

**Case Study**  
**Pinpointing the**  
**CUMMINGS**  
**Genetic Homeland**

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## INTRODUCTION

A 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 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 'O'May' was living in close proximity to others with whom he was related but who assumed other surnames like O'Gara and O'Hara. Given that 1,000 years have passed since surnames were adopted, 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 DNA test results.

In Ireland surnames can still be found concentrated in the County from which they originate. In this manner one can examine surname distribution and pinpoint a '**Genetic Homeland**.' The Genetic Homeland is the very 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 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 living in the pinpointed area.

### 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 potentially trace direct descent. But science has demonstrated that only 50% of individuals with a particular Irish surname will be related to that 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 1,000 years ago. As a result if your recent Irish ancestors were originally 9<sup>th</sup> Century Viking raiders, 12<sup>th</sup> Century conquering Normans, or a 16<sup>th</sup>/17<sup>th</sup> 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!

### Interpreting the Y-DNA test results

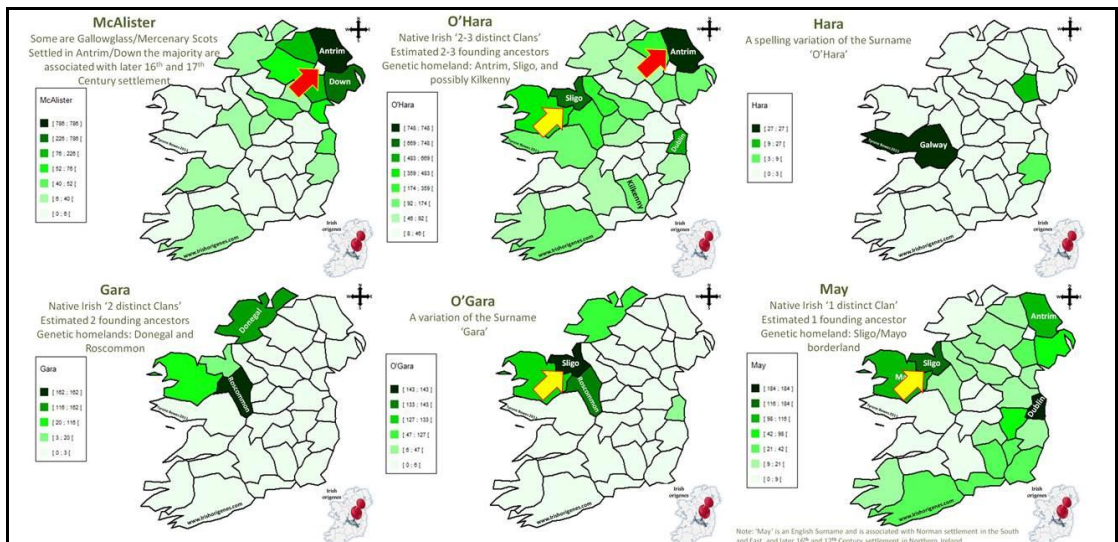
To identify a Genetic Homeland one must first identify the surnames that continually appear as genetic matches. These recurring surnames will reflect the surname of a medieval ancestors neighbour. Results for test subject Cummings are shown in **Figure 1**.

Test Subject	67 marker							37 marker					25 marker					
	exact	-1	-2	-3	-4	-5	-6	-7	exact	-1	-2	-3	-4	exact	-1	-2		
Cummings	-	-	McAlister/McAllister /McAlaster/McCollister(x7)	-	-	-	O'Gara(x5) O'May/May(x3)	O'Hara(x2)	-	-	-	-	-	-	-	Ferguson(x2)		
Time to shared ancestry / years	0-200	200-400	400-600	600-800	800-1000	1000-1200	1200-1400	1400-1600										

**Figure 1:** Recurring surname matches to test subject Cummings as revealed by commercial ancestral Y-DNA testing. Each surname appears at the earliest point at which it occurs e.g. the first match to a McAlister occurs at 65/67 markers but not all McAlisters may match at that level. In brackets are the numbers of individuals with a particular surname that appear as a genetic match. Coloured font indicates the ethnicity associated with each surname; **Irish**, **Scottish**, black font indicates multiple associated ethnicities. The estimated time to a shared ancestor (**red text** below Figure 1) is based upon the results of the Scottish Valentine Case Study ([www.scottishorigenes.com](http://www.scottishorigenes.com)).

