

# Session 1

## History, Genes, and Geography

Use your DNA to rediscover your Scottish Heritage

Scottish  
Origenes



www.scottishorigenes.com

Use your DNA to rediscover your Irish Heritage

Irish  
Origenes



www.irishorigenes.com

Use your DNA to rediscover your English Heritage

English  
Origenes



www.englishorigenes.com

Dr Tyrone Bowes  
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## **Session 1**

### **History, Genes, and Geography**

(what you need to know to help you understand your DNA results)

## **Session 2**

### **How to Pinpoint your paternal ancestral genetic homeland in 7 simple steps**

(the different commercial DNA tests and which one is suitable for you)

## **Session 3**

### **CASE STUDIES**

(Practical examples)

# Who am I?

- **Dr Tyrone Bowes**
- **Biotechnologist, Senior Scientist at NUIG, Ireland (2004-2010)**  
specialised in recombinant therapeutic antibodies
- **Submitted my own Y-DNA test in 2004 to FamilyTreeDNA**
- **Discovered my personal 'Bowe's' Genetic Homeland in 2010**
- **Recruited a number of individuals for Y-DNA testing to demonstrate reproducibility**
- **Launched Irish Origenes 2011**
- **Launched Scottish and English Origenes in 2012**



# HISTORY

## Human Migration to Ireland

8000 BC: Prehistoric people

800-100 BC: Iron Age Celts



800- 1169 AD: The Age of the Vikings



1169 AD: The Normans arrive and conquer almost the entire Island



1259 AD: The mercenary Scottish Gallowglass Clans (Hiberno-Norse) from the Highlands and Islands of Scotland arrive



1550-1650 AD: Scots and English Plantations



# The first Irish

The prehistoric peoples, how many people and how many waves of migration?



Soghan/Sodhan people e.g. surname 'Ward'



# THE CELTS

800-100 BC

How many waves of migration and how many people?



Rath



Rath near Kilmaine  
County Mayo

400 feet

Migration or Conquest?  
How many waves of Migration?



# What DNA has revealed about the Pre-historic settlers and Celts

## East/West divide

The more westerly that a Y-DNA can place your paternal ancestors the more ancient the association with Ireland

The maternal lines in Ireland are probably very ancient and date from Pre-historic and Celtic times!

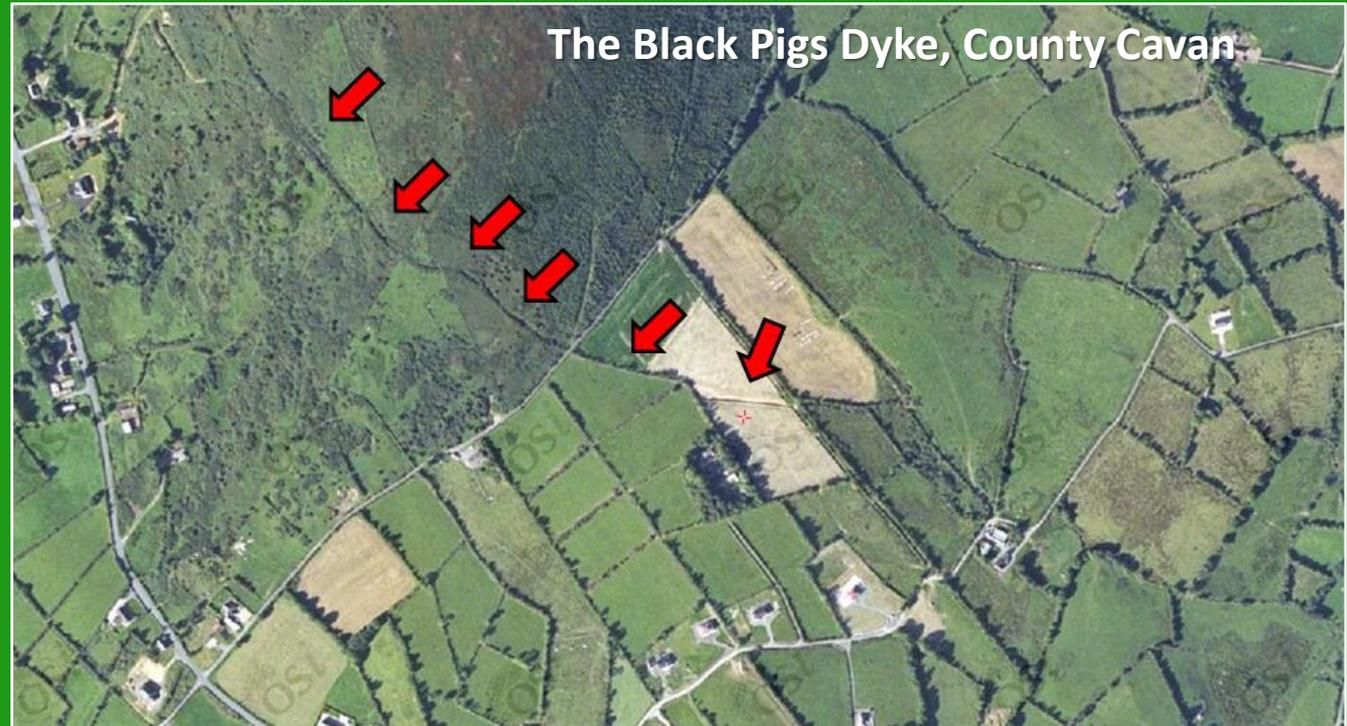
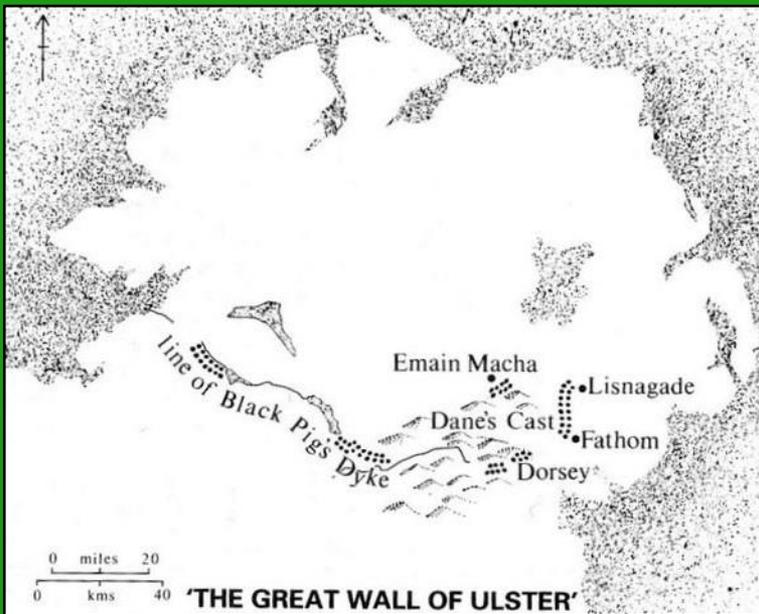


# North/South divide

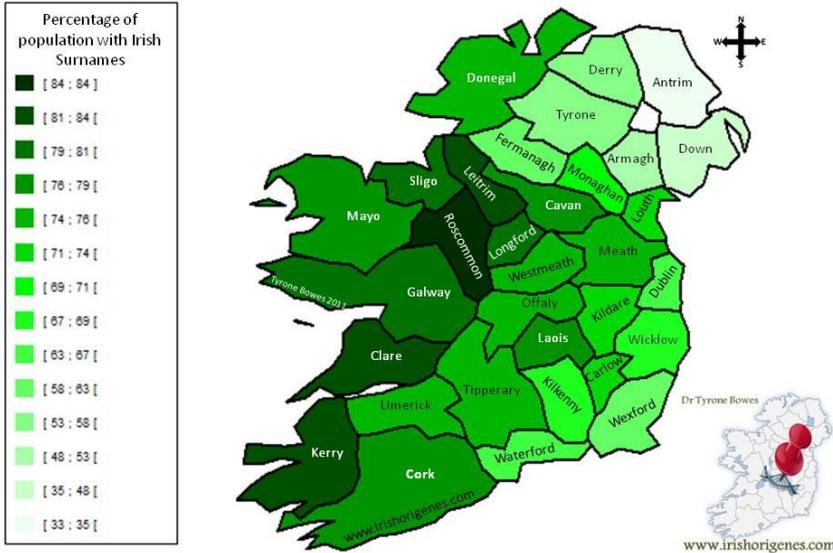
The North/South divide reflects the different migration routes into Ireland



Evidence of the **North/South** divide  
**The Black Pigs Dyke 390–370 BC**  
Reflects a historical division between the Northern  
and Southern Irish?



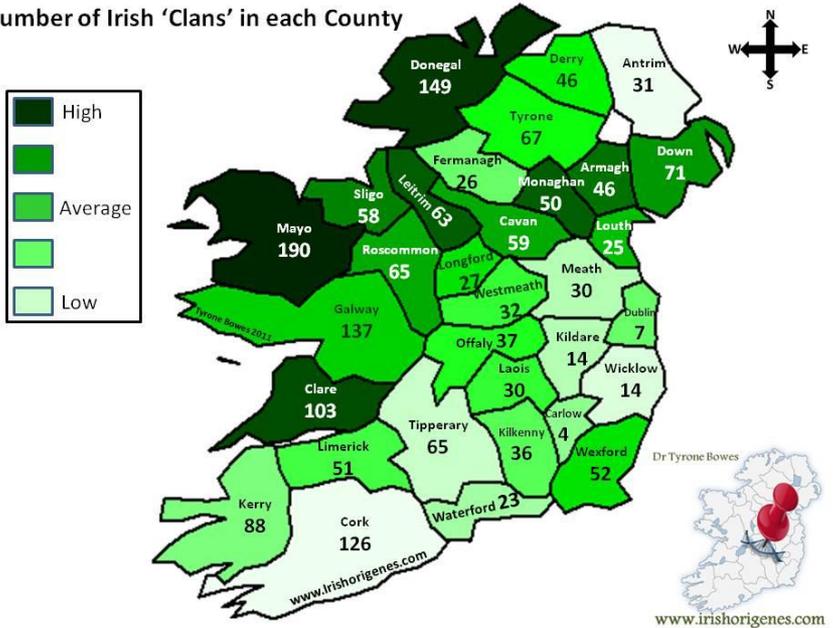
Distribution of people with Irish Surnames throughout the Counties of Ireland



The Celts have had the biggest impact in the history and culture of the Irish people

About 60% of people with paternal Irish ancestry are descended from the Prehistoric and Celtic peoples  
 About 95% with maternal links with Ireland

Number of Irish 'Clans' in each County



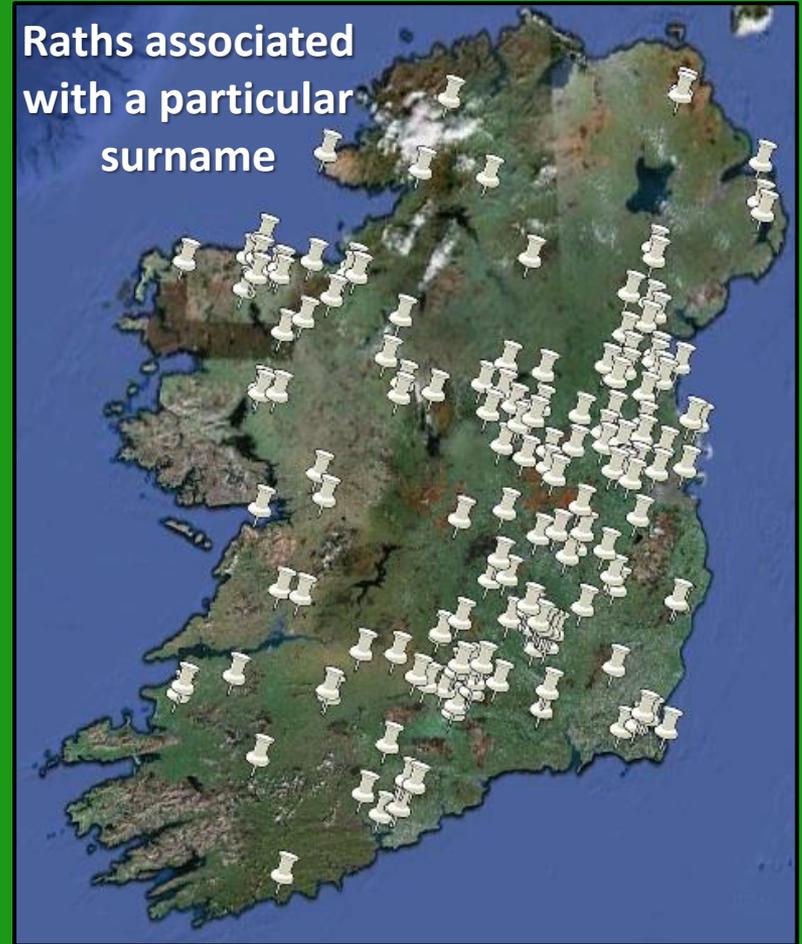
They gave the people of Ireland their distinctive Language: (Irish/Gaelic)  
 Surnames: Beginning with Mac/Mc, O', Gil/Kil, or Mul,  
 Clan system  
 Placenames



