

Email Dr Tyrone Bowes for a **FREE CONSULTATION**
tyronebowes@gmail.com

Pinpointing the Gill Paternal Ancestral Genetic Homelands A Scottish Case Study

www.Scottishorigenes.com



A handwritten signature in black ink, appearing to read 'Tyrone Bowes', positioned above the printed name.

Dr Tyrone Bowes

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. Approximately 400 years ago, one's direct male ancestor, the first for example to take the 'MacGill' surname was living near others with whom he was related but who took other surnames like Hamilton and McKellar. Given that hundreds of 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 ancestor's neighbours will be revealed in today's Y-DNA test results.

Early 19th century census data demonstrates that Irish and 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. Science has demonstrated that each of the estimated 1,500 unique Irish surnames had a single founding male ancestor (a Surname-Adam), which is an estimated 1,500 Adams from whom anyone with Irish ancestry (and with one of those unique surnames) can trace direct descent. But science has also demonstrated that only 50% of males with an Irish surname will be related to their surnames founding ancestor, the other 50% of people will have an association that has arisen because 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 (when surnames first appeared). As a result, if one's Scottish ancestor was descended from an Irish or Anglo-Saxon settler, Viking raider, or 12th Century Conquering Norman, one's DNA results will reflect earlier Irish, 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. Those surnames, particularly ones that recur among one's closest genetic relatives will reflect the surnames of one's ancestors neighbours. Mr 'Gill's' closest genetic surname matches as revealed upon commercial ancestral Y-DNA SNP testing are detailed in **Figures 1 and 2**.

Y-DNA SNP Matches	
Surname	Terminal SNP
Anderson	R-FTA34973
Bennett	R-FT31818
Fleming	R-FT178962
Forrest	R-BY20294
Grant	R-FT19905
Grant	R-FT82051
Hamilton	R-BY20276
HAMILTON	R-FT34392
Hamilton	R-FT34392
Hamilton	R-BY20294
Hamilton	R-BY20276
Hamilton	R-BY20294
Hamilton	R-BY20291
Hamilton	R-FT33140
Hamilton	R-BY20276
Hamilton	R-FT173909
MacDonald	R-FT82004
McKallar	R-FGC43477
McKellar	R-A11732
McKellar	R-FGC43477
McKellar	R-FT388294
Morrow	R-FT31818
Murphy	R-FT385353
Murphy	R-FTB13406
Nicol	R-BY72648
Rogers	R-FT31818
Ross	R-S6000
Slavin	
Starkweather	R-BY51781

Figure 1: Snapshot of test subject 'Gill's' closest genetic surname matches as revealed in a Y-DNA SNP database. Commercial ancestral Y-DNA SNP testing revealed 29 paternal genetic relatives (detailed). The surnames of those paternal genetic relatives were not random, they are dominated by Scottish-associated surnames, some of which like Hamilton and McKellar recur frequently (**bold**). Highlighted font indicates each surnames associated ethnicity; **Scottish**, **Scottish-associated**, **Irish**.

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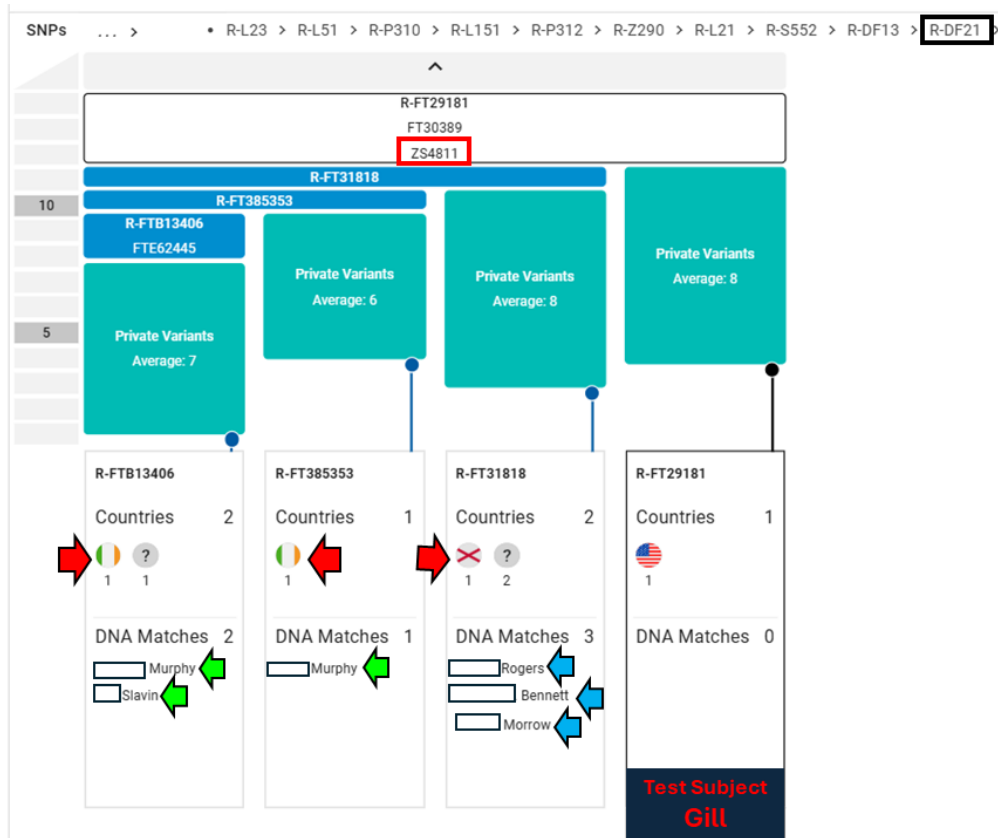


