

Case Study

Pinpointing the HICKEY

Genetic Homeland

www.scottishorigenes.com



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

Dr Tyrone Bowes
4th 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. 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 'McTurk' was living in close proximity to others with whom he was related but who assumed other surnames like McMath and McMinn. Given that 1,000 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 and Scotland surnames can still be found concentrated in the County from which they originate. In this manner one can examine surname distribution maps 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 'Hickey's' Y-DNA results and will provide a checklist on how to proceed in identifying your own Genetic Homeland.

Notes of caution!

1. Science has demonstrated that each Irish Clan had potentially a single founding ancestor. Since much of Scotland adopted a similar Clan system in it is logical to assume that the same is indeed true for Scotland and Scottish Clans. Similarly science has also 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 1000 years ago. As a result if your Irish or Scottish ancestor was originally a Viking raider or a conquering Norman your DNA results will reflect earlier continental or Scandinavian origin. In Ireland for example, 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 are less likely to be a result of non-paternal events (adoptions/infidelity) and reflect the surname of a medieval ancestors neighbour. Results for test subject Hickey are shown in **Table 1**.

SURNAMES THAT REOCCUR AS A GENETIC MATCH FOR TEST SUBJECT HICKEY 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
Hickey	no match	Turk (x4) ¹ McMath (x3) ^{1,2}	no match	Hickey (x3) ¹ Camren/Cameron (x2) ¹ Hartness (x2) ¹ Gray (x3) ¹ Stewart/Stuart (x5) ¹	McCauley/McAuley (x4) ¹	no match	Munn (x2) ^{1,3} McGregor (x5) ⁴	Alexander (x3) Campbell (x4) Peden (x2) Turner (x2) ¹ Bensen (x2) Karr/Carr (x7) Walton (x2) Blanchard (x2) Colburn (x2) McKinley/McKinley (x3) Matheson (x2 (McMath)) ² Trail/Traill (x3)

Table 1: Surnames that reoccur as a genetic match for test subject 'Hickey.' Each surname appears at the earliest point at which it occurs, for example the first match occurs with someone called Turk in 36 of 37 markers, but not all of the other individuals with the surname 'Turk' will necessarily match at this level. Surnames in **bold** reoccur 3 times or more, **Green** font indicates a surname of Irish origin, similarly **Red**; English, **Blue**; Scottish. Analysis is conducted at the 37 marker level, as not everyone upgrades to the 67 marker testing. ¹These surname also occur as a match at the 67 marker level. ²McMath; son of Math has sometimes be changed to Matheson. ³Munn is a variation of McMinn (which occurs as a match at the 67 marker level). ⁴Many McGregor's changed their Surname in the 17th Century ([see Valentine Case Study](#)).

Firstly there is a close genetic match to other individuals called Hickey. This potentially indicates that the test subject is part of the 50% of individuals who after 1,000 years has retained the surname of the founding ancestor, the first to call themselves 'Hickey.' However Hickey is an Irish surname, yet there is an overwhelming association with surnames of Scottish origin (**blue**), see **Table 1**. The Scottish element is reinforced when one looks at surnames that reoccur greater than 3 times (**bold** in Table 1), this results in the exclusion of all English (**red**) surnames. When one looks at surname distribution mapping of the surnames that occur as close genetic matches at the 37 marker level in Ireland, there is a clear association (with the exception of Hickey) with Antrim in Northern Ireland, see **Figure 1**. Scottish surnames when found in the northeast are usually associated with the 16th and 17th century plantation of Ulster. This was a time when lowland Scots and people from the North of England settled in large numbers in Northern Ireland.

WHERE DO THE SURNAMES HICKEY, TURK, MCAULEY, GRAY, AND STEWART ORIGINATE WHEN FOUND IN IRELAND?

