

September 2019 Newsletter-

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 Palakkad India.

TOPIC #1 : This is a portion of ongoing discussions relating to "Bronze" . Just what is 'bronze' and who decided the descriptions that we follow today?

The answers to those questions are complex, like so many other topics in Pigeon Colour Genetics! We can research back through all of the old books and find references that generally follow one another without much controversy , each content to believe that their predecessor was correct.

I have asked in the past if 'bronze' is indeed only one specific pigment , but made visible to us by a vast host of other mutations in an equally vast array of expressions. The idea brought about some interest , but no one dared to agree or disagree with the premise.

Paul Gibson speaks of 'bronze' in this manner in his Book : "Bronze Color is the result of an admixture of the black and red pigment (eumelanin & pheomelanin). In the case of Brander , it usually even appears to be a mixture of black and red in each cell within a barbule. The bronzes are enhanced or dulled by the increase or decrease of the percentage of 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 then lists many of the genetic traits that produce bronze colourations in certain combinations. He follows that with comments describing Kite bronze (K), Brander bronze, Modena bronze (Ts1)., Cauchois bronze ., Roller bronze., Lebanon bronze., and Shakhsharli bronze explaining how the bronzes are expressed differently in a variety of ways .

Editor : I have often referred to many of these bronze expressions as "residual bronze" to indicate that the bronze is often present as pigment cells , but only made visible to us by whatever other gene influences that may happen to be present. We see this especially well

when there is a gene that depigments 'BASE' Pigment such as , the stipper mutation., the reduced mutation., the Opal / opal mutations ., etc. We see some of the bronze expressed in the depigmented areas of each feather because the bronze alone has not been changed or deleted by the modifier(s) present.

Talking about bronze is so relevant at this time because there are so many breeders working with specific colour mutations that involve one or more bronze traits that enhance the colours of the traits they desire.

Excerpt from Joe Power email : Bob

As you can see this bird has super reddish color, even under her tail. This is the expression desired for great color. **Kites** that tend to go bronzy rather than this reddishness will produce almonds that are extremely dark as young birds. That pretty much means that they are only going to have a year, possibly two, as a show bird. Getting away from kites that are bronzy is quite difficult.

I learned to use a kite to recessive red or yellow mating every year. This helps to keep more red in them which also helps the almonds and getting a great color expression of almond.

I hear quite a bit about deroys and ticking. But in the English Short Face Tumblers I bred, as well as both my roller and Komorner Tumbler families (based on E S F) I seldom had more than an occasional darker feather in my deroys. I think, but have never tested to be sure, that those deroys that have this darker ticking are more than likely out of a family where the kites are very bronzy. Part of this bronzy expression has to be tied to an extreme amount of dirty. Dirty surely helps the almond family but too much is not how I want mine to be.



Below: Joe writes :

A series of photos on brander and kite. The photos in last {June} issue from Walter Wojceiski { first two below }, appear to me to be brander and NOT kite. The photos below show the differences. My brander photos are of a bird that is almond bred. Dan Zook has been using brander in his Portuguese Tumblers thinking they were actually Kites. He is not into color genetics so did not understand.

Walter's photos



Joe's examples :



Brander first two then , tails of **Kites** and wing which were discussed in the July Issue .

Below find photos of baby ESF Tumbler. It's out of a classic almond cock and a kite hen. I hatched the egg for Bob Bollinger. Raising it here for him though I can use it if I decide I want to before I get it back to him. Note how reddish the rump and more so the underside of the tail, including the main tail feathers. This will get even more reddish when molted to adult feather. Then the breast and top of the head. Lastly we get to the wing and primary feathers. Note how the color is and where it is on the shield feathers. I will be sending a few photos of a Portuguese t pattern brander out of a t pattern brander almond to recessive red gay mottle (also brander?) in a little bit. Included with those will be one of the wings of this ESF and the Portuguese showing the difference in color expression.

{We welcome Bob Bollinger to the Newsletter mailing list !}

Again from Joe Power ~ Photo is a young **kite ESF Tumbler**. Going to have awesome color. Even showing reddishness on underside of tail already. Unfortunately it isn't showing up on photos so will have to wait a week or ten days and try again. The color is entirely different from the brander photos I sent you. This bird is out of an almond cock and a kite hen. Bob Bollinger brought some eggs over for me to hatch. This is one that hatched.



