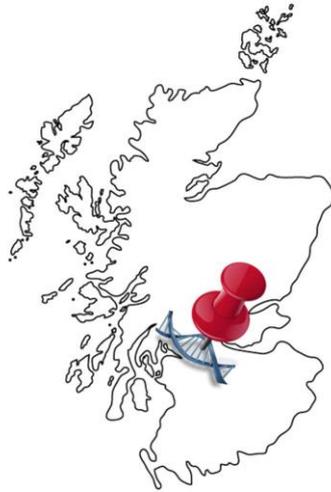


Pinpointing the MCMILLAN Paternal Ancestral Genetic Homeland

A Scottish Case Study

www.scottishorigenes.com



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

Dr Tyrone Bowes

31th July 2014

Contact Tyrone Bowes (tyronebowes@gmail.com) for a FREE consultation on your DNA results

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 many 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 'McMillan' was living in close proximity to others with whom he was related but who assumed other surnames like McChesney, and Glendingin. 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 Adam's 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 other 50% of people will have an association that has arisen as a result of what are called 'non-paternal events' usually a result of adoptions or infidelity. 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!

‘McMillan’ Case Study

Interpreting the Y-DNA test results

To pinpoint a paternal ancestral genetic homeland one must first identify the surnames that reappear as genetic matches. These recurring surnames are more likely to reflect the surnames of one’s medieval ancestor’s neighbours. Results for test subject ‘McMillan’ are shown in **Figure 1**.

Test Subject	Haplogroup	Y-DNA Test Results										Y-search.org matches			
		37 Marker level					25 Marker level					Last Name	Markers Compared	Genetic Distance	Frequency
		exact	-1	-2	-3	-4	exact	-1	-2						
McMillan	R-M269	-	Badger(x2) ¹	Smith(x2) ²	-	-	-	-	Chesnutt(x2) ^{1,4}	Fedderly (x4) ³	Paxton(x2)	Smith	37	2	13
			McMillan(x1) ^{1,2}									Sweet	25	5	7
												Baker	25	4	6
												Steward	25	5	6
												West	25	3	6
												Clendenin/Glendering	25	4	5
												Elliot	25	5	5
												Franklin	25	3	5
												Morrison	25	4	5
												Anderson	25	3	4
												Carroll	27	5	4
												DonaldMac	25	5	4
												Elder	25	5	4
												Jones	25	4	4
												Rose	25	4	4
												Arnold	25	4	3
												Brown	25	5	3
												Buchanan	25	4	3
												Campbell	25	5	3
												Gambrell	25	5	3
												Godwin	27	4	3
												Hull	25	5	3
												Jordan	25	4	3
												Norton	25	4	3
												Phillips	25	5	3
												Pierce	25	4	3
												Price	25	4	3
										Stevens	25	4	3		
										Thomas	25	3	3		
										Turner	25	4	3		
										Webb	26	3	3		
										White	25	3	3		

Figure 1: Recurring surname matches for test subject McMillan as revealed by Y-DNA testing. Surnames appear at the point at which they first occur as a genetic match e.g. the first match to an individual called McMillan occurs at 36/37 markers, although not all McMillans may match at that level. Figures in brackets represent the number of individuals with a particular surname who appear as a genetic match. Coloured font/blocks denotes the ethnicity associated with each surname; **Scottish**, **English**, **Welsh**, **Irish**. ¹Members of the same extended family recruited for DNA testing and excluded from further analysis. ²These surnames also appear as a genetic match in the Ysearch.org database. ³Most of these matches appear at the 12 marker level and the shared ancestry precedes the appearance of surnames by possibly many 100’s of years. ⁴Chesnutt is a Scottish surname which may be an anglicised version of McChesney; this is supported by the finding that the McChesney surname appears as a genetic match at the 12 marker level.

Upon commercial ancestral Y-DNA testing Mr McMillan matched one other individual called McMillan in the FTDNA database; this other McMillan is a known relative. However, an examination of the Ysearch.org database revealed another McMillan match (one who test independently) and this would indicate that Mr McMillan is directly descended from a McMillan-Adam; the first to take that surname who lived approximately 1000 years ago when paternally inherited surnames became common. McMillan is a common Scottish surname and an ancestral link with Scotland is supported by Mr McMillan’s Y-DNA results which reveal that his closest and most frequent genetically recurring surname matches are predominantly associated with Scotland, see **Figure 1**.

'McMillan' Case Study

Early census data reveals 11 clusters of McMillan farmers spread throughout Western Scotland; indicating the existence of at least 11 distinct McMillan Clans, see **Figure 2**. It is Mr McMillan's genetically reoccurring surname matches (as identified in Figure 1) as a snapshot of his ancestor's neighbours which can be used to pinpoint where his McMillan-Adam lived. 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 will reveal an area common to all.



