

Chapter 3

Aviary furniture and pheasant food



Roosts / shelters – heating – thermostatically controlled

Tubular heaters which operate via a cheap plug-in thermostat are extremely useful for heating a night shelter. Care should be taken to ensure that the birds cannot perch on or directly above the



heaters. Depending on the species, set the thermostats to come on at between 2 and 5 °C. Heated roosts are also useful for over-wintering tender summer plants, such as fuchsias.

Roosts / shelters – monitoring the temperature

To ensure that temperatures are maintained correctly, a simple maximum and minimum thermometer can be placed in each shelter.



Providing additional shelter

In areas with heavy rain, snowfall or strong winds, small shelters constructed very simply within the aviary can prove very helpful to the birds. They can also provide additional security for hens.



Perches

All pheasants roost on a perch at night out of choice. As this is an anti-predator action, the pheasant's natural behaviour is to get as high as possible away from the reach of most predators. In an aviary, they usually want to roost on the highest possible vantage point. Therefore, any high perches should be under the shelter or in the roost. As trees develop within an aviary, they must be pruned to stop birds roosting out in them. It is very well worthwhile checking how and where birds roost at night, since this is when most predation happens. When pheasants hatch their own chicks, the hen broods them on the ground overnight for a while but, eventually, they will have to learn to perch up at night. At this early stage of their lives, the chicks will often still need their mother's warmth to get them through the night, and they usually burrow under one of her wings whilst they all stand on the perch. However, young chicks quite frequently try to roost in a variety of places and can sometimes be found perching on the thinnest of branches, away from the warmth of their hen. It is vital to check the safety of young chicks until a regular, safe perching pattern is acquired. Try to train your birds to roost on a dry, sheltered perch so that they have every chance of avoiding the worst of the winter weather. You can do this by being around at dusk for their first few nights in your aviaries and by standing close to areas where you do **not**



wish them to roost. If birds are trained this way when they are young, it can save a great deal of time and effort for their owner during the rest of the birds' lives.

It is best if the perches are sufficiently thick that the birds can settle on them with their breast feathers covering their toes, as can be seen with this mountain peacock-pheasant. The feathers can then provide protection against frost and frostbite, particularly for tropical species.

Logs and rocks

Many pheasants "rattle" the wire – going up and down, dragging their beak on the wire and wearing out a path in a selected area. They do this particularly when they are stressed, but it can also become a stereotypical behaviour if the birds are not stimulated by their environment. Strategically placed logs and rocks stop birds doing this and also make the environment more interesting.

They also permit displays from birds like tragopans, which often won't breed without these.

Food hoppers – bowls

Food bowls and hoppers should be located somewhere that will stay dry and clean – not under perches. Don't forget treats; try to discover one favourite food in which medicines can be administered to individual birds. Currants are very useful for this purpose as they are a little sticky so any medical powder will adhere to them; also, they can be injected with small amounts of any required drug.

Water

Clean drinkers regularly and disinfect them for algae on a weekly basis

Heating in cold climates for tropical species

There will need to be small heated roosts in areas where tropical pheasants are kept under frosty conditions. Thermostats which come on between 3 and 5°C are very useful for tropical birds, once they have acclimatised.

Shelter for hens from exuberant males

It is vital to provide escape areas for hens, particularly near the breeding season. Often, males come into condition before females. In the wild, the male will often have to establish and defend a territory or lek, and fight off other males for the privilege of using a particular area. Then at a later stage, the hens visit the males to sum them up prior to mating.

In an aviary, none of this can happen, so the male comes into condition and the only bird around is his mate. He is ready and feeling very pugnacious and she may not be prepared to mate. Unfortunately, in an aviary, she cannot get away from the male's constant attentions, and often ends up getting bullied, or even injured or killed.

Having an aviary with areas where the hen can get out of the cock's vision, seems to help this situation. Try to create some areas where the hen can hide without the cock being able to attempt to mount her.

Dust bath

Pheasants do not wash – they keep their



plumage clean by dust bathing. Therefore a suitable dust bathing area needs to be provided, or they will create one themselves.

