

The Pigeon Genetics Newsletter, News, Views & Comments.  
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( Founded by Dr. Willard .F. Hollander)

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It is not just a matter of

## BLACK & WHITE!



Mr. Thomas Demunik of Ontario Canada who came to us years ago from Holland , and who also had been comparing notes with fellow Breeders in Europe, began corresponding with me regarding his interests in WHITESIDE. He imported some of their Dutch w/s birds after a visit home to help him try to figure out what is going on with WHITESIDE !? The following are his comments: { all material has been edited for spelling and terminology use, and brevity as he sent many emails over three years. }



A friend asked if I could breed some black **Vienna w/s** for him as he did not have the space and had three pair to breed from. The original pair and two pair of the offspring, which turned out to be all cocks. About that time I had two **Dutch w/s** hens come in from Holland one a black self and one over marked shield mottled. So I crossed these Dutch hens with two of the shield mottled Vienna young cocks. The black Vienna birds were extremely wild and didn't handle well providing you could catch them , they appeared still to be a flying type. He offered me to pick one young out of the cross for myself which I did (see picture attached) .

All the young out of these matings including the one straight pair appeared to have light classical grizzle in the black ground colour around the head , neck and a bit underneath. All also had light grizzling on the white shield. After the first molt the shields became tigered , plus a lot of the light grizzling in the ground colour darkened in all and disappeared in some. I think this is what Het u/g in the small feathers is supposed to do , whereby Homo u/g lightens the flights and tail feathers.

The question I have is - was it the modifiers that darkened the ground colour or was it Het. u/g ? For your info and in order to focus on next years breeding program this is what I think I need to produce black w/s no matter if it is Dutch w/s or tippler w/s. (A) for the shields Het. Classical and Het.Tiger Grizzle (B) for the ground colour T- Check, Spread and modifiers Dirty and Smoky ( not sooty as it smudges the white in the shield)

The w/s marking obviously has to do with coarse spread and I wonder if kite or bronze has something to do with it , as you see in other breeds including saddle marked birds.

**{Editors' response via email}** The immature grizzled feather edges of Tigers have nothing to do with either (Ug) or Classical Grizzle (G) and I doubt Sooty. That is the effect of Spread factor resisting the effects of Tiger grizzle which after the first moult gets to take over those feathers completely. Personally I have never seen a pigeon that expresses (Ug) on the "underbody" , always only in the flights, secondaries and Tail feathers in adult birds. These often , especially as juveniles , are quite light and darken with the first moult as (Ug) whitens all feathers basally , but we really do not notice it as much in all of the smaller feathers , basically the very opposite to Tiger. Paul Gibson is the one who identified the lightly frosted underbodies as also Undergrizzle. "PURE" grizzle can refer to any grizzle trait that has both parents contributing the gene to a given bird. In Tigers (hetero , impure is Mottle), and ( homo , pure is Tiger). In Classical Grizzles (hetero , impure is Salt & Pepper), and (homo. pure is Storked). I will leave you with that for now and try to get back soon. ~ Bob

{Here we corresponded back and forth considerably basically with the belief that Tom was indeed at that point breeding with Tiger grizzle and spread factor.}

**Tom adds later :** The reason I am so keen on finding out the genotype of the tippler hen is that I always thought that the difference of a print tippler and a black ws is spread and the Dirty modifier and that the focus should be on the ground colour and not a so-called ws gene. That is why I mated the ( rose wing ) Hetero tiger ws to the print tippler in the first place , since then I have learned from our discussions that tiger needs spread to express and is dominant over classical, hence the off spring on previous discussion are tigered. I think you believe the hen is tiger whereby Bill and I think it is a classical grizzle print so I would like to confirm it if we can. Editors ' note :{ At this point there was some confusion due to Tom's understanding that Print Grizzles were simply Classical Grizzles with additional modifiers, and not a separate genetic grizzle trait} He goes on to say ...

