

## The Cinnamon Burmese and Mandalay Programme – the first three generations

My interest in the cinnamon gene started when we bred an extremely pale, honey-coloured chocolate Burmese (Ch. Rafoej Xena), and I wondered whether she might actually be cinnamon rather than chocolate. I thought I would test this possibility by a test-mating, and see what cinnamon looked like in combination with the Burmese gene. Hence the Cinnamon programme was born in early 1994. Subsequent results confirmed that Xena's colour was not the result of the cinnamon gene, but remains unexplained. It appears that the cinnamon gene was entirely absent from the Burmese and Mandalay gene pools before this programme introduced it.

The cinnamon gene (*b'*) is a member of the same genetic series as the chocolate gene (*b*). Chocolate is recessive to black, and cinnamon is recessive to both black and chocolate.

The Genotype of a fawn Burmese is as follows:

***aab'b'c<sup>b</sup>c<sup>b</sup>dd***

The genotype of a Cinnamon Burmese is:

***aab<sup>1</sup>b<sup>1</sup>c<sup>b</sup>c<sup>b</sup>D-***

The initial cats bred were Provisional Register Mandalays - the full colour expression of the Burmese (*C-*).

### Generation 1:

I started the Cinnamon Programme with the mating of Ch. Rafoej Xena's seal daughter Ch Rafoej Almira (Mira) to an ebony Oriental carrying cinnamon. I then mated Mira's ebony Mandalay daughter Gr. Ch. Rafoej Midnight Caller to a sorrel Abyssinian. Three progeny from these matings – 1 male and two females - were the foundation cats for the Cinnamon Programme:

Rafoej Sahara Gen 1  <i>Male Ebony Ticked Tabby Mandalay DOB: 1994</i>	Dbl. Gr. Ch. Boothill Young Gun  <i>Sorrel Abyssinian</i>
	Gr Ch Rafoej Midnight Caller  <i>Ebony Mandalay carrying Burmese and Dilute</i>

Rafoej Sabu Gen 1  <i>Female Ebony Ticked Tabby Mandalay DOB: 1994</i>	Dbl. Gr. Ch. Boothill Young Gun  <i>Sorrel Abyssinian</i>
	Gr Ch Rafoej Midnight Caller  <i>Ebony Mandalay carrying Burmese and dilute</i>

Rafoej Panache Gen 1  <i>Female Ebony Mandalay</i> <i>DOB: 1994</i>	Dbl. Gr. Ch. Pizzacato Tango  <i>Ebony Oriental carrying cinnamon</i>
	Ch Rafoej Almira  <i>Seal Burmese carrying chocolate</i>

Rafoej Sabu (Gen. 1) produced only Mandalays and proved not to carry dilute; her genotype is: **AaBb<sup>1</sup>CCDD**.

Rafoej Sahara produced Mandalay and Burmese kittens and is therefore:

**AaBb<sup>1</sup>Cc<sup>b</sup>D-**. He never produced dilute kittens, and nor did either of his progeny which were bred from, but he was mated only to queens which did not carry dilute. Rafoej Panache had only one small litter, of two ebonies and a cinnamon tabby. Her genotype is: **aaBb<sup>1</sup>Cc<sup>b</sup>DD**.

All three of these foundation cats are alive and extremely well as I write this at the beginning of 2009.

## Generation 2:

Rafoej Sahara (Gen. 1) was mated to his sister Rafoej Sabu (Gen. 1) to produce Ch Rafoej Zephyr (Gen. 2), a cinnamon Mandalay. At that time the rules for experimental breeding programmes and for generation progression on the Provisional Register were more open than they are now. Breeding programmes did not require any formal approval, and cats progressed to the next generation automatically, even if both parents had the same generation status.

Rafoej Sahara (Gen. 1) was also mated to Rafoej Panache (Gen. 1) – to produce Rafoej Vartek (Gen. 2), a cinnamon ticked tabby Mandalay. Because Panache was not guaranteed to carry cinnamon, Sahara was also mated to her sisters, but these litters did not produce cinnamon, and did not contribute to the breeding programme.

