

## Where Do the New Varieties of Ringneck Doves Come From?

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Tame ringneck or laughing doves, *Streptopelia risoria*, apparently have been bred before 2,000 years ago as religious sacrifice birds, in cages, and later as pets. Up to about 50 years ago only 2 varieties were known: blond (fawn) and white (extreme dilute). Since about 1960 there has been an explosion of new beautiful colors.

It is no mystery: dove breeders began looking for rare mutants and identifying them and breeding stocks. Previously, about 1930, M. Tange in Japan studied a mutant, true albino, which is inherited as a simple recessive to normal color. In 1951 W. J. Miller discovered a male dove which had silky plumage. This mutant produced many similar progeny. It was not recessive, but rather codominant. Combined with white it gave a very attractive variety. But one should not mate silky birds together (except for experimental purposes) because homozygous progeny (1/4) have very fragile feathers and become "porcupine-like".

One must understand that the two old color varieties, blond and white, are also mutants. The coloration of the wild form is by contrast much darker than blond. This ancestral species, scientifically named *Streptopelia roseogrisea*, lives in northeastern Africa and in the vicinity of the Red Sea. It resembles somewhat the Turkish dove or Eurasian collared dove, *S. decaocto*. Through the many centuries in cages the two light-colored mutants were preferred, so that the dark wild type was lost from human care. [It is also possible that the blond form occurred in the wild and was preferentially selected for breeding.] But we like dark birds too, and therefore, obtained some for comparison. Wild-colored birds are not necessarily shy.

Next a dove fancier in Ohio discovered the "peach" mutant color. This color variety is really a combination of 2 mutants: blond with a new recessive mutant which is now called "rosy". Then some pied doves appeared in Arizona and California. Richard Burger in Delaware bought some of these birds for us. The adults usually show symmetrical piebaldness, but the juvenile plumage looks grizzle. This mutant also is inherited as a recessive.

Still another recessive color mutant "ivory" was discovered by Professor Taibel in Italy. The same mutant was bred by some fanciers in Louisiana and Texas, as Richard Burger found out. Now this variety is plentifully available. Prof. Tange's albino mutant still existed in Japan. Therefore, we wanted to get it too, and in 1967 we imported 6 birds to the USA. Albinism causes some visual impairment, but in other respects it is a pretty variety.

About 1973 Alois Münst discovered some orange-colored doves in Czechoslovakia. Richard Burger obtained some from Münst for America in 1981. We found that orange is a combination of blond with a new intermediate dominant mutant now called "tangerine (Mandarin)", Homozygous birds are lighter than heterozygous and often have some degree of lacing (=pearling) on the wing shield. There are now many orange and tangerine doves in the USA. The orange and especially the tangerine types usually have a flecking which can appear to be feather lice (!).

About 1988 Gary Harding in Kansas discovered a new delicate color mutant, now named "frosty",

(Where Do the New Varieties, Continued)

which is a dominant or codominant. [We guess that the color called "ice" is the homozygote, but we have not seen any data demonstrating this.]

So you see how new color varieties arise: first someone accidentally discovers a novel type and breeds it. Then the breeder crosses different mutant types together to produce combinations. Some combinations are attractive and are given special names. For example, white and pied together give black-eyed white, and frosty with tangerine produce ash color. Distinctive color effects are possible with some dominant mutants in homozygous versus heterozygous form, e.g., with frosty or tangerine. And each color can be combined with silky. But not all combinations are attractive or valuable. For example, all combinations of colors with albino look albino. The peculiarities of the individual mutants often, but not always, allow us to predict which combinations will be desirable.

New color types have turned up in Europe and are being analyzed by Hein van Grouw in Holland.

Dove color varieties don't always need to be purebred. Crosses are often interesting genetic examples. We are studying also some mutants which are unattractive or even detrimental, but scientifically interesting.

There is indeed something new under the sun!

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Various articles by W.J. Miller between 1974 and 1989 in the American Dove Association Newsletter referred to the color mutants and their inheritance, as well as other aspects of dove biology. Those titled Genetics of the Ringneck Dove, *Streptopelia risoria*, I, II, III, IV, V and published 1984 and 1985 are the most directly pertinent; however, others apply as well. That in the Jan/Feb 1989 ADAN on the sex-linked alternatives especially should be included.

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