The Pigeon Genetics Newsletter, News, Views & Comments.

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(Founded by Dr. Willard .F. Hollander)

Editor **R.J. Rodgers** Nova Scotia Canada.

November 2025

Dear fellow pigeon and / or dove fanciers,

This is the penultimate issue of the Pigeon Genetic Newsletter, which for so many years, and without any funding, is produced and distributed by Bob Rodgers. So, first, I would like to thank Bob for his time and dedication over all those years to provide us every month with an issue of the Newsletter. Bob shall write the last issue in December to say goodbye to this Newsletter, which has given all of us so many years of pleasure.

Bob took over as the editor from Lester Paul Gibson, who for over 30 years also dedicated his time and shared his knowledge to make sure every month a Newsletter was available for us, the fanciers who are so much interested in the genetics of our beloved pigeons and doves. Therefore, also to him a big ***thank you*** for all he has done for the Fancy. The first time I was in contact with Paul was in the late 1990s about having an issue of the Newsletter dedicated to dove-genetics, something Willard Hollander, aka 'Doc', had asked me to do. That issue was published in September 1997, and ever since Paul and I have kept in contact and shared information.

The front page needed a photo, and as I like my Silkie Ringneck Doves so much…

As far as I know, Paul was the second editor and took over from Doc Hollander who had founded the Newsletter sometime in the 1950s. Hollander's goal was to create a platform where pigeon fanciers, interested in genetics, could share their knowledge for the benefit of the Pigeon Fancy in general. What started as an actual paper version, posted every 3 months and later every month to all subscribers all over the world, has developed into the digital version as we know it now. This, unfortunately, has now almost come to an end, but perhaps it is time to stop. The Newsletter has informed and educated us about the subject we all love so much for about 70 years and, if I am correct, thanks to only three dedicated editors. Willard Hollander would have been pleased to know that his initiative continued successfully for so long and would have agreed to stop whilst the Newsletter is still so much appreciated. It will be remembered as one of those rare, non-commercial initiatives which turned out to be a long-running success within our fancy.

In the early 1990s I corresponded with Wilmer Miller, about the different mutations in the Ring-neck Doves, their genetics, and my findings from breeding tests I made with my doves. In Europe many more mutations were available, and it was especially about those mutations not present in the United States I wrote about. Miller, who was very much interested in that info, showed my letters to Hollander, so I learned later….

Dr. Willard. F Hollander, everyone interested in pigeon genetics must have come across his name at some point. Since my earliest interest in the subject starting more than 40 years ago, I had read many of his articles. In my opinion he was the master in pigeon genetics, and a pioneer in communicating this complicated information in an understandable way to the fanciers. So, one can understand how excited I was one day to find a letter from him, addressed to me, in the letter box. This was the first of many for almost 10 years, and his replies always arrived before the ink of my letters was fully dry. This first letter though, see below, is still treasured by me.

6 July 1995

Willard F. Hollander
R R 4 Box 171
Ames, IA. 50014-9523

Hein van Grouw
Karel de Grotelaan 327
7415 LX Deventer
the Netherlands

Hello Hein,

Wilmer Miller let me read your letters, very interesting. I send you several of my writings as a gift, and hope to see your book on dove genetics.

My name is not Dutch – it is from Germany. I can read German fairly well and a little Dutch (with dictionary!).

