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Pinpointing the Mitchell Paternal Ancestral Genetic Homelands

A Scottish Case Study

www.Scottishorigenes.com

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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 lots of 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 acquire the 'MacMichael' surname was living near others with whom he was related but who inherited other surnames like Milligan, Grierson and MacHarg. 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 one's 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. Each of the estimated 1,500 unique Irish surnames had a single founding ancestor, that is an estimated 1,500 'Adams' from whom anyone with Irish paternal ancestry (and with one of those unique surnames) can trace direct descent. But science has demonstrated that only 50% of individuals with a unique Irish surname will be related to their surnames founding ancestor (*the surname-Adam*), the other 50% of males will have an association that has arisen due to '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 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 will 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 in a commercial ancestral Y-DNA database. Those surnames, particularly those that recur among one's closest genetic relatives will typically reflect the surnames of one's medieval ancestor's neighbours. Mr Mitchell's closest genetic surname matches as revealed upon Y-DNA STR and SNP testing are detailed in **Figures 1, 2** and **3**.

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
7	McMichael		R-M269		11/4/2020		
10	Millikin		R-BY21241	BY21241	10/13/2012	2	445
10	Guthrie	Guthrie of Ireland	R-M269		4/12/2019		
10	Fulton	John Fulton abt 1800	R-M222	M222	3/21/2019		
10	Milligan	William Milligan, b1757 & d.1796 Rockbridge, VA	R-M269		1/18/2019		
10	Milligan	John Milligan, New York	R-M269		2/8/2017		

67 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	McMichael		R-M269		11/4/2020		
5	Milligan	Moses Milligan, b. 1697 in Unknown	R-FGC4125	FGC4125	5/19/2011	3	431
5	Logan	James Logan 1713-1788 VA>KY>AR	R-A5902	A5902	5/19/2011	7	431
5	O'Malley	James O'Malley, b. 1859 and d. 1926	R-A10526	A10526	7/10/2020	10	417
5	Glenn		R-M269		1/25/2013		
5	MacHarg	James McHarg b.1855, Ireland d. New Hampshire	R-A725	A725	5/19/2011		
6	Millikin		R-BY21241	BY21241	7/31/2012	2	445
6	Carey	William Carey, b. circa 1800	R-FGC4087	FGC4087	5/19/2011	5	421
6	Guthrie	Guthrie of Ireland	R-M269		3/22/2019		
6	Cafferkey		R-M269		6/18/2018		
6	O'Donnell		R-M269		4/21/2018		
6	Doherty		R-M269		3/29/2018		
6	Rodie		R-M269		11/3/2017		
6	Milligan	John Milligan, New York	R-M269		2/8/2017		
6	Spence		R-M269		5/8/2016		
6	Milligan	Joseph Ezekiel Milligan b1876 d1904	R-FGC4134	FGC4134	8/28/2013		
6	Wilson	William Wilson b.1775 d.1839, son of John Wilson	R-M222	M222	3/20/2012		
6	Templeton	James Templeton, b. abt. 1710 and d. abt. 1783 Ire	R-M222	M222	2/8/2012		

Figure 1: *Snapshot of the test subject Mitchell's closest genetic matches in a Y-DNA STR database. The more Y-DNA STR genetic markers 2 people share the more recent their shared paternal ancestor once lived. The test subject's genetic matches are* ***NOT RANDOM****; they are dominated by individuals with Scottish and Irish surnames, some of which like Milligan (yellow arrows) and McMicheal (red arrows) recur among his genetic relatives. The test subject also tested positive for the Irish R-M222 paternal marker which first appeared in Ireland before spreading into Scotland. Highlighted font indicates each surnames associated ethnicity or location of an earliest paternal ancestor; Scottish/Scotland, Scottish/Irish, Irish/Ireland.*

Test Subject	Haplogroup	Y-DNA STR Test Results				
		111 Marker Matches		67 Marker Matches		
		Genetic Distance		Genetic Distance		
		7	10	5	6	7
Mitchell	R-M222	McMichael (x2)[1]	Milligan (x13)	Glenn (x5) Logan (x5) McHarg (x5)	Doherty (x2) O'Donnell (x3) Rodie (x2) Templeton (x7) Wilson (x5)	Allison (x2) Bryant (x4) Fleury (x2) Gwinn (x2) McNichols (x3) Moore (x2)

Figure 2: *Mr Mitchell's closest genetically recurring Y-DNA STR surname matches reveal a most recent paternal link with Scotland. Surnames appear at the point at which they first occur as a genetic match and figures in brackets represent the number of individuals with a particular surname who appear as a genetic match at the 111, 67 and 37 marker levels. For example, the first match to an individual named Milligan occurs at 101/111 markers, although not all 13 Milligans may match at that level. The test subject's closest recurring Y-DNA STR matches are dominated by Scottish-associated surnames, which indicate a most recent paternal link with Scotland. Highlighted font indicates each surnames associated ethnicity; Scottish/Scotland, Scottish/Irish, Ireland/Irish.*

