

# Case Study

## Pinpointing the FOY

### Genetic Homeland

---

[www.irishorigenes.com](http://www.irishorigenes.com)



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

**Dr Tyrone Bowes**  
**Updated 3rd 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, 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 'Whelehan' was living in close proximity to others with whom he was related but who assumed other surnames like Daly, Fox and Kearney. 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 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, 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 Foy's DNA test results and at the end 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 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 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 1,200 years ago. As a result if your recent Irish ancestors were originally 9<sup>th</sup> Century Viking raiders, 11<sup>th</sup> Century conquering Normans, or a 16<sup>th</sup> Century Planter, 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!

## Foy: A brief family history

Brian Foy is a good friend of mine and was a willing participant in this 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 lived.

Brian had no idea about his recent or distant ancestry. The matter is complicated by the fact that Brian was adopted and 'Foy' is his adoptive surname. However, Brian was aware that his biological fathers surname was Whelehan and that his biological-Whelehan father was originally from Kinnegad in County Westmeath.

### Pinpointing the Genetic Homeland

To identify a Genetic Homeland one must first find the surnames that continually appear as genetic matches. These reoccurring surnames will reflect the surname of a medieval ancestors neighbour. Tabulated results for test subject Foy are shown in **Table 1**.

#### SURNAMES THAT REOCCUR AS A GENETIC MATCH FOR TEST SUBJECT FOY (biological father; WHELEHAN) FROM 37 MARKER Y-CHROMOSOME DNA TESTING

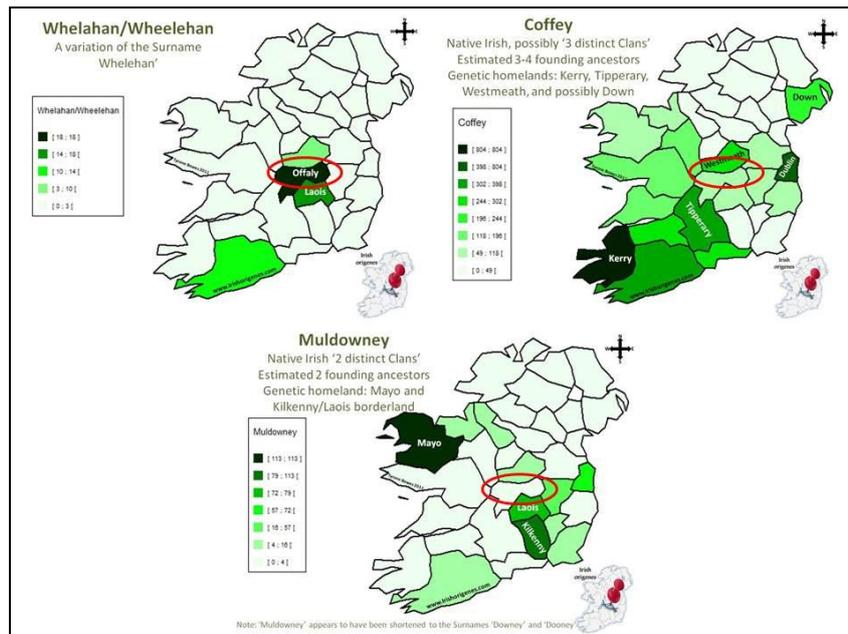
Test subject	37 Marker Y-DNA test								
	37 marker level					25 Marker level			
	exact	-1	-2	-3	-4	exact	-1	-2	
Foy (Whelehan)	-	-	-	-	Whelehan/Wheelahan/Wheeler(x5) Phelan	-	Coffey (x2) Muldowney/Downie(x2)	Kelly(x4)	

**Table 1:** In this table are listed the surnames that continually reoccur as a genetic match. Each surname appears at the earliest point at which it occurs, for example the first match occurs with another Whelehan in 33 of 37 markers, but not all of the other individuals with the surname 'Whelehan' will match at this level. In brackets are the number of individuals (with a particular surname) who appear as a genetic match.

### WHERE DO THE WHELEHAN, COFFEY, AND MULDOWNEY SURNAMES ORIGINATE?

The 1911 census of Ireland was released online in 2010. This allowed me to explore which County (there are 32 Counties in Ireland) the surnames Whelehan, Coffey, and Muldowney (from which Downie/Downey derives) can be found concentrated in, and hence where these surnames originate. When I plotted the distribution of people with these surnames across the 32 Counties of Ireland there was an association with the midland Counties, particularly Westmeath and Offaly, see **Figure 1**.

