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Case Study
Pinpointing the Valentine Paternal
Ancestral Genetic Homeland
(and uncovering a 400 year old family secret)

www.scottishorigenes.com



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

Dr Tyrone Bowes
Updated September 2016

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 'MacGregor' was living in close proximity to others with whom he was related but who inherited other surnames like Buchanan, Campbell and MacAuslan. 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 male 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 will reflect earlier English, Scandinavian, and possibly French origin. One must approach this process with an open mind!

Valentine - A Case Study

Valentine: A brief family history

Mr Valentine was born in Alford in Aberdeenshire in Northeast Scotland. He is aware that his Valentine ancestors trace back to the area surrounding Montrose town in neighbouring Angus. Like the vast majority of people today, Mr Valentine had no idea about his distant paternal ancestry, although family lore linked them with Clan Lindsay.

Interpreting the Y-DNA Results

To identify a paternal ancestral genetic homeland one must first find the surnames that appear as a genetic match, see **Figure 1**. Upon Y-DNA testing Mr Valentine was a close genetic match to over 300 different individuals. Crucially, the surnames of those individuals are **NOT RANDOM**, there are a number of Scottish surnames that appear as frequent recurring genetic matches, see **Figure 1** and **2**.

67 MARKERS - 340 MATCHES				
Genetic Distance	Name		Most Distant Ancestor	Y-DNA Haplogroup
1	John Leonard Valentine	👉👉👉		R-M269
1	John Leland Valentine	👉👉👉	Alexander Valentine, b. c1826 Montrose, Scotland	R-M269
3	Noah Buchanan	👉👉		R-M269
3	Michael Robb Buchanan	👉👉		R-M269
3	Joe C. Campbell	👉👉		R-M269
3	William Harry Pettigrew II	👉👉	William Harry Pettigrew, b.5-11-1913, Stephens Co. OK	R-M269
3	Donn Chandler Drummond	👉👉	Drummond	R-M269
3	Donald M. Logan	👉👉	John Logan (1802-1877) NC>TN>AL	R-M269
3	Mr. Robb Buchanan	👉👉	John Samuel Buchanan, 1785-1845	R-FGC32576
3	Sir Malcolm MacGregor Of MacGregor	👉👉	Gregor founder of the clan	R-L1335
3	Mr. Ernest Dean MacGregor	👉👉	James MacGregor bo c1760Muthill m McNabb Callander	R-M269
3	James Campbell	👉👉	William Campbell (c1782) of NC	R-M269
3	Campbell	👉👉	Charles Campbell (bet.1726/35) VA, Argyll Scotland	R-M269
3	Logan	👉👉	John Logan (1802-1877) NC>TN>AL	R-M269
4	Robert W Buchanan	👉👉		R-M269
4	Dale McIntyre	👉👉		R-M269
4	James Maitland Robertson	👉👉	Donald Robertson, b 1735 Little Dunkeld, Scotland	R-L1065
4	Reg MacAusland	👉👉	Samuel McAustlane, b.1799 and d.1855	R-FGC32576
4	Robert McGregor	👉👉	Robert McGregor m1815, Irvine, Scotland	R-L21
4	Steven Ross Wilson	👉👉	Oilphant	R-L21
4	Scott James Buchanan	👉👉	John Buchanan, b.c. 1737, near Drymen, Scotland	R-L21
4	Mr. Ross McGregor	👉👉	John McGregor (alias McGrigor) abt 1761	R-M269
4	w. HENRY HANBY	👉👉	John Hanby, b.1811 d. 1887	R-5691
4	John Amos Logan	👉👉	William Logan b abt 1783 Ireland d 25 Apr 1865 VA	R-M269
4	Mr. Douglas Love Miller Jr.	👉👉	Isaac Miller, b. about 1755, d. 1806	R-M269

Figure 1: Snapshot of test subject Valentine's closest genetic surname matches at the 67 marker level as revealed in the Y-DNA database. The more Y-DNA genetic markers two people share the more recent their shared paternal ancestor once lived. The test subject's closest genetic matches are **NOT RANDOM** and are dominated by Scottish surnames, some of which like Valentine (**red arrows**), MacGregor (**blue arrows**), Logan (**green arrows**) and Campbell (**yellow arrows**) appear as close recurring genetic matches. These surnames arose among related males living in a specific part of Scotland.

