Canary Island Finch in wild type green,Isabella,&yellow. Black Hooded Red Siskin Yellows derived from the green over many years. Notice dimorphism. Crossing of these two species produced (after many years) our Red Factor Canaries.

PIGEON GENETICS NEWSLETTER EMAIL OCT. 2008

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Life is not a journey to the grave with the intention of arriving safely in a pretty and well preserved body, but rather to skid in broadside, thoroughly used up, totally worn out, and loudly proclaiming "WOW, WHAT A RIDE!"

Sign in a AAA Restaurant: We pride ourselves with the cleanliness of our restaurant. You can eat off the floor! If you cannot find what you want on the floor; we do have a menu.

MARIO FENECH WRITES: excerpts

Strawberry is the pattern and color from a mating of Ash red T-check and Black Spread. Lavender is the colour from a mating of Ash red Bar X Black Spread.

MICHAEL SPADONI REPLIES:

This isn't necessarily correct, black is irrelevant in creating lavenders. All you need it the spread gene (S) and ash red (B*A). The pattern can have an influence, but I think the penetrance of the spread gene has a bigger bearing. A good dose of spread will even make a T-pattern into a clean even lavender. What will/can make a mess is any bronze present, rec. red will darken the overall shade of lavender. I have a couple of young lavenders I bred this year, I will try to get some pictures.

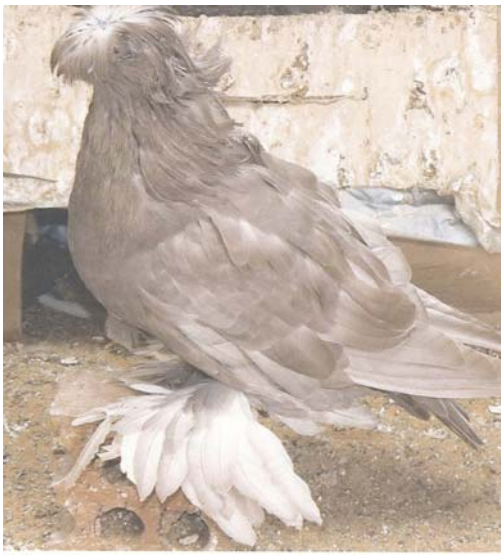
MARIO

Well, that would be interesting mate, could you mate a homozygous black spread to a homozygous ash red T-check and show us the results.

MICHAEL:4mar'07

Below are 2 young lavenders I bred this year.

This one I believe will be a hen. It is homozygous T-pattern, hetero spread. (B*A,S//+,C*T//C*T, G*T//+,+//z*wh) Note it is a very clean lavender, not a hint of mahogany. Why? I believe it's due to no bronze being present and very good penetrance of spread. The mother of this bird is blue, another sibling is very rich black.



This lavender is much darker and is also T-pattern and most likely homo spread. (B*A, S//S, C*T//C*T,+//e,+//z) But it is dark due to carrying rec. red. Het. rec. red darkens the ash red. Almost similar to the effect of dirty. You can see the juvenile feathers have a reddish tinge. The new feathers have lost the red tinge But have remained dark.

MICHAEL SPADONI EMAILS:

Steve, you are correct in your example of the many different gene combinations being erroneously called silver, true silver is a dilute blue (d). The best way is to show the genetic designation as that is one thing that cannot vary between breeds. A strawberry in several breeds are poor coloured ash lavenders (Ba,S). I prefer to call them Mahogany, but there is no mistaking this if we use the genetic notation of the mutations involved. A strawberry racer is (Ba, so).

STEVE SOUZA EMAILS:5mar'07

Thanks for reminding me that we should also use the genetic symbols (the established text shortcut for a gene name) for the bird's genotype (genetic makeup) when describing something. This will go a long way in helping the newer folks understand what is being talked about and will help them when they see it again.

BTW [by the way], the term "Mahogany" (ma) was used by Doc Hollander to describe (what is now referred to as) the Toy Stencil gene (Ts1) before Paul Gibson confirmed that the gene was part of the TS complex. Historically the same gene is also called Modena Bronze.

DEEP THOUGHTS FOR THOSE WHO TAKE LIFE TOO SERIOUSLY: Save the whales, collect the whole set. Support bacteria, they're the only culture some people have. OK… You are so smart, what is the speed of dark?

