



The Pigeon Genetics Newsletter

News, Views, and Comments.

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Section # (1) Beginner.

Alleles of Stipper.

The Stipper locus, named after the stipper mutation is a sex-linked locus and one of the most unstable loci that has been mutated repeatedly in *Columba livia*. There are many alleles that have been identified and studied by genetic enthusiasts. Including stipper, they are Sandy, Qualmond, Hickory, Faded, Chalky and Frosty in that decreasing order of the extent of whitening effect caused by each of them and were thusly arranged by Hollander. These are differentiated based upon some noticeable differences in their expression, however; the reported differences in the expression of some of these alleles are not that decisive, because of the great variation and or random nature in the expression, it makes us unable to recognize them correctly in certain genetic combinations, that makes many of them questionable as to which category they belong or if they are another mutant expression.

Most if not all of these mutations are present in various domestic pigeon breeds, and some of them are well known auto-sexing mutants.

Like stipper, in the case of all of its alleles, homozygous males are always lighter than hemizygous females, but if we compare the expression of heterozygous males with hemizygous females of each of these alleles, we can clearly see that the difference in the expression gets reduced as we go down the scale. Additionally, some of them get darker as they get older as in the case of the stipper mutation, however; unlike stipper a complete reversion back to the normal pigmentation is not possible in the case of most of them.

Photos on the top are of three nice Indian Fantails by Harvey Addengast, from left to right recessive yellow, dirty blue bar and a dilute blue bar.

Name of the mutation	Symbol	Mode of Inheritance	Discoverer or first analyst
Stipper	St	Incomplete dominant	Christie and Wriedt
Sandy	St(Sa)	Incomplete dominant	Hollander
Qualmond	St(Q)	Incomplete dominant	Joe Quinn
Hickory	St(H)	Incomplete dominant	John Potter
Faded	St(F)	Incomplete dominant	W . Feldman
Chalky	St(C)	Recessive	Robert Mangile
Frosty	St(Ft)	Recessive	Tim Kvidera

Table showing mutations, symbols, mode of inheritance and its discoverer.

Qualmond

Qualmond is not as popular as Stipper, However it is present in many breeds such as Uzbek tumbler, Russian tumbler, Birmingham roller, Indian Fantails, Gaditano pouter, English fantails, Racing homer, English long-faced tumbler, etc

Unlike stipper babies, heterozygous male and hemizygous female Qualmond babies are usually slightly short downed in the nest, and in adult plumage, they are lighter overall with somewhat silvery gray and they usually show some dark flecks, many of them show bronze colouration on neck and shield; however, the bronze can be eliminated(at least partially) by selective breeding.

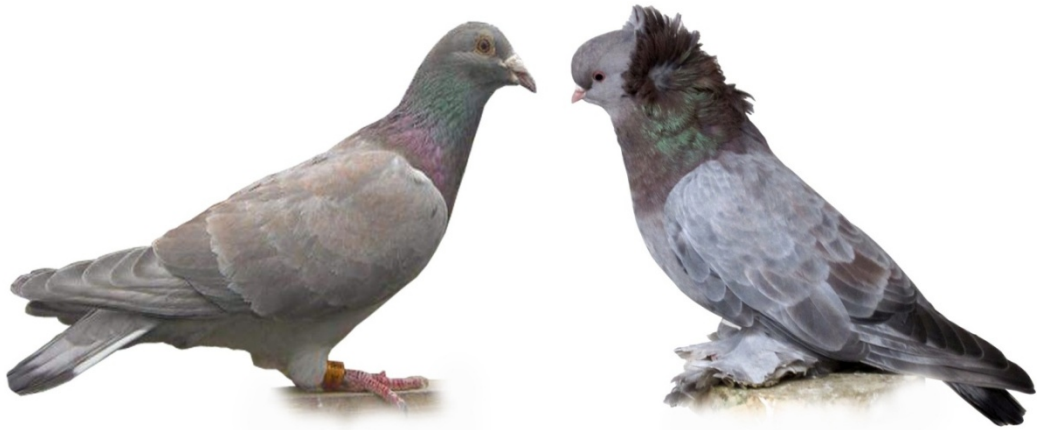
Homozygous males are usually short downed in the nest (similar to dilute babies) with very light or pinkish skin, feet and beak, and are much lighter or white plumaged in juvenile and sometimes even after first molt, that is similar to homozygous Stipper, however, unlike stipper they don't exhibit eye defects nor have premature deaths been reported. Qualmonds get darker as they get older, especially after the juvenile molt; however, the reversion to normal pigmentation is not as pronounced as in stippers/almonds.



A baby bred out of a heterozygous qualmond mated to an intense black hen by Mike Walter Sr, possibly a heterozygous qualmond. Second photo is of a couple of babies bred from two qualmonds by Bruce coons; possibly homozygous qualmonds.



First one is a heterozygous qualmond Russian tumbler bred by Mike and second one is a blue check bred by me, both are about 16 days old. Notice the qualmond baby has shed off almost all down whereas the blue check still has lots of down on it.



Left - a heterozygous qualmond blue T-pattern Racer cock from Ismail Haji (breeder unknown) and right a hemizygous qualmond blue check hen bred by Mike Walter Sr.



An adult Uzbek tumbler cock; homozygous qualmond spread blue. Photo from Mick Bassett.



A dilute het/hemi qualmond blue (no spread) Indian fantail.

