



▲ Red head of a normal wildtype Gouldian

Head Colours in Gouldian Mutations

AUTHOR & PHOTOS **TONY HANKS**



▲ Red head when melanins are reduced



▲ Black head of a normal wildtype Gouldian



▲ Red head when carotenoids are reduced



▲ Black head when melanins are reduced by a single-factor yellow back

PEOPLE EXPERIENCED in the care of Gouldian Finches recognise that there are three naturally occurring head colour variations, or morphs, found in the wild: red, black and yellow.

The black-headed form is the most common, displaying a deep, velvety sheen that provides a striking contrast to the bird's brightly coloured body plumage. The red-headed Gouldian, produced by a dominant gene, features a prominent crimson facial mask that adds to its visual impact. The yellow-headed form, also referred to as orange, results from a recessive gene that produces a softer golden or amber appearance.

Within aviculture, Gouldian Finch mutations attract considerable interest, with a wide range of colour options now available, some of which are specific to particular regions of the world. The interaction of head colour genes with mutations affecting the body and chest—such as yellow, blue, pastel, silver and cinnamon—produces Gouldian Finches exhibiting a remarkable diversity of subtle colour gradations and combinations.

However, it is important to recognise that all head colours share the same underlying genetic basis of red, black and yellow, despite differences in visual appearance. Although the genotypes determining head colour remain constant, variations arise in the observable characteristics—known as phenotypes—expressed across different mutations.



▲ Black head when melanins are reduced by a double-factor Australian yellow

CHANGED HEAD COLOUR APPEARANCES

Head colours in Gouldian mutations may differ from those expected from the underlying genetics. These colour changes occur when particular mutations interfere with the production of specific feather pigments.

REDUCED MELANIN PIGMENTS

When a Gouldian mutation reduces melanin pigment levels, the plumage develops a stronger yellow appearance, while the black head colour fades to varying shades of grey. For the same reason, the red head colour also appears lighter in tone.

Examples of mutations producing this effect include yellow back, dilute single-factor yellow back, Australian yellow, cinnamon and Australian recessive dilute.

REDUCED CAROTENOID PIGMENTS

When a Gouldian Finch mutation reduces carotenoid pigments, the normal green body colour shifts towards blue, while the red and yellow head colours are reduced to varying salmon shades.

Examples of these mutations include the blue and seagreen forms.

REDUCED MELANIN AND CAROTENOID PIGMENTS

Certain Gouldian mutations reduce both carotenoid and melanin pigment levels. These combined mutations, therefore, result in less saturated head colours across all three head colour variations.

Examples include pastel blue, silver, and Australian variegated blue.

SUMMARY CHART

The chart accompanying this article illustrates the head colour phenotypes (appearances) observed in the most common international Gouldian Finch mutations. This information may serve as a useful reference resource for breeders and enthusiasts.

STANDARD NOTATIONS

The first column of the chart lists the abbreviations used for the genes associated with each mutation. In accordance with standard genetic convention, dominant genes are represented by uppercase letters, while recessive genes are indicated by lowercase letters.

The abbreviation 'DF' signifies double-factor, while 'SF' refers to single-factor mutations. [Abk](#)

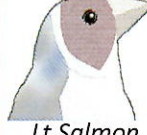
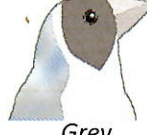
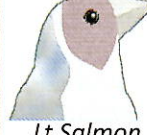
This article is based on a topic covered in the book *Gouldian Finches—Care, Breeding & Genetics* by Tony Hanks.

The Author

Tony Hanks has experience with Gouldian finches that spans over 50 years. As a result of his university studies, he has a special interest in Gouldian mutations and the genetics involved. He resides on the east coast of Australia.

Copies of *Gouldian Finches—Care, Breeding & Genetics* by Tony Hanks are available directly through **BirdKeeper**. See ad on page 159.

Quick Reference Table - Head Colours in Gouldian Mutations

Natural or Mutation	Purple-Breasted			White-Breasted		
	Red-Head	Black-Head	Yellow-Head	Red-Head	Black-Head	Yellow-Head
Natural Wild-type	 <i>Red</i>	 <i>Black</i>	 <i>Yellow</i>	 <i>Red</i>	 <i>Black</i>	 <i>Yellow</i>
Yellow Back (YB DF)	 <i>Red</i>	 <i>Lt Grey</i>	 <i>Yellow</i>	 <i>Red</i>	 <i>Lt Grey</i>	 <i>Yellow</i>
Dilute or SF Yellow Back (YB SF)	 <i>Red</i>	 <i>Grey</i>	 <i>Yellow</i>	 <i>Red</i>	 <i>Lt Grey</i>	 <i>Yellow</i>
Aust. Yellow (ay DF)	(NA)	(NA)	(NA)	 <i>Red</i>	 <i>Very Lt Grey</i>	 <i>Yellow</i>
Blue (bk DF)	 <i>Salmon</i>	 <i>Black</i>	 <i>Salmon</i>	 <i>Lt Salmon</i>	 <i>Black</i>	 <i>Lt Salmon</i>
Pastel Blue (bk DF, YB SF & PB)	 <i>Lt Salmon</i>	 <i>Grey</i>	 <i>Lt Salmon</i>	(NA)	(NA)	(NA)
Silver (bk DF & YB DF -or- bk DF, YB SF & WB)	 <i>Lt Salmon</i>	 <i>Very Lt Grey</i>	 <i>Lt Salmon</i>	 <i>Lt Salmon</i>	 <i>Very Lt Grey</i>	 <i>Lt Salmon</i>
Australian Recessive Dilute (ad DF)	 <i>Red</i>	 <i>Lt Grey</i>	 <i>Yellow</i>	 <i>Red</i>	 <i>Lt Grey</i>	 <i>Yellow</i>
Cinnamon (cn DF)	 <i>Red</i>	 <i>Grey</i>	 <i>Yellow</i>	 <i>Red</i>	 <i>Grey</i>	 <i>Yellow</i>
Seagreen (sg DF)	 <i>Lt Red</i>	 <i>Black</i>	 <i>Lt Yellow</i>	 <i>Lt Red</i>	 <i>Black</i>	 <i>Lt Yellow</i>
Aust. Variegated Blue (AVB) (ay DF & bk DF)	(NA)	(NA)	(NA)	 <i>Lt Salmon</i>	 <i>Grey</i>	 <i>Lt Salmon</i>