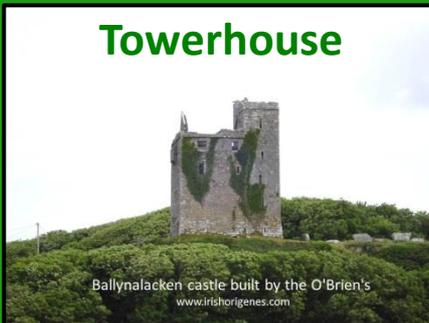
## Irish Clan Castles/ Towerhouse



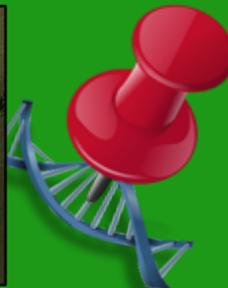
## Raths associated with a particular surname



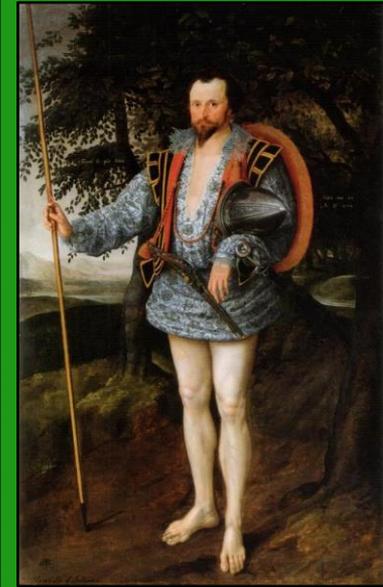
## Towerhouse



## Rath

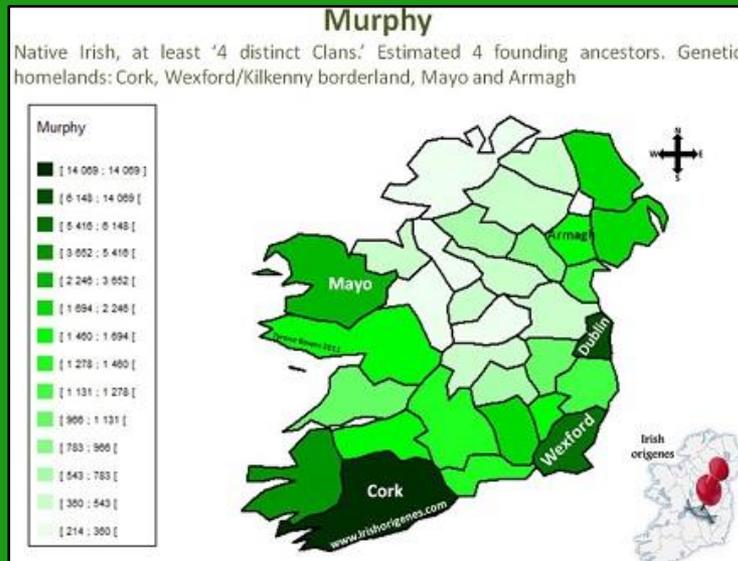
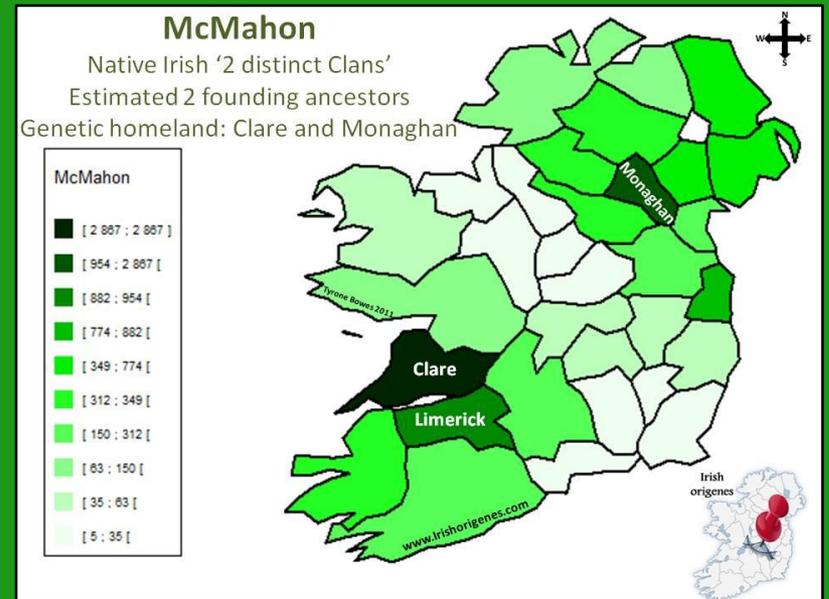
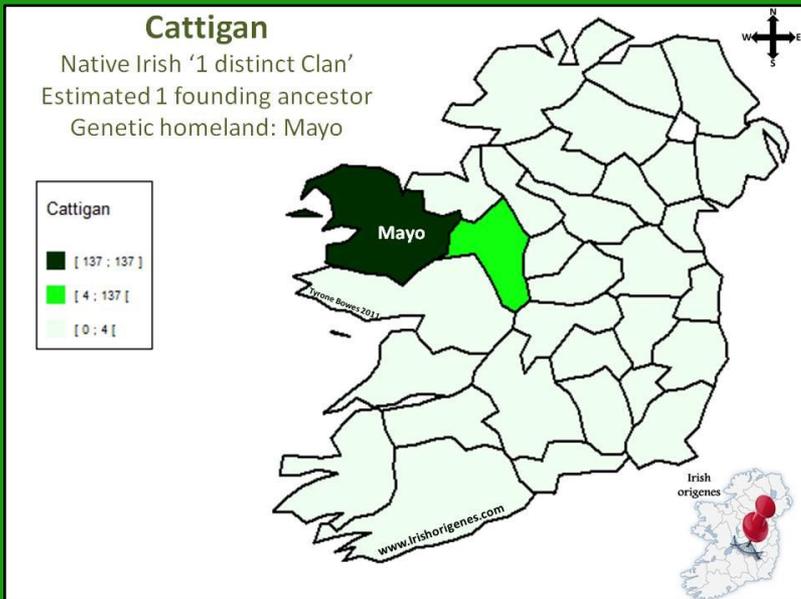


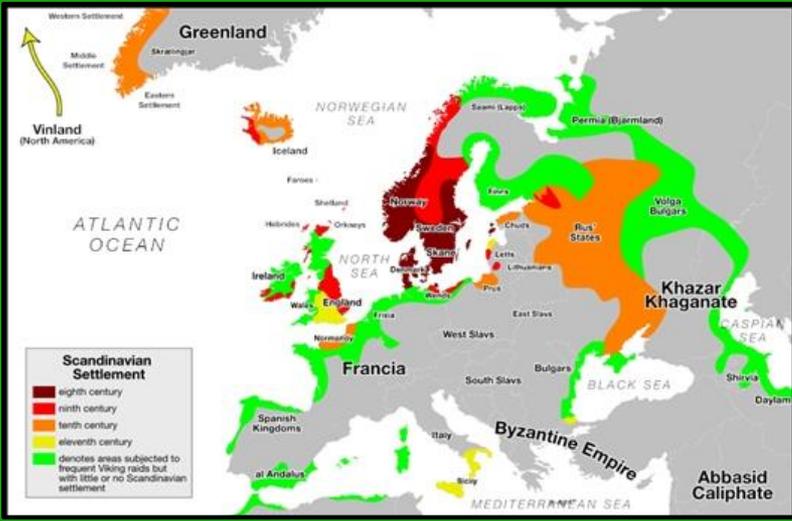
# What did the Gaels look like?



An English man in Irish garb: This is Thomas Lee, Captain of the 'Queen's Irish Kern' portrait painted by Marcus Gheererts.

# Typical Gaelic/Irish surname distribution (1911)





# THE VIKINGS

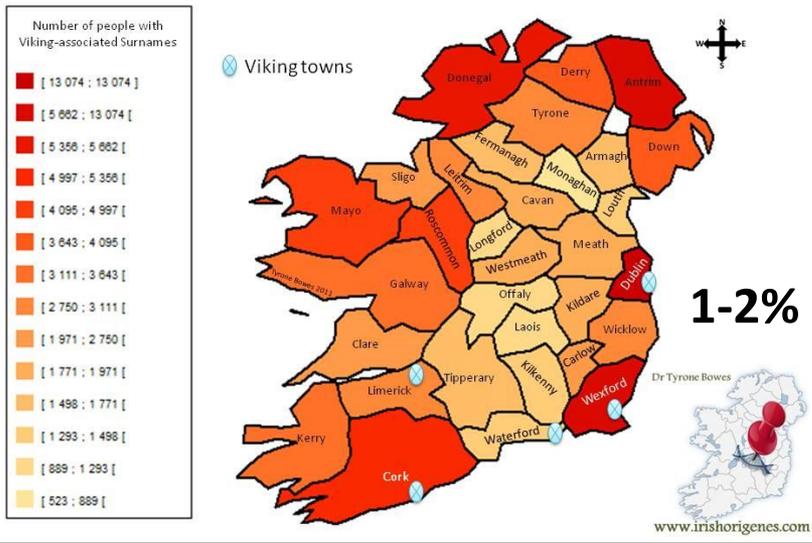
800-1169 AD

They gave Ireland its first towns  
How many settled?

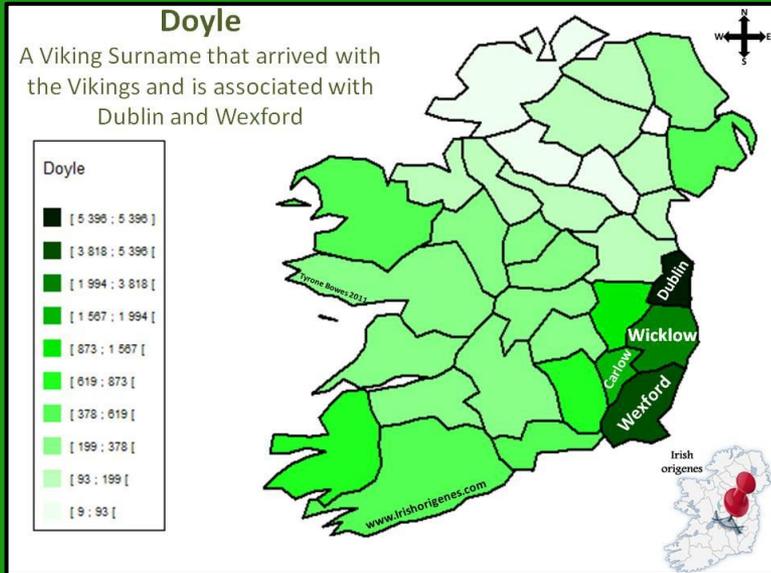
What happened to their descendants?

Raiding followed by settlement and intermarriage

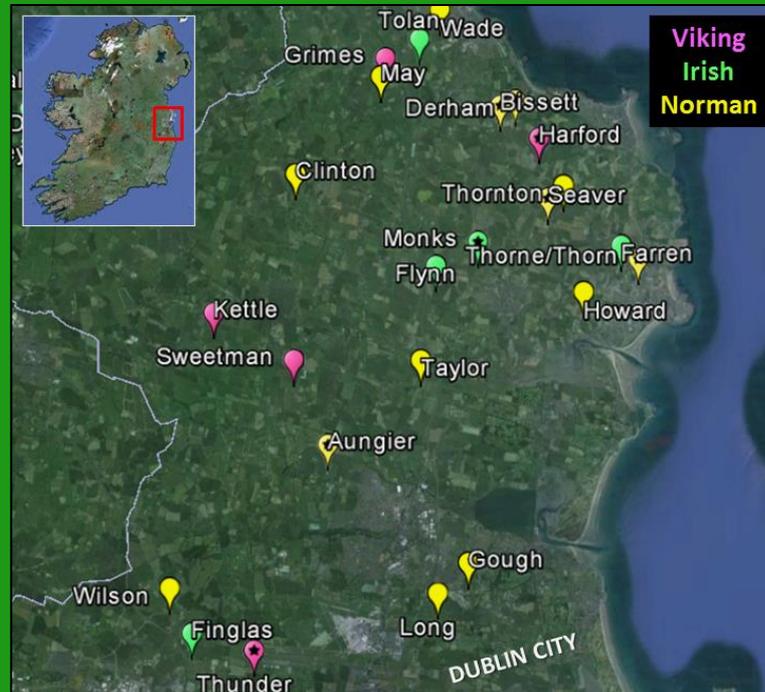
Distribution of people with Viking-associated Surnames throughout Ireland



# Viking surname distribution



## ARDS, COUNTY DOWN

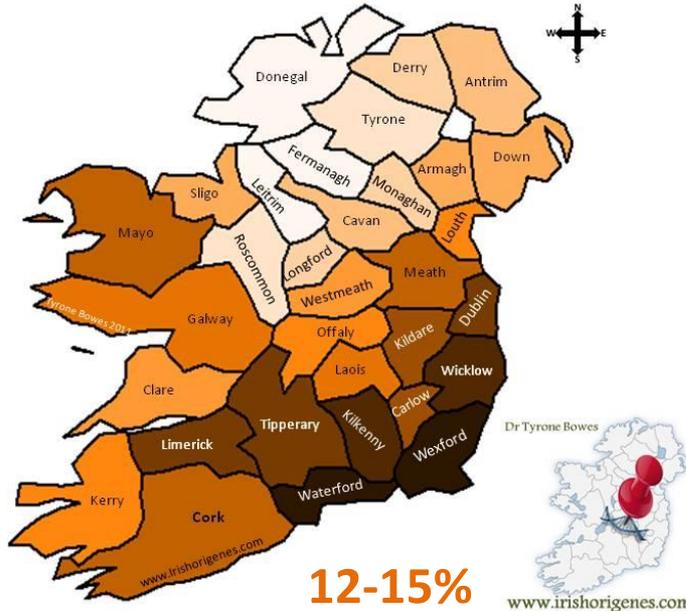
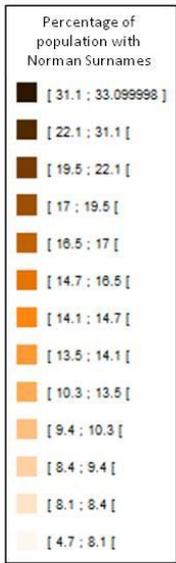