If the aviary floor is not covered with sharp sand, it is probably best to provide a sandy, dusty area in a spot which gets plenty of sun. If the dust bathing area is put in the shade, the pheasants will probably scratch out one themselves in a sunny spot. Smaller galliformes have even been known to dust bath in bowls of pellets when no other site is available.

To allow the birds to keep their plumage healthy, it is best to ensure that the dusting area drains well and dries out quickly after rain. One enterprising aviary builder has used a large tyre to contain the sand.



Roost perches

Two smaller perches across the corner angles help to keep birds apart when roosting, particularly when the male wishes to dominate a perch area. It is also easier for keepers to maintain without hitting their heads going underneath perches.

High perching

Here, a Mountain peacock-pheasant is roosting on top of a door – the highest available point in the aviary. Lower perches have been ignored.



Problem perches

Perches should be sufficiently thick that, when the pheasant roosts in winter, the body feathers cover the feet. This diminishes the risk of frost damage to toes, particularly to non-Himalayan species.

Perches should be scrubbed and disinfected on a regular basis, particularly if droppings are found on them. A minor cut on a pheasant's foot can easily become infected if it has to spend the night perching on top of its own droppings.

Bumblefoot can be caused by soiled perches. However, perches should also be checked regularly for potential hazards.

Here, a long-standing perch has split with age. The male Satyr has managed to catch one of his claws in the crack and pulled the claw out in his struggle to escape.



Here is a close-up view of the Satyr's claw, wedged in a crack in the perch.

Divided roost – Palawan peacock-pheasants

This allows some flexibility – keeping pairs apart for breeding, nesting or just providing the female with an escape area. It also stops the male dominating the



introducing a new mate with species where birds are known to be aggressive or even murderous. A similar temporary effect can be achieved by having wide headed clout nails already in place to clip on nylon mesh in cases where birds need to be divided quickly.

It is far better to have these nails in place and the netting already cut to size, rather than have to try and do this when the birds are actually at war with each other. If the nylon netting is stored attached to the nails at the top, rolled up and secured with string (like a furled sail), in an emergency, you just have to undo the knots in the string and drop the netting down into place, slipping the mesh over the heads of the nails.

On one occasion, with Malaysian peacock-pheasants, 2" (5 cm) string mesh was used but chicks could walk through it. This particular male was very unusual for his breed, and had managed to kill 2 very young chicks before the problem was identified. Double wire mesh then had to be fitted to stop cock attacking chicks.

Temporary aviary division

Here, nylon netting and clout nails are used to divide an aviary temporarily - in this case for different aged Temminck's tragopan poult.

This can also be very useful when separating warring cocks and hens, or temporarily separating an egg-eating cock from his hen. It can also be used with a male that habitually kills young chicks. Remember to have this set up beforehand, so that it can be utilised immediately it is needed.



Aviary furniture

Logs and rocks provide interesting low perches and allow birds views of their surroundings. Don't place these close to an adjoining pen or the birds will use them to stand on and display at each other. They can be very useful for stopping birds "rattling" up and down the wire.

This slide shows a Temminck's tragopan male displaying from behind a log.

Temminck's tragopan male displaying from behind a pile of rocks.



Malaysian peacock-pheasant

This highly endangered species needs the right aviary environment to display and thence to breed.



Food hoppers and bowls

A weatherproof hopper will keep pellets dry and off the floor and will also discourage mice.

A heavy dog bowl with a wider base than top stops birds like monals from spilling pellets on the floor, wasting them and attracting vermin. If the birds continue to scrape food from the bowl, placing it in a flower pot saucer can collect most of the seed that is spilt.

Fresh food and water

A suggested diet for daily food of pheasants is grated carrot, diced lettuce, tomato, apple or pear, grapes, currants, mealworms, beansprouts and Witte Molen softbill mix.



Pheasant pellets should be available at all times and the birds take these as and when they require. It is important to ensure that pellets remain dry. Chicken pellets tend to be too high in protein for pheasants and they often also contain growth enhancers. Turkey pellets have traditionally been about 2% lower in protein and are better, but specially formulated game pheasant pellets are best.

For most of the year, adult birds need only maintenance pellets; breeder pellets are usually started about a month before the breeding season. Chicks will need chick crumbs initially and then Grower or Rearing Pellets until they reach adult size in later summer.

