



*This new mutation of the zebrafinch is called an orangebreasted phaeo. Based on genetic theory it was predicted before it actually occurred. The mutation has occurred, however, as evidenced by this photo. At present, breeders in the Netherlands and in Germany are working to improve the color scheme of this totally new zebrafinch.*

## Zebra Finches: A World of Possibilities

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In Western Europe and in particular the Netherlands, Belgium and West Germany, zebrafinches are enjoying at this moment an enormous resurgence in popularity among bird breeders. In all these countries specialty clubs exist dedicated strictly to the advancement of this particular breed. This resurgence in popularity is due to various different factors. First of all, a new, more robust type of bird has been created specifically to be more impressive at shows. This type of bird in many cases is 50% larger than the average zebrafinch found in your neighborhood pet shop. Aside from this, however, the increase in popularity has been mostly because of the creation of an enormous variety of new color variations (mutants).

Because of the development of many new mutations of the zebrafinch, this bird has developed into a much sought after showbird. Breeders have discovered ways via crossbreeding different mutations to create yet new color varieties. Many of these colors have lots of times been "created theoretically" beforehand by breeders. One of these new color varieties of zebrafinches is the spectacular PHAEO zebrafinch. This bird is simply one of the most splendid color variations of zebrafinch created by man through his knowledge of genetics.

Zebrafinches have, as do most other birds, two pigment colors in their feathering: eumelanin — the black pigment and phaeomelanin — the reddish-

brown pigment.

In 1968 there was a zebrafinch born in West Germany that clearly showed a different color scheme in his plumage. In this bird's plumage you could clearly see that in certain areas the reddish-brown pigmentation had greatly increased (cheekpatches were much larger e.g.). Because this zebrafinch had also lost the zebra markings on its chest and instead had obtained a black chest they called it the BLACK BREASTED ZEBRAFINCH.

There was, on the other hand, a zebrafinch born in the Netherlands that had lost precisely all the black pigment in its feathering. This mutant was called by breeders "ISABEL." The isabel male zebrafinches were light cream in color but they did retain the cheekpatches and the flank markings in the same color-depth as found in the wild form of the zebrafinch. These zebrafinches thus *exclusively* possessed the phaeomelanin as it is found in the wild zebrafinch.

In Western Europe the famous zebrafinch breeder and author Mr. Hans Klören had constantly encouraged bird breeders via articles in several European bird magazines to cross the apparent mismatching colors of the blackbreasted and the isabel zebrafinch. The theoretical results of these crossings would be that zebrafinches would be born that would not have black markings because of the isabel factor; but that these birds would possess a maximum amount of phaeomelanin which also would be strengthened by the blackbreasted factor.

The name "PHAEO" was then introduced by Mr. H. Klören. The first phaeo zebrafinch was born in 1978 in the town of Enschede in the Netherlands. In the beginning Mr. H. Klören's ideas were met with great scepticism by many breeders. This scepticism was not only because his ideas were a little complex but also his ideas dealt with birds that still had to be born.

When breeding truly domesticated birds such as the zebrafinch it is simply not enough that breeders possess the elementary knowledge to bring two of these birds together and have them successfully raise offspring. It is equally important to understand how certain characteristics can be retained and passed on to their offspring. But for that it is necessary to obtain some insight into the feather-structure and genetics of these birds. Once you possess this knowledge you can calcu-

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late all the results of any coupling of these birds.

In the Netherlands and in West Germany there is a book written by Mr. H. Klören which is the most complete and in-depth book ever written about zebrafinches. This book is so well written that it is required reading for all apprentice judges in the Netherlands. Those aspiring judges undergoing the required two year course in order to be certified by the Dutch Federation of Aviculture (N.B.v.V.) must especially pay a lot of attention to the chapter dealing with genetics. This chapter is written so that it is readily understandable by any layman or beginning bird breeder.

If we keep in mind that the zebrafinch is just one of the many splendid Australian finches that are available to us and that its feather structure and genetics closely resemble that of all other Australian finches, we must conclude that the above mentioned book is a must reading for all bird breeders. In this book over 50 varieties of zebrafinches are shown and analyzed, some of them never yet seen in the U.S.A.

In Belgium there was a mutant born in 1978 in which all the black feathering on its body had been replaced with reddish-brown feathering. This mutant was called the "ORANGE-BREASTED" zebrafinch. This mutant was soon enough paired to a phaeo zebrafinch giving origin to the "ORANGEBREASTED PHAEO" zebrafinch. Thus an orangebreasted phaeo zebrafinch is a zebrafinch that has, because of the isabel factor, lost all the black pigment of its feathering. It is also a zebrafinch that, because of the blackbreasted factor, has gained more reddish-brown pigmentation and finally, it is a zebrafinch that has reddish-brown feather areas which in the wild form would have been black.

The orangebreasted phaeo was, in fact, created theoretically even before it was born. Calculations have shown that if two zebrafinches were crossed that were split for all three of these factors the chance of an orange breasted phaeo being born would be 1:128. Meanwhile the first orangebreasted phaeo zebrafinches have been born showing the coloration that was theoretically expected of them. The photo shown with this article is of one of the orangebreasted phaeos found in the Netherlands. Breeders are now busy improving the color scheme of this bird. This is thus a totally new zebrafinch, of which some people wonder if it still is a zebrafinch. ●