Pinpointing Dean Robinson's Scottish Paternal Ancestral Genetic Homeland

A Scottish Case Study

www.scottishorigenes.com

Dr Tyrone Bowes

Updated 30th May 2019

Introduction

A simple painless commercial ancestral Y chromosome DNA test will potentially provide one with the names of many hundreds of individuals with whom one shares a common male ancestor, but what often perplexes people is how one can match individuals with many different surnames? The answer is quite simple. Roughly 1,000 years ago one's direct medieval male ancestor, the first for example to call himself 'Robertson' was living in close proximity to others with whom he was related but who inherited other surnames like Campbell, MacDonald and MacKay. Given that 1,000 years have passed since paternally inherited surnames became common, there will be many descendants of those individuals some of whom will today undergo commercial ancestral Y-DNA testing. Hence the surnames of one's medieval ancestor's neighbours will be revealed in today's Y-DNA test results.

Early 19th century census data demonstrates that Scottish surnames could still be found concentrated in the areas from which they originated. One can therefore use census data to determine the origin of the surnames that appear in one's Y-DNA results, identifying an area common to all, and reveal ones '**Paternal Ancestral Genetic Homeland**.' The genetic homeland is the small area (usually within a 5 mile radius) where one's ancestors lived for hundreds if not thousands of years. It is the area where one's ancestor first inherited his surname surrounded by relatives who inherited others. It is the area where ones ancestors left their mark in its placenames, its history, and in the DNA of its current inhabitants. Since modern science can pinpoint a paternal ancestral genetic homeland it can also be used to confirm it by DNA testing individuals from the pinpointed area.

Notes of caution!

1. In Ireland each of the estimated 1,500 distinct surnames had a single founding ancestor, that's an estimated 1,500 Adams from whom anyone with Irish ancestry can trace direct descent. But science has demonstrated that only 50% of individuals with a particular Irish surname will be related to the surnames founding ancestor (the surname Adam), the other 50% of males will have an association that has arisen as a result of what are called 'non-paternal events' usually a result of adoptions or maternal transfer of the surname. Since Scotland adopted a similar Clan based society these scientific findings can be applied to Scotland and people with Scottish paternal ancestry.
2. Often people are looking for their DNA results to trace back to a specific area. One must remember that the results typically reflect one's ancestor's neighbours from around 1,000 years ago. As a result, if one's Scottish ancestor was descended from an Anglo-Saxon settler, Viking raider, or 12th Century Norman one's DNA results may reflect earlier English, Welsh, French, and possibly Scandinavian origin. One must approach this process with an open mind!

Interpreting the Y-DNA test results

To pinpoint a paternal ancestral genetic homeland one must first identify the surnames that appear as one's closest genetic matches upon commercial ancestral Y-DNA testing, see **Figure 1**. Those surnames, particularly one's that *recur* throughout one's Y-DNA results, will typically reflect the surnames of one's medieval ancestor's neighbours. Mr Robinson's closest and most frequent genetic surname matches revealed upon Y-DNA STR testing are detailed in **Figure 2**.

111 Marker Matches

Genetic Distance	Last Name	Earliest Known Ancestor	Y-DNA Haplogroup	Terminal SNP	Match Date	Big Y STR Differences	Big Y STRs Compared
4	*Robinson*	*James Robinson, b. 1760, d. 1835*	*R-BY23071*	*BY23071*	*1/31/2017*	*1*	*440*
5	*Robinson*	*James Robinson, b. 1760, d. 1835*	*R-BY23071*	*BY23071*	*2/25/2019*	*0*	*425*
6	CAMPBELL	Archibald Campbell (1859) of Jamaica	R-Y104089	Y104089	12/5/2017	2	442
7	Campbell	Duncan Campbell 4th of Glenlyon 1576	R-Y104089	Y104089	1/9/2016	1	443
7	Murray	Howard Murray b. 1863 P.E.I. Canada	R-BY23069	BY23069	1/8/2018	1	438
7	Campbell	Alexander Campbell	R-BY23069	BY23069	1/9/2016	1	437
7	McCoy	Un-identified McCoy, 1800s Pike County, KY	R-BY155	BY155	1/9/2016	3	445
7	McCoy	Richard McCoy, B. 1752 Montgomery County VA	R-BY11787	BY11787	1/9/2016	3	443
7	Roberts	Un-identified McCoy, 1800s Pike County, KY	R-BY155	BY155	1/9/2016	3	429
7	McCoy	Crinan of Dunkeld Mormaer of Atholl b. 975 d. 1045	R-A35	A35	1/9/2016	4	438
7	McLeish		R-M269		1/8/2019		
7	McCoy	Ulysses McCoy b. 1826 d. unknown	R-M269		2/21/2018		
8	McCoy	William McCoy, b. c. 1760, d. Pike County, KY	R-S764	S764	3/31/2017		
9	Campbell	Alexander Campbell died Greenock 1826 (will)	R-BY23069	BY23069	12/5/2017	0	439
9	Campbell	John Campbell 1830 Killin Tarbet Arrochar Scotland	R-BY23069	BY23069	1/1/2017	1	421
9	Gillis	Roderick Gillis b.1826 d.1906 Nova Scotia	R-BY154	BY154	11/11/2016	2	439
9	McCoy	Richard McCoy, B. 1752 Montgomery County VA	R-BY11787	BY11787	1/9/2016	3	447
9	Bissett	Jacob Bissett b. 1786, Maryland USA L1065+	R-FGC32449	FGC32449	1/9/2016	3	444
9	Campbell	Colin Campbell 1861	R-Z16328	Z16328	11/9/2018	6	395
9	Numbers		R-M269		1/11/2019		
9	Wilson	Possibly- Robert Fulton Wilson 1935-2011	R-M269		9/14/2018		
9	Munn		R-M269		10/13/2017		
9	Myers		R-M269		8/3/2017		
10	O'Donnell	John O'Donnell b 1781 d 1879	R-FGC32449	FGC32449	4/3/2018	2	430
10	McFarland	Benjamin Franklin Frank McFarland, b. 1856 , Mus	R-BY167861	BY167861	8/27/2018	3	383
10	MacDonald	John MacDonald b1803	R-BY154	BY154	1/9/2016	4	423
10	Karr		R-M269		2/11/2019		
10	McRobbie		R-M269	M269	1/28/2019		
10	Biles	William Biles 1595-? Dorset, England	R-M269		10/11/2018		
10	MacDonell	John McDonell B.1760 Fort Augustus	R-BY154	BY154	3/17/2017		
10	Baxter	James Baxter, b. 1820 and d. unk.	R-M269		9/20/2016		
10	Baxter	Charles Baxter	R-S764	S764	1/9/2016		

