy them at a very reasonable price, and they are very straight, often well over 20ft. in length. Another advantage is that they are light to erect and do not split as do oak and ash, which are to my mind quite unsuitable for the job we have now embarked upon. But, of course, if larch is unobtainable other timber will have to do.

With the group of aviaries arranged on the three sides, we now construct a centre lawn with a path between. I find an attractive method of filling the path is with gravel screenings consisting of small size pebbles of various colours, which is more pleasing than concrete paths.

An easy way to keep down the weeds is to spray with a good weed killer each spring, taking care that you do not damage the turf on the lawn. This can be ensured by the very simple way of holding a piece of hard board against the grass edge as you apply the weed killer with a water can equipped with a rose on the end.

Various types of flower garden made in different patterns, some round with perhaps a diamond shape plot for the centre, will look well if short plants are used in the centre beds. Another good tip is to have flower beds cut out of the lawn with no concrete edging or even tiles, and to have the lawn flush against the paths; then the mower can cut the whole right to the edge, thus eliminating the more arduous way of hand clipping with garden shears.

Now we come to the sunken piece of land. We can either put slopes at both ends or put in two very ornate pairs of steps. It depends on the height of the top half. I once saw a lovely rock garden which made a striking contrast between the steps.

At the lower part I suggest we make a pond at one side and build up a background garden of artificial stonework to a height of three feet, in which tall Standard roses will make a beautiful setting.

If the soil is claylike we can make a pond of very informal design, about eighteen inches deep with an outlet running through the hedge with a circle

of crazy paving stones around it to stop it from becoming muddy. These stones can be had from a local quarry, and in my part of the world I am fortunate for there is a quarry nearby which delivers these flat stones at 25/- per ton.

This surround, as it is called, will keep it clean to walk around, which is especially needful if we have a pair of these lovely Mandarin and Carolina ducks. They will look so very colourful on a small sheet of water such as we have here. It is best to buy them already pinioned as young birds, then there is no further trouble in this respect.

They are quite costly, about £12 a pair, and the Carolinas about £6, so we do not want them flying off. Insist that they are pinioned, not just cut winged, as when the old stubs moult the feathers would grow and the bird become full flighted again.

A lovely decoration for the centre is to construct a small fountain. This can be made out of a piece of one and a half inch pipe with a "rose" from a water can on the top to let several small jets of water into the air and into the pond. It is a lovely sight to see these highly colourful ducks washing underneath the small streams of water.

On the lower part young grass can be grown and paths made on the outside with small gardens to hold a bevy of Dalhia. On the lawn itself can be run, if fortunate enough to get a pair, some ornamental Bantams or the quaint little Silkies.

which one would be able to use as broody hens for foster mother to the Pheasant chicks.

To give shelter in the various corners I suggest ornamental shrubs such as Flowering Cherries, Hydrangea, or Fuchsia, Spanish Broom which is always attractive, and for the greatest show of all, the very beautiful Camellia which needs a semi-shaded corner.

For the guidance of anyone laying out this decorative garden I would suggest the following shrubs for the aviaries themselves; Fuchsia, Beech, Maple and Broom. Be very careful never to plant in the aviary, or for that matter near it or where it can grow through, such shrubs as Yew, Laurel, Privet, or even Holly for its berries are poisonous. Be particularly careful if you have any of the Parrot species for they delight in debarking trees.

For the borders, and especially for planting in shady places, may I recommend Azalea, Rhododendron, Ponticum and maybe Bamboo, if near a damp path? For sheltered places I would use Bay, Hypericum, Hydrangea, Escallonia and Myrtle; for the top of dry banks Cytisus (Broom), Heather, Lavender which gives out a beautiful perfume and can be collected and dried out, also Veronica.

Small shrubs for rock work include Japanese Maple (*Acer palmatum*) and Abelia. For the surround of the pond the Blue Iris makes a wonderful show and in the pond itself it will depend on whether you have fancy duck or fish in it. If there

are ducks nothing at all can be planted as they will destroy much of the beauty of it.

