

# Foster Rearing Button Quail II

## A Female Learns to Rear Chicks

by Nancy Bent, Brookfield, Illinois

Some time ago I wrote an article for this publication describing an attempt to teach a female Blue-breasted (or Button) Quail (*Coturnix (Excalfactoria) chinensis*) to rear her chicks (Bent 1996). Briefly, this female would incubate her eggs for half of the normal 16-day incubation period and then abandon them. I finally removed a clutch of eggs to an incubator after they were abandoned, and when the chicks hatched I placed them with their mother in a suitably furnished thirty gallon fish tank to see if she would rear them. The experiment was a partial success – the female exhibited most of the normal caregiving behaviors and successfully reared all of the chicks given to her. Unfortunately, she never laid again, so I was never able to determine if she had learned anything from this parenting experience that might carry over to her next clutch. Since the female had reared the chicks alone, I also did not know if a male could learn how to care for chicks.

When this “educated” female died I was faced with the prospect of starting over again. In addition, I was faced with the problem of locating another female quail. Like many species of birds, Button Quail seem to come into and go out of fashion, and I was searching for birds in a “down” period in our area. After many fruitless phone calls I finally located some birds in one of the large chain pet stores. There was only one potential problem – the birds were all mutation colors. I prefer the normal, wild coloration for a number of reasons, not the least of which is that I feel that the line breeding, inbreeding, and intensive rearing methods required to “fix” the new mutation colors is helping to create the well-documented loss of the birds’

brooding and chick rearing instincts (Alderton 1992; Hinze 1997, 1998). However, with no other choices and with an aging male, I chose the most normal colored female (a dilute brown “oatmeal”) from the store and hoped for the best.

After a few months of courtship and pair bonding, the dilute brown female began to build nice nests in the silk plant thickets I provided and produced two large clutches, both of which she incubated for four days longer than the normal incubation period. Both clutches were unfortunately clear, and not long after the abandonment of the second clutch the old male died. Now I had a female who would build nests and incubate her eggs, but no male to fertilize those eggs.

A second frantic search again failed to turn up any quail anywhere – except the same large chain pet store. This time they had no birds that even approached normal coloration, so I chose the calmest male available. This new bird, a red-breasted silver, began to court my dilute brown female immediately, and within a month she was incubating her third clutch. Unfortunately, she was lured off her nest by the constant courting of her

new young mate after five days, but when I opened the eggs I found that five out of her clutch of 11 were fertile. We were back in business.

Only two weeks after abandoning clutch three, the female began to incubate clutch four, also containing 11 eggs. When incubating her large clutches it was amazing to see the hen’s ability to flatten herself out, becoming a disk of brown feathers as she tried to cover all of the eggs. As later events were to show, she was apparently unable to fully warm such a large clutch.

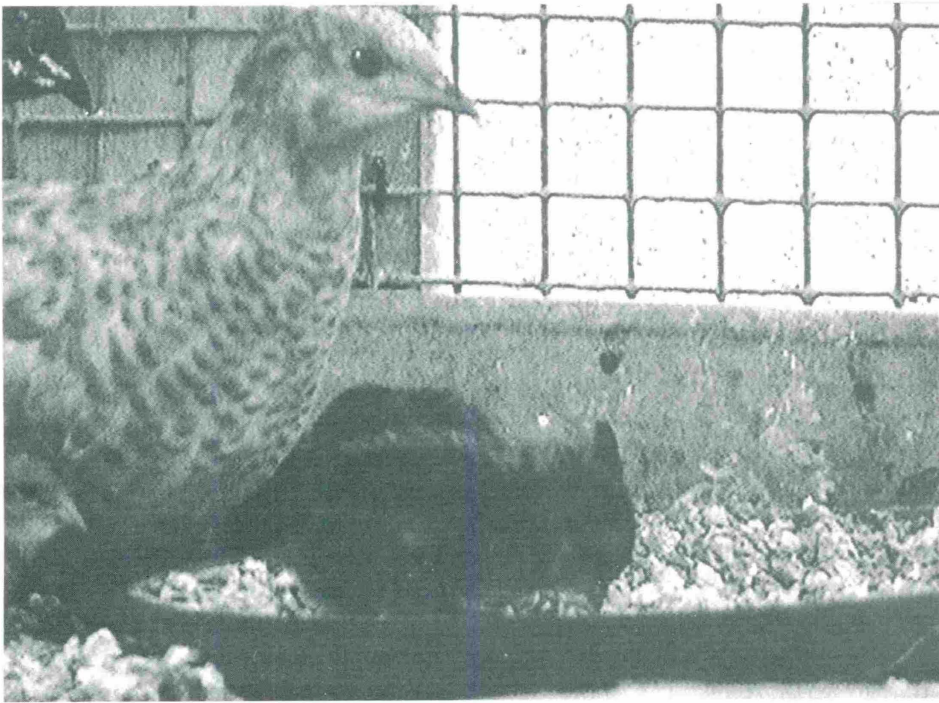
This time she abandoned her clutch after 17 days, one day overdue. When I pulled the eggs and opened one, it contained a tiny, live chick, which appeared to be halfway through the developmental process. I immediately placed the remaining 10 eggs into a Hova-Bator thermal air flow incubator at 99.5°. I intended to give the resulting chicks back to their parents to raise.