Figure 2: Block display of Mr Gill's closest Y-DNA SNP matches. While the STRs examined in the Y-DNA111 test are prone to replication or deletion with each generation, SNPs are far more permanent mutations. SNP testing offers a more accurate glimpse of the precise chronological development of surnames among a group of related males. Terminal display of Mr Gill's closest SNP matches reveals a mix of Scottish (blue arrows) and Irish (green arrows) surnames together with individuals with recorded ancestral links with Ireland/Northern Ireland (red arrows). All these Y-DNA matching males share the R-ZS488 DNA mutation (red box) which lies on a branch of the prominent R-DF21 Haplogroup (black box). Note: the individual named 'Slavin' was originally named 'Murphy.'

Upon commercial ancestral Y-DNA testing the test subject did not match others named 'Gill,' see **Figures 1** and **2**. This indicates that the test subject may not be directly descended from a Gill-Adam, literally the first male ('Adam') to take that surname who lived approximately 1,000 years ago when paternally inherited surnames became common. Gill is a Scottish-associated surname, and the dominance of exclusively Scottish surnames among the test subject's recurring SNP surname matches indicates an ultimate Scottish origin for his paternal line. However, an examination of his closest terminal Y-DNA SNP matches reveals a mix of Irish and Scots Irish surnames together with males with recorded ancestral links with Ireland, which indicates that his paternal ancestor had settled in Ireland after 1610AD when the Plantation of Ulster began, see **Figure 2**.

Scottish and Scots Irish 'Gill/MacGill/Magill'

Scottish surnames arose approximately 1,000 years ago in an agrarian society. As a result, farmers with each surname could still be found 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 therefore examine the distribution of Scottish farmers named 'Gill' to determine how many Scottish clans used that surname. The

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1841 census reveals the existence of at least 6 distinct groups of ‘Gill’ and ‘MacGill’ farmers spread throughout Scotland, see **Figure 3**. Hence, there were potentially 6 unrelated Scottish Gill/MacGill clans, each founded by an unrelated Gill/MacGill-Adam, one of whom the test subject may be descended from. The Gill/McGill/Magill surname is also associated with 17th Century Scottish settlement within Ireland, and an examination of the distribution of Irish farmers named ‘Gill/McGill/Magill’ reveals multiple groups spread throughout Northeast Ireland, see **Figure 4**.

