



Ash red/blue bar mosaic Holle Cropper (Lynn Watson of San Clemente, California.)

# PIGEON GENETICS NEWSLETTER

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### EDITOR:

From time to time, the question arises, can we breed mosaics from mosaics? The answer is yes, sometimes. The real question is why. Or is it how? Certain genomes produce more mosaics than others.

Stipple (Almond, stipper, harlequin, sprinkled, magnani) is one such genome. The stipple (St) gene has been shown to produce birds that are randomly mosaic, all the way from a few feathers to 50/50. Some male/female (gynandromorphs) have been produced. Some of the mosaics, especially those with a wing patch of kite feathers, do produce young with wing patches of kite.

There are a couple of breeds such as the Tschinny (Usbek Tumblers) that seem to defy the principles of genetic inheritance as we know it. Also pictures have been appearing of pseudo-mosaics from Saudi Arabia. Recently (2011) Dan Stiles put some pictures online of some pseudo-mosaic Iranian Tumblers.



spread indigo, plus.



spread indigo,plus



apparently black,plus.



Black,plus



Pic by Dan Stiles..

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Notice that the heads are mostly solid color with a delineation on the neck similar to gazzi.

AXEL SELL:10may'09 Axel Sell writes about the Tschinney.

I got your email and share some of my experience with the Usbek Tumbler with you. I raised a great number of red and yellow Tschinney for my Usbek Tumblers (I did not count them, perhaps a hundred or more, but I never got an entirely black one or even a blue or blue check. Some black feathers, usually wing feathers, often occur and seem typical for the breed. A rather extreme bird with a patch like a mosaic is given in my book "Taubenfarbungen" that I published with my daughter [Jana]. The causes of the black (dark blue) feathers might be the same as those for mosaics and the numerous mosaic like birds in Almond strains.

From crosses of red Tschinney with blue mates of other breeds I got near black progeny, due to dirty and additional darkening factors. Only serious inspection of the tail feathers revealed that they are dark check and not black. The tail feathers are as dark as in some black-wing copper Archangels, they appear solid black.

The genetic ground color in my Tschinney is black pigment in most cases, however some are also brown. The first birds I tested were non-spread, but in some spread seems to be present, but it is rather rare. Therefore, the black feathers could be considered dark blue darkened by dirty and other not identified darkening factors.



These two pictures are taken from pages 82 & 83 of the book "Taubenfarbungen" by Axel and Jana Sell (2005).

#### EDITOR:

Many Tschinney have one or more scattered black feathers on the wing shield like the bird at the left. The bird at the right is the one Axel refers to as a rather extreme bird. Tschinney start out rec. red and molt in white feathers but also may have some black feathers on the wing shield.

The Iranian Trumpeters appear to be T-pattern and Arabian birds appear to spread and some andalusian. A very interesting mutation with spread blue, white and red on the same bird.

**Winston Churchill: I contend that for a nation to try to tax itself into prosperity is like a man standing in a bucket and trying to lift himself up by the handle.**

GRAHAM MANNING EMAILS:12may'09 excerpts & editing

I promised follow up pictures of some young embers once they moulted into adult plumage. I'll resend the squeaker pictures when they looked like recessive reds and later showing the ember expression.

The mother is a homozygous ember and the father one of my blue bar Serbians that carried rec. red. The two young are both heterozygous for rec. red and ember. As you can see, ember wins out and expresses.



Het. ember, het rec. red young.



[After molt. Bird on right 1<sup>st</sup> pic is same as bird on left above.]

JAMES GRATZ EMAILS:

Certainly ember like, if you started from Richard they probably are. They seem much like embers here. At least he and maybe you have done breeding tests. I am not sure the bronze bars are the result of Ts. Many of mine have bars like that too and no reason to think Ts.

GRAHAM EMAILS:13may'09

Yes, mine started from Richard's birds. Our tests showed, contrary to information coming out of the U.S. that ember does indeed show itself when homozygous. We had the luxury of working with homozygous birds free from rec. red. You guys were initially using het. ember het rec. red birds thinking they were homo ember. Those hetero for both alleles do show a brighter expression of ember in the flights in my opinion, but the homo birds still show ember wings. More noticeable in the underflights view and before they molt.

EDITOR:

Although the bronze bars look like the result of Ts and may react with part of the Ts complex, the bronze is not Ts.

BRETT SAVAGE EMAILS:16may'09

What do you guys think of these two birds? I purchased them from a guy that thought they had dominant opal in them but now I am not so sure because all their youngsters seem to be somewhat ordinary looking reduced.

The cock is reduced and what else?



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Cock on left, hen on right.