As my initial experiment had shown, a basically naive female was induced to care for her chicks, even in isolation from her mate and presumably after any broody tendencies had subsided (since she had abandoned her nest eight days before the chicks



Two incubator-hatched chicks before their introduction to their parents. The chick on the left grew into a red-breasted silver, the other became a pied (normal/dilute brown).

Photo by Roger Reason



*Dilute brown female shown with two of her clutch of nine chicks. The chicks grew into normal plumage.*

hatched). I felt that my current, presumably more "prepared" female quail would prove to be an even better mother, as she had shown herself to be very broody in her previous clutches.

Since the male was very gentle and calm, and had often joined her on her nest while she was incubating, I decided it was safe to leave him with new chicks. As Harrison (1975) pointed out, these quail show strong and persistent pair bonds, and the male takes a full share in the care of the young. I also decided not to pull the quail from the mixed-species flight that they shared with three species of finches into an isolated area, though I had done this in the prior experiment. I wanted to keep things as close to what the pair was used to as possible. I could always fall back to moving the birds to an aquarium tank, or as a worst-case scenario, hand-rearing the chicks.

Three days after I had placed the eggs in the incubator, I candled two to check for development. On seeing absolutely no movement, I opened the first and discovered an approximately three quarter grown chick dead in shell. However, the second egg held an almost fully developed live chick with the blood vessels still showing, which I had to euthanize. I vowed not

to open any more eggs.

Four days after placement into the incubator, at 21 days into incubation, three chicks hatched. When they were dry, fluffy, and steady on their feet I placed them into the nest area in the flight cage. I also provided a heat lamp at that end of the cage so they would not become chilled. Within minutes of their placement in the nest, the active chicks had found their way out of the nest thicket. Meanwhile, their parent had cautiously approached the nest, possibly attracted by the loud peeping of the chicks. The moment of reunion was at hand.

When the chicks saw the adults they immediately ran towards them – at which point, their parents immediately ran away! The female particularly seemed very nervous, making quiet trilling distress calls as she kept as great a distance from the chicks as she could. The chicks were very persistent, constantly peeping and approaching the adults, even running after them if the adults ran. After an hour the gentle silver male suddenly began to make a loud mellow clucking note in response to the chicks, and then began to brood them. This call was similar to Harrison's (1968) description of a call given by his female, and may have

been an invitation to brood. From this moment on the male was an exemplary parent, calling his chicks to food, tidbitting them with tiny mealworms, and brooding.

The next day (after 22 days of incubation) three more chicks hatched. After they dried off, they too were introduced to the cage whereupon their father immediately gathered them into his brood. His mate continued to be somewhat nervous around the chicks, but appeared to be calming down, and by the next morning her parenting instincts had "switched on" and she was brooding the chicks along with her mate. From this point on they were both perfect parents, and the female proved to be even more aggressive at defending her chicks from perceived predators (my hands) than the male.

