

SPINIFEX PIGEONS

Their Incubation & Hand-rearing

By Dan Hassell

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I have been keeping the White-bellied sub-species of the Spinifex Pigeon (*Geophaps plumifera*) for about 5 years, but have never been able to manage to breed parent-raised young.

Most native pigeons are very nervous birds, due to being preyed on as food in the wild, and Spinifex Pigeons are no exception, therefore mine do not sit on their eggs. I admit this is partly my fault, because I house them as a floor-dwelling species in parrot aviaries, which do not provide as much seclusion as would planted aviaries, but they are however a desert bird and do not necessary rely on lots of plants.

Although the adults do not incubate, they do produce a good yield of eggs, which have generally proved almost 100% fertile. I have therefore experimented with different methods of incubating and hand-raising and have come up with a reasonably successful formula, which is revealed below :

Incubation

I have a number of incubators, being Brinsea™ Octagon 10 (still air) and Octagon 20 (fan-forced) types, and having a turning cradle. I primarily used the top from the Octagon 20 as part of a parrot brooder, so the first year of incubating I used the Octagon 10 and the turning cradle. I operated the incubator temperature at around 37–38 degrees and adjusted the humidity by placing a small piece of packing tape over one of the two ventholes. By moving the tape to increase or decrease the opening slightly, I altered the humidity until it settled to a level I was happy with. Once settled it remained fairly constant, albeit with slight variations.

I 'candle' the eggs and the first signs of veining inside the egg is noticeable within about 3 days. As I stated earlier, nearly all eggs were fertile. The incubation period was around 16 to 18 days, and the chicks hatch with thick coffee-coloured down and closed eyes. They would be a similar size to a cockatiel chick and are very weak for the first 3 to 4 days. They have very floppy heads and just lay in one place. Some have a habit of rolling onto their backs at every opportunity during that time and appear dead, but they are

deceptively resilient. On hatching I move them into a cut-down yogurt container, which has some garden mulch in the bottom to assist them sit with stability, and place them at a similar temperature into another Octagon 10, that is not in a turning cradle. I leave them in this incubator for around the first 6 – 7 days because I take them to work for feed during my meal break. I have a 12/240 volt inverter that I can plug into the cigarette lighter of my car, to maintain heat in the incubator during the trip to work and home each day.

Hand-rearing

I have hand-reared quite a few parrots in the past and I find the ‘Spinnies’ are generally much easier to rear than parrots. I have tried a number of different commercial mixes, but some are very grainy and block the feeding tube. I have had the most success using Roudybush TM Formula 3. This is administered via a syringe and tube, directly into the crop, at time periods of about 4 hours for newborns.

Care must be taken in the early stages not to overfill the crop, such that it will be inhaled by the chick and kill it. I find I have better control over the ‘flow rate’ from the syringe if I use a 1 ml (100 unit) insulin syringe for newborns, then step up to a 3 ml after a week, and a 10 ml after a fortnight. I do not use the type that has the inbuilt needle, but use the type that have a stepped down collar. For a tube I obtain winged infusion sets that doctors use to give drips to patients. The non-needle end of this device fits directly onto the syringe, and I cut the tubing about 30 mm from that end. The tubing is very pliable and is easy to insert down the chick’s throat and into the crop. Some newborn chicks open their beaks easily. Others may need a little careful pressure, however as they get older and learn when it’s feeding time, they open their beaks wide.

I use two medicine glasses to mix the formula. I combine boiled water with cold water in one glass to a temperature that I can hold my little finger in without burning it. I place a small amount of powder in the other glass, then transfer some of the water with the syringe. I pump the syringe plunger in and out a few times until the water and powder combine, then suck it into the syringe for feeding to the chick. Just like parrots, newborns should be fed with very little powder in the solution for the first 24 hours, and the formula is gradually thickened over the period the chick grows.

I do not have any set amount I feed the chicks, just that it is better to underfill them slightly than to overfill them and have food regurgitated and inhaled. As a rough guide the first feed (a few hours after hatching) will only be about 10 to 15 units (0.1 to 0.15 of a ml), the second feed about 20 to 25 units, etc.

