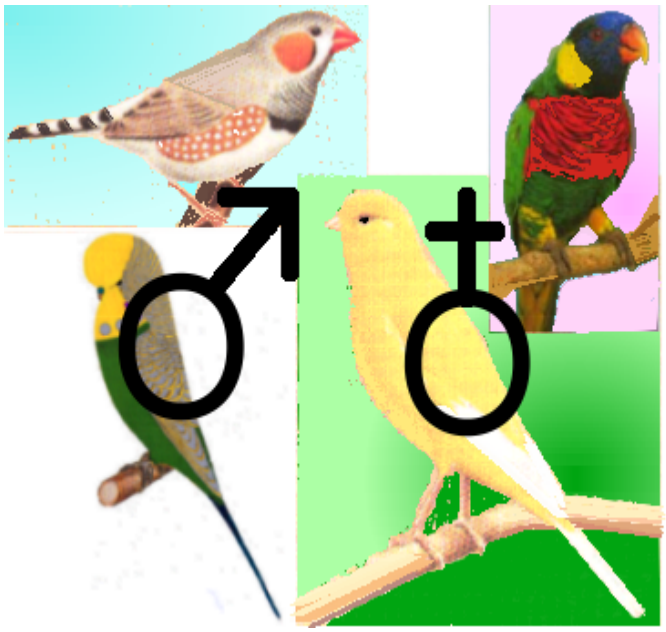

AVIAN
GENETIC
CALCULATOR

Version 1
2005

Created by K Yorke

GENETIC CALCULATOR (BUDGERIGAR) Help File

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Help File

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K YORKE
10 GWANDALAN CLOSE
BRANDY HILL,NSW, 2324
AUSTRALIA

kyorke@tpg.com.au

http://bit.ly/yorkestuff

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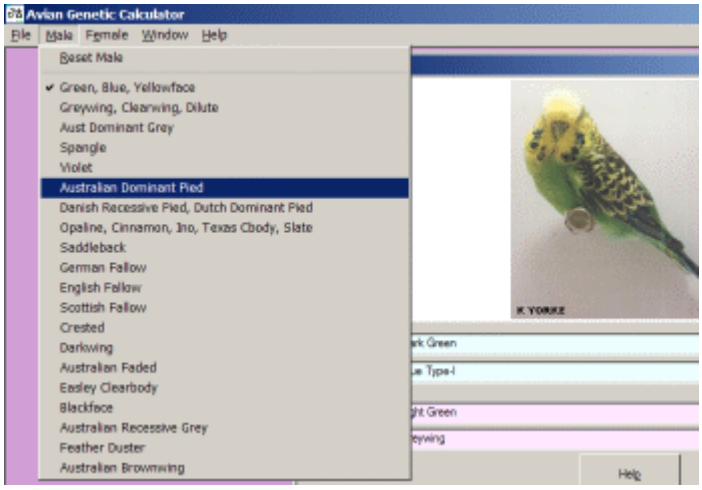

The following menu selections are used to progressively build up the descriptions of the Cock and Hen parents one variety at a time in the Mating Window.

MALE/FEMALE Menu

- Reset
- Green, Blue, Yellowface
- Greywing, Clearwing, Dilute
- Australian Dominant Grey
- Spangle
- Violet
- Australian Dominant Pied
- Danish Recessive Pied, Dutch Dominant Pied, Dark Eyed Clear
- Opaline, Cinnamon, Ino, Texas Clearbody, Slate
- Saddleback
- German Fallow
- English Fallow
- Scottish Fallow
- Crested
- Darkwing
- Australian Faded
- Easley Clearbody
- BlackFace
- Australian Recessive Grey
- Feather Duster
- Australian Brownwing

Unsupported varieties still undergoing genetic research:-
Anthracite, 2nd Dark Factor.

Unsupported varieties due to extinction:-
English Recessive Grey, English Faded, Terraneo Clearbody, South Australian Clearbody.

2 Reset

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The Reset menu is a fast method of deselecting all previously selected varieties and resetting the male or female parent description to its original default settings when the Mating Window was first opened.