I am 99% sure that it is not possible to produce a black with ws potential without Hetero Kite/bronze being present . When Kite/bronze is not present the best you can hope for is a shield mottled marking and in those the black body colour is better and more grizzle free . I am sure with selection the shield mottled type can be stabilized . The same cannot be said when Kite/bronze is present , but I have not had the black ws long enough if stabilization is possible in those. The two black tipplers in my CPFA add are the same bird , the ws picture is before he became too dark to be a ws and thus is now a shield mottled bird. That particular bird showed Hetero Kite/bronze being present , it is also the grandfather of the bird shown in my e-mail to Bill above.

I have two black Vienna/ Dutch HF cross cock birds that are brothers. One had ws potential and has darkened since , the other was a clean marked black shield mottled , it is now three years old and is still the same , the shield did not darken so am optimistic the shield mottled variety can be stabilized .

From where I started to where it ended up sure has been a interesting journey and could not have imagined what I learned along the way. Thanks to a great deal of friends like yourself who helped me along the way .

The smoky and Sooty factors and how they apply in the black w/s is a legitimate argument in my opinion, as is Classical G ( print grizzle ) over Tiger Gt.

I originally thought Spread was a required factor , until realizing late in the 2018 breeding season that Hetero Kite/bronze is a beneficial factor for the white shield . The young for the white shield type are from non Spread , Hetero Kite/bronze parents . Likewise the shield mottled offspring are from Non Spread dark Kite with no bronzing showing .

The rose wing pattern have more white under the wing if smoky is absent and from 2018 breeding appear to be Hetero Spread as are those with only the odd white feather. The black self's with black beak with no white anywhere appear to be Homo Spread as per results from last year's breeding.

Furthermore if there is such a thing as an enabler to produce a black w/s , it might well be Hetero Kite/bronze plus of coarse a full complement of the darkening factors to control the black ground colour.

As you know both Bill and myself are planning test matings the next few years , Bill with the reds and I with the blacks. It should be interesting to see parallel results and how both varieties are connected or linked.

Finally the hand out article is only for those that want to try the black ws breed in the hope that they become part of exploring the genetics in the breed and to help to confirm or revise what is currently known or speculated.

The following three revised articles one part two in separate mailing as it is over 25 MB and too large for a single mailing.

I have nothing more to add or change until after the 2019 breeding season is complete . It's a game of anticipation of what shows up from one season to the next.

Some observations along the way : "Ed. note" { some of the genetic traits and their actions or functions as stated below may not be entirely correct, thus not the cause of some of the phenotypes as given.}

**REC. RED / YELLOW** due to its expanding white feather factor, it is recommended to breed mottled shields to white side shields to control the shield pattern. The Grizzle factor is "detrimental" to breeding well marked recessive reds and yellow w/s birds . Light coloured flights as a youngster usually darken after the first molt , if the Sooty factor is present.. Recessive red and yellow bleach out when exposed to continued sunlight. It appears that the deep coloured recessive red timplers take longer to develop into shield mottles or w/s than the lighter version , probably due to Sooty .

**REC. REDS OUT OF BLACK CROSS:** Breeding red w/s out of black, you would actually have a black w/s with two times rec. red factor ( Rec. red covering a black w/s ). These young reds out of black usually lack the rich red colour of straight bred reds. These reds also inherit the marking problems one can experience with blacks, such as white in the head, snout and body underside due to grizzle factors.. Not much is gained with reds out of blacks except that these reds as young can be shield marked in the nest. "Straight bred reds" are always solid in the nest and usually become " shield mottles" after the first molt and " w/s " after the second or third molt, with minor plucking.

**BLACK WS / RED WS CROSS :** You will have black's that carry recessive red and have improved deep colour . The F1 first generation are most always black solid or rose wing marked, with the occasional Print . It appears that a single dose of recessive red opens up the white shield pattern in future black matings. When mating the F1's back to each other you can get a wide range of expressions from self's to open Print patterns , including over marked recessive reds of poor colour and of little use to either red or black w/s production..

