

INCUBATION OF WATERFOWL EGGS USING BROODY DOMESTIC FOWL

INFORMATION SHEET

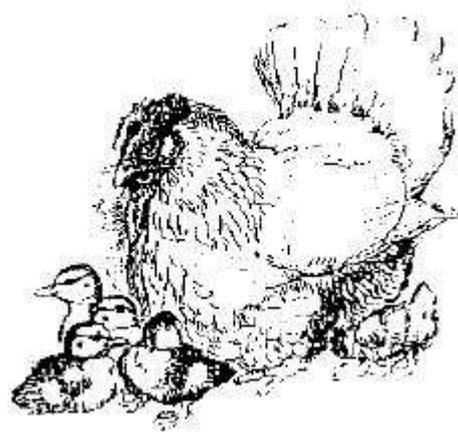
The ideal should be that female waterfowl incubate their own eggs. However, for a number of reasons this is not always encouraged in captivity.

The females may choose less than the most suitable spots or boxes in which to lay; the density of birds, often of different species within a collection, may lead to disturbing interactions between nesting and would-be nesters, competing for the same sites or boxes. Things like this can lead to the female birds just giving up laying. Even if a female does hatch her own eggs satisfactorily the number of young she rears, especially in ducks, can be very small, or indeed nil. Geese and swans, on the other hand, especially where males play a parental role, are frequently more successful.

An additional factor is that, particularly with rare species, or those in demand, if the first clutch of eggs is taken away then it is possible that the female will lay a repeat clutch in the same season.

EGG COLLECTION

A frequently used method with larger ducks and geese is to take the eggs, as they are laid, and replace them with dummies of near identical size and weight, until the clutch is complete. Then, should a predator find the nest, at least some of the eggs may be saved. However, in spite of the risk of predators, it may be better to leave small duck eggs in the nest rather than exchanging them for dummies. These frequently prove unacceptable to, for example, a female teal. Very small bantam eggs, matched for size and weight, may be an alternative substitute but not always.



EGG STORAGE

Ideally, eggs should be carried with care and, after naming and dating with an indelible pencil, they should be stored on a tray of sand in a cool outbuilding. The ideal temperature is around 15°C. A few degrees above or below this figure while the clutch is being collected should do no harm to the eggs. Normally a clutch takes up to 14/16 days to complete.

A record of eggs collected is helpful. The eggs should be turned once a day, as the mother would do each time she returned to the nest to lay another egg. As soon as down from the mother bird's breast appears in profusion covering the eggs in the nest, it can be assumed that the clutch is complete. Clear the nest of dummies and scrap the nest site (if you want to encourage the bird to lay again).

BROODY HENS OR BANTAMS

"Going broody" is a natural phenomenon with all birds that incubate eggs. It is particularly obvious in female waterfowl. Males may guard nests, even squat over eggs, e.g. Black Swans, to protect them but they do not incubate. There is no loss of down feathers from the breast to produce brood patches for the transfer of body heat, as occurs in the females.

Similarly all female gallinaceous birds, which includes pheasants and fowl, also go broody. Some domestic fowl of many breeds and "hybrid" forms, have had the "broodiness" characteristic bred out of them by commercial poultry breeders, or they may only go broody for a very brief period – so beware! However, many breeds and strains still retain this natural reproductive ability.

Silkie, Sumatra Game and Scots Dumpies are breeds that many expert breeders cite as the best. However, equally good, and some say better are crosses of these breeds. A Silky Cross, with no feathers on her feet, is likely to be a very good sitter. Feathered feet collect mud and can accidentally knock eggs

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out of the nest. "Game-type" bantams can be excellent broodies and are defiantly protective mothers to chicks and downies, but they are not so easy to handle in broody boxes.

The ideal broody is steady, quiet, clean of feather on feet and does not mind being handled. Good broodies are hard to come by so it is best to keep your own flock. You need a "bank" of spares, ones that have proven themselves and in turn should have been bred from, to fix the characteristics you require - the incubation and rearing of the waterfowl.

BROODY INCUBATION

It is recommended that the small breeder of waterfowl should have a bank of three to six broody boxes and a series of short netting covered runs. When you have a broody in a suitable sitting state, she should be gently moved from the fowl run nest box to the broody boxes. This is a good time to treat her with a proprietary delousing agent. A base layer of clean sand, covered with leaf mould or a sod of grass, shaped into the form of a nest, should fill the bottom of the box. A few dummy eggs should be left under the broody for twenty four to forty eight hours to test her. All this is best done in the evening. The next evening she needs to be lifted from the broody box for exercise in her run, and then the dummy eggs can be removed and the waterfowl eggs slipped in.