If fish are favoured I think a collection of wide varieties could be included from the following, Rudd, Carp, Green Tench, Shubunkins, Goldfish, Loach and Perch, and many more if required. For plants that root in the soil with leaves and beautiful blooms on the top of the water I would have the white Water Lily, or the yellow Water Lily.

Plant them in the new type wicker baskets so that the plants do not get pot bound as they do if planted in ordinary earthenware pots. In the basket put a good heavy loam and be careful how you lower the plant into the required position.

A number of other plants include Aurora Copper, and Pygmaea Heloolo, a very small yellow plant and a very sweet-smelling one which is white in colour.

Questions and Answers

HERE are given some simple questions likely to be asked by beginners; together with the answers. Indeed, they are often put to me, and I hope the replies will be of assistance.

To what age will a Pheasant live?

I know of a Reeve's and a Golden cock owned by a friend of mine which lived to fourteen years in a planted aviary. The Reeve's was at last killed by a fox. Incidentally it was so tame that it roosted outside the back door in a porch.

Many Pheasants die much earlier on account of liver complaint; living in captivity they do not get enough greenfood to combat this ill.

At what age will a Pheasant cock fertilise the eggs?

It is very well known that many Pheasants do not get adult plumage until eighteen months of age. We must wait, therefore, until the male is two years old before attempting to breed from it or disappointment may be our lot.

Some few cases have been noted when these

males will breed at just over the twelve months, but to be absolutely sure we must say two years.

The Pheasants we would include in this class would be the Golden, Silver, Amherst, Swinhoe which are all birds well suited for a novice.

Some of the other Pheasants which get adult plumage at twelve months quite frequently breed at that age. And remember, never breed from brother and sister; far better get unrelated stock.

What birds could I include in an aviary which is planted and has a pond about six feet across.

This aviary is 20 ft. long, 8 ft. wide and 6 ft. high?

Here is the Fancier's paradise, if I may say so, provided it has plenty of shelter room—about 8 ft. long by 6ft. wide and 6ft. high. If the top storey has small holes which will not allow Pheasants to enter it could be used as a dovecote.

On the ground floor a trio of Golden could be kept, also a collection of fancy duck which could include a pair each of Mandarin, Carolina and Red Crested Pochard. These all live in harmony and if nest boxes are erected about 2ft. from the ground they will breed here. A perch must be arranged so that the Mandarins and Carolinas can jump up and pop in their nest boxes, or perhaps a small ladder can be provided for these colourful little creatures to get up and down. Generally they lay at the end of April or in May, and their eggs take thirty days to incubate.

Another point is that these ducks do not like cold winds and must have adequate shelter. Perhaps a basket hurdle or two will provide this or some short shrubs. Feed them on a mixture of poultry wheat and kibbled maize, and they like greenfood and a little fine grit.

Having disposed with the ground area we turn our thoughts upwards. If there are some substantial shrubs we can get a very nice little collection of flying birds, including a pair of ornamental Pigeons of which there are many varieties to choose from. Fantails look very lovely and can be obtained in many colours as well as the ever popular white, black, blue, strawberry, yellow and one that has coloured patches all over its little body.

These feed, of course, on a mixture of pigeon corn with a little hemp seed or canary seed as an extra treat. But I remember from bitter experience never again to include a Triangular Pigeon in a mixed collection, as they are fighters and will kill even Pheasants.

A couple of White Java Sparrows or Turtle Doves are always an attraction in a collection. Feed them on wheat Dari and millet seed. These will breed if plenty of nesting space is provided.

I find also that a pair of that lovely little Parrakeet from Australia, the Cockatoo, make excellent aviary mixers, having remarkably peaceful dispositions. These will breed, and are very hardy if given plenty of sleeping accommodation. Feed

on a mixture of millet, canary seed and a little sunflower seed with, as an occasional treat, a piece of apple or carrot.

I think if the collection is to be complete a couple of large Weavers should be included. Feed on a mixture of mostly millet and canary seed.

Cranes, particularly the Crowned Cranes from South Africa, will mix sometimes. It all depends on the individual nature and temperament of the bird, but for these another ten feet should really be added. Then you would have a collection to be proud of, but the wire netting would have to be of half-inch mesh to exclude vermin such as rats, stoats and even sparrows.