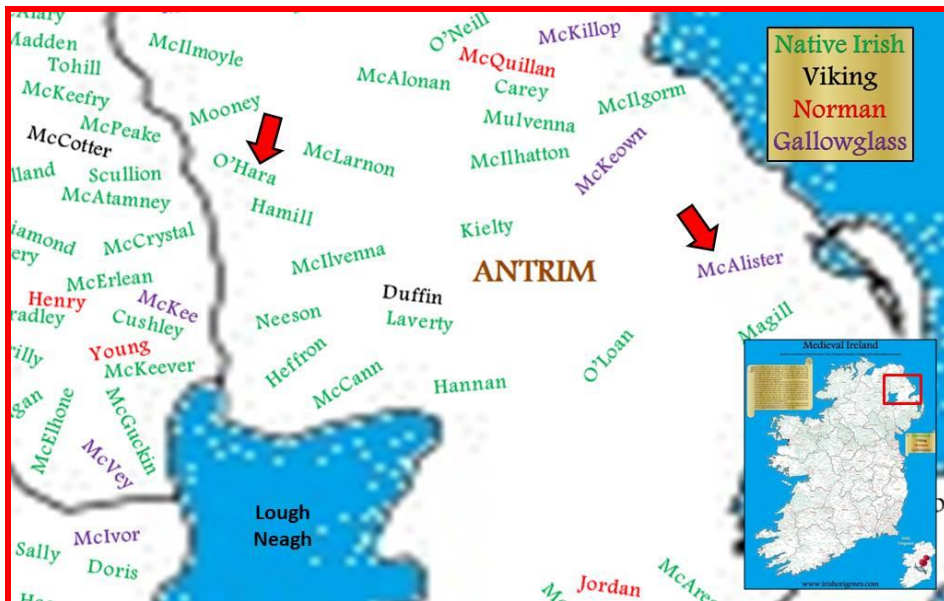
Mr Cummings association with his Cummings surname is a result of a recent non-paternal event. However, his Y-DNA test results revealed a number of surnames that are historically linked to one another. Irish surnames O'May(May), O'Hara, and O'Gara predominate as genetic matches from the time when paternally inherited surnames became common indicating that his paternal ancestor from this time period was Irish, see **Figure 1**. However a more recent paternal link (dating from between the 1400 and 1600's) with the 'Scottish' McAlisters is also reflected in the DNA results, see **Figure 1**.

Surnames in Ireland can still be found concentrated within the Counties where they first appeared, or in the area where ones ancestors first settled in Ireland. Hence an examination of the Irish Origenes distribution maps for the surnames that appear in Figure 1 reveals that Mr Cummings has a paternal ancestral link with 2 geographical locations within Ireland, see **Figure 2**. Both McAlister and O'Hara are associated with Antrim in the far northeast of Ireland and since his most recent recurring matches are to McAlisters this would indicate a more recent paternal ancestral link with this area. While the distant matches to O'Garas, O'Mays (May), and O'Haras indicate that his direct male ancestor was living somewhere in the west of Ireland when surnames became common approximately 1000 years ago, see **Figure 2**.