## DUBLIN





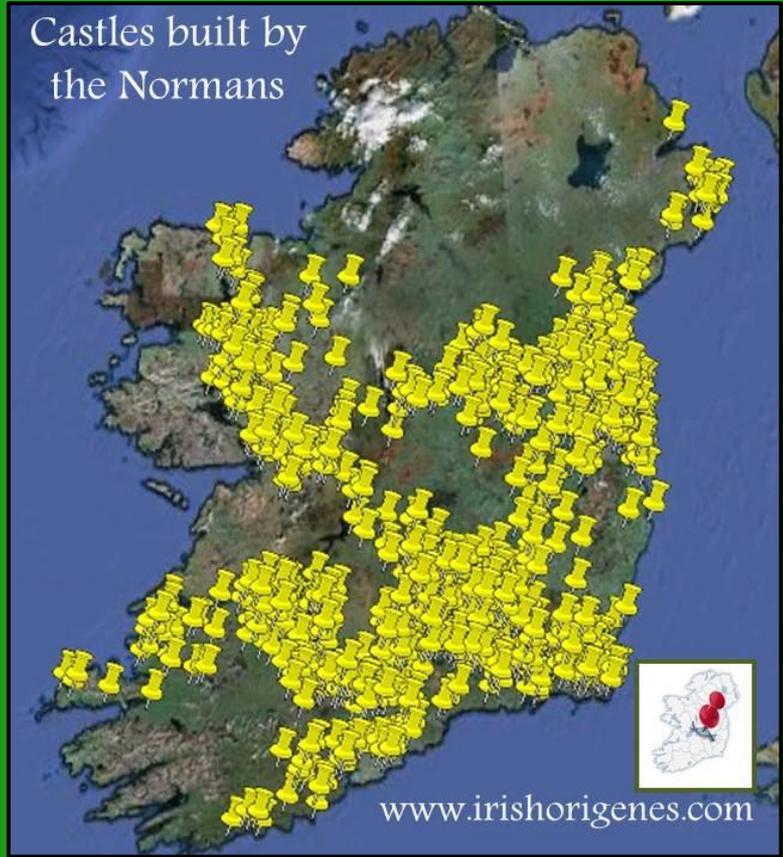
# Distribution of Norman Surnames throughout Ireland



**12-15%**

# THE NORMANS

Arrived in 1169AD  
 Conquered most of the Country and brought with them their Welsh, English, and Flemish followers



Castles built by the Normans



## Conquest and intermarriage

The marriage of Strongbow and Aoife  
 Daniel Maclise (1806-1870) National Gallery of Ireland

# Some of Ireland's most notable landmarks are associated with the Normans

Trim Castle built by Hugh de Lacey



Trim Castle aerial view



Hugh de Lacey



www.irishorigenes.com

Hill of Tara, Ireland

Lacey's Trim Castle

Dublin

Meath

Kildare

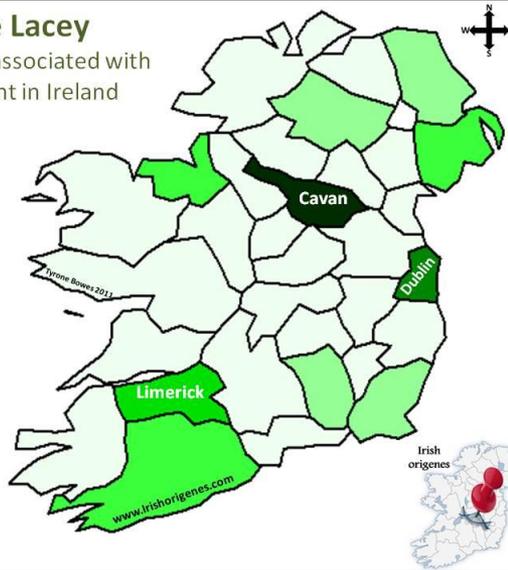
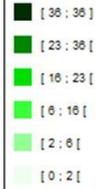
Hill of Tara

# Norman surname distribution

## De Lacy/De Lacey

A Norman Surname associated with Norman settlement in Ireland

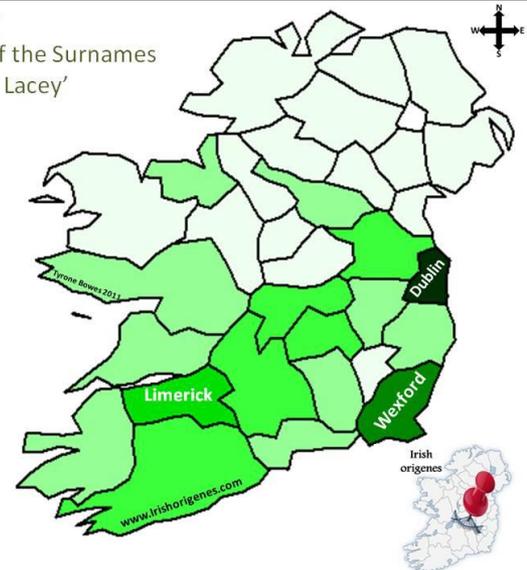
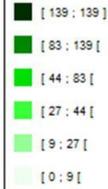
DeLacy/DeLacey



## Lacy

A spelling variation of the Surnames 'De Lacy/De Lacey'

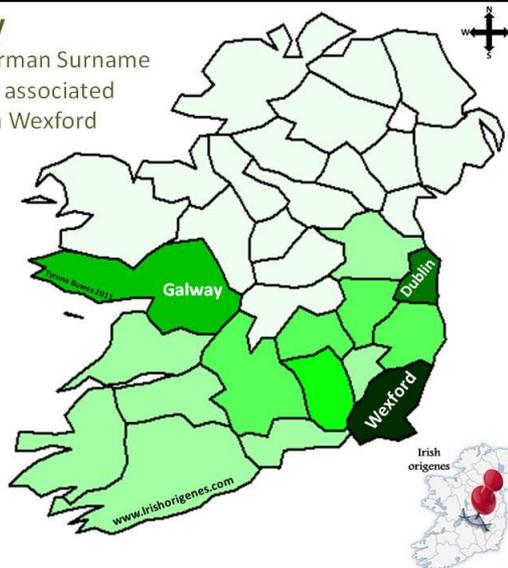
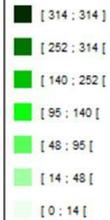
Lacy



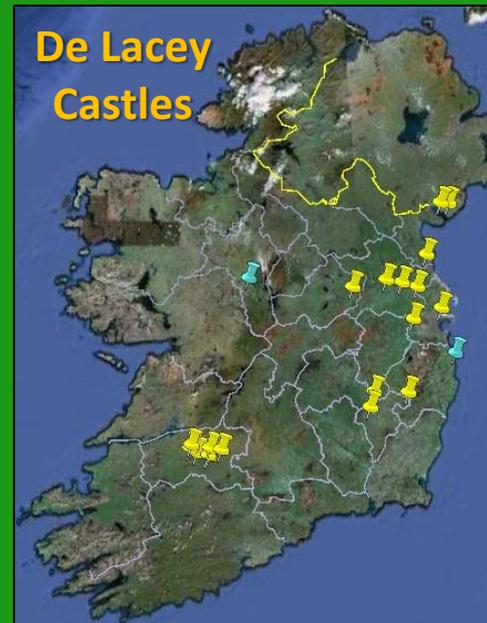
## Lacey

A variation of the Norman Surname De Lacy/De Lacey associated particularly with Wexford

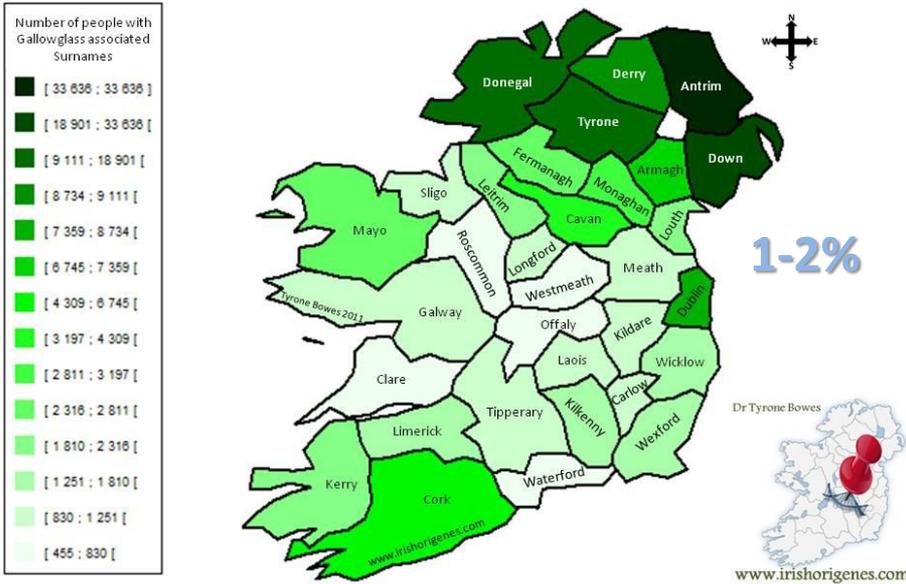
Lacey



## De Lacey Castles



## Distribution of Gallowglass Surnames throughout Ireland

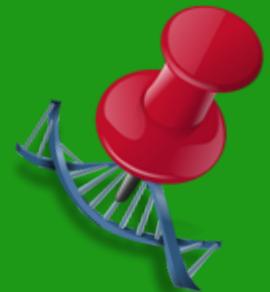


# THE GALLOWGLASS

1259 AD

The first mercenary Scots (of Hiberno-Norse ancestry) arrived from the Highlands and Islands of Scotland

- Whole Clans like the McCabe settled in Ireland.
- Some Scottish Clans like the McDonald's settled permanently in Antrim in Ireland's Northeast coast in order to monopolise the trade in mercenaries.



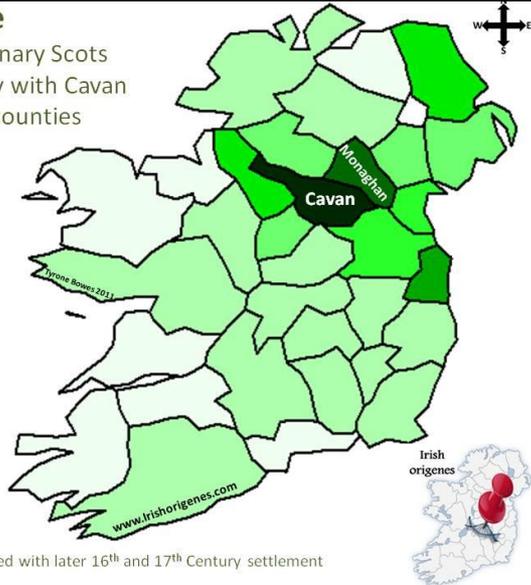
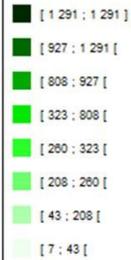
Albrecht Dürer, 1521 Gallowglass and Kern

# Gallowglass surname distribution

## McCabe

Gallowglass / Mercenary Scots  
Associated particularly with Cavan  
and surrounding counties

### McCabe

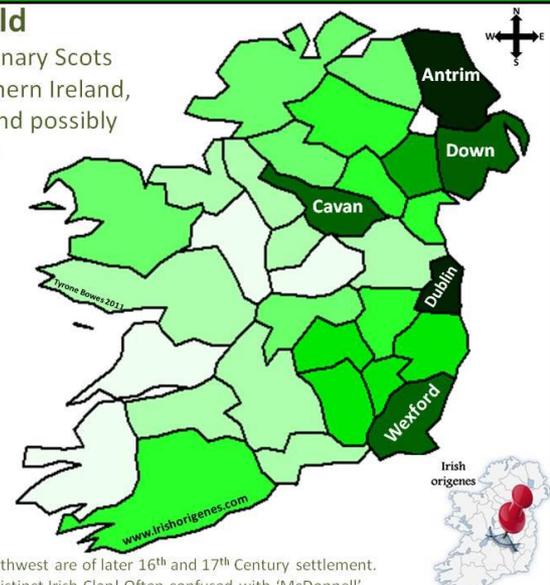


Note: Some McCabe's are associated with later 16<sup>th</sup> and 17<sup>th</sup> Century settlement

## McDonald

Gallowglass / Mercenary Scots  
associated with Northern Ireland,  
particularly Cavan and possibly  
Wexford

