



Can you guess what these two pictures depict? Answer on last page.

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TERRY WARD WRITES: 2dec'11

What a beautiful dove. Anyone know how many are left?



ROBERT McKEE WRITES:

This is really inspirational to moi! I shows us the embering on the wing. Does this define archangel and associated mutation?

EDITOR:

Certainly shows the coloration of an over-bronzed non-iridescent Gimpel.

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TERRY WARD WRITES:3dec'11

I have this light check recessive opal Homer cock with these dark checks mixed in with the opal checks. I'm wondering if the dark checks are actually Sooty. I've heard Toy stencil will stamp sooty to white or bronze, but maybe opal does not affect the sooty markings?



EDITOR:

First, I don't know why you call this a light check. It is a T-pattern recessive opal. Second, the dark flecks are not checks. They are randomly placed and even some of the recess. opal markings have the black fleck in them. They do not look like Sooty marks or check marks but are similar to what one finds in Ash reds (which this is not) and indigo (which may be what this is, an indigo rec. opal.)

*If you take a laptop computer for a run, you could jog your memory!  
Those that get too big for their britches will be exposed in the end.*

EDITOR:

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Terry stated that “Genetic Drift is the change in frequency of a gene variant in a population due to random sampling”.

Now I could not let that stand. Genetic drift is the change in frequency favoring a gene variant in a population which can be proven by random sampling (not due to random sampling). Genetic drift occurs and is guided by the environment which favors one gene over the other.

James Gratz follows up by saying “Genetic drift is RANDOM CHANCE. It is not selection in any form”.

Again I cannot let this stand. Genetic drift is a change in gene frequency within a small population and certainly can be influenced by selection. It can be influenced by the environment whether natural or unnatural. In Great Britain a study showed that genetic drift in color of a small moth was caused by industrialization which blackened the bark. The moths were light colored & dark colored prior to industrialization. Predation of the light colored moths because of their lack of camouflage produced a genetic drift to only the dark forms.

A human case can be cited also. In Africa, a woman gave birth to a child that had the fingers and toes fused into two to produce clawlike digits. The child was killed since it obviously possessed a demon. The woman had a second child with the same mutation, but the W.H.O. stepped in and prevented the child from being killed. Today this village has over 30 % of its population with this mutation.

GENE HOCHLAN WRITES:7dec'11

Last spring, I mated a pure Damascene cock to a pure Swiss Goldkragen Silver bar hen. They reared 2 young. One died. Both young were light colored Ice. The adult plumage of the one that survived isn't any different than the Damascene.

EDITOR:

Thanks, Gene, for the info. Every little bit helps find the answers.

EDITOR:

The following series of letters is a nice summary on “Ice”. In my 2005 book I wrote: “The gene for Ice (Ic) symbolized by [Joe] Quinn (1971) is a partial dominant trait that sometimes is nearer to the recessive end of the scale. It affects the ground color by greatly whitening the outer

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part of the feather. The skin of the young is usually very negoid. With Blue base this produces an ice-blue frosty phenotype with C areas and the flight tip and the tail bar generally unaffected.”

ALAN WROTE: 30nov'11

We had an in-depth discussion on Ice in here and I asked Gene the following question to sum it all up for me.

Question – Ice is not an actual gene but the result of selective breeding?

GENE'S answer – All the evidence we have from various fanciers over the years definitely points in that direction. I prefer using the term “directional breeding” and Douglas McClary has pretty much proven that with his good work in producing “powdered” which, in my opinion, is a form of primitive Ice. The “powdered” Show Racing Homers are close to Ice but are not quite there yet. Paul Gibson's summary statement: “manipulated genetic drift” also pleases me. I believe our group discussion (in Pigeongenetics 101) phased out the old belief that Ice is a distinct mutated gene and that is why no one has ever gotten the expected progeny testing results. Am not entirely sure if someone should get credit for this breakthrough but I believe that we have an original achievement where our Pigeongenetics101 group site is concerned. You may do whatever suits you with the above information. It is important and should be shared with the pigeon world.