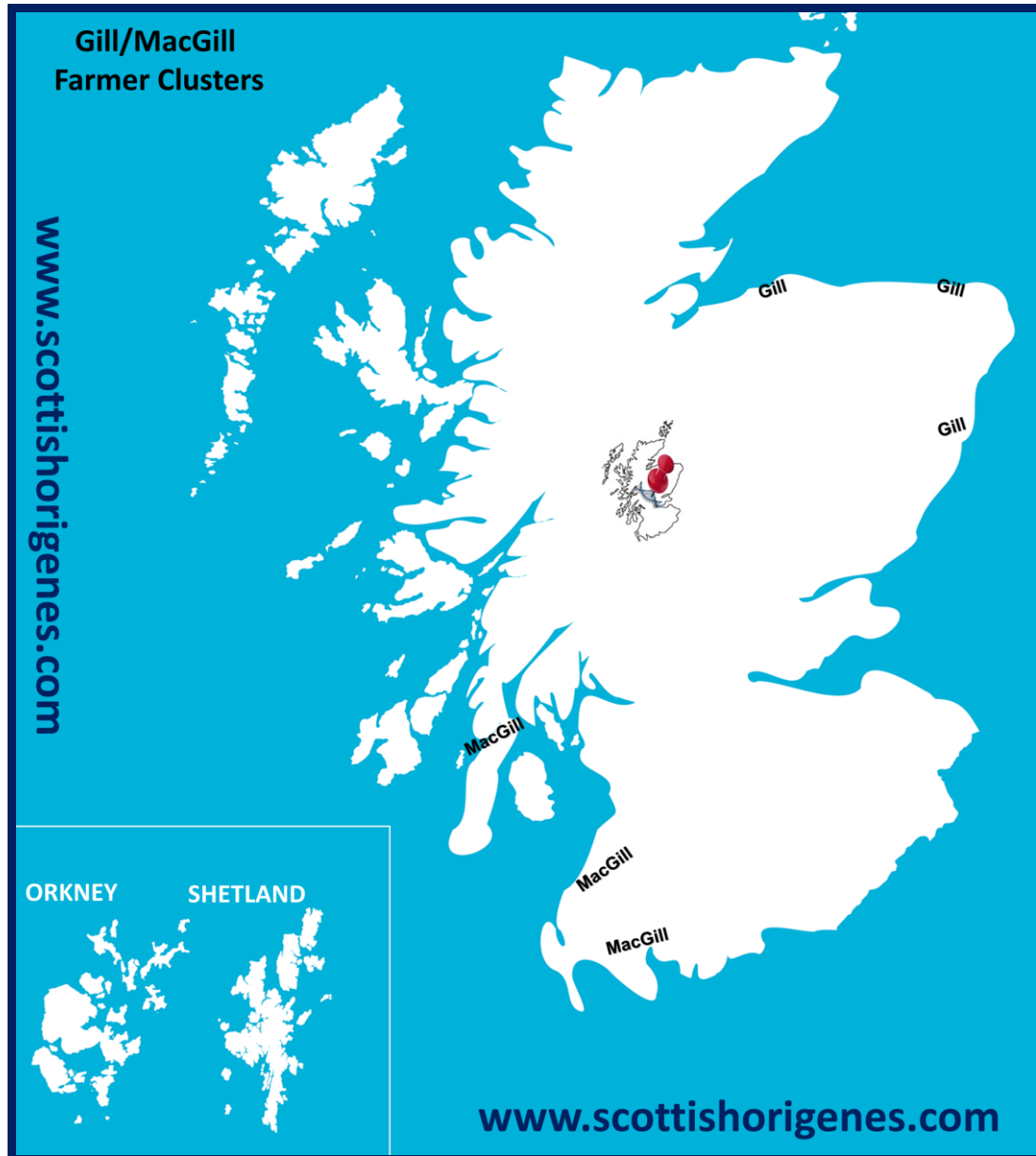


Figure 3: The Scottish Gill farming community. An examination of the distribution of farmers named ‘Gill/MacGill’ reveals at least 6 geographically distinct groups found throughout Scotland. Each surname is positioned in the location where farmers with that surname concentrated in early census data. The most common spelling is detailed in each location. Surnames are positioned as they appear on the Scottish Origenes Surnames map, free to view online www.origenesmaps.com