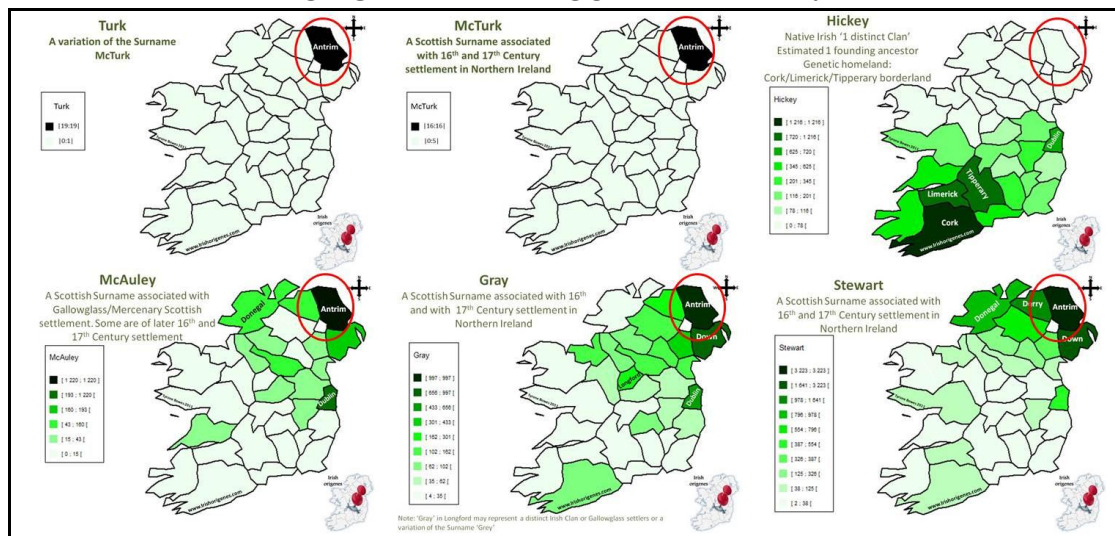


Figure 1: Distribution of the 'Hickey' reoccurring surname matches in Ireland. At the 37 marker level the closest genetic matches are to individuals with the surnames, Turk (McTurk), Hickey, McAuley (McCauley), Gray, and Stewart. All of these surnames with the exception of Hickey are usually associated with 16th and 17th century Scottish settlement in Ireland, particularly in Antrim (red circle).

By looking at the surname distribution maps for Great Britain of McTurk, McCauley, Gray and Stewart, 2 things become evident. Firstly there is a clear association with Scotland. Secondly the surname Turk, which is derived from McTurk, to whom the test subject has the closest and most numerous matches, is associated with a single geographical area in the far Southwest of Scotland. This is in contrast to Gray, Stewart, and McCauley which are common surnames used by different Clans throughout Scotland.

WHERE DO THE SURNAMES MCTURK, MCCAULEY, GRAY AND STEWART ORIGINATE?