Mating of Qualmonds

	$+$	\cdot
St(Q)	St(Q)// $+$	St(Q)// \cdot
$+$	$+$ // $+$	$+$ // \cdot

Square 1

	St(Q)	\cdot
$+$	St(Q)// $+$	$+$ // \cdot
$+$	St(Q)// $+$	$+$ // \cdot

Square 2

	St(Q)	\cdot
St(Q)	St(Q)//St(Q)	St(Q)// \cdot
$+$	$+$ //St(Q)	$+$ // \cdot

Square 3

Square 1: Mating of heterozygous qualmond cock with non qualmond hen produces 25% of each heterozygous qualmond sons, non qualmond sons, hemizygous qualmond daughters, non qualmond daughters.

Square 2: Mating of non qualmond cock with hemizygous qualmond hen is a sex-linked mating; all sons will be heterozygous qualmonds and all daughters will be non qualmonds.

Square 3 : Mating of heterozygous qualmond cock with hemizygous qualmond hen produces 25% of each homozygous qualmond sons, heterozygous qualmond sons, hemizygous qualmond daughters and non qualmond daughters.

Spread Qualmond

Spread blue qualmonds are usually very light in the juvenile plumage and usually becomes considerably darker after the juvenile moult. They are usually silvery over all with blackish flights and muffs (if muffed) or some times silvery colouration mainly one neck and chest with the rest being greyish black or sometimes rarely very dark and looks similar to poor grayish or muddy black(similar to faded spread blue hens).

The lighter versions can be confused as spread blue reduced; however, unlike spread reduced they usually shows dark flecks, and lacks the laced effect seen in the case of spread reduced. Darkness of the spread qualmonds seems to depends on some non allelic factors like pattern, darkeners such as dirty, sooty, smoky etc



Three het/hemi qualmond spread blues from light silvery colored to dark dull black colored, birds owned by Mike Walter Sr. And the baby in the above photo is the nestling plumage of the bird in the middle.



An English fantail in juvenile as well as in adult plumage; heterozygous qualmond spread ash red bred from an ash red and spread blue qualmond by Neww Yorkk (fb name).



A dilute het/hemi qualmond spread blue Ts1 Italian Modena, photo from Fabio Zambon; breeder Antonoi Vaccari , and an intense qualmond blue bar Ts1 sooty again by Fabio Zambon.



A qualmond spread blue African owl from fb and a qualmond spread blue frill stencil bred by Wild briar loft.



A qualmond blue T-pattern classic grizzle Gaditano pouter from face book.



A couple of qualmond spread blue dominant opals, left one is an adult English fantail bred by Neww Yorkk and right one is a juvenile Russian Tumbler bred by Mike Walter Sr.

Recessive red Qualmond

Like Stipper recessive reds (Deroy), qualmond recessive reds are usually a tone in between yellow and red and sometimes they can be confused as dark yellow or Deroy or gold (pale recessive red). They get a little darker after the juvenile molt and some of them are somewhat pinkish coloured where as some are dark yellowish or golden coloured after the first moult



Left is a qualmond recessive red and the right a dilute recessive red; Russian Tumblers bred by Mike Walter Sr.



A juvenile qualmond recessive red bred by Mike Walter Sr.



A couple of Russian tumblers bred by Mike Walter Sr, according to him both of them are qualmond recessive reds and the difference in the colour tone is partially due to different light conditions; however, in reality the colour difference was quite noticeable.



A homozygous qualmond both in juvenile (left) and adult plumage (right) bred off two qualmond spread blue carrying recred parents by Steve Shaw.

According to what he said it has coordination issues, and a side to side nod when it walks, but neither eye defect nor deafness have been observed.



A reduced recessive red looks similar in colour to the above homozygous qualmond recessive red, photo from face book.

Bronze and heterozygous recessive red qualmond

Qualmond itself on blue base tends to show some bronze on the pattern and neck. If bronze is present they can be very reddish. Heterozygous recessive red on blue qualmond usually shows some expression. Even in combination with spread factor they tend to show some reddish colouration on the neck and /or head, and / or shield areas.



Above are two Russian Tumblers bred by Mike, both are qualmond spread blue carrying recessive red. First one as juvenile and second one as adult. In the photos below a couple of qualmond spread blues, the one with reddish colour on the neck and head is heterozygous recessive red as well.

Following our last Issue featuring the Stripper / Almond Mutation ., we had the following comments from some of our Newsletter subscribers :

*Gary Young has wrote about his research on Orojo colour in Catalonians which will be placing in a future letter.

* Dear Bob and worldwide members.....Christine emailed us when dear Jules passed.....we will miss him the rest of our lives. The world can ill afford to lose good people like Jules.....nor can the Fancy.....I believe he was the world's premier all breeds Judge. Madelon Gilligan.

*Hi Bob, I have been getting my newsletters, although the latest one ame up in a zip file, may be because of it was so long, I am very leery of zip files generally, they are a great vechicle for viruses etc., but I did open the newsletter and got the newsletter fine. All the best, great issue, I have always like almond and its alleles and variations, keep up the great work.
Cheers Brian.

* Thanks for the issue, a great overview and impressive photos. Jules de Brenni was a great name in the genetic circles and I am sorry to hear that .
regards Axel Sell

* WOW! WOW & WOW! Terrific issue! It is nice to see all that info in one issue but really feel it should have been split into two issues at least. Too much to digest at one feeding.
All the best,
Paul Gibson.

Finally I want to again thank Jith Peter who has done this issue for us , while I keep busy elsewhere . I cannot tell you how thankful I am to have his assistance ! .

Last issue some of you had difficulties with opening the Newsletter folder . This issue I have sent all of them as straight PDF files. If anyone wants the July issue re- sent I would be pleased to do so. ~ Thats it from the Pigeon Loft until next Month - Bob R. and Jith Peter.