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# Cockatiel Mutations

by Dale R. Thompson  
Canyon Country, CA

*EDITOR'S NOTE: The following article on cockatiel mutations was originally published in the Aug/Sept '82 Watchbird. It proved to be one of our all-time most popular articles and the back issues have long been sold out completely. The full page photo of seven cockatiel mutations is unparalleled. It took Thompson and Dodge about eight hours of shooting to arrive at this masterpiece.*

The cockatiel, *Nymphicus hollandicus*, is undoubtedly one of the most popular species among aviculturists. Next to the budgerigar, it is the most popular psittacine as a pet. It can be reproduced quite easily in just about any type of aviary. It is easy to sex (except for the pied) and when tame makes a very enchanting pet. One of the main reasons for its popularity among aviculturists is that several mutations have occurred in this species. There is a great fascination in acquiring two or more mutation colors on one bird. The following is a short description on each mutation.

**PIED MUTATION:** The pied was the first cockatiel mutation to occur in captivity. They first occurred in the aviaries of Mrs. R. Kersh and D. Putnam in 1949. I visited Mrs. Kersh in 1979 and she was still working with this mutation and, I might add, they were outstanding in color. The pied is recessive so, unlike the sex-linked mutation, the hen can be split to pied.

The pied mutation has a great variance in color markings. No two birds are alike. Good piers are considered by aviculturists as birds that are mostly clear (feathers which do not contain any melanin) in the wings, tail, head and chest. Another term used in the trade is "heavy piers."

When breeding piers you may or may not get heavily pied young from heavily pied parents. Some of the best heavy piers that we produce come from light pied parents. The only good way to obtain heavy piers consistently is to work with a line of heavy piers for several generations. Tony Barrett has done this to quite a degree and is



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now one of the top breeders of this mutation.

Though most heavy peds are still unevenly marked, some outstandingly marked birds do occur. One of the best is a bird completely clear except for two evenly marked grey patches on the back of each wing.

The pied birds cannot be sexed by visual markings as can the other mutations. Sexing must be done by behavior. Split peds often show several white or yellow flecked feathers on the back of the neck.

**CINNAMON MUTATION:** The cinnamon is mentioned in the literature to have occurred around 1950 in New Zealand. The bird we have now originated in Belgium in the late '60s. When in Europe, the term Isabelle was used, and at first I thought this was a similar looking mutation, but this was the cinnamon using a different name. The cinnamon runs from a light phase to a dark phase. As adults the cock bird is a darker shade than the hen. The melanin in the cinnamon is brown, not black, and gives the bird a tannish color. The different shades of color come from the amount of melanin produced.

An unusually marked cinnamon occurred that has splotches of color on its back and wings. On some the markings are scalloped and show quite a degree of shading. The term marbled cinnamon has been given to this bird. Though it has been bred through to the offspring, I do not believe this is a mutation. I have had some birds that darkened in color and others which lost this marking after several years. One observation is that this may be due to a dietary deficiency or that they cannot absorb some vitamin. I have had one case where feather growth problems occurred in the offspring.

The eyes of the cinnamon mutation appear much lighter than the normal grey bird and this also varies in degree of intensity. The cinnamon is sex-linked in origin and they can be sexed after the first molt as with the normal cockatiel.

**LUTINO MUTATION:** The lutino mutation occurred from two normal looking cockatiels in 1958 in Florida and belonged to C. Barringer. Mrs. E.L. Moon purchased this new mutation and was the person responsible for developing this mutation strain.

The lutino has red eyes and this can be seen in the nestlings before they open their eyes. This mutation started out as a weak strain but with outcrossing, this can be corrected. The lutino



cockatiel has a tendency to have a large bald spot on the back side of the crest area. Even at this late date, they still must be outcrossed to correct this fault.

The lutino is sex-linked and can be sexed as adults like the normal bird. It certainly is not as easy from a distance, but in the hand the hen and immatures show the dark yellow barring on tail and underwing feathers. Since the melanin has been removed in the lutino the background color behind the barring is whitish yellow. This mutation has been wrongly called albino or white but most of the birds are a pale yellow and some have a good deep yellow color. Only through controlled breeding can this deep yellow be developed. Many deep yellow birds have feather problems.