It is well and good that we use the genetic symbols whenever we are referring to a trait but if we do this we must use the correct ones and not list any that are in doubt without explanation. For instance, Michael, you used (Ba, so) for strawberry and it should have been (B*A, So). And you use the symbols G*T//+, +//z and +//z*wh a lot. I know your birds have a lot of tiger grizzle and pied markings but that does not mean they are necessarily het. gazzi or het. recessive white.

In fact, most of the pied phenotypes are not part of the gazzi complex. They are probably on the same chromosome but not alleles of gazzi (z). My research shows many of them (especially the recessive pieds) are a complex of different pied factors that could better be referred to as a pied (Pi) complex.

Whenever we do not know for sure if a trait is in a particular bird but we believe because of the parents and/or grandparents, that it is part of the genome this probably should be included with a question mark (+//z?) or underlined (+//z).

Oh, yes, Michael, when sending pictures of your birds please try to include the head. I really don't know how those poor headless birds eat. ☺ ☺ ☺.

AMANDA BARBAR EMAILS:8mar'07

Paul, Karl Rau forwarded us your email about our possible ribbon-tail pigeon. Would you be able to answer some questions about the ribbon-tail effect? We have attached a few pictures of the bird to help in positively identifying his colour.

Is this bird a ribbon-tail? Or is the grizzle gene somehow helping to make a similar ribbon-tail effect? What kind of bronze causes the ribbon-tail effect and how does it work? Is the ribbon-tail rare or uncommon?

May we ask you to help when we have colour genetic questions? Or do you know of anyone else who could help us?

[I was not able to make this picture any clearer.]

EDITOR:

Amanda, I would not call this a ribbon-tail even though you can see a whitened bar across the tail, in the adult (shown in the lower left) this has almost all melted away. And yes, I think the grizzle gene has some effect on the expression.

Almost any bronze can, when in the right combination with ash red, produce a ribbon-tail. Ribbon-tail is common in some breeds and rare in others. The prettiest ribbon-tails are produced when recessive red is not present.

I am always available for questions about color genetics. There are a several good source of genetic information available. I would recommend that you join a group site called 'geneticsforpigeons' which is monitored by Graham Manning from Australia. There are excellent people on that site that are always willing to answer or discuss questions on pigeon genetics. There are also quite a few websites that some of these people have that are excellent sources of genetic information.

ED SCHMIERER INQUIRES:19mar'07

Sometime back, there was a discussion regarding the sexing of newly hatched birds. If anyone can help refresh my memory about this it would be greatly appreciated. If I remember correctly, when holding a newly hatched baby horizontally in the hand and looking straight at their vent; either a smile or a frown is viewed. Which sex is which?

LINDA RESPONDS

Smiling, it is a cock and frowning, it is a hen.

JOE POWERS SENT ME THESE PICS SENT BY MICK BASSETT

[These Cauchois show nicely the Ts and crop crescent (bavette). The first is a Ts1 check, the second is a dilute Ts1 check, the third is a complete Ts complex and the fourth is a black. The first and fourth show the bavette which is a Pouter crescent.]




[The first picture is a barred Ts1 Cauchois with bavette. The 2nd,3rd,&4th are Prachen Kanik (which is basically a gazzi pattern with white flights and a white snip mark). You will notice that there are some noticeable differences among them. The first (pic 2) shows a more compact, shorter beaked, short tail version which looks like a cross. The last two show a smoother version with longer wings and tail. Even here there are differences in the length of head coloration with the recessive yellow being a much nicer phenotype.]

SUZANNE COOK EMAILS:26mar'07 excerpts

I am trying to determine the inheritance of color/pigment/modifiers in my Mookee/Tippler cross. I am crossing colors to whites (from what I've gleaned, white birds only pass on the white gene, and if my white is a female then only the male offspring will carry it since Z carry's the color??)

Now with that said, if I cross the male offspring back to the white female, then 50% of those young will show/be white, with 25% males only carrying it and 50% of females with no white whatsoever.

Please correct me if I am wrong, I am trying to figure this out.

Problem 2. One of my crosses is a white hen to a blue indigo cock. He basically looks "white" but a dull/dirty white with black flecks starting at his head and fading into his body. The first baby is showing red/brown. So does that mean that the male was carrying some sort of red? Maybe a recessive red that showed up when combined with white which is also recessive? The baby basically has a light "pink" neck and head, with small bits of red on his first few wingtips. So what is the baby? Is it a reduced blue?