Figure 1: *Snapshot of test subject Robinson's genetic surname matches at the 111 marker level as revealed in the Y-DNA STR database. The more Y-DNA markers two people share the more recent their shared paternal ancestor once lived. The test subject's closest Y-DNA STR genetic matches are* ***NOT RANDOM****: his genetic matches are dominated by Gaelic Scottish surnames, many of which like Campbell (**red arrows**), McCoy (**orange arrows**) and McDonald (**yellow arrows**) recur among his matches; some of whom also record earliest paternal links within Scotland. In addition, the test subject also matched others with surnames derived from the personal name 'Robert' including Roberts and McRobbie (**blue arrows**). Note: both "Robinsons' who appear as a close genetic match are from the same family group, and were recruited for Y-DNA testing.*

Test Subject	Haplogroup	Y-DNA STR Test Results									
		111 Markers				67 Markers					37 Markers
		Genetic Distance				Genetic Distance					Genetic Distance
		6	7	9	10	3	4	5	6	7	0-4
Robertson	R-M269	Campbell(x24)	McCoy(x10)	Gillis(x3)	mcDonald(x17) McFarland(x13) Baxter(x3)	Murchison(x3)	Craig(x6) Moore(x9)	Buchanan(x25) McPherson(x11) McAusland(x7) McSwain(x12) Anderson(x3) Welch(x3) Lourie(x3) McAllister(x6)	Griffin(x5) Alexander(x28) McGregor(x3) Weems(x4) Davis(x3) Ferguson(x10) Henderson(x4) Logan(x8) McIntosh(x4) McCallum(x5) McLennan(x3) McLeod(x3) McRae(x9) Morrison(x8) Norton(x6) Patterson(x4) Stewart(x4) Young(x7)	Abrams(x3) Austin(x3) Bain(x6) Forbes(x4) Frasier(x6) Livingstone(x5) McLaren(x3) Sanders(x4) Smith(x4) Tate(x3)	Craigmiles(x5) Taylor(x4) Barnett(x4) Robertson(x4) Hunt(x3)

Figure 2: *Mr Robinson's closest genetically recurring Y-DNA STR surname matches reveal a Scottish paternal ancestral origin. Surnames are shown at the point at which the first appear as a genetic match, figures in brackets represent the number of individuals with each surname at the 111, 67 and 37 marker levels who appear as a genetic match. For example, the first Campbell to appear as a genetic match shares 105 of 111 genetic markers, although not all 24 Campbells may match at that level. The test subject's Y-DNA STR genetically recurring matches are dominated by Scottish Gaelic surnames which confirms a paternal ancestral origin within Gaelic Scotland. Those closest '**Gaelic**' genetically recurring Scottish surnames arose among a tribal group of related males living in a specific part of Gaelic Scotland an estimated 1,000 years ago. Highlighted font denotes the ethnicity associated with each surname; Scottish, Scottish-associated.*

Upon commercial ancestral Y-DNA STR testing the test subject was a close genetic match to other individuals with surnames derived from 'Robert,' including Roberts and MacRobbie, see **Figure 1**. This indicates that the test subject may be directly descended from a Robertson-, Roberts-, or MacRobbie-Adam; literally the first male ('Adam') to take the Robertson/Roberts/MacRobbie surname who lived approximately 1,000 years ago when paternally inherited surnames became common. Robertson is a common surname associated with Scotland, and a Scottish paternal ancestral origin is confirmed by the test subject's closest recurring Y-DNA genetic matches which are dominated in both number and frequency by exclusively Scottish *Gaelic* surnames, see **Figure 2**.

