

The Carswell DNA Project

Update January 2011

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There have been [16 Carswell males tested](#). All of these Carswell males come from families not known to be related.

To date, there are 3 distinct haplogroups within these 16 results. This reveals that, like most family name groups, there are a number of founder males.

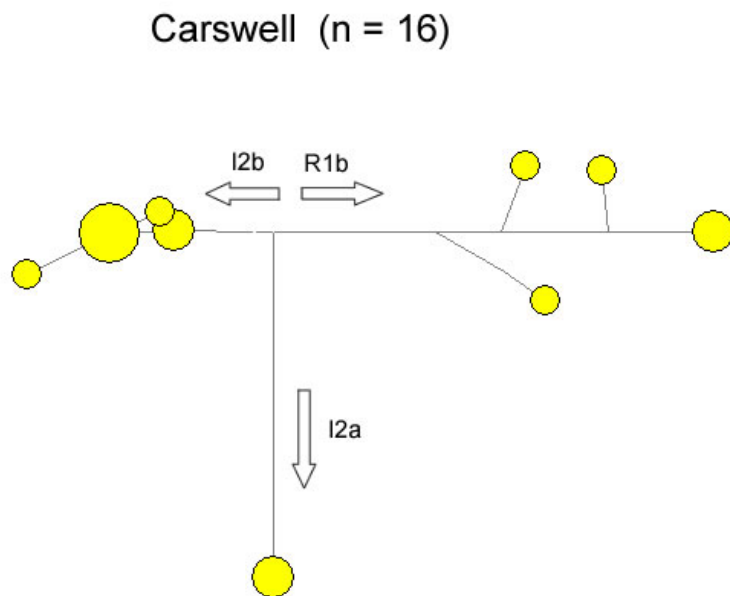


Diagram 1. Median Joining Network of Y-dna – Carswell Surname

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Haplogroup I2b1a1 (previously I1c-Isles)

Eight of the Carswells tested are Haplogroup I2b1a1. Of these, all can trace their family history to the Renfrewshire – Ayr region of Scotland.

I2b1a1 is a sub-group of I2b, peculiar for a 'null DYS 425' allele. This peculiarity is called a 'Palindrome'. Chromosomes are not straight and a section of the chromosome at DYS 425 has folded over onto itself. Thus, this section has sequences which mirror each other on each side of these folds and this is what has caused our 'null DYS 425'. This 'mutation' is unusual and familial, i.e. it is passed on from father to son and is specific to this family.

The closest DNA matches of the I2b1a1 Carswell group to another Surname group are to the family of Carson from Scotland and more distantly, McGuinness, McCartan, Diamond & the McCrackens, all of County Down & Antrim, Ireland.

Generally, it is assumed that the longer a group has been in a geographic area then the more genetic diversity is seen within that group. In the Carswell (I2b1a1) family case, there is as much diversity within the family as between them and the distantly related McGuinness family. This would indicate that the family has been resident in the Renfrewshire area for a very long time.

Recent research has suggested that the origin of this family group was in England. I2b1a, the germ root, is almost exclusively British and seems to have arisen there among the Celts. The renowned geneticist Ken Nordvedt has dated it's mutation in England as approximately 1870 BC. The subclade found in Scotland (I2b1a1) he has dated to approximately 270 AD.

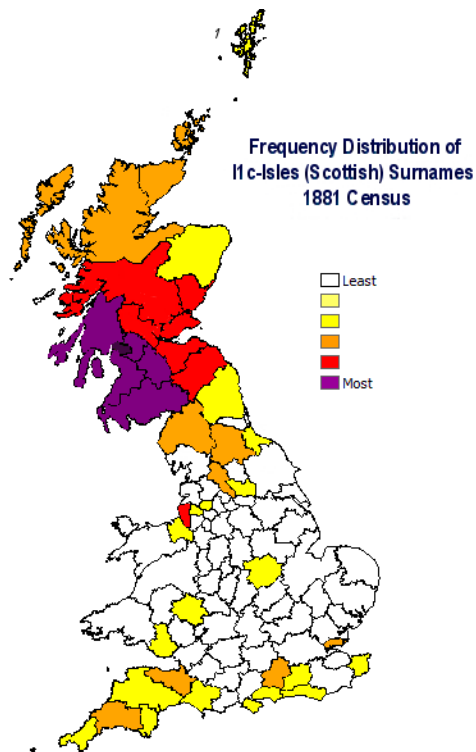


Diagram 2. Frequency Distribution of I2b1a1 (Scots)

Haplogroup R1b1b2

Four of the tested are R1b1b2. Of these, three are able to document their family history to Argyll Scotland.

