

The Crested Budgerigar Club of Australia

THE FULLCIRCLE

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**Very Impressive is it not.
This is the Maurice Roberts trophy**



DIRECTIONAL FEATHER

Written By Don Burke



To win on the show bench today, you simply must have directional feather. But how do you develop it in your birds? I have spent some years trying to sort it all out, and I am starting to make some headway. There are two issues to look at: What is Directional Feather and how is it passed on from parents to chicks?

What is emerging is rather strange, so please bear with me. The way it seems to work is quite simple, but it may rattle your cage a bit. Please willingly suspend your disbelief until you have finished reading this attempt to sort it all out.

What is Directional Feather?

Try as I might I can't find any significant change in the direction of feather growth in birds with Superb Directional Feather. It mostly seems to be longer feathers at either side of the cere rather than a major change in the angle of growth.

As I have tried to work out crested budgies, it emerged that they aren't crested at all, but rather have feather whorls. Feather and hair whorls are very common in normal birds and mammals. You have one on the back of your head. Whorls act to change the direction of feather or hair growth to aid in streamlining, to avoid hair or feather snags as the animal brushes against hard objects and also to shed water efficiently.

Some wild species of parrots (e.g. Quaker parrots) have a feather whorl just above the cere. In this position, a few feathers overhang the cere, some go to the left and others to the right, but most go straight back over the skull. In this way the whorl is very useful. If the centre of the whorl moves a few millimeters back towards the middle of the skull, you would call this a full circular crest. But in the wild Quaker parrots it is virtually invisible due to the central dot being right in the cleft at the middle of the cere.

I am now almost certain that all birds and definitely all parrots are crested. That is, they have a whorl on the front of their head. Please just read on....



The centre of the whorl is covered by either the cere or the beak itself. That little dot that marks the centre of the whorl on the heads of all wild birds is overgrown by the beak and cere as the embryo develops in the egg. All that remains is feathers growing back over the skull and to the left and right of the cere: that is, the whorl moulds the feathers over the head in a superbly streamlined way. The central dot disappears under cere etc.



So, directional feather is the end result of a facial feather whorl which is identical to what we call a crest in budgerigars.

So what has changed?

If my theory is correct, all that has changed is that the feathers on either side of the cere are longer than they used to be. The length of these “directional feathers” pushes them out in front of the eyes. It is also remotely possible that something has changed the angles of the whorl as well.

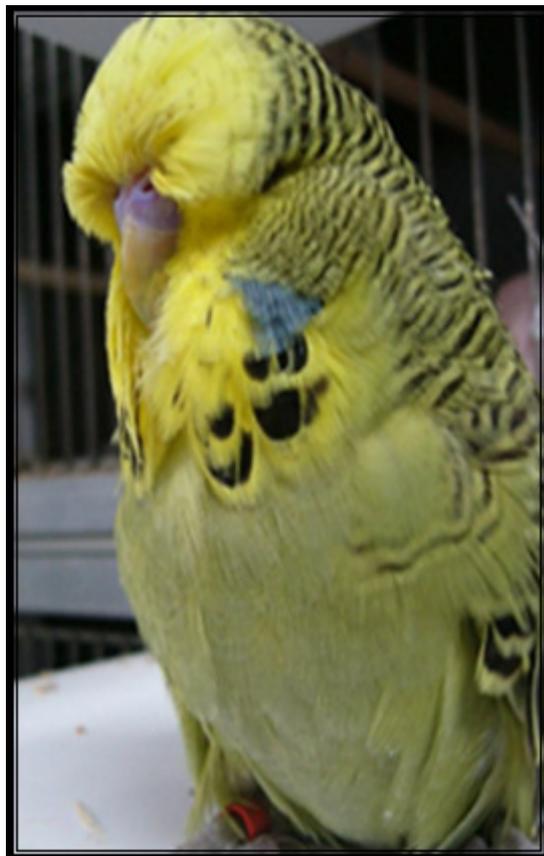
How is it passed on?

Mercifully, it seems to be passed on really simply as a sex-linked recessive gene: that is, it is identical to cinnamonwing or opaline in its mode of transmission. So, let’s do some numbers:

1. A cock with superb directional feather mated to a hen with none (and no history of it) will produce:
50% cocks with no directional feather (but split for it) and
50% hens with directional feather.

....cocks can be split for directional feather, but hens can't.

However



2. A hen with superb directional feather mated to a cock with none (and with NO family members with directional feather) will produce:
50% cocks with no directional feather (but split for it)
50% hens with no directional feather and not split for it.