Scottish Surnames derived from 'Robert.'

Early Scottish census data reveals that there are a number of surnames derived from the personal name 'Robert' including Robb, Roberts, Robbie, Robertson, Robinson, Robison, Robson, MacRobert and MacRobbie. Since farmers in early census data concentrated in the area where their surname first appeared, or in the area where one's ancestors first settled, one can examine the distribution of farmers named Robb, Roberts, Robbie, Robertson, Robinson, Robison, Robson, MacRobert and MacRobbie to estimate how many Scottish Clans existed (and could have given rise to the test subject's 'Robinson' surname). Early census data reveals 29 Scottish groups; indicating the existence of potentially 29 unrelated Clans that could have given rise to the test subject's Robinson surname, see **Figure 3**. Each Clan was potentially founded by an unrelated Adam; one of whom the test subject (as revealed by his Y-DNA results) may be descended from. It is Mr Robinson's closest genetic surname matches revealed by his Y-DNA test results, as a snapshot of his male ancestors neighbours, which can be used to pinpoint where his paternal ancestors once lived, or rather which of the 29 Clans he is related to. This is because

those surnames will have arisen among a group of related males living in a very specific location, plot where those surnames occur in early census data and one should reveal an area that is common to most, if not all.

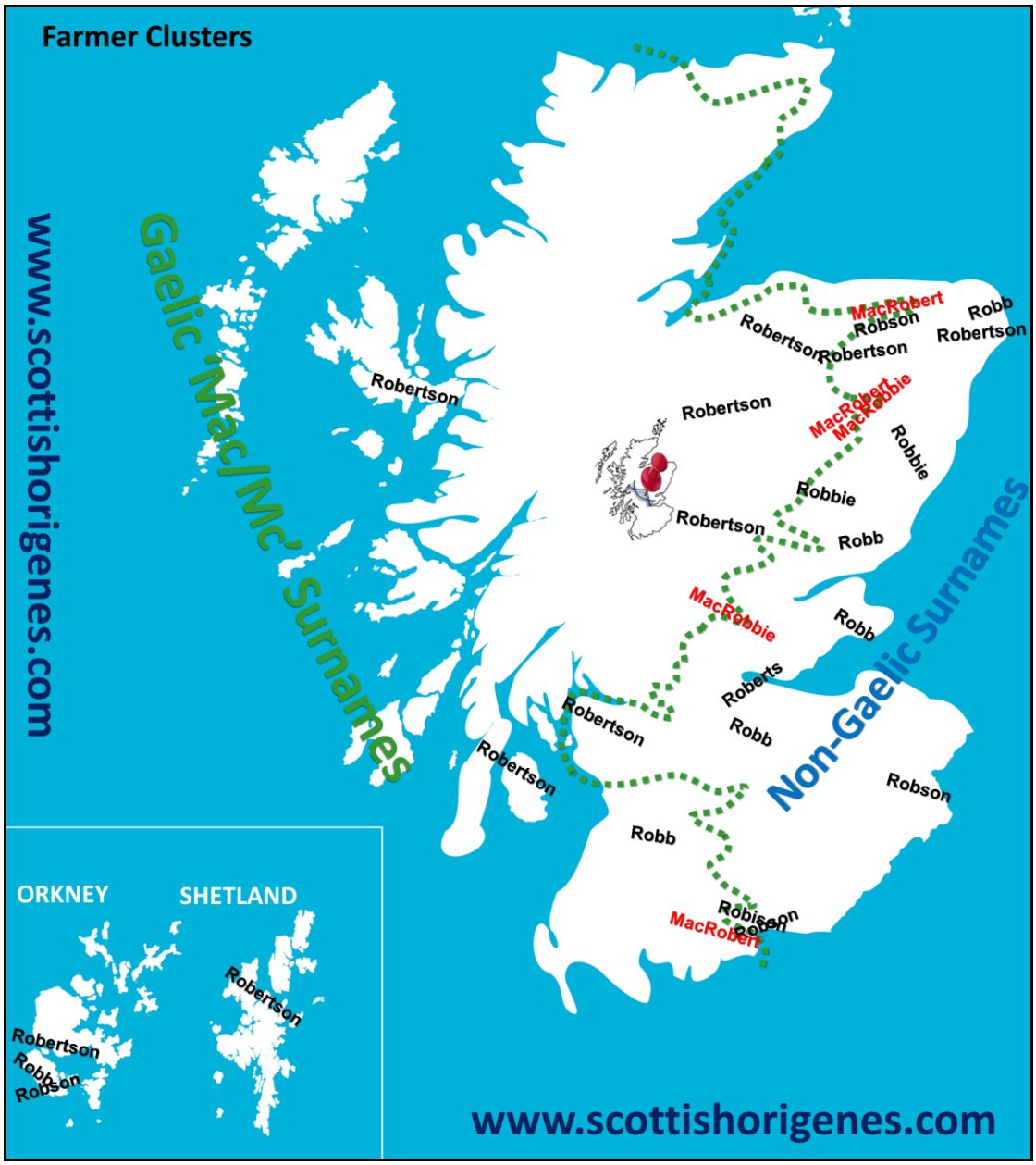

Figure 3: *Scottish surnames derived from 'Robert.' The 1841 census of Scotland reveals farmers named Robb, Roberts, Robbie, Robertson, Robinson, Robison, Robson, MacRobert and MacRobbie. An examination of the distribution of farmers named Robb, Roberts, Robbie, Robertson, Robinson, Robison, Robson, MacRobert and MacRobbie reveals 29 groups, and hence potentially 29 groups of genetically distinct Scottish Clans that could have given rise to the test subject's Robinson surname. A number of these groups are found in Western Scotland where Gaelic surnames dominate. In addition this map reveals substantial overlapping of Gaelic and non-Gaelic surnames which indicated that the surnames have been used interchangeably. Each surname has been placed on the map in the area where farmers with that surname concentrate in early census data.*

Pinpointing the Scottish Paternal Ancestral Genetic Homeland