Wheat or Barley can also be provided in small quantities, particularly during winter. Most species love a seed mix, which can be provided occasionally as a treat. Haith's Red Band Pigeon Conditioner is one that some breeders use.

A galvanised 4-pint drinker allows fresh water daily. It is vital for the health of the birds that this is freely available, will not get filled with sand from "digging" pheasants, and is regularly sterilised. Algae can grow quite quickly if drinkers are left in sunlight. These galvanised drinkers will withstand the rigours of being frozen in winter, and have been known to last for more than 25 years.

Probably every keeper of pheasants has a different feeding regime, in the same way that few human families eat identical meals. When starting, follow the regime of an experienced keeper and then gradually modify to suit yourself and your birds.



Administering medication

It is a good idea to find a particular treat which each pheasant likes and will take from your hand. Almost all pheasants love peanuts (provided they are unsalted), but the surface of these nuts does not allow medicines in powder form to adhere to the them. However, currants are greatly enjoyed by almost all birds and it is extremely easy to administer a worming powder on this way. Currants have three additional advantages.



1. An exact amount of a medicine can be injected into them.

2. Drugs can be given to individual birds without needing to treat all the occupants of the aviary.

3. A sick bird does not become stressed further by needing to be caught up for the administration of its medicine.

Mealworms, which are also much liked, can fulfill a similar function, particularly if the medication needed is a powder – just make each mealworm a little damp and the powder adheres to its skin and it is quickly eaten by the bird.

Too often, medicine is prescribed to go in the water, so all birds in that aviary receive the medicine, even though only one has had it prescribed. Incidentally, since pheasants can comfortably go without water for several weeks, if medicine is prescribed to go in their water and they dislike the taste, they will just ignore it. Even if it is in the water, it is difficult to assess how much of the dose has been administered. It is far better to administer a measured dose via a favourite treat and to actually see the individual bird receive what has been prescribed for it. Of course, this procedure is also extremely effective for routine procedures, such as **worming**. Most keepers worm their pheasants twice a year, in February and in September, using Flubenvet in powder form.

Replicating a natural diet



Here, grey francolin in Sariska Nature Reserve, India, are feeding naturally on termites. It is hard to replicate an exact natural diet under aviary conditions, but the nearer you can get to it, probably the better quality of birds will be produced. Many breeders dig up ants' nests or use ants' eggs to supplement diet, particularly with young chicks. This can be particularly effective in areas where normal pelleted food is unavailable.

Encouraging natural feeding behaviour

Just prior to this photo being taken, a wild hen monal in Sikkim was feeding on this tuber or fungus that she had just dug up. Local wildlife researchers had not seen it before. It was very hard and seemed



unpalatable, but obviously the monal found some goodness in it. In the wild, pheasants eat a great number of different foods, some of them only appearing seasonally.

Some species like tragopans seem to increase the amount of greenfood and protein in their diet very significantly in the breeding season, and to eat very little during winter when food is scarce.

Hens teach their chicks to find different foods in different seasons, which is probably why most chicks remain with adults for almost a year.

Undoubtedly, pheasants benefit from a varied diet rather than only receiving basic pelleted food, which is entirely unnatural. However, feeding a constant stream of treats in captivity can lead to the birds selecting only the foods that they like and not receiving a balanced diet. An old Edwards' pheasant with a WPA member in Lancashire would only eat peanuts after being given too many while it was young. It lived for 22 years but was never able to fertilise his hen's eggs.

Beijing Zoo has done a lot of research on pheasant diets and found that Vitamin B and calcium are often missing from a young pheasant's diet in captivity, leading to leg and toe deformities. In the wild, the birds would have such a varied diet that these deficiencies would never occur.

The food intake of the birds needs to be monitored to try and obtain a balance between good nutrition and a varied diet.

Aviary planting



All aviaries look better if they are well-planted. Most people would also agree that they are also much better and more natural for the birds. Insects can be caught on foliage, improving the birds' diet and making them act more naturally. Obviously, in an ideal world, it would be preferable to give birds the same sort of plant environment as they would experience in the wild. However, particularly with species that devour a great deal of plant food, such as tragopans, cheer and monal, an aviary is seldom large enough for sufficient natural food to survive.