After this clutch of chicks was fully grown and dispersed to new owners, a disruptive period lasting several months interrupted the breeding cycle. Various finches coming and going from the flight seemed to throw the female out of sync, and moving the pair to an aquarium tank to give one of their daughters a chance at breeding in the big flight cage ended in disaster all around. Not only did this silver daughter never fully pair bond with a young normal colored male I was able to find for her, her parents hatched a clutch of five chicks in the aquarium tank and apparently pecked them to death during my absence on a trip. Clearly, change was called for.

Since I am primarily interested in the natural breeding of normal, wild-colored birds (Bent 1999), at this point I decided to replace the silver male and pair my dilute brown female with the normal male I had procured for her daughter. This male had been gentle with the silver daughter, courting her and tidbitting, but the daughter had never responded to him. As I had already dispersed the other chicks I could not try the normal male with one of the other daughters, so this left the mother as my only choice. And, as an experienced mother, it would be interesting to see if she could repeat her previous success in the large flight

# **PET AIR**

**PROFESSIONAL ANIMAL TRANSPORTATION SERVICE**

**25 YEARS EXPERIENCE  
SHIPPING ANIMALS BY AIR**

**SERVICE TO OVER  
150 AIRPORTS**

**COMPUTERIZED  
FLIGHT PLANS**

**FAST FRIENDLY  
SERVICE**

**GREAT  
FREIGHT RATES  
TOLL FREE  
RESERVATION LINE**



## **PET AIR**

**1527 GRAND BLVD.**

**KANSAS CITY, MO 64108**

**PHONE: (816) 471-3852 FAX: (816) 842-7387**

**TOLL FREE RESERVATION LINE: (877) 959-7387**

**EMAIL: FLYPETAIR@YAHOO.COM**

**WEB SITE**

**WWW.FLYPETS.COM**

cage with a new mate.

Two months after their introduction, the female began incubation of another large clutch, 15 eggs this time. As with the previous silver male, her current normal mate often joined her on her nest at night. He never tried to court her once she began incubation as some males I have owned have done (Bent 1996), and he appeared to be very calm. All of this gave me high hopes for this male's parental abilities.

After another longer than normal incubation period (18 days this time), nine of the 15 eggs hatched. I first discovered the chicks when I checked the birds the night of the 18th day and discovered an eggshell protruding out from under the female on one side, and the struggling feet of a still-hatching chick appearing from her other side. The male was still on the nest with her, and may have even been brooding some of the chicks as he had also assumed the flattened disk shape of the female. On the first check the next morning both parents were calmly

shepherding the nine chicks around the cage, calling them to food, brooding, and protecting them from my hands as the female had done previously. Interestingly, the finches that shared the cage were never perceived as a threat, but my hands always were. The remaining six eggs in the nest all proved to be clear.

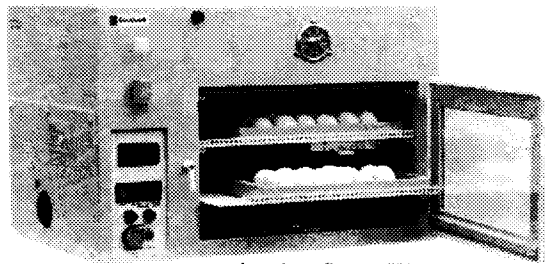
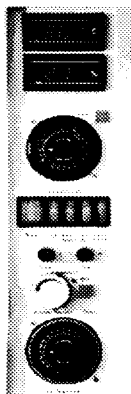
This pair were perfect parents. The now-experienced female showed no sign of the nervousness that she demonstrated with her previous incubator-hatched clutch, and no signs of the abusive behavior that had apparently caused her to kill her chicks when in the aquarium tank. The male, naive to parenting skills though he was, showed no hesitation in caring for his large brood, and was an equal partner in all phases of chick rearing. I removed the chicks when they were seven weeks old and their father had begun to try and chase them away. I thought I was now set – I finally had a good pair of Button Quail who would rear their own chicks.

