The Pigeon Genetics Newsletter

News, Views, and Comments.

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OUR APPRECIATION!

We have received nice comments from many members for the report of analysis on coloration of Lalband-Ghagra that we published in the last issue. and from the University of Utah where they have been researching the genome of pigeons. We would like to thank each of you for the nice comments and encouragement.

The photos above are photographed by Dick A H, from left to right Frankonian Bagdetten (scandroons), Saxon priests and Reverse wing pouters.

We had some members asking how our hypothesis on the allelic relation of Saffron with Ash red is possible and if possible , to explain it a little more clearly.
Well, from one of the reports published by the University of Utah, we know that the Ash Red mutation happened at the highly conserved cleavage site of the signal peptide of the "Tyrp1" gene and this results in a dramatic reduction in the cleavage efficiency of the protein coded by the Tyrp1 gene.

Usually newly made proteins undergo a number of processes to achieve their functional form. They must fold properly, and mis -folding can result in degradation of the protein. Many proteins are covalently modified to activate them or alter their activities. Finally, “proteins are targeted to their final intra- or extracellular destinations by a signal peptide present in the proteins themselves. Once the protein reaches the target, an enzyme known as Signal peptidase may cleave the protein and generate a free signal peptide and a mature protein. The free signal peptides are then digested by specific proteases and the mature protein take part in the biochemical process.

But in the case of the Ash red mutation, it reduces the cleavage of the protein and that alters processing of the mutant TYRP1 protein within the cell. A mutation away from the cleavage site still could alter the cleavage of the protein and it also could do something else to effect the proteins processing and movement within the cell similar to what is happening in the case of the Ash red mutation. After all it is just a possibility and it may or may not be correct in the case of saffron mutation.

We have heard some other suppositions from the members that a few think it could be an allele of reduced and rubella, whereas others think that it could be an allele at the Stipper locus… It may be in a new locus... Anyway, we have no solid proof or breeding data yet as to its location.

The name of the mutation will be the same, but we will be changing the symbol of the mutation if it is proven in the future, an allele at any of the loci which are already known, in order to match the present symbols of allelic mutation/s

Below are photos of some other colour variations in the Lalbands. We can’t be certain of the colour from photos, and we have not seen these birds in real life!

Left cock and right hen

Hen

This variety seems to have the Saffron mutation as the male is similar to Ash red(Ghagra cock) and the female is similar to the Lalband hen which we

tested, however, her overall colour tone and the band colour is different. Photos from Facebook.

A couple of Lalbands with off-white bars

Below are some photos of Lalbands that seem to be lacking Saffron. The reddish pattern on these birds seems to be caused by Toy stencil or a similar bronze factor. In such strains the birds are not sexually dimorphic.

The photos above are from Mohammad shoaib

Lalbands are usually barred; however checker and T- Pattern verities are also present in the breed. Below are some T-patterns from Mohammad Shoaib.


Below are a couple of photos of Lalbands which seem to be lacking the Saffron mutation. The expression of the bronze on the pattern of these birds seems to be somewhat similar to the non-Saffron F1 hens that we produced from Homer x Lalbands mating. However, these birds seem to have more bronze expression on the pattern than the crosses, that may be because these are homozygous for the specific bronze mutation and the crosses are supposed to be heterozygote.


Photos from Mohammad Shoaib

Below are some photos of the birds belonging to Ahmi Khan. They seem to be some kind of Lalband varitiety. Even though the birds look intense, their bar colour is somewhat creamy to creamy orange coloured and the overall colour is somewhat different than the type which we tested. We don't say the colour difference is only because of sun fading, however these birds seem to be flying around the house and it was jith's observation that the flight and bar colour of Lalband is slightly prone to sun fading.

The birds in the above photos seem to have the Saffron mutation. In the first photo two birds with ashred look-alike phenotype (cock birds) and the rest of the birds in the photo seem to have dark flights and tail. In the second and third photos again two birds with ashy flights and tail. In short these birds seem to have the Saffron mutation and they are showing sexual dimorphic colour. However, the colour (mainly bar colour) seems to be affected by some other modifiers.

One more photo of Lalbands from Ahmi Khan

It is rarely possible to see reddish barred Roshan chirag, Hydraband neela and Lahore. They are probably direct crosses of Lalbands or Lalband is involved in their ancestry.

The photos above from left to right, A Roshan chirag with red bar (probably het/hemizygous saffron), photo from face book. In the second photo a Lalband (heterozygous saffron bar sooty) with bar colour desired in the breed and a homozygous Saffron on hydrabad neela, the white on the bird is caused by plucking, third bird is a hydrabad neela. In the last photo again, it seems to be a hydrabad neela with the Saffron mutation. Second and third photos are from Mohammad Shoaib.