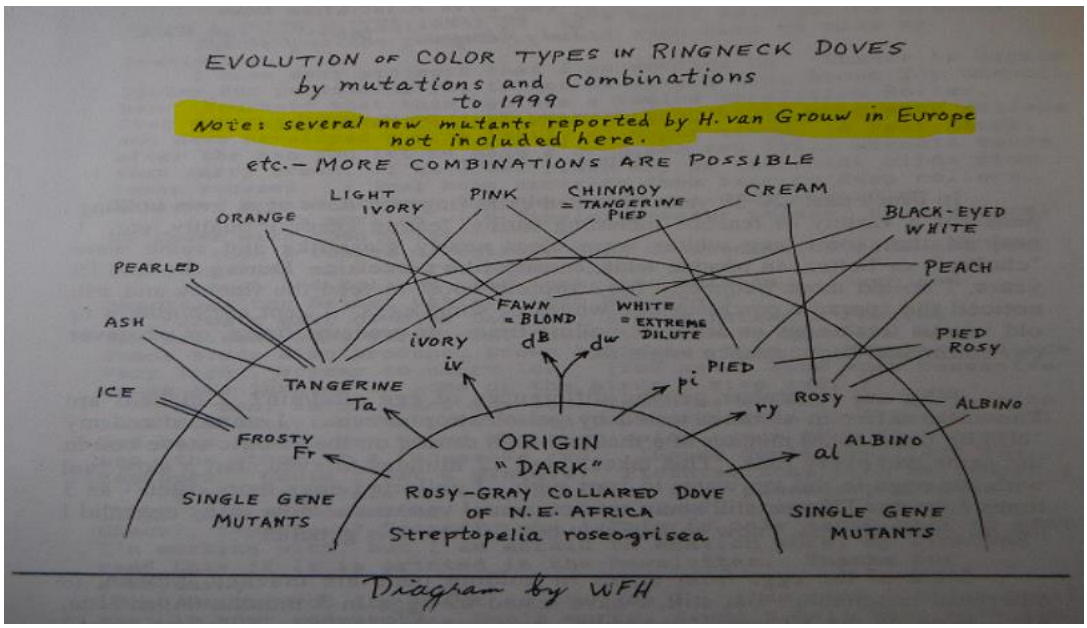
Do you have THE PIGEON book by Wendell M. Levi? I hope so. I assisted Levi in the preparation. Unfortunately the book is out of print, since Levi's death.

I am retired (age 82) but continue with pigeon genetics, and will be pleased to correspond with you. If you want more of my writings, I can supply.

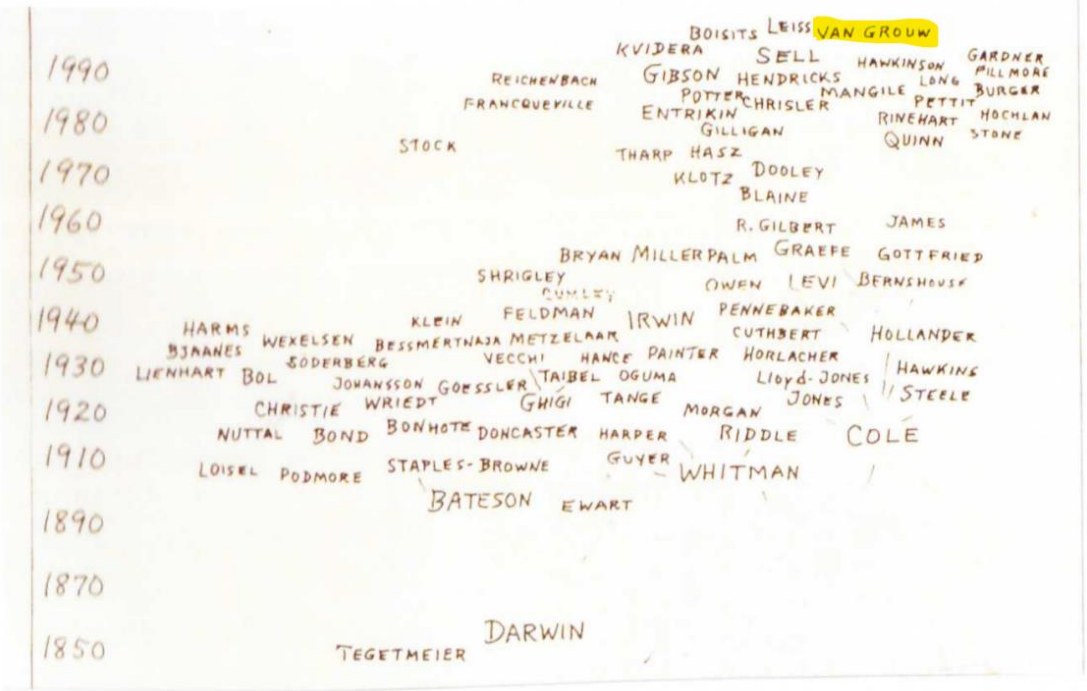
Sincerely,
Willard Hollander

PS. - Wilmer Miller says that he is too busy to answer your letter before he goes to Brazil.

