Quinn
An Irish Origenes DNA Case Study

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INTRODUCTION

There are several commercial ancestral DNA tests that can be used to explore one's ancestry. By far the most popular is the 'autosomal test' which sheds light over ***all*** of one's recent ancestral lines. With autosomal DNA testing one will typically match many individuals (both male and female) and making sense of those relationships can be quite challenging. However, as with every DNA test the same golden rule applies, the more DNA that two people share the more recent their shared (paternal or maternal) ancestor once lived. In addition, many of one's autosomal matches will reveal surnames and placenames associated with their family tree, and those surnames and locations can hold clues as to where the various branches in one's own ancestral tree originated. The challenge of modern autosomal DNA analysis is linking a common location revealed in the autosomal DNA test result with a particular ancestral surname.

INTERPRETING THE AUTOSOMAL RESULTS

An examination of test subject Quinn's 'autosomal' DNA test results revealed 78,714 genetic relatives, the vast majority of whom record ancestral information, see **Figure 1**. The locations revealed by the test subject's autosomal genetic relatives are ***NOT RANDOM***, Ireland and Scotland feature prominently in frequency and shared DNA, see **Figure 1**.

Autosomal DNA stats			
Genetic Relatives	**78,714**	**Percentage**	**Max. Shared DNA/cM**
>20cM Generic relatives	6,108	7.8	2653
>20cM Ireland	702	11.5	320
>20cM Northern Ireland	331	5.4	207
>20cM Scotland	617	10	213
>20cM England	1015	16.6	1187
>20cM Wales	250	4.1	320
>20cM Germany	686	11.2	213

Figure 1: *Ireland and Scotland gave strong autosomal DNA signals. Autosomal DNA testing revealed 78,714 genetic relatives, 6,108 of whom shared more than 20cM of DNA. The locations recorded by those genetic relatives are NOT RANDOM, given their respective populations sizes, Ireland, and Scotland feature prominently in frequency and shared DNA.*

The Ancestral link with Ireland and Scotland

The locations recorded within Ireland and Scotland by the test subject's autosomal genetic relatives are not random, and a search of that ancestral detail for the 32 counties of Ireland revealed 6 DNA hotspots centred upon Antrim, Donegal, and Armagh in Ulster, Dublin in Leinster, Cork in Munster, and Galway in Connaught, see **Figure 2**. The signal from Dublin may be non-specific noise, the result of more recent migration to the city. An examination of the 1841 counties of Scotland detailed by the test subject's autosomal genetic relatives revealed 5 DNA hotspots centred upon Lanarkshire, Mid-Lothian, Fife, Aberdeenshire, and Argyllshire/Perthshire in the Highlands, see **Figure 3**.

A

	County	Frequency	Percentage	Max. Shared DNA/cM
Connaught	Sligo	6	0.6	40
	Leitrim	19	1.9	40
	Mayo	18	1.8	48
	Roscommon	20	2.0	38
	Galway	55	5.5	91
Munster	Clare	38	3.8	59
	Kerry	19	1.9	2653
	Cork	85	8.5	139
	Limerick	32	3.2	2653
	Tipperary	32	3.2	35
	Waterford	22	2.2	37
Leinster	Kilkenny	15	1.5	32
	Offaly	16	1.6	35
	Laois	8	0.8	38
	Kildare	17	1.7	207
	Dublin	116	11.6	276
	Wicklow	17	1.7	276
	Carlow	29	2.9	53
	Wexford	14	1.4	160
	Longford	10	1.0	53
	Louth	23	2.3	43
	Westmeath	31	3.1	2653
	Meath	35	3.5	207
Ulster	Cavan	53	5.3	13
	Down	63	6.3	207
	Armagh	67	6.7	106
	Tyrone	52	5.2	48
	Donegal	145	14.5	207
	Fermanagh	22	2.2	47
	Derry	80	8.0	47
	Antrim	167	16.7	139
	Monaghan	20	2.0	320

B

Figure 2: *Autosomal testing reveals 6 DNA hotspots within Ireland. An examination of the Irish counties detailed by the test subject's autosomal genetic relatives that share greater than 20cM of DNA reveals 6 autosomal DNA hotspots centred upon the Antrim, Donegal, and Armagh in Ulster, Dublin in Leinster, Cork in Munster, and Galway in Connaught (**red arrows**, **panel A**, **red circles**, **panel B**). The signal from Dublin is the result of more recent migration to the city.*

