

Case Study

Pinpointing the BOYLES

Genetic Homeland

www.irishorigenes.com



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

Dr Tyrone Bowes
18th January 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, but what often perplexes people is how one can match many individuals with different surnames? The answer is quite simple. Roughly 1,200 years ago one's direct medieval male ancestor, the first for example to call himself 'O'Boyle' was living in close proximity to others with whom he was related but who assumed other surnames like O'Donnell, O'Doherty, and McLaughlin. Given that 1,200 years have passed since surnames were adopted, there will be many descendants of these individuals some of whom today will undergo commercial ancestral Y-DNA testing. Hence the surnames of one's medieval ancestor's neighbours will be reflected in today's DNA test results.

In Ireland surnames can still be found concentrated in the County from which they originate. In this manner one can examine the individual surname distribution maps on the [Irish Origenes](#) website and pinpoint a '**Genetic Homeland.**' The Genetic Homeland is the very small area (within a 5 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 Mr Boyles Y-DNA results and Pinpointed his Genetic Homeland!

Notes of caution!

1. In Ireland each of the estimated 1,500 distinct Clans have a single founding ancestor, that's an estimated 1,500 Adam's from whom one can trace direct ancestry. 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.
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 1,200 years ago. As a result if your recent Irish ancestors were originally 9th Century Viking raiders, 12th Century conquering Normans, or 16th Century Planters, your DNA results will reflect earlier English, Scottish, Welsh, and possibly Scandinavian origin. I have estimated that 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!

Pinpointing the GENETIC HOMELAND

Upon Y-DNA testing Mr Boyles matches other individuals called Boyle (see **Table 1**) which would indicate that the test subject is part of the 50% of individuals who after an estimated 1,200 years have retained the surname of their founding ancestor, the first to call themselves Boyle (the Boyle ‘Adam’ so to speak).

SURNAMES THAT OCCUR AS A GENETIC MATCH TO TEST SUBJECT BOYLES FROM 67 MARKER Y-CHROMOSOME DNA TESTING

Test subject	67 Marker DNA Testing							
	Genetic Distance							
	exact	-1	-2	-3	-4	-5	-6	-7
Boyles	-	-	-	-	O'Donnell(x5)	Cannon(x4)*/Concannon(x1) Byrne(x7) Strain(x13) Carnes(x6)	Dorsey(x6) Doherty(x11) McDonald/MacDonald(x9) Garey/Carey(x2) Walker(x4)* Ferguson(x3) Harrison(x7) McGinnis(x3) McGovern(x2) McNeill(x5) Wilson(x5) Young(x5)	McNeilly(x12) Boyle(x9) McLaughlin(x3)

Table 1: Reoccurring surname matches for test subject Boyles. Each surname appears at the earliest point at which it occurs as a DNA match, for example the first match with an O'Donnell occurs at 63 of 67 markers but not all O'Donnell's will match at this level. In brackets are the numbers of individuals with a particular surname that occur as a match. Coloured font indicates the ethnicity associated with each surname; Irish, English/Norman, Scottish, black font indicates multiple possible ethnicities. *These surnames may represent close family members recruited for Y-DNA testing and may therefore be false positives.

The surname Boyle can be of either Irish or Scottish origin. However Mr Boyles closest most frequent reoccurring surname matches at the 67 marker level are to notable and distinctly Irish surnames like O'Donnell, Byrne (Burns is Scottish), and Doherty. This would indicate that Mr Boyles ancestry is linked to Ireland, and that the surname Boyles is a spelling variant of the Gaelic Irish surname 'O'Boyle' which is associated overwhelmingly with County Donegal on Ireland's northwest coast, see **Figure 1**. The significant number of matches to notable Scottish surnames simply reflects the close genetic relationship between the Northern Irish and Scots, and reflects the various population movements back and forth between the two locations that have occurred over many millennia.

When one examines the surname distribution pattern of Mr Boyles closest most frequent reoccurring Irish surname matches throughout the 32 Counties of Ireland (in 1911) the association amongst all of these surnames with County Donegal is particularly striking, see **Figure 1**. The chances of all these surnames being randomly associated with the same County within Ireland is quite remote. In fact County Donegal is the only County where all these surnames are found together!