Question number two:

If I am crossing what I am guessing to be a dilute recessive ash red cock to a white female, will the red molt off? Out of my nestlings of that pair, one definitely shows reduced (had pink neck with silvery upper crop). But since it has dark smoke and red flights, maybe it's not.

I guess my biggest question now is what will molt into a white or lighter color? I was completely shocked when I saw my new almond roller molt all her lovely red feathers to a "sand" color, lol. Yet the Seraphim and a few other breeds molt all their red in either the first or second molts. So is there anyway to guess what my baby birds will look like after their molt?? Or will they pretty much stay the same??

I am including a photo of the blue indigo baby along with a wing shot. I need to wait a few more days on the other two. Basically I am trying to determine which birds would work together. Obviously the white from these pairs would be hard pressed. But would something that molts white, or something with a faint color be easily possible from either my blue indigo or my dilute yellow??

PAUL HOLLAND ANSWERS:

White birds pass on much more than the white (recessive white. I presume) gene. Each parent passes on one of each pair of genes. So in addition to a white gene, the white bird is also passing on one gene at the al locus, one gene at the e locus, one gene at the o locus, and on and on. As the white is a female, she is either passing on the whole W chromosome to her daughter or the whole Z chromosome to her sons. The Z chromosome has a gene at the b locus, a gene at the d locus, a gene at the wl locus, etc.

When a bird (male or female) has two recessive white genes, the expression of other color genes is blocked.

Nobody knows where the recessive white, or z, locus is except it is not on the Z chromosome. If your male has a pair of normal genes at the z locus, then all the babies will have a normal gene paired with a recessive white gene. None of the babies will be recessive white. There is no way to tell what the babies will look like from the given information, except that they will not be recessive white, but that leaves a huge range of possibilities.

If you cross a son back to his recessive white mother, the expectation would be ½ recessive white and ½ colored. Both sexes would be presented among the recessive whites. And both sexes would be represented in the colored babies.

If you cross a son to a daughter, then the expectation would be ¼ recessive white and ¾ colored. Again both sexes would appear in the recessive whites and the colored babies. Clear as mud? I must log out, so will leave the rest to others.

EDITORS REPLY:

Wow, Paul, where did the al gene come from. At present recessive white is symbolized by z*wh. I'm afraid you got sucked in by the words Suzanne Cook used. She stated that she was crossing whites to colored. Her whites sent with her email were not white and her colored were not self colored. The youngster in problem #2, of a 'white' hen to a blue indigo cock (which is white with black flecks), looks like a tortoise shell grizzle print with dominant opal.

Her question, …crossing a white hen to a blue indigo cock[pic 1 below] the first young is showing red brown[pic 2 below],will the red molt off? Second question – …crossing a dilute recessive ash red cock to a white hen …will the red molt into a white or lighter color? Third question – Is there any way to guess what her baby birds will look like after the molt? Unhappily my answer to all her questions were NO. Although your answers were ok, they unfortunately do not help her much since they are based on false information to begin with.

Suzanne, the cock bird is not a blue indigo nor is there such a thing as dilute recessive ash red. Just because a bird is mostly white does not mean it is genetically white. The white can be caused by a number of genes and gene combinations and it is safe to say that even an all white bird may not be genetically white but is only white phenotypically.

As Paul Hollander obliquely stated, even genetically white birds (these include recessive whites and albinos) have genetic information at all the other loci that is being passed on with the white. This means that although the bird is white, it has genes that can produce any combination of genetic information so there is no way known to use white as a defining phenotype to move colors or keep track of same.

Your 'blue indigo' bird on the nest looks like it is probably a grizzled pencil or a spread almond or faded penciled bird. Your 'dilute recessive ash red bird' is apparently a medium print tortoise grizzle dominant opal.

There are several people on this site that can help you a lot with your matings. Pictures are very important for this to be the most helpful. Pics sent by Susanne below.

This is Suzanne's "blue indigo cock".

This is Suzanne's "young showing red/brown".]

[This is her light 'pink' "showing bits of pink and red with smoke and red flights"].

EDITOR: THE OLD SLIGHT OF HAND REARS IT'S HEAD AGAIN.
PAUL HOLLANDER WRITES:27mar'07

"Ron Huntley wrote: 'Kenny's question to Mario is really a little genetic puzzle game using two autosomal recessives (al//al, e//e) genes. Since these are both autosomal genes they have nothing to do with sex linkage and he knows it. It's a puzzle, designed to confuse someone like Mario when they ask why blue/black, when it comes to sex linkage, is not treated in the same fashion as ash red and brown. Kenny and Paul H. never seem to tire of using it. It must have made a real impression on them when they first heard of it.'"

