

The Pigeon Genetics Newsletter, News, Views & Comments. The Pigeon Genetics Newsletter, News, Views & Comments.

(Founded by Dr. Willard .F. Hollander)
Editor R.J. Rodgers Nova Scotia Canada.
Co-Editor Jith Peter Kerala India.

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This Month - The Dominant Opal and recessive opal gene mutations .



(1)

Dominant Opal (Od) Pied Bald head Design blue checker. , and Self Dark Blue checker recessive opal (o) .

(1)Bred by and photo by Bob R.



(2)

(2)Photo by **Michael Spadoni** Australian Assoc.

I receive a great many requests lately about recessive opals in particular as breeders are attempting to sort out the differences from Dominant Opals and how to see those differences in the phenotypes.

These two gene mutations have no direct genetic relationship, and while they may in some instances look similar, they both have a wide range of expressions even when combined with wild type blue bar.

The following eleven pages will deal primarily with showing you photos of the various expressions of each in comparison with one another as best as possible.

Dominant Opal is the only genetic mutant at that locus, however recessive opal has at least one other.



The dominant Opal gene usually affects the entire bird visibly in that it causes all plumage to be a bit lighter than it normally would be in the intense phase. All coarse spread and condensed smooth spread is de-pigmented to some extent and IF there is any bronze present it will still be expressed. The effect breeders try to attain is to have all Coarse spread of the "C" pattern areas as white as possible. The bird on the left is a T-Pattern Canadian Show Roller bred by Bob R.

The patterns on Dominant Opals are whitened much more so, than is typical of recessive opals that tend not to be quite as dramatic in their expression.

The Dominant Opal also may have almost NO effect on the colour pigment of its host. Here is an Indian



Fantail bred by **Dan Skiles** that only exhibits a slight de-pigmentation of the sub-terminal band. The bars and flights and overall colour tone have not been affected.

Often the tail feathers and even the flights will show multiple colour bands that will disappear after the first molt to show just a light Tail band and inner flight feather vanes.

The Vane is the inner side of the feather that underlaps the next feather to it



This is a solid Black Canadian Show Roller that is also Dominant Opal. Bred by **Ryan Ward** of Nova Scotia Canada. Note that the entire bird appears more like a greyed Dun. The feathers are also lightened basally.

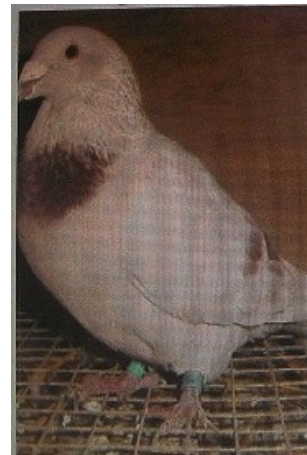
Solid pigment birds usually appear lighter in tone overall. In the case of Opal and Indigo being added, the bird may look more like a slightly laced white that is referred to as an Opalusian. That is an Andalusian and Opal mix.

A recessive opal (o) blue bar ASR bred by **Jeffrey Wozniak** .

If you have a bird that you suspect may be a recessive opal , then to test it , simply mate it with any non-opal bird that is not a carrier of recessive opal. The usual test bird is a clean blue bar with no other modifiers. If your suspected opal is indeed an opal (o) , then you will not get any opal babies from it as this gene is a recessive.

Conversely, if it is a dominant Opal (Od), then you will get about 50% Dominant Opal babies . This may not happen straight away , although I have never had to raise very many young before getting some Opal young. A general rule is that out of six young (three clutches) , you should be able to get the test result you seek.

As I mentioned earlier , recessive opals (o) , are not particularly popular and for the most part that is due to most phenotypes being rather ordinary with washed out patterns. The specimen shown at the top of the Newsletter by Michael from the Australian Association Show , is an exception as it looks a great deal more like a dominant Opal (Od). Below a Blue dark checker recessive opal (**Levi**), and a Cherry spread ash by **Steve Sousa**, from **Paul Gibson** Newsletter Issue Nov. 2007.



Recessive opal has at least one allele (mutation change) at the same locus. It was named "Cherry" by **Steven Sousa** of the USA. There is still an ongoing question about there being a 'BLUE' phase and a 'RED' phase of the recessive opal and whether or not the red phase is 'Cherry' or something different. I do not have any answers to that. The report presented in a much earlier Issue of this Newsletter by Steven Sousa I think stands as the accepted red phase being a separate allele to be referred to as "Cherry".

You can see by the photo that the barred tend to resemble a spread ash masking bar pattern and visa versa, so are not very attractive, or interesting.

