Contact Scottish Origenes or email tyronebowes@gmail.com for a FREE CONSULTATION on your DNA results or to find out what commercial ancestral test is suitable for you!

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Pinpointing the GRAHAM Paternal Ancestral Genetic Homeland

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 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 'Graham' was living in close proximity to others with whom he was related but who inherited other surnames like Johnston, Jardine and Armstrong. 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.

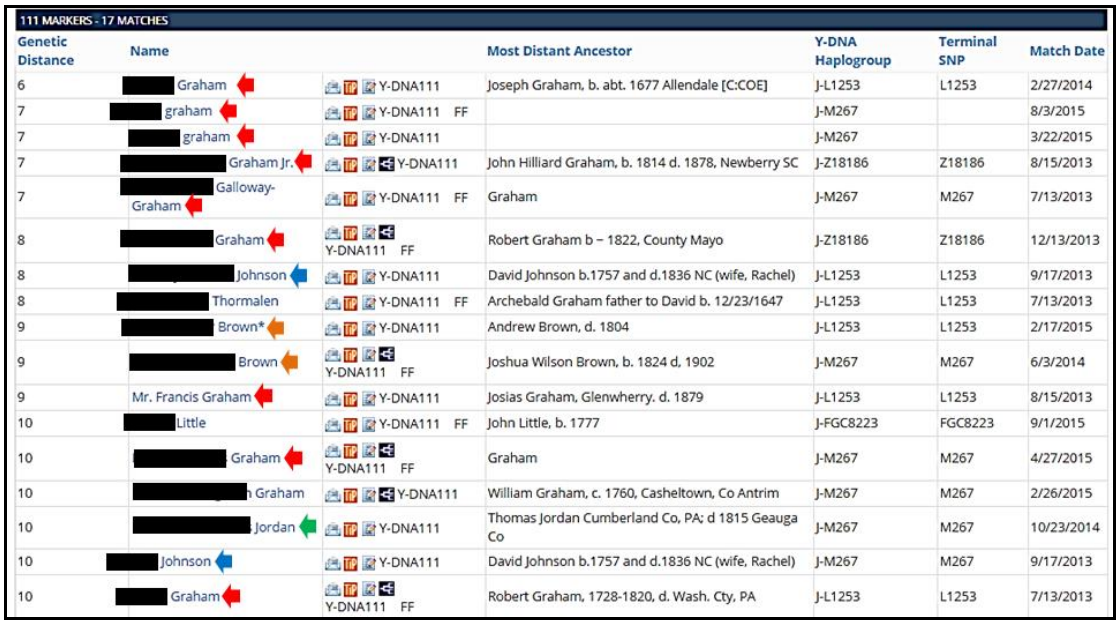
Early 19th century census data demonstrates that Scottish surnames could still be found concentrated in the areas from which they originated. One can therefore use census data to determine the origin of the surnames that appear in one's Y-DNA results, identifying an area common to all, and reveal ones '**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 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!

Interpreting the Y-DNA test results

To pinpoint a paternal ancestral genetic homeland one must first identify the surnames that appear as one's genetic matches, see **Figure 1**. Those surnames, particularly one's that recur throughout one's Y-DNA results will typically reflect the surnames of one's medieval ancestor's neighbours. Genetically recurring surname matches for test subject 'Graham' are shown in **Figure 2**.