The method of using genetic surname matches as revealed by commercial ancestral Y-DNA testing to pinpoint a paternal ancestral genetic homeland works by exploiting the link between the Y chromosome, surname and land; which are typically passed from father to son through the generations. In the absence of a link to the land the process becomes more challenging. The link with the land is greatest among the farming community and since farmers in Scotland can still be found farming the land where their ancestor lived when he first inherited his surname, or where one's ancestor first settled within Scotland, one can plot where farmers with the surnames that appear in one's Y-DNA results cluster and identify an area common to all. This means for example that upon Y-DNA testing a 'Robison' from Kirkcudbrightshire will be a close genetic match to people with surnames like MacClellan, MacGhie and Cairns; surnames associated with Southern Scotland. In contrast, a 'Robertson' from Aberdeenshire will be a Y-DNA genetic match to males named Pittendrigh, Gammack and Mundie; surnames associated with Northeast Scotland. Hence, it is the test subject's closest Scottish Gaelic recurring Y-DNA genetic surname matches which will reveal where his paternal ancestors originated.

An examination of Mr Robinson's Y-DNA ***STR*** results reveals that the Scottish Gaelic surnames Campbell, MacKay (McCoy), Gillies (Gillis), MacDonald and MacFarlane appeared as his closest and ***most frequent*** genetically recurring surname matches, see **Figure 2**. Distribution mapping of farmers named Campbell, MacKay, Gillies, MacDonald and MacFarlane reveals that they are found in closest proximity to one another on the Isle of Skye in the Western Isles of Scotland, in an area that is also associated with the Robertson surname, see **Figure 4**. The Campbells dominate among the test subject's closest Y-DNA STR matches, and an examination of the test subject's BigY SNP matches confirms a very close connection to the Campbell surname, see **Figure 5**. The presence of a solitary Campbell among the test subject's BigY block matches confirms that his Robertson surname was acquired by a Campbell male. Gaelic surnames are typically a genealogical record of one's founding ancestor, and these results indicate that the Robertsons of the Isle of Skye were descended from a male named 'Robert Campbell.'

The Robertson, Campbell, MacKay, Gillies, MacDonald and MacFarlane surnames arose among a (tribal) group of Scottish Gaelic males living on the Isle of Skye an estimated 1,000 years ago. The Scottish Origenes Surnames and DNA Map of Scotland details where farmers with each surname concentrated in early census data, and an examination of the Isle of Skye as it appears on that map reveals almost all of the surnames that dominate among the test subject's closest Y-DNA matches, see **Figure 6**.

