



Black Whiteside



recessive yellow whiteside



recessive red whiteside

# PIGEON GENETICS NEWSLETTER EMAIL VERSION FEBRUARY 2006

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Old Harold's in the hospital, he was sick. One young nurse there drove him crazy. Every time she came in, she would talk to him like he was a little child. Saying things in a patronizing tone of voice like, "And how are we doing this morning, or are we ready for a bath, or are we hungry?"

Old Harold had had enough of this particular nurse. One day, when he had breakfast, he took the juice off the tray, and put it on his night stand. He had been given a urine bottle to fill for testing. The juice was apple juice. So... you know where the juice went! The nurse came in a little later, picked up the urine bottle and looked at it. "My, but it seems we are a little cloudy today."

At this, Old Harold snatched the bottle out of her hand, popped off the top, and drank it down, saying, "Well, I'll run it through again. Maybe I can filter it better this time."

The nurse fainted!.....Old Harold just smiled.

**DON'T MESS WITH OLD PEOPLE!!!!!!**

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JUDY IN OREGON EMAILS:30 aug'04

Does anyone know the difference between a Roller and a Tumbler?

### MY RESPONSE:

Judy, I tried to find a good definition to rolling and tumbling. I did not come up with a precise definition but basically a Tumbler performs one or more backwards tumbles like a person on a gymnastic mat. The Roller performs a series of tumbles like a car wheel going backward around the axis..

Some Tumblers will fly in a straight line and back flip once, then fly, then back flip, etc. Some will perform a series of these back flips. Most Rollers do the back flips in a series without flying in between. The Roller normally loses altitude as it rolls whereas the Tumbler may not do so.

*How is it that we put a man on the moon before we figured out it would be a good idea to put wheels on luggage?*

There are Parlor Tumblers that flip a couple times from the perch (or your arm) to the floor. The Parlor Roller may spin (backflip) for a hundred feet or more without stopping. In fact the latest winning Parlor spun over 300 ft. There are many types of rolls performed by some breeds of Rollers and there are several types of tumbles performed by Tumblers. All Roller and Tumblers apparently have the gene “ro” for rolling and then other genes modify or control the speed and repetition of the roll or tumble. However, this area needs a lot more research.

Most aerial Rollers fly up 50’ to around 500’ and then swing into the wind and roll backward. Some mid eastern varieties roll wing-over-wing in a corkscrew motion and others dive down toward the loft then roll upward while others do a barrel roll on the way down.

Many Tumblers are muffed, some heavily, while no good Roller is known to be heavily muffed. I know this is more than you asked for and really does not answer your question. But I hope it helps.

#### RICHARD CRYBERG EMAILS

In airplanes there are two types of rolls possible. The first is called an aileron roll. In an aileron roll the fuselage of the plane stays on the axis of flight and the plane simply rolls in one direction or the other. This is the roll you see about 98% of the time in air shows.

The second type of roll is a barrel roll and is much more complicated to perform. In a barrel roll the planes fly in a corkscrew pattern. In fact go to an amusement park and they often will have a steel roller coaster called the cork screw or something close. These roll in a barrel roll.

I doubt very much if any bird actually fly a barrel roll. More likely they do the equivalent of an aileron roll. At least all the birds I have seen behave this way.

#### STEVE SOUZA WRITES

I doubt that the birds do a barrel roll too. In fact my Birmingham Rollers actually do a loop not a roll. With Birmingham Rollers their wings have different joint/muscle capability at the shoulders than most pigeons allowing for greater range of movement and control. They can actually “flip” backwards in flight allowing for the backwards head-over-tail type of maneuver.

#### JOE COSSICK EMAILS

Just to shed some light on the barrel rolling pigeons.... The Donek spins or rolls wings extended out and cork screwing. They have a few different types of spins, some will go fast clockwise, some will go clockwise then stop and go counter-clockwise, others just a slow corkscrewing roll. These birds are from Greece, Turkey, Macadonia ..and a few other places. If you have not seen the Donek perform you should go out of your way to do so. You won’t regret it!!! I used to breed Doneks and fly them. But mostly fly my Rollers and some Dewlaps.