A

County	Frequency	Percentage	Max. Shared DNA/cM
Shetland	11	1.8	30
Orkney	32	5.2	45
Caithness	22	3.6	44
Sutherland	16	2.6	44
Ross and Cromarty	20	3.2	39
Invernesshire	61	9.9	47
Argyllshire	109	17.7	113
Perthshire	84	13.6	139
Stirlingshire	49	7.9	51
Dunbartonshire	14	2.3	35
Buteshire	12	1.9	51
Nairn	8	1.3	32
Morayshire	23	3.7	32
Banffshire	19	3.1	46
Aberdeenshire	72	11.7	213
Kincardineshire	14	2.3	126
Angus	43	7.0	207
Fife	77	12.5	213
Clackmannanshire	18	2.9	51
Kinrosshire	4	0.6	34
West Lothian	11	1.8	38
Mid Lothian	151	24.5	207
East Lothian	30	4.9	213
Peebleshire	11	1.8	60
Berwickshire	14	2.3	44
Roxburghshire	17	2.8	36
Renfrewshire	60	9.7	47
Lanarkshire	151	24.5	213
Ayrshire	113	18.3	126
Dumfriesshire	36	5.8	51
Wigtownshire	18	2.9	48
Kirkcudbrightshire	6	1.0	37
Selkirkshire	5	0.8	35

B

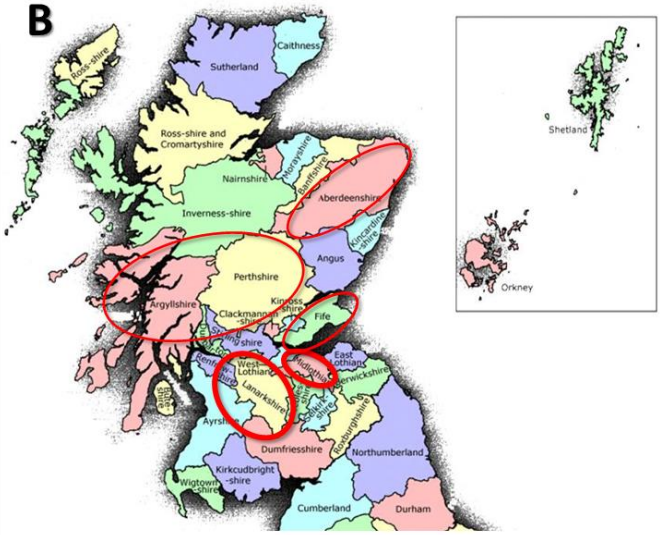

Figure 3: *Autosomal testing reveals 5 DNA hotspots within Scotland. An examination of the 1841 counties of Scotland detailed by the test subject's autosomal genetic relatives that shared greater than 20cM of DNA reveals autosomal DNA hotspots centred upon Lanarkshire, Mid-Lothian, Fife, Aberdeenshire, and Argyllshire/Perthshire (**red arrows**, **panel A**, **red circles**, **panel B**). The signal from Lanarkshire and Mid-Lothian may be non-specific noise, the result of more recent migration to the cities of Glasgow and Edinburgh, respectively.*

Ancestral Surnames

The test subject's most recent ancestral papertrail reveals a mix of surnames of English, Irish, and Mainland European origin, see **Figure 4**. Since surnames arose in an agriculturally based society, farmers with each surname can still be found concentrated in early census data in the area where their surname first appeared or in the area where one's ancestors first settled. In Ireland, the descendants of Gaelic Irish, Normans, and Scottish mercenary Gallowglass were overwhelmingly Catholic in early census data, while those descended from 17th Century Plantation Scots and English were overwhelmingly Protestant. Irish census data reveals that the Quinn and Moore (O'More) are associated with Medieval Ireland. An examination of the distribution of Irish Catholic farmers named Quinn and Moore reveals them concentrated in specific parts of Ireland, see **Figure 5**. The Moore surname is also associated with Plantation Scottish and English settlement (post 1600AD) settlement within Ulster, and an examination of the distribution of Protestant farmers named Moore reveals them concentrated in specific groups within Ulster, see **Figure 6**.

Surname	Earliest Recorded Ancestral Location
Quinn	Killmallock, Limerick, Ireland
Garner	-
Davis	-
Tucker	-
Rivenbark	-
Blandton/Bland	-
Davis	-
English	-
Lamm	-
Tomlinson	-
Moore	-
Newsome/Nusom	-
Bunn	-
Pate	-
Proctor	-
Page	-

Figure 4: *Ancestral surnames and earliest recorded ancestral locations. An examination of the test subject's ancestral tree reveals ancestral surnames together with their earliest recorded ancestral locations. Highlighted font indicates each surnames associated ethnicity or location of an earliest ancestor: English/England, Irish/Ireland, Multiple-associated ethnicities/locations, Mainland European.*