EDITOR:

They are reduced. This is no dominant opal involved. The cock is possibly indigo also. I have reared a number of birds like this and it is hard to be sure if it is also indigo without a test. The barred hen is spread reduced bar. Can you send pictures of the young?

JERRY STERNADEL WRITES:

My black reduced are always quite a bit lighter especially in the neck area than the one posted by Brett. What is the difference?



EDITOR:

Nice colored birds. Normally my Rollers (spread blue bar) are darker. I think the other bird is checker. Normally if they are T-pattern they are laced on the feather tips. Your 'barred' bird is very light and is probably sooty light check?

BRETT WRITES:

Thanks everyone for your comments. This and the next e-mail will show the 7 young from this pair.



1519



720



721

Now is it correct that 721 is a barred bird like mom and that the first two 1519 & 720 are checks like their father? Or are the first two spread? That would mean that the father must be split for bar or if it is spread, then he would be hetero spread. What do you guys think the underlying pattern is on these birds? I will send pictures of the last 4 youngsters in the next email.

Next email pictures:



722



723



724 &amp; 725

[Very typical fledgling colorations of reduced.]



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BILL PETERSON WRITES:

I'll be darned, they sure had me fooled. I have a rather dark colored reduced indigo hen also and nobody wanted to say that she was reduced or even indigo. I still can't say positively that she is reduced but she did throw indigo young, will test her this year to be sure on the reduced.

EDITOR:

I read the young as follows: 1519 is reduced T-pattern probably indigo, 720 is reduced spread T-pat., 721 is reduced indigo bar spread, 722 is reduced T-pattern blue spread, 723 is reduced T-pattern spread, and 724 & 725 are indigo probably T-pattern.

I see what appears to be whitened tips on the flights of 721, 724, & 725 and what appears to be white flights on 720 and 723. Are these truly that color and are they adult flight feathers?

BRETT REPLIES:

Thanks for identifying the colors and patterns. Some of the youngsters do have a few all white flight feathers. They also have white tips on several of the colored flight feathers. The flights of 722 and 723, I think are still baby feathers.

JERRY STERNADEL writes: (referring to my comments above about his birds.)

Paul, could be dark check also. It came from a T-pattern red velvet het reduced cock. And with the angle of the picture I wasn't sure so that is the reason for the most likely comment.

I have never had or seen a dark reduced spread like Brett's. Actually most of mine have been a little difficult to tell the difference between spread reduced and spread indigo reduced. [Me, too. It's subtle.] In many cases it took breeding tests to be sure. Tails were all light colored. His darker bird sure reminded me of some spread dominant opals I had in the past. [Yes, very similar but lacks lightened tail bar area.]



Darkest reduced black I have.



Reduced black cock bird.

MARY BARBAR EMAILS:

I was wondering if this bird is normal variation for baby Archangels or does it indicate some cross in the background? Will it moult into the full bronze colour?

**Will Rogers: I don't make jokes. I just watch the government & report the facts.**



BILL PETERSON REPLIES:

It looks like some of the gimpel variations that are seen such as some that I think are called Charcoal Larks. We don't usually think of Archangels having these kinds of variations but perhaps some of them don't have their patterns as well set as some others.

I have some Rollers from Dal Stone that are Gimpel and Archangel bronze and they tend to have these types of variations. I don't know for sure what it means but I can only guess that because of the crosses he had made to come up with them in the first place, that the patterns are not yet set as well as typical Archangels or any other of the patterns that we are familiar with such as saddle or gazzi or anything else. Mismarks are common until the patterns are set and even then, odd things appear from time to time.

EDITOR: 31may'09

I don't know how much response you got to your email but I thought I would write and include aspects of the answer to your question that I have learned from breeding Archangels and Gimpels for about 25 years.

The coloration of the depicted bird is not caused by a cross. It is part of the mystery of the Gimpel pattern. When breeding well patterned Gimpels; a bird similar to yours may appear. Two things happen to such a bird when it molts. It may stay the same or similar coloration OR it may molt to one of the prettiest birds you ever saw with a terrific sheen throughout. I am betting your bird will prove to be the latter.

When breeding blackwing Archangels, many times the young will be very bronzed over the wing shield. This bronze molts to a deep green very iridescent sheen in the adult, especially in the males. The females may retain some of the bronze tint in the saddle or rump areas. These are very good to maintain the desired sheen in the flock.

A Gimpel pattern is a recessive (or nearly so) and crosses show no bronze or just some bronze in the crop area (if the bird crossed to has a dark crop area (crescent)). Such breeds as the Suabian and the Starling may be homozygous for the bronze involved but show it only as a bronze to red crop crescent; so there is more involved with the genome of the bird interactions than we have been able to determine.