*Remember: Faith is the ability to not panic.*

BOB McGUAN EMAILS

I have attached a couple pics that I found on the Yahoo group. Can you tell me more about what they are genetically? If I am able and have all the factors in my Rollers, I would like to try them. Just need to know what is involved in the two factors.

EDITOR:

Bob, The first picture is of an Oriental Roller and the coloration is a mix of genes that produces a phenotypic color very similar to what is known as Yellow Atlas in the Arabian Trumpeters. The easiest way to get this color into your Rollers would be to purchase a bird like this and breed it to a nice blue bar Roller.

In order to find out genetically what the second bird is or even what variety it is one would have to know more about the parents color etc.

GERALD DOOLEY WRITES: excerpts and combination of two emails.

One bronzy mutant that can be easily overlooked that is particular to Homers is Velvet. It is usually a dull bronze. I overlooked it for a couple of years until I mated a Velvet cock to a Faded genetics bird hen. I got two whitish squabs. Then I began looking. Some velvets are easily noticeable, others aren't. It shows up best in T-pattern birds, but I have produced them in Check and bar. I think it is another allele of Almond.

This is real bronze coloring. Somebody, years ago, made a big mistake. A Racing Homer fancier handed a genetics somebody and asked what it was genetically. The genetics person did not notice the bronzing and described the bird in terms he knew – Dark T-pattern. I understand how the mistake was made and I think I know who made it. Not all Velvets are dark T-pattern and not all dark T-patterns are Velvet. The bronzing is easily overlooked.

I gave three Velvets to Paul Gibson. [Unfortunately one of these died and the other two never mated up so I did not get any useful info from them, sorry Gerald.]

RICHARD CRYBERG emails 2sept'04

In the brief discussion on Dirty, you say Dirty darkens the plumage and causes dark beaks and legs and skin. In my homers I have some that fit Dirty in every respect and some that only partly fit. They are along either blue or blue check. One pair consistently throws young which are much darker than wild type plumage, including dark

under the wings and much darkened beak and legs as young birds. On the other extreme, I had one pair that threw a chick that had the darkest legs as a nestling that I have ever seen. This squabs legs were almost 100% black by 48 hours. It also had a very dark beak. The feathers under the wings were dark. But the rest of the plumage was not a bit darker than wild type. And it was a bird destined for my freezer. When I picked it, the skin was not a bit darker than wild type. In fact, this pair never throws young with plumage any darker than wild type. I have other pairs that throw young showing characteristic dark bill and dark legs and dark under wings along with normal colored plumage and normal colored skin.

Care to comment on how variable Dirty is? The stuff I see on the web and in the books does not say it is variable at all.

I recently fledged an interesting Racing Homer. It is a recessive white and has tiny flutes on the feathers on its back. Not every feather, just 30 or so on each side. The very tip of the feather is sort of fanned out and maybe twisted and sticks up distinctly. Neither parent shows it. I have raised about 12 young from this pair and this is the only one that shows this. Do you think a bit of Frillback got into this birds recent ancestry?

#### MY COMMENTS:

Your discussion of Dirty is quite good. I have had the same thing happen with my birds. First, the skin of the body does not stay dark but is very much like normal in the Blue bar or Blue Check adult. I have also had squabs with white and black mixed scales on the feet. There is a darkening factor called Sooty that darkens the feathers and one called smoky that darkens the feathers but lightens the skin and beak to near white even on a black bird.

Second, there are a couple of nebulous darkening factors that have not been named yet. Sometimes in older literature they are referred to as smutty or smudgy but I do not know exactly where these fit in. Also, I have caught wild pigeons that have various darkening of certain areas and these have not been studied or named.

I, too, raise recessive white Racing Homers and have some with flutes on the wing shield. Do I think there may be some Frillback in the ancestry? Well, it is not impossible, but rather I think it is probably just mutations like what were used to produce the Frillback. I did experiment with the Frillback mutation and outcrosses showed that there are two mutants that make up the frilling. Now, there are possibly other mutations that produces the Shirley Temple like curls. The Ptarmigan breed is based on one of the Curly (Cu) mutants. So, yes, the fluting you see may very well be a similar mutation. However I have had no luck upgrading it to anymore than just this fluting.

