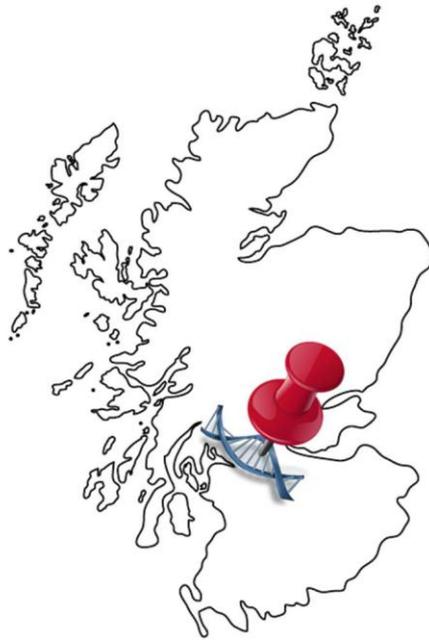


Shannon

A Scottish Case Study

www.scottishorigenes.com



A handwritten signature in black ink, which appears to read 'Tyrone Bowes', is written above the printed name.

Dr Tyrone Bowes
4th August 2012

Introduction

A commercial ancestral 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, but 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 'Shannon' was living in close proximity to others with whom he was related but who picked other surnames like Walker, McKie, Wilson, and MacAdam. Given that 1,000 years have passed since surnames were adopted, there will be many descendants of these individuals some of whom will today undergo commercial ancestral DNA testing. Hence the surnames of one's medieval ancestor's neighbours will be reflected in today's DNA test results.

Early 19th century census data shows that Scottish surnames could still be found concentrated in the Counties from which they originate. In this manner one can examine surname distribution maps (for the surnames that appear as a DNA match) to pinpoint a '**Genetic Homeland.**' The Genetic Homeland is the small area 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 identified location. The Case Study below will detail how I made sense of the test subject 'Shannon's' Y-DNA results and will provide a checklist on how to proceed in identifying your own Genetic Homeland.

Notes of caution!

1. In Ireland each of the estimated 1,500 distinct Clans 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 reflect one's ancestor's neighbours from around 1,000 years ago. As a result, if your recent Scottish ancestor was originally an Anglo-Saxon settler, Viking raider, or 12th Century Norman your DNA results will reflect earlier English, Welsh and possibly Scandinavian origin. One must approach this process with an open mind!

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Interpreting the Y-DNA test results

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. Results for test subject ‘Shannon’ are shown in **Table 1**.

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

Test subject	37 Marker Y-DNA test								
	exact	-1	-2	37 marker level			25 Marker level		
				-3	-4	exact	-1	-2	
Shannon	SHANNON/HANNON(x3)	Wilson(x6) WALKER(x7)	McGEE/McKEE(x18) ¹	McBride(x4) GLASS(x4) Luskhan(x4) DALY/DAILEY/DAYLEY(x5) BOYLE/BOYLES(x7) O'Kane(x4) Gallagher(x6) Robertson(x8) Logan(x5) Dowell/McDowell(x4) WILLIAMS/McWILLIAMS(x9) Strain(x4) CARNES(x4) Campbell(x6) DOHERTY/DAUGHERTY/DEHORITY(x16) Smith(x14) ² Cowan(x12)	Martin(x4) McCOMBS(x6) McCune(x3) McCard/McCurd(x4) BirneByrnesBurns(x15) Downes(x6) CANNON(x4) McAdam/McAdams(x6) McCallan/McLeland(x5) Murphy/Murphree(x6) Flannery(x6) Conner/Connor(x4) McAuley/McCauley(x4)	King(x5) ³ Riley(x7) McGrath(x4) Bradley(x4)	Dorse/Darcy/O'Aray(x5) Gilmore/Gilmout/Gilmet/Gilmore(x3) McConnell(x5) Gray(x5)	McKown(x3) Donohoe/Donohue(x5) Dowdy/Dowdy(x6) Short(x5) Murray/McMurray(x4) Morrison(x4) Mullin/McMullin/Mullen(x6) Fanning/Fannin/Fannon(x8) O'Neil/O'Neal(x6) Fingleton(x5) Faher/Vaher(x4) Clark/Clarke(x5) O'Connor/Connor/Conner(x4) Whelehan(x3) Devlin(x5) McLaughlin/Laughlin/McLoughlin(x6)	Kelley/Kelly(x6) McKanus(x4) Harkin(x4)