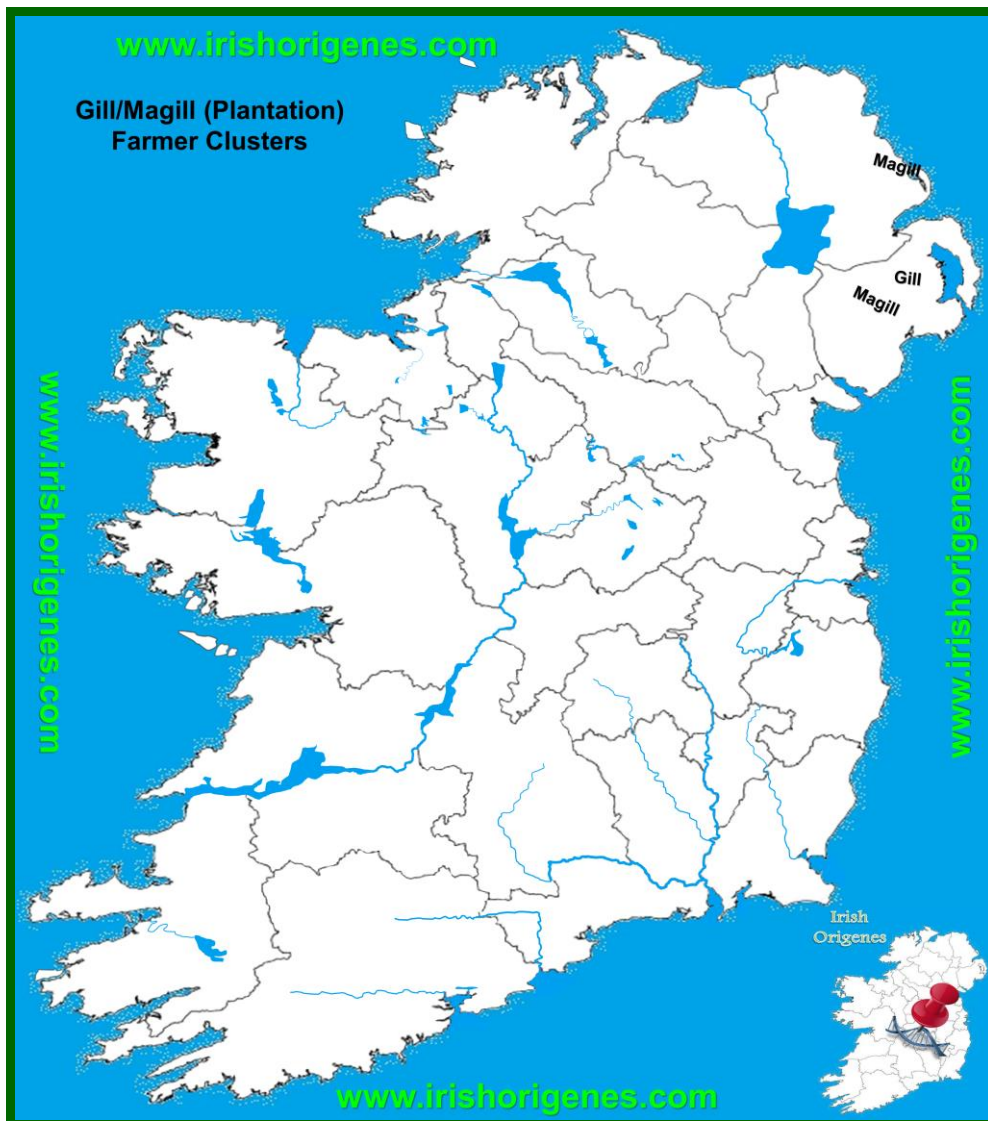


Figure 4: The Scots Irish Gill and Magill farming community. Census data reveals that individuals with Gaelic Irish, Norman, or Scottish Gallowglass surnames were overwhelmingly Catholic, while those with 16th and 17th Century Plantation Scottish or English surnames were overwhelmingly Protestant. The Gill/Magill surname is associated with Plantation Ireland. Distribution mapping of farmers (Protestant, male, heads of household) named Gill/Magill in early census data reveals multiple distinct groups spread throughout Northeast Ireland. Each surname is positioned as it appears on the Irish Origenes Plantation Surnames map, the most common spelling is detailed in each location, free to view: www.origenesmaps.com

A Recent Paternal Ancestral Link with Southeast Ulster in Northern Ireland

Southwest Scotland was an area from which many predominantly Protestant English speaking Scots with surnames like MacGill departed for Ireland in around 1610AD to settle lands forfeited by rebellious Irish Chieftains. The Irish Origenes Surname maps reveal the precise origin of over 8,000 surnames found within Ireland. Strikingly, an examination of the distribution of Protestant Irish farmers named Gill/Magill, Bennett, Morrow, Murphy, and Rogers, reveals that they concentrated together within County Down in Northeast Ireland, see **Figure 5**. Research at Irish and Scottish Origenes has revealed that the Plantation surnames (post 1600AD) in each Irish

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location mirror those of their Scottish origin, indicating that whole communities had migrated and settled together within Ireland. An examination of the Plantation surnames of County Down reveals that the test subject's Gill/Magill paternal ancestor settled in the farmland that surrounds the town of Ballynahinch, See **Figure 6**. In the surrounding area one finds the surnames that dominate among his closest SNP matches together with the Hamilton and McKellar surnames which dominate as more distant recurring Y-DNA SNP revealed paternal genetic relatives, see **Figures 1, 2, and 6**. The Y-DNA test results reveal that the test subject's Gill/MacGill paternal ancestor had settled together with genetic relatives named Hamilton and McKellar, and over time had formed relationships with fellow planters and native Gaelic Irish with surnames like Bennett, Morrow, Rodgers, and Murphy.