111 MARKERS - 17 MATCHES

Genetic Distance	Name		Most Distant Ancestor	Y-DNA Haplogroup	Terminal SNP	Match Date
6	[redacted] Graham	Y-DNA111	Joseph Graham, b. abt. 1677 Allendale [C:COE]	J-L1253	L1253	2/27/2014
7	[redacted] graham	Y-DNA111 FF		J-M267		8/3/2015
7	[redacted] graham	Y-DNA111		J-M267		3/22/2015
7	[redacted] Graham Jr.	Y-DNA111	John Hilliard Graham, b. 1814 d. 1878, Newberry SC	J-Z18186	Z18186	8/15/2013
7	[redacted] Galloway-Graham	Y-DNA111 FF	Graham	J-M267	M267	7/13/2013
8	[redacted] Graham	Y-DNA111 FF	Robert Graham b – 1822, County Mayo	J-Z18186	Z18186	12/13/2013
8	[redacted] Johnson	Y-DNA111	David Johnson b.1757 and d.1836 NC (wife, Rachel)	J-L1253	L1253	9/17/2013
8	[redacted] Thormalen	Y-DNA111 FF	Archebald Graham father to David b. 12/23/1647	J-L1253	L1253	7/13/2013
9	[redacted] Brown*	Y-DNA111	Andrew Brown, d. 1804	J-L1253	L1253	2/17/2015
9	[redacted] Brown	Y-DNA111 FF	Joshua Wilson Brown, b. 1824 d. 1902	J-M267	M267	6/3/2014
9	Mr. Francis Graham	Y-DNA111	Josias Graham, Glenwherry. d. 1879	J-L1253	L1253	8/15/2013
10	[redacted] Little	Y-DNA111 FF	John Little, b. 1777	J-FGC8223	FGC8223	9/1/2015
10	[redacted] Graham	Y-DNA111 FF	Graham	J-M267	M267	4/27/2015
10	[redacted] h Graham	Y-DNA111	William Graham, c. 1760, Casheltown, Co Antrim	J-M267	M267	2/26/2015
10	[redacted] Jordan	Y-DNA111	Thomas Jordan Cumberland Co, PA; d 1815 Geauga Co	J-M267	M267	10/23/2014
10	[redacted] Johnson	Y-DNA111	David Johnson b.1757 and d.1836 NC (wife, Rachel)	J-M267	M267	9/17/2013
10	[redacted] Graham	Y-DNA111 FF	Robert Graham, 1728-1820, d. Wash. Cty, PA	J-L1253	L1253	7/13/2013

Figure 1: *Snapshot of test subject Graham's genetic surname matches as revealed in the FTDNA database. The more YDNA markers two people share the more recent their shared paternal ancestor once lived. At the 111 marker level the test subject matched 17 different individuals. Many of these genetic matches share his Graham surname (**red arrow**). However many also have non-Graham surnames and some of those surnames like Browne (**orange arrow**), Johnston (**blue arrows**) and Jordan (**green arrow**) appear as recurring genetic matches. The shared paternal ancestor with these Brownes, Johnstons and Jordans lived prior to the appearance of surnames. These surnames arose among a tribal group of related males living in a specific location.*

Test Subject	Haplogroup	Y-DNA Test Results					
		111 markers				67 markers	
		-6	-8	-9	-10	-6	-7
Graham	L1253	Graham (x36)	Johnson (x6)	Brown (x5)	Jordan/Jardine (x3)	Armstrong (x3) Irving/Irwin (x3) Turner (x3)[1]	Grimes/Gream (x6)[2]

Figure 2: *Genetically recurring surname matches for test subject Graham as revealed in the FTDNA database. Surnames appear at the point at which they first occur as a genetic match e.g. the first match to an individual called Graham occurs at 105/111 markers, although not all Grahams 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 denotes the ethnicity associated with each surname; Scottish, Scottish or English, black font indicates multiple associated ethnicities. [1]Members of the same close family recruited for YDNA testing.' [2]Gream and Grimes in this instance are corruptions of Graham.*

Upon commercial ancestral Y-DNA testing Mr Graham matched many other individuals called Graham who tested independently, see **Figure 2**. This indicates that the test subject is directly descended from an Graham-Adam; literally the first

male ('Adam') to take that surname who lived approximately 1000 years ago when paternally inherited surnames became common. Although Graham is a common surname associated with Scotland and England, a Scottish paternal ancestral link is supported by the test subject's closest recurring genetic matches which includes the exclusively Scottish surnames Jardine and Irving, in addition to Scottish-associated surnames like Johnston, Armstrong, Brown and Turner, see **Figure 2**.