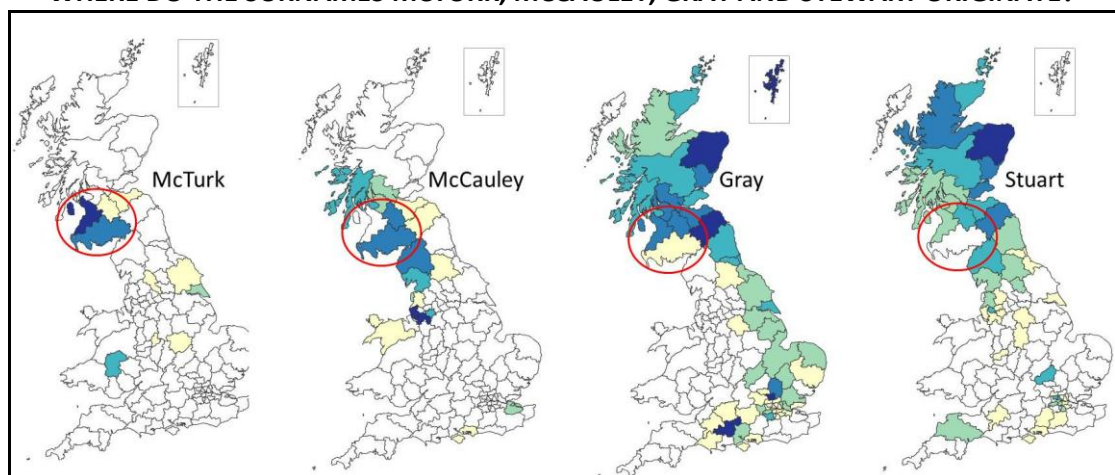


Figure 2: The closest genetic matches to test subject Hickey demonstrate a Scottish association. Although all the Surnames have a strong association with Scotland, only McTurk is associated with a single geographical area within Scotland (red circle: southwest Scotland).

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When one looks at the 67 Marker level, the closest genetic match is to an individual called McMath ('son of Math') which has been anglicised Matheson (a surname that occur as matches at the 25 marker level). These are followed by Turk (McTurk) and McMinn both of which are rare surnames. When one examines where these surnames originate using surname distribution mapping, all show a concentration in the southwest of Scotland, particularly in Dumfries and Galloway.

MCTURK, MCMINN, AND MCMATH ARE ASSOCIATED WITH A SINGLE LOCATION IN THE SOUTHWEST OF SCOTLAND

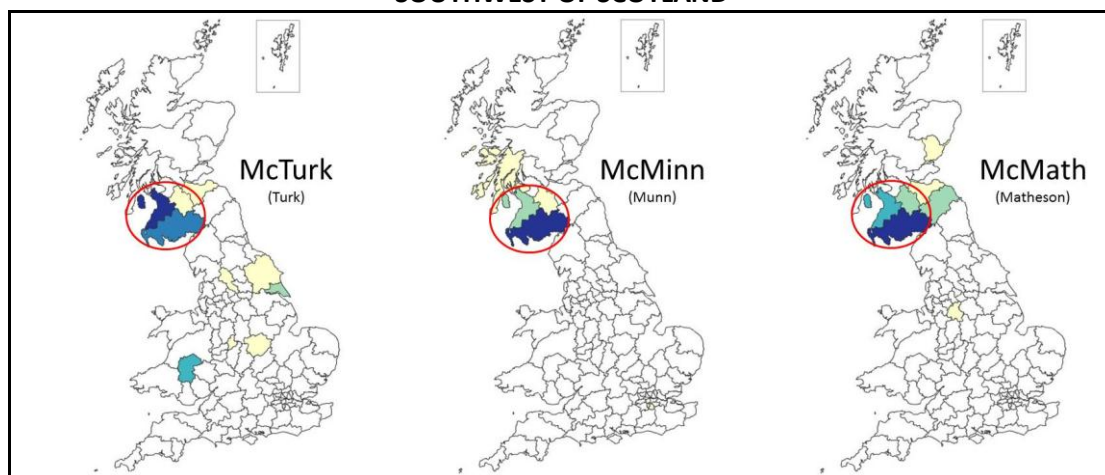


Figure 3: Mr Hickey's closest genetic matches localise to Dumfries and Galloway. The surnames or Clans of McTurk, McMinn, and McMath are associated with a single geographical area, located within Dumfries and Galloway (red circle).

Glenkens in Galloway

Land, like the surname is usually passed from father to son, and when one examines where farmers with the McTurk, McMinn, and McMath surnames are found in 1841, they all cluster in Glenkens in Galloway. The chances of 3 surnames reoccurring as genetic matches and localising to a single valley or Glen in Scotland is quite remote and hence '**Glenkens**' is the Genetic Homeland of the test subject Mr Hickey, see **Figure 4**. This means that when surnames became common in Scotland approximately 1,000 years ago the test subject's direct male ancestor was living in the Glenkens area of Galloway.