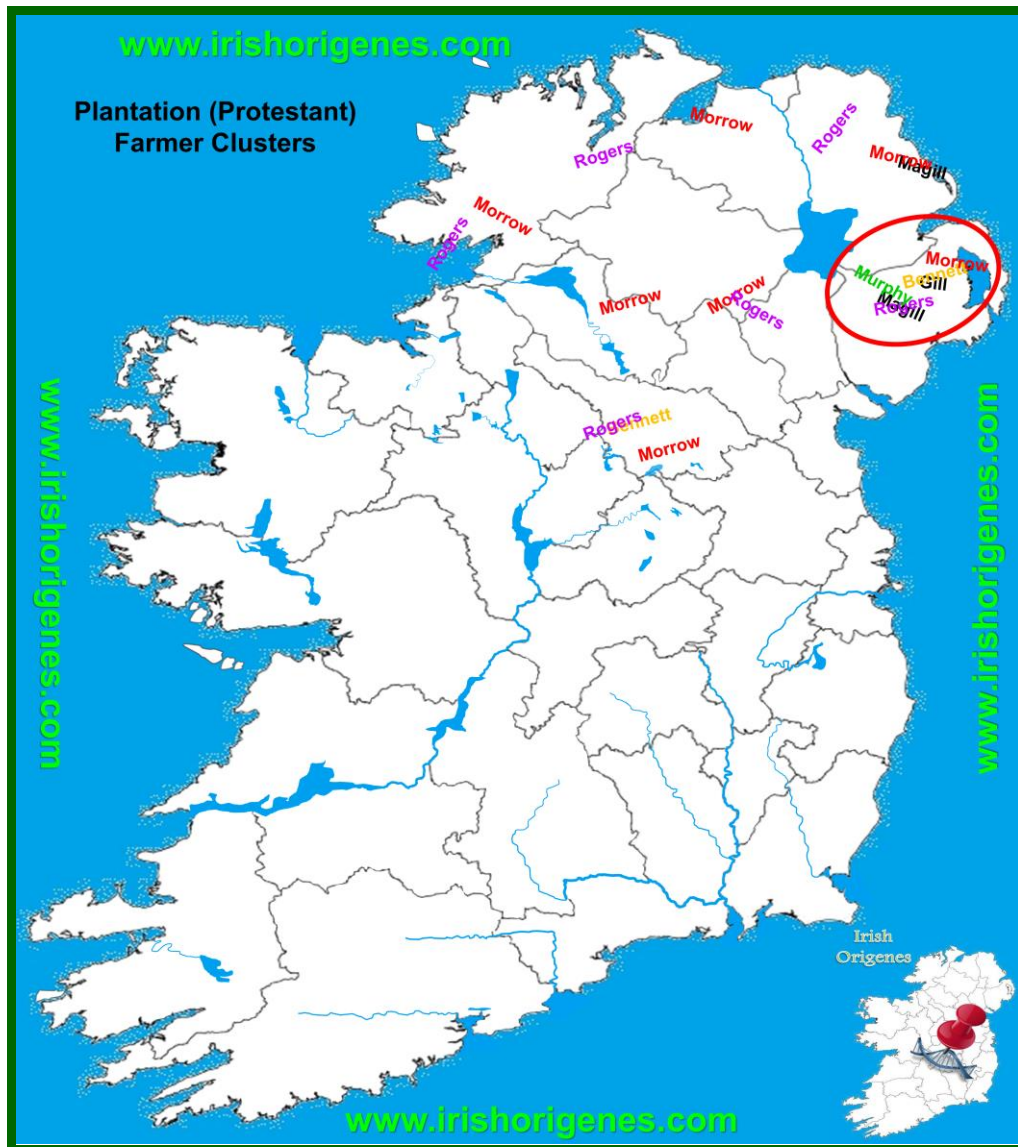


Figure 5: Overlay mapping reveals a more recent paternal link with Northeast Ireland. Distribution mapping of Protestant farmers named Gill/Magill, Bennett, Morrow, Murphy, and Rogers (fig. 2) reveals that they occur together within County Down in Northeast Ireland (red circle). Each surname has been placed on the map in the area where farmers (Protestant, male, heads of household) with that surname concentrated in early census data. The most common spelling is detailed in each location. Surnames are positioned as they appear on the Irish Origenes Plantation Surnames map, free to view online www.origenesmaps.com



Figure 6: The Plantation Surnames of County Down. An examination of the area surrounding Ballynahinch as it appears on the Plantation Surnames of Ireland map reveals that the test subject's Gills/Magills (**black arrows**) had settled in the farmland that surrounds the town of Ballynahinch. In the surrounding area one finds surnames that appear as close SNP matches (**red arrows**) together with Hamiltons and McKellars (**blue arrows**). Each surname is positioned in the location where farmers (Protestant, male, heads of household) with each surname concentrate in early census data. The most common spelling is detailed in each location. Detail taken from the Irish Origenes Plantation Surnames of Ireland map, free to view at www.origenesmaps.com

An Earlier Paternal Ancestral origin within Argyllshire

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 can still be found farming the land where their ancestor lived when he first inherited his surname, or where one's ancestor first settled, one can plot where farmers with the surnames that appear in one's Y-DNA results originate and identify an area common to most if not all. This means that upon Y-DNA testing a male named 'Gill' from Aberdeenshire will be a Y-DNA genetic match to males with surnames like Birnie, Lunan, and Pittendrigh. In contrast, a male name MacGill from Southwest Scotland will be a Y-DNA match to males with surnames like MacCulloch, MacLellan, and MacGie, surnames associated with Southwest Scotland.

The exclusively Scottish Hamilton and McKellar surnames appear among the test subject's recurring SNP matches, see **Figure 1**. The Y-DNA SNP results reveal that the test subject's founding paternal ancestor lived among a group of related Scottish males among whom appeared the Gill, Hamilton and McKellar surnames. Distribution mapping of Scottish farmers named Gill, Hamilton and McKellar reveals that they only occur together within Argyllshire, see **Figure 7**. An examination of the surnames associated with Argyllshire reveals the Gill surname on the Mull of Kintyre, and surrounded by surnames that appear as recurring Y-DNA revealed genetic

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matches to the test subject, see **Figure 8**. The test subject's Y-DNA results reveal an earliest paternal origin within Argyllshire.