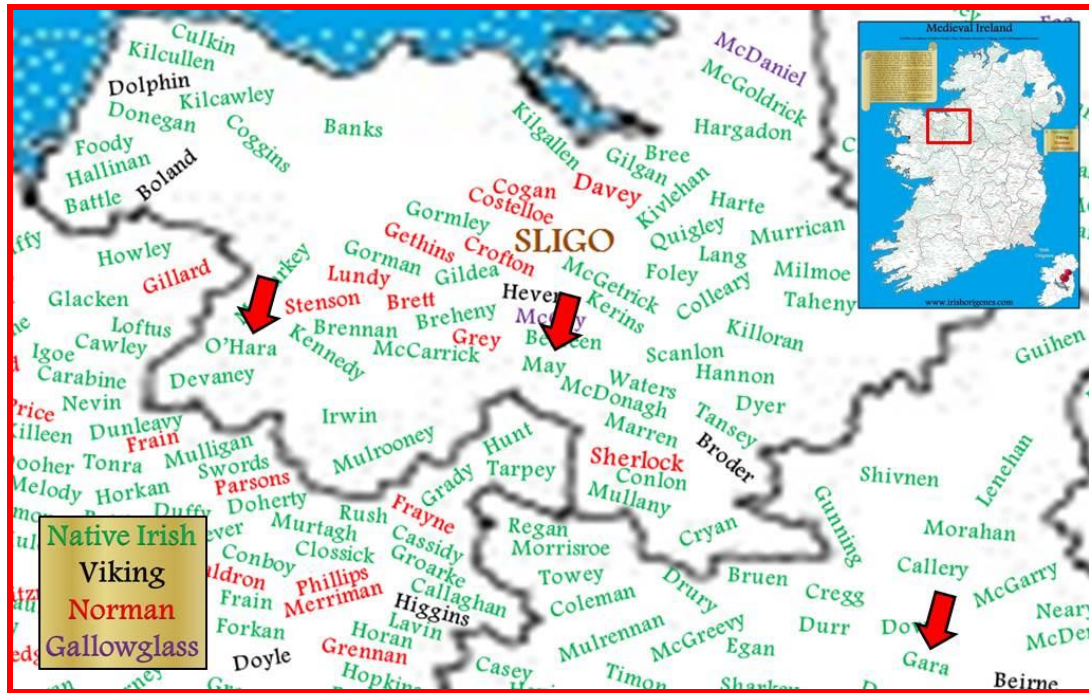
**Figure 2:** Surname distribution mapping reveals a paternal ancestral link with Antrim and Sligo. The Scottish McAlisters are overwhelming associated with Antrim where one also finds the O’Haras (red arrows). Distant genetic matches to O’Gara, O’Hara, and May (O’May) indicate an earlier paternal ancestral link with Sligo (yellow arrows).

Land, like the surname and Y chromosome is typically passed from father to son. Since Ireland was still an overwhelmingly agrarian society in 1911 farmers could still be found farming the land that their ancestors had settled hundreds if not thousands of years ago. The Irish Origenes Surnames of Ireland map shows where farmers with each surname clustered. An examination of County Antrim in northwest Ireland reveals that the McAlister and O'Hara farming communities lived in close proximity, see **Figure 3**. While the O'Haras, O'Garas, and Mays are found clustered in, or close to County Sligo, see **Figure 4**.



**Figure 3:** The O'Haras and McAlisters of Antrim. The O'Haras and McAlisters (red arrows) have been neighbours since the 1400's.