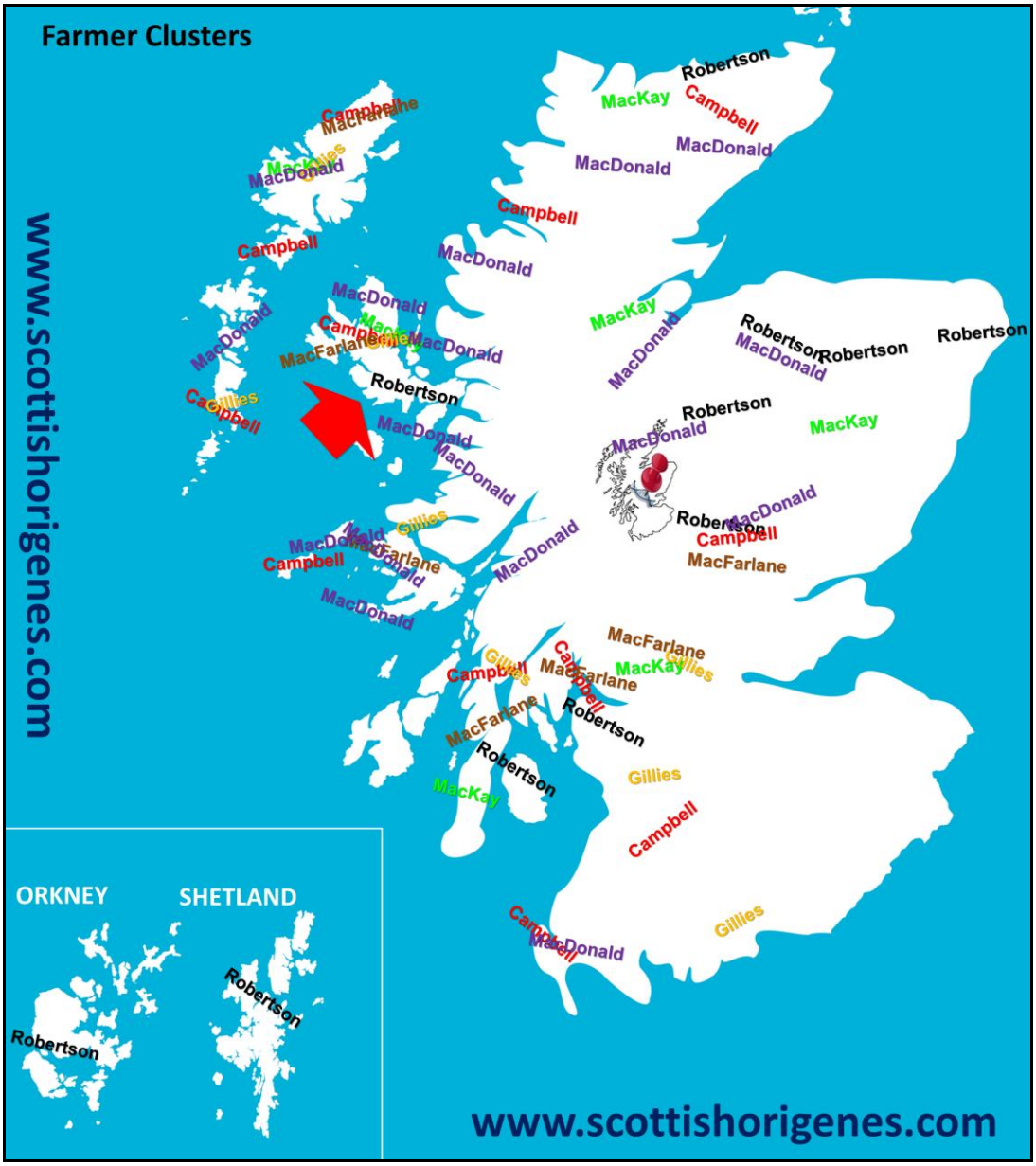

Figure 4: *A Paternal Ancestral link with the Isle of Skye. Distribution mapping of the Campbell, MacKay, Gillies, MacDonald and MacFarlane farming communities reveals that they are common surnames associated with multiple locations, but that they crucially occur in closest proximity to one another on the Isle of Skye where one also finds the Robertson surname (**red arrow**). Each surname has been placed on the map in the area where farmers with that surname concentrated in early census data. The most common spelling is detailed in each location.*

