The Pigeon Genetics Newsletter, News, Views & Comments.

The Pigeon Genetics Newsletter, News, Views & Comments.

(Founded by Dr. Willard .F. Hollander)
Editor R.J. Rodgers Nova Scotia Canada.
Co-Editor Jith Peter Kerala India.

July 2023

The main topic this Month is "RESIDUAL BRONZE" , is it always only KITE BRONZE?

Every time we add a whitening mutation to any base colour and pattern, there is a very good chance that the whitened areas will express a hint of Phaeomelanin (red pigment) even though it may be very faint. It may appear as if it is PINK , or Yellowish , or even brownish. This is almost always caused by the presence of a Bronze pigment that is perhaps otherwise not seen because it is mixed in with the base pigment granules.

Rainer Krebs - rubella blue T-Pattern and checker expressing residual bronzing on coarse spread. It is similar to Indigo but sex-linked recessive not autosomal.

Stephen Scott - residual bronze on Stipple blue - Canada and **Anee Sheikh** Pigeon Maniac - Stipple blue T-Pattern kite bronze - India.

Stephen Scott - Kite hetero (e) Sat. T-Pattern blue. - Canada. Kite Flights - Bob R. Canada.

Recessive opal - **Michael Spadoni** - Australia. .. Dominant Opal - Bob R. - Canada

Dr. Lester .P. Gibson did more test breeding and reporting on the bronze gene mutations than anyone else over the years and most of what is known today is as a result of his work and that of **Dr. Willard .F. Hollander** with whom he exchanged findings on a regular basis. Both reported in this Newsletter when Dr. Gibson was the Editor.

Dr. Gibson stated that - **" Bronze colour is the result of an admixture of the black and red pigment granules (eumelanin & phaeomelanin) . The bronzes are enhanced or dulled by the increase or decrease of the percentage of the red versus black granules. Bronze color can be produced by a direct gene effect, by an indirect gene effect, or by a variable gene expression."**

He goes on to say - **" The gene for Kite (K) produces a reddening (bronzing) of the inner webs of the flight feathers and a reddening of the tips of feathers over the head and shields of <u>juvenile</u> feathers when mated to wild type. Often no more than the bronzing of the inner vane of flight feathers appears after the molt."**

Photo - **Paul Gibson**.

Then he ads - **" In Brander and Tipplers, the expression is an admixture of black and red which occur in the same feather. It usually even appears to be a mixture of black and red in the same cell within a barbule. "**

Photo - **Paul Gibson**.

~~~~~~
~~~~~~

We have the task of sorting out the many expressions in the various phenotypes that have a bronze as part of their genomes. Often it appears that it is simply a case of one bronze gene having its effect seen only when another mutation de-pigments the base pigment and allows us to see the bronze. This may be much more evident in various areas of the feather cover. I like to think of KITE as an undercoat and Brander as an overcoat of bronze colouration.

Both bronze traits fail to express on areas of condensed smooth spread such as the sub-terminal tail band , the ends of the flight feathers, on Sooty marks, but does express partially on any feathers where the colour pigments are 'clumped'.

Kite + (e) and (st) - **Scott Sharp**- England .

Brander bronze **Ratul Hasan Sahed** - India.

{ In both cases the bronze traits did not express on the condensed smooth spread areas of the tail band even when (St) de-pigmented the base pigment in the first photo.}

When any recessive red gene is combined with the dilution phase gene, it creates a recessive yellow. The 'pale ' phase is darker and about 1/4 way between intense phase and dilution and is referred to as Gold. When Kite bronze is combined with dilution , the resulting colour is referred to as 'sulfur'. It is a lighter shade of yellow. Pale factor is rarely mentioned when discussing bronze but pale factor bronze birds can and do exist. Pale would be a great deal more beneficial in breeding Classical Almonds with a rich yellowish ground and very dark flecks that could easily be mistaken for black.

(1) **Tim Kvidera** Intense phase. (2) **Mick Bassett** pale phase . (3) dilute phase & (4) **Tim Kvidera Extreme**.

We have only to imagine what takes place when we add dilution to Classical Almond. Firstly we have the bronze ground of Kite bronzing and recessive red slightly de-pigmented to yellowish tones by the stipple gene.. Then a further lightening by the dilution factor on bronze to sulfur and the yellowish recessive red to a washed out recessive yellow. Often combined with those effects we will see a further lightening caused by things such as the effect or "lack of the influence" by various other modifiers and the lack of intence quality of the base components to begin with, such as unimproved recessive reds etc. The entire package bleaches out the ground to a very poor quality.

The Ecru or what appears to be Hollander's perceived 'extreme dilution' phase has been put into almonds by Paul Gibson. They have silver flecking with a very light yellow ground.

~~~~~~

Even though bronze can be a direct , indirect or variable expressed effect., it still can only be either heterozygous (one dose / impure) or homozygous (two doses / pure) for that gene. So it can readily be seen and understood that there cannot be TOO MUCH added in a breeding program.

However the quality of the expressed one dose, or of the two doses, can be low to extreme based upon its ratio with the existing base colour pigment granules as you saw earlier written by **Dr. Gibson**., and that is controlled by selection, not only for the variable expression but also for any modifiers that may be affecting that quality.

Dominant Opal - **Robert Corrales**.

One dose of kite, no (e) plus (St) - Bob R.

Many breeders are presently experimenting with the 'bronze' traits around the World, and that will eventually show us new insights into what exactly is going on.

Here are some photos of the results of their studies as posted on my " Strictly Colour Genetics for Pigeons " Facebook Group.
~~~~~~

Photos provided by : Octavian Sarafolean.