....that is, hens with superb directional feather, when mated to cocks with no directional feather will never produce any babies with directional feather unless the cock is split for it.

3. If you mate a split cock from Mating #1 above, to a non-directional feathered hen you get:
25% cocks split for directional feather
25% cocks not split for directional feather
25% hens with directional feather



25% hens not carrying the directional feather at all.

...so only one hen out of four babies (on average) will have directional feather.

To go beyond these matings, just look up charts for either cinnamonwing or for opaline and substitute the words directional feather for either opaline or cinnamonwing and you will get the expectations.

In my matings, it is looking like the gene for directional feather could be linked to cinnamonwing or opaline, but I am not convinced. What I am getting is lots of hens that are opaline cinnamonwing birds with lovely directional feather. I suspect that other matings will see this as coincidence. Nonetheless, it proves the genetic basis of directional feather: sex-linked.

What about extra wide Directional Feather?

This is emerging as a gene volume control issue: that is, blending inheritance. Long directional feather to shortish directional feather gives mostly mediumish directional feathers. Much as black human married to a white human produces 100% mid brown children.

Although Mendel's work indicates that blending inheritance can't happen, in fact it does and it's very common.

So, once you have directional feather in all of your birds, as you select gradually for longer and longer buffalo horns (feathers) so your birds will get more of it.



So much of exhibition qualities are controlled by gene volume controls. These are long sections of DNA that are not genes, but they do control the extent of influence of one or more genes. So nature (or breeders) can ramp up the effect of almost any gene. Or ramp it down for that matter:



- You can get clearer wings on clearwings
- You can get less yellow pigment on the bodies of yellowfaced blues
- You can get coarser or finer feathers
- You can get bigger or smaller birds
- You can get bigger or smaller spots

Etc etc

Some of you must still be grumbling about the crest bit of all this. If all budgies are crested, what on earth are true crested budgies???

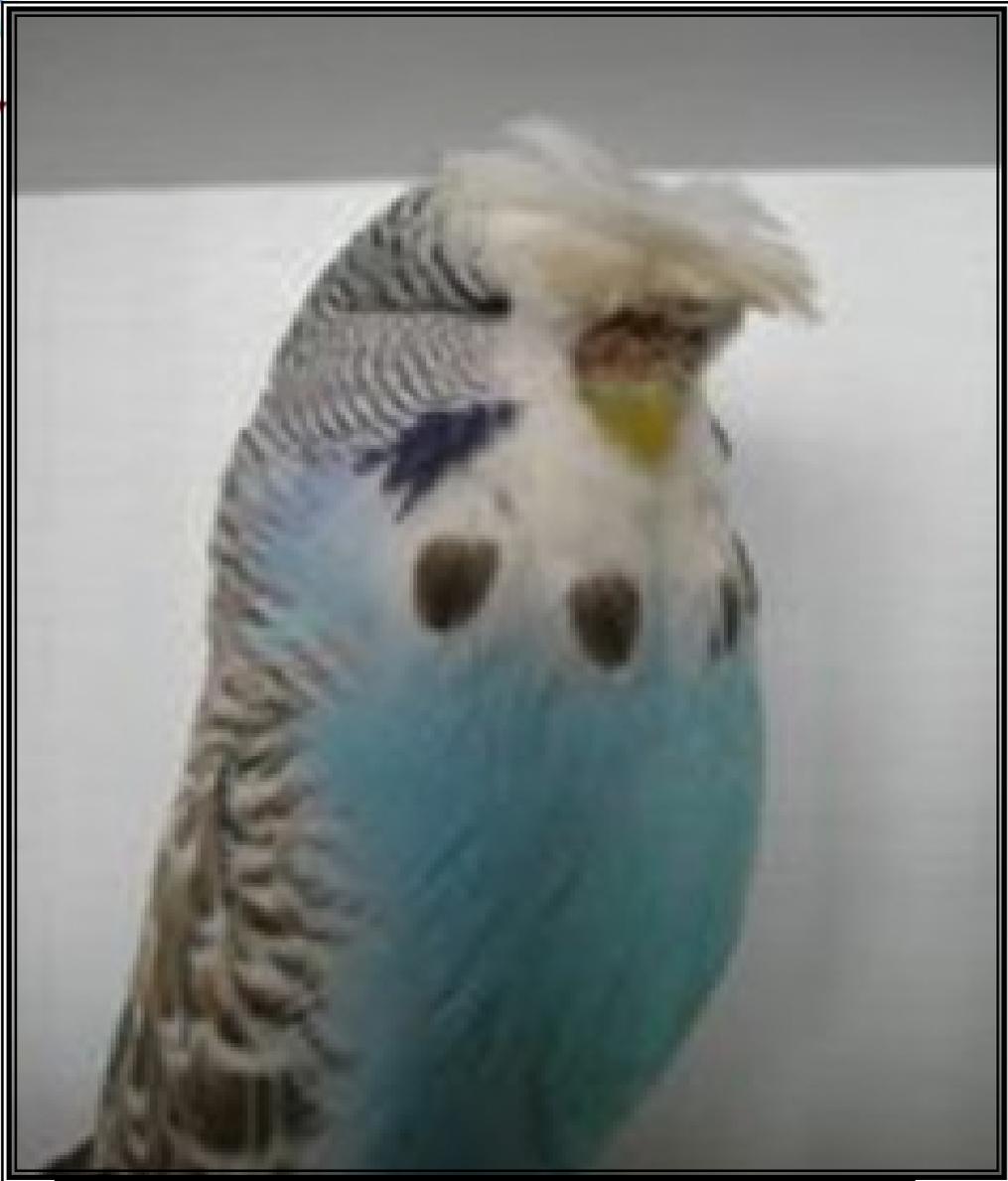
I suspect that what we call crested budgies either:

