**ADDRESSING (or adding to) THE CONFUSION BETWEEN GREYWINGS, CLEARWINGS, DILUTES, GREY YELLOWS & BLACK EYED SELFS**
*Written by Nigel Tonkin 26/10/99*

I receive so many inquiries from fanciers re these varieties and the confusion they appear to create that I thought I would give my best shot at answering a few of those inquiries via this article. I will not be answering specific questions, but will give an overview that I trust will cover those questions asked. I also want to make it clear from the outset that I am not attempting to get involved with the politics of these varieties at a State or Zone level, although some of the points I make will certainly appear that way. I will personally consider, at some point soon, addressing some of the issues at a National level, but only after putting those issues through my States Standards and Executive committees.

I have, over a number of years, acquired many books on Budgerigars that involve many and varied topics. I have used these books as the source for validating any thoughts I might have on certain issues and to correct any that I was off track with.

I must at the very start confess that I do not breed Clearwings or Black Eyed Selfs nor do I deliberately breed Greywings, Dilutes or Grey Yellows. I need to quantify what I perceive a Grey Yellow to be at this point. I have no doubt that it is the dilute form of the Normal Grey Green - the body colour being mustard without the green suffusion of other green series Dilutes, and the cheek patches being pale grey. There is some confusion when a mustard coloured Dilute appears with a pale violet cheek patch, one could imagine this to be the Dilute form of a Normal Olive Green. Further to this, I have no doubts that Grey Whites are the dilute form of the Normal Grey, these birds should have a pale grey body colour and pale grey cheek patches. More learned fanciers than I also subscribe to the above.

For the purpose of this article, Grey Yellows and Grey Whites will be classified as Dilutes.

To further confuse readers, I should state my belief on the origins of the Black Eyed Self. Again one could assume this 'variety' originated from or is in fact a Dilute, but by selective breeding, the 'buttercup yellow' and 'buttercup white' as required by The Standard has been obtained. If one checks various writings on the history of the Yellow, and I include The Standard in this list, we find that they all state Yellows (Dilutes) firstly mutated in Belgium around the 1870's. Yellows, (which were the first known mutation of the budgerigar), with strong green suffusion have been observed flying in wild flocks of budgerigars over periods of time.

I again state that one could assume the Black Eyed Self is a Dilute and for the purpose of this exercise, they will be grouped with Dilutes.

Some by now might be saying, "no, no, no there is no such variety as the Dilute", others will be saying "a Standard is urgently required for this variety".

In reference to a Standard for the Dilute, States or Zones would need to make submission to the National Body to have a Provisional Standard produced for this variety or States / Zones may choose to adopt the U.K. Standard or in fact choose not to recognise the variety at all.

What about the complications that could arise if my suggestion is to be believed that Black Eyed Selfs are in fact Dilutes. Where would this leave the Black Eyed Self Standard? Do we leave this one alone and put together a standard for the remaining Dilutes? What about the Opaline form of Dilute, where would this slot? All good questions, I believe, but not for me to answer.

Lets quote from one of the wonderful ALL ABOUT Series collection of books by Roy Stringer and Fred Wright, published by Roy Stringer Publications. On pages 5 & 6 of ALL ABOUT Specialist Variety Budgerigars, the following is written:

DILUTE (Expert: Peter Hallam)

Dilute is a genetic term covering Yellow (the Dilute of the Green Series) and White (the Dilute of Blue Series). The Yellow was first reported in Belgium in 1872; the first mutation to be established some 32 years after the wild Green Budgerigar was introduced into Britain. From 1878 (when the Skyblue appeared) the components were available to permit the production of the White; but it was 1920 before one was reported. Dilute is the most recessive of all Budgerigar varieties.

GREYWING (Expert: Steve Amos)

In 1919, the Greywing mutation was established; a variety in which both the markings and body colour were diluted to only halfway between Normal and Dilute. It was subsequently discovered that both Dilute and Greywing were caused by the mutation of the same gene.

CLEARWING (Expert: John Monks)

The same gene mutated again in the mid-1930's to produce the Clearwing, in which the dilution of the markings was virtually complete, while the depth of body colour remained substantially as the Normal. The Clearwing of the Green series is called the Yellow-wing and that of the Blue series is the Whitewing.

This group of three mutations is known as the "multi-allelomorphs". A further "variety" the Full-bodied Greywing, can be produced by pairing Greywing with Clearwing, but these are rarely, if ever, seen.

From this, one can see that all of these varieties are closely related to each other in a genetic sense. They have all mutated from the one gene, but in different ways or forms. I will not complicate the issue by using symbols to explain these relationships nor shall I use symbols to explain the breeding expectations of the various varieties or the combinations thereof as this subject is quite complex already.

Some genes are capable of mutating in more than one way, i.e., of existing in more than one mutant form, and such genes produce a series of what are known as multiple allelomorphs. The most important point to remember about these series is that all the mutant genes have the same locus as the wild-type gene from which they derived. Genetics for Budgerigar Breeders - T.G. Taylor, M.A., Ph.D. (lecturer in Physiological Chemistry University of Reading) and Cyril Warner.