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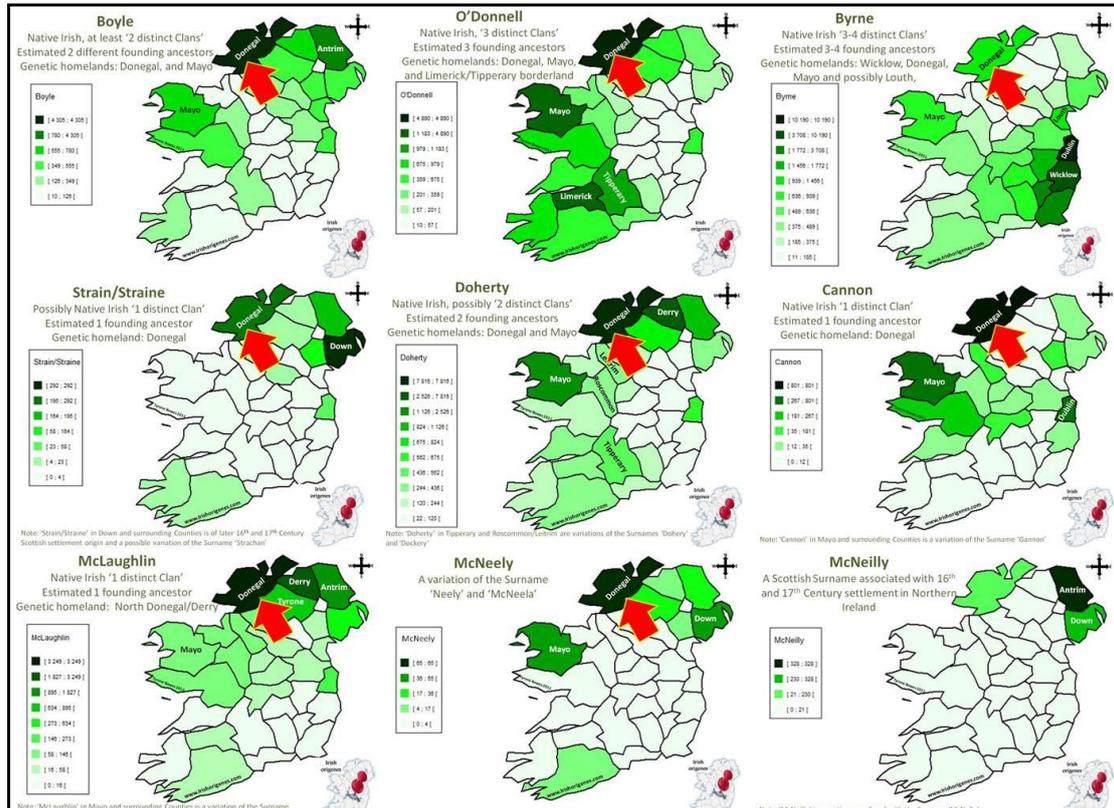


Figure 1: Surname distribution maps from the 1911 census of Ireland for Mr Boyles Irish genetic surname matches indicate an ancestral link with County Donegal. All of the individual Irish surnames identified in Table 1 are associated with one or more locations within Ireland. However all of these surnames are associated with County Donegal in Ireland's far northwest (red arrows)

Land, like the surname and Y chromosome is typically passed from father to son. Given the importance of land to the Irish psyche and the fact that Ireland was still an overwhelmingly agrarian society in 1911, farmers in Ireland could still be found farming the same land that their ancestors had settled hundreds if not thousands of years ago. When one places pins on the location of farming communities with the Irish surnames as revealed in Table 1 there is a clear link amongst all these surnames with County Donegal, see **Figure 2**. What is particularly striking in the magnified image of County Donegal (in Figure 2) is the location of the Boyle farming community which is found concentrated in close proximity to Mr Boyles closest genetic relatives the O'Donnell's.