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Test Subject	Haplogroup	Y-DNA Test Results							
		67 Marker Matches							
		exact	-1	-2	-3	-4	-5	-6	-7
Ross Valentine	M269	-	Valentine (x2)	-	MacGregor (x34) Buchanan (x25) Campbell (x4) Logan (x5) ¹ Drummond (x3)	Miller (x5) Robertson (x4) MacAusland (x3)	Johnson (x8) MacDonald (x7) McCormick (x5) Tate (x4) ¹ Calvert (x3) Mcintosh (x3) McKinley (x3) McPherson (x3) Norton (x3) ² Stewart (x3)	Bourland (x9) Moore (x7) Patterson (x7) ¹ Stirling (x6) ¹ MacLean/McClain (x4) MacBain/Bain (x3) McArtor (x3) McMillen (x3) Turner (x3)	MacRae (x8) Alexander (x3)

Figure 2: Mr Valentine's closest genetically recurring surname matches. Surnames are shown at the point at which they first occur as a genetic match, for example the first match with another individual called Valentine occurs at 66/67 markers, but not all Valentine's will match at that level. In brackets are the numbers of individuals with a particular surname that appear as a genetic match. The McGregor surname (**bold**) is particularly notable due to the numbers of individuals with that surnames who appear as close genetic matches. Coloured font indicates ethnicity associated with a surname, **Scottish**, **black** font indicates multiple associated ethnicities. ¹Possible members of the same close family recruited for Y-DNA testing. ²Norton in this instance may be an anglicised form of Scottish MacNaughtan. Only surnames which appear more than 3 times at the 67 marker level are detailed.

Upon commercial ancestral Y-DNA testing the test subject matched other individuals called Valentine who tested independently. This indicates that the test subject is directly descended from a Valentine-Adam; literally the first male ('Adam') to take the 'Valentine' surname. Valentine is a surname that is associated with Scotland, and the test subject's closest genetic matches are dominated by individuals with either exclusively Scottish or Scottish-associated surnames, see **Figure 1**. The test subject's Y-DNA results reveal that his paternal ancestor lived among a tribal group of related males somewhere within Scotland, among whom arose surnames like MacGregor, Buchanan, Logan, Stewart and Campbell.

Scottish Valentines

The Valentine surname can be of English or Scottish origin; however the test subjects genetically recurring surname matches are exclusively Scottish; confirming his paternal link with the Scottish Valentines. Valentine is not a common Scottish surname and early census data reveals a single cluster of Valentine farmers found close to Montrose town in Angus in Northeast Scotland, see **Figure 3**. This indicated the existence of a single Scottish 'Valentine' Clan from whom the test subject is directly descended. Mr Valentine's genetically recurring surname matches (as identified in Figure 2) as a snapshot of his ancestor's neighbours from the time when paternally inherited surnames first appeared an estimated 1000 years ago, should localise to the area surrounding Montrose and confirm his paternal ancestral link with that area. This is because the test subject's closest genetically recurring surname matches 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.