To give an example, a new 4 ft. (1.2 m) broom bush was planted in a cheer pheasant aviary and the pair ate the whole plant, roots and all, by the same evening.

Vigorous, low growing bamboo and small evergreen fir trees seem to suit most aviaries and pheasant species.

- **Aesthetic and providing shelter particularly for hens**

A well planted aviary looks nice but, more importantly, it will probably provide areas where hens can conceal themselves from over-attentive males as well as finding potential nest sites. The more secure a hen feels within her aviary, the more likely she will breed successfully. Hens often know they can hide when they need to, they are much more prepared to use the open areas and show themselves to observers.

- **Grass**

If an aviary is sufficiently large, and grass is well established, then some species such as koklass will thrive in this environment. Indeed, without such a

ready supply of green-stuff, young koklass are difficult to keep alive.

- **Bamboos**

It is good if “natural” species can be provided. However, some bamboos grow particularly vigorously and can soon wreck an aviary roof if not kept under control. Once the roots system is established in a suitable soil, the rhizomes can run underground very vigourously with some species. It is probably best to try and plant miniature varieties if they are available and if you can afford them – they are very expensive in Europe. Some pheasants will also strip them totally in a very short time, so it might be worthwhile growing the bamboo in pots and keeping several pots, rotating them in and out of the aviary.

- **Evergreens are usually not eaten much**

Once evergreens are established, birds seldom peck at them. Indeed, if they do this, it is a strong indicator that they have not been provided with sufficient greenery in their diet.

- **Ground cover and shrubs**

These provide variety for the birds and are aesthetic for the aviary observer. By keeping the plants pruned to a low level, the birds will not use them to roost in. This has two advantages; firstly the birds roost under cover in winter where you want them to, and secondly the bushes don't get covered in unsightly droppings.

Bulwer's' pheasants, recently taken from the wild, in a very densely planted aviary in Malaysia. This aviary was used to provide some security for the birds, and to replicate their natural habitat. Actually, it was not a successful breeding strategy, as the birds never laid. Their aviary was so densely planted that they could always “disappear” when their keeper arrived, so they never became accustomed to captivity.



Protect new plants

Monals are great diggers and can often be found excavating their way to Australia. It is sometimes necessary to protect the roots of plants, particularly when they are newly planted. This monal actually was less interested in excavating the roots of the plant, than in dust-bathing. A dust-bathing area had been provided, but in an area with little sunlight, so the monal created a better site.

This newly planted bamboo was just not big enough to survive the depredations of a pair of Temminck's and their three poults. It would have survived with no problems in a peacock-pheasant aviary.





Poisonous plants

Some plants can be poisonous to birds – laburnum is one such. Ivy is supposed to be poisonous to birds, although golden pheasants have been known to trim a ivy bushes growing outside their aviary with no ill-effects. These mountain peacock-pheasants have nibbled at the base of this canary ivy, but otherwise leave it alone. However, avoid all forms of avocado, whether it be leaves or fruit. In experiments or accidental exposure to avocado, ostriches, parrots and budgerigars have all died in quite significant percentages. In *Toxic Plants Dangerous to humans*, Jean Bruneton, Professor of Pharmacognosy at the University of Angers School of Pharmacy, found severe toxicity with cultivars of the Guatemalan variety of avocado pear (for example Hass. Reid, Anaheim and Fuerte). There is no known antidote. Amazingly, the quetzal seems to live almost exclusively on wild avocado and the hoatzin also seems immune to its toxins.. Other known poisonous plants are yew, oleander, clematis, black locust and Virginia Creeper.

Rhododendron is also supposed to be poisonous, but these much filmed Himalayan monals have lived for more than 25 years with large rhododendron shrubs. However, their aviary has plenty of other greenfood and they seldom do more than nibble at a few fresh leaves.



Security for hens

- **Plant cover**

The more cover there is in an aviary, the more secure a hen will feel, and therefore be more likely to lay without problems such as dropping eggs off perches, egg eating or just abandoning eggs anywhere.