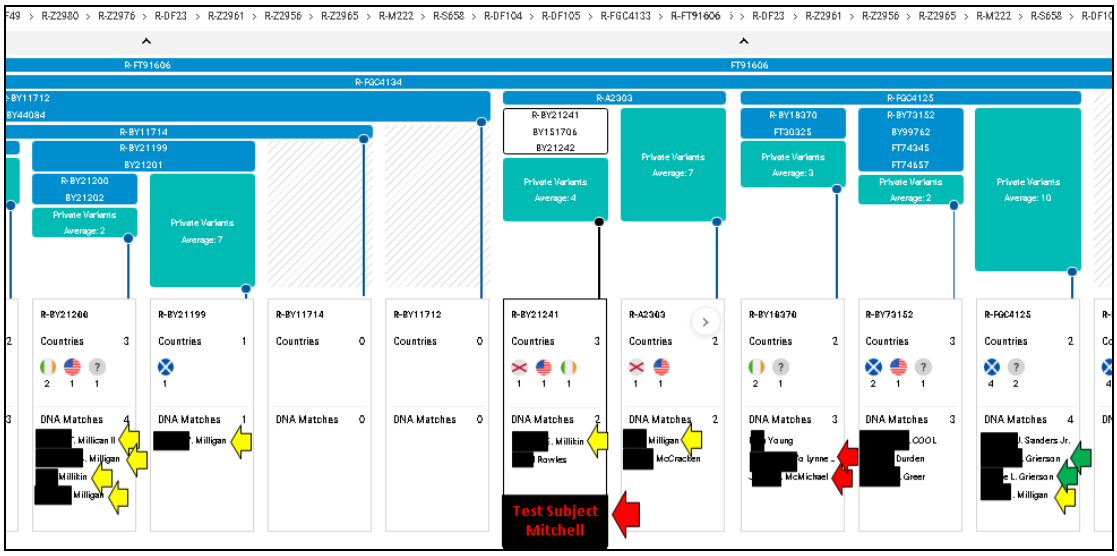

Figure 3: *Block display of Mr Mitchell's closest BigY SNP matches. While the STRs examined in the Y-DNA111 test are prone to replication or deletion with each generation, the SNPs explored in BigY testing are far more permanent mutations. BigY SNP testing offers a more accurate glimpse of the precise chronological development of surnames among a tribal group of related males. The test subject's closest BigY results are dominated by Scottish surnames which confirms a most recent Scottish paternal origin. BigY Block display indicates that the Mitchell/McMichael (**red arrows**), Milligan (**yellow arrows**) and Grierson (**green arrows**) surnames arose among a tribal group of males of Gaelic Irish (R-M222) origin within Scotland approximately 1,000 years ago.*

Upon commercial ancestral Y-DNA testing Mr Mitchell was a close Y-DNA match to individuals named 'McMichael' who tested independently, see **Figures 1, 2** and **3**. 'Mitchell' is the Norman form of Gaelic '*MacMichael*,' and the dominance of Scottish Gaelic surnames among the test subject's closest Y-DNA matches indicates that his surname has evolved from Scottish McMichael, see **Figures 1, 2** and **3**. This indicates that Mr Mitchell is directly descended from a 'MacMichael-Adam,' literally the first male to take that surname who lived approximately 1,000 years ago when surnames first appeared within Scotland. The test subject also tested positive for the Irish R-M222 paternal genetic mutation which first appeared in Ireland before spreading into Scotland. It is the test subject's closest recurring genetic matches revealed upon Y-DNA STR and SNP testing that reflect the surnames of his medieval ancestor's neighbours and will reveal where his Scottish Mitchell ancestors originated.

The Scottish Mitchell Surname

Census data reveals that Mitchell is a common Scottish surname. Since surnames arose in agricultural societies, farmers in early census data could still be found concentrated in the area where their surname first appeared, or in the area where one's ancestors first settled. One can therefore examine the distribution of Scottish farmers named 'Mitchell' to estimate how many clans used that surname. By plotting the location of Mitchell farmers in early census data it reveals 9 distinct clusters spread throughout Scotland; indicating the existence of potentially 9 genetically distinct Mitchell clans, see **Figure 4**.