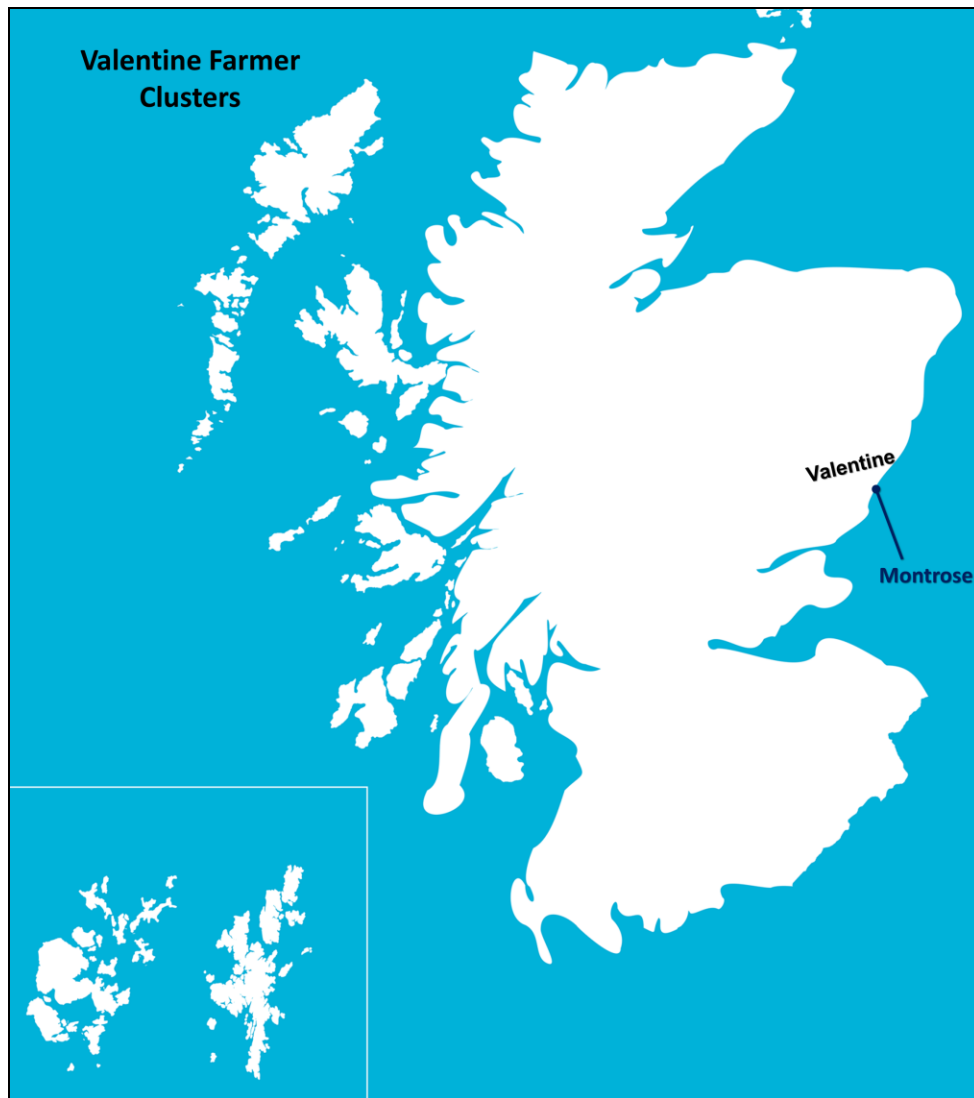


Figure 3: Scottish Valentine. Surnames arose in an agrarian society and estimated 1000 years ago and early census data reveals that farmers with each surname could be found concentrated in the area where their surname first appeared. Early census data reveals a single cluster of Scottish Valentine farmers found close to Montrose town in Angus in Northeast Scotland. The test subject has an ancestral papertrail and DNA evidence (matches to other Valentines) that links his paternal ancestry to the area surrounding Montrose town.

Pinpointing the 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 concentrate and identify an area common to all. This means for example that upon Y-DNA testing a 'Stewart' from Aberdeenshire will be a genetic match to people with surnames like Tarves, Fowlie and Barrack; surnames associated with Northeast Scotland. While in contrast a Stewart from Fife

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will have genetic matches to people called Pride, Pitcairn and Seath; surnames associated with East Central Scotland. Hence, it is the test subject's genetic surname matches which will reveal where his Scottish paternal ancestors originated.

An examination of test subject's Y-DNA results reveals that the surnames Valentine, MacGregor, Buchanan, Campbell, Logan, Drummond, Robertson, MacAuslan and Miller appear as his closest recurring genetic matches, see **Figure 2**. Distribution mapping of farmers called MacGregor, Buchanan, Campbell, Logan, Drummond, Robertson, MacAuslan and Miller reveals that they crucially occur in closest proximity to one another in West Central Scotland far removed from the Valentines of the northeast, see **Figure 4**.

The Scottish Origenes Surnames of Scotland map details where farmers with each of the estimated 4000 different Scottish surnames concentrated in early census data. An examination of Stirlingshire in West Central Scotland as it appears on the Scottish Origenes Surnames map reveals most of the surnames that appear among the test subject's closest recurring genetic, see **Figure 5**. The MacGregor surname appears as the test subject's closest and most frequent genetic match and farmers with that surname concentrate in North Stirlingshire, where they appear surrounded by almost all of the test subject's closest genetic relatives, see **Figure 5**. The DNA results indicate that the MacGregors of North Stirlingshire are the source of the test subject's Y chromosome.