**BLACK W/S GENETIC REQUIRMENTS :** It is my opinion that the difference in tippler print and stork marked birds from the white side markings is spread and the darkening modifiers . In order to have any chance to produce black white sides, T check, Spread , Dirty, smoky and Sooty appear to be requirements. It appears that Hetero recessive red inhibits Sooty from mottling up the white shield after the first molt. Breeding over marked black w/s to solid or rose wing blacks has possibilities providing Dirty,smoky and Sooty are present . Breeding a self or rose wing w/s with Spread , Dirty, smoky and Sooty to a print or stork marked pattern has equal possibilities to producing black w/s however particular attention has to be given to establish a solid ground colour in these off spring . Small gray feathers in face and head are the result of "classical grizzle" and may disappear after the first molt , if Sooty is present.. Homo. under grizzle will lighten flights and tail feathers but Hetero under grizzle in the small underneath body feathers will often darken and tends to disappear after several molts, particularly if Sooty is present.. I currently believe that " smoky" smudges the shield of black w/s young in the nest and "Sooty" has a tendency to mottle the shield after the first molt ,

giving it the appearance of Tiger grizzle. In my opinion Tiger grizzle is detrimental in producing black white sides as it lightens with age.



Hi Bob

I have just come back from the coop handling more young birds to study what I am seeing in the juvenile rec. red birds.

Another thing is that some of those with the Albescent strip missing and I suspect are smoky also show almost a light checkering through the rec. red on the shield . like they are not a even self colour in that area. Not only that those secondary feathers become very fragile and frayed until they moult. Is it possible that this is smoky or is it the affect of T- check under the rec. red with regard to colour. The primary flights are always a bit light at this stage on all .. All feathers on all birds darken up after the moult and all feathers will look healthy thereafter. Of course they are shield mottled or w/s after the moult and no feather defects can be detected as long as I have had them..

Attached are of a juvenile that I just took and one of my old show bird that the juvenile will eventually look like.

I apologize for adding bits and pieces in this discussion , I am a bit embarrassed for not processing everything I am seeing all at one time. It must be a senior thing . Tom.



Hi Bob

You know I have no idea how you and others can possibly confirm the genetics involved in the black white sides without breeding these, although I appreciate you doing it. Heck You and I can't even agree on the definition of Print grizzle , nor can Bill G and I agree with You on the complete definition of under grizzle , simply because our experiences are with different birds then yours have been , I think .

This is my third breeding season with the black white sides and have spent many many hours studying known genetics and modifiers in order to apply same to what I was experiencing . I realize that these type of studies sometimes conflict with established theories and that is just the nature of these discussions and I think unavoidable but not particularly enjoyable at times .

I feel pretty confident that the Dutch black white sides are Blue series, bar pattern, Homo Grizzle or Print grizzle , Homo smoky , Hetero Kite or Brander, Hetero recessive red , Hetero Dirty , Hetero Spread and Sooty. All have light or horn coloured beaks in the nest that darken after the moult . Every Dutch black white side that I have raised has been over marked as a juvenile and cleaned up to become show quality after the first or second moult with very minor plucking of the shield..

See the attached picture of a few juveniles just weaned they will change a lot after the moult with a much cleaner expression.

The Dutch HF black "Shield mottled" variety are Hetero smoky and are dominated by Dirty. You generally see no grizzling in the black when Dirty dominates smoky and/ or Grizzle , even as juveniles. Although the shield mottles are nice they are useful when mated to a over marked bird to create some show quality white sides. Selection is important as in most breeds.

"Editor's note" { I think it would be extremely difficult if not impossible to avoid having just about every individual trait in the homozygous state when repeatedly breeding these Black base birds together. }

The Rose wing variety are the result of Spread and or Dirty.

The Pepper heads are Homo Spread on Grizzle.

The Vienna and all of the Show tiplers with the exception of one crossed pair show no bronzing but all carry recessive red. This season I get some of these that have white side potential but with dark beaks in the nest so those are different from the Dutch ws.. It is possible these are T-check along with Dirty but I currently don't know that . I will have a sample picture of one after the moult in the fall.

I looked at all the factors that might influence light colored beaks , these are in order of expression : smoky , recessive red ,Pied, Homo Grizzle, Spread Ash, Blue series bar, (wild type) { Wild-Type does not lighten the braks} . So it's no wonder that the white

sides are light beaked as juveniles when they have several of the mentioned modifiers in their make up...

The dark beak contributing modifiers are Dirty, T-check , Sooty , Kite/bronze , again it's no wonder that the beaks darken with age in these. " Editor's note" { I am not aware of any data that suggests that Sooty or Kite darkens beaks }

Kite and Dirty combined on the same bird are really affective in covering the grizzling in the black markings . Called the affect of Dirty/Kite by some fanciers. I don't believe that is recognized by the genetic group but it does happen in my view.