### McDonald

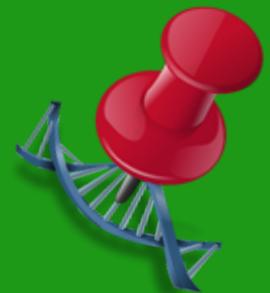
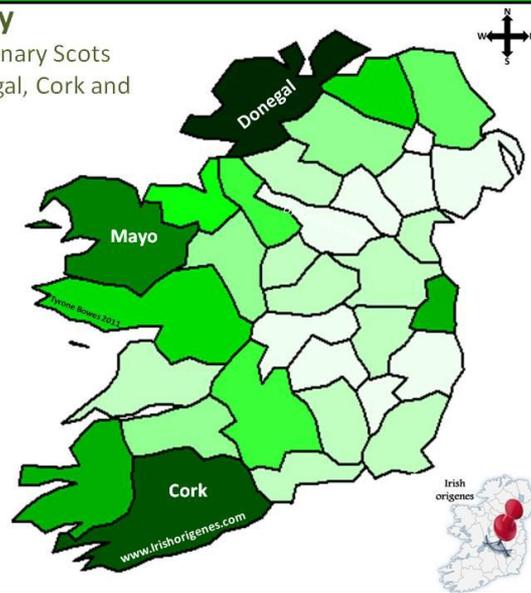


Note: Some 'McDonald' in the Northwest are of later 16<sup>th</sup> and 17<sup>th</sup> Century settlement.  
'McDonald' in Wexford may be a distinct Irish Clan! Often confused with 'McDonnell'

## Sweeney

Gallowglass / Mercenary Scots  
associated with Donegal, Cork and  
Mayo

### Sweeney

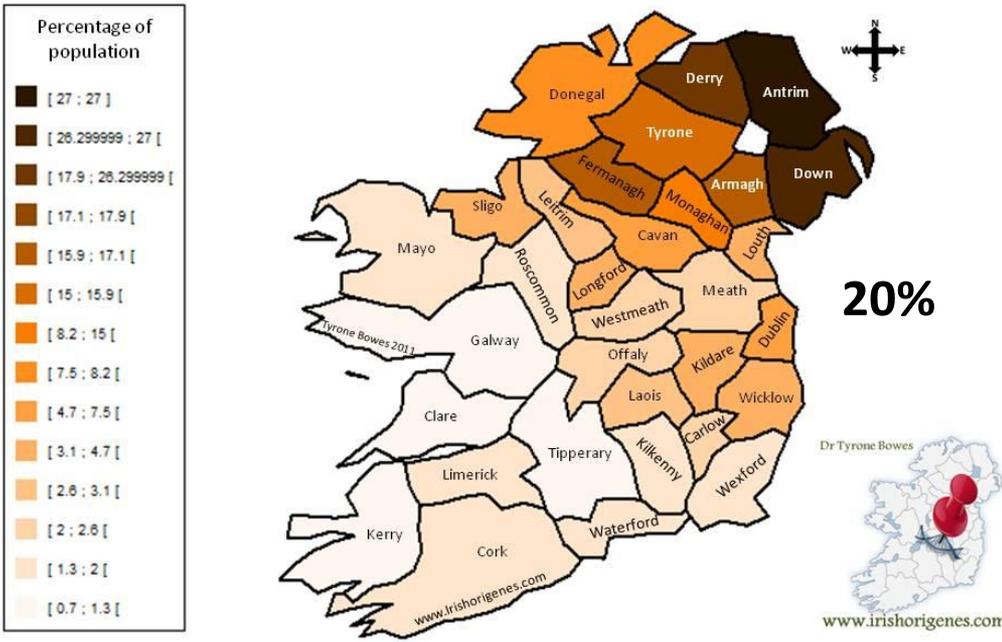




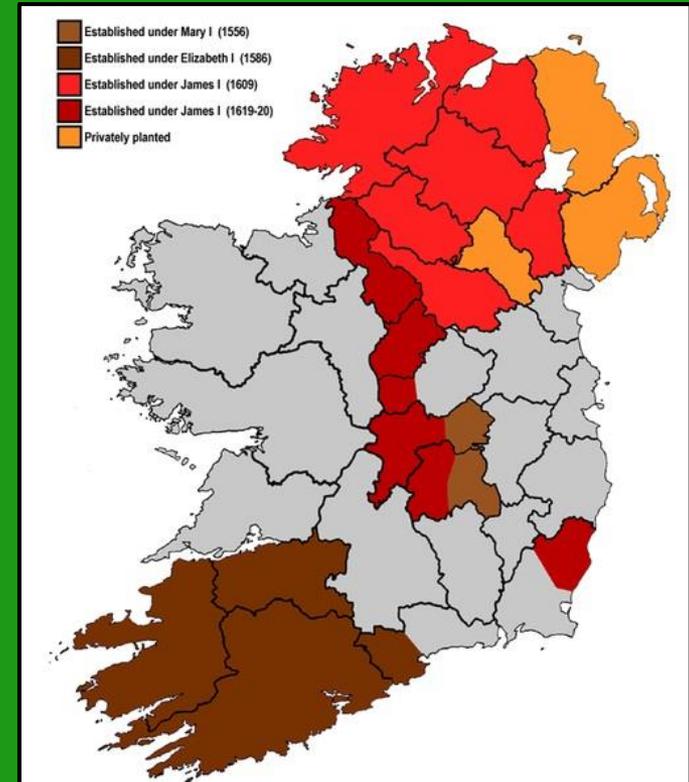
# 1556AD-1652AD The Plantations of Ireland

## English speaking Protestant Lowlander Scots and English

Distribution of people with Surnames associated with 16<sup>th</sup> and 17<sup>th</sup> Century plantations



settlement

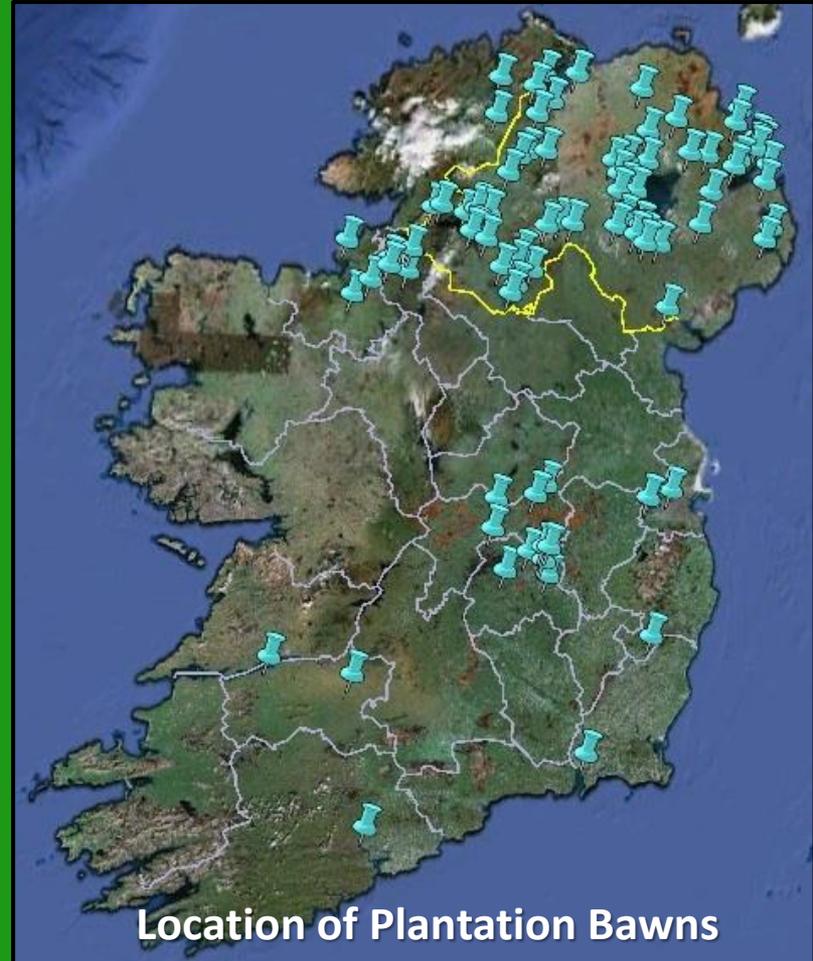


# Plantation Bawns

Parke's Plantation Bawn County Leitrim



Surnames associated with Plantation settlement show a much broader pattern of settlement



Location of Plantation Bawns



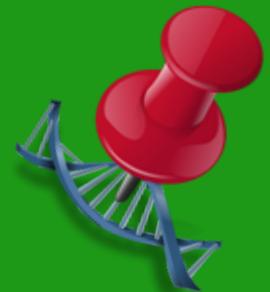
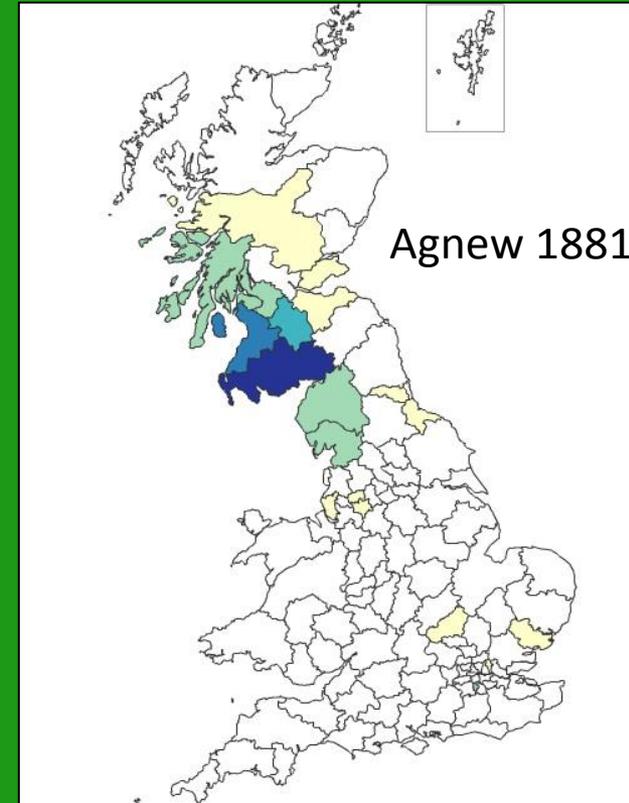
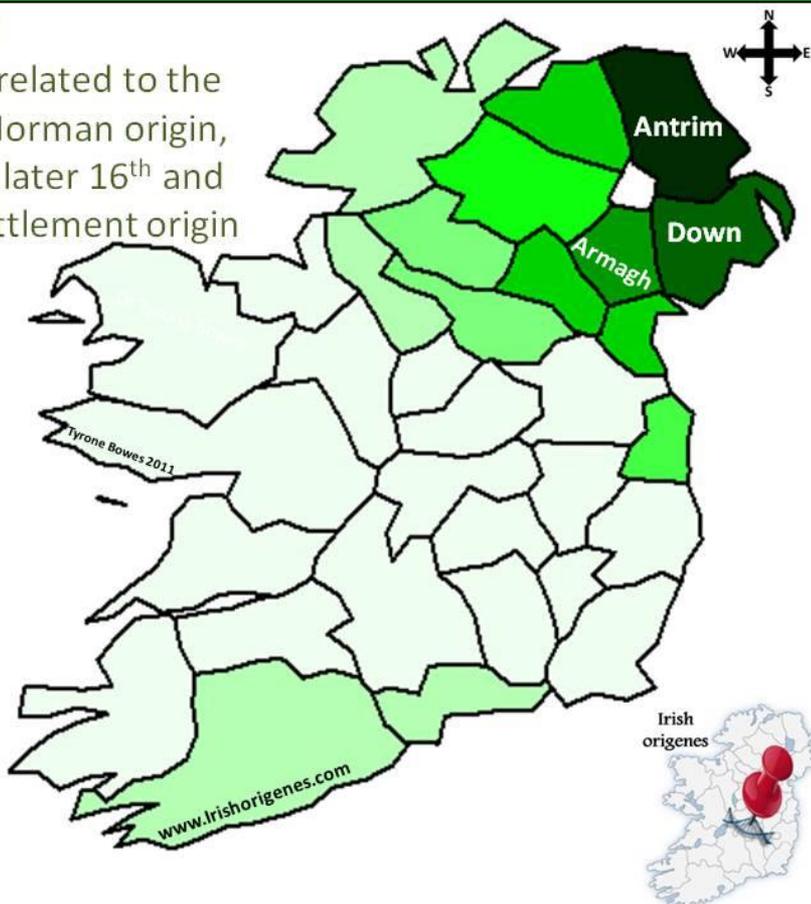
# Ulster-Scots/Scots-Irish surname distribution