Hollander and Miller published together many articles on dove genetics and the diagram below, with all mutations present in the US at that time, was printed in one of the Newsletters in 1999, in which was pointed out that in Europe more Ringneck Dove mutations were, and I believe still are, available.



In one of his last articles, Hollander presented a diagram in which he recorded the important workers on pigeon genetics over time since Darwin. This was published in 2002, in the annual booklet of the German Pigeon Museum in Neurenberg. I am proud to say that Hollander included me in his diagram, next to my two friends from Austria, Andreas Boisits and Andreas Leiss.



Andreas Leiss, unfortunately, passed away far too young. Besides pigeon breeding, Andreas had studied the different mutations present within the Feral Pigeon populations in Vienna. He unmasked an unknown mutation present in a Swiss pigeon breed (Luzern), and discovered, investigated and described a new mutation he found among the Viennese Feral pigeons. In the late 1990s, during his tours through Vienna in search of Feral Pigeons, he regularly came across 'pale coloured' Eurasian Collared Doves. And as he remembered my article in the 1997 Newsletter on Dove Genetics, he contacted me to discuss these Collared Dove. They appeared to be pure Eurasian Collared Doves with the same recessive and sex-linked mutation known as Blond in the Ringneck Dove.

Blond Eurasian Collared Dove in Vienna 1999. Photo: Andreas Leiss

This is one of the many examples of how the Newsletter brought us, pigeon and dove genetic enthusiasts, in contact with each other. The Newsletter as such stops, but I would like to hear from anyone interested in Dove Genetics and to share information on the different mutations found elsewhere in the world. So, please, contact me by email if you like to share your experiences with Ringneck Doves, or any species of Dove for that matter. The series on Dove Genetics was supposed to be at least 3 more parts, but as this will now be the last one, I cannot include all mutations in as much detail as I would have liked. Therefore, in this last part I'll focus mainly on the rare mutations, and the ones I think are still not available in the US. As a result, my favourite, the Silkie mutation shall not be discussed, but I do show you a few photos of these below before I start the final part of the series.

I wish you all the very best, and I do hope to hear from some of you soon.

Hein van Grouw, Potten End, UK h.van-grouw@nhm.ac.uk

Blond, hen *Ivory, cock* *Ivory Rosy, hen* *White, hen*

The following text has been written from an European perspective and has been published earlier in episodes in the English magazine Cage & Aviary Birds. The text is slightly adapted for this Newsletter, and some additional information has been added. All photos by the author.

I'm keeping Ringneck doves, known as Barbary doves in the UK, for more than 45 years now and have investigated the inheritance of all mutations available to me in those years.

Hein van Grouw, November 2025

DOVE GENETIC, PART 4 (last part).

Phaeo, (symbol Ta) the most popular mutation in the Barbary dove - continued

As the Phaeo-mutation can be combined with any of the other available mutations in the Barbary-dove, the combination colour will inherit according to the mutation involved. For example, due to the recessive and sex-linked inheritance of Blond, crossings between Blond-Phaeo (Orange) and Wild-colour Phaeo (Tangerine) inherit in the same way as between Blond and wild-type (see Newsletter June 2024). Therefore, from a pair of Wild-colour Phaeo doves it is possible to breed Blond-Phaeo only if the Wild-colour-Phaeo male is also heterozygous for Blond. The Blond-Phaeo offspring, however, are always female. To breed a Blond-Phaeo male, it's necessary to pair a Blond-Phaeo female to a Wild-colour Phaeo male heterozygous for Blond. From paired Blond-Phaeo doves, however, one can never breed a Wild-colour Phaeo again.

Although the Phaeo-mutation can be combined with any other known mutation in the Barbary dove, although not all combinations have a clear visible effect on the plumage colour. The mutation Isabella, for example (see October 2025 Newsletter), reduces the eumelanin but does not affect the phaeomelanin. As a Phaeo dove has only phaeomelanin in its plumage, Isabella does not make any difference to the colour.

