

McCauley – A Case Study

CONTACT ME (tyronebowes@gmail.com) IF YOU HAVE A QUERY
OR FOR A FREE CONSULTATION ON YOUR DNA RESULTS OR
TO FIND OUT WHERE TO TAKE A DNA TEST

If you are a McCauley from Inishowen or you believe that you may be a genetic
match to the test subject then please contact **Mr Jerry McCauley:**
jmichaelmccauley@gmail.com

Pinpointing the MCCAULEY Paternal Ancestral Genetic Homeland

www.irishorigenes.com



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

Dr Tyrone Bowes
Updated 5th September 2014

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INTRODUCTION

A simple painless 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 'McCauley' was living in close proximity to others with whom he was related but who inherited other surnames like McGonigal, McLaughlin and Doherty. Given that 1,000 years have passed since paternally inherited surnames were first 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 Y-DNA test results.

In Ireland surnames can still be found concentrated in the area where they first appeared or in the area where ones ancestors settled. One can therefore use census data to determine the origin of the surnames that appear in one's Y-DNA results, identifying an area common to all, and reveal one's '**Paternal Ancestral Genetic Homeland.**' The paternal ancestral genetic homeland is the 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 ancestor first inherited his surname, surrounded by relatives who inherited others. It is the area where ones ancestors left their mark in its placenames, its history, and in the DNA of its current inhabitants. Since modern science can pinpoint a paternal ancestral genetic homeland it can also be used to confirm it by DNA testing individuals from the pinpointed area.

Notes of caution!

1. In Ireland each of the estimated 1,500 unique surnames had a single founding ancestor, that's an estimated 1,500 Adams from whom anyone with Irish ancestry can trace direct descent. But science has demonstrated that only 50% of individuals with a particular Irish surname will be related to their 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 1,000 years ago. As a result if your recent Irish ancestors were descended from 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 paternal ancestry are related to the pre-Christian Celtic tribes of Ireland. One must approach this process with an open mind!

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Interpreting the Y-DNA results

To pinpoint a paternal ancestral genetic homeland one must first identify the surnames that reappear as genetic matches. These recurring matches will typically reflect the surname of a medieval ancestors neighbour. Results for test subject 'McCauley' are shown in **Figure 1**.

Test Subject	Haplogroup	Y-DNA Test Results										
		exact	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
McCauley ¹	M222	-	-	-	-	-	-	-	-	Taylor(x3) ² McGinnis(x2) McGonigal(x8) Carnes(x3) Daly(x7)	Carroll(x5) Quinn(x10) Coyne(x3) ² McCamis/McAmis(x4) McKown/McCown/McGowan(x15) ^{2?} Murphy(x10)	Boyle(x5) O'Donnell(x7) Glass(x4) McAdam(x12) McGroary/McCrory(x4) Reid/Reed(x11) McCaffrey(x2) Byrne/Burns(x15) Savage(x2)

Figure 1: Recurring genetic matches to test subject McCauley as revealed by commercial ancestral Y-DNA testing. *The surnames that appear as a genetic match to the test subject McCauley are NOT RANDOM; some appear as frequent genetic matches.* Surnames are shown at the point at which they first appear as a genetic match e.g. the first match to a McGonigal occurs at 103/111 markers, although not all McGonigals may match at that level. ¹Mr McCauley is a genetic match to other McCauleys at the 67 marker level. ²Individuals from the same close family recruited for Y-DNA testing and excluded from further analysis. Font colour denotes the ethnicity associated with each surname; **Irish**, **Scottish**, blank font indicates multiple associated ethnicities.

Upon Y-DNA testing Mr McCauley matched multiple individuals called McCauley. This indicates that he is part of the 50% of males who after an estimated 1000 years are directly descended from a McCauley-Adam (the first to take the McCauley surname). The McCauley surname can be of Irish or Scottish origin, but Mr Cauley's closest and most frequent genetic matches are to exclusively Irish surnames like McGonigal, Daly, Quinn, Murphy and Carroll; indicating a paternal ancestral link with Ireland, see **Figure 1**.