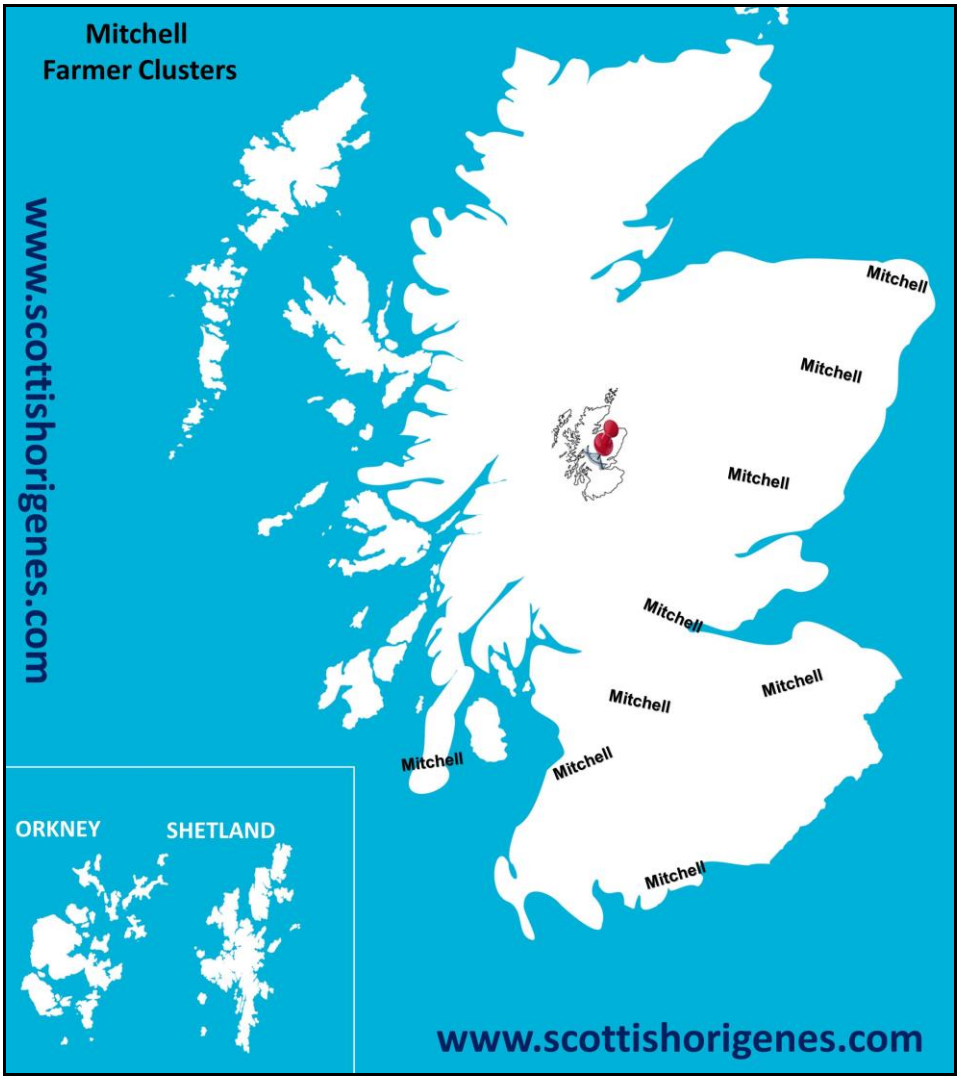

Figure 4: *Scottish Mitchell farming communities. Early census data reveals at least 9 distinct clusters of Mitchell farming communities within Scotland. Each surname has been placed on the map in the area where farmers with that surname concentrate in early census data.*

Y-DNA, Surnames, and Land

The method of using genetically recurring 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 amongst the farming community, and since farmers in Scotland can still be found farming the lands where their ancestor lived when he first inherited his surname, or where one's ancestors first settled within Scotland, one can plot where farmers with the surnames that appear in one's Y-DNA results concentrate and identify an area common to all. This means that upon Y-DNA testing a Mitchell male from Aberdeenshire will be a Y-DNA genetic match to males with surnames like Rettie, Dinnis and Dalgarno; surnames associated with Northeast Scotland. In contrast, a Mitchell from Argyllshire will be a genetic match to males named MacMullan, MacKerral and MacSporran; surnames that are associated with the Mull of Kintyre. Hence, it is Mr Mitchell's closest Scottish-associated genetic

surname matches which will reveal where his paternal ancestors originated within Scotland.