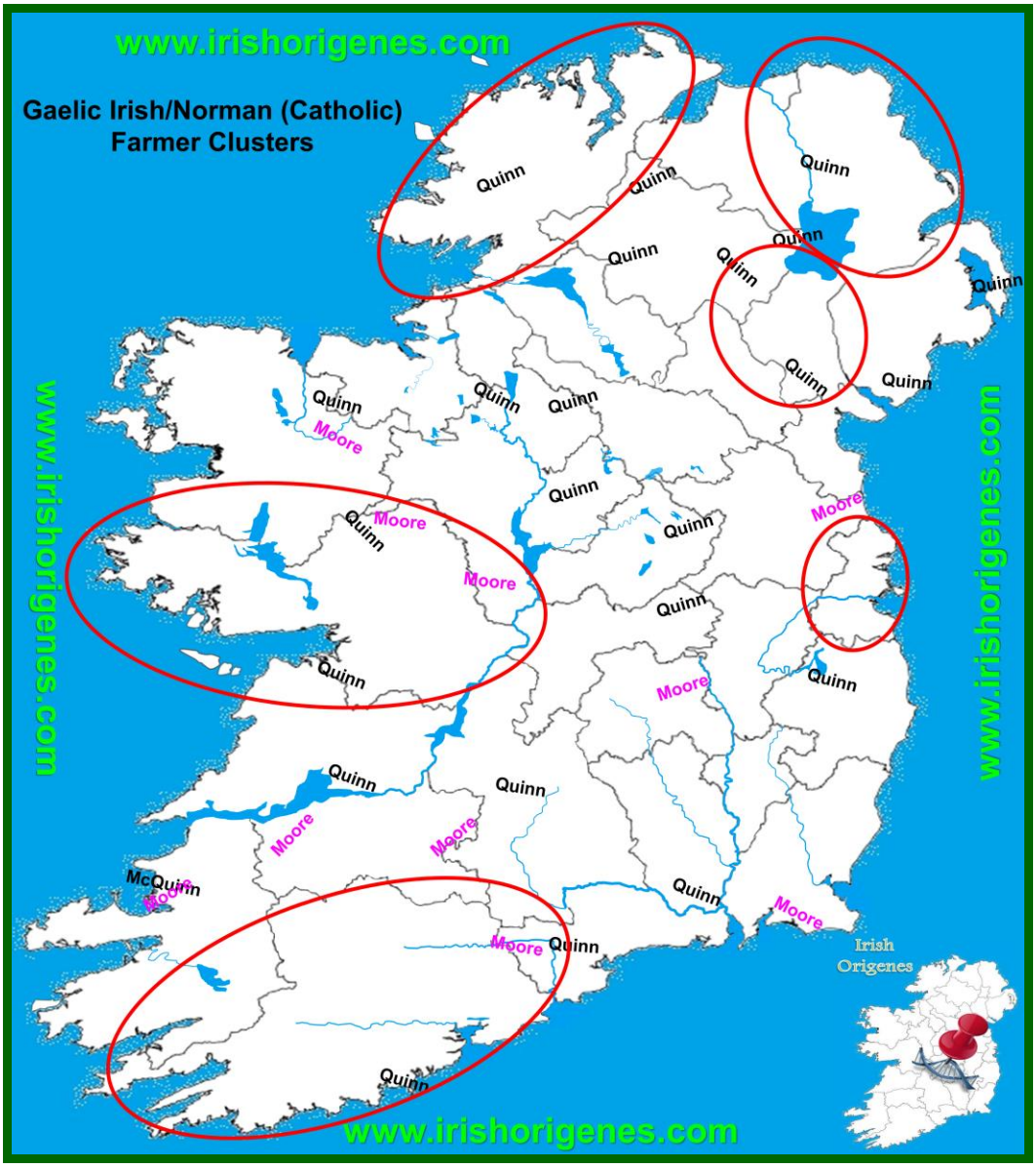

Figure 5: *Gaelic Irish Quinn and Moore farming communities and autosomal DNA revealed locations. Census data reveals that individuals with Gaelic Irish, Norman, or Scottish Gallowglass surnames were overwhelmingly Catholic, while those with 16th and 17th Century Plantation Scottish or English surnames were overwhelmingly Protestant. The Quinn and Moore surnames can be of Pre-Plantation Gaelic Irish or Norman origin. Distribution mapping of farmers (Catholic, male, heads of household) named Quinn and Moore in early census data reveals multiple distinct groups spread throughout Ireland, some of which are associated with autosomal DNA revealed locations (**red circles**). Each surname is positioned as it appears on an Irish Origenes Medieval Surnames of Ireland map, the most common spelling is detailed in each location, free to view: **https://www.origenesmaps.com** Surname Search function available at **https://analysis.irishorigenes.com/surnames***