Table 1: Reoccurring surname matches for test subject Shannon. Surnames appear at the point at which they first occur as a genetic match e.g. the first match to another individual called Shannon occurs at 37/37 markers although not all Shannon's may match at that level. Figures in brackets represent the number of individuals with a particular surname who occur as a genetic match; only surnames that occur greater than 4 times are shown. Coloured font denotes the ethnicity associated with each surname; **Scottish** and **Irish**. Black font indicates surnames with multiple ethnic origins. Surnames in upper case and bold font also occur as a match at the 67 marker level.

The test subject Mr Shannon matches other ‘Shannon’s’ which indicates that after an estimated 1000 years he has retained the surname of his founding Ancestor (the Shannon ‘Adam’ so to speak). He also matches a single individual with the surname Hannon which may be a spelling variant of Shannon. However the surname Shannon can be of Scottish or Irish origin. A clue to the test subjects ethnic origin can be found in his closest genetic matches to Wilson, Walker, and McKee/McGee all of which are associated with Scotland, see **Figure 1**.

McGee and McKee may also be of Irish or Scottish origin, but when of Scottish origin they are a spelling variation of McKie which is concentrated in Dunfries and Galloway (where it originates), see **Figure 1**. Both Shannon and McKie originate in Dumfries and Galloway while Wilson and Walker are also found associated with that area (**orange broken circle, Figure 1**).

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WHERE DO THE SURNAMES THAT OCCUR AS THE CLOSEST GENETIC MATCHES ORIGINATE?

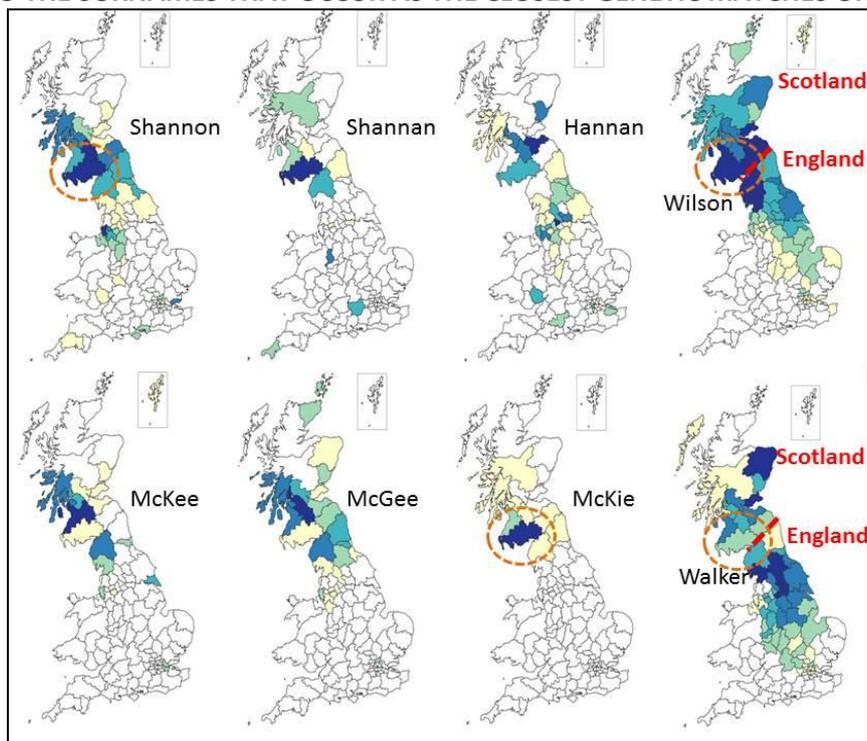


Figure 1: 1881 Surname distribution mapping of Mr Shannon's closest genetic matches confirms the ancestral link to Scotland. All of the surnames that reoccur as Mr Shannon's closest genetic matches are associated with Scotland and two of these; McKee and Shannon are associated with a single geographical area in Dumfries and Galloway in the Southwest (orange broken circle). Note how McKee and McGee are found in the counties surrounding the area where 'McKie' originates (orange circle) which is typical of a distribution pattern associated with spelling variants.