Blue/ Black T-Pattern base Branders Male & Female without grizzle .

Brander male and female with grizzle, showing more red.

Blue Brander Bronze youngsters -

Brander and Almond full siblings and nest mates., The Ash-Red Almond hetero for blue linked to St.

Father and son - Blue/Black base sire from Brander, Son is ash -red base hetero for blue /Black.

{Octavian says that this is Classical Grizzle (G) , but in all my experience with the grizzle factors I feel quite confident that this is "Print Grizzle", and a separate grizzle gene . This bird is also expressing Sooty factor in Brander bronze. It is very rare for (G) to have any bronze.}

Brander Agate recessive red ,

Kite T-Pattern blue/Black - **Vioajori Colorati**.

Red Agate from Brander,

Recessive red grizzle from Branders.



Feather striations - Romanian name 'scales' on Brander.

Charles Kendrix - Bob Rodgers Almost all my kite birds express the most in the course spread of the pattern. The branders express over the whole bird. With kite the bronze lacing in every area except the pattern seems to molt out with the adult molt. Brander still expresses in those areas after the adult molt. I've seen a number of pics of almonds that have a very good bronze ground color, and the folks posting them say it is kite, and while kite maybe present those birds look like they are likely brander

almonds. I have been told that brander in conjunction with almond will result in a bird with a lot of grizzle showing, but I don't believe that is necessarily true. I have a roller hen that I believe is a brander almond, but I cannot get any eggs off her to test my theory.

William Greenslade - Bob Rodgers Hetero (e) causes the red lacing on the chest, neck and shield. It will disappear after the moult. That has been my experience, at any rate.

Octavian Sarafolean - William Greenslade it's dark lacing on the red as it is more red on the feather.

A Brander Youngster showing slight Sooty expressions that may moult out , and one of the best Brander Homer expressions they created during this project.

I did not get too involved with anything except Brander proper on a Blue/Black base for this Issue. Perhaps we can revisit this particular subject and breeding program for another Issue to include brown/Chocolate and Ash-Red.

Below are a couple of their Brander plus (St) specimens. Note that whenever Brander and (St) are combined , the "ground" colour is never quite the same tone nor depth as we see with Kite bronze and heterozygous recessive red! The Brander ground expresses as an 'overcoat' just as the actual Brander expression and not as an undercoat as with Kite.






Vioajori Colorati - Brander ground plus blue base ----------and (St).

Md Kamal Hossain - Homozygous Dirty (V) and Sooty Brander.

{Note that all condensed smooth spread areas have not been affected by Brander.}

Brander grizzle - **Saeed Hasanzal**

Brander g rizzle - **Md Hera .**

There is considerable disagreement as to just what 'grizzle (s) is/are involved here. I think that undergrizzle that is usually closely linked to Kite bronze that is also linked closely to Brander is what we are seeing. I also think that Print Grizzle is involved. I do not think that either Classical Grizzle (G) or Tiger grizzle (G^T) is involved.

Keep in mind that 'Undergrizzle' (Ug) is not actually a grizzle factor and therefore not an allele of the others and can be expressed fully in combination with any one of the other grizzle alleles.

Below are some Brander Bronze Modenas bred by **Carlos Tom** from another Facebook location. I could not contact him for permission to post them but they were too nice to leave out.

You may be able to see the Sooty - like marks and Striations that we also discussed in the above Racers of **Octavian Sarafolean** and **Vioajori Colorati**.

Couple of final notes this Month :

(1) I will be sending along other PDF articles with this Newsletter, under separate cover. The opinions and views in same may not be those of this Newsletter and the Editors. If you have any disagreements , please direct them to the Authors of those articles.

(2) The Show Results publications are on hold due the fact that no more have been submitted. The main reason for this is that there are not many shows being held during the breeding season and subsequent summer moult. The Covid situation worldwide has also made it very difficult for Shows to be held. The idea was very well received and enjoyed by all members.

(3) Lastly I regret to announce that I and Jith will both be stepping aside as Editors of this Newsletter! Jith is now living in England with his wife Maya and new born son Johan. Their routine is obviously very busy and he does not have the time to work on this project. I on the other hand have had increased heart problems which may soon require an ablation and in addition to that the internet connection that allows me to do this Newsletter costs me in excess of $200.00 per month. I do not have anyone in mind to turn the Newsletter over to , so if someone out there is interested, please let me know and a decision will be made.

I thank all of the devoted followers , and all those who have taken the time to send your comments , and who have contributed Photos and articles over these past nearly ten years.

All the Best to everyone and hopefully the future will be better. The membership has dropped a bit from the 400 + that we generated because of Covid and other situations in various Countries. Perhaps that will once again increase for the new Editor/ Editors. ~ Sincerely Bob Rodgers.