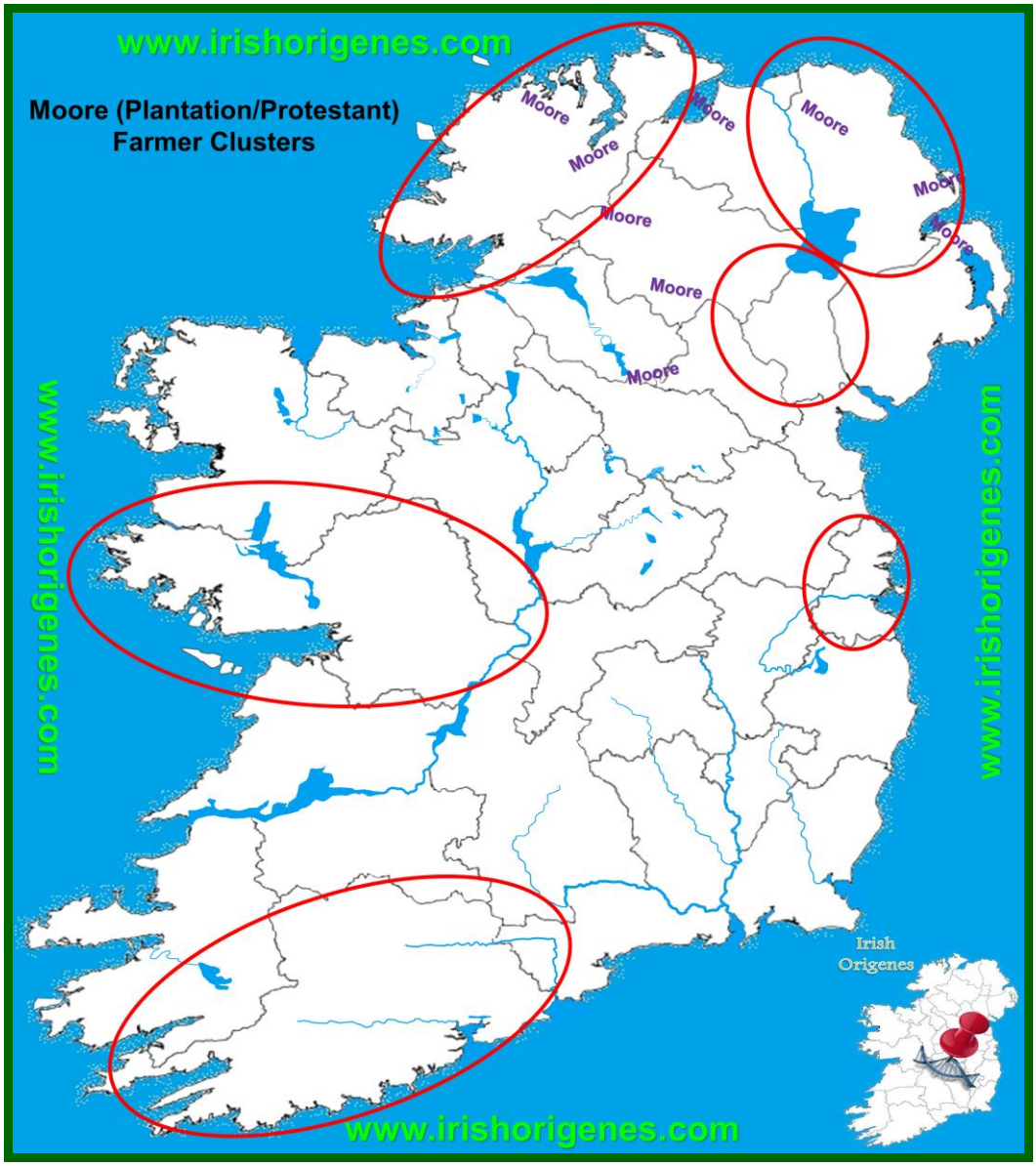

Figure 6: *The Moore Plantation farming communities and autosomal DNA revealed locations. Census data reveals that individuals with Gaelic Irish, Norman, or Scottish Gallowglass surnames were overwhelmingly Catholic, while those with 16th and 17th Century Plantation Scottish or English surnames were overwhelmingly Protestant. The Moore surname is also associated with Plantation settlement within Ireland. Distribution mapping of farmers (Protestant, male, heads of household) named Moore in early census data reveals multiple distinct groups concentrated in Ulster, some of which are associated with autosomal DNA revealed locations (**red circles**). Each surname is positioned as it appears on an Irish Origenes Plantation Surnames map, the most common spelling is detailed in each location, free to view: **https://www.origenesmaps.com***

LINKING ANCESTRAL SURNAMES WITH AUTOSOMAL DNA HOTSPOTS

The ancestral information (surnames and locations) recorded by one's autosomal DNA genetic relatives are not random, reflecting the relationships that developed among one's most recent ancestral lines in specific locations. One can therefore blast search that detail for locations associated with the test subject's ancestral surnames. One can then compare the distribution of one's ancestral surnames with DNA revealed locations, together with autosomal search results to begin the process of linking each ancestral surname with its Irish origin.