Photo 75: *Orange (= Blond Phaeo), hen. Due to the mutation Blond the overall colour is lighter, more yellowish-brown rather than reddish-brown, and the pinkish colour on head and breast is absent.*

One can, however, recognise an Isabel-phaeo by the colour of its beak. Wild-colour Phaeo and Blond Phaeo doves have dark beaks, but if they are genetically also Isabella their beaks will be very light coloured. The remaining eumelanin in Grey-necks (heterozygous Phaeo) will be even further reduced in combination with Isabella, making their flight feathers and neck ring nearly white. These doves can therefor easily be confused for being homozygous Phaeo instead. However, as they are still genetically Grey-necks they are lacking the laced appearance what distinguishes them from proper Phaeo.

Phaeo in combination with White (Ino) may seem nonsensical, but as White is not truly white, the combination is subtle but rather nice. The Americans call it Pink based on the pale-coloured remaining phaeomelanin, what contrasts clearly with the white neck ring.

Photo 76: *Pink (= Ino-phaeo), cock. Due to the mutation Ino (White) the remaining phaeomelanin is strongly bleached but still contrasts clearly with the white flights and neck ring.*

Knowing that the pied-mutation in the Barbary dove increases the phaeomelanin in the plumage (see October 2025 Newsletter), I reckoned that a Pied Phaeo would be a wonderful combination; deep reddish-brown plumage variegated with pure white feathers, so in 1990 I started a breeding program in

Photo 76 and 77: *Phaeo, heterozygous for Pied, cock, and its open wing. Due to being heterozygous for Pied the phaeomelanin is increased resulting in solid coloured back and wings, and this pigment now also appears in part of the plumage it normally does not occur, like the primary coverts.*

an attempt to create this desired combination. The reality, however, turned out to be rather unexpected. Firstly, Phaeo doves who are heterozygous (split) for Pied are almost solidly coloured without any lacing, and in that respect look a bit like Grey-necks (heterozygous Phaeo). So, even in Phaeo doves who carry only one gene for Pied, the increase in phaeomelanin is remarkably high. In fact, these are rather striking looking birds, with their solid, warm reddish-brown coloured wings and back.

Due to the effect the pied-mutation has on the increase of phaeomelanin, in Phaeo doves split for Pied this pigment also appears in part of the plumage it normally does not occur, like the primaries and primary coverts, and the neck ring. In hens this effect is much stronger than in cocks, often resulting in phaeomelanin still present at the tips of the adult primaries and the white neck ring being obscured by this pigment.

Photo 78: *Blond Phaeo heterozygous for Pied Barbary dove, hen. Especially in hens the increase of phaeomelanin as an effect of the Pied mutation is often more extreme, resulting in phaeomelanin still present at the tips of the adult primaries and the white neck ring being obscured by this pigment*

With the above in mind, the idea that a Pied Phaeo would have deep reddish-brown plumage variegated with pure white feathers seemed to be the correct assumption. However, nothing was further from the truth. The first one I bred changed its promising reddish-brown grizzled juvenile plumage into solid white, with perhaps one or two small, coloured feathers left. And the same for the second, and the third, and all other Pied Phaeo doves I bred. So, it appears that in combination with Phaeo, the pied-mutation avoids pigmented feathers to develop in the adult plumage, resulting in a pure white dove with dark eyes.

Photo 79: *Black-eyed White, hen. Genetically this dove is Blond-isabel-phaeo-pied. For unknown reason Pied in homozygous form in combination with phaeo avoids pigmented feathers in the adult plumage. The combination Blond and Isabel secures an unpigmented beak.*

Pied in combination with Phaeo is the secret of how to breed perfect bull-eyed-white Barbary doves as I promised earlier, in the October 2025 Newsletter, I would reveal. The best specimens are birds who are genetically Pied, Pastel, Phaeo and Isabella, as in these also no colour will remain in the tip of the bill.