#### **DID YOU KNOW??**

47 countries have reestablished their embassies in Iraq? That 3100 schools have been renovated and 667 more are being constructed or rehabilitated?

That Iraqi Police have over 55,000 fully trained and equipped officers?

That 4.3 million Iraqi children were enrolled in primary school by mid Oct. 2004?

That there are nearly 2 million cell phone subscribers in Iraq?

That Iraq has 75 independent radio stations, 180 newspapers, and 10 television stations?

WYNN SMITH EMAILS:5sept'04

I've attached a photo with the hope of learning whet genes my new youngster carries. I took photos of his parents, but first I want to ask how much resolution should I use when sending pictures to this group? Pop is a red bar. Mom is brown.



Picture sent by Wynn was darker (see 865 below).

DREW LOBENSTEIN WRITES:

You have a red spread cock split brown. You say the dad is a red bar (mealy Ash red bar?) The mother must be a spread brown to get this from a red bar cock. The flecking in the tail and secondaries indicates that it is a male. Occasionally an ash hen will have flecking but it is usually lighter flecking than in a cock and is not common. This looks like the same ash expression I got when I mated Swing Pouters one time.

RON HUNTLEY WRITES:

I disagree with both Drew and Michael. I think your bird is a spread Indigo, het blue/brown plus smoky. I sure would like to see photos of the open tail. If it is an Andalusian then the sire was not a red bar but is a homozygous Indigo which is a mimic for Ash red. Ink spots are common on Indigo feathers and they are not caused no the same way as the sex linked marking of het Ash red.

WYNN SMITH RE EMAILS:

Thank you for your replies. Here is a photo of 865. Please note I am the one on the left. ☺



Young 865



Dad to 865

All F1 cocks look like the Dad.

*Blessed are the flexible, for they shall not be bent out of shape.  
Silence is often misinterpreted, but never misquoted.*



Mom of 865



Brother of 865

The F1 hens show a little more variety than the Mom.

RON HUNTLEY REPLIES:

Sire is smoky, Indigo, blue bar. Dam is Spread, smoky, brown bar. That should explain the outcome of 865 and its nest mate.

MICHAEL SPADONI WRITES:

I have read all the replies confirming Ron's evaluation. Just for some fun, I'm going to take the devil's advocate route.

The cock is a mealy with the dirty factor, also smoky (B\*A//+, V//+, sy//sy) as is the barred youngster. Why? Because it is not common to see an Indigo show a lightened tail bar, but it's expected with a mealy with any additional darkening factors such as dirty, bronze, etc.

The hen is a dun, (+/., d/., S//+) & looks dun, but as we know dun & brown of various shades can look almost identical, if it is brown I would expect to see faded tips on the primaries, if anything this hen has darker tips? Additionally the striations on the youngster look black to me.

The original youngster in question. #865, by others reckoning then must be an Andalusian (+//b, In//+, S//+). I say it's a lavender (B\*A//+, S//+, V//+, sy//sy) and its nest mate is a mealy (B\*A/., V//+, sy//sy).

Also for the white to show up on the mealy youngster both parents are hetero for a form of recessive white/pied. (white flights?)

Just an alternative, need to go further up the family tree to get the definite answers. ☺

RON HUNTLEY REBUTAL: EXCERPTS with inserts by Editor.

I say the cock is smoky, indigo bar. [Ron sent a couple pictures showing that indeed Indigo birds do show lightened tail bars. Ron is right especially on homo Indigos. I believe the male is a smoky and may be Dirty but is homo Indigo bar. Many of my homo Indigo bar hens looked like this bird.]

As for the hen, I said she was a spread, smoky, brown bar. You classify her as a dun or spread dilute blue. However, she just as possibly could be a brown spread smoky since smoky would add pigment to the brown wing tips. [I think the hen is a Spread, dilute het Indigo smoky. She could be either brown or dun. Both look like this (dark mud).] [You can see why even with pictures, differences of opinion abound.]