The non-random nature of the ancestral locations recorded by the test subject's autosomal genetic relatives can be easily demonstrated by examining the countries of Britain, Ireland, and Germany that are recorded in association with the Quinn surname, see **Figure 7**. Autosomal DNA results reveal that the test subject's Quinns were linked with Ireland, and that his Moores were of Scots Irish or Anglo-Irish origin, see **Figure 7**. A further search of the ancestral information recorded by the test subject's autosomal genetic relatives for the 32 counties of Ireland in association with the Quinn surname uncovered links with Dublin in Leinster and Tyrone in Ulster, the latter of which borders Armagh which emerged as an autosomal DNA hotspot, see **Figures 2** and **8**. This would indicate that the test subject's Quinns had migrated to Dublin from the Armagh and Tyrone borderlands in Ulster. A search for the Moore surname in association with each Irish county among the autosomal DNA test results revealed a link with the Plantation Moores of County Antrim, see **Figures 6** and **8**.
The bordering counties of Armagh and Tyrone are of particular interest as it is one area associated with the Quinn and Casey surnames which commercial ancestral Y-DNA testing has revealed are intricately linked, having arisen among related Gaelic Irish males living in a specific part of Ireland, see **Figures 9** and **10**. The Irish Origenes maps detail the precise origin of each Irish surname, and an examination of the Armagh and Tyrone borderlands reveals the Quinns together with the Caseys and Gibsons that both appear among the test subject's closest Y-DNA matches, see **Figure 9** and **11**. An examination of the Irish Origenes databases reveals the townlands of Killyquinn and Cottagequinn near Dungannon, see **Figure 11**. The DNA results reveal that the test subject's Quinns originated near Dungannon close to the borderlands of Armagh and Tyrone in Ulster, and that his Quinns may have passed through Dublin prior to their arrival in the Americas.

Autosomal Search Results

Surname	Ireland		Northern Ireland		Scotland		England		Wales		Germany	
	Frequency	Max. DNA/cM	Frequency	Max. DNA/cM	Frequency	Max. DNA/cM	Frequency	Max. DNA/cM	Frequency	Max. DNA/cM	Frequency	Max. DNA/cM
Quinn	43	276	14	37	6	18	0	0	0	0	0	0
Moore	129	47	50	35	34	32	146	47	7	19	13	41
Garner	4	23	3	20	8	44	40	28	0	0	1	15
Davis	35	36	16	34	10	31	205	66	93	60	2	18
Tucker	1	23	0	0	1	16	39	28	1	14	1	13
Bland	0	0	0	0	0	0	16	28	0	0	1	37
English	17	93	0	0	2	15	51	213	1	16	0	0
Tomlinson	7	21	0	0	0	0	24	27	7	207	0	0
Bunn	0	0	0	0	1	17	4	25	0	0	0	0
Pate	0	0	0	0	1	12	11	37	0	0	0	0
Proctor	3	21	1	21	1	17	19	21	1	12	0	0
Page	1	13	0	0	1	13	64	62	0	0	0	0
Newsome	0	0	0	0	0	0	4	60	0	0	1	17
Nusom	0	0	0	0	0	0	0	0	0	0	0	0
Rivenbark	0	0	0	0	0	0	0	0	0	0	35	189
Blandton	0	0	0	0	0	0	0	0	0	0	0	0
Lamm	0	0	0	0	0	0	0	0	0	0	0	0

Figure 7: *Autosomal search results for Ancestral surnames (and variants) within Ireland, Britain, and Germany. The ancestral locations revealed by one's autosomal genetic relatives are not random, reflecting the relationships that developed among the test subject's various ancestral lines living in specific areas. Autosomal searching of genetic relatives that share greater than 12cM of DNA for the countries of Ireland, Scotland, England, Wales, and Germany graded according to maximum shared DNA (cM) reveal a clear Irish origin for the test subject's Quinns and Moores (**green arrows**), English origins (**red arrows**) for his Garners, Davis, Tuckers, Blands, English, Tomlinsons, Bunns, Pates, Proctors, Pages, and Newsomes. Autosomal search results also reveal Rivenback links with Germany (**purple arrow**).*