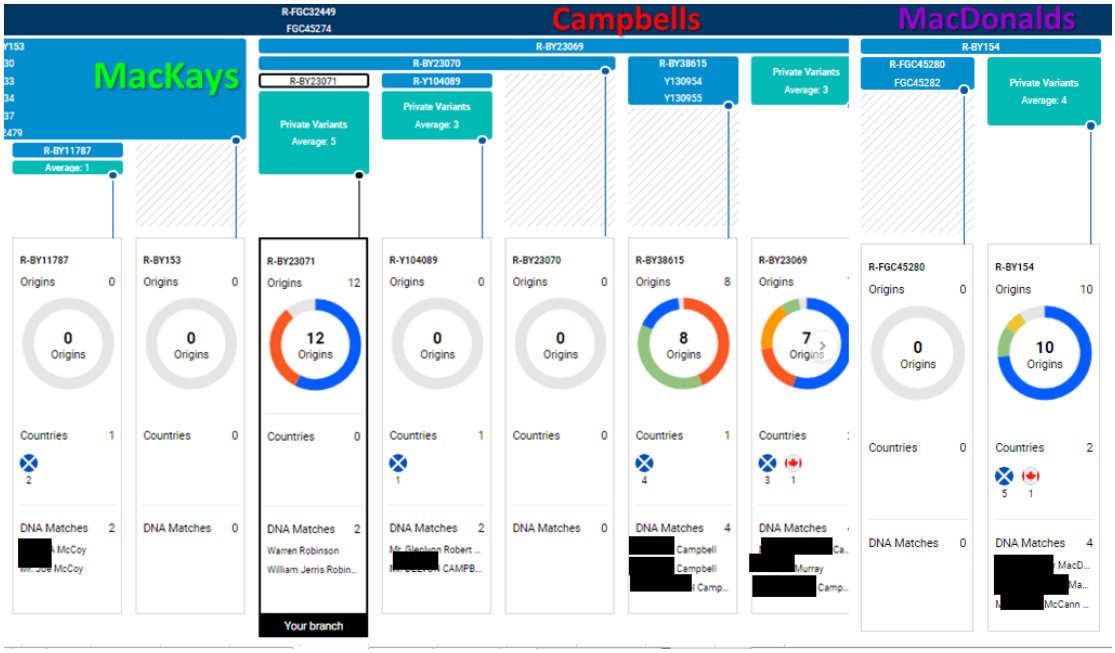

Figure 5: *Mr Robinson's closest BigY matches confirm a close link with the Scottish Campbells. The FTDNA BigY block display shows the test subject's Robinsons among a group of Scottish Campbells (centre), who share closest ancestry with the Gaelic MacKays (**left**) and MacDonalds (**right**). Given the genealogical nature of Gaelic surnames, these results indicate that the test subject's 'MacRob' (Robert's son) ancestors were presumably descended from a 'Robert Campbell.'*

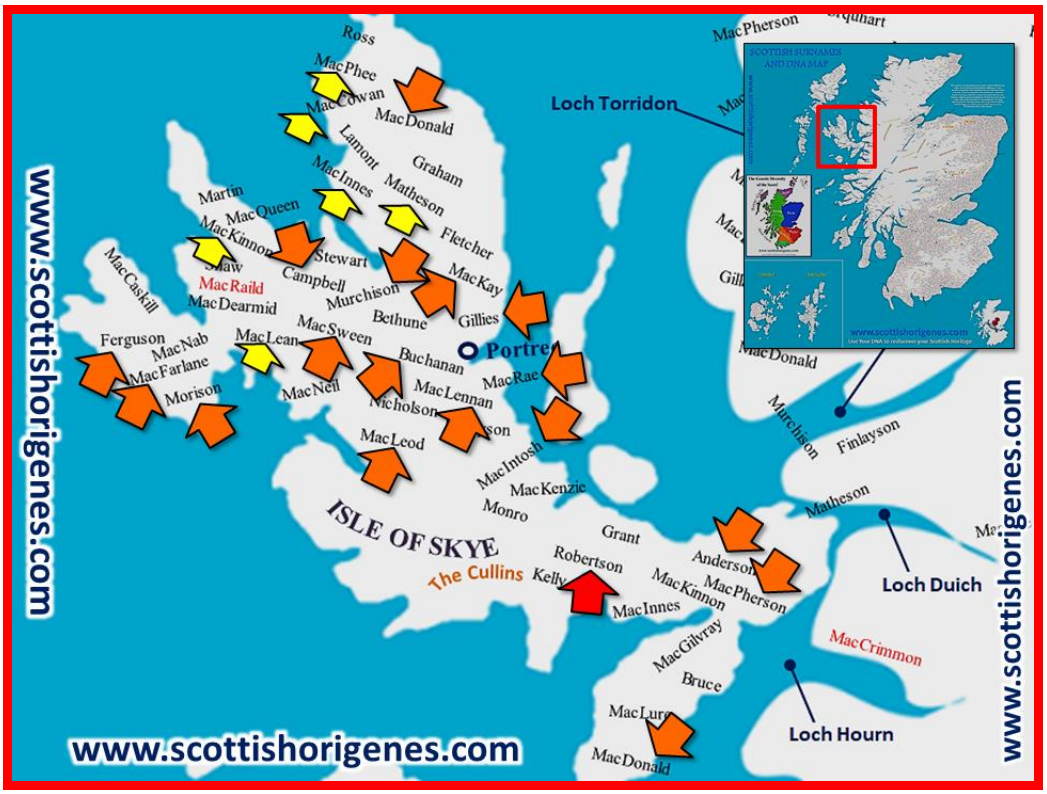

Figure 6: *The Surnames of the Isle of Skye. An examination of the Isle of Skye as it appears on the Scottish Origenes Surnames and DNA map reveals the Robertsons (**red arrow**) together with almost all of the surnames that appear as close (**orange arrows**) and more distant (**yellow arrows**) recurring Y-DNA STR genetic matches. Each surname has been placed on the map where farmers with that surname concentrated in early census data. The most common spelling is detailed. The clustering of genetic matches in the north of Skye, surrounding the Campbells, confirms a close connection with the Campbells of Northern Skye.*

The Clan Territories of the Isle of Skye

By examining the locations of the castles and towerhouses that are historically associated with a particular surname, it reveals that Medieval Scotland was a patchwork of territories dominated by notable Clans and Families. Modern commercial ancestral Y-DNA testing has revealed that almost everyone with Scottish paternal ancestry will be genetically related to at least one of these prominent Clans or families that once ruled over one's paternal ancestral genetic homeland. An examination of the castles and towerhouses of the Isle of Skye and its surrounding area reveals a mix of Clans of Scots Gael and Norse-Gael origin, see **Figure 7**. Strikingly, the test subject's Y-DNA results reveal a shared paternal ancestry with all of the Clans that dominated the Isle of Skye and the bordering areas on the mainland, see **Figure 7**.