An examination of the McCauley surname in Ireland reveals a number of common spelling variants and an association with a number of locations found within the North of Ireland, see **Figure 2**. The McCauley farming community is not uniformly distributed throughout Ireland, and a close examination reveals 6 major clusters of McAuley, McCaughley, McCawley, McCowley and even Cawley farmers, see **Figure 3**. Each farming cluster may represent the descendants of a distinct McCauley Clan, each founded by a McCauley-Adam; which arose in, and is historically associated with each location. Since the test subject is descended from a McCauley-Adam his ancestry is linked with one of these Irish McCauley farming communities. An examination of Irish placenames reveals a number that may be references to the McCauleys, these placenames correspond to areas where farmers called McCauley are found in early census data, see **Figure 3**.

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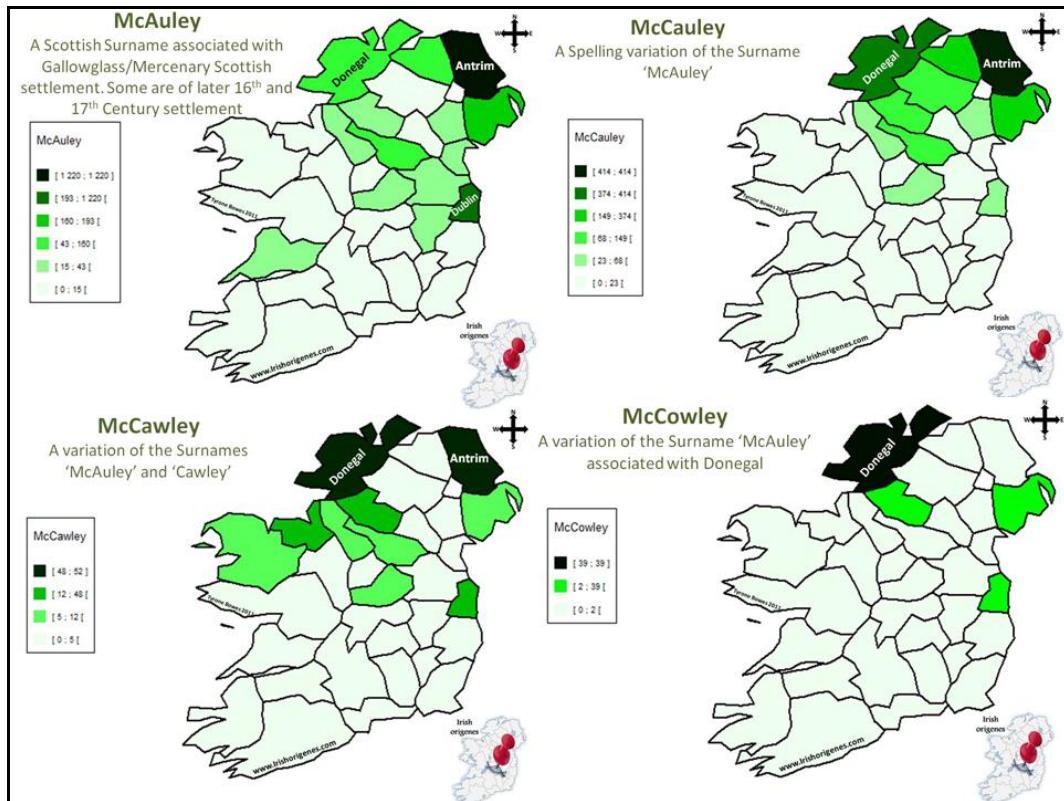


Figure 2: The McCauley surname in Ireland. Although there are a number of spelling variations associated with the McCauley surname, they are all overwhelmingly associated with the north of Ireland. The McCauley surname can also be of Scottish origin and some McCauleys may have arrived in Ireland as either mercenary Scottish Gallowglass or later plantation settlers.



Figure 3: Census data reveals a number of distinct McCauley Clans. There are 6 distinct clusters of farmers with surnames that may have evolved over both time and distance into McCauley including; McAuley, McCowley, McCaughley and Kilcawley (left panel). The McCauley surname is also associated with the West of Scotland and at least 4 of these McCauley/McCauley clusters may ultimately be of Scottish origin. An examination of McCauley placenames reveals that most are associated with the North of Ireland where the surname predominates (right panel).