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Figure 2: Mr Boyles closest reoccurring Irish surname matches as revealed by the Y-DNA test are associated with Donegal. Although Mr Boyles genetic matches are to common Irish surnames (that are associated with multiple geographic locations), these surnames are all associated with County Donegal. What is particularly striking is that within Donegal one finds the O'Boyle and O'Donnell farming communities clustered in the same location (yellow arrow).

The Irish Origenes Clan Territories of Ireland Map was reconstructed based on the location of castles and their known historical link to a particular Clan or Family, see **Figure 3**. An examination of County Donegal reveals the O'Boyle Clan territory situated just south of where the Boyle farming community clustered in 1911. Within the O'Boyle territory there are 2 identifiable Forts or Castles; O'Boyle's Doon Fort and O'Boyle's Island Castle, see **Figure 4**. Surrounding the O'Boyle territory was the territory of the O'Donnell's. Other prominent Clans and Families that are reflected in Mr Boyles Y-DNA results who appear on the Clan territories map including the O'Doherty's, the McLaughlin's, and the MacSweeney's (2 individuals with the Sweeney surname occur at the 37 marker level).

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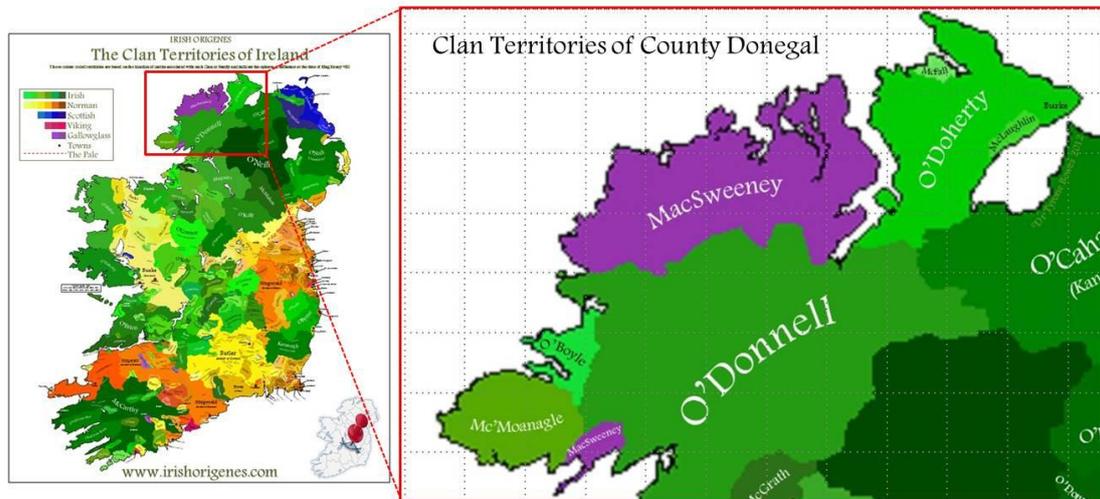


Figure 3: The Medieval Clan Territories of County Donegal. The O'Boyle's were a prominent Clan in medieval Donegal which was dominated by their genetic cousins the O'Donnell's. Mr Boyles other genetic relatives, the O'Doherty's and McLaughlin's dominated Donegal's Inishowen Peninsula to the North. Mr Boyles also matches 2 different individuals called Sweeney. The MacSweeney's were a prominent Scots-Gallowglass Family.



Figure 4: The O'Boyle Castles of West Donegal. Doon Fort is an impressive and exceptionally well preserved 4,000 year old ring fort which was occupied by the O'Boyle Clan for over 600 years; it is also reputedly the site where the last O'Boyle chieftain was murdered in 1530AD. In contrast little remains of the neighbouring O'Brien Island castle situated on Kiltorris Lough.

The Genetic Homeland

Ireland is quite unique in that many of its placenames reflect the Clans and families that first arose or lived there. The Townland is the smallest unit of geographical land division in Ireland. The entire country is divided into an estimated 62,000 Townlands which predate the arrival of the Normans in Ireland (in 1169AD). An examination of Irish Townlands and placenames that surround the 2 O'Boyle castles reveals a number that refer to the O'Boyle's, including Ballyboyle (O'Boyle's town), Ballyboyle Island, both to the south, Mullantiboye (O'Boyle's house at the top of the hill), and O'Boyles Island close to the O'Boyle castles, and Crohyboyle (O'Boyle's Gallows) to the north, see **Figure 5**. Given this clustering of O'Boyle placenames close to the O'Boyle Castles, this indicates that the area surrounding the town of Portnoo (lying in the heart of the medieval O'Boyle Clan territory) is Mr Boyles Genetic Homeland.