3 Green, Blue, Yellowface

GREEN, BLUE, YELLOWFACE Top Previous Next

This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Green, Blue, Australian Yellowface, Mutant 1 Yellowface, Mutant 2 Yellowface and Dark factor birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

VARIETY INFORMATION
The genes for the wild Green, Blue and all three Yellowface varieties exist at the same location and are multiple alleles. The gene for Dark factor resides on the same chromosome. The crossover rate between the Dark gene and the Green gene (or its alleles) is 14%. Green is dominant over Blue and all Yellowfaces. Australian Yellowface is dominant over Mutant 2 Yellowface which in turn is dominant over Mutant 1 Yellowface which in turn is dominant over

Blue.

The Dark factor gene (responsible for the 3 shades of green and blue) is a partial dominant gene.

ALTERNATIVE NAMES
Australian Yellowface(df) = Goldenface
Australian Yellowface(sf) = Sea Green = Turquiose
Yellowface Mutant 1 = Creamface = Lemonface = English Yellowface
Yellowface Mutant 2 = English Yellowface

4 Greywing, Clearwing, Dilute

GREYWING, CLEARWING, DILUTE

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Greywing, Clearwing and Dilute birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The genes for the Greywing, Clearwing and Dilute varieties exist at the same location and are multiple alleles. All three varieties are recessive to Normal. Additionally, Greywing is partially dominant over Clearwing which in turn is dominant over Dilute.

ALTERNATIVE NAMES
Dilute Green = Yellow = Black-eyed Yellow
Dilute Light Green = Light Yellow
Dilute Dark Green = Dark Yellow
Dilute Olive Green = Olive Yellow
Dilute Light Grey Green = Grey Yellow
Dilute Blue = White = Black-eyed White
Dilute Sky Blue = White Sky
Dilute Cobalt = White Cobalt
Dilute Mauve = White Mauve

Dilute Grey Sky Blue = Grey White
Green Clearwing = Yellowwing
Blue Clearwing = Whitewing

5 Aust Dominant Grey

AUSTRALIAN DOMINANT GREY

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Australian Dominant Grey birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
Grey is a dominant gene. The Grey gene turns normally blue birds into grey and normally green birds into Grey Green. As such there are many different types of Grey and Grey Green depending on whether the base colour being masked is Light Green, Dark Green, Olive Green, Sky Blue, Cobalt or Mauve. The most common form of Grey Green is the Light Grey Green and most common Grey is Grey Sky Blue. All shades are very similar visually. Single factor and double factor birds are visually identical.

6 Spangle

SPANGLE Top Previous Next

This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Spangle birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The Spangle gene is a partial dominant gene. Single factor and double factor spangles are visually different.

7 Violet

VIOLET Top Previous Next

This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Violet birds.

To change the parent bird description, click the mouse on the desired item in the list and press

SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The Violet gene is a dominant gene. The Violet gene modifies other shades of Green and Blue. The most common “visual violet” is the Violet(sf) Cobalt and Violet(df) Cobalt, although there is evidence that Violet(df) Sky Blue is also “visual violet” in color. Violet(sf) Sky Blue is very commonly mistaken in colour for Cobalt.

8 Australian Dominant Pied

AUSTRALIAN DOMINANT PIED

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Australian Dominant Pied birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION

The Australian Dominant Pied gene is a dominant gene. The single factor and double factor birds are visually identical, although double factor birds do sometimes tend to be more heavily pied marked. Some other names have been given to the various pied markings on Australian Dominant Pieds, such as Banded, Clear-flighted and Variegated. These marking names have no known genetic relationship.

9 Danish Rec Pied, Dutch Dom Pied

DANISH RECESSIVE PIED, DUTCH DOMINANT PIED, DARK EYED CLEAR

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Danish Recessive Pied and Dutch Dominant Pied birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The gene for Danish Recessive Pied is recessive. The gene for Dutch Dominant Pied is dominant. Although genetically unrelated the combination of these two varieties produces a bird which is unlike either of its components, i.e. The Dark Eyed Clear. Some other names have been given to the various pied markings on Dutch Dominant Pieds, such as Continental Clear-flighted, Frosted and Variegated. These marking names have no known genetic relationship.