## Agnew

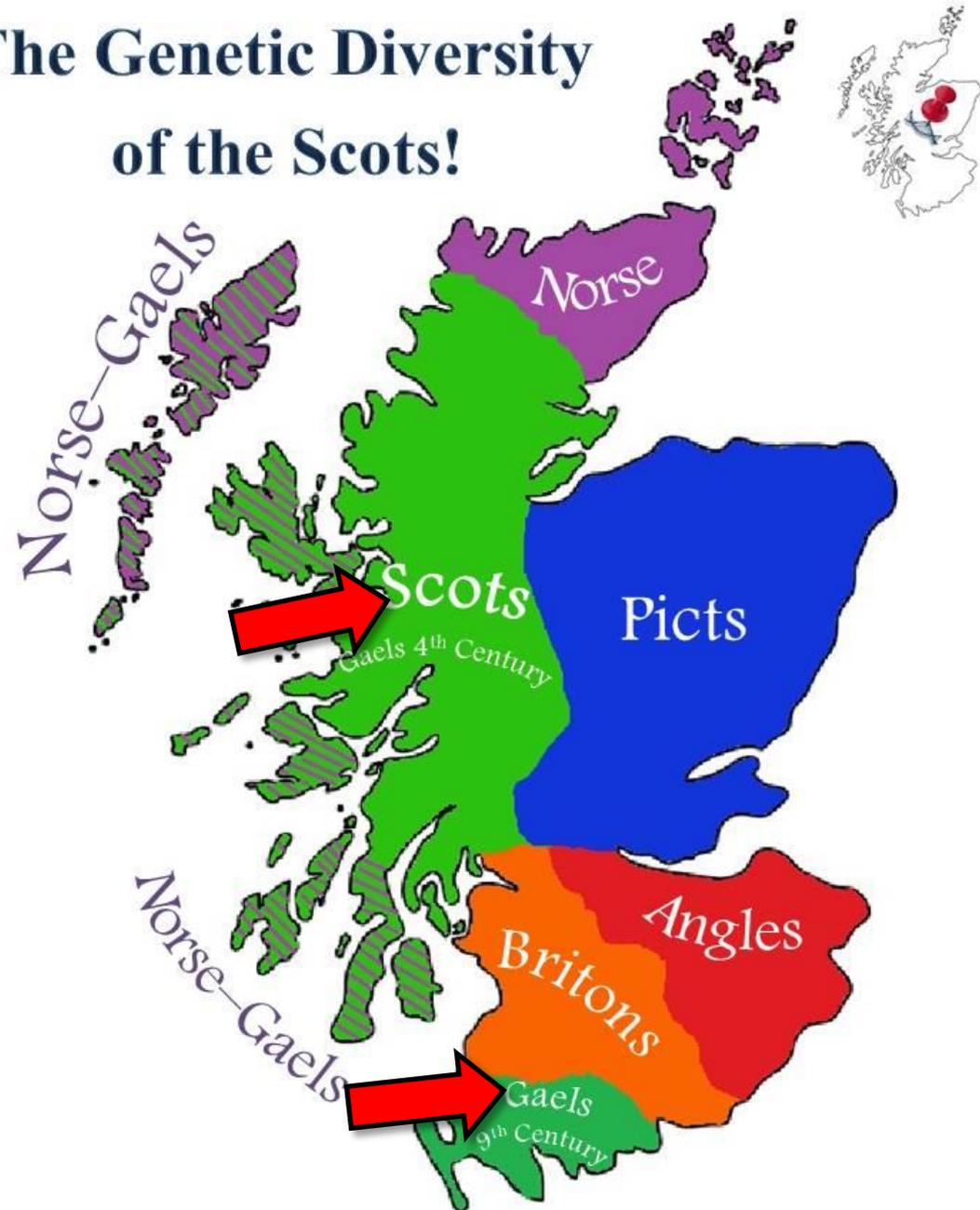
Some are Native Irish (related to the O'Neills), some are of Norman origin, but the majority are of later 16<sup>th</sup> and 17<sup>th</sup> Century Scottish settlement origin

### Agnew

■	[ 901 : 901 ]
■	[ 393 : 901 ]
■	[ 89 : 393 ]
■	[ 71 : 89 ]
■	[ 62 : 71 ]
■	[ 40 : 62 ]
■	[ 13 : 40 ]
■	[ 3 : 13 ]
■	[ 0 : 3 ]



# The Genetic Diversity of the Scots!



Commercial DNA testing  
has revealed that many of  
the Lowlander Scots are  
descended from Irish  
settlers

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

'use your DNA to rediscover your Scottish Heritage'

# After the Cromwellian Conquest of the 1650's a distinction was no longer made between Gaels and Norman (they became the Irish)

Today only modern commercial ancestral DNA testing can make that distinction and reveal whether your Irish ancestors were Gaels, Viking, old English/Norman (English, Welsh, Flemish, Bretons), Gallowglass, or 16<sup>th</sup> and 17<sup>th</sup> Century Planters

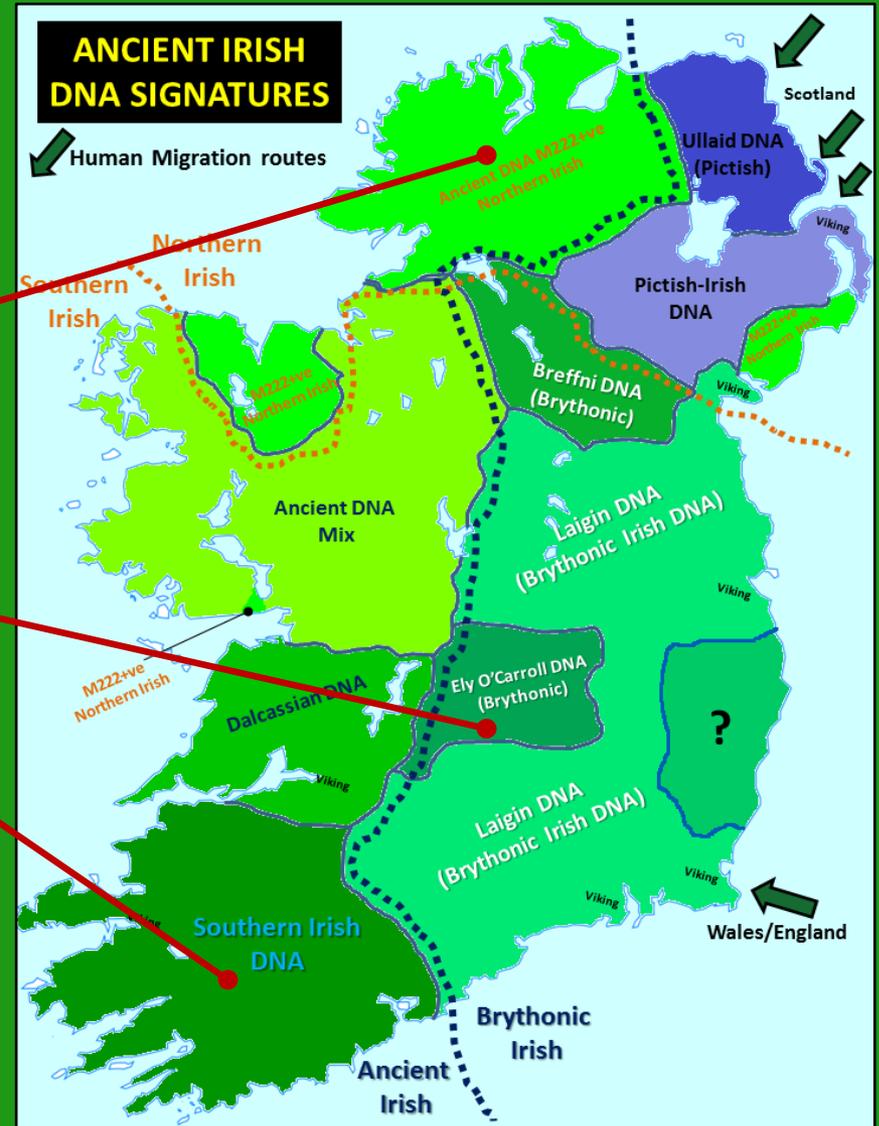
My 5 original Guinea Pigs

4 from Dublin, 1 from Dundalk, all Catholic Irish background



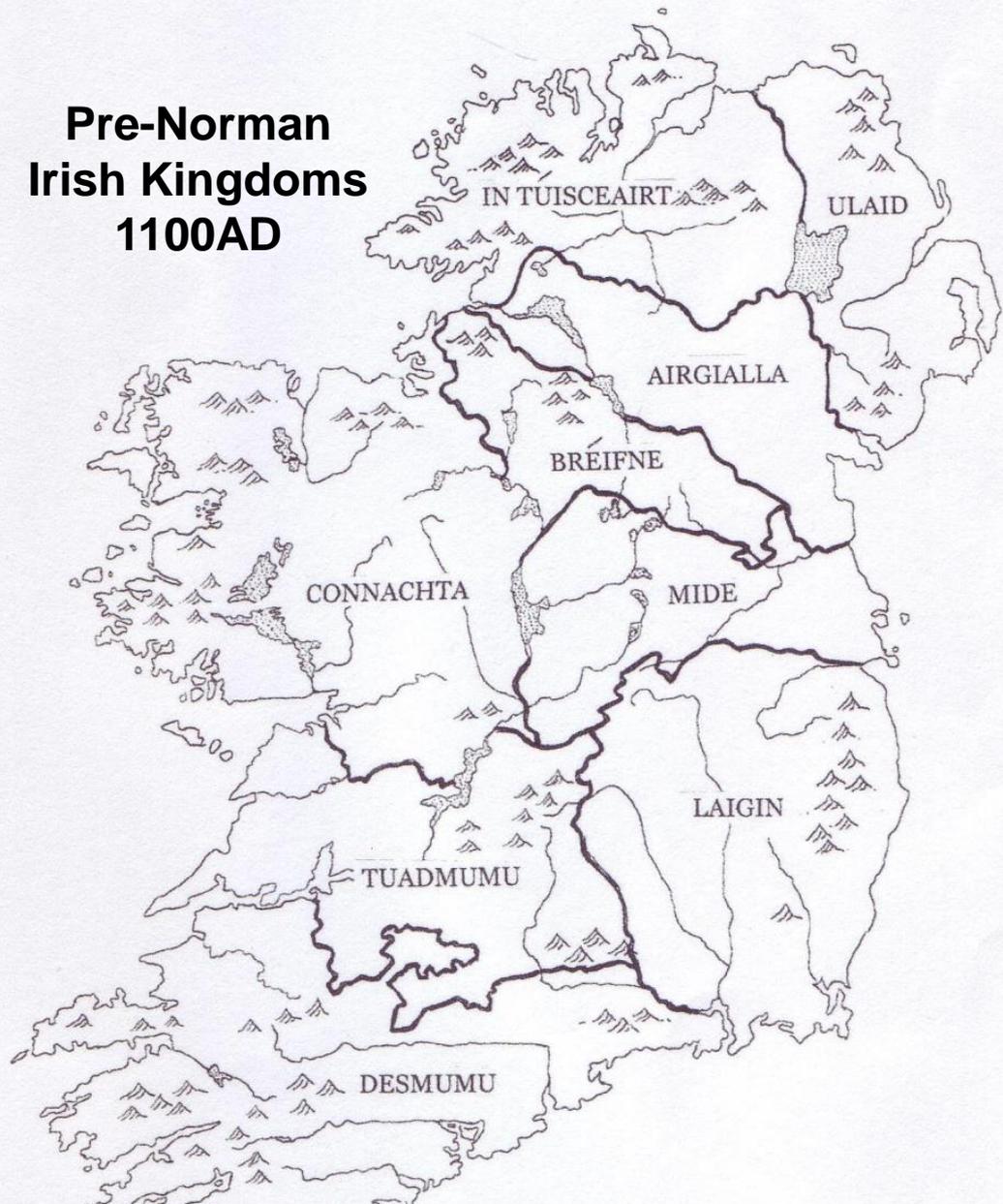
# The Gaels were not a homogenous population

Gaels



Gaelic Irish DNA 'signatures' reflect the political division (Kingdoms) of Pre-Norman Ireland

Pre-Norman Irish Kingdoms 1100AD



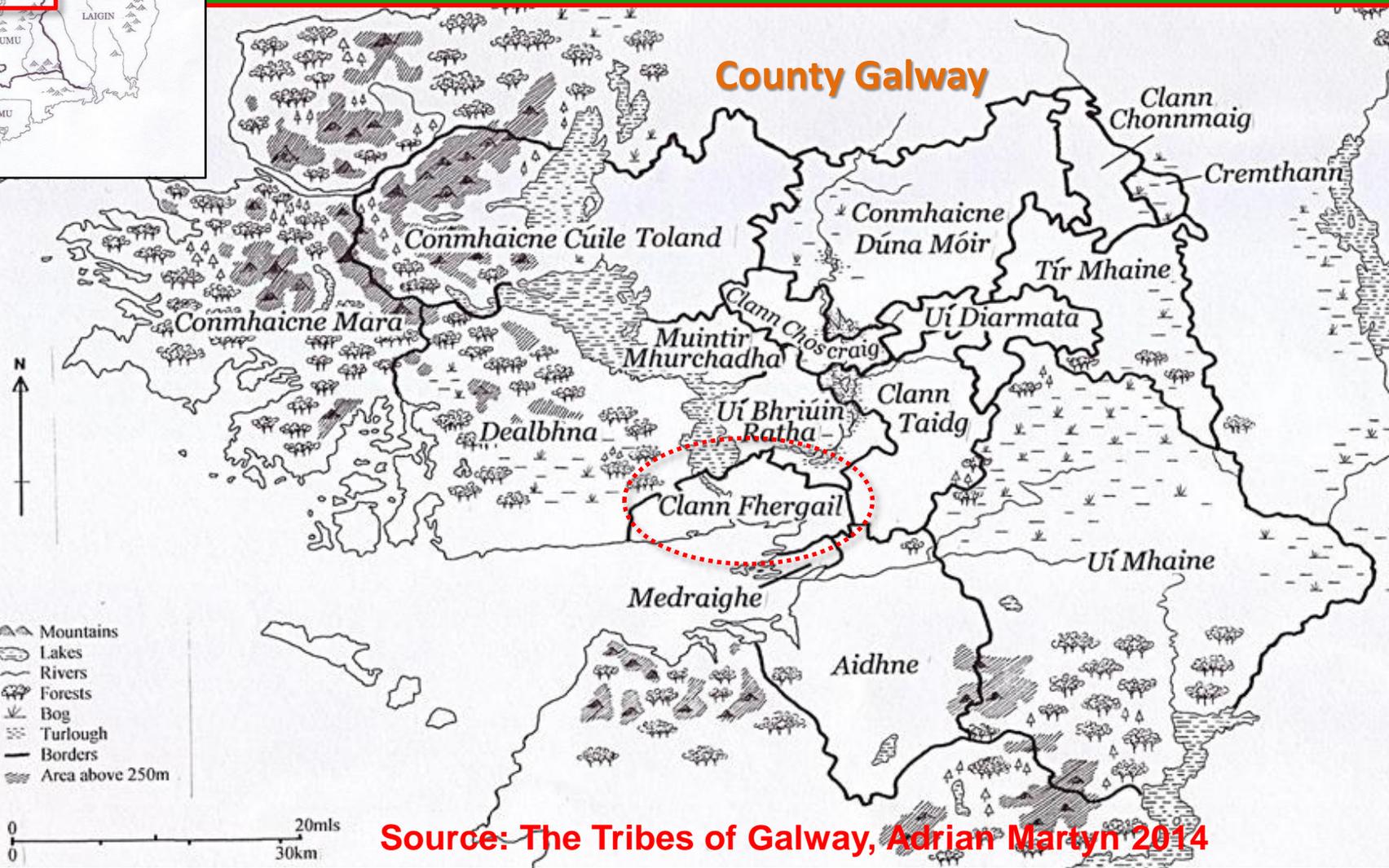
Source: The Tribes of Galway, Adrian Martyn 2014