I should have known that things are never that simple! After a few months rest for molting and recuperation, the female began to lay again. She scattered her eggs for a few weeks, then built a new nest and began a true clutch. Unfortunately, at this point she became egg-bound, and though she managed to pass a very large egg after I placed her into a 95° incubator with very high humidity, she died the next day. This is the first female I have lost to egg binding after years of using mineral supplements (Avimin®) in the drinking water. I have now increased the amount of this supplement that I add to the drinking water in hopes of forestalling a similar loss in the future.

This recent loss of my dilute brown female left me with a young, experienced male, and after yet another long search I procured found a new young female from a Button Quail breeder. As seems to be my lot, she is another mutation color – a cinnamon this time. When she was introduced to

## GRUMBACH INCUBATORS OF GERMANY

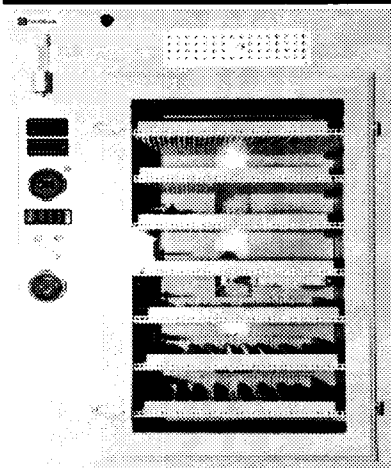
WHEN ONLY THE BEST WILL DO



Item shown Compact S84

Larger units available

Item shown #203/01/02-Incubator BSS300, includes programmable motor turning, 7 egg trays, each with 8 turnable rollers, adjustable to the size of the egg, directly adjustable automatic humidification system, cool down timer, digital thermometer and humidity readouts.



- Electronic regulation of temperature for maximum precision.
- Egg tray with rollers, adjustable to each size egg.
- Automatic humidity control, adjustable from 40% to 99%, water reservoir 4.5 liters. It can add humidity only.
- Automatic turning, determination of turning intervals and degree by pressing tabs on timer.
- Circulation air system for optimum distribution of temperature.

 Grumbach

LYON ELECTRIC COMPANY INC. IS NOW THE EXCLUSIVE DISTRIBUTOR FOR  
GRUMBACH INCUBATORS OF GERMANY FOR THE U.S.A. AND CANADA  
1690 BRANDYWINE AVENUE  
CHULA VISTA, CA 91911 U.S.A.  
TEL (619) 216-3400, FAX (619) 216-3434  
EMAIL: LYONELEC@CTS.COM, WWW.LYONELECTRIC.COM

 LYON  
ELECTRIC COMPANY, INC.



*Male Chinese Painted (Button) Quail.*

the male they appeared to bond almost immediately, and she has built a nest. When she began to lay, only her first “pullet” egg was left in the cage at large – all of her subsequent eggs have gone into her nest. With any luck, this new pairing will lead to the answer of a new question in Button Quail chick rearing – will an experienced male help a naive female to learn to incubate her eggs and raise her chicks? Is the male a necessary component to the equation? My guess is that he is, and that his familiarity

with the whole process of courtship, nest building, incubation, and chick rearing will help his new mate to become a successful parent. Only time will tell.

#### Acknowledgement

Many thanks to Roger Reason for help with this paper and all phases of my quail breeding program.

#### Literature Cited

Alderton, David. 1986. *The Complete Cage and Aviary Bird Handbook*. Neptune, NJ: TFH Publications, Inc., p. 129.

- Bent, Nancy. 1996. Foster rearing button quail chicks: an attempt at a return to natural breeding. *AFA Watchbird* 23(6): 13-16.
- Bent, Nancy. 1999. A different philosophy on keeping & breeding button quail. *Game Bird and Conservationists' Gazette* 46(5): 26-30.
- Harrison, C.J.O. 1968. Some notes on the behaviour of nesting painted quail, and some further notes on their calls. *Avicultural Magazine* 74(1): 7-10.
- Harrison, C.J.O. 1975. The pair-bond in *Excalfactoria*. *Bulletin of the British Ornithologists' Club* 95(3): 128.
- Hinze, Ian. 1997. Ask the Experts: Chinese painted quail. *Bird Talk*, 15(8): 95-97.
- Hinze, Ian. 1998. Ask the Experts: Chinese painted quail. *Bird Talk*, 16(11): 92-94. 