

Productivity is Affected by Heredity

by Arnold L. Davis
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I am an aviculturist first because I enjoy birds. Getting them to breed is also very fulfilling, and I hope to help aviculture as a whole by working with and supporting endangered species. Space, feed, housing, equipment, time and the birds themselves are expensive, especially the rare or endangered ones! Money is one of the controlling factors in the kind and number of birds we can keep. A high percentage of aviculturists have to make the birds pay for themselves as they cannot take that amount of money from the family budget. Purchasing birds from a family with a history of high productivity can make the difference between success and failure.

Working with a nonproducing pair of birds for three or four years often leads to discouragement and giving up, especially when an avicultural friend has a pair of the same kind producing in one or two years. I feel that there are two, maybe three things to look for when purchasing birds, from the standpoint of productivity dealt with in this article. 1) The tendency to breed at a young age. 2) To have multiple clutches. 3) Clutch size, though I have found that often the last egg or two may be infertile, also if the last egg hatches too far behind the first, the baby may not get enough food and be small or die. It is my belief that these things are hereditary.

In the spring of 1983, I purchased blue and split to blue Indian Ring-necks from four people in different areas of the country. The idea was to have unrelated stock, as much as possible, especially where inbreeding is a problem for those working with newer mutations. One group came from Texas in which there were two sisters, both nice sized good looking split to blue hens. A second group came through a bird broker which also contained two sisters, both nice looking blue hens. All the birds were set up in wire flights suspended two feet from the floor. The flights were all three feet wide, five to seven feet high, and seven to eight feet deep with nestboxes at the back. They



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were placed with their future mates, where they remained till they produced some years later. Idaho is cold in the winter, so all aviaries are in an insulated barn with controlled lighting and heat.

The first hen to lay did so when she was one year old. She was from the broker and laid two eggs the first year. The number two hen was also from the broker and a sister to the number one hen. This second hen laid four eggs when she was two years old. The third hen was from Texas and did not lay till she was three years old, when she laid three eggs. The fourth hen, also from Texas and a sister to number three, did not lay even when she was three

years. Thinking something was wrong with her, I had her surgically sexed just to see if anything was wrong internally. The vet said she was perfectly healthy and he could see no reason for her not laying. I decided to give her one more chance and on her fourth year she finally laid four nice eggs.

I feel that the heredity of the first two sisters from the broker encouraged them to breed early. Many of the daughters of these two sisters bred when they were only one year old and were fertile, especially when placed with older mates. The hereditary traits of the third and fourth sisters from Texas slowed them down, the first hen laying three years

before the fourth and worst hen, with the descendants of both genetic lines or families showing the same tendencies for fast or slow production as their parents.

Hen 1 - laid 2 eggs when 1 year old (mated with another hen). 4 eggs when 2 years old. 2 clutches of 4, 5 for 9 total when 3 years old. 3 clutches of 5, 5, 5 for total of 15 at four years. 3 clutches of 6, 6, 5 for total of 17 at five years. Total - 47 eggs and 38 babies in 5 years.

Hen 2 - laid 4 eggs when 2 years old. 2 clutches of 4, 4, for 8 total when 3 years old (male was infertile). 2 clutches of 4, 8 (pulled eggs) total 12 at 4 years (new mate). 2 clutches of 4, 4 for total of 8 eggs when 5 years.

Total - 32 eggs and 15 babies in 5 years.

Hen 3 - laid 3 eggs when 3 years old. 4 eggs when 4 years old. 4 eggs when 5 years old.

Total - 11 eggs and 11 babies in 5 years.

Hen 4 - laid 4 eggs when 4 years old. 4 eggs when 5 years old.

Total - 8 eggs and 8 babies in 5 years.