Since farmers in early census data concentrated in the area where a surname first appeared one can examine the distribution of Farmers called Graham and determine how many Scottish Graham Clans (or Families) existed. Early census data reveals 10 distinct clusters of Graham farmers; indicating the existence of potentially 10 unrelated Graham Clans, see **Figure 3** and **4**. Each Graham Clan was potentially founded by an unrelated Graham-Adam; one of whom the test subject is genetically related to. It is Mr Graham's genetic surname matches revealed by his Y-DNA test results as a snapshot of his Scottish medieval male ancestors neighbours which can be used to pinpoint where his Graham ancestors once lived, or rather which of the 10 Graham Clans he is related to. 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 should reveal an area within Scotland that is common to all.

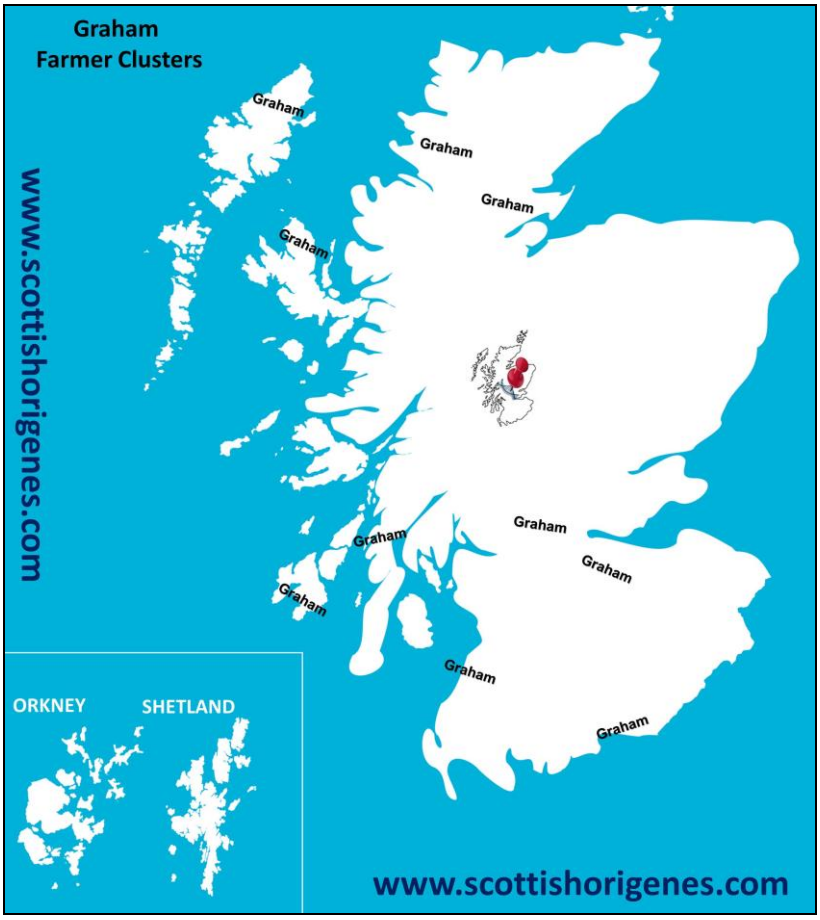


Figure 3: *Scottish Grahams. By examining the distribution of farmers called Graham in early census data it reveals 10 clusters within Scotland. Since the test subject is descended from a Scottish Graham-Adam his paternal ancestry is connected to one of these 10 groups of Grahams. Each surname has been placed on the map in the area where farmers with that surname concentrate in early census data.*