First photo shows almond bred Portuguese **brander t pattern** over the top of the **ESF kite**. Obvious differences in expression of color. Followed by rump, breast, and underside of tail. All quite different from classic almond kite. Glad to answer any questions you may have on these two sets of photos. Joe .





{Joe speaks above in a manner that may be confusing to some of you so I caution you to realize that he separates KITE to mean a T-pattern bird, and bronzy as a colouration added that differs from 'reddish'.. }

{KITE (K) is the name and symbol given to the gene and it is enhanced by the recessive red mutation for two reasons : (1) they both are 'red' pheomelanin., and (2) recessive reds almost all certainly do have KITE bronze as part of their genome, consequently the resulting T-patterns from such matings would be homozygous Kite. Dirty factor is either heterozygous or homozygous in its expression and keeping track of that may present some challenge. Dirty is suspected of enhancing the 'reddish' expressions of pheomelanin at least in some cases such as the Ash-Red series, but whether or not it has any affect on bronze, to my knowledge has not been determined in any published material.}

The following is an edited email from Ash Hammett to Joe Power, and shared with Jith & I, so I am sharing it with all of you here as it sums up many of the thoughts that a number of you have presented on Facebook and in chat and emails.

1. It is definitely possible and perhaps even likely that ESF's, Oriental rollers, Ports and other "well colored" stipper combinations have bronze mutants heretofore undescribed and originating in those breeds. Maybe that is why these breeds are "better almonds" than stipper combos of other breeds. Maybe these less noticeable color mods get "lost" in the transition when trying to move the color to other breeds because they aren't obvious, especially on juvenies?

2. If Kite Bronze is in fact a verified single mutant, and is co-dominant or a "partial" dominant or whatever term one chooses to use, and if it is confirmed to be viable in homozygous state (which it supposedly is), it should be SIMPLE to isolate and reproduce in any breed.

A lot of people think this has been accomplished.

So why isn't it as dark and reddish as an ESF?

Either there is an undescribed modifier unique to ESF's that is causing it, or it is the presence of known darkeners that makes the color richer, those mods being lacking in "kites" of other breeds.

There isn't some supernatural magic going on with ESF Almond.

According to every credible source I can find, "Almond" is het stipper, het recessive red, het or homo kite bronze, and het or homo t-pattern.

So why aren't they as dark and bronzy as an ESF?

Even if "kite" is "tied" to stipper in ESF's (which I do not believe), once separated from stipper, it would be simple to isolate as a single mutant, either het or homo, on any pattern and spread. Therefore it would no longer be "tied" to stipper. So even if it was somehow "tied" to the ESF stipper mutation, that becomes irrelevant once they are separated.

I understand that genes can be "tied" together, but my understanding is that's because those genes are on the same chromosomes.

Stipper locus is on the sex chromosome, Kite is not. So it seems illogical that they would be linked genetically per se.

(Same is true for Ash Red and Indigo, but that's another discussion).

If intensity of color is being lost when moving kite, that just means some other color modifiers (known or unknown) are being lost. The "kite" mutation can't just fade away for no reason, that is not logical. If the parents carry the mutation, they can pass it on. That's what genetics IS.

Based on all credible knowledge, Kite Bronze should show on any pattern. The bronze shows on the course spread whether bar, check or t-pattern.

But in what we're calling "kite", it also shows at the base of the flights as reddish.

Is that recessive red or is that kite showing up there?

Because a spread kite looks black; that reddish color *won't show in a spread*, unless that's recessive red showing through and not kite.

Also, again y'all are referring to "kite" as what?

A single mutant or including het RR?

Because het RR will definitely show in dirty t-patterns as bronzing, especially in juveniles; you don't need a bronzer for het RR to show, especially in the webbing of the primary flights and on the neck and upper breast.

So if you're calling a bird that's t-pattern, het RR, het or homo kite bronze a "kite" you're describing a phenotype and not a genotype.

Darkening mods are absolutely going to affect the appearance of a "kite" phenotype or any other bronze phenotype.

3. There are multiple grizzles, bronzes, and even multiple "opals", so why not multiple stippers?

Well, we actually know that there are.

Faded, Qualmond (should be called Quinn's *Stipper*), Frosty, etc.

We know there are alleles for stipper at that locus so maybe there are more than we even realize? Maybe that is why some "almonds" look different from others in different breeds? Maybe it's an allelic thing? Seems plausible to me, especially given all the known alleles at this locus.