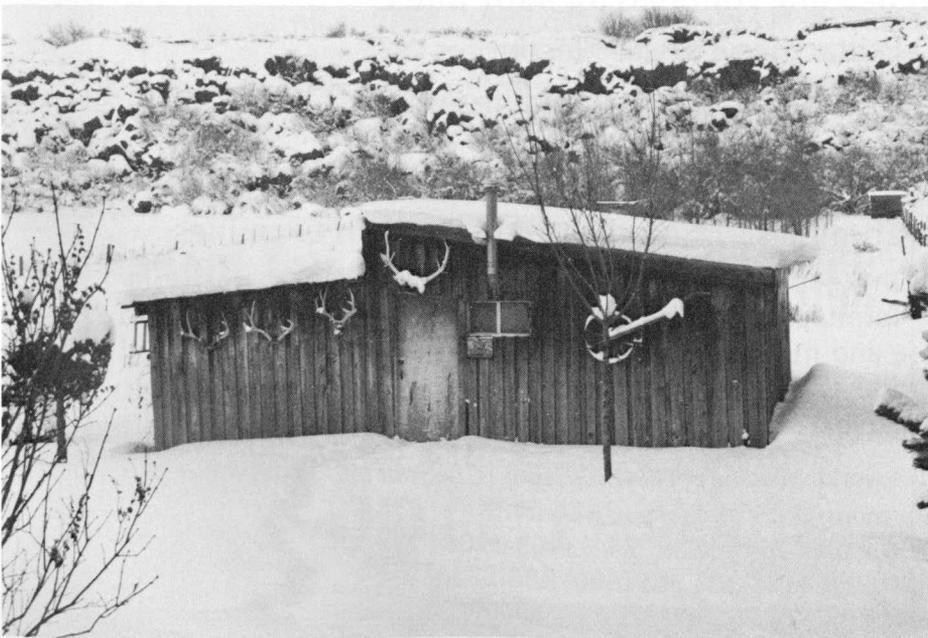
The productive family of hens 1 and 2 produced 53 babies in 5 years, while the less productive genetic line or family only produced 19 babies in the same time. To make the scales even more uneven, daughters of hens 1 and 2 were producing by the time hens 3 and 4 began to lay. Foster parents, handfeeding and incubators were used for second and third clutches which accounts for some of the disparity between number of eggs laid and number of babies. There was some loss of eggs and babies due to human error and miscalculations with all the shifting around. Hen 2 had an infertile mate her second breeding season and both clutches were clear and a new mate the following year slowed things down. At each end of the comparison, hen 1 the best, produced 38 babies in five years while hen 4, the worst produced only 11 babies. The environment was basically the same for all birds.

Environment (feed, housing, lighting, humidity, etc.) is extremely important, but the difference between hen 1 and 4 is the difference between a financially successful and rewarding aviary and one that is discouraging and nonproductive. As a final note of interest, hen 1 is still with me and going strong. ●

Photos by Arnold L. Davis



Two views of the author's bird barn in the winter time.



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reviewed by Dale R. Thompson
Canyon Country, California

The Complete Guide to Cockatiel Color Mutations

by Linda S. Rubin

For cockatiel enthusiasts, whether beginners, seasoned breeders or owners of pet cockatiels, Linda Rubin's *Cockatiel Color Mutations* is an excellent reference on this subject.

Written with clear, understandable language, this guide gives a comprehensive study on the color pigmentations found in cockatiels.

The first 11 chapters are based on a series of articles by Linda Rubin entitled "Color Pigmentations in Cockatiels" originally published in *American Cage Bird Magazine*. Linda wrote a column in ACBM called "Talk from Tangowood."

These chapters explain the mutations that have appeared in cockatiels. These mutations are explained in terms of color pigmentation. This in-depth study gives a thorough understanding of why mutations appear the way they are seen visually.

Another plus with this guide is that it makes references to show standards and explains what is desirable on the show bench. This is an ideal aid for those breeders interested in showing their birds.

Several additional chapters have been written including two appendices and several tables. Appendix I gives a historical record of the primary cockatiel mutations and when cross mutations became popular. Appendix II gives the characteristics of the seven main cockatiel mutations and their crosses whether they are double or multiple crosses.

Two tables give an easy method of calculating sex-linked and simple recessive mutations. They are easy to read and understand.

Although this guide is a softbound booklet with no color photography of the mutations, it is a "must" for those interested in cockatiels and

their mutations. This information has been explained to a depth not found in many publications. For those interested in seeing many of the color mutations found in cockatiels, I recommend the February/March 1991 issue of *AFA Watchbird* magazine which was a special issue on cockatiels. Linda Rubin wrote several articles in this issue and submitted the wonderful color photography of the cockatiel center spread.

This guide has been written by a very knowledgeable author. Not only

has Linda Rubin reproduced cockatiels for many years, she is also a certified panel judge for both the National Cockatiel Society (NCS) and the Society of Parrot Breeders and Exhibitors. She was also the author of the NCS's official "Show Standards of Excellence" by which NCS cockatiels are judged.

The Complete Guide to Cockatiel Color Mutations can be obtained for \$13.95 (includes shipping) from Tangowood Aviary, 93 Woodcliff Road, Chestnut Hill, MA 02167. ●

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