Will Golden Pheasants breed with any other variety?

A lot of Fanciers like to "dabble" and try to experiment with breeding. A Golden Cock will breed with a Lady Amherst's Pheasant hen and a very pretty bird, particularly the male, will be the outcome. Oddly enough the progeny will again be fertile to breed with another variety.

But it is better to keep to pure breeds, as, after all, indiscriminate crossing will only harm the pure breeds, and when one gets a lot of these birds it may prove difficult to dispose of them.

What does a pair of Golden Pheasants cost?

• Many youngsters are advertised in *Cage Birds* week by week for the sum of 25/- each, which is

only the price of an ordinary commercial laying pullet. A good breeding pair can be bought for about £4.

On the other hand I had a dealer's list recently from the continent which gave a pair of that exotic species the Peacock Pheasant at £80. So we have plenty of scope, our pockets being the chief guide.

What does it cost to keep a pair of Silver Pheasants?

Roughly a couple of shillings a week will be sufficient to buy corn, as we always have the odd tit bit from the home and garden; chopped lettuce and cabbage can always be provided, while the odd bread scraps from the table are always useful. It is a really cheap hobby for such a magnificent display in our garden aviary.

When do Pheasants moult?

Unfortunately for public places such as zoos and park aviaries Pheasants moult in the season when so many people come to admire them and they are in full moult during the month of July, many going on until August.

Gradually the new feathers appear and by the end of August all these drab and bedraggled birds get the "new look".

What grit is the most suitable for Fancy Pheasants?

I think a mixture of one part very fine flint grit and two parts pine oyster shell is ideal.

Is it possible to pinion Pheasants, and release them in the grounds of a large house?

I would much rather rear some youngsters and get them used to these surroundings, gradually giving them their liberty, as they could roost in the trees, but protection from foxes and other vermin must be provided at night.

This is more satisfactory than having the responsibility of several pinioned birds about at the mercy of foxes and deprived of their only means of defence—flight.

How many eggs can a Silkie cover as a broody for hatching Pheasant eggs?

A good sized white Silkie will cover nine or ten eggs very comfortably, and believe me they make wonderful foster mothers as they are of a very placid disposition.

What is the average clutch a Peahen lays?

On an average they lay about five to seven eggs in one batch, and nearly always follow up with a second laying of perhaps one or two fewer in number than the first.

Are Jungle Fowl really fighting cocks?

They are not really, although all domestic poultry originated from the highly ornate Jungle Fowl. The Old English Game, of which there are several colours, resemble the Red Jungle Fowl.

and the males of this species are as a rule real fighters, although very much smaller in size than the ordinary Old English Game.

What does polygamous mean in Pheasant breeding?

It means that more than one female will run with one male in the breed, like the Golden and Amherst when in captivity. Where there is one female only to one male, they are known as monogamous.

Do Pheasants require heat?

I should say that imported species coming from a warm climate will want some heat, perhaps by means of an infra red bulb the first winter. They should have a warm, frost-proof and, above all, draught-proof shelter.

Many of the ordinary varieties breed in this country, such as Golden, Silver, Reeve's, Amherst, and are very hardy, disdaining even the use of a shelter on the coldest of nights.

The one thing they do not like is a wet cold night when they do take full advantage of the shelter.

How many eggs will a Golden Pheasant lay in one season?

A really good Golden Pheasant hen of over two years and in good condition in ideal surroundings will lay up to thirty eggs in a season. They usually miss a day between laying each egg.

What is the hatching period of Fancy Pheasant eggs?

The incubation period varies a great deal in the variety of bird from twenty-one to twenty-eight days. For instance the Reeve's and Amherst Pheasants take about twenty-two or twenty-three days to hatch in contrast to the Cheer Pheasant which takes the full period of twenty-eight days. By the way Jungle Fowl eggs take about twenty days to hatch and those of their much larger cousin, the Peafowl, take twenty-eight days.

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(The White Peafowl and the Black Winged are mutants of *Pavo cristatus*)