- **Shelter boards – angled against aviary wall or raised on bricks**

If a hen knows she can get away from an aggressive or exuberant male, either behind an inclined board or underneath a board raised on bricks, then she is more likely to feel secure enough to lay and breed successfully. This measure is particularly important when males come into breeding condition more quickly than females. Changing the protein levels of pellets can be a key time to put these boards in place as cocks seem to react much more quickly to protein changes than do hens. Many breeders also use old Christmas trees or braches from shrubs in a similar manner.

- **Several perches – small – spade handle – suspended perch**

A perch that is just large enough to take one bird will often discourage an over-attentive male. An old spade handle is just wide enough for one bird to sit on. Similarly, a fairly narrow perch suspended on a couple of wires, like a child's swing, can provide a secure perch for one bird, but will move when a second tries to land on it.

- **Somewhere out of sight of the male**

Irregular shaped aviaries, foliage cover or a roost that allows the hen to get out of the cock's sight are often enough to discourage the male from constantly worrying the hen.

- **Aviary or roost divides easily to cater for aggressive males that pester sitting hens or kill chicks**

As mentioned earlier, it can be extremely helpful to have designed the aviary so that it can easily be divided. However, even if this has not been included initially, it is usually quite simple to partition an aviary or roost in such a way that the male can be excluded from the female. Nylon netting hung on clout nails and applied temporarily is usually very effective. If the noise of a hammer banging in nails disturbs the hen, try using small cup hooks.



This simple triangular device can provide a harassed hen with security from an over-eager cock, and it will also provide a potential nesting site for a ground-nesting female.

If new pairs need to be introduced to each other, this is usually best done in winter when the birds are young and not interested in breeding displays. Some species, such as Copper Pheasants, have a reputation for being particularly aggressive to their hens. If new pairs need to be introduced, it is usually best to bring the new male to the female, where she is already used to her home aviary. This allows her to know all the "escape" areas and the male is often less aggressive since he is not on his home turf. Another good method is to split the aviary into two equal parts where the birds can see each other and familiarise themselves before being allowed together. Putting a young female with an experienced male in the breeding season is a recipe for disaster. It is far better to allow a gradual introduction and to lose one breeding season than to lose a hen, which may go on and breed for 10 or more seasons.

This Lewis' silver male can be very aggressive towards his hen in the breeding season, but once he cannot see her, he doesn't pester her. She has learnt to hide behind the board which has been placed at an angle against the aviary wall. If mating becomes too aggressive, hens can hide behind the board and the male cannot get on her back to attempt mating.



Nesting



In the wild, most pheasants nest in a scrape on the ground. In mountainous areas, the hen will often look for a site which provides some shelter from inclement weather and also from the eyes of predators. In this photo taken by Zhang Jing in the Shanxi Mountains in China, there is a wild blood pheasant nesting with eggs. A rocky overhang creates a small sheltered "cave" and overhanging plants conceal the nest even further.

In this photo, also by Zhang Jing, another wild blood pheasant hen is actually sitting tight on her nest of eggs, confident that it is well concealed from prying eyes.

If similar opportunities can be offered for pheasants in aviaries, successful breeding successes may be achieved. In large, landscaped aviaries it may even be possible to create similar suitable sites, but otherwise alternatives need to be offered that still encourage birds to lay their clutch of eggs in a way that makes them feel comfortable.



Nest box - covered



A golden pheasant male using a nest box as a respite from his chicks on a sunny day.

Note – it is raised on bricks to avoid disturbance by mice to the hen when she is sitting at night.

Place it under cover so that the hen doesn't have to sit in a wet nest box, or that the straw and sand doesn't become so wet that the eggs chill or go mouldy.

Washed, sharp sand and straw, not hay, is best. It is too easy for mould to grow on hay – it must be dry, or there is danger of the spores of aspergillosis forming on it.

It is possible to "persuade" birds to lay where you want them to, particularly young hens. In an aviary, usually a hen will lay in a secluded corner, but sometimes she will just drop her eggs anywhere. Usually, provided you don't take eggs away from a young hen, she will soon learn what to do. If her eggs are always taken to be incubated, nature's natural processes are not encouraged and she never learns what to do. This is often when egg-eating starts.