Ivory, a mutation which comes in many shades (symbol iv)

The mutation *Ivory* (called White-head in Europe) in Europe probably originates from Italy as it was the Italian geneticist Dr. Taibel who reported it first in 1966. Shortly after that the mutation occurred independently in Rayne, Louisiana. A similar trait, much lighter in colour but with a much darker neck-ring and tail markings, is likely to have also first occurred in Italy. This latter mutation is known as Ivory in Europe. In the September 1997 Newsletter, I introduced it as *White black-collared*, to avoid confusion with the American name '*Ivory*' for White-head. However, for convenience let's call it now *Light-Ivory.* Ivory and Light-Ivory are related in the way that they are different mutations of the same gene. In genetical terms this is called allelic; the mutations are each other's alleles. A third allele occurred in my own stock in 1998 from a pair of Blond Crested Barbary doves I had received from Kuwait the year before. I called it Pale-head, as it is overall darker than Ivory and with a pale (though not white) head and breast, but with a lighter coloured neck ring. The name we shall use here for it is *Dark-Ivory*.

Photo 80, 81 and 82: *The three known alleles of the Ivory gene; Light-Ivory, Ivory and Dark-Ivory*

Both the lighter and the darker mutation, as far as I know, do not appear to be present in the US. Light-Ivory is the most recessive in inheritance and is given the symbol iv^{l}. Ivory, symbol iv, is dominant over Light-Ivory, but recessive to Dark-Ivory. The later, with symbol iv^{D}, is dominant over both.

In Light-Ivory the original darkest parts of the plumage, the neck ring and the tail marking, remained darker than in Ivory and Dark-Ivory, whilst the rest of the plumage is remarkably lighter.

Photo 83, 84 and 85: *Feathers from the neck ring, and the outer tail feathers from above and from underneath. Left Light-Ivory, middle Wild colour, right Ivory*

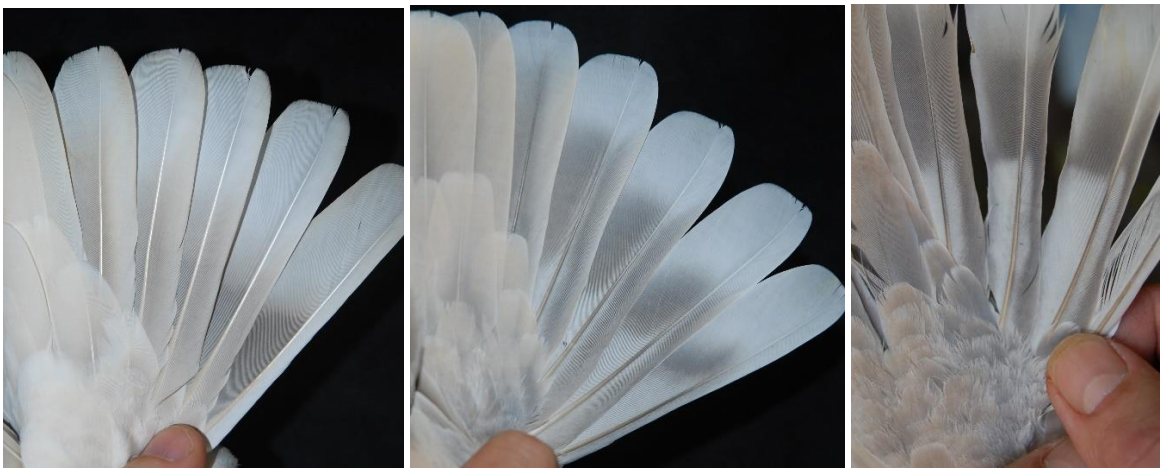


Photo 86, 87 and 88: *Spread tails, from above, of Light-Ivory (left), Ivory (middle) and Dark-Ivory (right)*

Photo 89, 90 and 91: *Spread wings of Light-Ivory (left), Ivory (middle) and Dark-Ivory (right)*

The ivory mutations can be combined with any other mutation. Some striking examples below.

Photo 92, 93 and 94: *Light-Ivory Rosy, hen (left), Ivory Pied, hen (middle) and Blond Dark-Ivory, hen (right)*

Himalayan, a mutation what changes appearance by different temperatures (Symbol al^H)

Himalayan, know as Colour-head in Europe, appears to originate from Italy from where I got my first birds in the early 1990s. It is a dominant allele of Albino which is temperature sensitive and produces pigment mainly in the extremities where the body temperature is lower. This results in a very lightly pigmented body and somewhat darker extremities, and this mutation is mainly known in mammals such as mouse, rat, rabbit, guinea pig, hamster, and cat. As doves do not have the sort of extremities as mammals have, like external ears and tails, the effect may be less obvious at first sight. Their tail, for example, is not pigmented, as these feathers grow close to the warm body. And the same for the wing feathers. The coldest parts of a dove's body are the bill and head, the feet, and the wing bows (wrist), and these will be pigmented in some degree.