Figure 7: *The principal Medieval Clans and Families of the Isle of Skye. The test subject's Robertson ancestors lived on the Isle of Skye (**red arrow**) in an area dominated by Clans of Scots-Gael and Norse-Gael origin. All of the clans that dominated Skye and the surrounding area appear as either close (**orange arrows**) or more distant (**yellow arrows**) Y-DNA genetic matches to the test subject.*

Mr Robinson's Scottish Paternal Ancestral Genetic Homeland

The test subject's Y-DNA results reveal that his paternal ancestor was originally named 'Campbell' before his paternal ancestor acquired the 'MacRobert' surname, which over time and distance became 'Robinson.' The test subject's Y-DNA results also reveal that his paternal ancestry is linked with the Campbells of the Isle of Skye. Early census data reveals that his Campbell ancestors concentrated in the area that lies to the west of Portree on the Isle of Skye; and it is there that the test subject's earliest Scottish paternal ancestral genetic homeland is to be found, see **Figure 8**. It was there that his paternal ancestor lived when surnames first appeared in Scotland

an estimated 1,000 years ago, and where his paternal ancestor first acquired the Campbell surname. His paternal ancestor lived among a tribal group of related Scots Gaelic males among whom arose other surnames like, MacDonald, MacKay, Gillies and MacFarlane, among many others. When one's ancestors have been associated with an area for long enough, one will often find evidence of their long historical links with that location in the monuments and placenames one finds there. Although an examination of this area failed to uncover any castles or placenames associated with the Campbells, there are plenty that are associated with his other genetic relatives, see **Figure 8**. The Campbells they will undoubtedly have left evidence of their ancestral links with this area in the history of this location, but also in the DNA of the Robertsons who still live there. The finding that the Robertsons of Skye concentrate further south, raises the possibility that his Campbell ancestor had migrated to that area before acquiring the Robertson (MacRobert) surname.