Right from the beginning I took a two step approach in learning to understand the breed, one was to concentrate on the shield requirements and the other on the requirements of the black markings . That took a lot of time with no prior genetic experience with these to figure it all out. Thanks to a great deal of help from you and others in the hobby and for that I am grateful Bob..

So for what it is worth this is where I am at with these. I don't care if others agree with these findings or not , it's all about getting breeding information out there so the next generation of fanciers might try these and be successful with them.. Bob if I get anymore birds of interest I will send a picture otherwise this project will end for me after this season . My age is telling me to start downsizing and just keep a few birds for personal pleasure . Again thanks for your dedication in genetics , past and present . It amazes me how you keep up with it all.

Tom

2020 BLACK WHITE SIDE BREEDING IN REVIEW With the moult complete after another season, it is time to review and assess a path forward in trying to stabilize the markings in the black white sides. OBSERVATIONS:

Those juveniles born with a smudged up white shield all clearly show that smoky is present. These youngsters will all darken after the moult and become shield mottled to a variable degree. Those juveniles with clear white shields are generally over marked with grizzling in face, neck and underbelly. These youngsters do not show any sign of "smoky" and their shields do not mottle up like those expressing smoky.

We know what darkening modifiers are present in the Dutch HF black white sides, such as smoky, Dirty, Kite/bronze and possibly T check or Sooty in some. So what modifier(s) is darkening the smudging on the shield after the first moult and often continues to darken after each moult thereafter. When starting this project three years ago I thought it surely must be Sooty factor that darkens the shield due to its delayed action common with the Sooty factor. I now realize that other factors can and probably are capable of this transit expression. We know Kite/bronze or (Brander/bronze) is present in the black Dutch HF and have a darkening affect in these and in my opinion is more than capable in darkening the smudging of the shield caused

by smoky. It further appears that Hetero Dirty in combination with Hetero Kite and or Hetero Spread helps to improve the black to cover any grizzling in the black area.

In the black Vienna Tumblers I am working with there is no sign that Kite is present but we know they are Hetero recessive red. They generally have a much better clear shield at the juvenile stage and are non-smoky. The shield stays that way in most, but are generally over marked with light grizzling in the face, neck and underbelly. I currently am not aware if they are check or bar pattern. I also know that Dirty is common in the Dutch HF and Homo Dirty clearly shows a dark mottled shield already at the juvenile stage and darken after the first moult often becoming the Rose wing variety. We know that Hetero Spread is present in all or most of these, as the name indicates it Spreads the primary colours. Spread does a poor job covering Grizzle even at the Homo stage hence the Pepper head or Rose wing results of black solids. The Dutch black ws I am working with proved out to be Bar pattern but I would suspect that the T check pattern may be present in some . It certainly is present in the recessive red variety as proven by Bill Greenslade this past season. The question remains what is it we need to stabilize black white sides, or maybe more important what modifiers don't we need. In my brief experience in these it appears that we certainly could do without homo smoky, not a difficult task as it is visible in the nest and a decision can be made with proper recordings.

It appears that homo smoky and hetero Dirty are present in the nest with horned beaks, feet and toes in all Dutch HF young with white side potential. I suppose it could also be the affect of hetero recessive red instead of smoky but I don't think that is the case. In order to plan the 2021 matings the common practice has been to mate the dark birds to the light (over marked) type and hope for the best, along with a good amount of luck. In my opinion selection alone is not going to get us there to stabilize the black white side breeds but by sorting out the genetics and modifiers might and that is what this project is all about. The short answer from above observations is to eliminate homo smoky, homo Spread, and instead concentrate on Dirty as it appears to support hetero spread and hetero Kite in order to avoid grizzling to express in the black areas. We have the opportunity to see these factors expressed in the nest so it does not appear to be an impossible task to make this project feasible or at least to move forward. As always comments from those with genetic experience on above mentioned are welcome and appreciated.

The two pictures below are a mix of a few 2020 Dutch HF and Vienna tumbler juveniles before the moult It is disappointing that the shields in these will darken considerably especially the Dutch Birds.