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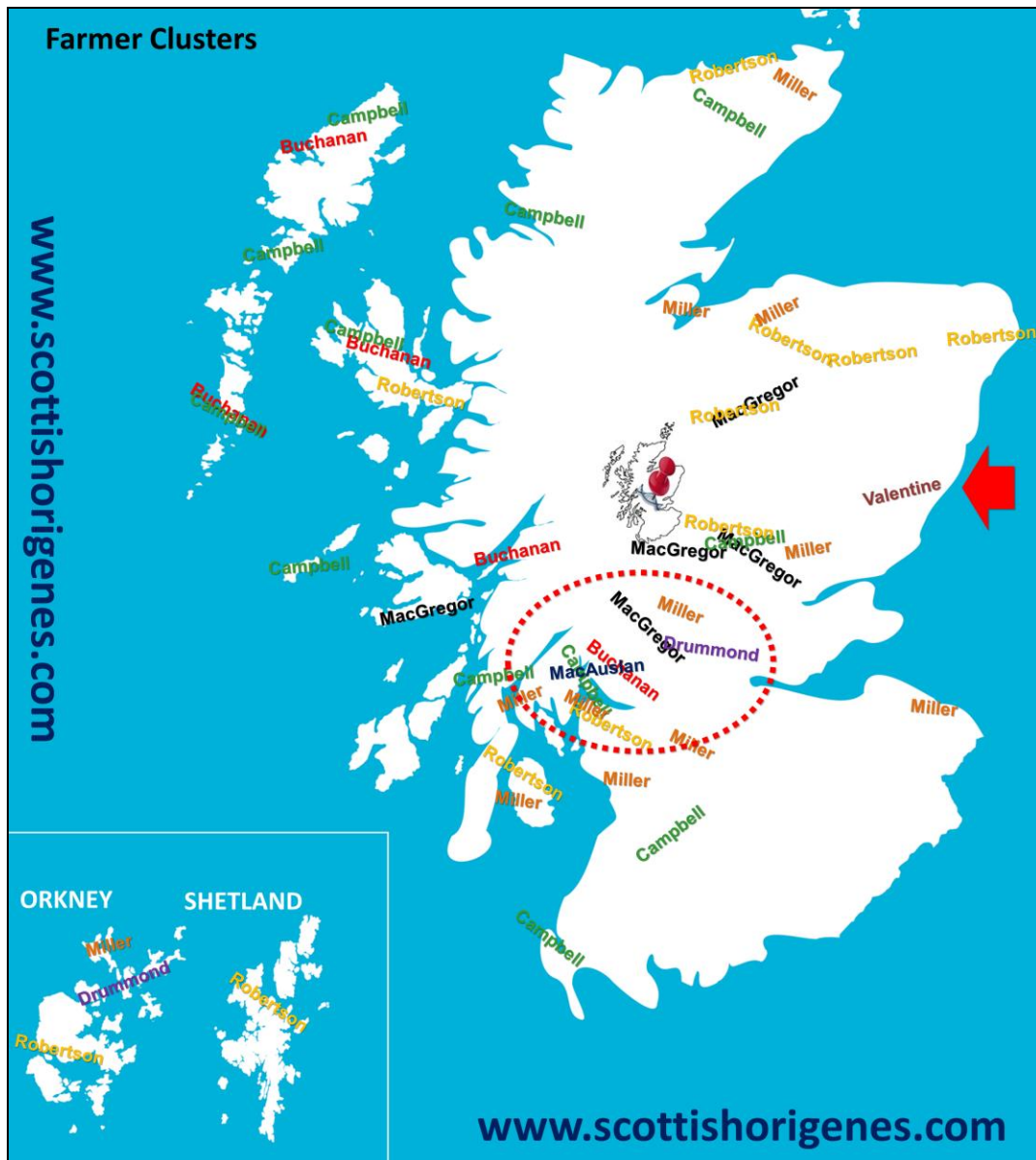


Figure 4: Mr Valentine's closest genetic matches cluster in West Central Scotland. Although Valentine is associated with the Northeast (red arrow), his closest recurring genetic matches only occur together within West Central Scotland (red broken border). Each surname is placed where farmers with that surname reach their highest concentration in early census data. The MacAuslan surname which appears as a close recurring genetic match to Mr Valentine is exclusive to West Central Scotland.

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Figure 6: The principal Medieval Clans and Families of Northwest Central Scotland. The Picto-Gaelic MacGregors appear among the test subject's closest and most frequent genetic relatives and were a prominent Clan in the Scottish Highlands (**red arrow**). Almost all of the other Picto-Gaelic Clans that dominated this area of the Scottish Highlands appear among the test subject's closest genetic relatives (**orange** and **yellow** arrows). The test subject's paternal ancestor was of Picto-Gaelic ancestry and lived in North Stirlingshire approximately 1000 years ago.

Scottish Valentines are MacGregors in disguise!