Autosomal Search Results

County	Quinn		Moore	
	Frequency	Max. DNA/cM	Frequency	Max. DNA/cM
Roscommon	0	0	1	18
Sligo	0	0	1	14
Mayo	0	0	1	14
Galway	1	19	2	25
Clare	0	0	0	0
Kerry	0	0	1	13
Cork	2	17	2	19
Limerick	4	34	1	12
Waterford	0	0	1	20
Tipperary	2	16	8	25
Kilkenny	0	0	2	17
Offaly	1	17	0	0
Laois	1	17	3	15
Kildare	0	0	1	14
Dublin	9	276	6	24
Wicklow	4	34	0	0
Carlow	0	0	0	0
Wexford	1	13	1	17
Longford	0	0	0	0
Louth	0	0	2	13
Westmeath	0	0	0	0
Meath	0	0	0	0
Leitrim	1	23	0	0
Cavan	0	0	1	14
Monaghan	0	0	6	21
Fermanagh	0	0	0	0
Donegal	1	32	7	31
Tyrone	8	37	3	17
Derry	0	0	12	23
Antrim	0	0	18	21
Down	5	20	14	21
Armagh	1	16	1	28

Figure 8: *Autosomal search results for the Quinn and Moore surnames within Irish counties. The counties recorded by autosomal genetic relatives (that share greater than 12cM of DNA) in association with the Quinn and Moore surnames revealed ancestral links with specific Irish counties (**green arrows**).*

67 Y-DNA STR Matches

Surname	Match Date	Markers Tested	Genetic Distance	Big Y STR Differences	Y-DNA Haplogroup	Paternal Country of Origin	Earliest Known Ancestor
Smallwood (quinn)	July 14 2009	1 to 67	2	Not Available	R-M269	Ireland	Loftin/Laughlin Quinn, b. 1712, Ireland, d.1774 NC
Quinn	July 14 2009	1 to 67	2	Not Available	R-M269	Ireland	Mr. David Monroe Quinn
Quinn	July 14 2009	1 to 67	3	Not Available	R-M269	Ireland	Laughlin Quinn (1712-1774)
Gibson	August 02 2011	1 to 67	5	Not Available	R-M269	Unknown Origin	
Casey	September 18 2012	1 to 111	7	Not Available	R-M269	Ireland	Peter J. Casey, b. 1835 and d. 1910

37 Y-DNA STR Matches

Surname	Match Date	Markers Tested	Genetic Distance	Big Y STR Differences	Y-DNA Haplogroup	Paternal Country of Origin	Earliest Known Ancestor
Quinn	June 25 2009	1 to 37	2	Not Available	R-M269	Ireland	David Quinn died 2/20/1861 in Simpson Co. Ms
Smallwood (quinn)	June 25 2009	1 to 67	2	Not Available	R-M269	Ireland	Loftin/Laughlin Quinn, b. 1712, Ireland, d.1774 NC
Quinn	June 25 2009	1 to 67	2	Not Available	R-M269	Ireland	Mr. David Monroe Quinn
Casey	August 01 2014	1 to 37	3	Not Available	R-M269	Unknown Origin	
Rushton	April 13 2022	1 to 37	3	Not Available	R-M269	Unknown Origin	
Quinn	June 25 2009	1 to 37	3	Not Available	R-M269	United States	Laughlin Quin, 1713-1774
Casey	July 14 2020	1 to 37	3	Not Available	R-M269	Unknown Origin	
Hansen	February 06 2015	1 to 37	4	Not Available	R-M269	Unknown Origin	
Allen	November 10 2017	1 to 37	4	Not Available	R-M269	Unknown Origin	

Figure 9: *Snapshot of test subject Quinn's closest genetic surname matches as revealed in a Y-DNA STR database. The more Y-DNA STR markers two males share, the more recent their shared paternal ancestor once lived. The test subject's closest Y-DNA revealed genetic surname matches are **NOT RANDOM**, he matches others named Quinn (**black arrows**) together with others with surnames like Casey (**red arrows**) that also recur among his matches. The Quinn and Casey surnames have arisen among related Gaelic Irish males living somewhere in Ireland at some point after the appearance of surnames an estimated 1,000 years ago. Highlighted font indicates each surnames associated ethnicity, or the location of an earliest paternal ancestor; Irish/Ireland, Irish-associated.*