**ON THE INDIAN FANTAIL INTERNET CLUB, DAN STILES POSTED A PICTURE OF A MOSAIC WHICH STARTED QUITE A GOOD DISCUSSION ON MOSAICS.**

Some of the questions – Do mosaics always have two colors or can they just have split genes? How can you explain how a mosaic is produced? Can you breed mosaics from a mosaic? What is the bipaternity or 2 sperm theory? I was taught that only one sperm can fertilize an egg, how can it be possible for two of more to do so, wouldn't there be too many chromosomes in the cells?

**RON HUNTLEY AND I RESPONDED AND TRIED TO EXPLAIN MOSAICS!**  
RON HUNTLEY: EXERPTS

The types of mosaics we are discussing here are known as bipaternal. The late Dr. Hollander, a professor of genetics put forth the theory of two sperms fertilizing a single egg as one way to create a mosaic. He specialized in the study of the bird, mice, and fruit fly genetics. He loved pigeons and was without a doubt the most knowledgeable expert on their genetic makeup. The vast majority of what we know about pigeon genetics comes from him. Sadly he passed away the spring of 2004 at the age of 90.

Robert Raymond, you are correct in that only one spermatozoid penetrates the egg membrane to fertilize it. That's what's supposed to happen; however, we are discussing the abnormal not the normal. Some hens are deficient in the chemical that prevents multiple sperm entry and are therefore prone to production of mosaics. Thus two sperms on occasion do enter the membrane before the defensive mechanisms take effect.

As proof of the two sperm theory, let me point to the existence of a bipaternal bilateral 2 variety of pigeon bred by Marvin Lee of Prairie Grove, Ar. This bird was a sooty, blue bar, [hetero] baldhead roller on one side and a black homozygous Chinese Owl on the other side. The fact that this specimen is of two different breeds, and involves more than just the sex chromosomes is all the more evidence of the two sperm theory. I believe Dr. Gibson may have the body of this bird preserved. [Indeed I do.] Ok, Paul, can you post some of your thoughts on this to the group?

EDITORS REPLY: EXCERPTS

Having been associated and consultant by Dr. Hollander for decades, I observed and tried many theories about this phenomenon of mosaics in pigeons and in plants.

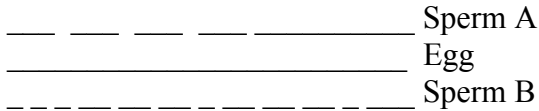
In plants, most mosaics are somatic and easily propagated.

In birds, some mosaics are somatic and not easily propagated; though there are some ancient records that it has been done. One of the reasons Dr Hollander's theory (of bipaternity) seems to be the right one is that the mosaics are made up of available genes and not new mutations. I have reared a number of mosaics over the years and all of them fit the scenario. I wrote over a page explaining the process of cellular division and how mosaics could be produced.

It was stated that a cell with three chromosomes could not live. This has been proven to be false in many insect and plant tests and manipulation results. I raise flowers that are tetraploids, as do many people. Even humans are known to have sex chromosome configurations of XXX, XXY, XXXY, XXYY, and even XXXXY.

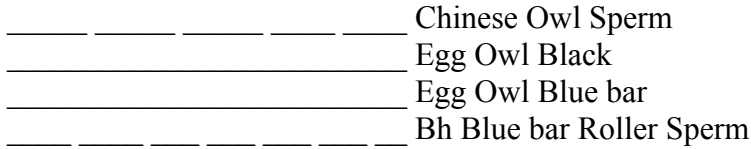
Somatic mutations can occur anytime after fertilization of the egg.

Let's consider the bipaternity sperm theory. If two sperm fertilize the egg at or nearly at the same time you would get a configuration somewhat like:



As the egg starts dividing the Sperm A and the egg would produce cells that become the right half and Sperm B and the egg would produce cells that produce the left half.