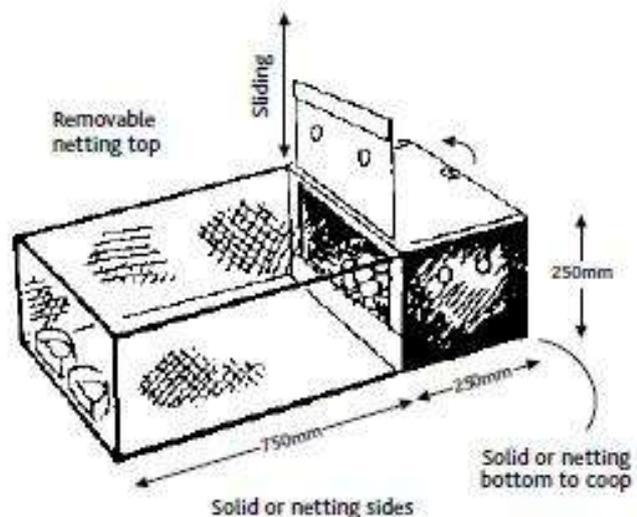
An experienced breeder will candle the eggs once or twice during incubation - it is best after 10 days and again after 20 days. Eggs are candled by shining a bright light through the egg. Any which are completely clear after 10 days are infertile and if, after 20 days, you cannot see clear signs of blood vessels then the embryo has most probably died and is going rotten. Such eggs should be removed.

RECORD KEEPING

Memory, especially with several broodies sitting, can be embarrassingly unreliable! It is therefore recommended that a simple record (on a card) is kept pinned on each incubation box. The species; the date incubation started; and the anticipated date of hatching should be written down. Notes on the nature and effectiveness of the broody might be kept too.

BROODY CARE

The broody boxes need ventilation holes, and if possible should be kept in the shade or under shelter to avoid heat stress to the broody in hot weather. She needs to be allowed off the eggs at least once a day, fifteen to twenty minutes on average, at the same time each day. She should have water and food receptacles that she cannot turn over in the run. Wheat, cut maize and a little grit is suitable food. She must have time to both feed and defecate during this period. If possible, a dust bath should be provided. Experience with the individual hen will tell you whether you have to shut her out with the slide from the eggs or not. Some will hurry back to the eggs before defecating with unpleasant results later for the eggs, hen and handler!



Although the broody will be turning the eggs herself, she may need help to turn larger goose eggs, and the breeder should do this as a routine precaution. During dry conditions it may be beneficial to dampen the ground around the broody boxes.

HATCHING

You will need to check incubation times from other breeders or reference books. "Downies", as young waterfowl are often termed, will be heard calling within the eggs up to forty eight hours before they are due to hatch or the eggshell has been chipped. The broody will sit tighter and will be less inclined to leave the nest for food or exercise. It may take seventy two hours for all, or the majority of the eggs, to hatch. Light

spraying of the chipping eggs with tepid water might be beneficial at this stage, especially in periods of dry weather.

The downies will not need food for twenty four hours or so, since they have yolk reserves to draw upon for sustenance.

REARING

At this stage a brooder should have been prepared which will house both hen and downies on clean ground. Preferably it should be an area of closely mown grass upon which waterfowl have not been kept recently, to avoid potential parasite problems.

This is where a good broody really proves her worth, not only as an incubator, but brooder too. Depending on the species, chick crumbs, turkey crumbs and duckweed should be introduced for the young. This will be sampled by the broody and she will coax the downies to try, and indeed to eat. Water should be available in shallow trays filled with smooth pebbles so that the young don't get too wet before their down and preen glands have become active.

If the young are going to be pinioned then this should be done within the first few days under veterinary supervision. The brooder, hen and downies should be moved onto fresh clean ground every day.

Finally all broody boxes should be thoroughly cleaned and disinfected ready for the next valuable batch of eggs or young to be hatched this season, or the next.

This leaflet is only a brief introduction and the successful husbandry of all livestock depends on being well informed about them. The BWA Bookshop sells a number of specialist publications which cover all aspects of keeping both Wildfowl and Domestic Waterfowl. All new keepers are strongly advised to obtain a book appropriate to their interest.