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Each genetically distinct McCauley Clan arose in a specific location surrounded by Clans with whom they shared common ancestry. This means for example that upon Y-DNA testing the McCauleys of Antrim will have genetic matches to people with surnames like McNeill and McAleese; surnames associated with that County, while the McCauleys of Cavan will have genetic matches to O'Reillys and McCabes; surnames associated with County Cavan. Hence it is Mr McCauley's genetically recurring surname matches as a snapshot of his medieval male ancestor's neighbours which will exhibit a common area of association within Ireland and reveal where his Irish paternal ancestral genetic homeland is to be found (or where his McCauley ancestors lived).

An examination of the distribution of McCauley, McGonigal, McInnis and Daly surnames which appear as Mr McCauley's closest Irish-recurring genetic matches reveals an ancestral link with Northwest Ireland, see **Figure 4**. The McGonigal surname is particularly notable as it occurs as Mr McCauley's closest most frequent genetic match and it is associated exclusively with the Irish Northwest, see **Figure 4**.

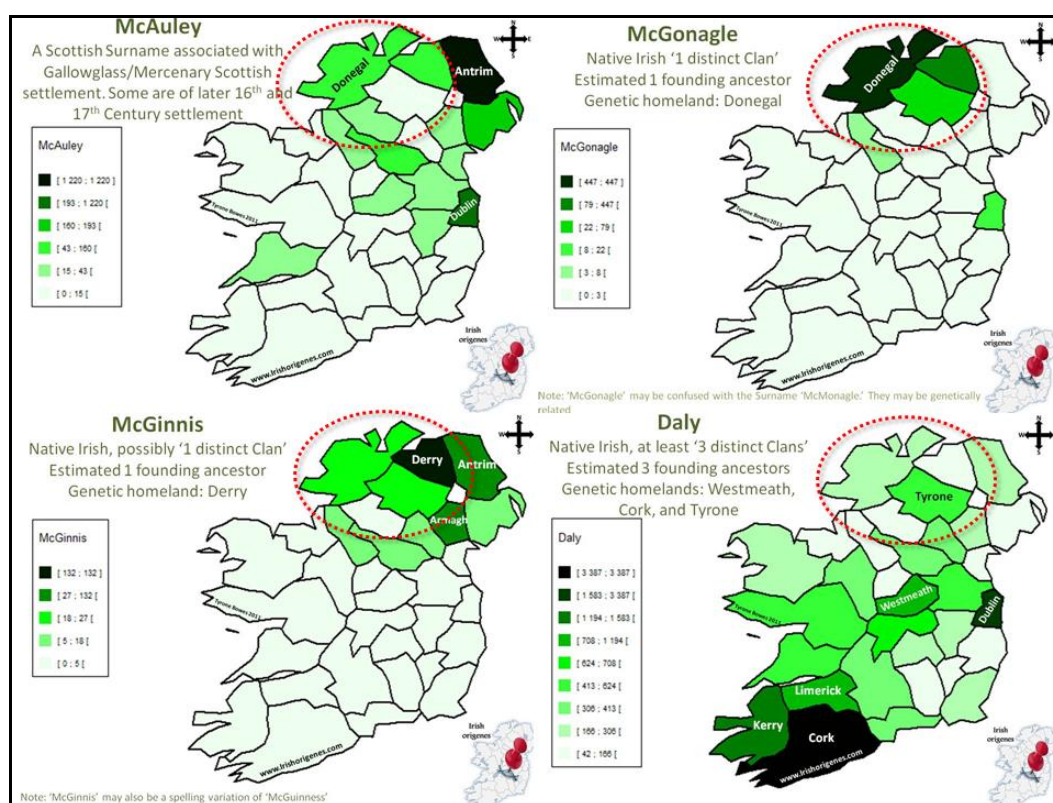


Figure 4: Mr McCauley's closest Irish-recurring genetic matches reveal a paternal ancestral link with Northwest Ireland. An examination of the Irish Origenes surname distribution maps for Mr McCauley's closest Irish recurring genetic matches reveals that they are all associated with Northwest Ireland (red broken circle). The McGonagle surname is notable because it appears as Mr McCauley's closest most frequent genetic match and it is exclusively Irish in origin, it is also associated with a single geographical area found within Northern Donegal.