ALEC WRITES:

Joining interesting discussion, maybe better to ask: Ice is not a single gene but a phenotype of combined action of several genes? And “directional breeding” is just accumulation of several genes (mutations) improving Ice phenotype? And “powdered” is only lacking modifying gene or genes to become Ice? This means we can still find how many and what type of genes (mutations) acting together in Ice?

GENE HOCHLAN WRITES:

Welcome to the group! Your insight concerning Ice is rational but this phenotype does not respond to normal testing procedures. When Ice is mated to a wild type the result is an overall, half-tone copy and if you pair up the crosses, they will produce more of the same with a slight variation of blue shades. Once in a great while, a decent colored Ice is produced. Fanciers have found it necessary, when introducing Ice into a different breed, to back cross to Ice in order to make any real progress.

Paul Gibson referenced “manipulated genetic drift” when we concluded our discussion on this subject. In nature, all “wild type” phenotypes are the result of genetic drift due to the sum of all environmental conditions, hazards and mutations. The end results that we see in wildlife have taken thousands and sometimes millions of years. In confinement, we can manipulate this process and put it on “fast track”. The Ice coloration that we see in Damascenes and Ice Pigeons is very similar to a new man made “wild type”. Had it not been for Douglas McClary’s work in producing “powdered” through directional breeding, always selecting for the lightest blues, we would still be groping in the dark concerning Ice. If I remember correctly, it took him 50 years to make his accomplishment and that is true dedication. Hope this sheds a little light.

#### ALAN WRITES:

Gene, would it then be safe to assume that there are actually no different Ice genes – e.g. Damascenes vs Ice Pigeons – but merely different underlying modifiers that express different phenotypes.

#### GENE WRITES:

To the best of my knowledge there is no difference between the Ice in Damascenes and Ice Pigeons. I have crossed the two and all progeny were perfectly acceptable light ice coloration. Also made a cross between a Damascene and an Ice Magpied Galician Highflier and produced perfect Ice.

Cannot say if the original Ice was produced in the Mid East and then transferred to Europe or they came about individually.

The only underlying modifier I can think of is a “form” of Dirty in Damascenes but it does not have to be present to get good coloration. If you look at Ice Pigeons in Europe today, you will find that they are just as light as Damascenes but lack the Dirty modifier.

#### EDITOR:

When I started working with Ice Pigeons (got muffed Ice Pigeons from [Frank] Hollman), they were a slightly bluish color as seen in clear ice or icebergs. I did not like the muffs, so for several years I worked breeding the muffs off them. The originals were very Dirty with all squabs very negroid. By the time I got done breeding the muffs off them, my new cleanleg Ice were just as Ice colored as originally but many of the squabs were no longer Dirty. My conclusion was that Dirty is not a necessary component of the Ice Pigeon phenotype. When working with Ice Pigeons

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and Damascenes, I found the Damascene crosses were easier to work with in transferring the Ice coloration. My Damascene crosses to Ice Pigeons produced nice ice coloration.

One of the problems with moving ice coloration was the crop crescent area. I found if you used a bird that did not have a sharp delineation of color at this crop crescent point but had a light head and neck of uniform color, it was much easier to get a nice ice colored bird.

Oh, yes, I usually equate the color of the Ice Pigeons to clear bluish ice and the Damascene color with snow.

I have talked to several breeders that say they have been working with ice for decades and still are not satisfied with the ice phenotype. Most of the time when they sent pictures, it wasn't the ice coloration per se that was the problem but that the neck color allowed by the crop crescent discoloration. Or if they worked with Damascenes as their source, it was the head shape and perhaps the overall phenotype that was the sticking point not the ice coloration per se.

There has been some thought that there is no gene for ice. Perhaps that is because of the variability of some of the progeny which may be caused by other factors other than a gene for ice or that there are two or more factors that make up what some people have in their ice.

I produced ice in several colors [including Ash red, Ash yellow and brown] and assuredly these were produced by a factor or factors which we call Ice.

#### JERRY STERNADEL WRITES:

I wish I had the time to write and the pictures to demonstrate the experience I have had with moving Damascene Ice to Figuritas.

