

Case Study

Pinpointing the Valentine

Genetic Homeland

www.scottishorigenes.com



A stylized, handwritten signature in black ink, appearing to read 'Tyrone Bowes'.

Dr Tyrone Bowes
4th August 2012

Introduction

A commercial 37 marker Y chromosome DNA test will potentially provide one with the names of many hundreds of individuals with whom one shares a common male ancestor. What often perplexes people is how one can match many individuals with 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 'Valentine' was living in close proximity to others with whom he was related, but who assumed other surnames like Buchanan, Drummond and Logan. In the 1,000 years since surnames were adopted, there will be many descendants of these individuals some of whom will today undergo DNA testing. Hence the surnames of one's medieval ancestor's neighbours will be reflected in today's DNA test results.

In Ireland and Scotland surnames can still be found concentrated in the County from which they originate. In this manner one can examine surname distribution maps and pinpoint a '**Genetic Homeland.**' The Genetic Homeland is the very small area, usually within a 5km (or 3 mile radius) where one's ancestors lived for hundreds if not thousands of years. It is the area where one's ancestors left their mark in the placenames of that area and in the DNA of its current inhabitants. Since modern science can pinpoint a Genetic Homeland it can also be used to confirm it by DNA testing individuals from the pinpointed area. The Case Study below will detail how I made sense of the test subject 'Valentine's' Y-DNA results and will provide a checklist on how to proceed in identifying your own Genetic Homeland.

Notes of caution!

1. Science has demonstrated that each Irish Clan had potentially a single founding ancestor. Since much of Scotland adopted a similar Clan system in it is logical to assume that the same is indeed true for Scotland and Scottish Clans. Similarly science has also 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 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.
2. Often people are looking for their DNA results to trace back to a specific area. One must remember that the results reflect one's ancestor's neighbours from around 1000 years ago. As a result if your Irish or Scottish ancestor was originally a Viking raider or a conquering Norman your DNA results will reflect earlier continental or Scandinavian origin. In Ireland for example, only 60% of those with Irish ancestry are related to the pre-Christian Celtic tribes of Ireland. One must approach this process with an open mind!

Valentine: A brief family history

The test subject Mr Valentine is my brother in law and was a willing participant in a study which set out to demonstrate the reproducibility of an analytical research method that uses the Surnames of an individual's 'genetic matches' to pinpoint a time and place where a founding ancestor (e.g. the first Valentine) lived. Like the vast majority of people today, Mr Valentine had no idea about his distant ancestors. His most recent ancestors were farmers, living in the Northeast of Scotland.

Pinpointing test subject Valentine's Genetic Homeland

To identify a Genetic Homeland one must first find the surnames that continually appear as genetic matches. These reoccurring surnames are less likely to be a result of non-paternal events (adoptions/infidelity) and reflect the surname of a medieval ancestors neighbour. Surnames that continually reoccur as genetic matches for test subject Valentine are listed in **Table 1**.

SURNAMES THAT REOCCUR AS A GENETIC MATCH FOR TEST SUBJECT VALENTINE FROM 37 MARKER Y-CHROMOSOME DNA TESTING

Test subject	37 Marker Y-DNA test				
	37 marker level				
	exact	-1	-2	-3	-4
Valentine	Valentine(x3)	Campbell(x14) Logan(x10) Drummond(x4)	McGregor(x22) Buchanan(x23)	McDonald(x11) Robertson(x8)	Robinson(x6) Bain(x3) McKinlay/McKinley(x4)

Table 1: Genetic Matches of test subject Valentine. Surnames are shown at the point at which they first occur as a genetic match, for example the first match with another Valentine occurs at 37/37 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 match. Both McGregor and Buchanan (**bold**) are notable due to the numbers of individuals with these Surnames that occur as close genetic matches. Coloured font indicates ethnicity associated with a surname, [blue](#); Scottish.

The closest matches in the Family Tree DNA database are to other individuals called Valentine. Mr Valentine is part of the estimated 50% of individuals who have retained their founding ancestor's surname (the Valentine Adam). The surname Valentine may be of English or Scottish origin; however there is an overwhelming association with notable Scottish surnames in the DNA test results. The association with Scotland is especially evident when one examines the Surname distribution pattern across the UK of all the Surnames present in Table 1, see **Figure 1**.