They are not as popular and quite often seen only in Flying Racer flocks. Females are usually darker in tone than males , as the natural dimorphism of wild type prevails.

Below are some beautiful Dominant Opal American Show Racers , checker, then graduating through dark check to T-Pattern., then an Opalusian and I believe a spread ash Opal ? for comparison.



Gary Yount



William Wilson



Djiin Becor



John Doyle



Robert Corrales



Marlo Reishus



Nicolea Florea



Robert Corrales

Below you can easily see how Dominant Opal lightens the base colour of blue bar and a recessive red or Yellow masking blue bar. The latter being one expression of an 'Isabelle'. They may be darker if the base is Intense recessive red , or other combinations involving either Chocolate /brown bar base , or Ash-Red base . The birds may be of any colour phase from Intense , pale , dilute , or ecru. It seems that the various combinations have Breeders who are staunch supporters of one or another.



Bassett

Below blue barred Pattern de-pigmented by Dominant Opal (Od) with less expression so that more bronze is visible and the overall tones are darker and enhanced by dirty factor (V).



Some people mistake Opals for Toy Stencils full complex, and indeed the two used to be crossed in an attempt to create whiter pattern contrasts . Normally the (Ts) birds do not have a lightened tone overall and the patterns are very white with a strong contrasting black edge in the Intense phase. Opals on the

other hand almost always are paler in tone and the pattern usually is less white with reddish tinges. If the flights are coloured , (Ts) has no effect on the flights , while (Od) has a distinctive whitening of the vanes.

-----Photos : Capuchin Internet Encyclopedia, Racer **Ryan Ward**, and Isabel Pouter **Levi**.





Note the tail band , flight vanes and bar whitening with a dark edging that takes on a somewhat dun tone.

Dominant Opal blue bar - all photos from **Levi**.



Here we see what appears to be a full complex Toy Stencil but there is extensive whitening of the vanes of the flights and the Tail band is also whitened , so I suspect this bird is a combination of Ts and dominant Opal. Below the same with checker pattern. (**Levi**).



Here we can see that the overall colour tones are normal Intense phase, the bar pattern coarse spread is clear white by the full complex (Ts) genes, but the flight vanes and sub-terminal tail band are NOT affected at all. This is a clear indicator that dominant Opal is not present , and that this is indeed a Full Complex Toy Stencil expression. (**Levi**)



Here again is another example of a Toy Stencil full complex expression with no effect of the genes on the vanes of the flights or the sub-terminal tail band. The bird appears lighter all over , but in this case I think it is just the lighting of the photo. (**Levi**)

Below some Checker Patterns showing the range of effects



Saddle blue check.



Baldhead blue checker

Ryan Ward Dominant Opal

Bob R. - dominant Opal.



Dirty , Sooty Dominant Opal Blue Bar white flight - **Ryan Ward**. Nova Scotia Canada .



A dominant Opal dilute blue T-Pattern Giant Homer of the 1960's , (**Levi**) photo. Here we have to take a number of things into consideration. Firstly that the bird is a dilute (silver) plus the lightening overall of Opal and some residual bronzing., but also the lighting. The entire photo is affected by the lighting in the room, which gives everything a pinkish tone that probably is not the natural colour.

While researching for this issue , my claim that recessive opals are not all that popular became even more evident as I found it difficult to find any good examples in the various Patterns etc. Often breeders have one or two but tend to just pass them off as slightly different expressions of reduced , or even dominant Opal.

I thought it would be of interest to many of you if I presented some of the discussions of the past that **Dr. Paul Gibson** printed in several Issues of this Newsletter - Back to 2007. I was interested to discover that my 2022 Issue was not unlike the info he gave back then. Here are some photos of the material that he and members presented.

PIGEON GENETICS NEWSLETTER

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EDITOR: LESTER PAUL GIBSON

PAGE 529

EDITOR:

I will start this issue with a wrap-up with representative recessive opal and dominant opal expressions with the use of pictures.

Recessive opals (o/o)



Light check rec. opal



Checker recessive opal



T-pattern recessive opal



brown check recessive opal

RICHARD KURSCHNER WRITES:

Tom and all, replying more to ask a question than answer yours. What I wanted to ask you or anyone who has bred recessive opals is how (you have found blue phase opals and red phase opals, both in genetically blue birds), work when mated together? Which is dominant or do you get grades of in-between types? From different pairs in the past I have got different results but on the whole, I have found red phase to be more difficult to breed. Certain pairs that should have bred red phase just didn't. Although they did breed some that I didn't consider typical blue phase either. Just wondering how it has worked out for you.