Australian National Budgerigar Council The Standard states in part that Normals of the Green and Blue series are to have clearly defined black markings on cheek, back of head, neck & wings on the appropriate ground colour. Body colour to be full intensity. This colouring is determined by the distribution of melanin pigment granules. In the case of the markings on the wing, head, neck etc of Normals, the granules contain a black melanin pigment. It was changes in the distribution of these pigment granules that resulted in the Greywing, Clearwing and Dilute (Whites & Yellows) being produced. The changes for these three varieties, as previously mentioned, were the result of various mutations of the one gene. They form a series of multiple allelomorphs, or alleles for abbreviation purposes. All of these alleles create a similar effect, by reducing the number of pigment granules, but in differing degrees.

In Greywings and Dilutes, the reduction in melanin is uniform throughout the wings and body, but in Clearwings, the melanin in the body feathers is only slightly reduced, while that in the wing feathers is reduced to an extent similar to that observed in Dilutes.

Full body colour is completely dominant to all three of its alleles and it is, therefore, possible to have birds normal in appearance that are split for Greywing, Clearwing, or Dilute. All birds possess two, and only two, of all non-sexed-linked genes, whether they are mutated or wild-type. It follows, therefore, that it is not possible for a bird to be split for more than one of these alleles. It may be split for Greywing or Clearwing or Dilute.
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Greywing is completely dominant to dilute so that a Greywing/dilute is identical in appearance to a homozygous Greywing.
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Clearwing is dominant to dilute and only two genotypes of Clearwing can exist, one pure breeding and the other split for dilute. Genetics for Budgerigar Breeders.

Neither a Clearwing nor a Greywing is completely dominant to the other. When a true, pure Clearwing is paired to a true, pure Greywing (by true, pure Greywing, I refer to the original mutation that is 50% full intensity of Normal in both body and wing colour), the progeny are referred to as 'Full Body Coloured Greywings'. The body colour is of the true, pure Clearwing and the wing markings are of the true, pure Greywing. In the true, pure Clearwing variety, the melanin placement in the wing feathers is independent of the melanin placement in the body feathers thus it would appear that: the Clearwing body colour is dominant to the Greywing variety and the wing colour of the Clearwing is recessive to that of the Greywing. Complicated, huh, well further to this, from what I have researched, a Dilute cannot be split for anything, but all varieties can be split Dilute, apparently for a reason that has previously been stated and that is because the Dilute is the most recessive gene of the multiple series.

It will be seen that, in the series of multiple allelomorphs, Full Body Colour, Greywing, Clearwing and Dilute, each member of the series is, in general, dominant to all the succeeding members. The Greywing-Clearwing relationship is exceptional in that the Greywing is incompletely dominant to Clearwing and the result of crossing these two varieties is a blending of the two. Genetics for Budgerigar Breeders.

Okay, where does all this leave the fancier who is now producing the true, pure Greywing variety, that is, the original mutation with 50% body colour intensity? (Initially the Australian Standard for the Greywing variety stated, as I understand it "approaching 50% body colour intensity"). The Clearwing? The Dilute? The Grey Yellow (Dilute)? The Black Eyed Self (Dilute)? The Full Bodied Greywing (i.e the combination of two varieties as required by The ANBC The Standard for exhibition purposes in Australia)?

I have stated in previous articles / interviews, that I believe Australia may have created a rod for its own back by promoting / accepting and in fact standardising the combination of two mutations / varieties. I am not one for changing The Standard from an original mutation, the mutation should become The Standard and we should aim to keep it as pure and perfect to its origins as possible.

Is it too late for change? Nothing is ever too late - the ANBC, through the Standards coordinator is presently rewriting The Standard. If individuals would like to see change, then a sensible submission to the Secretary of their State / Zone stating the reasons for that suggested change would be the appropriate action to take. It would then be up to that State's / Zone's Standards committee to make an assessment of that submission and if they deemed it as reasonable to proceed, they would put the submission to the ANBC Secretary through their State / Zone Secretary for discussion / actioning.

It is important to note that The Standard is a guide for both the judge and the exhibitor alike and it is a worthwhile purchase if you do not already own a copy.

Judges will be given instructions by their judges panel executive as to what is expected of them with the above varieties and it is my aim to have decisions made on these varieties at a National level to hopefully lessen the variables in interpretation.

Some of the matings & expectations of these varieties.

True Pure Greywing x Dilute = 100% True Greywing/Dilute

Pure Clearwing x Dilute = 100% Clearwing/Dilute

Dilute x Dilute = 100% Dilute

True Greywing/Dilute x Clearwing/Dilute
= 25% True Greywing
= 25% Full Bodied Greywing
= 25% Clearwing/Dilute
= 25% Dilute

Glossary
(1) Allelomorph: One of a pair of alternative hereditary characters.
(2) Genotype: The genetic constitution of an individual.
(3) Homozygous: Breeding true for those characteristics.
(4) Melanin: The dark pigment in the body of man and certain animals inherited.