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The method of using genetically recurring surname matches as revealed by commercial ancestral Y-DNA testing to pinpoint a paternal ancestral genetic homeland works by exploiting the link between the Y chromosome, surname and land, which are typically passed from father to son through the generations. In the absence of a link to the land the process becomes more challenging. The link with the land is greatest amongst the farming community and since farmers in Ireland can still be found farming the lands where their ancestor lived when he first inherited his surname, or where one's ancestor first settled within Ireland, one can plot where farmers with the surnames that appear in one's Y-DNA results cluster and identify an area common to all. An examination of the distribution of McCauley, McGonagle, Daly, McGinnis, Quinn, Murphy and O'Donnell surnames in Northwest Ireland reveals a cluster of McCauleys on the Inishowen peninsula close to McGonagle and McInnis farming clusters, see **Figure 5**.



Figure 5: The farming communities associated with Mr McCauley's closest genetic matches cluster on the Inishowen peninsula. The 1911 census data reveals a cluster of McCauley farmers concentrated on the eastern shore of the Inishowen peninsula. To the north one finds the McGonagles and to the south a cluster of McGinnis. In the surrounding area one finds clusters of the more common Quinns, Murphys, O'Donnells and Dalys; all of whom appear as recurring genetic matches at the 111 marker level.

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THE MEDIEVAL CLAN TERRITORIES OF IRELAND

The Irish Origenes Medieval Clan Territories of Ireland Map was reconstructed based on the location of castles and their known historical association to a particular Clan or Family. Over 400 of the most prominent Irish, Norman, Viking, Gallowglass, and Scottish Clans and Families are detailed, and typically one's Y-DNA results will reveal shared ancestry to one or more of the prominent Clans/Families that dominated one's paternal ancestral genetic homeland.

An examination of the Inishowen peninsula (where the McCauleys clustered) as it appears on the Irish Origenes Clan Territories map reveals that it was dominated by the Gaelic Irish O'Doherty and McLaughlin Clans, see **Figure 6**. Greater than 30 individuals called Doherty and 10 different McLaughlins appear as genetic matches to Mr McCauley at the 67 marker level. In fact the Dohertys are by far the most common recurring surname in Mr McCauley's Y-DNA results. In addition the Boyles and O'Donnells who dominated the areas to the Southwest also appear as recurring genetic matches in the test subjects Y-DNA results, see **Figure 6**.

