

Case Study

Pinpointing the EGAN Genetic Homeland

www.irishorigenes.com



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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 'Egan' was living in close proximity to others with whom he was related but who assumed other surnames like Dunican, and Galvin. Jump forward 1,200 years and there will be many descendants of those individual some of whom will today undergo ancestral DNA testing. Hence the surnames of one's medieval ancestor's neighbours are reflected in today's DNA test results.

However, sometimes the link between the surname and the Y chromosome is broken due to 'non-paternal events' (NPEs) like adoptions and infidelity. But since these events usually occur between Clans and families living in close proximity; these NPEs will still reflect one's ancestor's neighbours and shed light on where they lived. 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 for the surnames that reoccur as genetic matches from DNA testing 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 recruited from the identified area. This Case Study details how I used the test subject 'Egan's' Y-DNA results to pinpoint his Genetic Homeland. A checklist for pinpointing your own Genetic Homeland is provided at the end of the report.

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 (a surname 'Adam'), the other 50% of people will have an association that has arisen due to NPEs, usually the 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 DNA 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, 11th 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

To identify one’s Genetic Homeland one must first find the surnames that continually appear as genetic matches. These reoccurring surnames reflect one’s ancestor’s neighbours from the time when surnames became common. Results for test subject Egan are shown in **Table 1**.

SURNAMES THAT REOCCUR AS A GENETIC MATCH FOR TEST SUBJECT EGAN FROM Y- DNA37 TESTING

Test subject	37 Marker Y-DNA test							
	37 marker level					25 Marker level		
	exact	-1	-2	-3	-4	exact	-1	-2
Egan	-	-	-	Kaney/Kenney (x3)	Flynn(x2)	-	Painter(x2) ¹ Hanley(x2)	Keaveaney(x2)

Table 1: Reoccurring surname matches for Egan. Each Surname appears at the earliest point at which it occurs as a DNA match, for example the first match with a Kenney occurs at 34 of 37 markers but not all Kaney/Kenney’s will match at this level. In brackets are the numbers of individuals that occur as a match. Coloured font indicates ethnicity; **Irish**. ¹Both individuals called Painter are closely related and are excluded from further analysis

Upon DNA testing Mr Egan did not match other Egan’s and this implies that his association with the ‘Egan’ surname is a result of a non-paternal event (NPE). When one examines the distribution throughout Ireland of the surnames Kenny (of which Kaney and Kenney are spelling variants), Flynn, Hanley, and Keaveaney identified in Table 1, a common area of association is clearly evident, see **Figure 1**.

WHERE DO THE EGAN, KENNY, HANLEY AND KEVEANEY SURNAMES ORIGINATE?

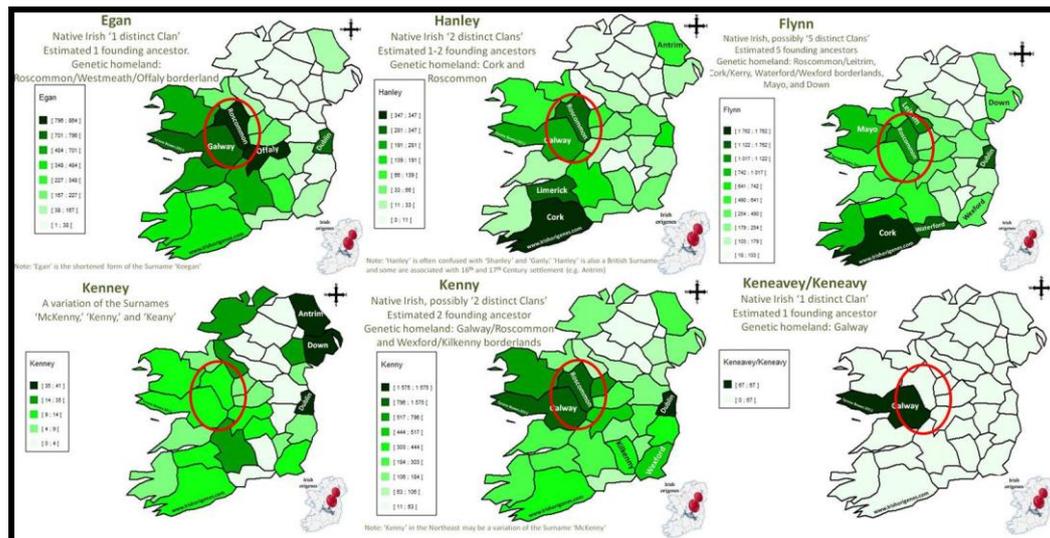


Figure 1: Surname distribution maps for Mr Egan’s genetic matches show a common area of association. The surnames Egan, Hanley, Kenny, and Flynn are all associated with County Roscommon (red circle). Keaveaney is unique amongst these surnames as it is associated with a single geographical area within County Galway which borders Roscommon.