BigY SNP testing reveals that the Milligan, McMichael, and Grierson surnames dominate among the test subject's closest recurring SNP matches, and that those surnames arose among a tribal group of R-M222 related males somewhere within Scotland, see **Figure 3**. Overlay mapping of farmers named Milligan, McMichael and Grierson reveals that they ***only*** occur together within Galloway in Southwest Scotland in an area where research at Scottish Origenes reveals that the test subject's paternal R-M222 Haplogroup predominates in the local male population, see **Figure 5**. The Scottish Origenes Surnames and DNA Map details where farmers with each surname concentrated in early census data, and an examination of Galloway in Southwest Scotland reveals the MacMichael surname (from which Mitchell has evolved) near Sanquhar village and surrounded by many of the surnames that appear among the test subject's Y-DNA results, see **Figures 2, 3** and **6**. The test subject's Y-DNA results confirm a most recent link with the 'MacMichaels of Galloway' in Southwest Scotland.

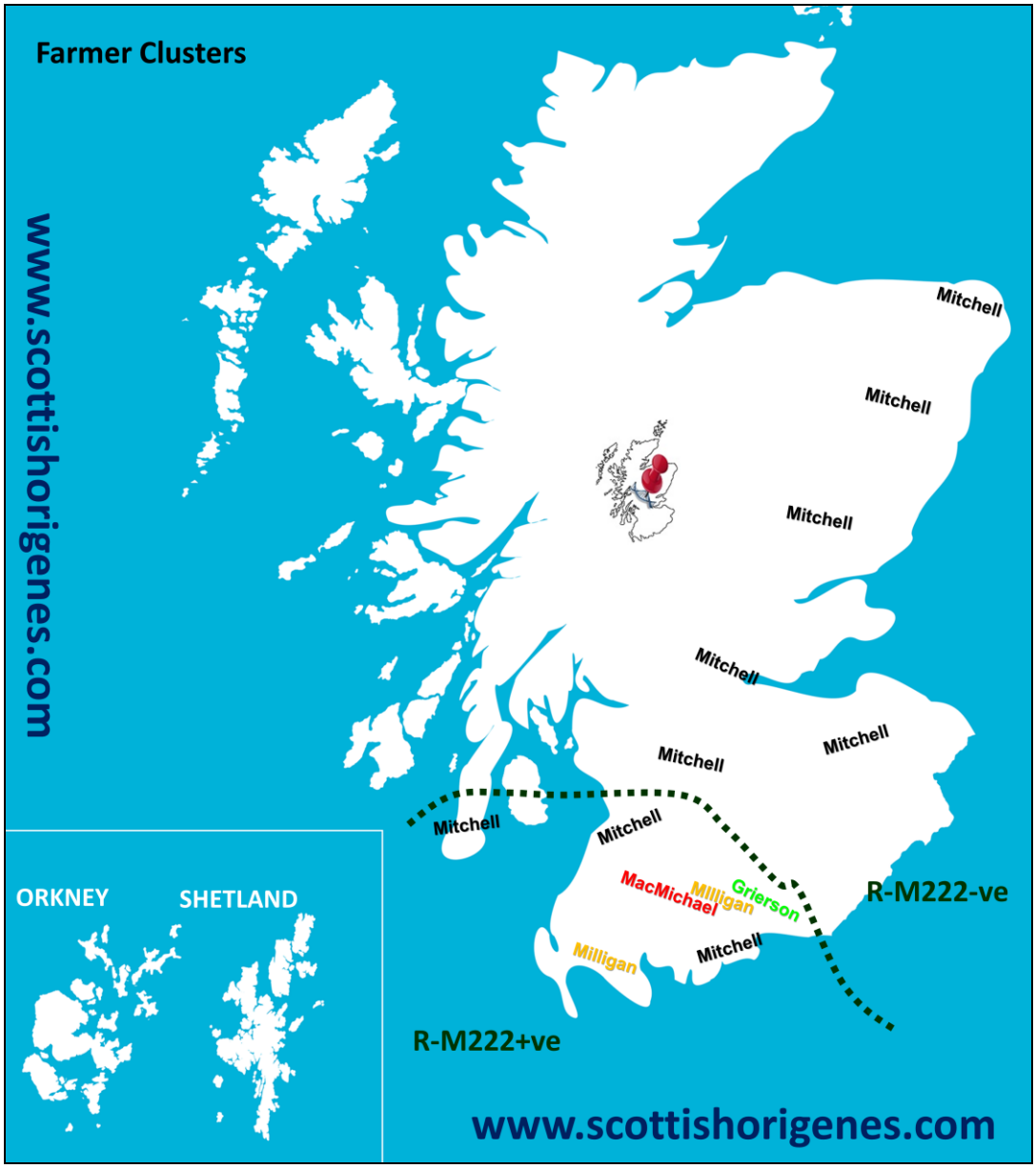

Figure 5: *Mr Mitchell's closest genetic surname matches reveal a most recent paternal ancestral link with Galloway in Southwest Scotland. Y-DNA testing reveals that the Mitchell, Milligan, McMichael, and Grierson surnames arose among a tribal group of related males living in a specific part of Scotland. Overlay mapping of the Mitchell, Milligan, McMichael, and Grierson farming communities reveals that they only occur together within Southwest Scotland in an area where the test subject's R-M222 paternal marker predominates in the local population. Each surname has been placed on the map in the area where farmers with that surname concentrate in early census data. The most common spelling is detailed in each location.*