In my estimation, I would say there is at least one gene difference in the Damascene ice and Ice Pigeon or ice gene found in Italian Owls and other breeds.

My matings producing F1s showed a variance in phenotype. I recently did another cross of a decent ice to a blue bar Fig[urita] and I got at least two different phenotypes.

I am not at the point of saying it is one simple recessive gene, but it may be and the differences may be different modifiers.

I have written about gene set in the past and I believe in the Damascene case and maybe others the genome is made up of a certain set of genes, some maybe dominant and some recessive. There also maybe linkages we are not aware of. I know this is more than simple selection or at

least with my birds it is, but selection is certainly part of the process.

TERRY WRITES:

I had similar problems in attempting to move Ice into another breed in the past. I found I had to step back to a good colored Ice to get a decent Ice after an outcross. I concluded that there must be several factors involved similar to the makeup of Ts. It could be even more factors than Ts. It may take breeding many hundreds of birds to figure out how many factors.

I think the fact that Ice can be put on Ash red or brown is a pretty good indicator that there are genes for Ice. That kind of destroys the idea that Ice was just a product of selecting the lighter blues for many generations in my mind.

I used a Damascene for my source of Ice. I never could get an Ice Pigeon to use. Since I had to go back to the Damascenes, I couldn't get away from the look of it's head and got frustrated with the project. I kind of lost interest with it since I was playing with so much else.

Another thing about Ice is it seems to be harder to get a check or T-pattern to have clean light Ice on the crop than in a bar. Anyone else notice this? Good colored Ice Pigeons do come in all patterns though.

I picked up a pair of Damascenes where the cock was T-pattern with a very dark crop and the hen is a decent marked bar. I figured I could eventually raise a good marked T-pattern from them, but they raised dark cropped T-patterns and good clean bars. How can that be?

I'm still trying to get a pair of clean legged Ice to play with. I would like the Ts white check but wouldn't turn down any pattern.

ALAN WRITES:

Terry, Ice on Ash red and brown does not discount the idea that Ice is a result of directional breeding. Not at all. The intermediates are simply carried over to the other pigments and more selection and backcrossing is made to lighten them the same way.

Think beyond the box. To me it explains everything, especially why you have to keep going back to the original Ice breed and how McClary created the Ice British Show Racers. Starting with Blue Bars and never using another breed that was already Ice. Of course, it took him 40 years of selective directional breeding. Of course, using a breed that already [Ice] would have been a shortcut. He didn't call them "Ice" but they are Ice phenotypes nonetheless.

2<sup>nd</sup> email: This Turkish breed is a prime example. It's "barless" Ice

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[phenotype] without the barless gene. It has no bars do to many decades of directional selective breeding to erase the bars. I believe the Ice must have been created in the same manner. [Seljuks, an Ice coloration of Turkish Fantails]

EDITOR:

I will conclude this subject with some illustrative pictures. First the neck crescent (which in review and retrospect is part of the wild type) is present in many birds of many breeds including many Ice coloration breeds.



Ash red and Cherry bar appear thus. Ash yellow bar Ice, Moon Pigeon  
I use the left picture because it shows the neck or crop crescent better than does a blue or brown. However it is prominent on the Moon Pigeon which is Ash yellow Ice.



These are variations of McClary "Powdered". As you can see the second one is very similar in color to a Damascene.



These Seljuk Fantails have a tail that is shaped like a tent.  
Although they are barred they also have a gene that obliterates the bars.



Brown bar Ice



Hetero Toy Stencil check Ice



Check Toy Stencil Complex Ice Pigeon



Dark Check Ice Pigeon



These are Ice Pigeons.

The first probably is Dom. opal and the second is frill stencil.

Axel Sell in his newest book says this fs is accepted as “porcelain”. It is not the porcelain of old which was a bicolor check caused by recessive opal effect on Toy Stencil check.



Damascene.

Answer: The first is *Citrus medica* var. *sarcodactylis*. It has a strong lemon fragrance, no pulp, no juice or seeds. It is sold under the name Buddha’s hand citrus but ought to be called Octopus fruit. The second is of the blue cones of *Abies koreana*, Korean Fir.