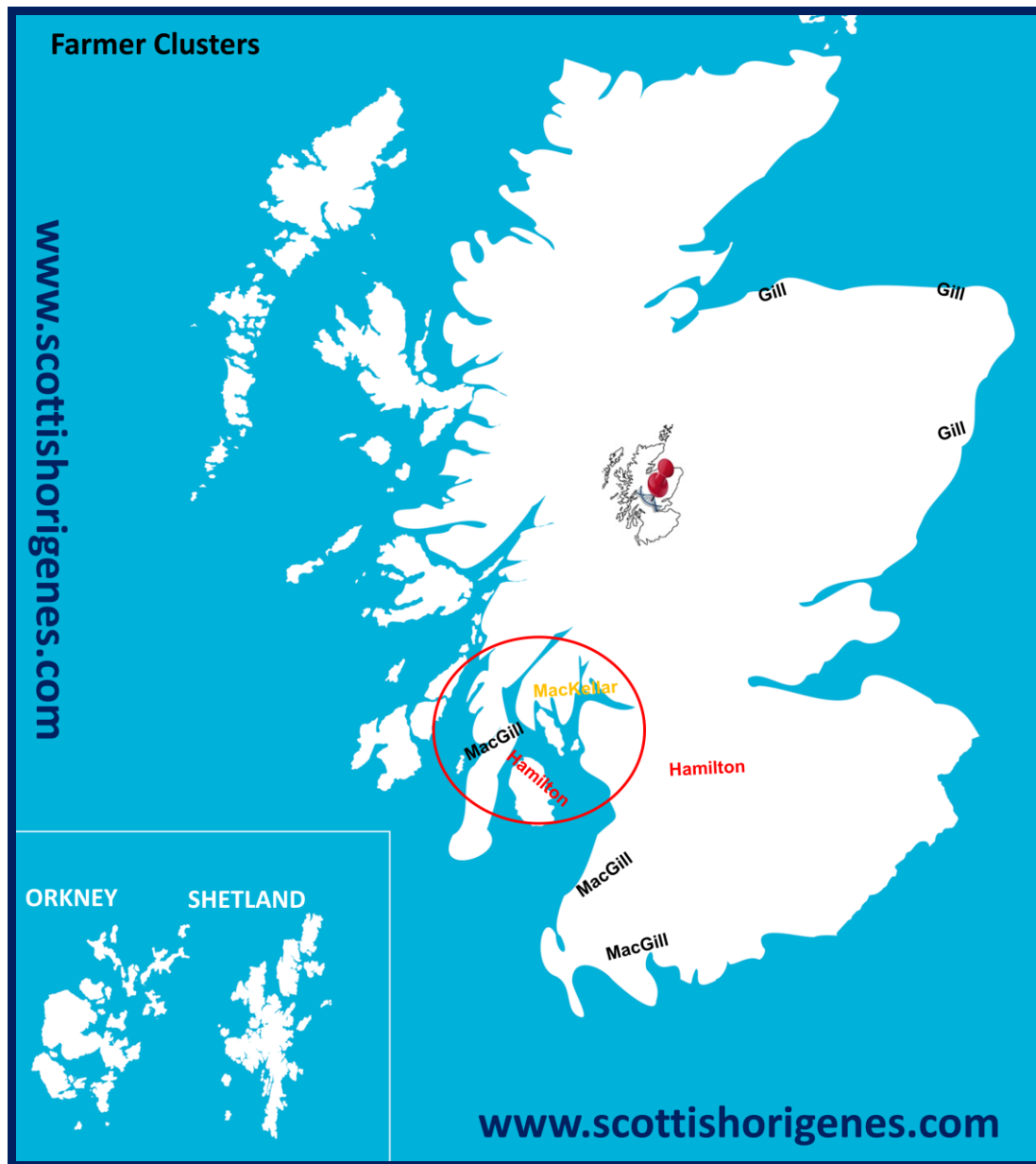


Figure 7: Overlay mapping reveals a paternal origin within Argyllshire. The Hamilton and McKellar surnames dominate among the test subject's recurring Y-DNA SNP matches (fig 1). The Gill, Hamilton and McKellar surnames arose among related Scottish males. Distribution mapping reveals that farmers named Gill/MacGill, Hamilton and McKellar only occur together within Argyllshire (**red circle**). 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. Surnames are positioned as they appear on the Scottish Origenes Surnames map, free to view online www.origenesmaps.com

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Figure 8: The Surnames of Argyllshire. Farmers in Scotland still concentrate in the area where their surname first appeared. An examination of the surnames of Argyllshire reveals the test subject's MacGills near West Loch Tarbert on the Mull of Kintyre (**black arrow**) and surrounded by surnames that dominate his Y-DNA SNP matches (**red arrows**). Each surname is positioned in the location where farmers with each surname concentrated in early census data. The most common spelling is detailed in each location. Surnames in **red font** are associated with a single geographical area within Scotland. Image taken from the Scottish Origenes Surnames of Scotland map, now free to view: www.origenesmaps.com

The Clan Territories of Argyllshire

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 nearly 400 notable clans and families. Modern commercial ancestral Y-DNA testing and 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 Argyllshire reveals a diverse mix of clans and families that claim Norman, Gael, and Viking origin, see **Figure 9**. The clan map reveals that the Hamiltons who dominate the test subject's Y-DNA results were a prominent clan in Argyllshire, see **Figures 1 and 9**.