## Foy - A Case Study



**Figure 1:** Surname distribution maps for Mr Foy's reoccurring genetic matches. The Whelehan, Coffey and Muldowney surnames are associated with the midland Counties of Ireland, particularly Counties Offaly and Westmeath (Red circle). Surname distribution maps are taken from the [Irish Origenes surnames database](http://www.irishorigenes.com).

Land, like the surname is typically passed from father to son and when one examines the location where farmers associated with each surname are clustered one sees a strong association among the surnames Whelehan and Coffey with County Westmeath, see **Figure 2**. When one examines the singularly occurring surnames that appear as matches one also sees a strong association with Westmeath, these surnames include Slevin, Fox, Bannon and Fagan. These singularly occurring matches may represent non-paternal events! But since these non-paternal events are more likely to occur between neighbouring Clans they can also be used to shed light on one's medieval ancestors location and help pinpoint a Genetic Homeland.

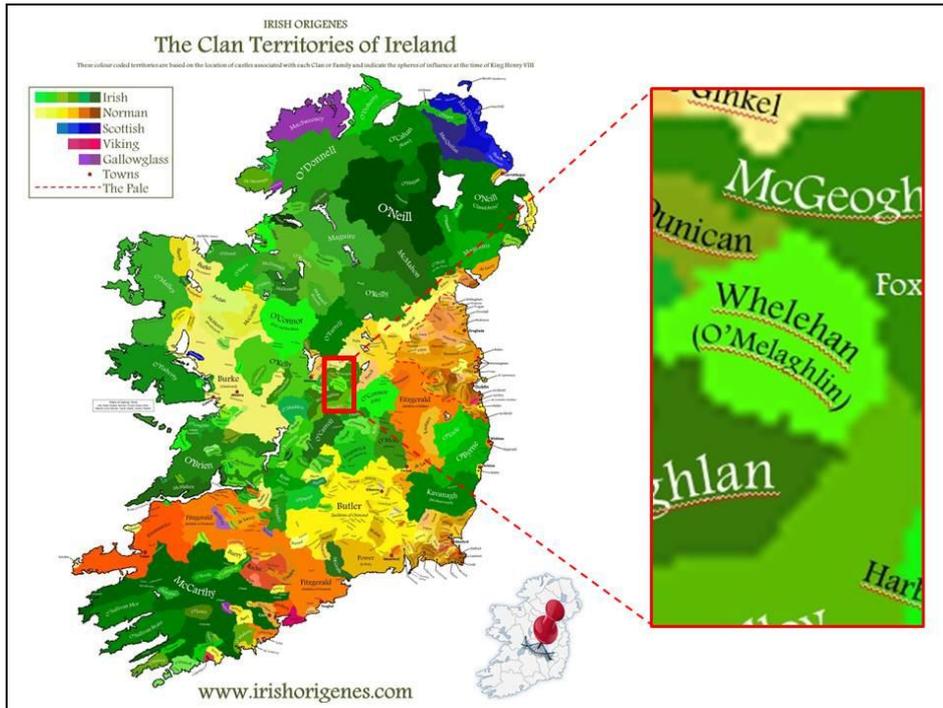
## Foy - A Case Study



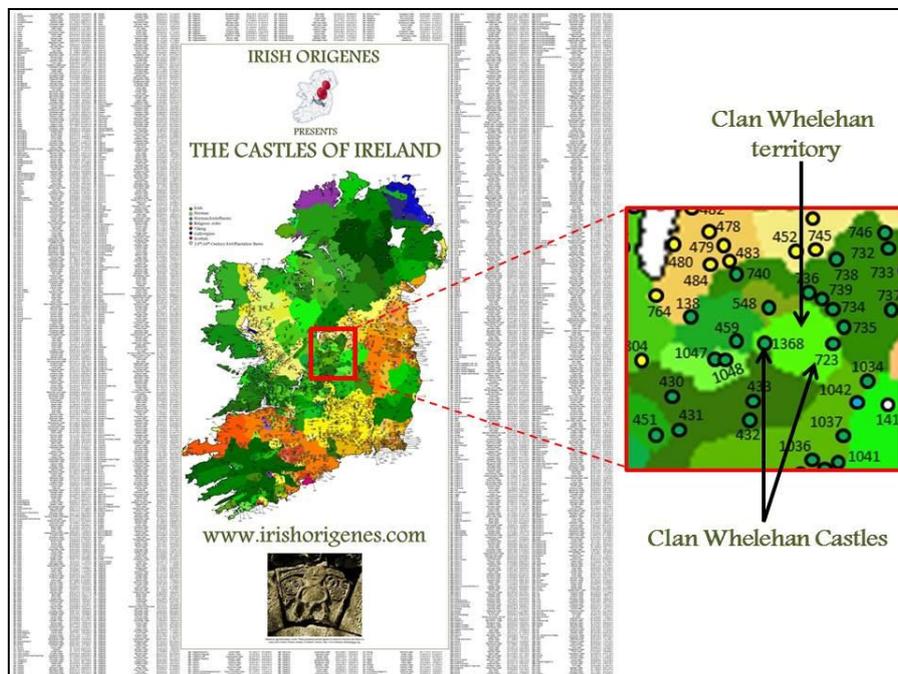
**Figure 2:** The Irish Origenes Surnames of Ireland map showing where **Farmers** associated with each surname are clustered based upon the 1911 census of Ireland. By sticking a pin on the surnames of the test subject 'Foy's' genetic matches one can see these surnames clustering in, or around County Westmeath. **Green pins** show position of Whelehan (**red arrow**), Coffey, and Muldowney. The **Yellow Pins** show the location of singularly occurring surnames that appear as matches; Slevin, Fagan, Fox and Bannon. [This map is available at the Irish Origenes website](#)

Clan Whelehan had its ancient territory in the midlands of Ireland spanning part of the Westmeath and Offaly borderland area, see **Figure 3**. It was here that Clan Whelehan has left the most notable evidence of their presence in the form of 2 Castles that have a close historical association with the Whelehan's, see **Figure 4**. The Whelehan's lived for hundreds if not thousands of years in this area and their association with the area is also evident in the placenames that include Meelaghlin's crossroads and Derryweelan, see **Figure 5**.