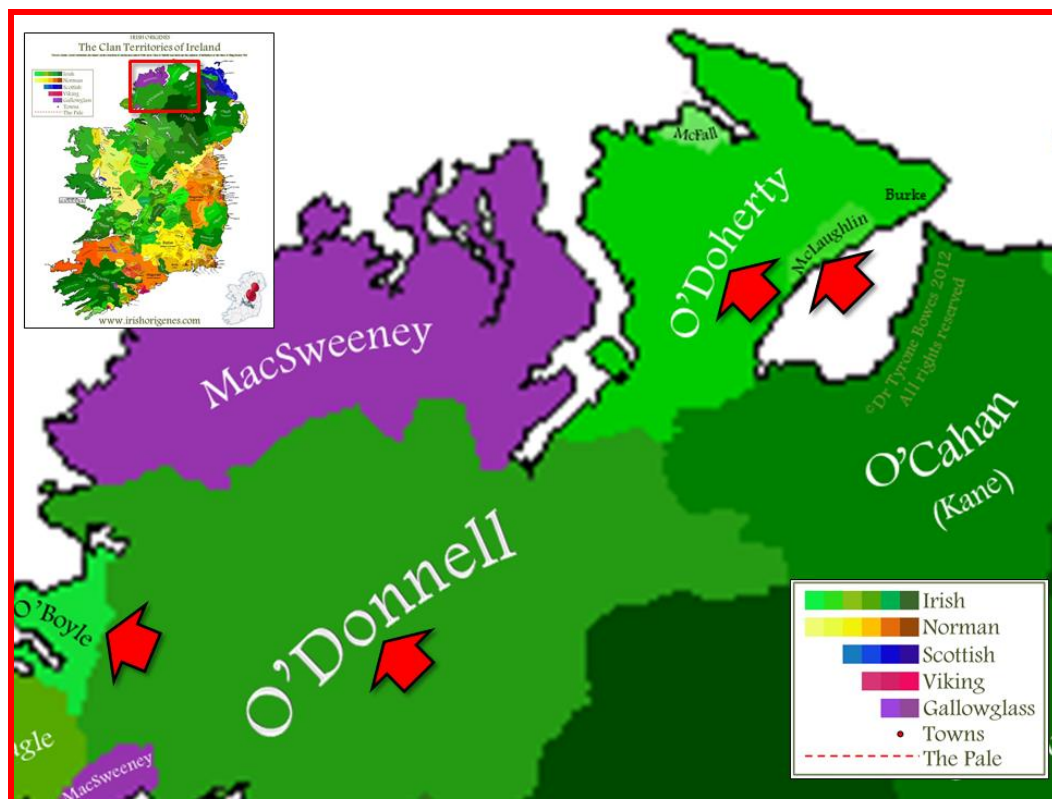


Figure 6: The Medieval Clan Territories of Northwest Ireland. The McCauleys in 1911 clustered on the Inishowen peninsula in what would have been the medieval territory of the O'Dohertys and McLaughlins; surnames which appear as frequent genetic matches in Mr McCauley's Y-DNA results (greater than 30 different Dohertys and 12 different McLaughlins appear as a genetic match at the 67 marker level). In the surrounding area one finds the O'Donnells and O'Boyles; both of whom appear as close recurring genetic matches (red arrows).

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Mr McCauley's Irish Paternal Ancestral Genetic Homeland

Mr McCauley's paternal ancestral genetic homeland lies on the eastern shore of the Inishowen peninsula, see **Figure 7**. Mr McCauley carries the M222 Y-DNA mutation which reaches its highest concentration in the male population that surrounds Grianan of Aileach at the base of the Inishowen peninsula, see **Figure 8**. This mutation appeared in a single male individual living in that area between 2000 and 8000 years ago and indicates that Mr McCauley's paternal ancestry was been linked with the Inishowen area for many thousands of years. His paternal ancestor was living on the eastern shore of the Inishowen peninsula when paternally inherited surnames first appeared. When his ancestor first took the McCauley surname, his relatives and neighbours took surnames like McGonagle, Doherty and McLaughlin. Evidence of one's long ancestral link with an area is often reflected in the placenames one finds there, and although there are no local placenames associated with the McCauleys, there are many in the surrounding area that are references to his genetic relatives including the O'Donnells, Fannings, Quinns and Murphys. The Inishowen peninsula is also littered with the remains of Castles and Towerhouses associated with both the O'Dohertys and McLaughlins, see **Figure 7**. The McCauleys will undoubtedly have left evidence of their long ancestral links with this area in its history, but also in the DNA of the McCauleys who still live there.