By about day 2 they will be taking around $\frac{1}{2}$ a ml per feed, and by day 3 almost a full 1 ml syringe. After that I step up to the next size syringe.

Using this method I find that I can feed one chick in less than 5 minutes and 5 or 6 chicks in no more than 10 minutes. I used to get up in the middle of the night to give a feed, but now I do not. I give the last feed about 11-00 p.m. and the next feed first thing when I get up.

Chick Growth

In the wild Spinifex Pigeon chicks need to grow very fast or they will become food for reptiles and other birds, therefore they develop quickly. Within 24 hours of hatching, black patches can be seen to develop on their shoulders and this is the beginning of feather growth. Small pin feathers can be seen emerging from the trailing edge of the wings within 2 to 3 days, and their eyes begin to open about day 5 or 6. They start to move around by about day 7 or 8 and feather development is well underway by that stage.

Around that time, I stop taking them to work and feed them before I go and when I get home. They are starting to move around in the yogurt container by that time, so they progress to a small aquarium that has a light fitted through a hole in the lid, which provides warmth. I use a blue coloured light globe of either 25 or 40 watts, depending on the ambient weather temperature, and I monitor the aquarium temperature by an electronic unit that can be purchased cheaply from places like Tandys or Dick Smiths. I can also adjust the temperature to a certain extent by draping an old towel over the aquarium, uncovering or covering to allow or prevent heat escaping. The chicks can get closer if they want more heat, or move away if they want to cool down. They remain in this container for about a further $1\frac{1}{2}$ weeks, then progress to the next stage. By that time their head plume has begun to develop and they look like small pterodactyls.

After the aquarium stage, I move them to a clear plastic storage box with a lid, and with some dirt on the floor. A door of $\frac{1}{4}$ inch mesh is fitted in the lid so that I can put my hand through to catch the chick for feeding. I ring my birds with coloured plastic size X3 (equivalent to aluminium size M) numbered leg rings at this stage for two reasons (a) I check the numbers as I feed them so that I know all chicks have been fed, and (b) for identification later when getting birds DNA or surgically sexed. There are two lights fitted inside the lid of the storage box and the temperature can be adjusted by changing the wattage of the light globes, or by removing one globe. As the chicks feather up more, I use the light only at night when the temperature drops, and during the day I move the box outside onto a table under the

pergola. During this stage, the black facial and chest lines begin to appear, and the white head patches and belly colour begins to break through. The skin area around the eye also begins as a pale pink and will redden over the next 6 months or so.

During the storage box stage I put a coffee lid of dry and soaked seed into the container, and scatter some around the dirt floor for them to pick at. I find this is the most difficult stage in the whole process – getting them to wean. Once one has started, it will usually teach the others to eat. I used to use budgie mix sized seeds at this time, but later saw the chicks had difficulty picking up small seeds. Last season I weaned them using mainly soaked mung beans, and they coped better with these food morsels.

Finally, when I am confident each chick is eating by itself, I transfer them into an aviary, making sure there is food of the type they have been eating. They often will sit in a corner for a day or two until they gain confidence, so I observe they are eating during that time, but otherwise leave them alone to fend for themselves.

Difficulties

The first year I kept these birds I bred 2 birds while experimenting with different methods. The next year I raised around 10 or 11 birds, some of which were donated to the Adelaide Zoological Gardens. I got a bit fancy the next year and purchased an automatic humidity control, which can only be used with the Octagon 20, not the 10. I was also trying to incubate parrot eggs, and found the Spinifex eggs were dying during late development. I lost most of the season's eggs before deciding the humidity required for parrot eggs was too high for the eggs of the desert-dwelling Spinifex Pigeon. Last year I went back to the Octagon 10 and dropped the humidity to the high 20% to low 30% range, and I hand-reared in excess of 20 birds to maturity, losing only one egg during development and another proving to be infertile.

Conclusion

The Spinifex Pigeon can be a relatively easy bird to hand-rear provided you have the time and patience required. They make an interesting bird species for the aviary floor for those aviculturists looking for an alternative to quail or other ground species.