ALTERNATIVE NAMES
Danish Recessive Pied = Harlequin
Dutch Dominant Pied = Continental Clearflight Pied = Frosted Pied
Danish Recessive Pied Dutch Dominant Pied = Dark Eyed Clear

10 Opaline, Cinnamon, Ino, Texas Clearbody, Slate

OPALINE, CINNAMON, INO, TEXAS CLEARBODY, SLATE

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the sex linked varieties of Opaline, Cinnamon, Ino, Texas Clearbody and Slate birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The above genes all lie on the X chromosome which also influences gender. All the above genes are sex-linked recessive to normal in cocks. Being sex-linked, hens cannot be split for these varieties. Hens cannot be double factor for these genes. In addition, the Texas Clearbody and Ino genes lie at the same location and are multiple alleles, with Texas Clearbody being dominant over Ino. The crossover rates for these genes are approximately:- Opaline - 30% - Ino - 3% - Cinnamon - 7% Slate.

ALTERNATIVE NAMES
Green Ino = Lutino
Blue Ino = Albino
Cinnamon = Cinnamonwing
Cinnamon Ino = Lacewing
Normal/Lacewing = Normal/(Cinnamon-Ino) Type 1

11 Saddleback

SADDLEBACK

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Saddleback birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The Saddleback gene is recessive to Normal.

12 German Fallow

GERMAN FALLOW

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the German Fallow birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The German Fallow gene is recessive to Normal.

13 English Fallow

ENGLISH FALLOW

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the English Fallow birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The English Fallow gene is recessive to Normal.

14 Scottish Fallow

SCOTTISH FALLOW

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Scottish Fallow birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list,

but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The Scottish Fallow gene is recessive to Normal.

15 Crested

CRESTED

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Crested birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The complete genetic picture for Crests is still not known. It is believed that Crests are produced from the interaction of one or more partial dominant gene/s acting in cooperation. The exhibition groupings of Full Circular, Half Circular and Tuft have no strict genetic basis nor do the many other visual variations of Crest (eg, multiple crests, “Helicopters”, Quarter Circles etc). Of those birds displaying crests the accurate genetic prediction of the type of crest is not possible, perhaps due to the influence of modifying genes. Thus, the complete picture is probably of polygenic inheritance.

The Avian Genetic Calculator uses a combination of genetic theory and statistical analysis of real breeding results to model the crest inheritance. This gives the best known calculation prediction in the absence of proven genetic theory. The Crest is modeled as a partial dominant gene which has 17% penetrance in the single factor state. In addition, Crestbred are genetically similar to Crested (sf) but show no visual crested feathers.

16 Darkwing

DARKWING

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Darkwing birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The Darkwing gene is a dominant modifier gene. It's action is only visible when combined with Greywing, Clearwing and Dilute varieties. All other varieties mask Darkwing.

17 Australian Faded

AUSTRALIAN FADED

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Australian Faded birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The Australian Faded gene is recessive to Normal.

18 Easley Clearbody

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Easley Clearbody birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The Easley Clearbody gene is dominant to Normal.

ALTERNATIVE NAMES
Easley Clearbody = Laced Clear

19 Blackface

BLACKFACE Top Previous Next

This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Blackface birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The Blackface gene is recessive to Normal.

20 Aust Recessive Grey

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Australian Recessive Grey birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The Australian Recessive Grey gene is recessive to Normal.

21 Feather Duster

FEATHER DUSTER

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Feather Duster birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The Feather Duster gene is classed as recessive to Normal. Feather Dusters are generally short lived and no examples of feather dusters actually reproducing are known. Normals/Feather Duster can sometimes be visually identified from Normals, but as it can be difficult it is better to treat them as splits rather than single factor partial dominants.

ALTERNATIVE NAMES
Feather Duster = Mop = Chrysanthemum

22 Australian Brownwing

AUSTRALIAN BROWNWING

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This menu opens the Variety Combination Window containing a list of all possible genetic combinations involving the Australian Brownwing birds.

To change the parent bird description, click the mouse on the desired item in the list and press SELECT/DONE.

Photographs of some items in the list can be viewed if a camera icon appears in the PICTURE column. Highlight the desired item in the list with the mouse and press the SHOW PICTURE button.

Selecting NORMAL from this list means that the selected bird contains no other genes from list, but may or may not contain genes from other lists in other Variety Combination windows,

VARIETY INFORMATION
The Australian Brownwing gene is recessive to Normal.

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