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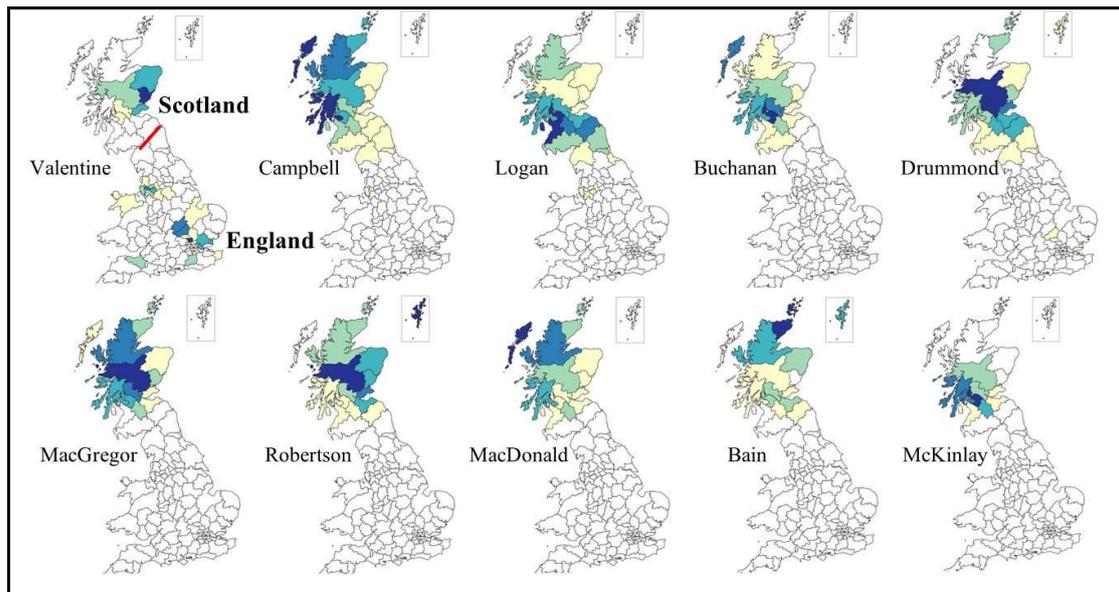


Figure 1: Surname distribution mapping of test subject Valentine's genetic matches. All of the Surnames that occur as genetic matches are associated exclusively with Scotland.

To find out where the Scottish Valentines originate, one must find out where the Valentine farming community were located using census data, the earliest in time that this can be determined the better as over time populations migrate and the link with the original Genetic Homeland is broken. In the mid 1800's the Valentine farming community was clustered in the area between Montrose and Stonehaven in the Northeast of Scotland, see **Figure 2**. This is the area where the first Scot to assume the Valentine Surnames lived.

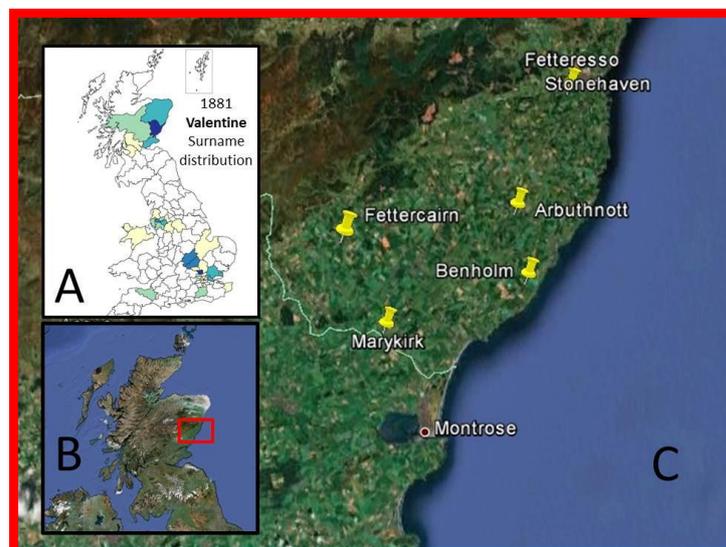


Figure 2: The Genetic Homeland of the Scottish Valentine's is located in the Northeast of Scotland. Surname distribution mapping (**panel A**) shows Scottish Valentine's clustering in the Northeast which also corresponds to the location where Farmers with this Surname cluster (**red box panel B**). Upon magnification one can see the Valentine Farming community localised to an area between Montrose and Stonehaven, each **yellow pin in Panel C** denotes a cluster of Valentine Farmers.

WHERE DO THE CAMPBELL, LOGAN, DRUMMOND, BUCHANAN, AND MACGREGOR SURNAMES ORIGINATE?