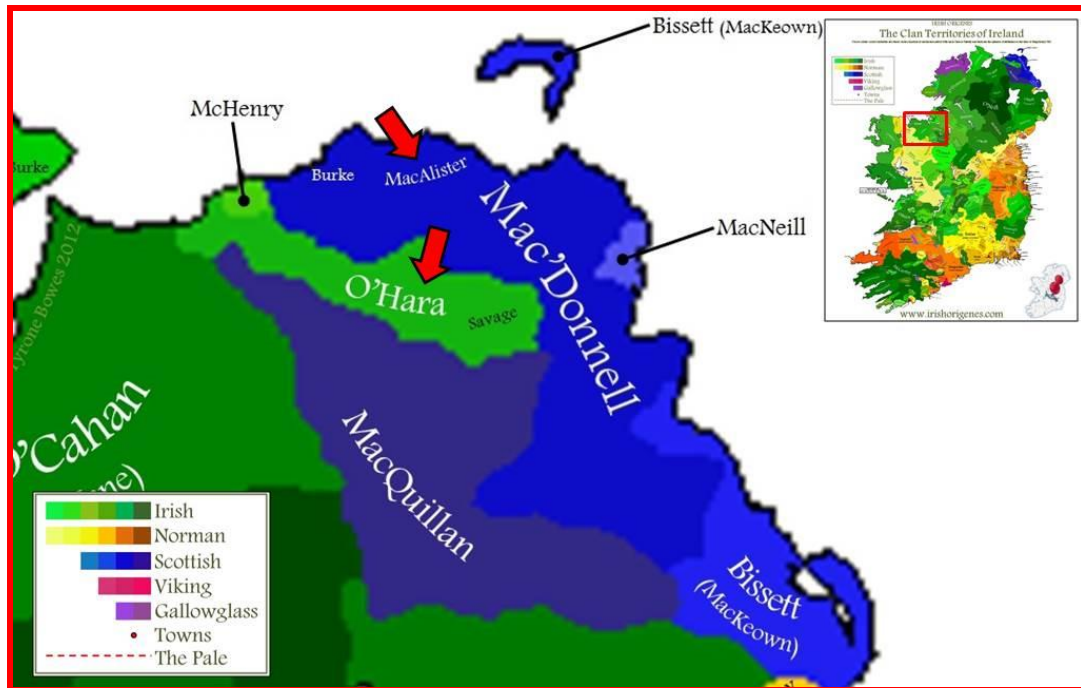
**Figure 4:** The Irish Origenes Surnames of Ireland Map reveals a medieval paternal ancestral link with Sligo. In 1911 the farmers with the surnames O'Hara, O'Gara, and May (red arrows) could be found concentrated in, or close to County Sligo.

### The Clans of Ireland

If one has Irish ancestry then an examination of the Irish Origenes Clan Territories of Ireland Map typically reveals a shared ancestry (of the test subject) to prominent Clans or Families that once ruled over one's Genetic Homeland. An examination of Antrim as it appears on this map reveals that this area was split between Scottish and Irish Clans, see **Figure 5**. The Scottish MacDonnells (MacDonalds) had arrived in Antrim in about the 14<sup>th</sup> Century. Their presence in Antrim may have been an attempt to monopolise the lucrative trade in mercenary Scottish warriors known as 'Gallowglass' who were employed by Irish Chiefs, Norman lords, and even the English authorities. The Scottish MacAlisters appear to have colonised Ulster at the invitation of the MacDonnells, presumably serving as Gallowglass throughout Ireland. It is known that Sorley Boy MacDonnell gave Kilbane castle in north Antrim to Owen Maclan Dubh MacAllister (Chief of Clan MacAlister) as a reward for their service to the MacDonnell clan, see **Figure 6**. When the MacAlisters took possession of Kilbane castle one of the prominent Gaelic Irish Clans in that area would have been the O'Haras who had migrated from Sligo to Antrim where they had been granted lands by Henry II (1133-1189). Mr Cummings paternal ancestor may have been an O'Hara at the time of the arrival of the MacAlisters in Antrim. One can only speculate as to how the MacAlister surname was acquired by Mr Cummings paternal line, it may have been through adoption of fostering between these neighbouring Clans which were often a means of building good relations between medieval neighbours. It may have been through infidelity or simply the maternal transfer of the surname. Or alternatively an O'Hara may have taken the MacAlister surname and become Gallowglass. The prowess of the Gallowglass was often associated with

specific surnames, and having a Gallowglass-surname (MacAlister) would have ensured steady employment.