**Commercial ancestral DNA testing is beginning to re-write the history on the origin of, and differences between the people that lived in these Kingdoms and Lordships**



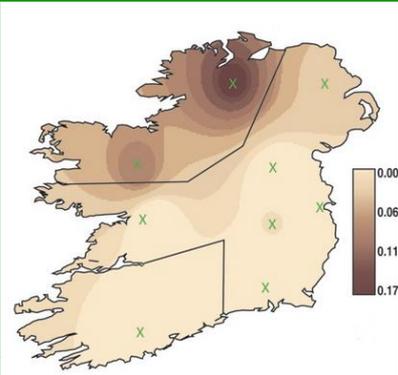
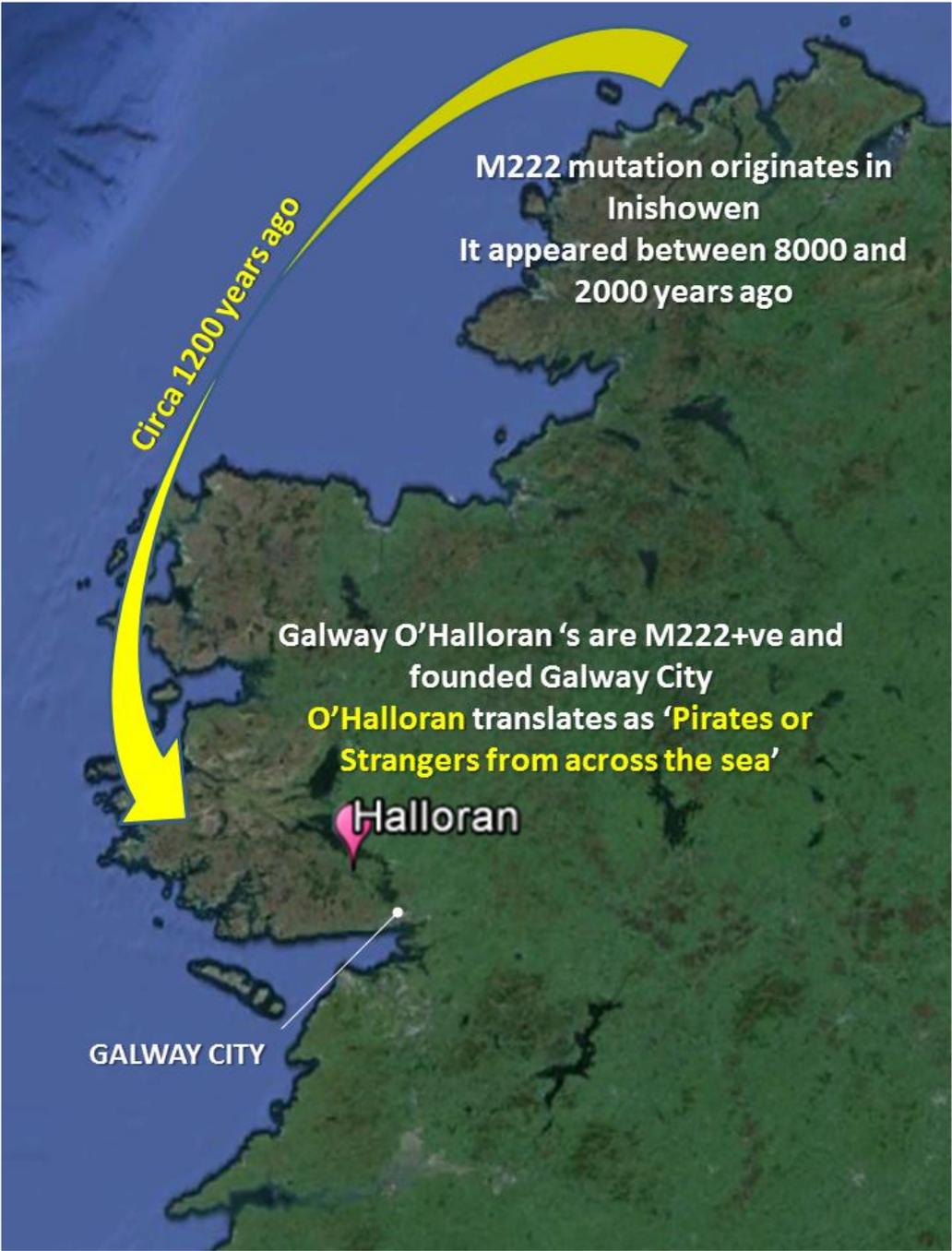
# There were 'many' lordships within each Kingdom in Pre-Norman Ireland

Commercial DNA testing reveals the origin of these tribal groups  
**Clan Fergail; O'Hallorans, Floods, and Tullys**



**Source: The Tribes of Galway, Adrian Martyn 2014**

DNA reveals that Clann Fheargail were northern Irish who colonised Galway



Niall of the nine hostages DNA marker

## Points of Note

- Compared to the rest of Europe there have been far fewer and less drastic population movements.
- Most of Ireland remained essentially an agrarian society which means that surnames can still be found concentrated in the areas where they either first arose (Gaels) or where one's ancestors settled (Vikings, Normans, Gallowglass)



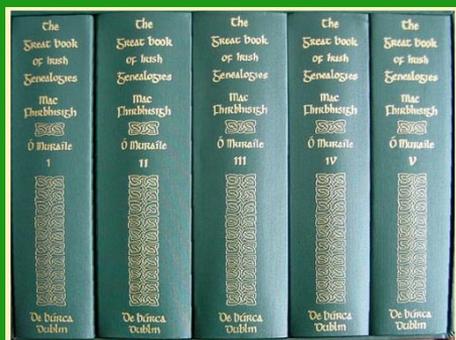


# GENES

## What's in a name?

## Surnames and the Y chromosome

*'Before long I'll be dead, and you and your brother and your sister and all of her children, all of us dead, all of us rotting underground. It's the family name that lives on.'*



- 'Clan' is an Irish (Gaelic) word which translates as 'Family'
- The Irish were obsessed with Genealogies
- It mattered who you were in Medieval Ireland
- It is no coincidence that Ireland was the first European Country to adopt paternally inherited surnames that are a genealogical record in themselves
- All Irish surnames have been anglicised to some degree

Mac/Mc' = 'son of' (MacMahon = son of Mahon)

O' = 'Grandson of' (O'Brien = Grandson of Brien)

Gil/Kil/Mul = follower of, devotee of (MacGillopatrick = son of the follower of Patrick)

Fitz = Fils' son of (Fitzgerald = son of Gerald)



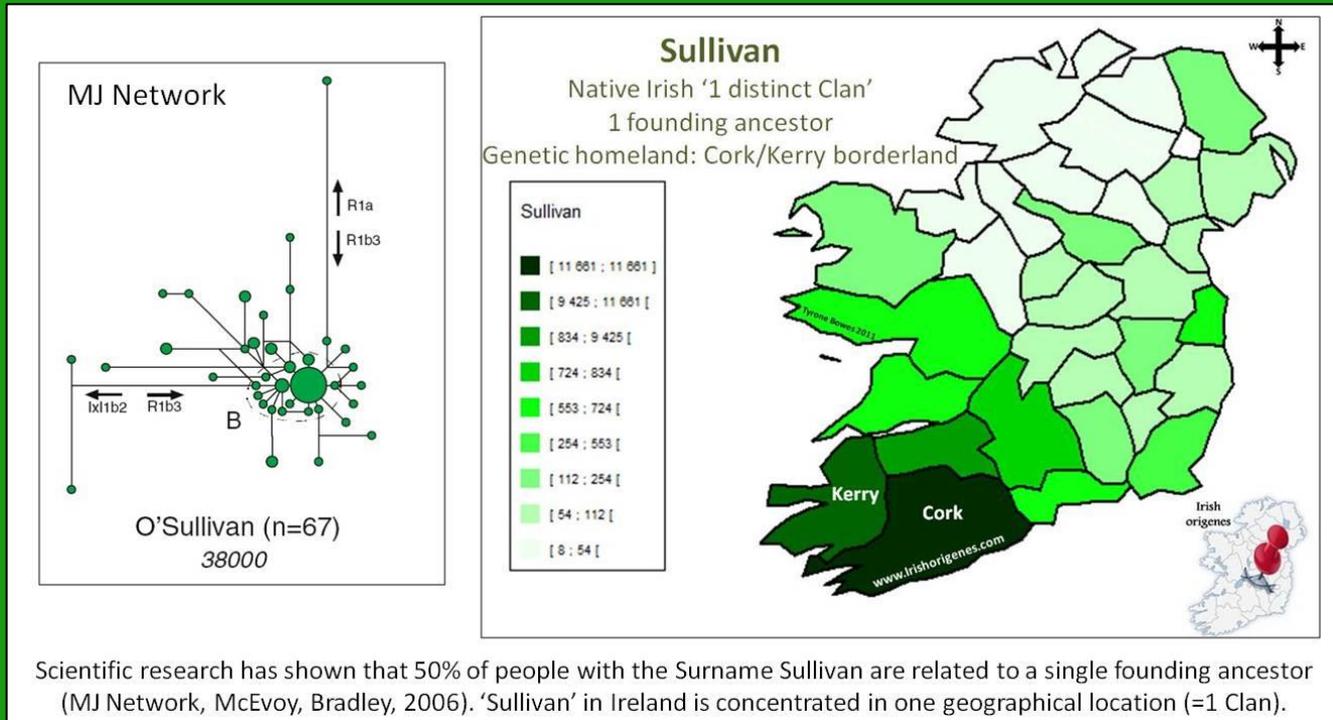
# Irish Surnames and DNA Analysis

In Medieval Ireland You had to have been someone notable or done something notable to deserve your own family name.