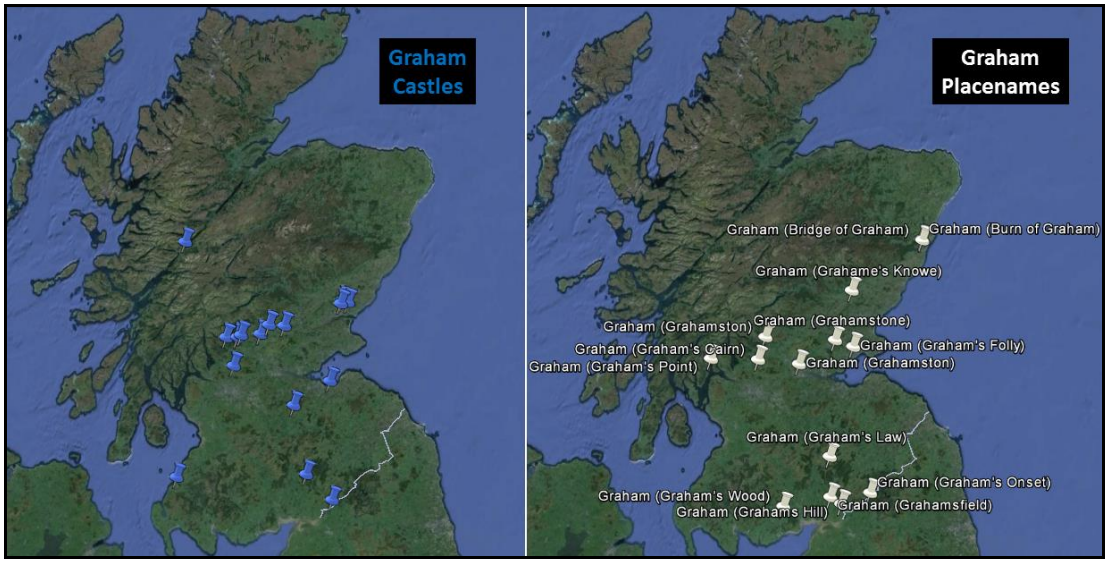


Figure 4: *Scottish Graham castles and placenames. An examination of the Scottish Origenes databases reveals at least 15 castles or towerhouses (**left panel**) that are associated with the Graham surname. In addition there are many Graham placenames (**right panel**).*

Pinpointing the 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 amongst 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 cluster and identify an area common to all. This means for example that upon Y-DNA testing Grahams from Ross and Cromarty will be a genetic match to people with surnames like Aird, Monro, Kemp and Wallace; surnames associated with the far North of Scotland. While the Grahams from the Isle of Skye will be genetic matches to people called MacPhee, MacCowan and MacDonalds; surnames associated with the Western Isles of Scotland. Hence, it is Mr Graham's genetic matches which will reveal where his paternal Graham ancestors originated. An examination of Mr Graham's Y-DNA results reveals that the surnames Graham, Johnston, Brown, Irving, Jardine and Armstrong appear as his closest Scottish-associated genetic surname matches, see **Figure 2**. Distribution mapping of farmers called Graham, Brown, Irving, Johnston Jardine and Armstrong reveals that these surnames are all associated with Dumfriesshire in Southern Scotland, see **Figure 5**.