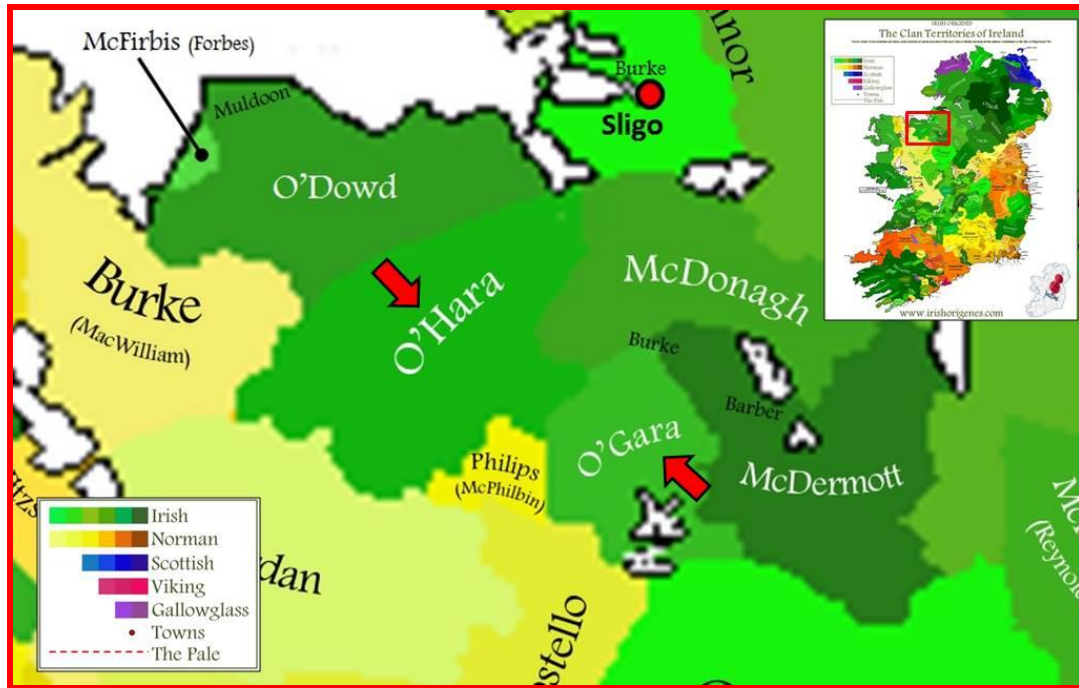
Only some of the O'Haras had ventured to Antrim in the 12<sup>th</sup> Century. The majority of O'Haras in Ireland are still to be found in Sligo. An examination of the Clan Territories of Ireland map for North Connaught reveals that the O'Haras dominated lands in what is today known as County Sligo and that their neighbours were the O'Garas, see **Figure 7**.



**Figure 5:** The Clan Territories of Antrim. The Clan Territories of Ireland map was reconstructed based on the location of Castles and Towerhouses associated with particular Clans and Families. The McAlisters and O'Haras (red arrows) were two prominent neighbouring Clans who dominated north Antrim from the 15<sup>th</sup> until the 17<sup>th</sup> Century.



**Figure 6:** The ruins of Kilbane Castle on the north coast of Antrim.



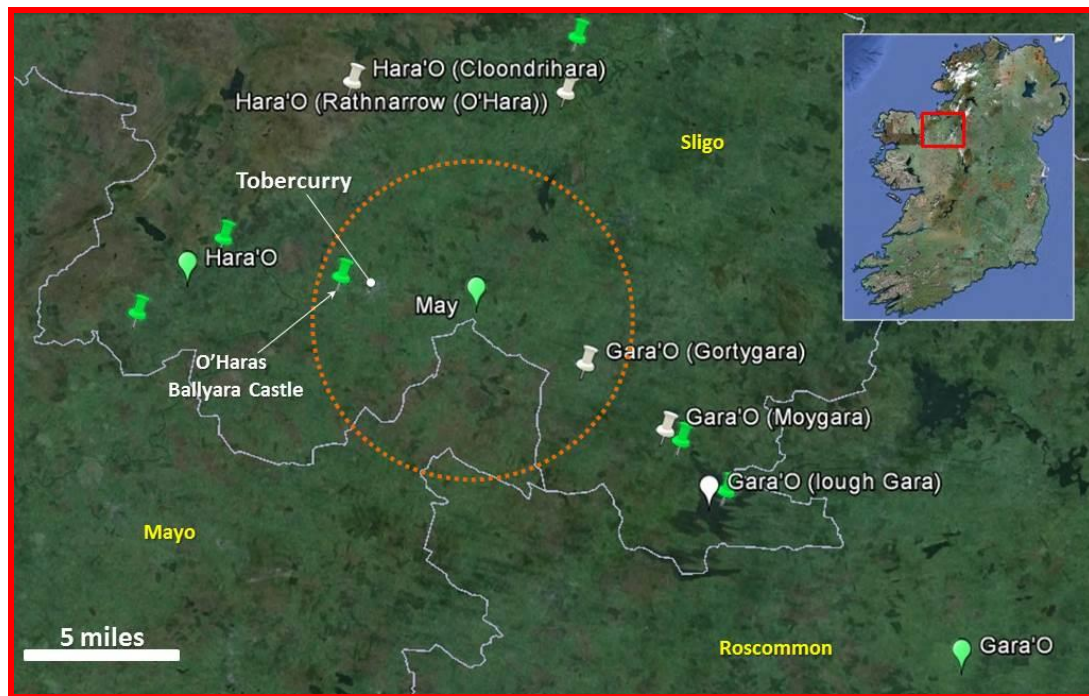
**Figure 7:** The Clan Territories of Sligo. Medieval Sligo was dominated by Gaelic Irish Clans which included the O'Haras and O'Garas (red arrows). In the 12<sup>th</sup> Century some O'Haras migrated to Antrim, later becoming neighbours of the Scottish MacAlisters.