SCOTTISH SHANNON

The method of using reoccurring surname matches as revealed by commercial ancestral Y-DNA testing to pinpoint a Genetic Homeland works by exploiting the link between the Y chromosome, surname, and land which are typically passed from father to son. In the absence of a link to the land the analytical process will fail. Hence one must examine whether the Scottish Shannon's had a link to the land. This can be explored by identifying where farmers with the Shannon surname lived. The earlier in time that a link can be established the better as over time (particularly in the UK due to the industrial revolution) the link with the land is lost.

At the 67 marker level only McGee/McKee, Shannon, and Walker occur as Genetic matches, no Wilson matches are observed (although 5 of the 7 have tested at the 67 or 111 marker level). Hence the closest genetic matches to Mr Shannon are to other Shannon's but also to numerous McGee/McKee (McKie's in disguise) and Walkers.

A search for Shannon farmers in 1841 revealed a single individual farming land in Kirkcudbrightshire in southwest Scotland (this individual was born in Kirkcudbrightshire). Similarly the Walker and McKie farming community is also found clustered in the southwest, see **Figure 2**. When one places pins in the areas where the Shannon, McKie, and Walker farmers are found one finds them clustering on

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either side of Wigtown bay in Galloway, see **Figure 3**. It is within this area that the Scottish Shannon 'Adam,' the first Scot as it were to use the Shannon surname lived approximately 1000 years ago, and it is where Mr Shannon's Genetic Homeland is to be found.

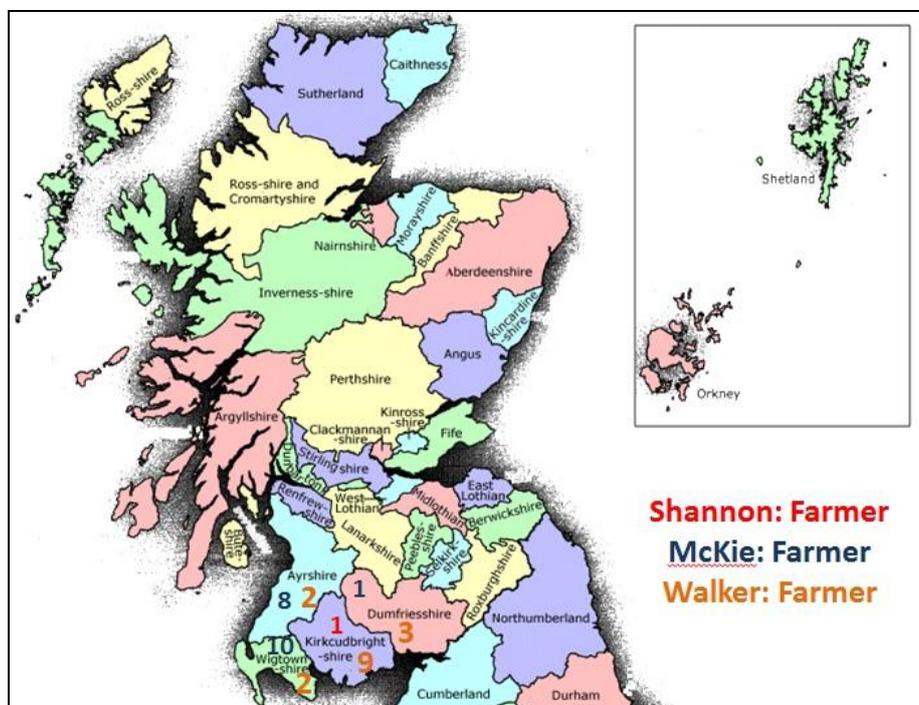


Figure 2: The Shannon, McKie, and Walker farming community in 1841. Figures indicate the number of farmers with each surname in the Counties of southwest Scotland in 1841. These farmers cluster within Wigtownshire and Kirkcudbrightshire.



Figure 3: The Shannon Genetic Homeland in Galloway. Each pin represents an individual farmer in 1841. All three of these farming communities cluster on either side of Wigtown bay in Galloway in southwest Scotland and it is within this area that the Shannon Genetic Homeland will be found (orange broken arrow).