With a young hen, if she hasn't used the nest box to lay in, try moving the nest box to the site where she laid her first egg and put the egg in it. Then, when she lays her second egg, move the nest box nearer to where you want it to be. Usually, once she is used to the box, she follows it and you can then place it in its final, safe and dry position.

Here a cheer pheasant hen is in typical brooding position. She is sat on a clutch of eight eggs, right at the back of the box and with her tail up in one corner. Hens seem to feel much more secure if they can adopt this position, natural rearing can be encouraged by trying to ensure these types of conditions. Note how her tail is very bent – it is quite a common sight with sitting hens, but they usually go into moult soon after hatching the chicks, so nature remedies this problem quickly.



Nest boxes - raised

Monals usually chose a closed box on the ground similar to a rocky overhang that they would find in the wild. This particular hen likes to use the nest box as an escape site when pestered too vigorously by her mate. Tragopans will use this type of nest box, particularly young hens.



Nest boxes - open

These are suitable for placing on the ground or on a shelf. Place it in a corner, not underneath a perch (where droppings from the male won't land on the sitting hen) and she can then sit with her tail up in a corner.

Nest boxes – across a corner

This design makes it easy for the bird keeper to clean underneath, without hitting one's head. It is useful when space is limited. Note the perch on the front to make it easier for the hen to fly up to it.



Nest baskets

Remember to offer the birds a variety of nest baskets and sites – they are all different and it might make the difference between successful breeding and half-hearted approaches. This pair of satyrs likes to roost in an old cat basket when they don't have chicks, and they fight over its use each evening. Young tragopan hens often prefer a shallower basket but, once they have raised young successfully, they often choose a deeper basket, where they can be hidden from the outside world.

A Temminck's tragopan hen with a choice of two raised nest sites.



A Temminck's tragopan male taking advantage of a spare basket.



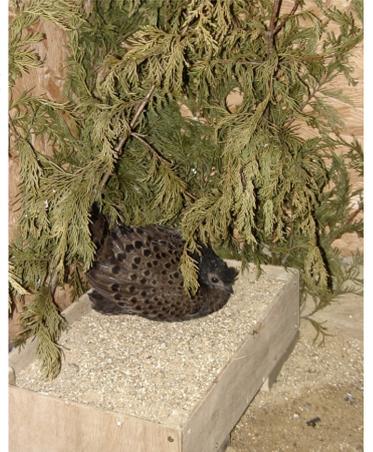
Encouraging the use of nest boxes

If the hen seems unwilling to use one of the nest boxes or baskets that you have provided, and you have ensured that these have been placed in a secluded corner, some foliage can be placed to increase her feeling of security. Hens will often use these “camouflaged” boxes to hide from the male if he is over-attentive, but they also encourage hens to feel safe when laying and incubating. If a number of baskets or boxes have been



provided, try using different amounts of foliage – sometimes only a small amount is sufficient to encourage the hen, whereas others seem to like total concealment.

Here a Temminck’s tragopan and Malaysian peacock-pheasant hens both contentedly incubate their own eggs.



Limiting breeding opportunities

The tragopan hen in this very exposed aviary was only provided a single nest basket. Some shelter from the wind and rain would surely encourage more successful breeding, and additional baskets would provide greater choice for the hen.



Unusual nesting sites

This Palawan peacock-pheasant hen is actually laying one of her eggs in a ceramic plant pot which had been left to over-winter a begonia in the roost. The pot is on a raised shelf.

The pair of Palawan peacock-pheasant chicks have subsequently hatched in the plant pot. They were unable to fly out, and it was expected that they would need human assistance to leave the nest site, but the hen carried them out under her wings and never returned to the nest site. Pheasants are nidifugous – they do not usually return to their nest site once they have hatched their young.



Egg breaking and eating

This egg in the photo on the next page has been slightly dented by the Palawan peacock-pheasant hen as she left the nest. If the damage is only slight and the inner membrane is undamaged, it is sometimes possible to repair the damage with a substance that will seal the egg. Nail varnish seems to work very



well. Superglue is also highly effective.

Some birds damage their own eggs and there can be many reasons for this.