The Y-DNA results reveal an ancestral link with the area known as the Trossachs in West Central Scotland in an area dominated by Clan MacGregor. The test subject's DNA results also reveal that greater than 30 different individuals called MacGregor appear as a close genetic match to Mr Valentine (see **Figure 2**). Mr Valentine's link to Clan MacGregor is further strengthened by his close genetic match to the current chief of Clan MacGregor (see **Figure 1**; 'Sir Malcolm MacGregor of MacGregor'). The MacGregor Clan massacred members of the MaLaren and Colquhoun Clans in separate incidents in the 16th and 17th Centuries, see **Figure 7**. This was serious enough to get the MacGregors formally banished in 1603 by King James VI of Scotland who made it a capital offence to bear the MacGregor name! The edict proclaiming the name of MacGregor 'altogidder abolisheed', meaning that those who bore the name must renounce it or suffer death (many were hanged). The MacGregors were outlawed which resulted in many migrating and adopting new surnames; one of which the Y-DNA test results have revealed was 'Valentine.'

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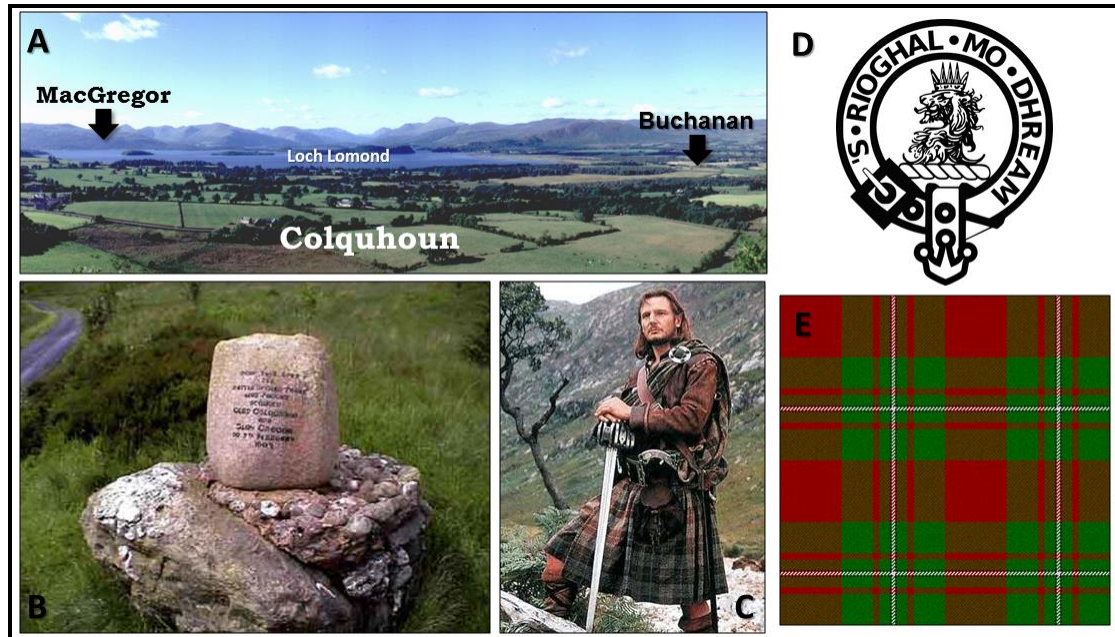


Figure 7: The Battle of Fruin Glen and the banning of the MacGregor surname. The MacGregors who appear as the test subject's most frequent genetic matches dominated the northern shores of Loch Lomond (**panel A**). The MacGregors were outlawed after massacring their Colquhoun neighbours in 1603AD at the battle of Fruin Glen (**panel A and B**). Liam Neeson played Rob Roy MacGregor whose surname was recorded as Campbell on official documents (**panel C**). The MacGregors claim Kingly descent and their motto is 'Royal is my Race' (**D**). The traditional MacGregor tartan (**E**).

Mr Valentine's Paternal Ancestral Genetic Homeland

In 1841 the Stirlingshire MacGregor farming community concentrated between Loch Katrine and Loch Earn and it is there that the test subject's paternal ancestral genetic homeland is to be found, see **Figure 8**. It is in that area that the test subject's direct male ancestor lived when he first inherited the MacGregor surname an estimated 1000 years ago. His ancestor lived surrounded by male relatives who inherited surnames like Campbell, Logan, Drummond, Buchanan, MacDonald, Robertson and MacAuslan among many others. When one ancestors have been associated with an area for long enough, they often leave evidence of their ancestral links in the placenames one finds there. The surrounding area reveals many references in the castles and placenames to the MacGregors, see **Figure 8** and **9**. The MacGregors 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. When the MacGregors were outlawed in 1603AD, the test subject's direct male MacGregor ancestor moved to Angus in Northeast Scotland and adopted the 'Valentine' surname.