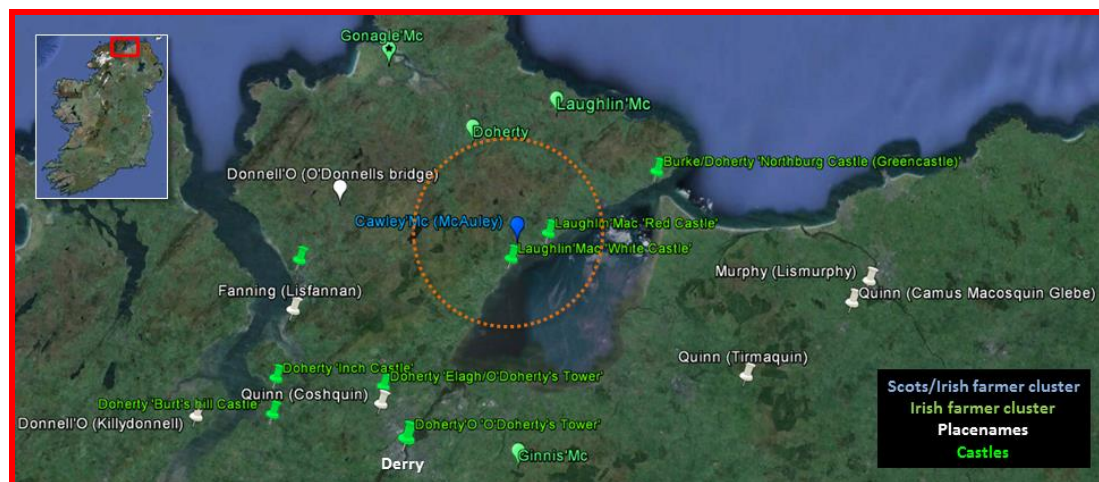


Figure 7: Mr McCauley's Paternal Ancestral Genetic Homeland. Mr McCauley's paternal ancestral genetic homeland lies on the eastern shore of the Inishowen peninsula (**orange broken circle**). It was here that the McCauleys lived surrounded by genetic relatives with surnames like O'Doherty, McLaughlin, McGonagle, O'Donnell, Boyle, Quinn, Murphy and McGinnis. Many of these Clans and Families have left evidence of their presence in this areas history, monuments, placenames, and in the DNA of its current inhabitants

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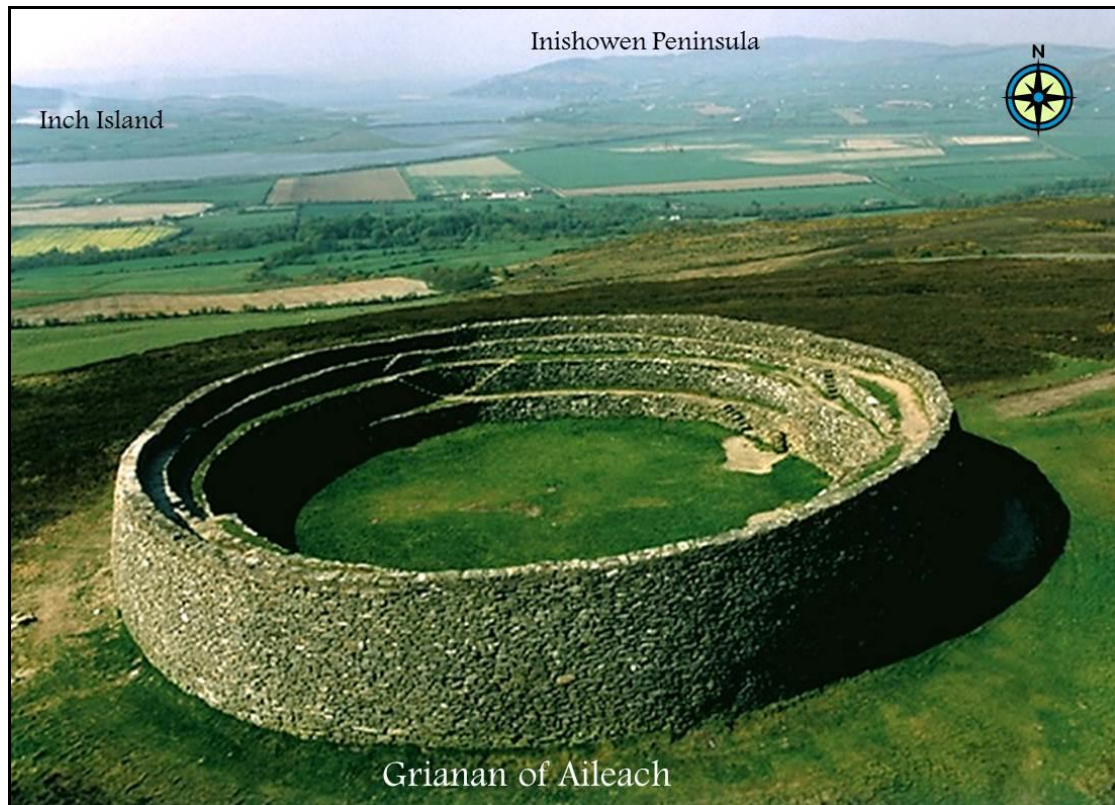


Figure 8: Grianan of Aileach at the base of the Inishowen peninsula. Mr McCauley carries the M222 Y-DNA marker. This marker reaches its highest concentration in the male population in the area surrounding Grianan of Aileach. This mutation arose in this location anywhere between 2000 and 8000 years ago. It means that Mr McCauley's paternal ancestors have an ancient association with this area and may well have lived within sight of this pre-historic structure.

How to confirm a 'Paternal Ancestral Genetic Homeland'

Confirmation of the paternal ancestral genetic homeland will require the commercial ancestral Y-DNA testing of McCauley farmers who live on the Inishowen peninsula.

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