Although the Scottish Valentine Surname originates in the Northeast, the Surnames of his closest genetic matches all cluster in west central Scotland indicating an earlier origin in that area. There are also a surprisingly large number of Buchanan and MacGregor genetic matches at the 37 marker level (45 in total). The Clan territories of Scotland from the 16th and 17th Centuries have been well documented and when one examines where Clans Buchanan and MacGregor had their territories there is a surprising finding. Both Clans had a very long association with the east bank of Loch Lomond in West Central Scotland, see **Figure 4**.

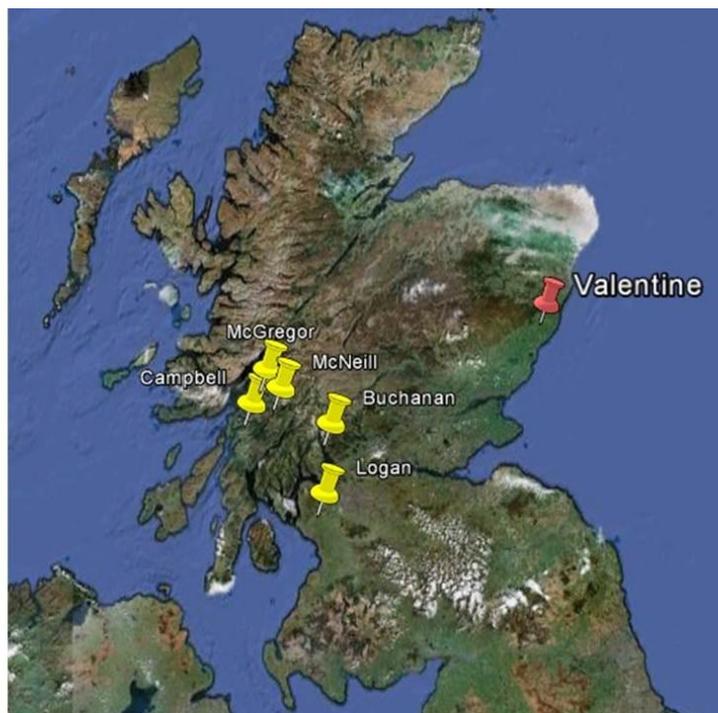


Figure 3: Valentine Genetic Matches cluster to the West Central Scotland. Although Valentine is associated with the Northwest, all of Mr Valentine's closest genetic matches are to surnames associated with west central Scotland!

What happened?

The test subject Valentine's ancestors were originally either MacGregor's or Buchanan's. What happened? Why was the MacGregor or Buchanan Surname discarded and Valentine assumed, and why the migration to the Northeast? It may simply be that the popular Valentine personal name was innocently adopted as a surname. But then as now, changing one's name and moving away is usually seen as suspicious. There may be clues in the history of the MacGregor Clan.

The MacGregor's were the original bad boys of the Scottish Highlands! The MacGregor Clan massacred members of the MacLaren and Colquhoun Clans in separate incidents in the 16th and 17th Centuries. This was serious enough to get the MacGregors formally banished in 1603 by King James VI 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

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suffer death. Clan MacGregor was scattered, many taking other surnames, and it is at this time that the first Valentine's appear in the Northeast! Mr Valentine's link to Clan MacGregor is further strengthened by his close genetic match to the current chief of Clan MacGregor.