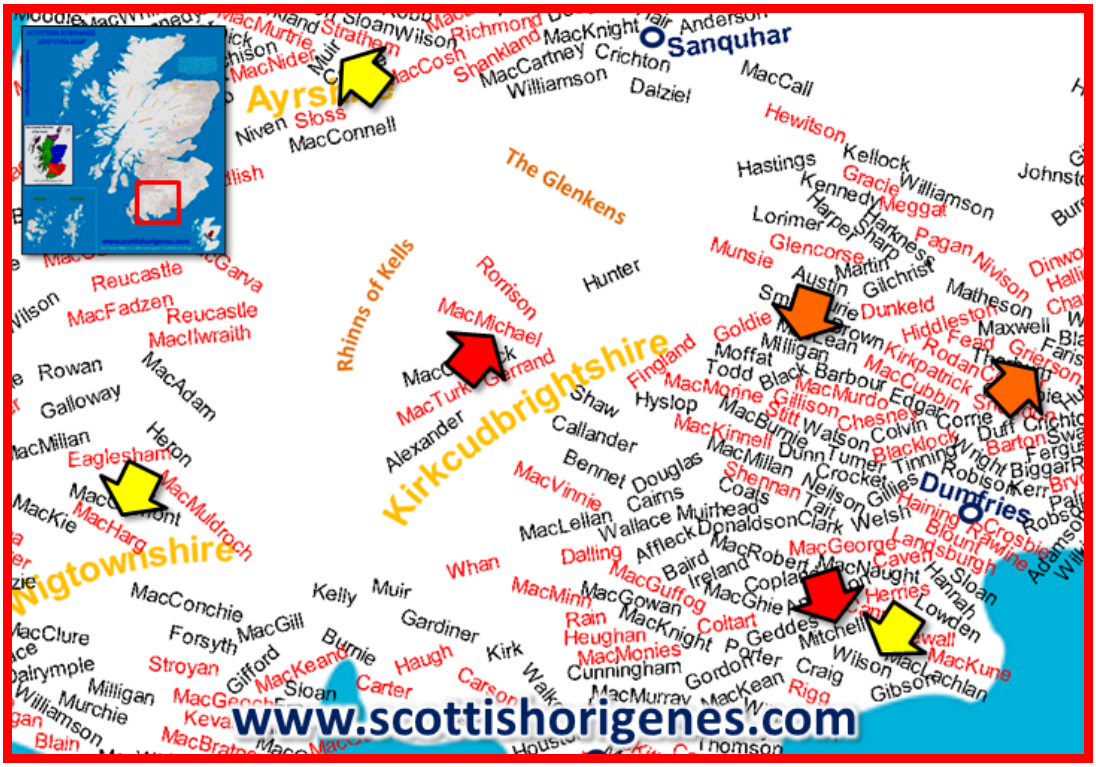

Figure 6: *The Surnames of Kirkcudbrightshire. An examination of Southwest Scotland as it appears on the Scottish Origenes Surnames and DNA map reveals Mitchell and MacMichael farmers (**red arrows**) in Kirkcudbrightshire and surrounded by genetic relatives with surnames that appear as close recurring BigY SNP (**orange arrows**) or Y-DNA STR (**yellow arrows**) genetic matches to the test subject. Each surname is positioned in the location where farmers with each surname concentrate in early census data. The most common spelling is detailed in each location. Surnames in **red font** (like **MacHarg, Grierson** and **MacMichael**) are associated exclusively with a single location within Scotland.*

The Clan Territories of Southwest Scotland

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. Research at Scottish Origenes 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 Southwest Scotland reveals a diverse mix of clans and families of Gael, Ancient Briton, Anglo-Saxon, Viking, and Norman origin, see **Figure 7**. The Griersons that dominated lands midway between Dumfries and Sanquhar also feature prominently among the test subject's closest recurring ***BigY*** block display matches, see **Figures 3** and **7**.

