

November-19



Time Travellers Club

Dear Club Members,

Before I was a dyer I was a science teacher. None of my formal education was arts based, I have Science A-Levels and my subject at university was Biology. It's always surprising how many people in the fibre arts come from a science or engineering background. There are times when I do sometimes wish I had done a more arts based education, but there were real benefits to studying science, and I was lucky to have some very inspirational teachers.

My tutor in my final year of university was Professor Tim Birkhead. If you like listening to science programmes on BBC Radio 4 you may have heard him on various programmes including The Infinite Monkey Cage. He's a very funny man, and excellent at communicating scientific ideas. On the back of the door of his office was a publishers advertising poster for a book he'd just written. I wasn't the worlds best student, and by that point it was becoming very clear that I was not going to be a career scientist, but I did still love the subject. So I went home and ordered a copy. I still have it, I still read it now and again, and it's the inspiration for our fibre this month.

Ask anyone to name the first genetically modified animal and they will probably say Dolly the Sheep. It may come as no surprise that I am about to tell you that she was not the first. The first genetically modified species (ie. containing the DNA of a completely different animal) is the canary. The title of the book is The Red Canary and it's the story of an amateur bird breeder, a scientist and a rich philanthropist and the quest to take an ordinary yellow canary and breed a bird that was bright red.

The canary had been kept as a domesticated bird since the 17th century, the original birds were green and yellow and found on the islands just off the coast of Africa and Spain. In Germany the breeders focused on producing birds with a beautiful song, including an incredible variation known as the Mountain Roller. The amateur bird breeder of our book was a master. Karl Reich had managed to breed a bird capable of replicating the song of a nightingale. He did this using careful breeding, and crucially, the right environment as the bird grew up, as canaries learn their song by listening to other birds.

Karl Reich met the scientist Hans Ducker, and together they set about trying to breed a red canary. Throughout the 1920's and in to the 30's they tried to breed a red canary by introducing the genes from a red siskin. This was long before the technology of genetic manipulation that allowed precision splicing of the genetic code. Instead they bred thousands of birds, selecting for the best colour, and hoping that the hybrid birds would be fertile. I don't think it's too much of a spoiler to say that they succeeded, but the story of how they got there is fascinating. The book tells this much better than I ever can, so I will leave the tale there, and as ever the further reading links will take you in the direction of pictures, videos, and much more.

Happy Spinning

Katie

Further Reading-

The Red Canary Book (Amazon link, as you can get a second hand copy for 1p plus postage, but it's available from other sources)

<https://www.amazon.co.uk/Red-Canary-Genetically-Engineered-Animal/dp/140884706X>

Mountain Roller Canary Song

<https://www.youtube.com/watch?v=gRZTIN8ndYA>

Canaries

https://en.wikipedia.org/wiki/Domestic_canary

History of Canary keeping

https://www.omlet.co.uk/guide/finches_and_canaries/canary/history/

Canaries were used to detect bad air in mines-

<https://www.smithsonianmag.com/smart-news/story-real-canary-coal-mine-180961570/>

Red Canary-

<https://www.petguide.com/breeds/bird/red-factor-canary/>

The Infinite Monkey Cage Radio Programme (Radio programmes are available to non-UK listeners)

<https://www.bbc.co.uk/programmes/b09ly26f>

<https://www.bbc.co.uk/programmes/m0008nyc>

The Life Scientific Radio Programme- Bird Promiscuity

<https://www.bbc.co.uk/programmes/b098j5l3>

TED Talk by Tim Birkhead on The Early Birdwatchers-

https://www.ted.com/talks/tim_birkhead_the_wisdom_of_birds

Fibre Content- In case your parcel is missing the label
62.5% Corriedale, 12.5% Mulberry Silk, 25% Sari Silk