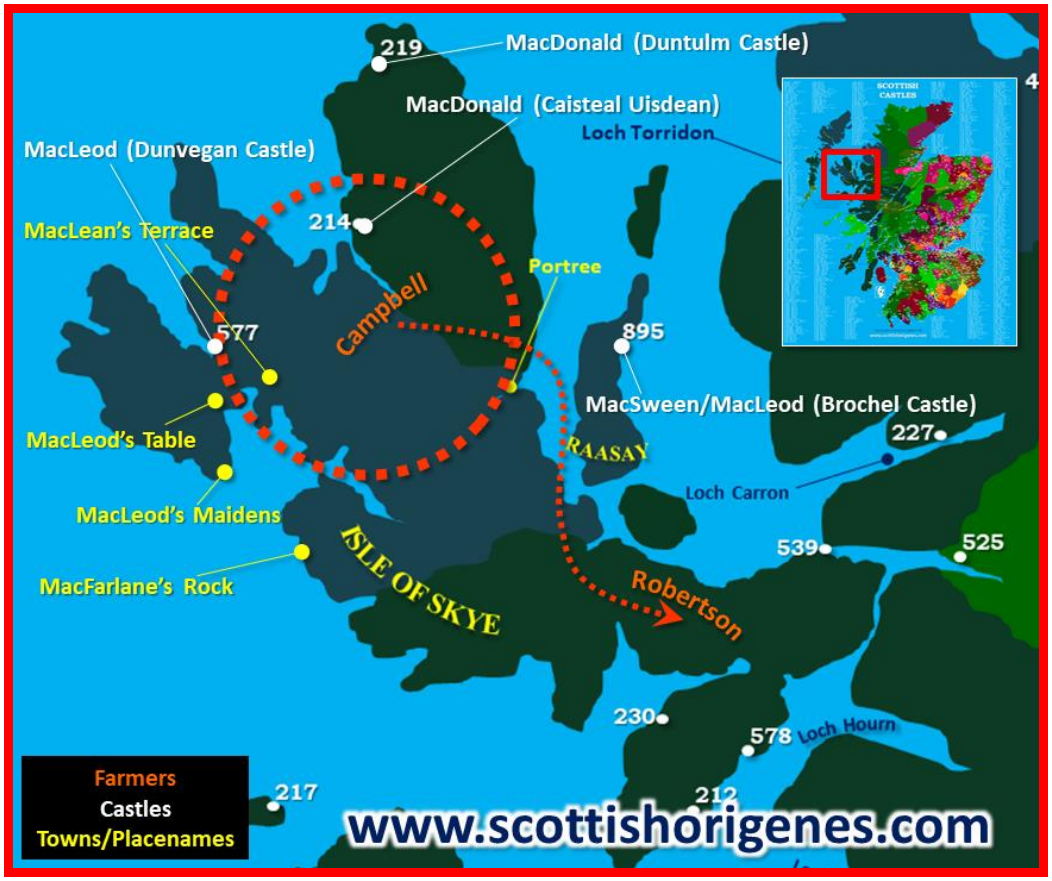

Figure 8: *Mr Robinson's Scottish Paternal Ancestral Genetic Homeland. The Campbells that dominate the test subject's Y-DNA and STR genetic matches concentrate in the area that lies to the west of Portree on the Isle of Skye; and it is there that the test subject's most recent Scottish Paternal Ancestral Genetic Homeland (**orange broken circle**) is to be found. His paternal ancestors lived surrounded by Scots Gaelic genetic relatives who inherited other surnames like MacDonald, MacFarlane, Gillies and MacKay, among many others, some of whom have left evidence of their links with this area in the surrounding castles and placenames. The presence of Robertsons to the south raises the possibility that his paternal ancestor also acquired the MacRobert/Robertson surname on the Isle of Skye. The test subject's paternal ancestors will also have left evidence of their ancestral links with this area in its history, but also in the DNA of the current inhabitants.*

FROM GAUL TO SCOTTISH GAEL

The test subject's Y-DNA results reveal that he is descended from the Scottish Gaels that dominate the modern identity of the Scottish nation. Up to 40% of all Scottish males (and males with paternal Scottish ancestry) may have a Gaelic paternal genetic signature which dominates almost all of Western Scotland. However, until the advent of modern commercial ancestral DNA testing, the origin of the Gaels has remained a mystery. Although DNA testing has revealed that the Scottish and Irish Gaels share common origin, the concept of the Scots Gaels being descended from a 'tribe' from Ireland who invaded Scotland does not hold true. However, rather than being the prehistoric inhabitants of Scotland, commercial Y-DNA has revealed that the Scots Gaels are relatively recent arrivals, having first stepped foot in Scotland approximately 2,000 years ago.

The story of the Gaels, as recorded by their DNA, begins in Bohemia, in the western borderlands of the modern Czech Republic. In around 800BC the 'Keltoi' people of Bohemia began crossing the Erzegebirge Mountains into modern Southern Germany, where they followed the River Main towards the Rhine. The Celts would use the Rhine to spread throughout Central Europe. Those that spread north would give rise to the 'Celtic' tribes that would come to dominate the modern area of Belgium and the Netherlands, before making the short crossing into Britain and giving rise to the Britons (including the Picts of Northeast Scotland and the Ancient Britons of Strathclyde). But the ancestors of the Gaels (the Proto-Gaels) were part of a Celtic group that headed south colonizing the upper reaches of the Rhine, spreading towards modern Switzerland and even crossing the Alps into what is now Northern Italy. The DNA studies performed for males with Gaelic Irish or Scots origin reveal that they invariably share a common paternal ancestor that lived between 2,000 and 2,600 years ago within the area located between the Rivers Moselle and Rhine, which forms much of the modern borderlands of modern France and Germany. The DNA also points to an exodus of Proto-Gaels from that area approximately 2,000 years ago when the Roman Conquest of Gaul began. The defeated Proto-Gael inhabitants of the lands between the Rhine and Moselle chose to follow the Rhine north into Britain and exile among their distant Celtic cousins 'the Britons.' By the time they arrived in Britain, the exiled Proto-Gaels were distinct from their distant Briton cousins, with the Britons speaking what would eventually become the 'Welsh' language, and the Proto-Gaels speaking what would eventually evolve into Irish and Scottish Gaelic.

The Romans invasion of Britain in 55 and 54BC propelled the Proto-Gaels north. The Proto-Gaels would keep one step ahead of the Roman advance, and would cross the Clyde and the Firth of Forth and settle in the inhospitable lands of the Highlands and Islands of Scotland, or cross the sea into what the Romans aptly named 'Hibernia' (land of winter); both of which lay beyond the reach of permanent Roman settlement. The Y-DNA results have also revealed that the Scots Gaels would find ultimate refuge from Rome on the Isle of Skye. However, with the collapse of the Roman world, the Scottish Gaels would begin raiding and colonising the surrounding Islands and mainland of Scotland. Free from Roman persecution, the descendants of the Proto-Gael refugees would evolve into the Scots and Irish Gaels that would shape the modern identities of both Scotland and Ireland.

How to confirm the Robertson Paternal Ancestral Genetic Homeland

- One must remember that this is a DNA approach to pinpointing an ancestral origin. As such, the connection to a pinpointed area can be confirmed by Y-DNA testing individuals with a particular surname from a particular location.
- The paternal link with the Campbells of Northern Skye can be confirmed by the recruitment of farmers named Campbells from that area for commercial ancestral Y-DNA testing.
- A most recent connection to the Robertsons of Southern Skye can be confirmed by Y-DNA testing males named Robertson from that area.