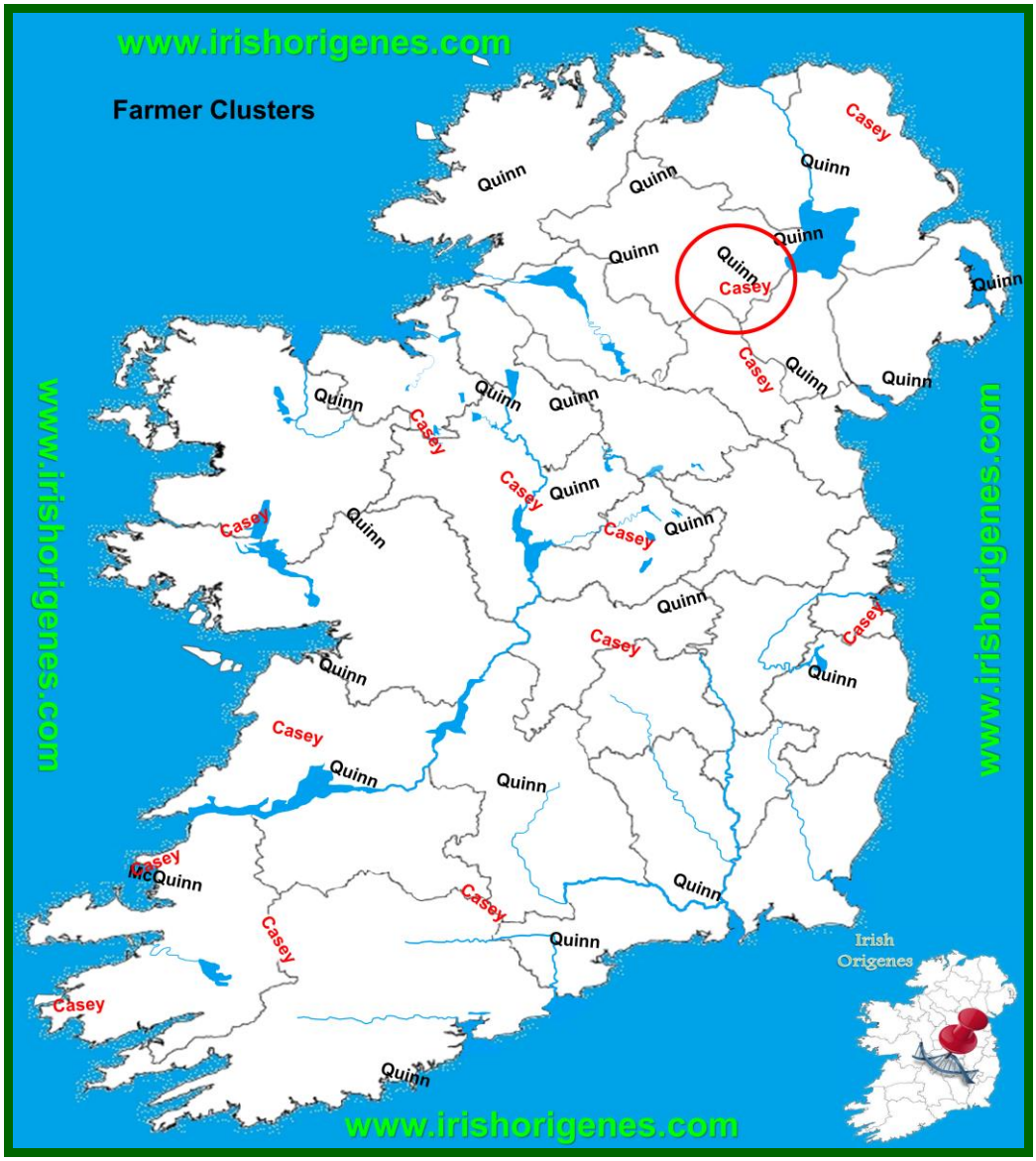

Figure 10: *Overlay mapping of the Quinn and Moore farming communities. The Quinn and Moore surnames are linked through Y-DNA testing and hence arose among related Gaelic Irish males living in a specific location. Overlaying mapping of the Quinn and Moore farming communities reveals that they occur together within the Armagh and Tyrone borderlands (**red broken circle**) which also emerged as an autosomal DNA hotspot that is associated with the Quinn surname. Each surname is positioned in the area where farmers with that surname concentrate in early census data. The most common spelling is detailed in each location. Surnames are positioned as they appear on the New Updated Irish Origenes Medieval Surnames map **https://www.origenesmaps.com** A surname search function is available at **https://analysis.irishorigenes.com/surnames***