### The Genetic Homeland

Surname distribution and historical evidence show that Mr Cummings paternal ancestry is linked to County Sligo, at the least from the time when surnames became common (800-1000AD). By plotting where O'May, O'Hara, and O'Gara farmers, plus placenames and historical monuments associated with these surnames are found one can see an area emerge that is centred upon the cluster of farmers called May, see **Figure 7**. This is an area just east of Tobercurry. It is within this area that Mr Cummings direct male ancestor lived when surnames became common between 800 and 1000AD. It is in this area that one finds evidence of his genetic relative's long ancestral links with this area in its monuments, placenames, and in the DNA of its current inhabitants. The O'Gara, O'Hara, and O'May (May) surnames are only a few of the more common Gaelic Irish surnames that arose in this area, a full list of Gaelic Irish surnames that are associated with this area are detailed in **Figure 8**.



## Cummings - A Case Study



**Figure 7:** Mr Cummings paternal ancestral Genetic Homeland situated in south Sligo. Mr Cummings numerous matches to O'Garas, O'Haras, and Mays indicate that his Genetic Homeland (orange broken circle) is found just east of Tobercurry in South Sligo. It is in this area that one finds a castle, placename and farmer cluster associated with the surnames that appear as genetic matches dating from the time when surnames became common. Green balloons = farmer clusters, Green pins = O'Gara and O'Hara Castle locations, White pins = placenames.



**Figure 8:** Candidate surnames for Mr Cummings founding ancestor. Irish surnames can still be found concentrated in the areas where they first appeared. This image shows the surnames associated with Mr Cummings Genetic Homeland (orange broken circle). It is interesting that May occurs at the centre of this area. It could indicate that his direct male ancestor was an O'May.



### How to confirm a pinpointed 'Genetic Homeland'

Confirmation of the area east of Tobercurry as Mr Cummings's Genetic Homeland will require the recruitment of farmers called 'May' from that area for commercial ancestral Y-DNA testing.

### Chronological time frame

**800-1000AD:** Paternally inherited surnames become common in Ireland. Mr Cummings ancestor lives in South Sligo surrounded by male relatives. A limited number of surnames including O'Hara, O'Gara, and O'May arise among these related males.

**1154-1189AD:** Henry II grants lands in Antrim to the O'Haras. Some of the O'Haras and presumably their followers (with surnames like O'May and those identified in Figure 8) accompany the O'Haras to Antrim.

**1259AD:** First Scots Gallowglass arrived in Ireland

**1560-1571:** Scots MacAlisters occupy Kilbane Castle close to the O'Hara territory

**1400-1600:** A non-paternal event takes place which results in Mr Cummings paternal ancestor becoming a MacAlister.