Regarding your baby and just venturing an opinion, to me it doesn't look like a straight ash red, so if a cock, I think it is opal as well. I haven't bred ash red recessive opals but have seen what I believe were some in a friend's racing homers. Parentage apart from appearance suggested that is what they could have been, just as in your case, but my friend wasn't interested in proving it. They were light chequers and I didn't see them as babies so I can't draw comparisons with your baby. A further question comes to

mind though and that is does anyone know what a red phase recessive opal looks like in either ash red or brown?

TOM BARNHART WRITES:

Richard, I fully concur with your first paragraph. My best (extreme) red phase recessive opals have come from a pair I no longer have. Cock was a light "white lace" spread blue recessive opal from Ron Huntley and the hen was a normal blue bar that was hetero for rec. opal. I have attached a photo of one of the sons, the only extreme red phase I have right now that I absolutely know is a "blue" pigeon. When mated to any hen, hetero or homo, that is rec. opal, I get a lot of variation but have yet to get one that is as extreme as he is. If I can come across an extreme red phase hen; I will try him on her and see what happens.



STEVE SOUZA WRITES:

To add to Tom's comments (and picture); what you have seen, and are asking is correct. And Tom's reply is spot on. I am in the middle of publishing a paper on my results from the past 6 years of breeding and testing for the effect known alternately as "red-phase opal" or "extreme opal". As soon as my paper is in print, you can read all about it... but the basic question to answer is – this effect seems to be the result of a factor that is recessive to both wild-type and [recessive] opal as we know it. No one until now has done any research through extensive breeding so hopefully my results will add to the group of knowledge out there.

The Paper he presented later Named the Red Phase as - "Cherry".

EDITOR:

Steve's paper will add greatly to our knowledge of the blue phase/red phase phenomenon exhibited by recessive opal. Just a few comments on the phenotypic aspects of the spread recessive opal red phase. First, the crescent on the breast shown on the first photo of Tom's above is not part of the recessive opal complex. It is a separate phenomenon. The presence or absence of which is genetically controlled independent of rec.opal. Second, Richard's question and comments about the variability of "red phase" is right on. Intermediate shades are seen. My experience is that I bred more red phase males than red phase females and the blue phase/red phase phenomenon is independent of pattern. Third, that Richard's comment of 'if it is a cock I think it is opal as well' is based on the fact that its mother is an ash red. Fourth, rec. opal does not show as well at all on either brown or ash red. It has been my experience that recessive opal only shows in ash reds when they are in juvenile feather. Browns, especially in check patterns, do sometimes show rec. opal effects as adults. And fifth, in my 1993 book, I have a plate that shows a brown rec. opal T-check as well as blue phase and red phase rec. opals. In my 2005 book, I again show some pictures of rec. opal in different patterns and phases.

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Here is another picture of a rec opal red phase included with the above discussion.

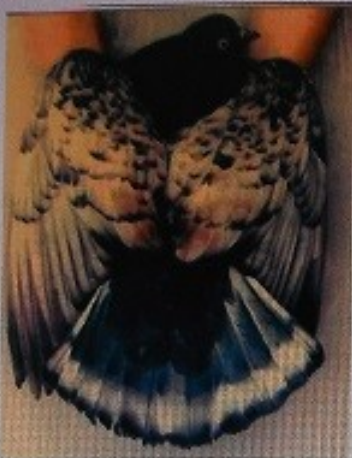


Note the near absence of the neck crescent.



Red phase spread ash bar

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Dom. opal t-pat light



Od t-pat dark



Dom. opal t-pat bronze Gimpel



Variation in colors of Dominant. opal bar recessive red (Isabelle).

You can see some of the variability in whitening produced by Dom. opals. This gene being dominant needs only one to be expressed. Many of the Ods tend to be more bronzy in the pattern areas. Also notice the tail usually has the bar whitened somewhat like ash red. Usually the plumage of the entire bird is lightened in all base colors. A dom. opal recessive red dilute is very light colored. This gene can make some very interesting color combinations.

Well Folks that brings us to the end of another Month in Pigeon Genetics , but to be followed as usual with a new Month , and newer topics plus Your comments , and follow - up material on previous topics. **Robert Mangile** did a partial study on the Red Whiteside , and has given permission to print the first stage here . Unfortunately he did not get to complete the research and write a Report in full.

So, until September , that is it from the Loft . **On a Final note I am pleased to tell you that Jith and his wife Maya have moved to England where they hope to begin a new and interesting Future together! I am extremely excited for them and wish them all the Best !**