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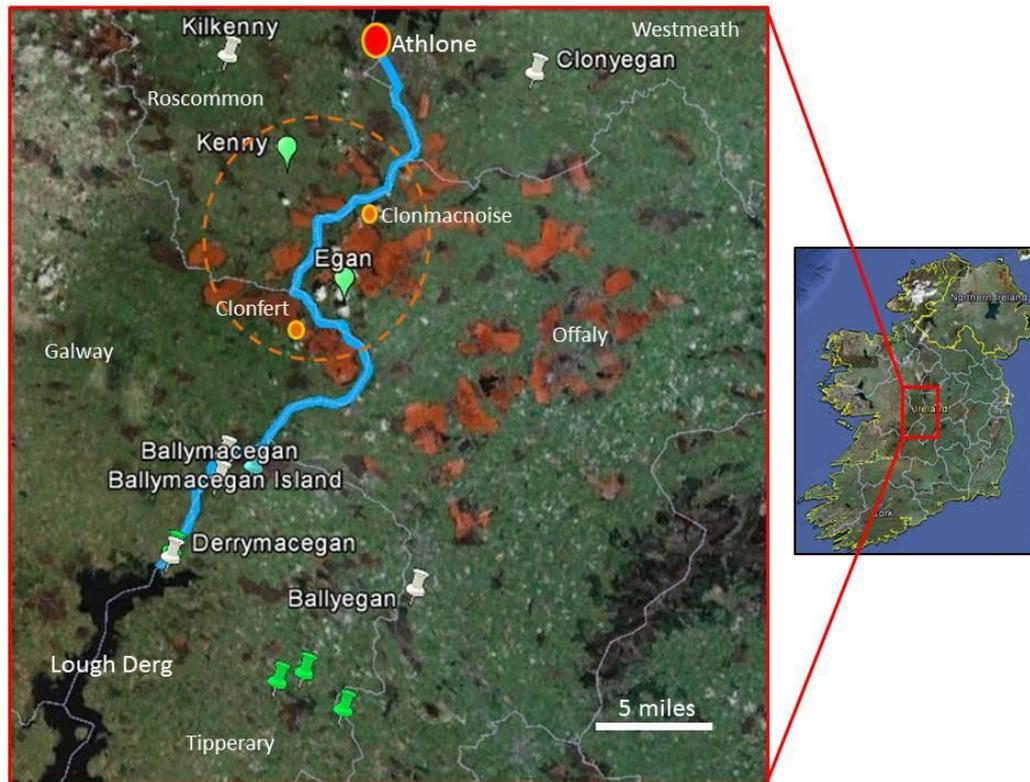


Figure 3: Mr Egan’s Genetic Homeland on the Roscommon and Offaly border. Clan Egan have occupied the east bank of the river Shannon from Athlone (at the base of Lough Ree) to Lough Derg, leaving evidence of their long association with this area in its placenames (white pins). The Kenny’s occupied territory in the southern tip of Roscommon, close to a ‘Kilkenny’ townland. Mr Egan’s genetic Homeland (**orange broken circle**) lies in the area around Clonmacnoise and Clonfert where both farming communities cluster. It is within this area that a NPE occurred resulting in the test subjects association with the Egan surname. **Green pins; MacEgan castles, blue line; river Shannon, orange circles; medieval monasteries.**

Evidence of Viking ancestry

The genetic genealogical analysis looks like an open and shut case with the test subjects association with the Egan surname arising due to an adoption or infidelity with the neighbouring ‘Kenny’ Clan. But there is another possibility. Mr Egan’s Ia2 Haplotype is rare in Ireland but common in Scandinavia where the Vikings originate. The Egan’s and Kenny’s are also surrounded by the Viking-associated surnames of Crosbie, Henson, and McManus (son of Magnus), while to the south opposite the traditional medieval McEgan Clan territory one finds the Viking surnames of Dolphin and Cotter, see **Figure 4**.