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Evidence in the history and placenames

The Clan system in Scotland has been extensively recorded and documented and is beautifully illustrated in Bartholomew's Clan map. This map features the lands (or the spheres of influence) of the most prominent Clans in Scotland from around 500 years ago. Almost everyone with Scottish ancestry will share ancestry with at least one of these prominent Clans and families.

When one examines the Galloway area of the Clan map where the Shannon, McKie, and Walker farming communities overlap one sees surnames that appear as genetic matches to Mr Shannon in Table 1 including Ferguson, MacAdam, Cairns (as Carnes), McLellan, McKie/McGie, MacDowell, and Agnew, see **Figure 5**. This cluster of surnames does not occur in any other area and is further evidence for Mr Shannon's ancestor's long association with Galloway.

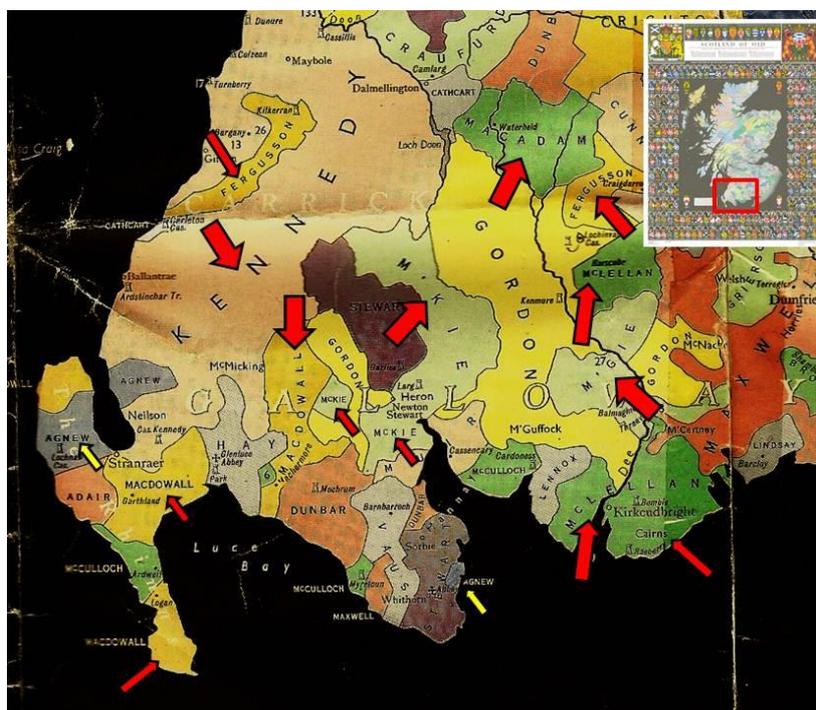


Figure 5: 15th Century Clan map of Galloway in Scotland. The Scottish Shannon's are not recorded on this map. However one finds numerous references to Clans (red arrows) that appear as genetic relatives in Table 1, including Ferguson, Kennedy, MacDowell, MacAdam, McLellan, McGie, and McKie. Agnew which occurs twice as a genetic match at the 25 marker level is also shown (yellow arrow).

Evidence for one's ancestor's long association with an area can also be found in its placenames. An examination of the area between Wigtown bay and Auchencairn bay (where the Shannon farmer is found in 1841) did not reveal any placenames associated with the Shannon surname. However there are references to Mr Shannon's genetic relatives the McKie/McGie's, MacAdam's, McLellan's and Duggan's, see **Figure 6**. These placenames are clustered in and around the area between Kirkcudbrightshire and Auchincairn and it is on this peninsula to the south of these towns that Mr Shannon's Genetic Homeland is situated. It is here that the Scottish Shannon 'Adam' lived when he first picked his surname surrounded by

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relatives who chose other surnames like McKie, Walker, McLellan, and MacAdam. It is here that his ancestors lived for 100's of years, leaving their mark in the placenames and in the DNA of the current inhabitants, and it is where his distant ancestors may still live!



Figure 6: Placenames associated with Mr Shannon's genetic relatives in Galloway. There are no references to the Shannon's in the area between Wigtown and Auchencairn bays. However one finds references to his genetic relatives in Port MacAdam, McClellan's castle, loch MacKie, Loch Dougan, and Balmaghie where a McGie castle site has been identified. Given the location of the Shannon farmer and the surrounding references to his genetic relatives, the peninsula between Kirkcudbright and Auchencairn marks Mr Shannon's Genetic Homeland.