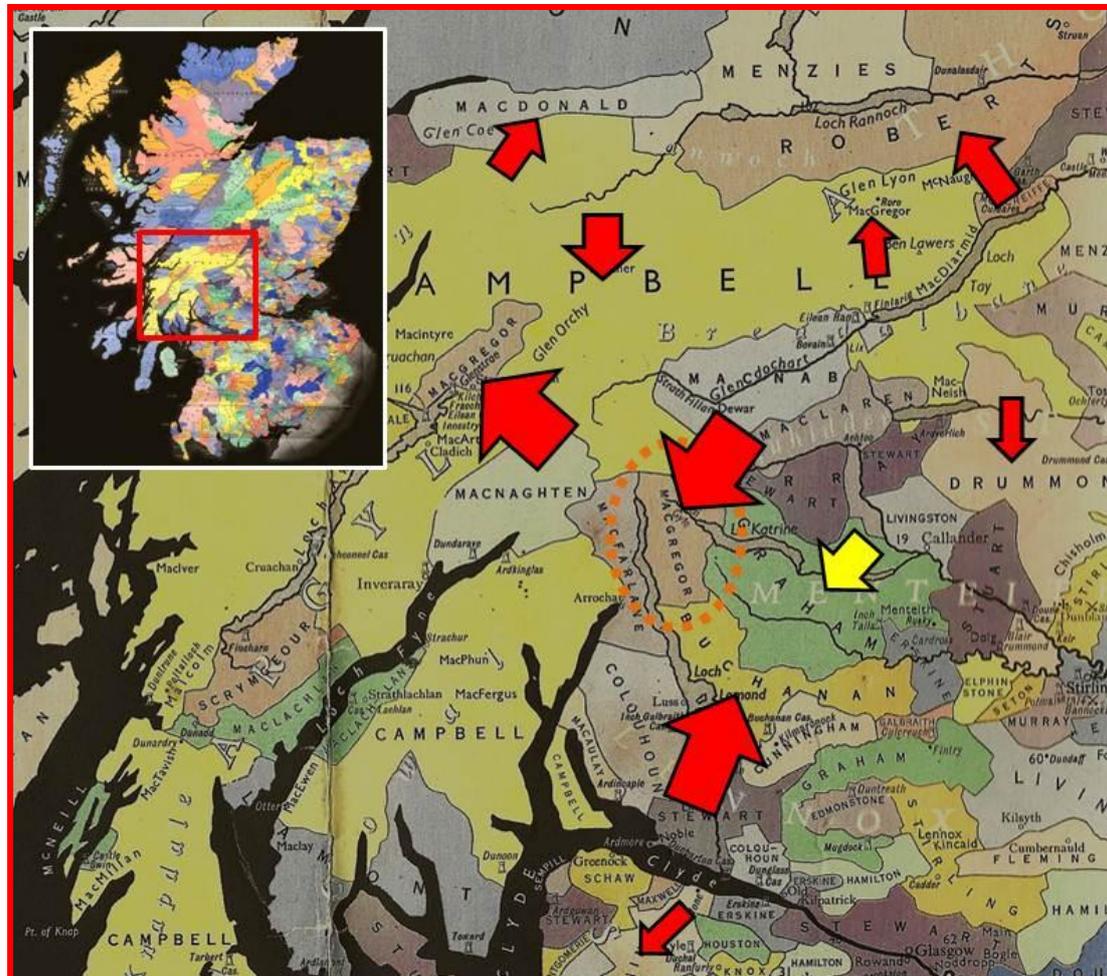


Figure 4: Clan territories in west central Scotland at the time of King James VI. The MacGregor (orange broken circle) and Buchanan Clans had neighbouring territories on the left bank of Loch Lomond (large red arrows), it is here that Mr Valentine's MacGregor Genetic Homeland is situated. Surrounding this area are the territories of Mr Valentine's other genetic relatives; Drummond, Logan, Robertson, MacDonald, and Campbell (small red arrows). Next to the MacGregor's and Buchanan's of Loch Lomond is Clan Graham, a surname which appears frequently as a genetic match at the 25 marker level (yellow arrow).

HAVE YOU HAD A Y-DNA TEST? THEN ORDER YOUR OWN CASE STUDY BY CONTACTING ME DIRECTLY tyronebowes@gmail.com

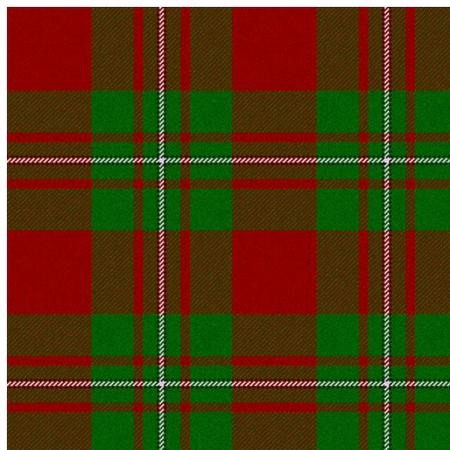
The consultation for your own Case Study is free. At present there is an 80% success rate. If in the unlikely event that I cannot pinpoint your Genetic Homeland I will explain why and I will not charge you.

CHECK LIST FOR DISCOVERING YOUR OWN GENETIC HOMELAND

1. First you must order a Y-DNA37 test from Family Tree DNA. To order follow the 'are you a warrior' link from the [Scottish Origenes homepage](#).
2. PublicProfiler World names database.
3. Census data (earlier the better).
4. Google Earth.
5. Scotland of Old, Clan Names Map.



Royal is my Race
(Clan MacGregor motto)



Clan MacGregor Tartan