However, the question remains as to how the test subject assumed the Hickey surname which is associated overwhelmingly with Ireland. There may be clues in the history of Galloway. Galloway literally translates as the 'land of the foreign Gael.' This is a reference to the Viking-Gaels originating from the Viking colonies of northwest Scotland who settled in Galloway. These Vikings adopted the Gaelic language as well as many other Gaelic customs including their distinctive surnames that typically begin with Mac/Mc. This accounts for the many Gaelic sounding surnames (beginning with Mac/Mc) in Galloway, in a sea of surnames of Anglo-Saxon and Norman origin in the surrounding Scottish lowlands **Figure 5**.

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Figure 4: Mr Hickey's Genetic Homeland in Glenkens in Galloway. The McTurk, McMinn, and McMath surnames originate in Glenkens in Galloway, it is here that the test subjects ancestors lived when surnames came into common use approximately 1,000 years ago.

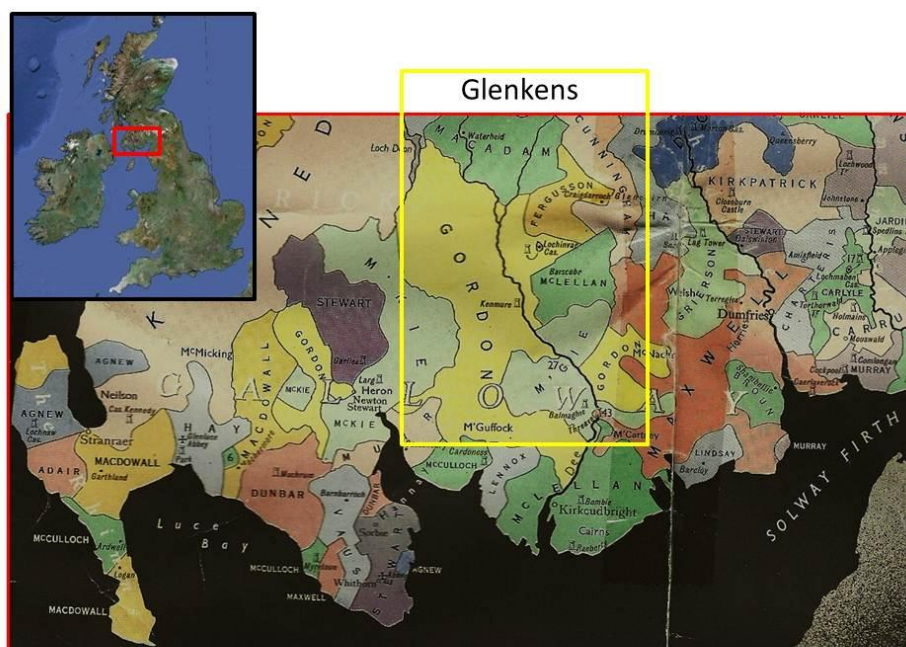


Figure 5: The Clan Territories of Galloway. Glenkens was dominated by the Gordons, who appear to have been later arrivals, surrounding the Gordons are the Stewart's (who appear as genetic matches). Many of the Clans in Glenkens and Galloway begin with Mac/Mc, and some of these like MacDowall are associated with Gallowglass settlement in Ireland.

The Irish Connection

In Ireland the Scottish Gallowglass or 'Foreign Gaels' were employed for over 400 years (from 1259 AD onwards) as mercenaries by Irish Clans, Norman Families, and even the English authorities. Some of these Gallowglass families settled permanently in Ireland, allocated land by their Irish, Norman, or English employers. For example the MacDonnell's settled in Counties Galway and Mayo in the service of the Norman Burke's, the MacSweeney's settled in County Donegal in the territories controlled by the Irish O'Donnell, while a smaller population of MacDonnell's were settled in County Laois by the English authorities after the conquest of Laois and Offaly in the 16th Century.