In the case of a bird like the half black homozygous Chinese Owl; Sooty Blue bar hetero Baldhead Roller reared by Marvin Lee, the above would work better if we have a bipolar egg or if you prefer, a Siamese egg.



This would allow the one side to produce the homo Owl side and the other to produce the hetero Owl/Roller side.

Yes, after the bird was accidentally killed, I had Mr. Lee freeze and send me the bird. I have it mounted. Dr. Hollander assured me that it was a waste of money to have it mounted since everyone that sees it will just say it is a hoax. The Owl side is completely Owl with all the Owl attributes and the Roller side distinctly Roller. Even measurements of the beak show the Owl side and the Roller sides to fit each some. The bone structure and muscle formation was split right down the middle also. Here are pictures of the bird taken while alive.



Right side of mosaic

Left side of mosaic

Mosaic Ch. Owl/Roller

As you can see the full frilling of the Chinese Owl is present on the right side. The head is just slightly lopsided because the Owl half is slightly smaller than the Roller side. The division is almost perfectly down the center so that it looks like half a Roller glued to half a Chinese Owl.

*A GRUDGE IS A HEAVY THING TO CARRY!*



KIM WRIGHT EMAILS:8sept'04

Does the Bh gene refer to just the white headed part of the normal Baldhead tumbler phenotype or to the white head, white flights, and tail grouping? I read somewhere that the three areas on Baldheads can be separated, that just white tailed or white flighted or white headed youngsters can be bred. Are the three linked.

I am endeavoring to create recessive red Baldheads. Last season I crossed a red self cock to a Baldhead T-pattern Kite hen. I kept two of the young and have them mated together. The first three young were like the parents – small areas of white on the head, some white flights, and coloured tails. There are two more in the nest now – both red (yippee!) and one that looks to have a good number of white flights, a mostly white tail and considerable white on the head. The other in the nest shows typical homo Bh markings. [Whoops! You described the same bird two different ways. The other bird in the nest is all rec. red with maybe a few white feathers on head.]

Now from what I've read, this reasonably marked e//e youngster is likely to progressively moult in more white particularly on the wing shields. Is this correct? If I'm planning to use these rec. red baldheads in an Almond Bh project – is it detrimental to use the e//e Baldheads with these extra white markings?

EDITOR:

Dr. Hollander named this trait (Bh) but was not specific as to what it included. He said the pattern seems to be a probable unit that shows incomplete dominance to self.

My experiments have shown that “Baldhead” Rollers phenotype mated to self produces birds with white flights, dark tail, and a white mark across the top of the head in the vicinity of the ears. Further research shows that the head white can be inherited by itself and is a partial Dominant, the white wing flights are a dominant white independent of the head color and the tail is a recessive white independent of head color. You can produce any combination with or without white heads.

There is some synergistic effect of white flights, white tail and white heads which produces a white vent area or white belly. Also it appears that the white trait common to the “classic Baldhead” are linked. All the rec. reds I worked with showed that the Bh gene locus (as postulated by Joe Quinn) is very likely linked to the e gene locus on the same chromosome. When you got a crossover putting them both on the same chromosome then the bird came out of the nest with the “classic” Bh pattern and molted to a gayly pied marking completely destroying the phenotype.

Trumpeters evidently have a different baldhead gene. Ask Michael Spadoni about them. Please let us know if the birds stay bright red Bh pattern or molt in more white.

SOME INTERESTING PICTURES:



nice bronze neck Mookee  
sent by Tristan



Qualmond Check hen  
sent by Steve Souza



Bh Dom. opal with Ts and frill stencil  
Sent by Andrew Reed



Hawks waiting in our tree for a pigeon dinner!  
Just kidding, actually Vultures waiting for a  
raccoon dinner. ☺ ☺ ☺



Mosaic Modena, notice tail is half blue  
and half black also. Sent by Frank.



Nice Bronze Show Tipplers  
Sent by Mick Bassett

HOPE EVERYONE HAD A MERRY CHRISTMAS AND WILL HAVE A HAPPY  
PROSPEROUS NEW YEAR. MAY ALL YOUR YOUNG BIRDS BE WINNERS.