Figure 2: The 1841 McMillan farming communities. Census data reveals that there were 11 clusters of McMillan farmers spread throughout the West of Scotland. This indicates the existence of an estimated 11 distinct Scottish-McMillan-Adams from whom the test subject may be directly descended. Each McMillan has been placed on the map where farmers with that surname cluster in early census data.

Pinpointing the Genetic Homeland

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 cluster and identify an area common to all. For example upon Y-DNA testing McMillans from Invernesshire will be a genetic match to people with surnames like Logan and Dallas; surnames associated with Invernesshire, while the McMillans from Wigtownshire will be genetic matches to people called MacColm and MacCracken; surnames associated with the far Southwest of Scotland. Hence, it is Mr McMillan's genetic matches which will reveal where his paternal ancestors originated within Scotland. Mr Millan matches many people with common Scottish surnames like Stewart, Smith, Buchanan, Campbell and McDonald which are associated with multiple locations throughout Scotland. However, there are a number of surnames that are exclusively Scottish in origin and are associated with a single geographical area within Scotland including McChesney/Chesney, Glendining, and Paxton. In addition the surname Elliot when found in Scotland is also associated with a single geographical area. By plotting the location of farmers called Chesney/McChesney, Glendining, Paxton and Elliott it reveals that these surnames are all associated with Southern Scotland and that the majority cluster close to a McMillan farming cluster centred upon Dumfriesshire, see **Figure 3**.

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McMillan may begin to see matches emerge to some of the Clans and families that dominated this part of Dumfriesshire like the Griersons, Dalziel, Crichtons and Dennistouns.

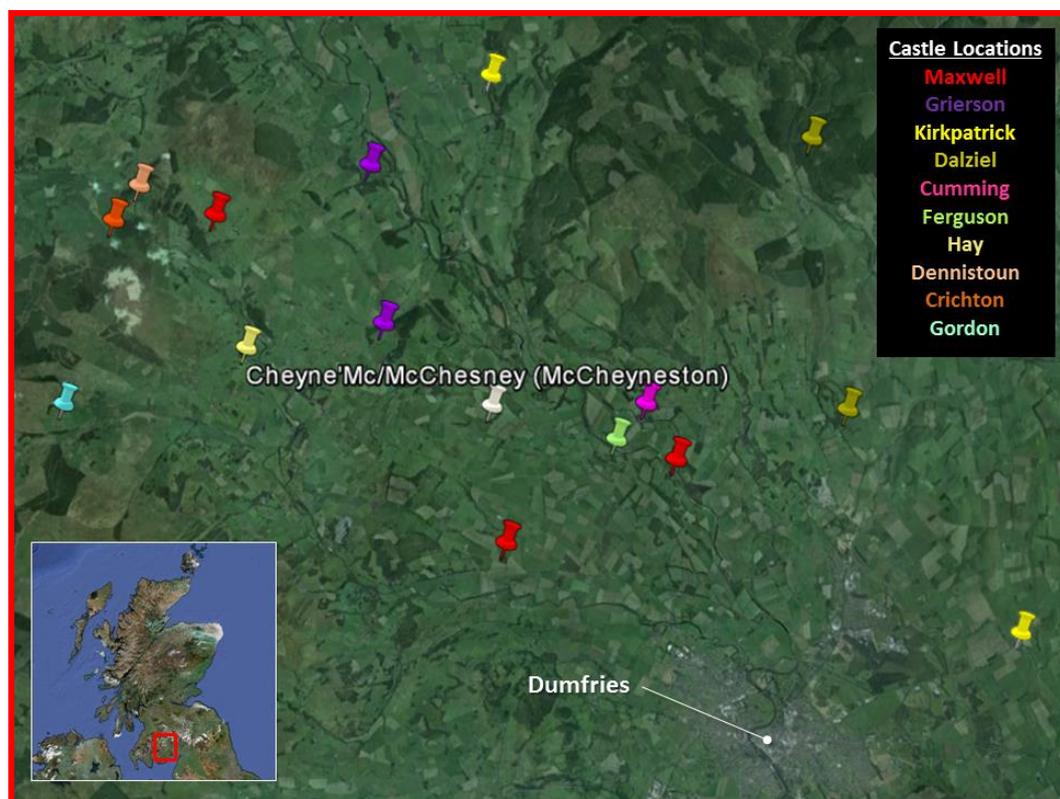


Figure 4: The principal Clans and Families of Central Dumfriesshire. The McMillan and McChesney farming community cluster to the North of Dumfries town in an area dominated by Clans of Ancient Briton, Norman, and even Gaelic Irish origin. As more and more people participate in commercial ancestral DNA testing some of these prominent Clans and Families will appear as a close genetic match to Mr McMillan.

