

**Analysis of the Results of the Big-Y Male DNA Testing Program
For Descendants of Todd Families Sharing the “Group 2” Male DNA Pattern
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Between early 2020 and early 2021, a prodigious effort was expended to recruit and raise funds for “Family Tree DNA” Big Y 700 male DNA tests for 17 Todd families having the same basic male DNA pattern but no known common ancestor. The purpose of this testing was to see if the Big Y 700 would reveal relationships between these various branches that was not apparent from the historical record and traditional DNA results.

Special thanks to Cherie Ohlsson who encouraged the pursuit of Big Y tests even when one of us, namely Richard McMurtry, doubted that it would be productive.

The families that were tested were:

Region	Family	Progenitor	Sample Donor
Co Antrim	Todds of Coleraine and NW Co Antrim	Daniel Todd d 1737 Coleraine and John Todd 1766-1851 of Priestland, NW Antrim	Nicholas Todd
	Todds of Central Antrim and Londonderry, New Hampshire	Andrew Todd b 1697=>Londonderry NH 1720	Robert Bruce Todd
	Todds of Kennett Square, Chester Co PA	James Todd 1799-1820	John Gardner Todd
	Todds of Nashville & Xenia Ohio	James Todd 1748-1815	Russell Todd
	Robert Todd b 1750s of Laurens Co SC	Robert Todd b 1750s=>Laurens Co SC 1773	John T. Todd
	Todds of Washington County PA	John Todd d 1808 Washington Co PA	Alexander Todd
Co Down	Todds of Carricknaveagh/Toddstown	John and Robert Todd prior to 1625 Carricknaveagh	James Rea Todd
	Todds of County Down and Butler Ohio	Robert Todd b 1806 1833 Killinchy, Co Down, =>Butler Co OH by 1870	Samuel. Pogue Todd
	Todds of Fleming County Kentucky	Thomas Todd 1781-1826	Norman Todd
	Todds of Co Down, Delaware & Fayette Co PA	Thomas Todd b 1765-1855	William Bracken Todd
	Todds of Co Down, Co Monaghan and Laurens Co SC	Andrew Todd b 1756 Co Down=> Co Monaghan=>Laurens Co SC 1816	Samuel Rutherford Todd
	Todds of Aghaderg, Co Down	James Todd d 1704 Aghaderg, Co Down	Peter Ross Todd
	Todds of Somerset County New Jersey	Andrew Todd d 1781	Morris Todd
	Todds of Somerset County New Jersey	William Todd d 1760	Robert Samuel Todd
	Todds of Loudon County, Virginia	Robert Todd b 1730s d 1793	Gareth Todd
	Todds of Washington Co New York	John or Robert Todd b prior to 1750s=>Washington Co NY by 1771	Richard W. Todd, Charles Ralph Todd, Jr.
Scotland	Todds of Fenwick, Ayrshire	Matthew Todd b 1695 md 1715 d 1763 Fenwick, Ayrshire	Allan Todd
	Todds of Antrim and Ninety-Six District/Edgefield/Saluda County SC	Archibald Todd b ca 1745 Co Antrim? =>96 District (later Edgefield later Saluda Co) by 1773	Benjamin Harris Todd

The raw data for our analysis are shown on Figure 1 below. Following Figure 1 is our attempt to show in graphical terms the relationships between the families studied. (Figure 2).

We were able to show with these samples which Todd families shared the same branch of the genealogical tree and therefore were more closely related to each other than the families on other branches. For example, we were able to show that:

1. The Todds having the oldest DNA pattern were the **Todds of Fenwick, Ayrshire** Scotland.
2. The **Todds of Co Antrim** and the **Todds of County Down** were not descended from each other, but rather were two independent branches of the family that emerged at a very early date.
3. The **Todds of Nashville TN and Xenia, Ohio** (James Todd b 1748); the **Todds of Laurens Co, SC (Robert Todd b 1750s=>Laurens 1773)**; and the **Todds of Washington County, Pennsylvania** (John Todd d prior to 1808) all share a common ancestor prior to the branching off of the County Down Todds.
4. The Todds who came to **Londonderry New Hampshire** in 1720 (Andrew Todd b 1697) and the Todds who appear 100 years later in **Kennett Square, Chester County, Pennsylvania** (James Todd 1799-1820 share a common ancestor with the **Todds who settled Coleraine and NW Co Antrim** (Daniel Todd d 1737 and John Todd b 1766).
5. The remaining Todd families in our study all appear to have derived from the County Down Todds.