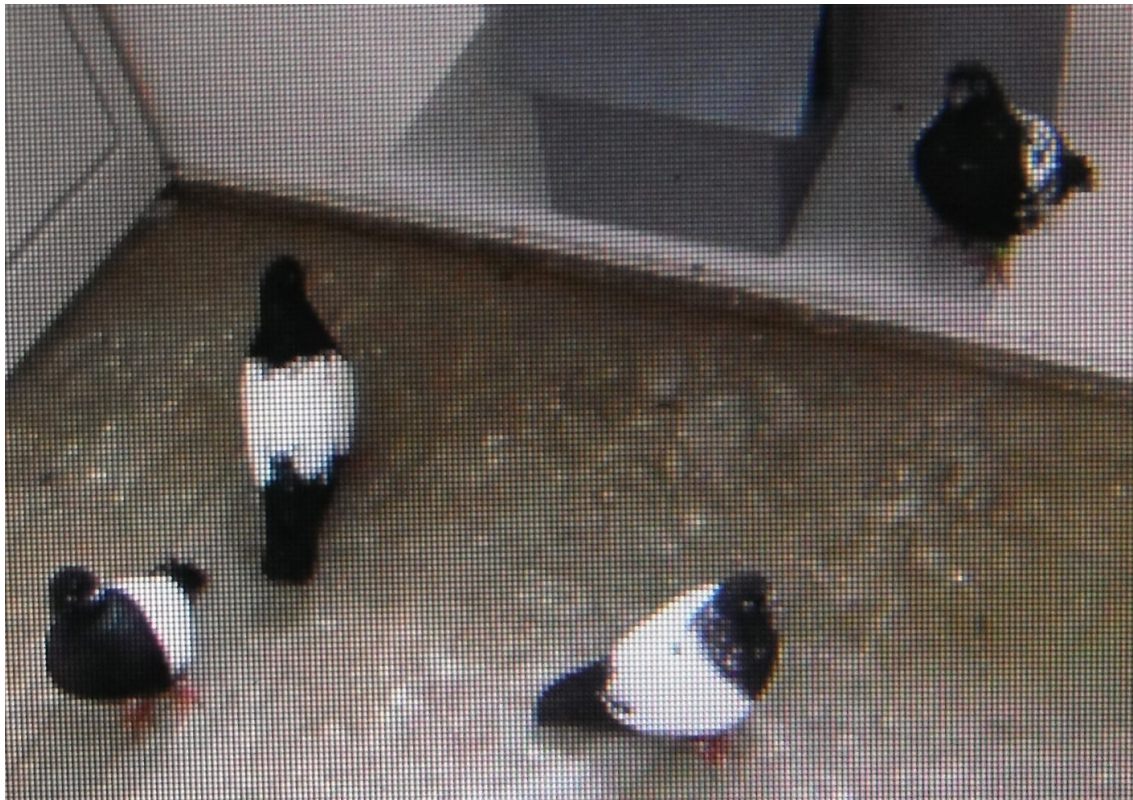


The below are 8 pair of Dutch NL HF stock birds for the 2021 breeding season. The cocks are on the right and hens in the picture on the left.



The below are two pictures of 4 pair of Vienna tumblers, cocks are on the right and hens on the left It is currently easier to produce a white shield on the Vienna then on the Dutch HF white sides. The Dutch birds however darken better when it comes to covering Grizzling in the black marking.







One of the show Tippler white sides showing the stray head and neck feathering . The toenails and beak are not horn tipped probably due to spread factor. There is a slight bronze lacing over the head.







This group of birds bred by Tom clearly show the effects of "Print Grizzle" combined with a number of modifiers such as recessive red , Kite bronze , Brander Bronze , Spread factor , and the pattern series of Bar and T-pattern at least.

That is all I am able to show you at this point , and I do apologise . I was so certain that I would be able to work around the glitches , but it seems that the damage done is much greater than I thought. I am using what seems to me to be a young Computer , but by the standards apparently is quite old , and it is no longer compatible with many of the new updates that they are always doing .

That is it from here for November .. hope to see you in December . I may have to buy a new computer first