- A) have the centre of the whorl (crest) genetically moved further back on the head or
- B) have a second whorl just behind the normal one. This is not so silly since you do get budgies with multiple crests on their backs, wings and even chests.

By now I suppose that you all think that I am mad. Maybe you're right. Let me know your experiences and thoughts.



WINNERS
Of the Maurice Roberts trophy
Colin Flanagan and Bruce Sheppard
Presented with the trophy by our president
Roy Blair at the national show in Canberra 2011



A NATIONAL WINNER OWNED BY
Colin Flanagan and Bruce Sheppard



CRESTED BUDGERIGAR CLUB of
AUSTRALIA



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GOLDEN CREST AWARD

COMPETITION ENTRIES



Dear Show Secretary

Please supply the show winner of your clubs awards.

1st Place.

.....

Type of Show.

The Objects of The Club are :-

1. To encourage, promote the breeding and exhibition of the Crested variety.

2. To collect and publish information relative to the Crested Budgerigar or other matters of interest to members of the club.

3. To assist with the adoption of a Standard of Perfection for the Crested Budgerigar and to revise it when deemed appropriate.

4. To Conduct exhibitions of the Crested Budgerigar.

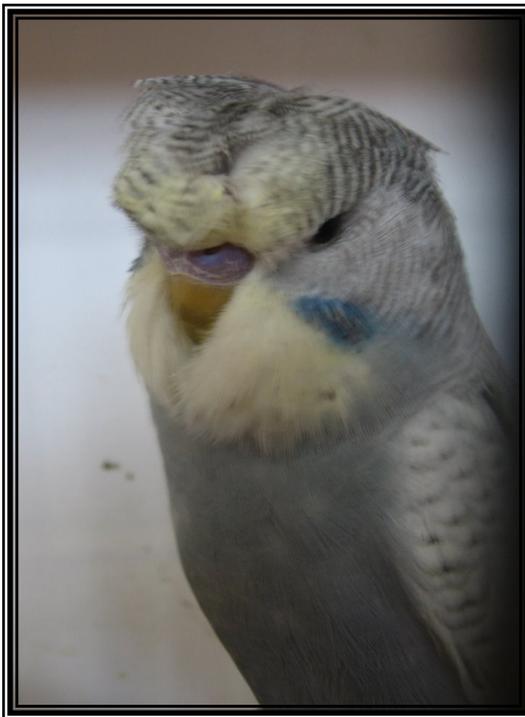
5. To take such actions and to do such things as may be considered expedient to the pursuit and furtherance of the objects of the club

6. To affiliate or liaise with any Society or club with similar interests.



St George / Illawarra winner Bred by Steve Wackwitz

Unbroken cap winner bred by Craig Geering



Photo's curtesy of Nola Bradford



Christmas Greetings.

Hello everyone, I am hoping that your breeding is going well and that many disturbed feathers are in site.

And then of course, that they develop into champions.

I expect that you, like me, are eagerly waiting the show season, and of course, the National show in Geelong.

Oh, and by the way, have a happy Christmas and a great New Year.

Roy Blair
President





This very lovely baby photo was sent in by our latest new member
from overseas

Etienne & Tsetseg de Smaele
Stud "The Dutchbudgie"

<http://dutchbudgie.tripod.com>

