

TRACING HUMAN GENETIC BACKGROUNDS

By Frank Carrucan (of the Patrick line – Ballarat, Victoria).

The genetic history of Britain and Ireland has been researched by Sykes.¹ The following is a brief summary of Sykes' work. Detailed explanations are available in his books and research studies.

In genetic research, changes in DNA structure are tracked over time. Large samples of present day populations are collected. This data can then be compared with DNA from either a single, modern individual or from samples collected from ancient human remains (eg. a bone or tooth).

Sykes² outlines the process of change in DNA structure. DNA instructs human cells to copy themselves. Changes (called mutations) occur very rarely when an error occurs in copying cells. Mutations (copying errors) only occur very rarely – on average once in every thousand million times a cell is copied, but this is enough to cause genetic variation of species and evolution.

Sykes' research, at first, concentrated on mitochondrial DNA (m DNA) which occurs outside the cell nucleus. There is a far greater change of finding mDNA in ancient bones as it is about a thousand times more plentiful than ordinary DNA. All mDNA comes from the maternal line and, as such, tells the history of women. Sykes calls it the perfect guide to the human past. Seven maternal clans predominate in Europe.

Genetic research can be used to track very early human migration. For instance the Pacific was colonised from East to West – from SE Asia to the Pacific islands. Thor Heyerdahl and the Kon Tiki expedition (1947) was wrong in attempting to prove Pacific colonisation from South America.

Y-chromosomes can be used to track the genetic history of males. Mutation rates of Y-chromosome fingerprints are quicker than mDNA occurring about every 1,500 years. There are 5 paternal Y-chromosome clans defined in Western Europe.

Although there is evidence of very ancient human occupation of Ireland, about 11,000 years ago an ice age forced early humans south, as the sea was frozen down to northern Spain (or where Spain is now). Ireland was separated from the rest of the Isles when the sea level rose again about 8,500 years ago.

People returned to Ireland after the thaw. Sykes states that the genetic bedrock on the maternal side' was in place by 6,000 years ago and that

the genetic evidence shows that a large proportion of Irish Celts, on both the male and the female side, did arrive from Iberia at or about the same time as farming reached the (British) Isles'.³

Sykes thinks that the sea routes of the Atlantic fringe conveyed both men and women to the Isles, that, largely, the genetic structure of the Isles is Celtic descended from people who were there before the Romans. Whatever ongoing research discovers, as Sykes says 'the strands of ancestry weave us all together as children of a common past.'⁴

My own genetic background is Irish – Carrucan from my father (Fanore origins) and McArdle from my mother (Athlone origins). In genetic terms I am a Haplogroup R1b-L21 which is predominate in Ireland/UK and also

¹ Sykes, *Saxons, Vikings, and Celts. The Genetic Roots of Britain and Ireland.*

² Ibid., 94.

³ Sykes, *Saxons, Vikings, and Celts. The Genetic Roots of Britain and Ireland*, 282.

⁴ Ibid., 287.

found in Germany, France, Lowlands, Scandinavia and Iberia. I am also a AMH, (Atlantic Modal haplotype.)⁵

Haplogroup R1b is the most common haplogroup in European populations. It is believed to have expanded throughout Europe as humans re-colonized after the last glacial maximum 10-12 thousand years ago. This lineage is also the haplogroup containing the Atlantic modal haplotype. (Family Tree DNA).

R1b is out of Africa 60,000 years ago and then in the Middle East 45,000 years ago. By 30,000 – 25,000 years ago, the R group is spread from R2 in Central Russia, R1a is just NE of the Mediterranean to R1b located in Spain (Family Tree DNA map tracing).

Therefore, I am 'most common' in Haplogroup terms. Sykes states that the 'prosaic'⁶ Atlantic Modal Haplotype (AMH) is the commonest Y chromosome signature in the (British) Isles.

More research into the genetic backgrounds of Carrucans is necessary before any further tentative inferences can be drawn. With my results, there seems to be a mDNA link to Iberia (where Spain is now) and a possible Y chromosome Viking connection – Viking raider? Irish slave to Scandinavia? (see Frances James below).

Genetically testing among family members is encouraged to add to the Carrucan story extending back beyond the limited written records that exist in Ireland. There are the records within our own DNA that can be traced. Genetic testing can be investigated at website <https://www.familytreedna.com> (and for a discount price join via the Corrigan yDNAgroup <http://www.familytreedna.com/public/corrigan/default.aspx>).

So my bubble is burst. Idle dreams of Irish royal blood are retreating and I am becoming reconciled to a more 'common' or 'prosaic' origin. However, this new science is fascinating and still in its infancy. As more people are tested world wide, more research will be conducted and more understandings developed.

⁵ Ibid., 281.

⁶ Sykes, *Saxons, Vikings, and Celts. The Genetic Roots of Britain and Ireland*, 162.