One scenario that may account for the Irish association would involve mercenary Gallowglass from Galloway settling amongst the local Irish Gaels. The fact that the test subject has genetic matches to other Hickey's would indicate that the Irish association occurred some time ago, possibly hundreds of years ago, far enough back in time for there to be sufficient Hickey descendants in existence, and for some to independently undergo DNA testing.

Evidence for Gallowglass settlement close to the Hickey's in Ireland

When one looks at the location of farmers with the Surname 'Hickey' in Ireland in 1911, there are 2 population clusters and hence 2 potentially unrelated Hickey Clans, see **Figure 6**. Firstly what is instantly noticeable is the lack of surnames in either area that occur as genetic matches to the test subject. However in the Carlow area, where there is a population of Hickey's, there are also a number of Gallowglass Surnames; McCall, MacDonald, and McCrae. Both McCall and McCrae are associated with Galloway (see **Figure 7**), and this is evidence that Scottish Gallowglass have settled in at least one area where the Hickey surname clusters in Ireland!

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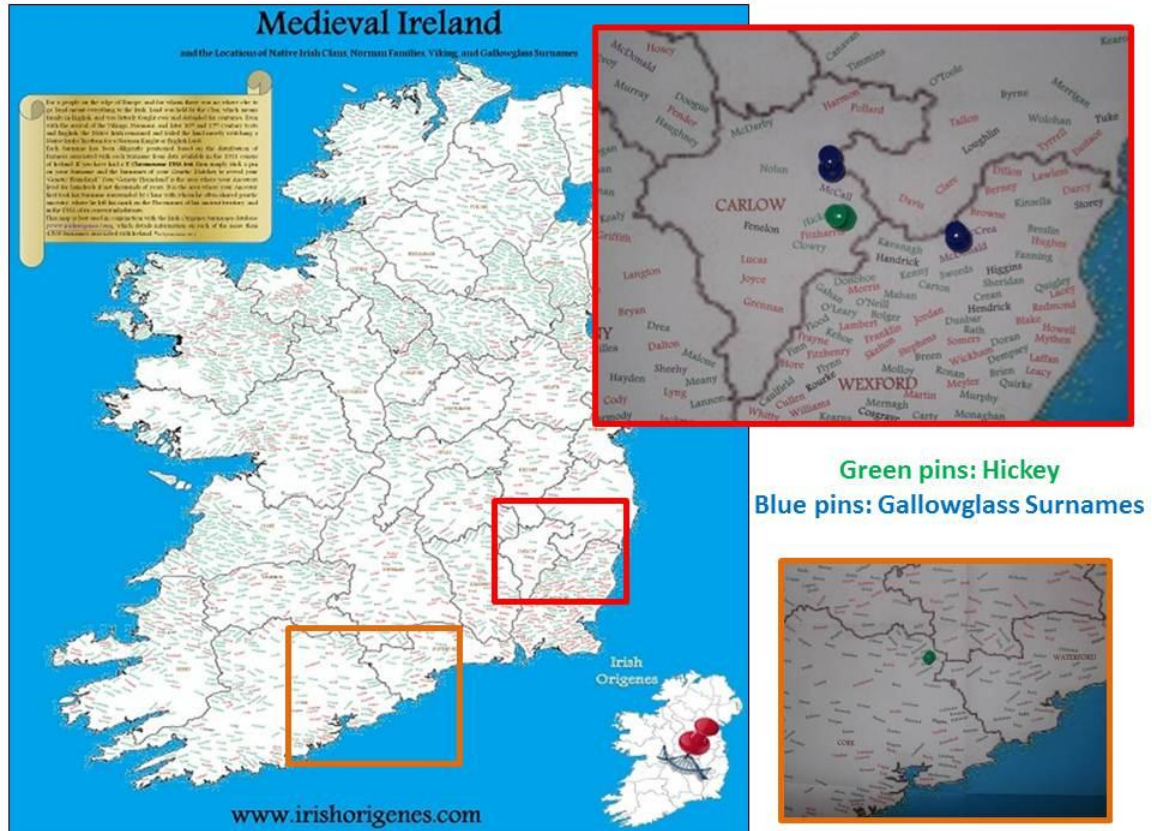