Figure 7: *The principal Medieval Clans and Families of Southwest Scotland. Southwest Scotland was dominated by a diverse mix of Clans and Families of Gael, Ancient Briton, Anglo-Saxon, Viking, and Norman origin. The Griersons (**orange arrow**) who dominated lands midway between Dumfries and Sanquhar (where MacMichaels concentrate, **red arrow**) and appear among the test subject's closest BigY block display matches (see Figure 3). The Clan map was reconstructed based on castle locations and their historically associated clans and families.*

Mr Mitchell's Paternal Ancestral Genetic Homeland

Early census data reveals that Mitchell and MacMichael farmers were found together within the neighbouring parishes of Old and New Cumnock in Central Ayrshire, and it is there that the test subject's Scottish paternal ancestral genetic homeland is to be found, see **Figure 8**. It was there that the test subject's direct male ancestor lived when he first inherited the 'MacMichael' surname which upon arrival of the Normans within Scotland was Normanised to 'Mitchell.' His Normanised-Gaelic ancestor lived surrounded by male relatives who took other surnames like Milligan, Templeton, Grierson and MacHarg (among many others). When one's ancestors have been associated with an area for long enough, they often leave evidence of their ancestral links in the placenames one finds there. Although one does find 'Meikle' placenames these do not appear to be related to the MacMichael surname, see **Figure 8**. The MacMichaels/Mitchells will also have left evidence of their long ancestral links with this area in both the history of this location and in the DNA of its current inhabitants.

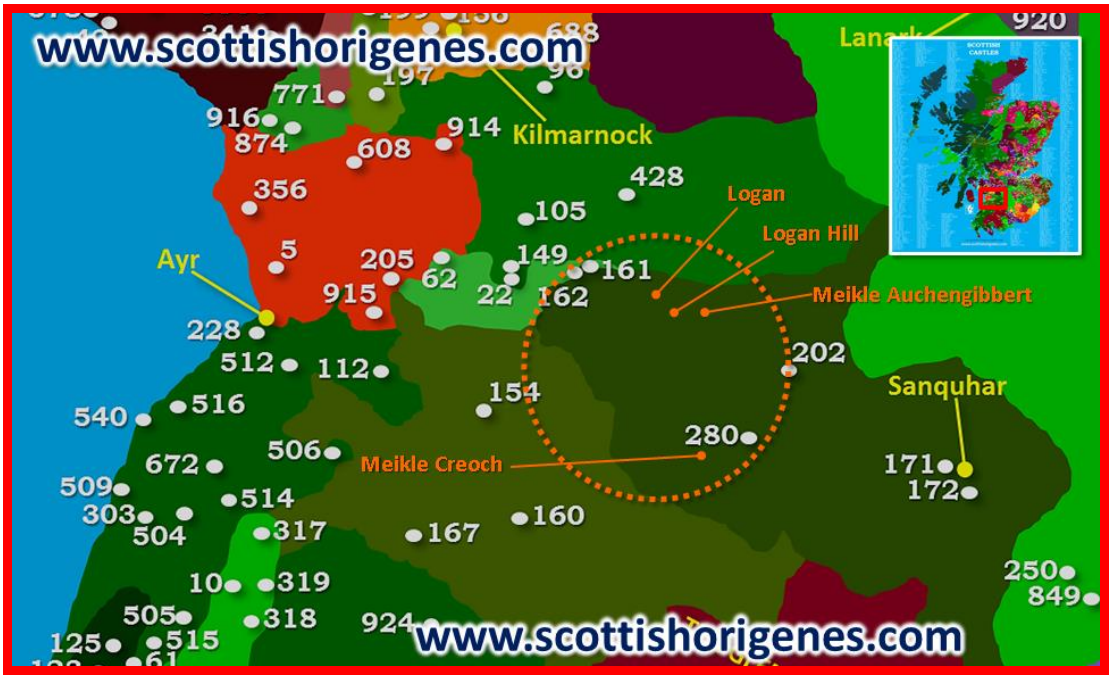

Figure 8: *Mr Mitchell's Scottish Paternal Ancestral Genetic Homeland. Mr Mitchell's Y-DNA results indicate that his Scottish Paternal Ancestral Genetic Homeland (**orange broken circle**) lies in the neighbouring parishes of Old and New Cumnock where Mitchells and MacMichaels are both found farming in early census data. It was there that the test subject's paternal ancestor lived when he first inherited the MacMichael surname which, with the arrival of the Normans, became 'Mitchell.' His ancestor lived surrounded by Gaelic relatives who inherited other surnames like MacHarg, Milligan, Grierson and Templeton (among many others); some of whom have left evidence of their long ancestral links with this area in the surrounding placenames and castles. The MacMichaels and Mitchells will also have left evidence of their ancestral links with this area in its history, but also in the DNA of the current inhabitants.*

The Expansion of R-M222^{+ve} Inishowen Males throughout Ireland and Scotland

'Vikings,' 'Foreign Helpers' and 'Raiders from across the Sea'