Mr McMillan's Paternal Ancestral Genetic Homeland

In 1841 a small number of McMillan and Chesney/McChesney farmers could still be found in the area to the northeast of Dumfries town, and it is in that area that Mr McMillan's paternal ancestral genetic homeland is to be found, see **Figure 5**. His ancestors were most likely the ancient Britons who inhabited this land prior to the arrival of the Norse-Irish in the 12th Century. However, when paternally inherited surnames became common the test subjects ancestors had adopted the Gaelic language and customs of the Hiberno-Norse becoming McMillans, others became McChesney, while others took Brythonic surnames like Glendining, others still became Elliotts and Paxtons. Typically, an examination of one's paternal ancestral genetic homeland will often reveals evidence for one's ancestor's long association links with this area in its history, monuments, and placenames. An examination of Dumfriesshire reveals a place called Millantae; tae may be Gaelic Irish 'ti' meaning 'house,' and this placename may have been a reference to a 'MacMillans House,' see **Figure 5** and **6**. In the area surrounding Dumfries there are also references in the placenames to the McChesneys, Stewarts, Campbells, Glendinings, Whites and Jardines (Jordan) all of whom feature prominently in Mr McMillans DNA results. Mr

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McMillan's ancestors will also have left evidence of their long ancestral links with this area in its history, but also in the DNA of the McMillans who still live in this area.

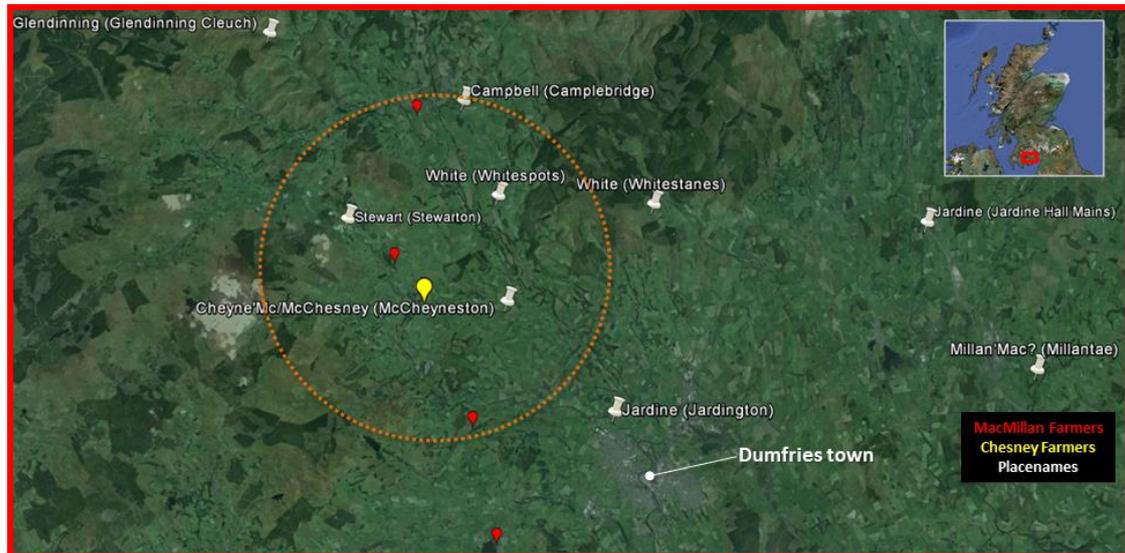


Figure 5: Mr McMillan's Paternal Ancestral Genetic Homeland. Mr McMillan's Y-DNA results indicate that his Paternal Ancestral Genetic Homeland (red broken circle) lies to the Northwest of Dumfries town. It is in this area that his paternal ancestor lived when he first inherited the McMillan surname. His ancestor lived surrounded by relatives who inherited other surnames like McChesney, Stewart, White, Campbell, Glendening and Jardine (Jordan) all of whom have left evidence of their long ancestral links with this area in the surrounding placenames, history and in the DNA of the current inhabitants. Millantae to the east of Dumfries town may translate as 'MacMillans House.'



Figure 6: Millantae in Dumfriesshire. The farm known as 'Millantae' may translate as 'MacMillans House.' It lies to the east of where McMillan farmers were found in early census data.

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How to confirm the McMillan Genetic Homeland

Confirmation that Mr McMillan's paternal ancestors originated from Dumfriesshire will require the recruitment from that area of McMillan farmers for commercial ancestral Y-DNA testing.

Contact Tyrone Bowes (tyronebowes@gmail.com) for a FREE consultation on your DNA results