When breeding the lutino for double mutations one must remember that the lutino will mask all other mutations. The lutino is certainly the most outstanding cockatiel mutation that has been produced so far.

**PEARL MUTATION:** The pearl mutation was first developed in 1967 in West Germany. Other terms used for this mutation are laced and opaline. The pearl mutation has a scalloping effect on the back of the neck, mantle and wings and sometimes on the breast. In this mutation the pearl effect comes from white or pale yellow feathers that are edged in grey and also contain a small grey area in the center of each feather.

The pearl markings occur on all young birds, but after the first moult the cock birds lose the pearl effect. From outward appearance, the cocks look like normal birds after the first moult. During the first year most of the pearl males can be distinguished from normal males in that they carry a few pale flecked feathers on the back of the shoulder. Most will carry a very small amount of yellow on the base of each tail feather by the quill. Very few will retain some pearl markings and it may be that line breeding or going through other mutations will be necessary to improve the pearl effect in males.

Pearl hens vary from light to heavy pearl markings, with the heavy, evenly marked bird being more desirable. Those hens with lace that is a darker yellow are known as golden pearls,

and those with white lace as silver pearls.

The pearl mutation is sex-linked as is the cinnamon and lutino, and is an excellent mutation to use with double mutations.

**FALLOW MUTATION:** The origin of fallows is not completely confirmed. It may have been in Europe or in America. It occurred in the early '70s. The fallow is very similar to the cinnamon mutation with the main difference being that it has red eyes and is recessive.

There is a great difference in color variation in fallows. Like the cinnamon, the cock bird is generally a darker shade. Because of its similarity with cinnamons it has not been as popular. An outstanding fallow appears almost two-toned. They are generally golden yellow while the wings are tan. Good quality fallows are outstanding in color. This is not a well developed mutation and is still somewhat new. It appears that there is a dark strain and a light strain, but I presume this is because the light strain has been line bred to keep the good golden yellow color.

**SILVER MUTATION:** The silver mutation occurred in Europe in the late '60s. This mutation, like fallow, is recessive and contains red eyes. It may be due to this similarity that there has been some confusion between these two.

The silver I observed in Europe was silvery grey in color, but others I have seen in the U.S. are very similar in color to the cinnamon.

The silver is noted for poor eyesight. Some are hatched blind. This mutation needs a lot of work before it becomes established.

**CHARCOAL MUTATION:** This mutation occurred in Europe in the late '70s. It is very different from all the previous mutations in that it does not have the orange cheek patch. The charcoal does not carry any yellow pigment; without the yellowish background, the bird appears to be sooty charcoal in color. Both sexes appear the same before the first molt and are totally grey in color through the head. After the first molt the male obtains a white face. The name white face has also been given to this mutation, but this would be accurate only for the adult males.

The charcoal is recessive and when bred with the lutino it will eventually produce the pure albino. Since the lutino is sex-linked, the albino cannot

be obtained immediately. In fact, the odds are very low even after you get the right pairing.

Since the charcoal lacks all yellow, one can definitely distinguish it from all other mutations at day one in the nest. Instead of the normal yellowish color, the charcoal has white down.

This mutation will certainly change the cockatiel world in a few years because it is so radically different from the previous mutations.

**ALBINO MUTATION:** This mutation was obtained from the charcoal mutation. As soon as a mutation occurred that lacked all yellow it was only a matter of breeding it to a lutino to eventually acquire the pure albino.

The albino I observed in 1980 in the Netherlands was completely snow white. There was no cheek patch. The bird was a female. Usual mating to get the albino was 1:16 and was always a female. The genetic pairing I observed would theoretically produce one female albino out of 16 babies. The next generation of this pairing would produce albinos of both sexes at the ratio of one to eight. I am certain that this is not the end of new mutations in cockatiels and this is what makes working with cockatiels so exciting. ●

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*Cockatiels. Top row (left to right): fallow, normal, cinnamon, lutino. Center is charcoal, and pied. Bottom is pearl. Photo by George Dodge and Dale Thompson.*

This photo, in poster form, is available from the Home Office—see order form on dust jacket cover.