The puzzle is confusing only for those wedded to the idea that there is one sexlinked blue gene. ☺

Albino is recessive to blue. Recessive red is recessive to blue. Therefore, neither an albino pigeon nor a recessive red pigeon has the one and only blue gene. Yet, crossing the two produces blue babies. This is impossible if there is one and only one blue gene.

Both albino and recessive red are autosomal mutants. As shown by mating either type of pigeon to a blue pigeon produces all blue babies and does so no matter which sex is the blue. Therefore, the one and only blue gene cannot be sexlinked. On the other hand, dilute is recessive to blue. Yet blue acts as if it is sexlinked because mating a dilute cock to a blue hen produces dilute daughters and blue sons. It is a little difficult to argue that the one and only blue gene is sexlinked and not sexlinked at the same time.

The only solution to these logical contradictions is that many genes cooperate to make blue coloration. Some of these genes are sexlinked and some are not. Changing any one of them changes the pigeon's coloration to something other than blue.

EDITOR:

Paul, Paul, Paul, albino is NOT recessive to blue NOR is recessive red recessive to blue. There is NO blue gene! Your father told you this but you failed to comprehend. As Ron Huntley wrote, your little genetic slight of hand or puzzle is designed to confuse not help the increase of understanding of the genetics of the pigeon.

Albino mated to any color will produce whichever color is dominant to 'blue' and albino no matter what the color is. The same is true of recessive red.

You know (I hope) and I know, that if you establish a line of brown (or homozygous ash red) carrying either or both of the genes for albino and/or recessive red that when recessive reds are crossed with albino NO blue phenotypes will result. Now what happened to all the "blue" sites? All mutant genes have wild type but these are for the trait. The opposite of wild type is a mutant. The opposite of a mutant is wild type for that trait whether it is polydactyly, leg feathers, crest, shape, bone length, bill length or feather color. For simplicity sake, we cut corners and normally only name the mutant because without the mutant we have no idea what that site does. This should not deter us from saying that this mutant is dominant or recessive to the norm which we call wild type.

To try to make all these sites 'blue' is ludicrous. What your father tried to convey was that the totality of all the genes prior to mutation makes up the genome of the wild type pigeon; not that they were all the same!!! The only thing that is the same is the individual cells of the organism. Each carries the blueprint of the total organism, even

though their position in the corporate body causes them to produce the parts necessary to produce the part, they still carry all the same information unless some have mutated.

The only logical thesis is that the trait that produces the black pigment that makes the "blue" pigeon is on the sex chromosome and thus by definition is sex-linked just like its two alleles (brown and ash red).

EDITOR:

Thought I would throw in a few puzzles for you readers. Three years ago a mutation took place in my stud of Egyptian Swifts. It exhibited itself in the flights and tails of my sulfur blues. The flights were lighter and the tail bar had whitened areas delineated by dark edges. See picture 1. I mated him back to his mother and they produced more like him. I mated him to other sulfur blues and they also produced more like him. This year I mated him to a self black hen and they produced the youngster in pic. 2. These are pureblood E. Swifts. At this date they have another in the nest.

Male E. Swift mated to a self black E. Swift

Produced this youngster.

Young from Black Timisoara X brown barless. Undergrizzle showing on Brander bronze. Roller

The above two (Ttg) young are from a crossing of a black male Timisoara (Ex two black Timisouras that throw black, dun, brown & khaki young). The left one is spread brown and the right one is the first white one I have ever hatched. As you can see, it is now

molting in color. Will wait on it to see how much color molts in. The Brander bronze undergrizzle marked bird is from two excellent colored Brander bronze Show Tipplers. Occasionally these birds throw a recessive red that always molts to mostly white. This youngster is bronze and again time will tell how much more white molts in, if any.

This next pair of pictures will be put on the (geneticsforpigeons) group site for discussion also. How many can you recognize as to their genetic makeup? Can you pick out any ash yellow? The first picture are all Egyptian Swifts and the second are Homers, HomerXRoller, and Rollers.

Clue: Only one is ash yellow, some are spread, most are not, there are 3 genetic colors..

DEEP THOUGHTS FOR THOSE WHO TAKE LIFE TOO SERIOUSLY: 42.7% of all statistics are made up on the spot. 99% of lawyers give the rest of them a bad name.