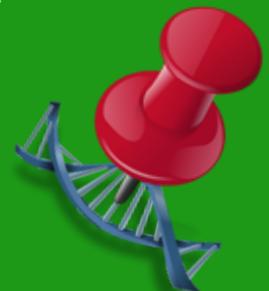
1. Irish surnames are overwhelmingly 'Patronyms' (son of, Grandson of, follower of)
2. Elsewhere in Europe surnames can be occupational, denote physical characteristics, geographical, or derived from nicknames
3. **'One man one Clan' (surname 'Adams')**
4. Surnames have been extensively anglicised

**Irish researchers conducted a DNA study in 2006 that looked at Irish surnames and relatedness**

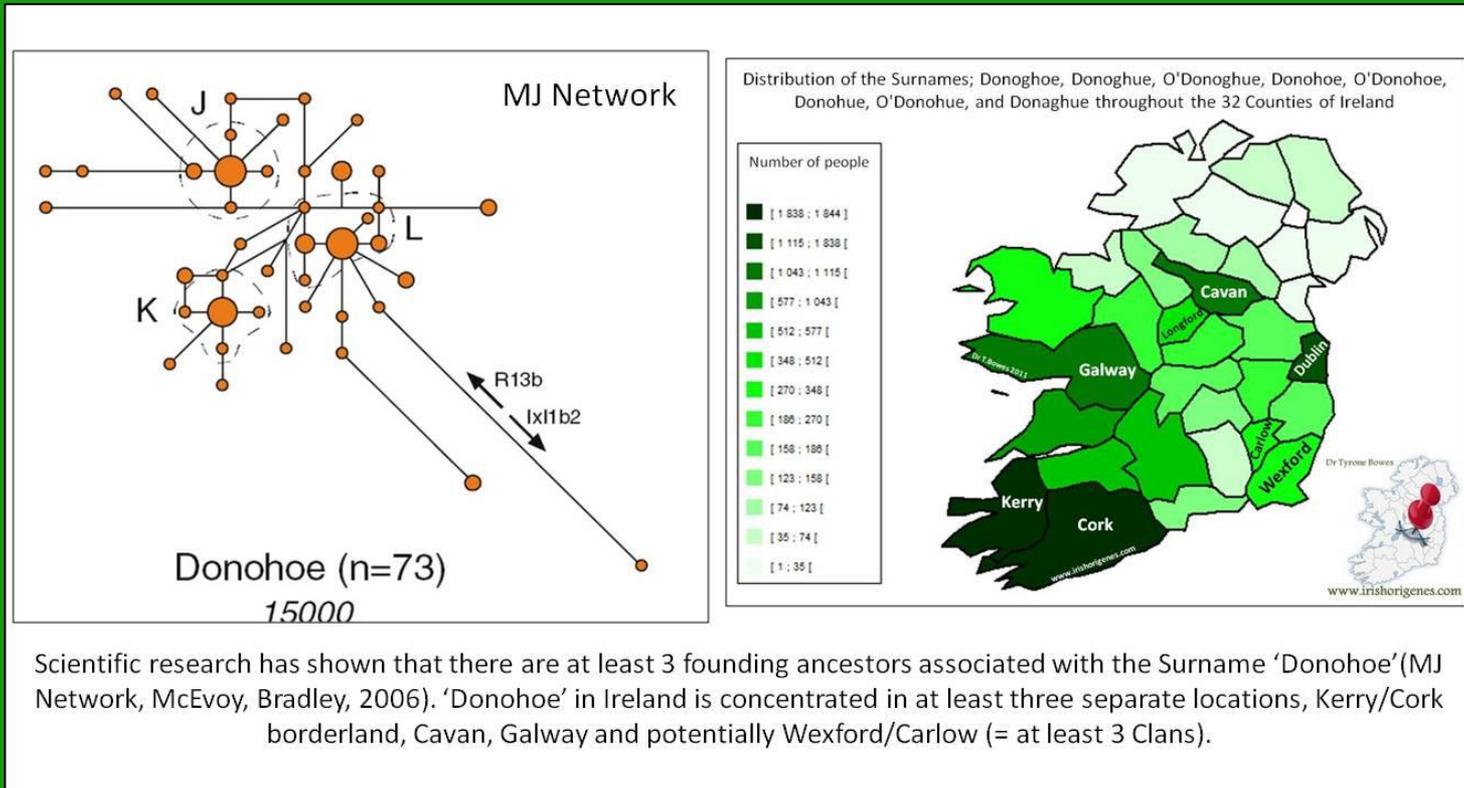
- DNA analysis of males called Sullivan surname revealed that 50% were directly descended from a common male ancestor (the Sullivan-Adam) that lived between 1000 and 1200 years ago!



- 50% of Male Sullivan's have an association with the surname as a results of adoptions infidelity etc... that have occurred since the Sullivan Surname first appeared.
- Surname distribution mapping reveals that the Sullivan surname is associated with a single geographical location found in Irelands Southwest.



- DNA analysis of males with the Donohoe surname revealed that there were 3 distinct Donohoe Adam's and therefore 3 distinct Clans



Scientific research has shown that there are at least 3 founding ancestors associated with the Surname 'Donohoe'(MJ Network, McEvoy, Bradley, 2006). 'Donohoe' in Ireland is concentrated in at least three separate locations, Kerry/Cork borderland, Cavan, Galway and potentially Wexford/Carlow (= at least 3 Clans).

- 50% of Male Donohoe's are descended from three Donohoe Adam's.
- Surname distribution mapping reveals that the Donohoe surname is associated with at least 3 distinct geographical locations.



## Points of Note

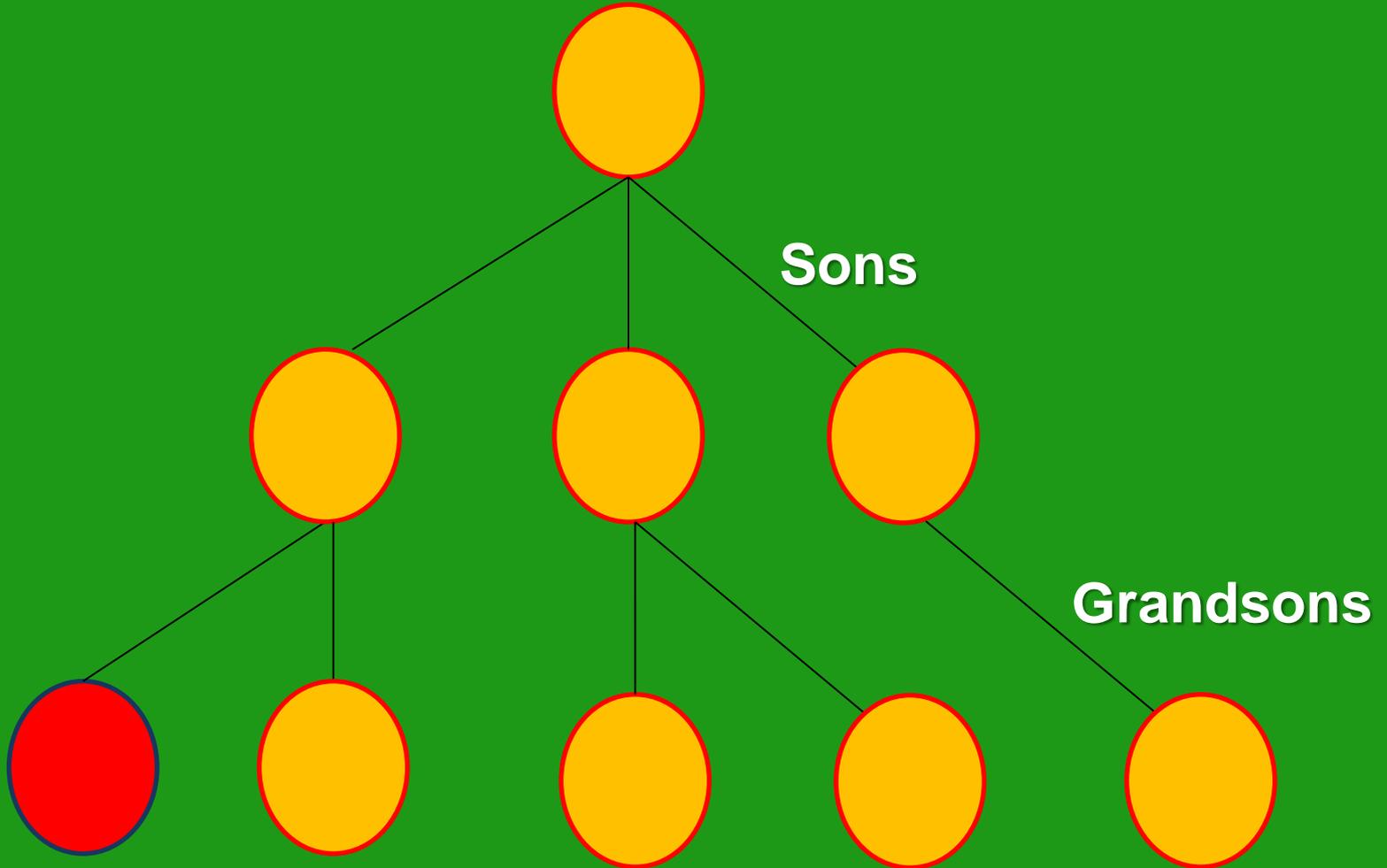
- DNA analysis revealed surname 'Adams' (single founding male)
- Some surnames (like O'Sullivan) are unique with a single surname Adam and associated with a single geographical location.
- Some surnames are based on common personal names (like Donohoe) and multiple Adams and multiple geographical locations.
- 50% rule.



But surnames were evolving over many hundreds of years

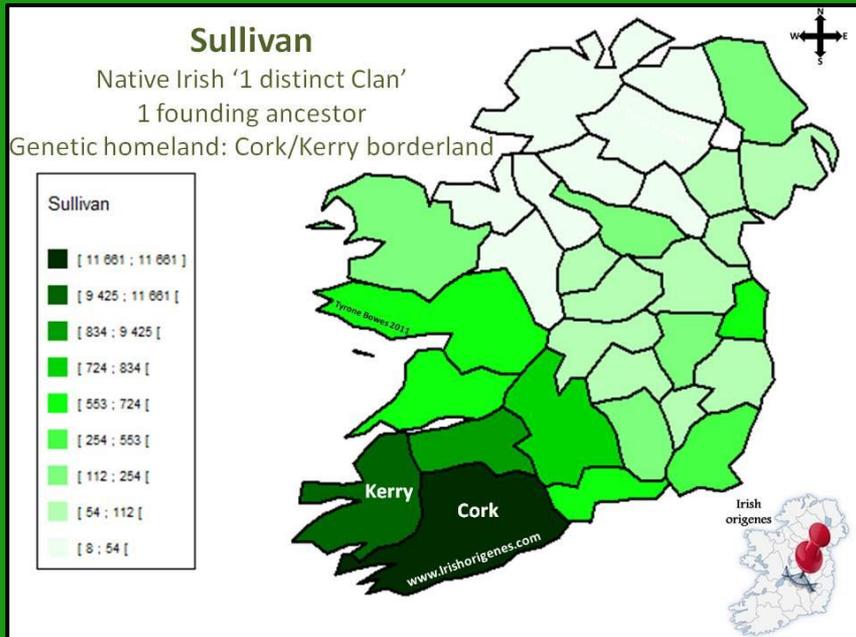
## O'Sullivan Adam

(Grandson of the little dark eyed one)

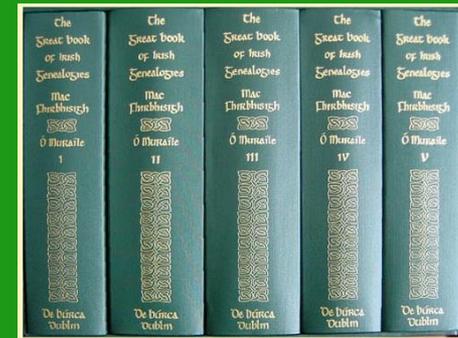


McGillicuddy surname Adam

New surnames were appearing over an estimated 500 year time frame

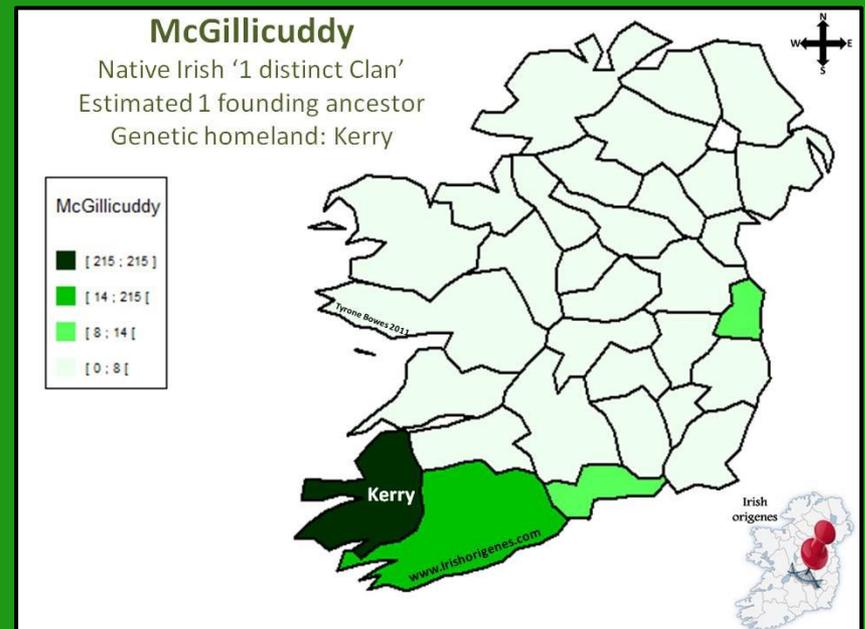


The Medieval Genealogies reveal that the McGillicuddy's descend from the Sullivan's



Both Sullivan and McGillicuddy are associated with the same area

If your name is McGillicuddy your DNA results may show DNA matches to other McGillicuddy's but also Sullivan's



About 1,200 years ago in Ireland paternally inherited surnames appear



But surnames were evolving or appearing over a 500 year time frame  
You will have certain particular surnames associated with certain area that arose  
among related individuals