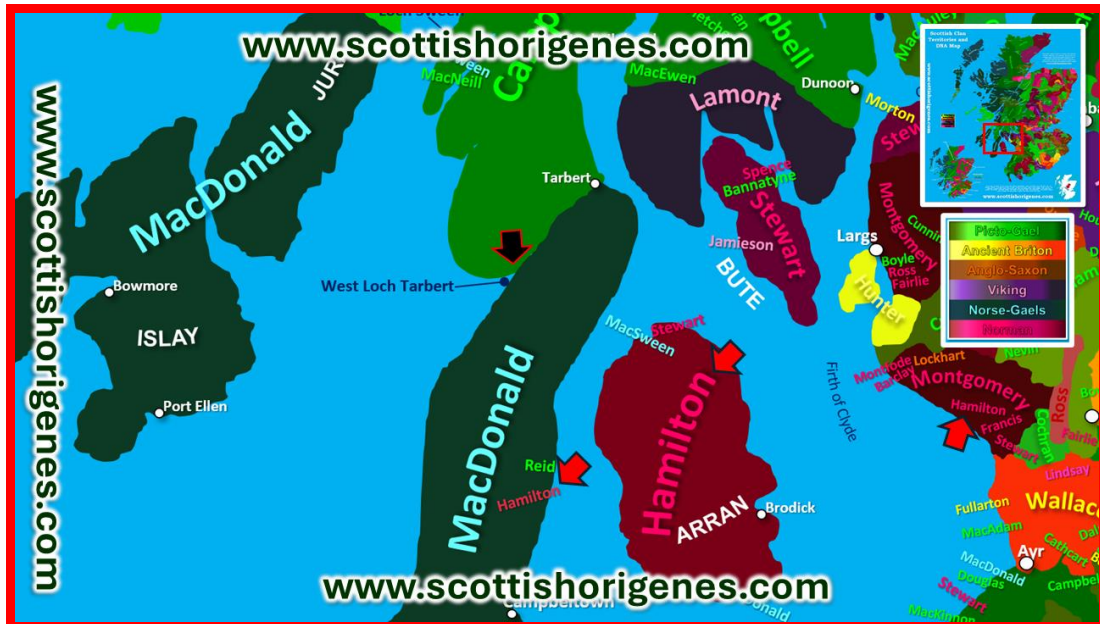


Figure 9: The principal Medieval Clans and Families of Argyllshire. An examination of the clans and families of Argyllshire reveals an area dominated by a diverse mix of clans and families that claim Norman, Gael, and Viking origin. The test subject's 'MacGills' (**black arrow**) lived in lands dominated by the MacDonalds and Hamiltons (**red arrows**), the latter of whom dominate among the test subject's SNP matches. The clan map was reconstructed based on the location of castles and towerhouses and their historically associated clans and families. Image taken from the Scottish Origenes Clans of Scotland map, now free to view: www.origenesmaps.com

Mr Gill's 'Scottish' Paternal Ancestral Genetic Homeland

Early census data reveals that the 'MacGills' concentrated in the area that lies to the west of Tarbert on the Kintyre peninsula, and it is there that the test subject's Scottish Paternal Ancestral Genetic Homeland is to be found, see **Figure 10**. It was there that the test subject's direct male ancestor lived when he first took the 'MacGill' surname at some point after surnames first appeared in Scotland an estimated 1,000 years ago. His paternal ancestor lived among a group of related males among whom arose other surnames like Hamilton and McKellar. When one's ancestors and their genetic relatives have lived in an area for a long time, one will often find evidence of their links within that area in the surrounding monuments and placenames, although an examination of the surrounding area failed to reveal any Gill/MacGill placenames, it does reveal castles and towerhouses associated with his Hamilton genetic relatives, see **Figure 10**. The test subject's MacGill ancestors will also have left evidence of their long ancestral links with this area in its history, and in the DNA of the current inhabitants.

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Figure 10: Mr Gill's Scottish Paternal Ancestral Genetic Homeland. Early census data reveals that the MacGills farmed the lands that surround the village of Tarbert on the Mull of Kintyre in Argyllshire, and it is there that the test subject's Scottish Paternal Ancestral Genetic Homeland is to be found (*orange broken circle*). It was there that his paternal ancestor lived when surnames first appeared in Scotland an estimated 1,000 years ago. His MacGill paternal ancestors will have left evidence of their ancestral links with this area in its history, but also in the DNA of the current inhabitants. Image taken from the Scottish Origenes Castles of Scotland map, now free to view: www.origenesmaps.com

Indo European Celts

The hundreds of Y-DNA Case Studies conducted at Scottish Origenes has resulted in a Y-DNA map of Scotland, see **Figure 11**. That map reveals that the modern Scots are a diverse bunch descended from Neolithic farmers, Indo European Celts (Ancient Britons, Picts, Scots Gaels), Romans, Anglo-Saxons, Vikings, and Normans. Clues to the ethnic origin of the test subject's paternal ancestors can be found in his R-M269/R-DF21 paternal Haplogroup which reveals that his paternal ancestors were the descendants of the Indo-Europeans who began to arrive in Scotland approximately 4,500 years ago, see **Figure 11**.