Photo 95 and 96: *Albino Silkie, cock (left) and Himalayan Silkie, hen (right)*

A Barbary Dove with the Himalaya mutation moulted during a warm time of the year will look predominantly white, with only the bill, head and neck ring pale-coloured, hence the name Colour-head. As outdoors, even in the Summer, the temperature fluctuates, the colour is never even.

In doves moulted during the winter months, the coloured parts are darker and bolder and almost normally pigmented, but pigmented feathers also occur in other thin-feathered (= colder) areas such as the elbows.

Photo 97: *Himalaya, hen, moulted in Summer*

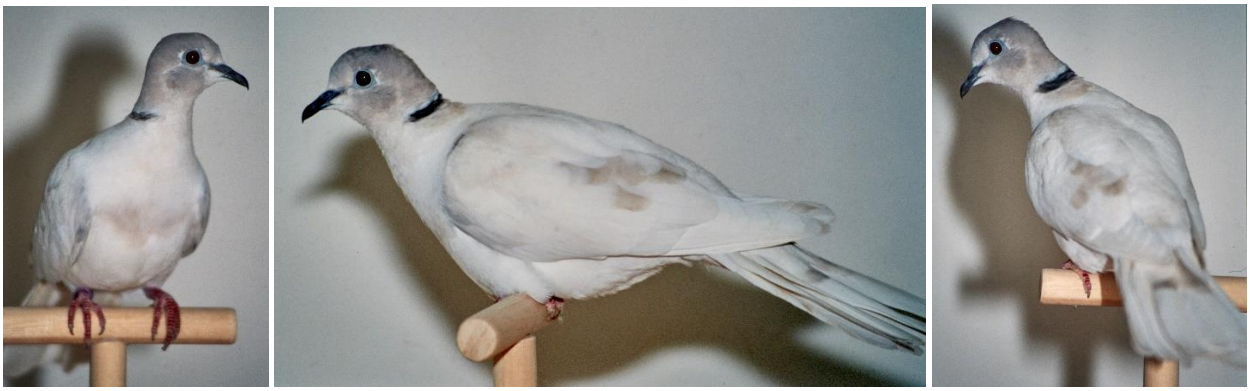


Photo 98: *Himalaya, hen, moulted in Winter. Due to the lower temperature, the colour is darker. As doves during the cold months eat more and have constantly a full crop of seed, the skin on the breast (crop) is therefore colder resulting in the feathers on that part of the skin getting pigmented.*

The juvenile plumage of doves hatched in a warm period is almost white and shows on each feather a narrow line of pale pigment, developed during the period the parents did not cover (warm) them during the day. After a few days, however, the feathers are developed enough to keep them warm, and the rest of the plumage is therefore without pigment again. The juvenile plumage of doves hatched in a cold period is much darker as the youngsters are much colder when they are not covert by their parents.