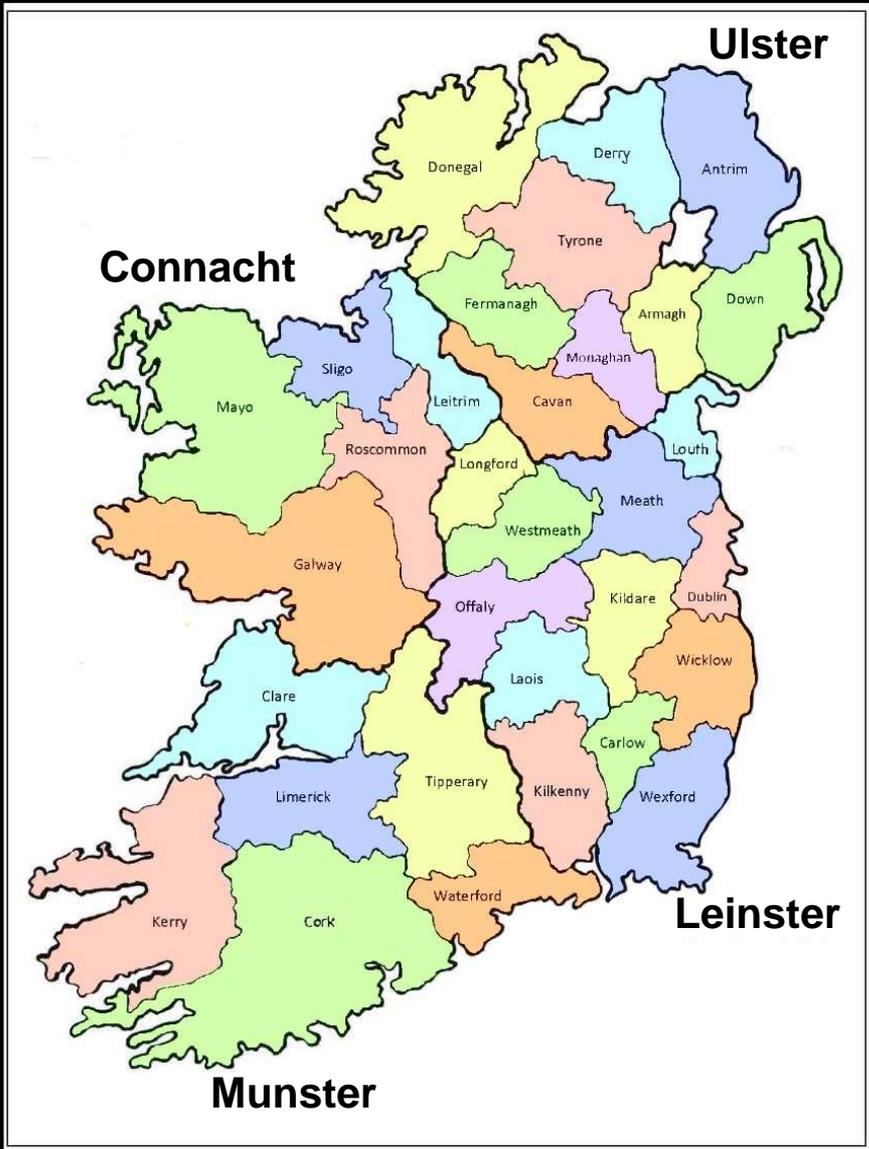
## Points of Note

- Estimated 1,500 surnames that are exclusive to a specific area
- Irish surnames can still be found concentrated in the areas where they first appeared
- Viking, Norman, Gallowglass, and Ulster Scots surnames can still be found in the areas where they settled
- A limited number of Irish surnames will have arisen in a specific area among related individuals
- Those surnames are revealed in DNA test results



# GEOGRAPHY

## Land division in Ireland



Ireland



Province (x4)



County (x32)



Parish(Civil/Ecclesiastical)  
Baronies (many)



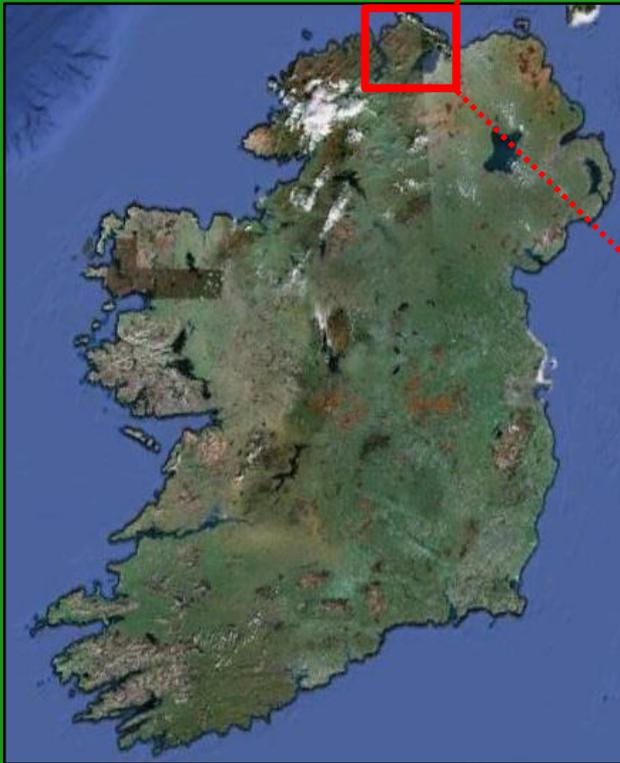
Townland (approx. 61,402)

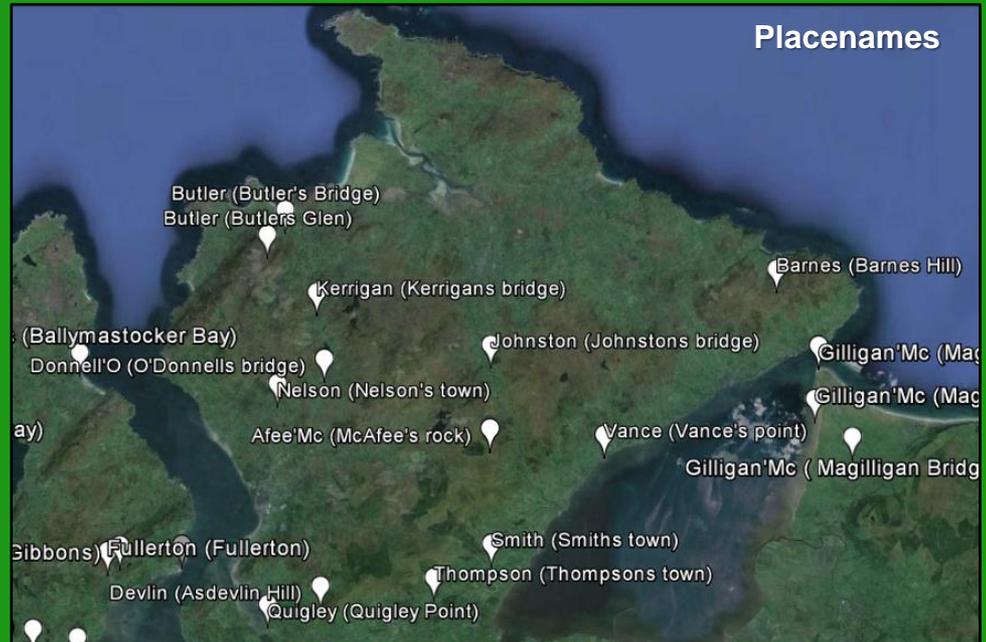
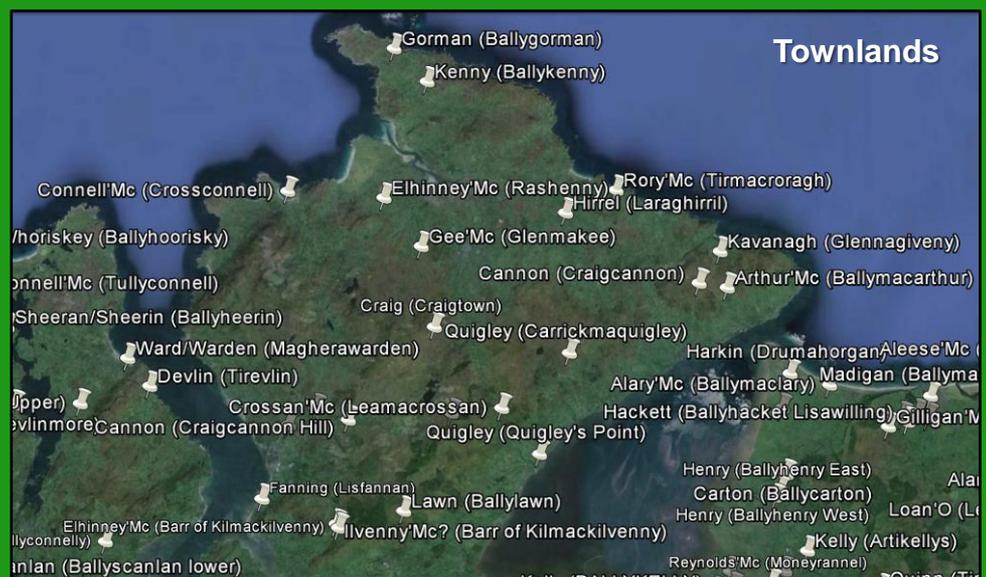
# Townlands

- Smallest geographical division of land used in Ireland
- Unique to Ireland
- Many pre-date the arrival of the Normans in Ireland (in 1169AD)
- ***Many Townlands bear the names of the Clans/Families that lived, arose, or settled there!!***
- Amazingly your modern commercial ancestral DNA results can potentially pinpoint your direct male ancestor to a specific Townland



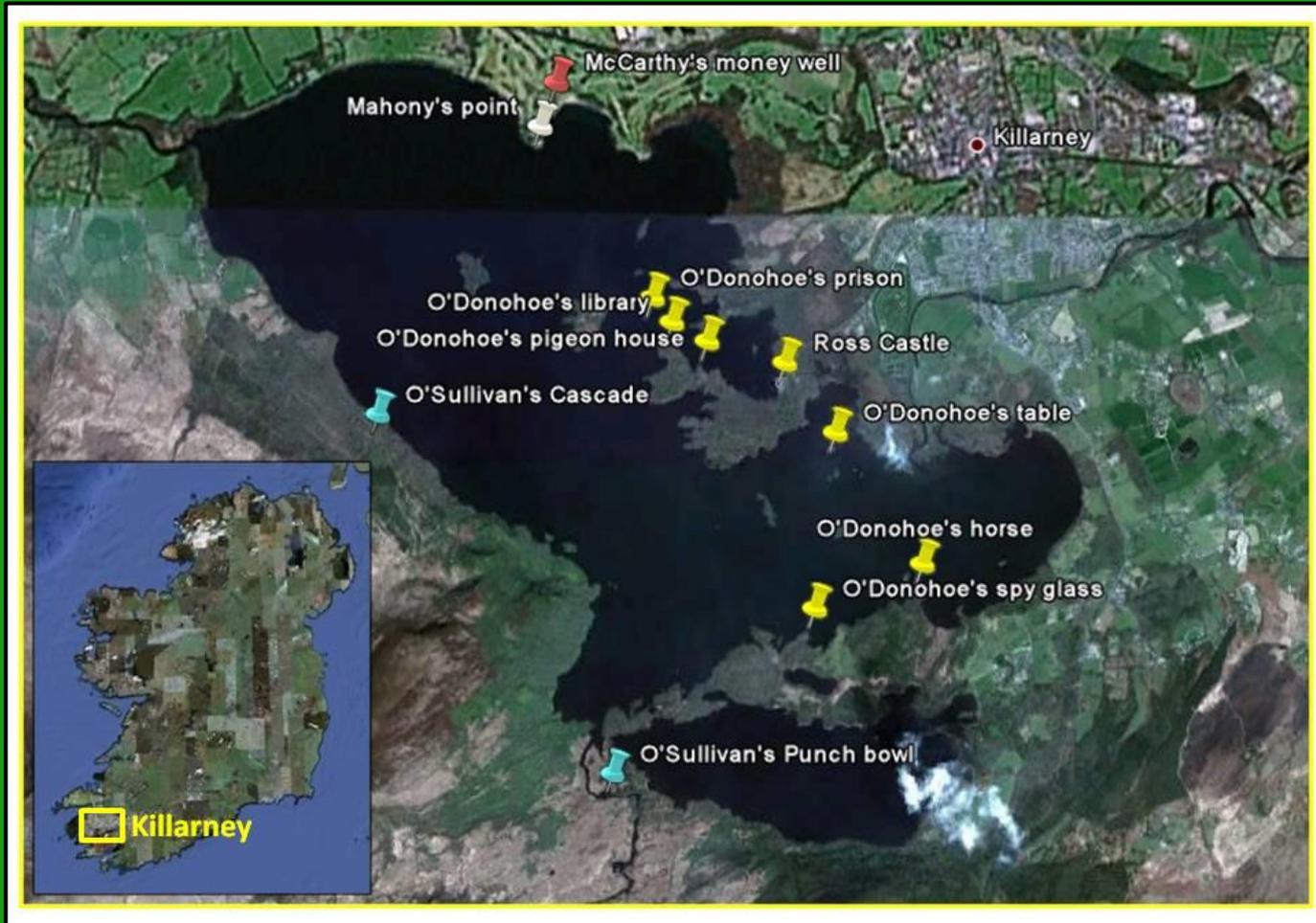
Lets look at Inishowen  
In County Donegal





There is a wealth of information on ones ancestors in the landscape of Ireland

# This wealth of information is found throughout Ireland



Even in a small area like Killarney there are many placenames associated with the Clans and Families that lived there



## In Summary

Commercial ancestral DNA testing can reveal;

1. Whether your Irish ancestors were of Gaelic, Viking, Norman, Gallowglass, or Scots-Irish origin
2. Whether after an estimated 1000 years one is still directly descended from one's surnames founding ancestor (50:50 rule)
3. The DNA results can potentially pinpoint precisely where your direct male ancestor lived/settled (75% success rate)
4. Since this is a scientific approach you can prove the association with a pinpointed area by DNA testing people still living there.
5. The DNA results are shedding new light on the history of Ireland



Use your DNA to rediscover your Irish Heritage

## Irish Origenes



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

End of Session 1  
Any questions?

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