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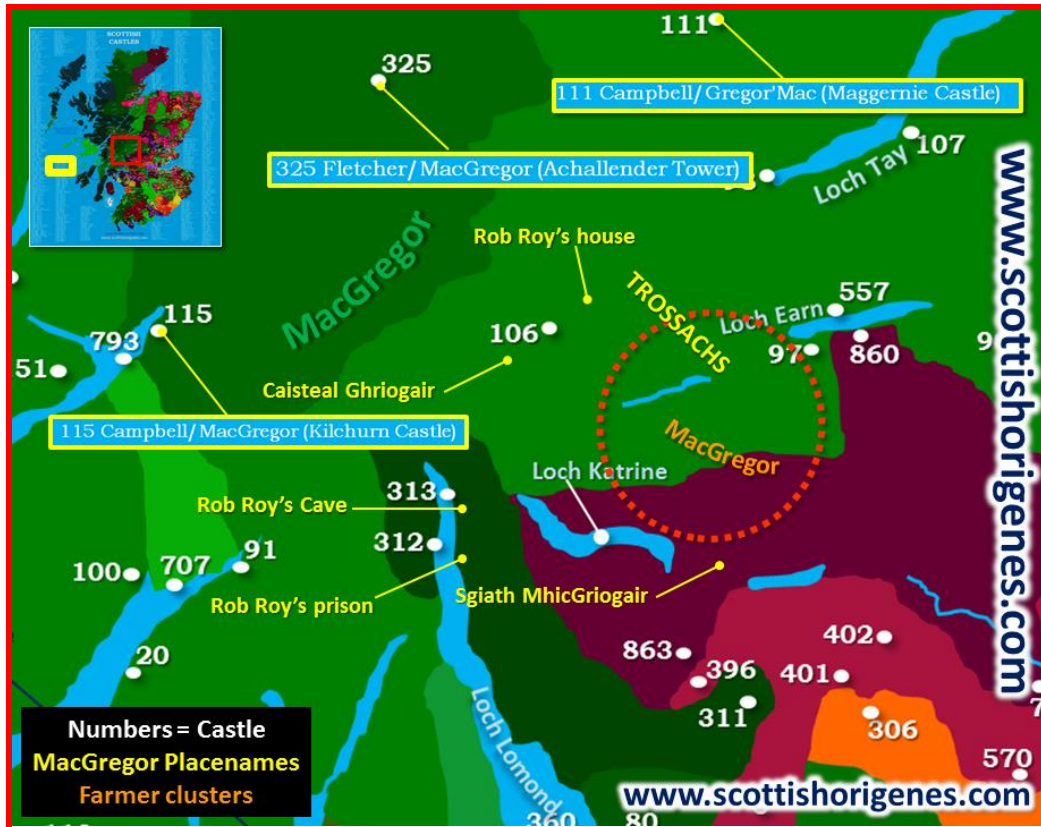


Figure 8: Mr Valentine's Paternal Ancestral Genetic Homeland. Mr Valentine's paternal ancestral genetic homeland lies in an area of the Trossachs that lie between Loch Katrine and Loch Earn (orange broken circle). It is there that his MacGregor founding ancestor lived surrounded by genetic relatives with surnames like Campbell, Buchanan, Logan, Drummond and MacAuslan. His MacGregor ancestors have left lots of evidence of their long ancestral links with this area in the surrounding castles and placenames. One also finds many castles and placenames associated with their genetic relatives. At some point after 1603AD the test subject's direct male ancestor fled this area to Northeast Scotland and changed his name to Valentine. Image taken from the Scottish Origenes Castles of Scotland Map.



Figure 9: MacGregor Castles. There are 3 castles located near the test subject's paternal ancestral genetic homeland which at some point in their history were associated with Clan MacGregor; Achallender Castle (top panel), Kilchurn castle (middle panel) and Maggernie Castle (bottom panel).

How to confirm the Valentine Paternal Ancestral Genetic Homeland

Confirmation that the test subject's paternal ancestor was a MacGregor from the Trossachs will require the recruitment of MacGregor farmers from the area between Loch Katrine and Loch Earn for commercial ancestral Y-DNA testing.

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