The above bird is an accidental cross of Lalband and Hydrabad neela (heterozygous Saffron), it belongs to Zaaby. Hydrabad neela is an Indian breed with colour very similar to Damascence and Ice pigeons. No one did a serious test breeding of Hydrabad neela to our knowledge; however, this bird seems to be similar to F1 crosses of Ice pigeons except the reddish bar which is caused by Saffron, interesting nevertheless.

Here are some photos of dilute Lalbands

Dilute version of Ghagra (Homozygous Saffron) belongs to Shine Sasi and the same dilute Lalband hen which we published in the last issue.

This is a cross of Homer and Lalband (B2: 87.5% Lalband and 12.5% homer); a hemizygous dilute Saffron. The pure dilute lalbands have creamy yellowish bars, but the cross has somewhat “khaki” coloured bars and that is probably because of lacking some essential modifiers.

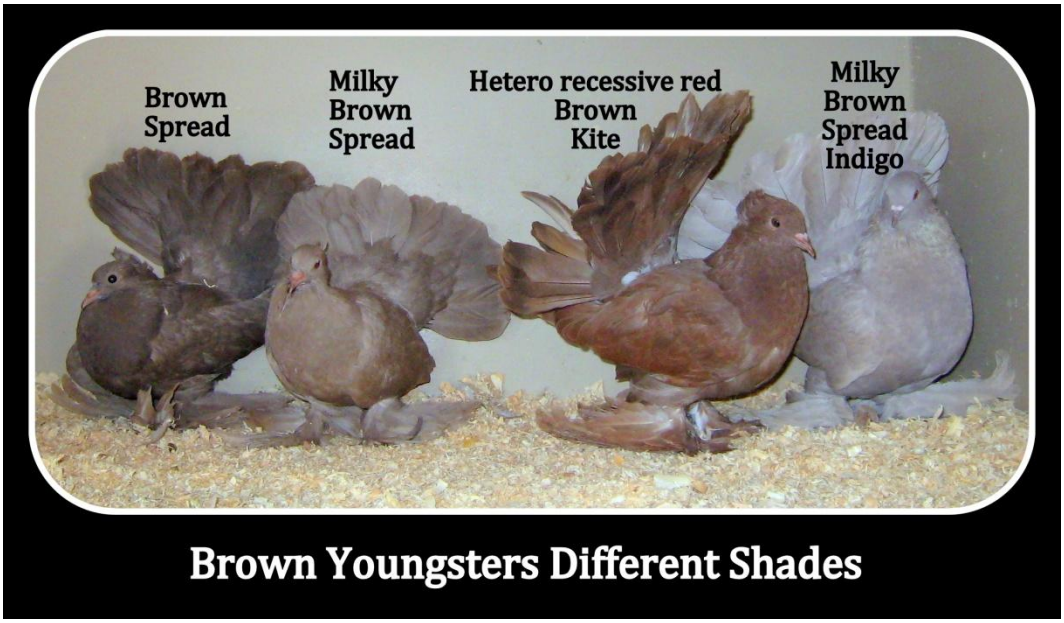
Below are a couple of photos of feathers of Lalband showing sun fading. These birds were never flown, and rarely exposed to sunlight, but they still show some

colour bleaching due to a very hot climate. The extent of bleaching is expected to be even more pronounced in the case of birds which are flying everyday.

NEXT ISSUE :

We will feature a suspected Mutation belonging to Lynn Kraal , of the U.S.A. Three fellow Indian fantail Breeders are presently working with some of her birds to work out the genome of her unique colour named " OYSTER" or Oystershell .

Below are photos of some of the Indian fantails bred & labelled by by Lynn Kral.



Brown T-p hetro recessive red kite

Spread brown

Brown hetro Recessive Red Spread Baby

Brown hetero recessive red

Brown carrying dilute and recessive red

Dilute brown

Spread browns

Stipper carrying brown in the opposite chromosome

Thats it from the Pigeon Coop for June 2016. Again many thanks to all of those who take the time to send in their comments , we truly do appreciate hearing from you ! Those of you who like to print off a copy of the Newsletter will have no problem with this issue . The security restrictions have not been applied.

We have had two members say that they have flocks of Gimpels in many rare colours , and that they will send photos for a future Issue , so we are anxiously waiting !

If YOU have something new or know of someone who has , please let us know about it so that we can share it here in the Newsletter !

Until Next Month ~ All the Best !