Rafoej Vartek (Gen. 2)  <i>Male Cinnamon</i> <i>Tabby Mandalay</i> <i>carrying Burmese and</i> <i>Self</i>	Rafoej Sahara (Gen. 1)  <i>Ebony Ticked Tabby</i> <i>Mandalay carrying</i> <i>Burmese, self and</i> <i>Cinnamon</i> <i>DOB: 1994</i>	Dbl. Gr. Ch. Boothill Young Gun  <i>Sorrel Abyssinian</i>
		Gr Ch Rafoej Midnight Caller  <i>Ebony Mandalay carrying Burmese</i> <i>and Dilute</i>
	Rafoej Panache (Gen. 1)  <i>Ebony Mandalay</i> <i>carrying Burmese and</i> <i>Cinnamon</i> <i>DOB: 1994</i>	Dbl. Gr. Ch. Pizzacato Tango  <i>Ebony Oriental carrying cinnamon</i>
		Ch Rafoej Almira  <i>Seal Burmese carrying Chocolate</i>

Champion Rafoej Zephyr (Gen. 2)  <i>Female Cinnamon Mandalay</i>	Rafoej Sahara (Gen. 1)  <i>Ebony Ticked Tabby Mandalay carrying Burmese, self and Cinnamon</i> DOB: 1994	Dbl. Gr. Ch. Boothill Young Gun  <i>Sorrel Abyssinian</i>
		Gr Ch Rafoej Midnight Caller  <i>Ebony Mandalay carrying Burmese and Dilute</i>
	Rafoej Sabu (Gen. 1)  Female Ebony Tabby Mandalay carrying Self and Cinnamon	Dbl. Gr. Ch. Boothill Young Gun  <i>Sorrel Abyssinian</i>
		Gr Ch Rafoej Midnight Caller  <i>Ebony Mandalay carrying Burmese and Dilute</i>

Champion Rafoej Zephyr (Gen. 2) produced only Mandalays and proved not to carry dilute; her genotype is: ***aab<sup>1</sup>b<sup>1</sup>CCDD***.

Rafoej Vartek (Gen. 2) produced Mandalay and Burmese kittens and is therefore: ***Aab<sup>1</sup>b<sup>1</sup>Cc<sup>b</sup>DD***.

Two more Gen. 2 breeding cats were subsequently bred from Rafoej Sabu (Gen. 1): Ch Rafoej Cupreous (Gen. 2), sired by Rafoej Vartek (Gen. 2), and Rafoej Mata (Gen. 2), sired by Rafoej Eclat (Gen. 3).

Champion Rafoej Cupreous (Gen. 2)  <i>Male Cinnamon ticked tabby Mandalay, carrying Burmese</i>	Rafoej Vartek (Gen. 2)  <i>Male Cinnamon Tabby Mandalay carrying Burmese and Self</i>	Rafoej Sahara (Gen. 1)  <i>Ebony Ticked Tabby Mandalay carrying Burmese, self and Cinnamon</i>
		Rafoej Panache (Gen. 1)  <i>Ebony Mandalay carrying Burmese and Cinnamon</i>
	Rafoej Sabu (Gen. 1)  <i>Female Ebony Tabby Mandalay carrying Self and Cinnamon</i>	Dbl. Gr. Ch. Boothill Young Gun  <i>Sorrel Abyssinian</i>
		Gr Ch Rafoej Midnight Caller  <i>Ebony Mandalay carrying Burmese and Dilute</i>

		Rafoej Vartek
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Rafoej Mata (Gen. 2)  <i>Female ebony ticked tabby Mandalay carrying self</i>	Rafoej Eclat (Gen. 3)  <i>Ebony Ticked Tabby Mandalay carrying Burmese, self, dilute, and cinnamon</i>	(Gen. 2)  <i>Male Cinnamon Tabby Mandalay carrying Burmese and self</i>
	Rafoej Sabu (Gen. 1)  <i>Female ebony tabby Mandalay carrying self and cinnamon</i>	Ch Lessentine Filigree  <i>Blue Burmese carrying chocolate</i>
		Boothill Young Gun  <i>Sorrel Abyssinian</i>
		Gr Ch Rafoej Midnight Caller  <i>Ebony Mandalay carrying Burmese and dilute</i>

Ch. Rafoej Cupreous (Gen. 2) proved to homozygous agouti: ***AAb<sup>1</sup>b<sup>1</sup>Cc<sup>b</sup>DD***.  
Rafoej Mata (Gen. 2) produced very few kittens and her genotype is therefore uncertain, but all her kittens were ebony or ebony tabby: ***AaB-C-D-***.

Ch. Rafoej Cupreous (Gen. 2) went to Jan Parsons to begin her involvement in the cinnamon programme. All the other Gen. 1 and Gen. 2 breeding cats were retained by Rafoej cattery except for one litter bred from Rafoej Sabu (Gen. 1) under lease to Carol Gray.

### Generation 3:

As well as the Gen. 2 litter to Rafoej Sabu (Gen. 1), Rafoej Vartek went on to produce Cinnamon carrying cats from two matings to full register Burmese, which went to other breeders as follows:

1. X Rafoej Galia (Seal carrying Chocolate and Dilute) produced Ch. Rafoej Dapple (Gen. 3) who went to Jane van Dyk;
2. X Christa Krey's Ch. Lessentine Filagree (leased to Rafoej), who produced Jane van Dyk's Rafoej Eglantine (Gen. 3), and Gaye Teague's Rafoej Eclat (Gen. 3).