BigY SNP testing reveals that the test subject carries the Irish R-M222 paternal genetic marker, see **Figure 3**. That marker/mutation appeared in a single male who lived in the far northwest of Ireland approximately 1,800 years ago. This marker reveals that Mr Mitchell's paternal ancestors lived near, or on, the Inishowen peninsula in the far Northwest of Ireland until around 900 years ago. Commercial ancestral Y-DNA testing and extensive Y-DNA Case Studies at Irish and Scottish Origenes have revealed areas beyond Inishowen shores where R-M222^{+ve} males predominate in the local population, particularly along Irelands west coast (Moy River valley in Mayo), Southern Ulster, Galway Bay and Galloway (Southwest Scotland). Clues as to why some of these R-M222^{+ve} Gaels left Inishowen and began colonising throughout Ireland and Scotland can be found in their origin; Donegal (*Dún na nGall* '**base or fort of the Foreigner**') and their descriptive surnames which they took with them like Gallagher (*Ó Gallchobhair* meaning '**Foreign helper**') who upon settling along the west coast of Ireland acquired new surnames like Higgins (*O'hUigin* meaning '**Viking**') and Halloran (*O'hAllmhurain* meaning '**Pirate** or **Stranger from overseas**'). Modern DNA science indicates that during the appearance of

surnames (800AD onwards) the R-M222^{+ve} Gaels of Inishowen had formed an alliance with Scandinavian 'Vikings,' and that Christian-Gael and Heathen-Gall (*Gall = foreigner*) had together raided and colonised throughout Ireland and beyond. In support of this Viking-Inishowen connection, research at Irish Origenes has uncovered three individuals with recent Inishowen ancestry but with Scandinavian Y-DNA: clear evidence of Scandinavian contact with Inishowen.

R-M222^{+ve} males from Inishowen took part in the Hiberno-Norse Conquest and colonisation of Southwest Scotland which was led by the King of Norway 'Magnus Barelegs' in about 1100AD. The land in Southwest Scotland they conquered became 'Galloway' meaning 'land of the foreign Gael;' a term used by the surrounding 'Scots' to describe the Gaels from Inishowen in Northwest Ireland who settled there. The Inishowen Gaels took with them their genetic markers (like R-M222) and their surnames like McGee (McGhie) and McLaughlin (MacLachlan). However, in the areas within Southwest Scotland where R-M222^{+ve} Irish Gaels settled permanently they acquired new surnames like MacMichael, Milligan and Grierson.

The Dohertys, McLaughlins and McGees that often feature prominently among R-M222 Y-DNA results reach their highest concentration in, or close to the Inishowen peninsula, see **Figure 9**. In fact, the territory of the Dohertys, who dominate the genetic matches of R-M222^{+ve} males, incorporated much of Inishowen together with the historic centre of 'Grianan of Aileach' where the R-M222 marker reaches its highest concentration in Ireland, see **Figure 10**. Conquest beyond Inishowen would literally allow one's ancestors to 'make a name for themselves,' and what the DNA reveals is an explosion of newly acquired surnames among the Inishowen R-M222^{+ve} Gaelic Irish Conquerors of Galloway, see **Figure 10**.

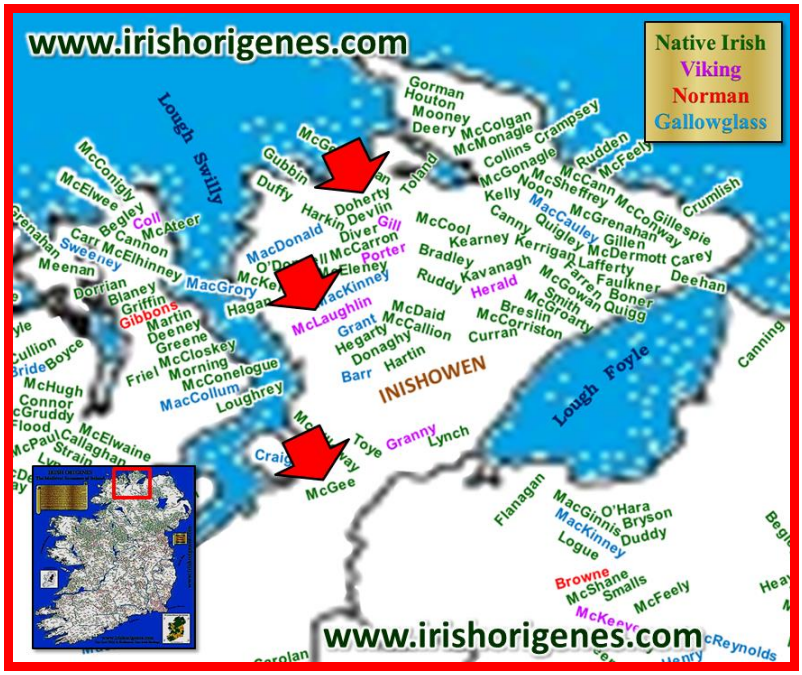

Figure 9: *The Surnames of Inishowen in Donegal in Northwest Ireland. The test subject's paternal ancestor lived in Northwest Ireland prior to his arrival within Southwest Scotland. An examination of Inishowen surnames reveals the Dohertys, McGees, and McLaughins (**red arrows**) that dominate the genetic matches of males that carry the R-M222 marker (including the test subject Mr Mitchell). Each surname is positioned in the location where farmers with each surname concentrate in early census data. The most common spelling is detailed in each location.*