Figure 6: Hickey's in Ireland. There are 2 Hickey Clans in Ireland, situated in Cork (orange box), and Carlow (red box). None of the surnames that reoccur as genetic matches are evident in either location (green pin; Hickey). However in Carlow, there is evidence of at least 3 Gallowglass families (blue pins) settling close to the Hickey's of Carlow, two of whom; McCall and McCrea originate in Galloway (see Figure 7).

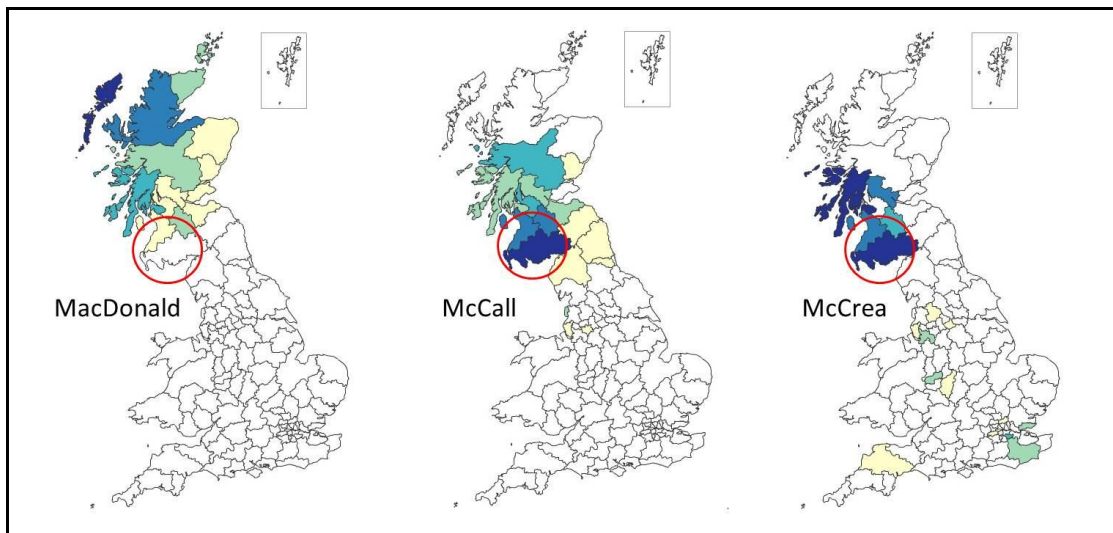


Figure 7: Gallowglass surnames found in the Southwest of Ireland originate in Galloway. Both Scottish McCrea and McCall Clans are concentrated in Dumfries and Galloway indicating a strong possibility that Scottish Clans from that area settled in the southwest of Ireland.

How to confirm a pinpointed 'Genetic Homeland'

To confirm Glenkens as the Genetic Homeland will require the DNA testing of farmers, preferably of those with surnames with a long association with that Glen e.g. McTurk, McMinn, and McMath. The more recent link to Ireland will only be revealed when commercial DNA testing in Ireland becomes more common place. It may be worthwhile recruiting 'Hickey's' from the Carlow area, some of these may turn out to be a genetic match which would in turn confirm an ancestral link with Ireland.

**HAVE YOU HAD A Y-DNA TEST? THEN 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 80% success rate. If in the unlikely event that I cannot pinpoint your Genetic Homeland I will explain why and I will not charge you.

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 [Scottish Origenes homepage](#).
2. PublicProfiler World names database.
3. Census data (earlier the better).
4. Google Earth.
5. Scotland of Old, Clan Names Map.