These two litters included the first Burmese kittens born in the programme – all the earlier litters had been of Mandalays only.

Ch. Rafoej Zephyr (Gen. 2) (Dinky) produced several daughters which went on to become breeding queens. She was mated to Gaye Teague's Rafoej Eclat (Gen. 3) to produce a cinnamon ticked tabby daughter which was sold for breeding but had only pet kittens. A mating to Jan Parsons' Ch. Zanyminx Pink Panther (a lavender caramel ticked tabby grandson of Ch Rafoej Cupreous), produced Rafoej Burnt Umber (Gen. 3), a cinnamon Mandalay who went to Christa Krey, and Rafoej Brown Sugar (Gen. 3) a chocolate Mandalay who went to Dorothy Horton. To Jan Parson's cinnamon Mandalay Ch. Arsenios Touch of Bronze (bred by Jane van Dyk), she produced Ch. Rafoej Malibu (Gen. 3), who now belongs to Eddie and Cheryl Henrard. From Dinky's final litter by Ch. Lekcid Olhovskiy, born in late 2003, I kept an ebony son (Ch. Rafoej Vivid (Gen. 3)) and daughter (Rafoej Vinka Gen. 3)). I am developing a line with no Oriental ancestry, as I felt the Oriental type was inclined to

be too predominant in the programme. Also, caramel has popped up in subsequent generations and can make colour identification challenging – we think this came from the Oriental line, so I hope fawns without this ancestry will let us see what an undoubted non-caramel fawn looks like.

Rafoej Mata's (Gen. 2) only successful litter produced the delightful Ch. Rafoej Unforgettable (Gen. 3), an ebony ticked tabby who went to Jan Parsons to produce some very nice kittens before being retired to live a life of luxury as a pet.

Jane Masterton (now van Dyk) mated Ch. Rafoej Dapple (Gen. 3) to Rafoej Eclat (Gen. 3), owned by Gaye Teague and Terry Frost Jones – Llantillio cattery. Dapple's first born from this mating, was Mpaka Touch of Gold (Gen. 3) – a cinnamon ticked tabby Burmese. Jane also mated Rafoej Eglantine (Gen. 3) (Katy) to her seal Burmese Ch Lekcid Olhovskiy – their son Arsenios Chocolate Charlie is in many pedigrees.

Jan Parsons kept a lovely ebony ticked Mandalay, named Ch Zanyminx Mishah (Gen3), known as 'Bunny' from Ch Rafoej Cupreous (Gen 2). Bunny's offspring are in many of today's pedigrees.

Carol Gray leased Rafoej Sabu (Gen. 1) for a litter to the ebony Mandalay Ch. Atacat Rasputin. From this litter she kept Ch. Atacat Tabulah Bel Tuesday (Gen. 2), who had one litter. Her ebony ticked tabby Mandalay son Atacat Zachary (Gen. 3) (Zac) went to live with Ruth Phillips and in turn sired one litter before being neutered. His chocolate Mandalay son Purpaws Chocalate Truffles (from the lavender Mandalay Ch. Purpaws Laurasian Lavender) continued the family tradition by siring a single litter to Ch Atacat Asia Rose (Gen. 3) which included Ch Atacat Greta Garbo (Gen. 3).

Carol also mated her seal Burmese Gr. Ch. Rafoej Lysistrata to Ch Rafoej Cupreous (Gen 2). She kept and bred from two sisters (Ch. Atacat Asia Rose (Gen. 3) and Gr Ch Atacat Amber Lee (Gen. 3)). Ch. Atacat Greta Garbo's last litter was to Ch. Rafoej Unforgettable (Gen. 3), and produced the fawn caramel ticked tabby Burmese Atacat Razzle Dazzle (Gen. 3) – she was such a rich caramel that for a long time she was misidentified as a cinnamon tabby.

Ch. Rafoej Malibu (Gen. 3) is the only Gen. 3 cat still entire at the beginning of 2009. As there are now no entire provisional register males, there will be no more Gen. 3 cats, and the programme is now an experimental programme no more – these colours are now fully a part of the Mandalay and Burmese breeds. The first three generations of the cinnamon programme did not produce any cinnamon Burmese apart from one cinnamon tabby, or any fawns – this was to happen some years later. Cinnamons and fawns, and tabbies in these colours have now been produced in both Mandalay and Burmese in reasonable numbers. They are very strikingly rich warm colours (cinnamon) or very soft and subtle (fawn). They are fully recognised with standards and challenge status and are now being bred by an increasing pool of breeders who were not part of the original programme.

A commercial test for the cinnamon gene is now available at a reasonable cost, and will make the breeding of these colours much easier.