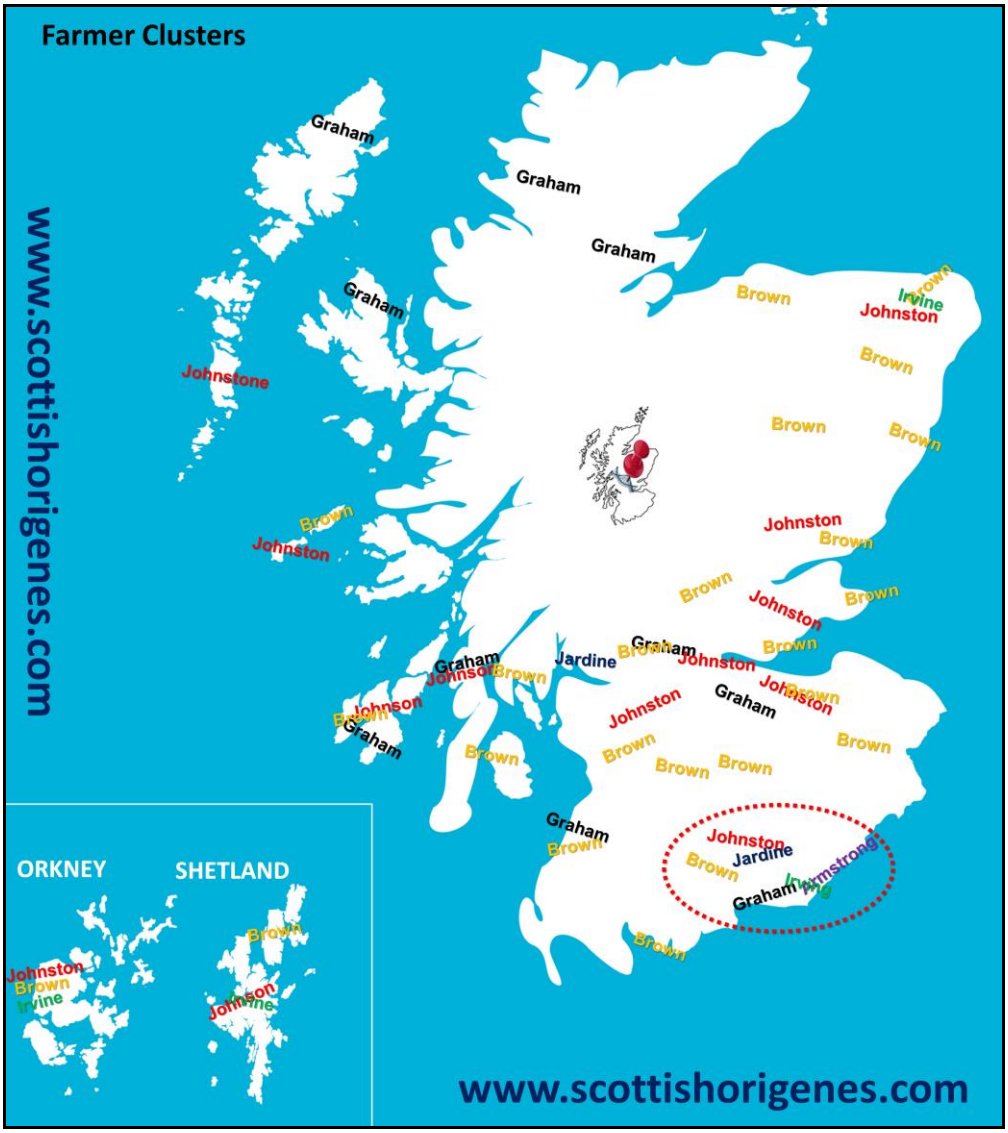


Figure 5: *The Scottish Graham, Brown, Irving, Jardine, Johnston and Armstrong farming communities are associated with Dumfriesshire. The Graham, Brown, Irving, Jardine, Johnston and Armstrong farming communities are associated with multiple locations within Scotland but crucially only occur in close proximity to one another within Dumfriesshire (**red broken circle**) in Southern Scotland. Each surname has been placed on the map where farmers with that surname concentrated in early census data.*

The Surnames of Dumfriesshire

The Scottish Origenes Surnames and DNA Map of Scotland details where farmers with each surname concentrated in early census data. An examination of Dumfriesshire as it appears on the Scottish Origenes Map reveals a cluster of Graham farmers close to the Solway Firth, midway between Dumfries town and the English border, see **Figure 6**. Surrounding these Grahams one finds ***all*** of his closest recurring genetic relatives as revealed by his YDNA results, see **Figure 6**. In addition one finds the surnames Little and Turner; both of which also appear amongst the subject's closest genetic relatives, see **Figure 6**. The test subject's closest Scottish-associated genetic surname matches reveal a paternal ancestral connection link with an area of Dumfriesshire that lies close to the English border.