The other (the fourth) participant's forebears are from Shropshire, England, where the family has strong roots.

The results of the Argyll participants shows that all sets of Y-DNA were Haplogroup R1b1b2 and almost identical, with only one mutation each, over 37 markers. A Fluxus Calculation using a confidence rate of 75% with a 30 year generation interval revealed a TMRCA (Time To Most Recent Common Ancestor) of 420 years. Taking the current age of the testees from this calculation, revealed an estimated date for a common ancestor of 1540 AD.

Initial investigations were a little mystifying, as there were no public database matches. This is very unusual for the ubiquitous R1b1b2 aka the Western Atlantic Modal Haplotype. Investigation however, of data from the Trinity College study of "Y Chromosomes and the Extent of Patrilineal Ancestry in Irish Surnames"¹ (McEvoy et al, 2006), it was apparent that there was a congruent relationship with the Carswell I2b line to the Macartan and McGuinness.

The following Fluxus diagram outlines the relationships. Both Argyll R1b Carswells are represented by '**ca128**'. Macartans are coded to start with '**MC**', McEvoy with '**ME**' and McGuinness with '**G**'.

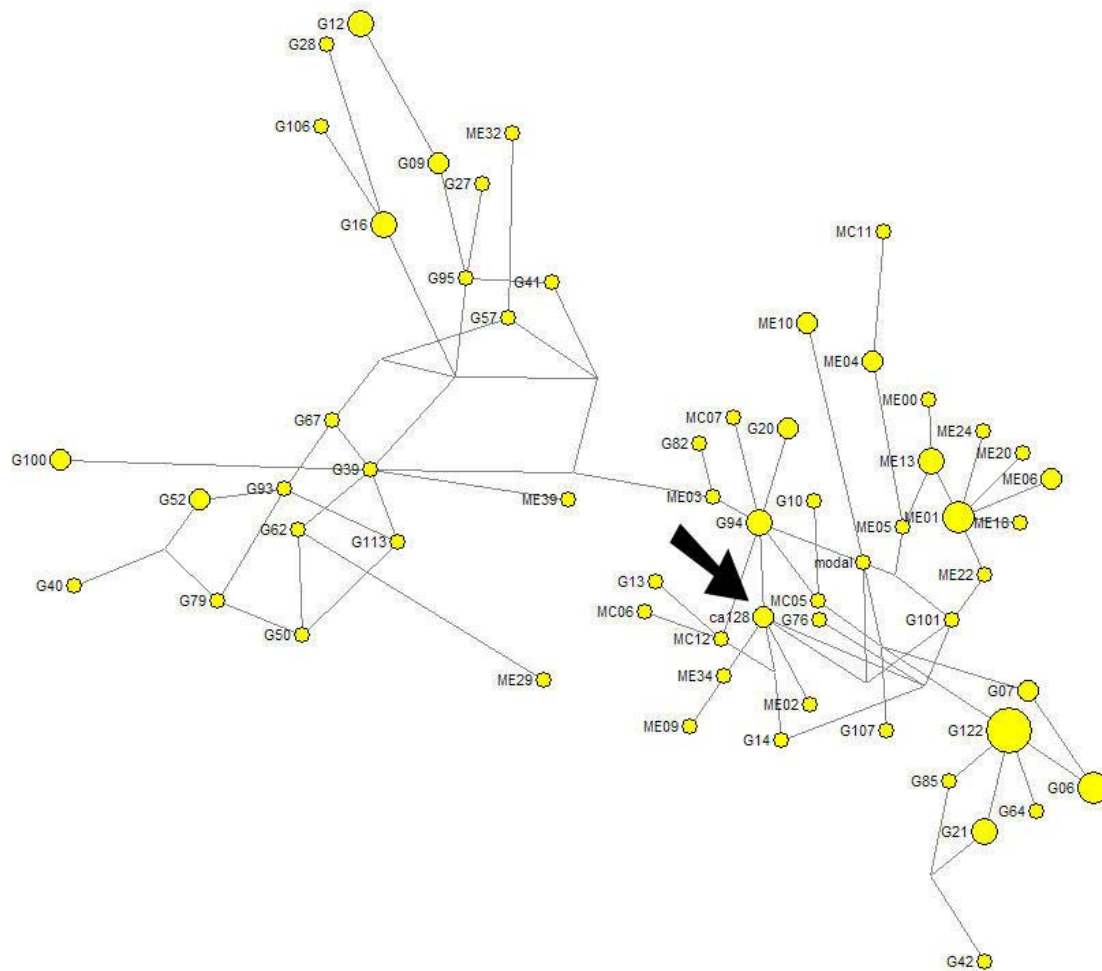


Diagram 3. Median Joining Network – Dal n'Araidhe

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It can be seen that, as with the I2b line, the closest relationship is with the Macartans, which cluster with the McEvoy's around a McGuinness (G94). Two other McGuinness lines sit either side of the cluster which also contains the modal DNA estimation.