Maybe ESF stipper is a completely different mutant from the one in Modenas or Oriental Rollers?

4. Just because a Blue pigeon of any pattern displays some reddish tinge in the coarse spread areas of the plumage doesn't mean it is some kind of bronze, kite or otherwise, or recessive red either.

Sometimes the reddish tinge shows up because of the arrangement of a few pigment granules. That's all recessive red is anyway, right? the granules are turned... extended... hence the symbol "e" for extension. It's still a blue pigeon.

The point being some slight bronzing is not always genetically relevant... So just because a dark, dirty, closed t-pattern pigeon has some slight bronzing in the feathers, doesn't mean it is Kite or any other bronze or even hetero recessive red.

5. Has anybody thought about "ember" in regards to ESF Almond? Is it possible that ember or possibly even another undescribed allele of RR could be a factor?

Are there "ember" ESF's?

Clearly the term "kite" is not used properly by hobbyists, and neither is the term "almond".

Just because people have misused these terms until now, doesn't mean we should keep on misusing them because older people don't wanna change their thinking (there's a lot of this in the hobby).

It's not magical.

There is some kind of logical explanation for the different appearances of all these so-called "kites" and "almonds".

Maybe the term "kite" is where the confusion starts because y'all are not referring to a single mutant when y'all refer to a "kite".

Just like when y'all say "almond" you aren't referring to a single mutant either.

I am still waiting to see a photo of a pigeon that is confirmed KITE BRONZE with no other modifiers affecting the plumage.

People have been genetically modifying plants and animals for thousands of years, quite effectively, without really understanding what they were doing, just selective breeding. Like begats like. But there are actual reasons and details that create these traits we select for. There is a physics to it. Mechanics. Rules. We just don't know them all yet.

But based on those rules, we can figure things out.

Hence, if KITE BRONZE is actually a mutation, then it has a pure form on wild type blue bar just like every other mutation does.

Who coined the term "kite"?

Based on what?

What breed?

That's all I have for now... Ash Hammett.

The following are some photos that demonstrate hetero (e) & bronze in various expressions :
Hetero recessive red Jith Peter., and an intense and dilute homo Kite bronze Stephen Scott.



Below a Spread blue black homo Kite Stephen Scott. - Kite black Pied ~ Bob Rodgers.



Indigo blue checker residual Kite - Ryan Harvey. Ts1 Sooty blue bar Jith Peter.



Below Brander Bronze : First photo by Mick Bassett - Homo Brander plus hetero recessive red,
most likely also homo Kite bronze.



Below : Pure Brander possibly lacking recessive red (e), MD Sojib, and Brander lacking (e) Faisal Hossain PBCBD. These birds may lack homo or even hetero Kite as well.



Pure Brander , homo Dirty factor , Sooty factor likely lacking (e) with (K) ~ Pakhal Vai photo.



Below : Possibly pure Kite bronze feral blue bar photo by Bob Rodgers. ~ Paul G. once said that he felt that the red extended too far up the feathers to be Kite , and suggested hetero (e). This was a wild caught feral and most likely not hetero (e) , but none of her young expressed any bronze which indicates that he was likely correct.



That is it for the Month of September 2019 , more food for thought , and we hope that you will mull it over and come up with some thoughts of your own. We are always open to new ideas and photos.

We have talked about the bronze traits as if there are many INDIVIDUAL types of bronze genes. That of course may not be fact. We still must consider that the bronze trait may be a single gene trait that expresses in many different ways depending upon what modifiers are affecting the base pigment and thus the bronze granules. There is a possibility as seen above that two or more bronze traits may work together creating new phenotypes.

Some of you may totally disagree with the labels that Joe or I gave to some of the photos ., and I understand that . We can only guess at this stage as we have so little fact upon which to make definitive statements about any aspects of this subject.

Finally , we have to consider something that Ash Hammett touched on earlier , and that is that there may (almost certainly) , be traits / factors / mutations involved in the many bronze phenotypes that we still have not discovered . There have been cases in past newsletters whereby breeders have referred to the possibility of a recessive bronze or bronzes , that may only express on phaeomelanin. When these 'red' birds are mated to blue/black series birds , the bronze red disappears only to show up again when mated back to a red series bird. Breeds that seem to possess this trait or traits are: the Lahore , the Jacobin ., and the Indian Fantail .



Expressions of Kite bronze in wild caught feral pigeon flight feathers .

See you all back here in the Pigeon loft in October !