Figure 6: *The Surnames of Dumfriesshire. An examination of Dumfriesshire as it appears on the Scottish Origenes Surnames and DNA map reveals Graham farmers (**red arrow**) surrounded by the farming communities with surnames that appear as close recurring (**orange arrows**) and singular (**yellow arrows**) genetic matches to the test subject. Each surname has been placed on the map where farmers with that surname concentrated in early census data. Surnames in **red font** are associated with a single geographical area within Scotland.*

The Clan Territories of Dumfriesshire

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. 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 Southern Dumfriesshire reveals a diverse mix of Clans and Families of Ancient Briton, Anglo-Saxon and Norman origin, see **Figure 7**. The Grahams of Dumfriesshire were a notable Border Reiver family and dominated lands found on either side of the volatile and fluid medieval Scottish and English border, see **Figure 7**. Remarkably ***all*** of the test subject's closest genetic relatives were also notable Clans and Families that once dominated this part of Southern Scotland, see **Figure 7**.

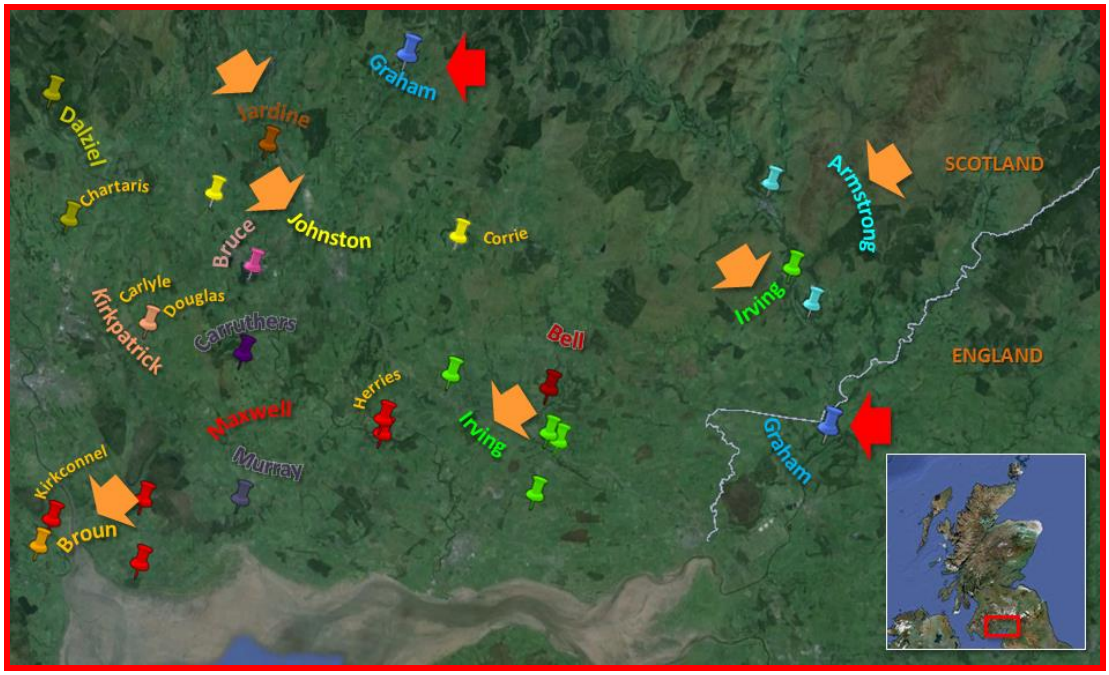


Figure 7: *The principal Medieval Clans and Families of Dumfriesshire. Dumfriesshire was once dominated by a variety of Clans and Families of Ancient Briton, Anglo-Saxon and Norman origin. The Grahams (**red arrows**) were a notable Border Reiver Family with lands that straddled the modern Scottish and English border. The surrounding area was also dominated by the test subject's Armstrong, Brown, Irving, Jardine and Johnston genetic relatives (**orange arrows**).*