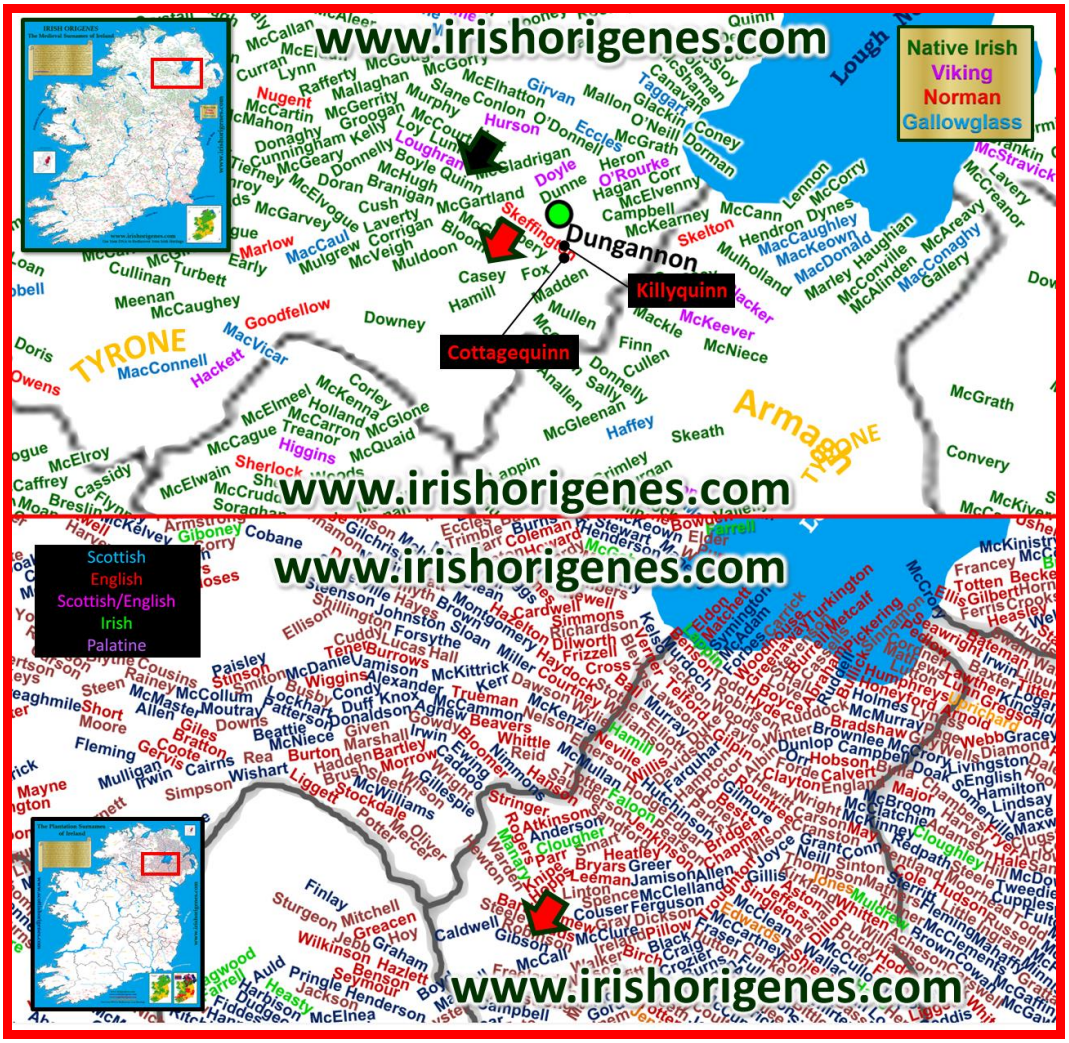

Figure 11: *The Surnames of the Armagh and Tyrone borderlands. Irish farmers still concentrated in early census data in the area where their surname first appeared or in the area where one's ancestors first settled, and an examination of the surnames that span the borderlands of Armagh and Tyrone reveals the test subject's Quinns concentrated near Dungannon (**black arrow**, **top panel**). In the surrounding area one finds the Gaelic Caseys and Plantation Gibsons (**red arrows**) that appear among the test subject's closest Y-DNA revealed genetic relatives. Each surname is positioned in the location where farmers with that surname concentrate in early census data. The most common spelling is detailed in each location. Detail taken from the Irish Origenes Surnames maps, free to view at* ***www.origenesmaps.com*** *Surname search function available at* ***https://analysis.irishorigenes.com/surnames***

Confirming an ancestral link to an identified area

One must keep in mind that this is a scientific 'DNA' approach. The DNA does not lie, and commercial ancestral DNA testing of individuals (farmers) with the surnames of interest from the ancestral DNA hotspots would confirm the ancestral link to that location.