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MARY BARBAR WRITES:

Paul, thanks for your email – it is very much appreciated. This bird had a lot more bronze in the veins of it's flights and has a considerable blacker rump than its older brothers and sisters (they're all quite gray). He overall has a richer appearance. When he hatched, he was the only one to have a dark beak with a red band – the other three had pink beaks with coloured bands (I have hatched two more since which both have pink beaks and red bands). I have assumed him to have an extra darkening modifier. Also he's the first to carry both pale and chocolate. I'm glad to hear that this variation can happen in well bred Archangels, because I was beginning to think that I shouldn't use him for breeding, but now I know he still can be useful. I can post you a picture of him when he moults if you are interested.

ARPAD CSEPL EMAILS:7june2009

I find (regular) pied pigeons very attractive and a great part of my flock are pied in some way. I made different crosses between them in the past few years to get to know how they work. This year just happened, gazzi marked pigeons partnered with Baldhead, White Flighted pattern. The result was remarkable.

Squabs from at least three different pairs came out with quite regular appearance.  
-Skin area of the Bh trait become white patched (not that regular as Bh//+ normally used to be: “cow pied”).

- Flights remain eight all white or a few of the first feathers become colored and the remaining white flight feathers forming a “Window” in the wings.

- A big patch of white feathers popping up around the vent (where the white gazzi area ends) up to the lower part of the crop.

- No white feathers anywhere else. See pictures (coloration also interesting but another story).

How to evaluate these results? I think that the big white patch on the body is caused by the otherwise recessive gazzi gene. Also the dominant pied traits were affected by the gazzi, causing a new type mismark in the white areas.

I think pied traits are related, they interact with each other, and in this case can be an example of how an otherwise recessive gene could become technically co-dominant or intermediately inherited with the help of a specific modifier.

My speculation is based on 6-7 individuals only. What do you say?





EDITOR:

Would liked to have seen pictures of other squabs also instead of just one example. The belly white patch and the leg white are shared peds by both Bh and z so that is to be expected. The white flight mismatch is unexpected and since Wf is dominant this should not have happened unless the Bh was hetero for Wf or something in the gazzi interfered with the Wf. I don't know what 'cow pied' means but in English a cowpie is excrement. The head marking top and bib is not typical for Bh. I suspect the Bh parent was also homo for bib or beard pattern.

And yes, many pied traits interact with each other which is what makes it so hard to study and separate the peds.

ROBERT BENNION EMAILS: 12june'09

I have a query which I hope you will be able to help me with. I have a faded blue bar cock with brown linked to faded. If he were paired to a spread blue/black hen, would all the faded daughters be faded brown or would he be able to produce faded black daughters too? I have been in discussion with someone who says this bird is able to produce faded brown, brown, faded spread blue/black and spread blue/black daughters.

I was under the impression that a crossover can only occur in the cock because, with the sex-linked genes, only the cock has homologous chromosomes to facilitate the crossover. Therefore he is unable to produce a faded spread blue/black daughter because to produce this combination, the crossover would have to occur in one of the sons who would subsequently produce the faded spread blue/black crossover combination.

EDITOR:

Robert, you are correct. Since your cock is faded blue bar phenotype (not white) then he is hetero faded and he can only produce blue bar and faded brown females. Males from this mating would all be spread blue/black (half faded) if the hen is homo for spread or blues and blacks (half faded) if she is hetero for spread.

If you get any other than blue bar or faded brown females, they would be crossovers (brown and faded blue bar).

As an aside, it is interesting that Doc Hollander, in 1938, gave faded the symbol, Of, for Feldman's opal. He later changed the symbol to B^Of since it was determined to be sex linked and an allele of brown. In 1951, he again changed the symbol to St^F where it stays today.

EDITOR:

A couple pictures of birds I found interesting.



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The first bird is an Indian Fantail bred by Gerrit Nijland in 2009. Its parents were a blue bar and a milky. The phenotype is a smoky blue bar. The white line across the tail is quite unique and could be caused by a temporary illness when the feathers were growing causing a glitch in pigment distribution.

The second bird is a very good example of a homozygous indigo bar. Although it looks like an ash red bar, the traits that tell us it is indigo is the flights and tail which are indigo.



This picture is of a homozygous spread indigo mosaic bred by Jerry Sternadel.

ARPAD CSEPL EMAILS: heavily edited and paraphrased

Here are two squabs, a black and a rec. red gazzi triganino. The day they hatched and at pinfeather break. The naked one is the rec. red.



EDITOR: The naked one would make one think it would be a dilute. Just shows down density & length are not necessarily diagnostic. There is the possibility that the bird will be a recessive yellow since the breaking pinfeathers are not real dark red.