Viking surnames along the river Shannon from Limerick City (a Viking founded town) to Athlone should not come as a surprise given the seafaring Vikings use of rivers for raiding, trade and settlement. By 922AD the Vikings had founded a permanent settlement on the site of modern Limerick city with the sole intention of raiding the religious sites upriver. The most famous of these religious sites were Clonmacnoise and Clonfert situated in Mr Egan’s Genetic Homeland. These sites are known to have been raided by the Vikings on numerous different occasions. It may well be that the

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source of the NPE were the Vikings who have left evidence of their presence in the Y chromosome of Clans (and their descendants) all along the course of the river Shannon.

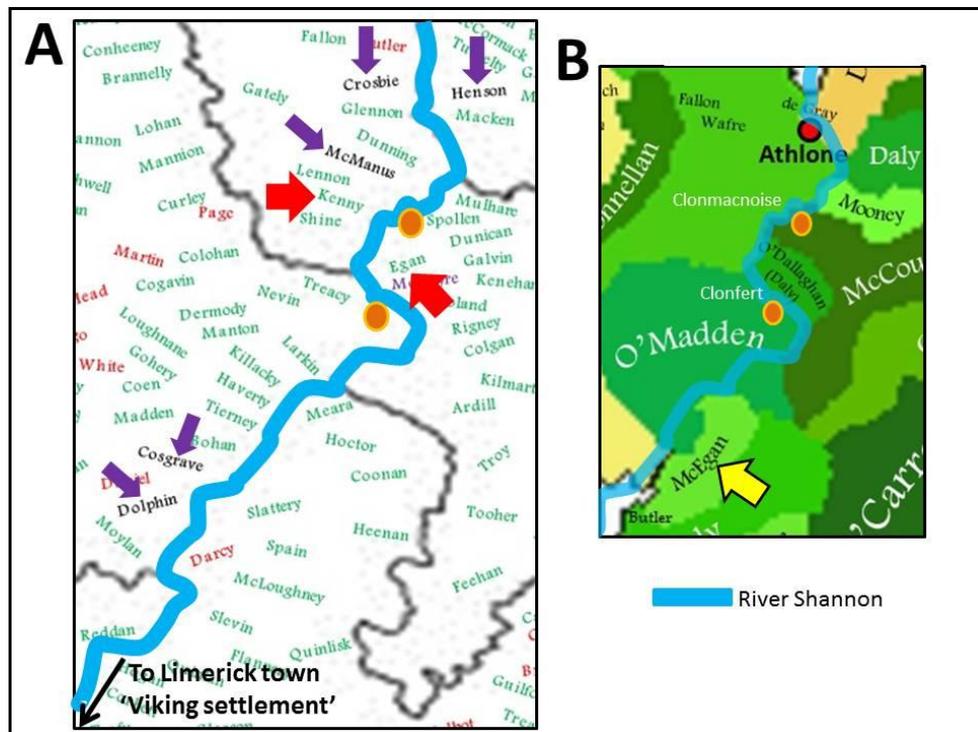


Figure 4: Viking settlement on the river Shannon. The Shannon was used specifically by the seafaring Vikings based in Limerick to raid the various monastic settlements including Clonfert and Clonmacnoise (orange circles). The area along the Shannon from Lough Derg to Athlone (Panel A) is peppered with surnames of Viking origin (black font and purple arrows). Viking surnames are particularly notable close to where the Egan and Kenny farming communities (red arrows) clustered in 1911 and also further south opposite the medieval McEgan Clan territory (Panel B; yellow arrow).

How to confirm a pinpointed 'Genetic Homeland'

To confirm the 'Kenny's as the origin of the NPE will require the DNA testing of farmers with the surname Kenny that still farm the west bank of the river Shannon in south Roscommon. The possibly Viking link may only be revealed when DNA testing becomes more routine in Scandinavian countries, if there is a Viking link then these Scandinavian test subjects will match Mr Egan.

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](#)

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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.