A hen that is unhappy or uncertain may lay an egg from her perch which subsequently breaks as it hits the ground. If this bird, or its mate then gets a taste for egg, it may remain an egg eater for the rest of its life, and subsequently involve the keeper in many wasted hours trying to beat the bird to the egg.

Sometimes hens seem to know that an egg is infertile, particularly the first egg of the season, and experience has shown that many early eggs laid from the perch are indeed infertile. However, the hen can be persuaded to use a nest box or basket to lay every egg, then the chances of broken eggs and egg eating are reduced considerably. Plenty possible nest sites with lots of cover around them will often be sufficient to encourage the hen that one of these sites is secure for her.

Another possible solution for persistent perch layers is to tie a loose piece of material or sacking underneath the perch in such a way that it can catch the egg as it falls. If there is sand underneath the perch, and the hen always drops eggs from the same spot, piling sand underneath like a small hill can allow the egg to land on the top and then roll down, thus reducing the initial impact. This method works very occasionally.

Once egg eating becomes established, it is extremely hard to break the habit. One well-known breeder floods his aviary with old golf balls well before the breeding season so that the birds get used to these light coloured round objects and are less inclined to peck at anything new, such as an egg.

If the male is identified as the egg eater, shutting him away from the hen when she is due to lay can resolve the problem. With most species, the mating by the male fertilises an egg which may be laid about 6 days later. Some species, such as golden or Lady Amherst pheasants, only seem to need to mate once to fertilise all the hen's eggs, whereas other species, like the monal, seem to need to fertilise every egg. If a golden pheasant male has an egg eating problem, he can probably be removed once egg laying starts until the hen has finished incubation. This is not so easy with the monal, so in this instance the male should be shut away on the day that the hen is due to lay (with monals this is every third day).

If the hen is an egg eater, the problems increase significantly and the keeper is reduced to watching her very closely when she is due to lay. This is not as arduous as it seems, particularly if the birds are conditioned to seeing a keeper around their aviary on a regular basis. Most hens lay at the same time of day; most birds lay in the evening between 5 and 6 p.m., although one lays every morning at almost exactly 8 a.m. Once the hen's laying pattern has been learnt, preparations can be made to rescue the egg, even though it will need to be placed in an incubator or under a broody. One well-known Belgian breeder, whose hens were used to being handled, used to persuade the hen into a closed nest box just before she was due to lay. The nest box had slats of wood on the base through which an egg could pass, landing on soft sand below. Since the nest box was fairly dark, the hens didn't seem to see the egg below the slats and so did not peck it. It could then be collected for artificial incubation.

There have been many unusual attempts to dissuade birds from egg eating, some involving very hot chilli pepper or other distasteful substances, but they have seldom worked. Indeed, recent research seems to indicate that pheasants, like many birds, seem to have little sense of taste. By far the best way to stop egg

eating is to do everything possible to get the birds to behave naturally and sit on their own eggs. Once they have learned to do this, it is seldom a problem.

Eggs

Hens do not necessarily lay uniform eggs. These eggs are all from one clutch from the same Temminck's tragopan hen, and they vary very significantly both in size and colour. All were fertile. The largest egg had a double yolk and hatched twin chicks. This is highly unusual and normally nothing would be expected to hatch from such an egg.



Although the eggs are not normally expected to hatch after a set time (in the case of tragopans – after 26 days) it is not unusual for this time to be extended by several days. This extended hatching time is quite common when hens are hatching their own eggs. If the ambient temperature is low for much of the incubation time, chicks often hatch later than expected. The keeper should also remember to add an additional day to the expected hatching time if hens are hatching their own eggs, as the hen usually sits for one day on the hatched chicks to ensure they are all fully ready to leave the nest. She also calls to them to familiarise them to her voice.

Thus for the tragopan hen two pages back, chicks on day 26 would not be expected (even if the hen hatched them on time). One might see the occasional small piece of eggshell, but the chicks would first be seen and brought off the nest on day 27.

For hens that hatch chicks in a basket or nest box off the ground, the chicks naturally follow their mother down to the ground, even though they can not really fly. On some occasions, peacock-pheasant hens have been known to tuck chicks under their wings and then jump down from the nest. Hens seldom return to the nest site to brood their chicks overnight.