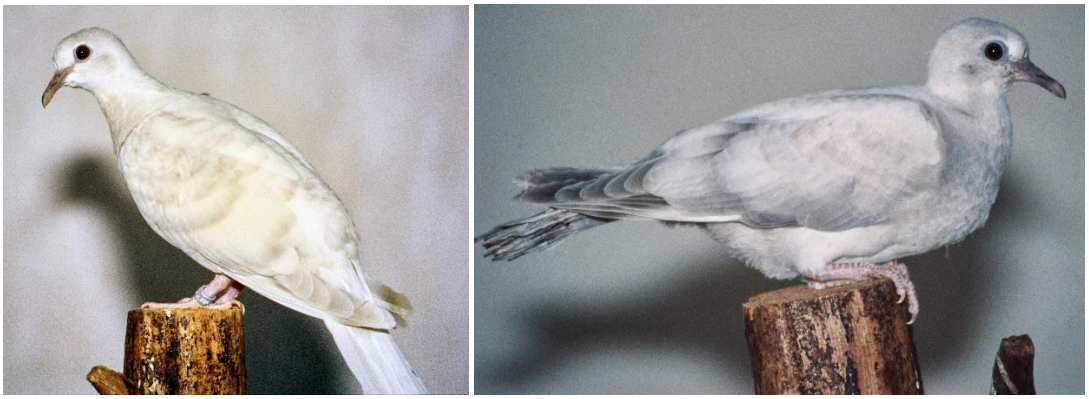


Photo 99 and 100: *Himalaya Barbary doves in juvenile plumage hatched in Summer (left) and in Winter (right)*

Grizzle, a mutation with a preference for phaeomelanin (symbol Gr)

In 1996 I noticed an odd-looking Phaeo (Tangerine pearled) Barbary Dove in a pet shop in Hengelo, a town in the eastern part of the Netherlands and where I was born and raised. The dove had far whiter plumage than expected for Phaeo. It turned out to be a cock, and after two years of conducting breeding experiments I had established that the mutation was partial dominant, and that the homozygous birds show whiter than the heterozygous ones. In that respect the inheritance is the same as Grizzle in domesticated Pigeons. Also, Grizzle doves become whiter after every moult.

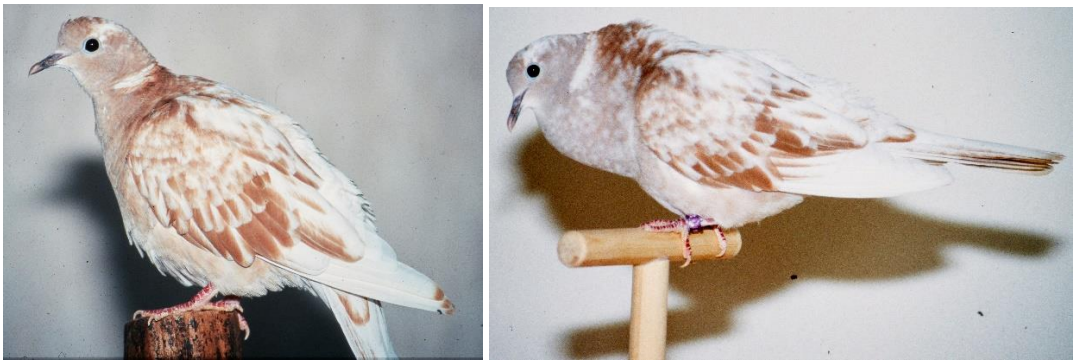


Photo 101 and 102: *The first heterozygous Grizzle Phaeo Barbary Dove I bought in a pet shop when it was less than a year old (left), and the same dove in its third year (right)*

Photo 103 and 104: *Heterozygous Grizzle Phaeo (same dove as above) in its fourth year (left), and homozygous Grizzle Phaeo in its first year (right). The homozygous Grizzle is much whiter from the start.*

Photo 105 and 106: *Homozygous Grizzle heterozygous Phaeo (left) and heterozygous Grizzle Blond heterozygous Phaeo (right), both in their first adult plumage. Grizzle in homozygous form has a stronger effect.*

Grizzle in the Barbary Dove differs from that in domesticated pigeons in the way that in the former the loss of pigment is mainly in the tops of the feathers. Dove-Grizzle reduces the phaeomelanin stronger than it does the eumelanin, resulting in some remaining grey eumelanin in the affected feather tips. Further, in fully eumelanin-pigmented wild-colour the grizzle effect is less compared with that in combination with eumelanin reducing mutations like Blond, or Rosy.

Photo 107, 108 and 109: *Heterozygous Grizzle wild colour, first adult plumage (left), heterozygous Grizzle Blond, first adult plumage (middle), homozygous Grizzle wild colour, first adult plumage (right)*

The bill tip in Grizzle is without pigment, what can already be noticed the day after hatching, and the claws (nails) also have no pigment.

Photo 110 and 111: *Wild coloured squabs, the one on the right is also Grizzle and therefore lacks pigment in the tip of the bill (left). Heterozygous Grizzle Rosy cock, three years old, and the pale bill tip is clearly visible (right)*