Taken in the context of the I2b1a Carswell results, the conclusions of the Trinity paper, and with the historical record, these results would indicate reasonably conclusively that the R1b Carswells of Argyll are part of the same family group as those of the I2b1a1.

The landmark Trinity College study also records numerous exact matches at 13 markers with the main line of the Kennedy family of Munster. Indeed, very surprisingly, these members are the exact match of the Kennedy modal (at 13 markers).

Ethnically, the Kennedys are of the [Érainn](#). If not from the Munster area originally, the Ulster tribe of the Erainn were the [Dál Fiatach](#) who were known allies of the [Dal Araidhe](#) (McGuinness & Macartan) and participated with them in the colonization of [Dál Riata](#).

Haplogroup I2a

In November, 1772, Alexander and Isabella Brown Carswell and their children Edward, Agnes, John, Alexander Jr., James, Matthew, sailed from Belfast, Ireland and landed at Savannah, Georgia, USA.

Ancestors of Alexander and Isabella earlier had fled strife-torn Scotland for Ireland. Isabella was a descendant in the fourth generation of Scotland's William, 4th Lord Ruthven and 1st Earl of Gowrie.

From their home in Hephzibah, Georgia, the Carswell family became numerous and widespread in the Southern United States. The Carswell DNA project is grateful to our two participant Carswells for their contribution to the study. Both claim to be descendants of Alexander and Isabella Carswell.

The DNA results of 'Georgia Jim' and 'Texas Charles' reveals that they are very closely related.

These results show the participants belong to haplogroup I2a (the old I1b) and thus indicate no direct male line relationship to the other Carswell families which are either I2b or R1b. This does not preclude this DNA line, of course, from being another ancient component of the tribe. This will be one of the next project tasks.

There is one mutation difference from 67 markers between the two study members, over 250 years (at DYS 570). It may be possible to determine which of Alexander Carswell's progeny produced this mutation and whether there are any more on other lines. DYS570 is a relatively fast mutating marker.

This is most likely the haplotype I2a-P37.2*-West-Isles, however there will need to be more deep clade testing to determine/authenticate this result.

Background

The Y-DNA is one of the few areas of the genome which does not re-combine during fertilization. Every man has his biological father's Y chromosome, who had his father's Y chromosome, and so on. DNA testing can reveal specific mutations in the Y-chromosome which occur extremely rarely in populations and which are used to indicate branching of major human population groups over large time periods. These specific subgroups are referred to as a '**haplogroup**'.

Further differentiation is possible by comparing code in certain areas of the Y chromosome which are known to mutate at predictable rates, but over a much quicker timespan. These are called "Short Tandem Repeats" or STRs. These can be used to construct a '**haplotype**', or subset of the haplogroup.

Of course, the majority of our genes are a mish-mash of who knows how many hundreds of thousands of people who have ever lived, and we are the direct product of these almost random combinations. The Y-dna however, is like a time capsule travelling through the ages, changing significantly only once every 8 or 10 thousand years and only very slightly every few generations.

In 2006 Dublin University's Trinity College published the results of a research project "**Y-Chromosomes and the Extent of Patrilineal Ancestry in Irish Surnames**"(McEvoy and Bradley 2006)¹. This was a watershed publication which quickly led to the identification of certain haplogroups and haplotypes within known familial groups in Ireland backed by a large body of historical documentation and information. It was soon realized that this painstaking scientific research had immensely powerful applications in complementing the existing body of knowledge of the Irish people, who had already a long history of genealogical observation.

Very quickly I was drawn into a somewhat obsessive polymath world of legends, mythology, ancient history, archaeology, computer science, mathematics, linguistics, racism, politics and rat-baggery. Just about everything that I was interested in!

That probably cannot be said for the majority of genealogical researchers however, for whom it is perhaps of more practical importance to find the birth certificate of Uncle Bill or where Grandfather James originally came from.

Even here the DNA information can be of use, as it can determine very quickly to which others you are related and how closely, and sometimes more importantly, who you are not related to. This can save much useless and time-consuming work.

¹ McEvoy, B. and D. G. Bradley (2006). "Y-chromosomes and the extent of patrilineal ancestry in Irish surnames." Hum Genet **119**(1-2): 212-9.