

Newsletter Dec. 2022 Supplement :

## Understanding the three present Base colour pigments and the two ways we see them.

{Lets take a quick look again at the basic three colour alleles at what is generally considered to be the "Major Colour Locus"} {There are three base colours : Dominant Red , Black , and Chocolate. When these are added to birds that must each have a PATTERN SERIES , the terms change to be ASH, Blue, and brown because we see the base colour differently as it is dispersed into a Pattern . That is why we often see the colours referred to as : Ash/Red., blue/Black., and brown /Chocolate.}

There are two ways to consider each of the three presently known Base colour Pigment alleles.

**One name refers to how the pigment looks combined with each of the Pattern Series., and the other refers to spread factor that covers the entire bird with that base pigmentation.** Thus we have below a Blue Series Barred pigeon , and a Solid Black spread factor pigeon. The Blue Bar is accepted as the "Wild Type" base colour against which all other colour genes are tested. Note that the tail band signifies the base pigment colour BLACK. The tail band colour pigment is called "smooth spread". The lighter areas are referred to as "Clumped Smooth Spread"., and the bars and checks are called "Coarse Spread" The melanin or pigment for Black is called "eumelanin"



- Bob R.-



Below are two Birds that both are Dominant Red colour . They both have been renamed ASH by Doc. Hollander, that makes this example a bit confusing so I will attempt to clarify. The pattern series is referred to as Ash-Red , but the Spread factor birds are referred to as simply spread Ash instead of Spread Red. Note that the tail Band base pigment is an ash or whitish colour thus Ash not Red, even though the actual base pigment is Red in both birds. The bars of the wings show the brick red pigment. Ash-Red is thought to have mutated only once . I wonder if it may have been introduced from another species like Check Pattern was.? The red melanin ( phaeomelanin) usually shows as 'red' only in coarse spread Pattern areas.



Gary Keith



Robert Corralles

Finally we have the other mutation at this Major Colour Locus - the base colour pigment Chocolate, so named by Christie and Wriedt, and continued by Hollander and Gibson. Note again the tail band colour dictates the base pigment colour as Chocolate seen in the bar and tail band, and then Spread Chocolate over all. The Chocolate mutation is a combination of 'phaeomelanin' and 'eumelanin' expressing more black melanin than red. Chocolate mutated many times in the past, perhaps as many as seven or more times. I wonder if that may explain why most brown/chocolate series birds have false pearl eyes, but a few have been bred with Red/ Orange eyes?



Rob Grogan



Clint Robertson

SO - if we hear someone say that there is no BLACK in a bird because there is no SPREAD factor, we know that they do not understand even the very basics of colour genetics.

I was asked again to show just one case where the term "Chocolate " was used to mean brown. I refer you to Axel Sell's Pigeon Genetics where Wriedt and Christie are cited as having named the gene Chocolate. Hollander uses it in his writings "Origins and Excursions". and Gibson uses it in his Book second printing 1995, to name a few. The information is out there, you just have to look for it and be certain that you read what is said carefully. I sometimes have people telling me that I said this or that when I clearly had not, and had to point the facts out to them again.