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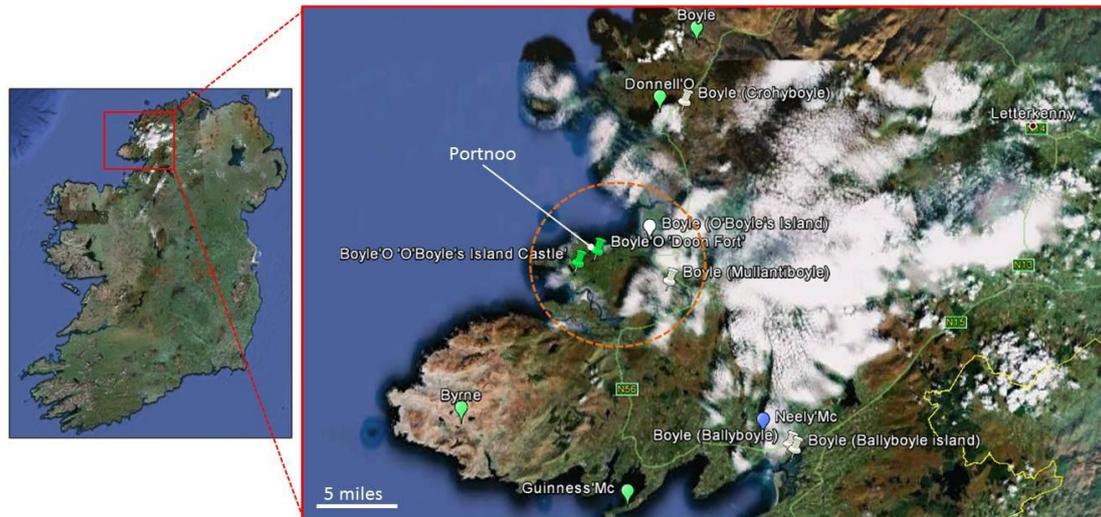


Figure 4: Mr Boyles Genetic Homeland centred upon the town of Portnoo in southwest Donegal. Boyle is a common surname in Donegal and the majority of Boyle farmers cluster just north of the O'Boyle Genetic Homeland (orange broken circle). Mr Boyles Genetic Homeland surrounds the town of Portnoo where importantly one finds the O'Boyle castles (Green pins) and placenames (white pins).

How to confirm a pinpointed 'Genetic Homeland'

Confirmation of the area surrounding Portnoo as Mr Boyles's Genetic Homeland will require the recruitment of 'Boyle' farmers that still live and farm in the surrounding area for commercial ancestral Y-DNA testing.

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 [Irish Origenes](#) homepage.
2. [Irish Origenes Surnames database](#)
3. [Irish Origenes Surnames map](#) Stick a pin on your Surname and on the Surnames of your genetic matches (as revealed by DNA testing) to discover your Genetic Homeland.
4. Google Earth.
5. [Irish Origenes Clan Territories Map](#). This map details the territories of over 400 of the most prominent Irish Clans and Norman families and is based on the location of nearly 1,500 castles and their known historical association to these Clans/Families.
6. [Irish Origenes Castles of Ireland Map](#). This map details the names and precise location of nearly 1,500 castles in Ireland. Input the co-ordinates into Google Earth and view the castles on street view.
7. Your Genetic Homeland can be confirmed by recruiting male volunteers with the Surname of interest from the identified area for Y-DNA37 testing.

ALTERNATIVELY 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 86% success rate. If in the unlikely event that I cannot pinpoint your Genetic Homeland I will explain why and I will not charge you.

Every successful Case Study customer also receives an Irish Origenes Surnames of Ireland, Clan territories of Ireland, and the Castles of Ireland map.