## Foy - A Case Study



**Figure 3:** The Irish Origenes Medieval Clan Map of Ireland showing the location of Clan Whelehan's (O'Melaghlin) territory (red box magnified). This map was reconstructed based on the location and historical association of nearly 1,500 castles found in Ireland. [This Irish Clan map is available at the Irish Origenes website.](http://www.irishorigenes.com)



**Figure 4:** The Irish Origenes Castles of Ireland Map showing the location of castles associated Clan Whelehan (red box magnified). There are 2 castles (numbers 723 and 1368) associated with Clan Whelehan situated on the Offaly/Westmeath border. [This Castles of Ireland Map is available from the Irish Origenes website.](http://www.irishorigenes.com)

## Foy - A Case Study



**Figure 5:** Mr Foy's Genetic Homeland on the Offaly/Westmeath border. By the 15<sup>th</sup> Century Clan Whelehan territory was reduced to a small area on the Offaly and Westmeath border (orange broken circle) which marks Mr Foy's Genetic Homeland. Clan Whelehan left evidence of their long association with this area in the castles they built (green pins) but also in the placenames (white pins) associated with the surrounding area including 'Meelaghans crossroads' and 'Whelehan's oak wood' (Derryweelan). The Green balloon marks the area where the Whelehan farming community clustered in 1911.

### How to confirm a pinpointed Genetic Homeland

In summary the test subject 'Foy's' Genetic Homeland is situated on the Westmeath/Offaly borderland. The DNA results show conclusively that the test subject's biological father (Whelehan) lived close to his Genetic homeland, where the Surnames founding ancestor and the medieval Clan Whelehan (O'Melaghlin) had its territory. The Whelehan Clan still retained its territory on the Westmeath/Offaly borderland and lived immersed in Gaelic culture right up until the Elizabethan conquest of Ireland. After that, members of the Clan stayed in the area, merely switching a native Irish Chieftain for a new English landlord. The Genetic Homeland can be confirmed by commercial ancestral Y-DNA testing of Whelehan's that still farm land on the Westmeath and Offaly border.

## 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](#)

## Foy - A Case Study

---

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](mailto: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.***