Mr Graham's Paternal Ancestral Genetic Homeland

In early census data the Dumfriesshire Grahams concentrate in the neighbouring parishes of Cummertrees and St. Mungo's in Southern Dumfriesshire; and it is there that the test subject's paternal ancestral genetic homeland is to be found, see **Figure 8**. It was in that area that the test subject's direct male ancestor first inherited the 'Graham' surname. His ancestor lived surrounded by male relatives who inherited other surnames like Armstrong, Brown, Irving, Jardine, Johnston, Taylor and Little. Often when one's ancestors have been associated with an area for long enough they leave evidence of their ancestral links in the castles and placenames one finds there. The Grahams of Dumfriesshire came to dominate much of the borderland area of Southern Scotland and Northern England and evidence of the their long historical and ancestral links with this area can be found in the surviving Graham castles of Gillesbie and Kirkandrews, and in placenames like 'Grahamshill' and 'Grahamsfield,' see **Figure 8** and **9**. There also numerous references to the Grahams genetic relatives in the surrounding castles and placenames, see **Figure 8**. The Grahams of Southern Dumfriesshire will undoubtedly have left evidence of their long ancestral links with this area in the history of this location, but also in the DNA of the areas current inhabitants.

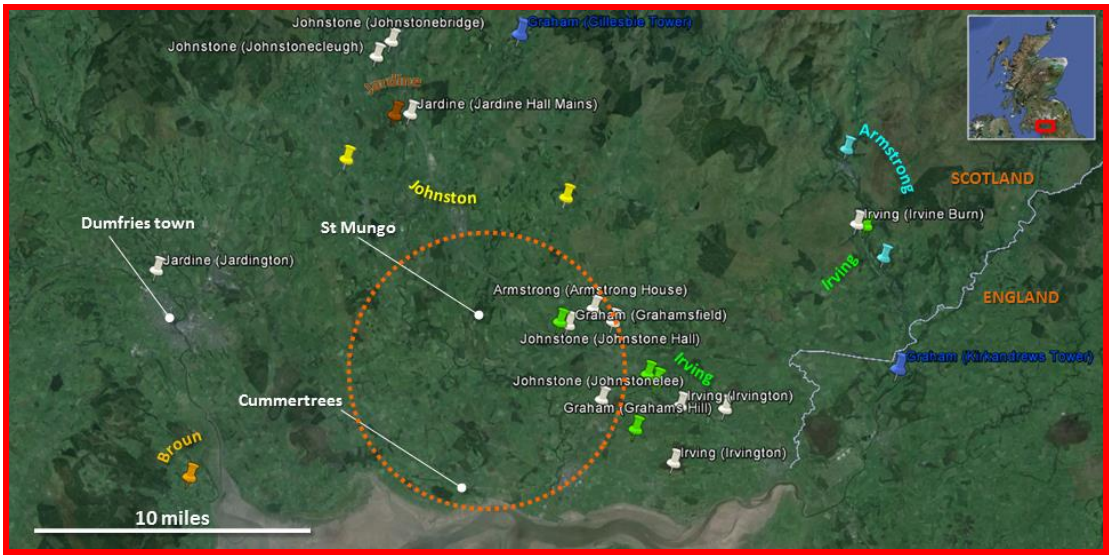


Figure 8: *Mr Graham's Paternal Ancestral Genetic Homeland. The Graham farmers of Dumfriesshire concentrate in the neighbouring parishes of Cummertrees and St. Mungo, and it is there that the test subject's Paternal Ancestral Genetic Homeland (**orange broken circle**) is to be found. It was there that his paternal ancestor first inherited the Graham surname. His Graham ancestors lived surrounded by relatives who inherited other surnames like Armstrong, Brown, Johnston, Jardine, Irving and Little; almost all of whom have also left evidence of their long ancestral links with this area in the surrounding placenames and castles. The Grahams will also have left evidence of their long ancestral links with this area in its history, but also in the DNA of the current inhabitants.*

Figure 9: *Graham Placenames in Southern Dumfriesshire.*

How to confirm the Graham Paternal Ancestral Genetic Homeland

Confirmation that Mr Graham's paternal ancestors originated from the parishes of Cummertrees and St. Mungo will require the recruitment from that area of Graham farmers for commercial ancestral Y-DNA testing.

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