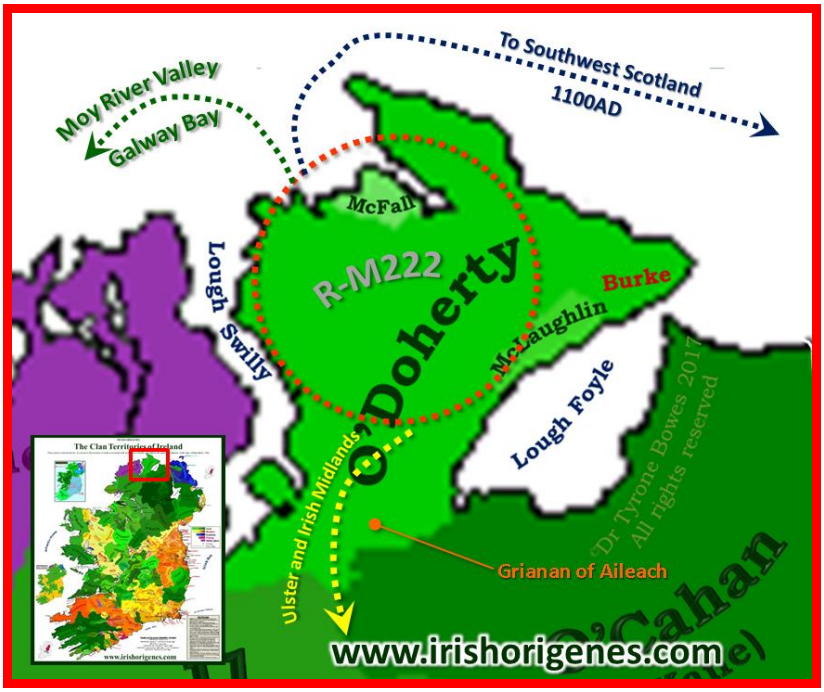

Figure 10: *The Clan Territories of Inishowen. An examination of the Irish Clan territories map reveals that the R-M222^{+ve} Dohertys and McLaughlins ruled almost the entire Inishowen peninsula. The test subject's paternal ancestor lived in Northwest Ireland prior to his arrival within Southwest Scotland. The R-M222 ancestral homeland is marked by the historic centre known as 'Grianan of Aileach.' R-M222^{+ve} males later participated in the Conquest of Southwest Scotland led by the Viking King of Norway 'Magnus Barelegs' in about 1100AD. R-M222^{+ve} males spread throughout Galloway taking new surnames and assimilating into the native population. Many of the descendants of these Conquering Gaels returned to Ireland as English-speaking Lowlander Protestant Scots during the Plantation of Ulster that began in 1610AD.*

Refugees from Gaul

The test subject's Y-DNA results reveal a deeper Central European 'Celtic' origin. Research at Irish and Scottish Origenes has revealed that Roman Conquest of Gaul in the 1st Century BC propelled Gaulish refugees into Britain and Ireland. The Y-DNA results reveal that the test subject's paternal ancestors sought refuge from Roman Conquest in the remote northwest corner of Ireland approximately 1,900 years ago. Although Great Britain takes its name from the 'Celtic' Brythonic tribes that began colonising the island from Central Europe in around 800BC. It was the distant cousins of the Ancient Britons; the 'Gauls/Gaels,' who, ousted by the Romans from their homeland in Central Europe, would carve out new territories for themselves in Ireland and Scotland, and would eventually come to dominate the modern identity of the Irish and Scottish nations.

How to confirm the Mitchell Genetic Homeland

One must keep in mind that this is a scientific 'DNA' approach. The DNA does not lie and a simple painless commercial ancestral Y-DNA test of MacMichaels and Mitchells who live in the parishes of Old and New Cumnock would confirm the paternal ancestral link with that area.

Contact Scottish Origenes for a FREE CONSULTATION

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For queries regarding Mr Mitchell (test subject) you can email Mike Mitchell who commissioned the report. Email: *ojsglty@yahoo.com*