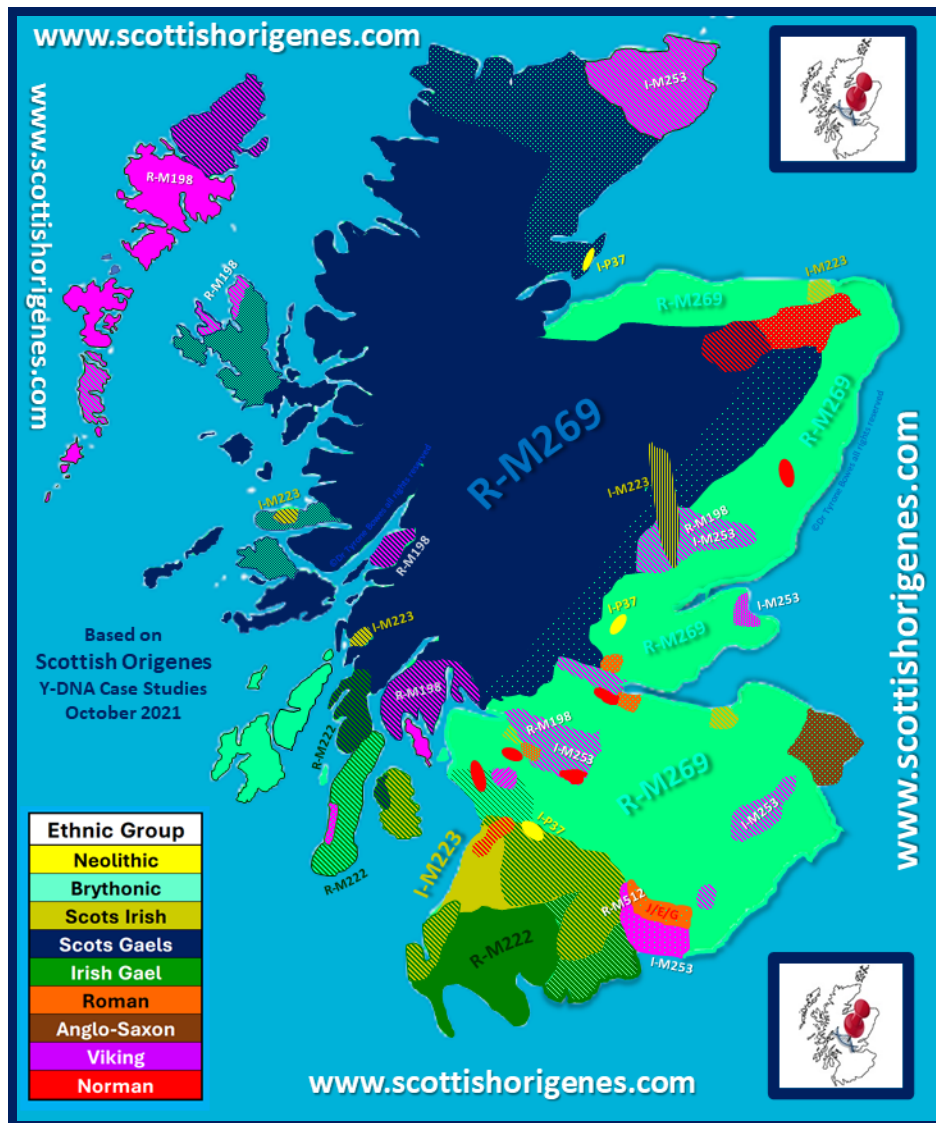


Figure 11: The Scottish Origenes Y-DNA ethnicity map of Scotland. Y-DNA Case Studies at Scottish Origenes reveals an ethnicity map of Scotland. The test subject's paternal ancestors were the descendants of the R-M269/R-DF21 Indo-Europeans who began to arrive in Scotland approximately 4,300 years ago and who would virtually replace the Neolithic population.

How to confirm the Gill Paternal Genetic Homelands

One must keep in mind that this is a scientific DNA approach to identifying an origin.

As such, the connection to an identified area can be confirmed by Y-DNA testing males with the surname of interest from the identified location. The origin within Argyllshire can be confirmed by Y-DNA testing males named MacGill who still farm in the area that surrounds Tarbert on the Mull of Kintyre. The more recent link with Southeast Ulster can also be confirmed by Y-DNA testing males named Gill or Magill who live and farm in the area surround Ballynahinch.

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