The Irish connection

If one looks closely at the reoccurring surnames in Table 1 there is a surprising discovery to be made. The closest matches at the 37 marker level are overwhelmingly Scottish in association but as one moves to more distant matches (from 37 to 25 markers) which corresponds to a movement back in time and hence reflects more distant shared ancestry one sees more and more Irish surnames creep into the table. When one gets to the 25 marker level the vast majority of Surnames are of Irish origin with no distinct Scottish surnames in evidence. When one looks at where all these surnames cluster in Ireland they all cluster within the Northwest of Ireland where the 'Niall of the Nine hostage' haplotype reaches a maximum concentration, see **Figure 6**. This can only mean that Mr Shannon's more distant ancestry is associated with the northwest of Ireland and that his ancestors migrated to Galloway in Scotland from Ireland.

This genetic evidence does indeed fit with the historical records. The Gaels of Ireland did migrate to the southwest of Scotland sometime between the 8th and 10th Century and the area they settled became Galloway or literally 'the land of the Foreign Gael.' This would also account for the plethora of surnames beginning with Mac/Mc in Galloway surrounded by a sea of surnames of British, Anglo-Saxon, and

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Norman origin. Mr Shannon's Gaelic Irish ancestors settled in Galloway and since surnames were still evolving, his ancestors chose new surnames like McClellan and Ferguson that are today associated exclusively with Scotland

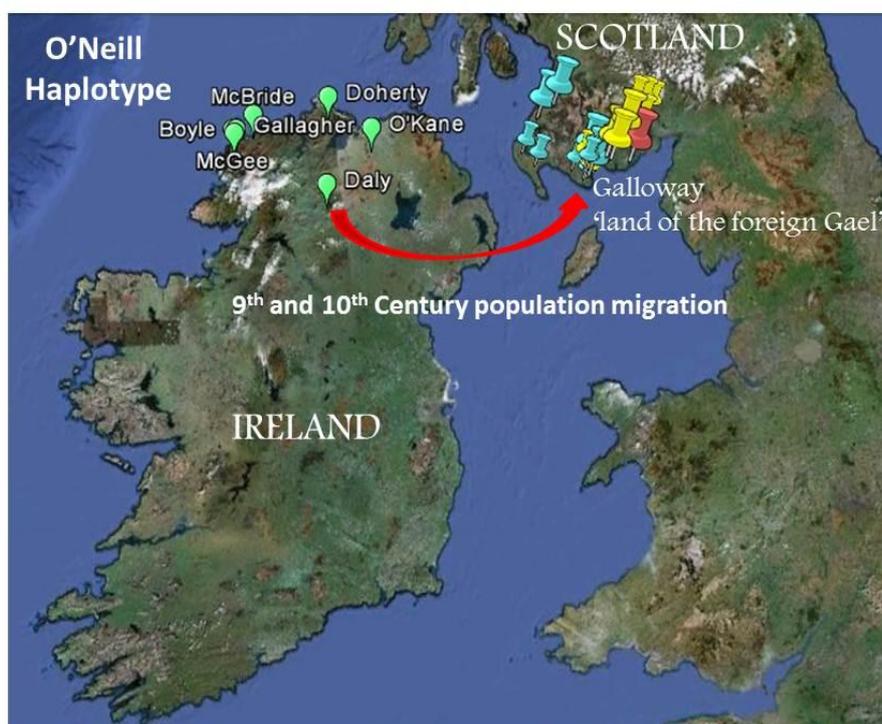


Figure 7: Galloway 'the land of the foreign Gael.' History records the settlement of the southwest area of Scotland by the Gaels of Ireland in possibly the 8th and 10th century. The land they settled became Galloway or 'the land of the foreign Gael' and Mr Shannon's DNA test results support his ancestor's participation in this historical event.

How to confirm the Shannon Genetic Homeland

Confirmation of the Genetic Homeland will require the DNA testing of farmers with the Shannon surname currently living in Galloway. However a Shannon farming community may not exist given the time that has passed. It may be worthwhile recruiting Shannon's from the surrounding towns and villages.

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](#).

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2. PublicProfiler World names database.
3. Census data (earlier the better).
4. Google Earth.
5. Scotland of Old, Clan Names Map.