For many of these families, prior to this study, we had no idea where they came from in Ireland before coming the US. Now we know for several of these families which ones had an Antrim origin, which ones had a Down origin and in a few cases, which had a southern County Down origin as opposed to a northern County Down origin as described in more detail below.

But let us be more systematic in our discussion of the results.

The Todd family with the oldest DNA pattern on the Todd genetic tree was the Todds of Fenwick, Ayrshire, Scotland. Sharing this pattern was the family of Archibald Todd b 1745 who migrated to Ninety-six District (later Edgefield, then Saluda County) SC in 1773. This suggests an Ayrshire origin rather than or perhaps prior to the Midlothian origin suggested by some historians of this family.

The three branchings from this oldest pattern were:

1. The **Todds of Coleraine and northwest Co Antrim** descended from Daniel Todd d 1737 Coleraine and a presumed descendant John Todd 1766-1851 who lived on Daniel's County Antrim lands. From this branch are also related (a) the family of Andrew Todd b 1697 who came to Londonderry Township, New Hampshire in 1720, and (b) the family of a James Todd b 1799 who died in 1820 in **Kennett Square, Chester Co PA**. Andrew Todd b 1697 was the third son of James Todd (c 1662-1715) and Rachel Nelson (1662-1745), who emigrated from Scotland to the north of Ireland. Elizabeth Todd, the sister of Andrew, married John Bell of Coleraine (possibly Ballymony parish), Co Antrim.

2. Three different Todd families: (a) the family of **James Todd b 1748 Co Antrim who migrated to Nashville TN** by 1780 and then moved on to Xenia, Greene Co Ohio and died there in 1815. (b) the family of **Robert Todd b 1750s** who came to the Rabon Creek area of **Laurens Co SC** in 1773, (c) the family of **John Todd** who died in **Washington Co PA** by 1808.

3. The third branching consists of three separate branches of Todds - all with origins in County Down.

a. The oldest of the County Down branches was the family of **John and Robert Todd** who settled in **Carricknaveagh/Toddstown** in northern County Down by 1625. Closely related to this branch was the family of **Robert Todd b 1806** who married in 1833 to Prudence Scott in **Killinchy Co Down** and who came to Butler Co Ohio by 1870. (Killinchy is adjacent to Saintfield Parish that contains Carricknaveagh.)

b. The second of these three branches was the family of **Thomas Todd b 1765** who came from County Down to Delaware by 1785, and then moved on to **Fayette Co Pennsylvania**. Also in this branch was the family of another **Thomas Todd** – this one born in 1781 who came to **Fleming Co Kentucky** with his brothers John and Patrick by 1811. This was a very satisfying discovery since previously we had no idea where the Fleming Co Kentucky family came from.

c. The third branch of the County Down Todd branch contained three subbranches:

i. The earliest of the subbranches was the family of **Andrew Todd 1756-1843** who was born in Co Down, moved as a boy to County Monaghan, and then in his aging years moved in 1816 to **Laurens Co SC** where his brothers John 1762-1835 and Samuel 1761-1825 had moved years before. John came there by 1790 and Samuel by 1800. Records of this family indicate that there were Todds in County Monaghan before this branch moved there. So perhaps there are descendants there.

ii. The second of these subbranches contained the families of the **Todds of Aghaderg (Ballynaskeagh)** in southern County Down (James Todd d 1704), the **Todds of Somerset County New Jersey** (Five brothers Andrew, William, John, Robert and James and an unnamed sister) and the **Todds of Loudon County Virginia** (Robert Todd born 1730s). This was also a very satisfying discovery because we always wondered if the Loudon County Todds might be an offshoot of the Somerset County Todds, and indeed these data suggest that is a possibility. Also, we did not know where the Somerset County NJ Todds or the Loudon County Virginia Todds came from. Now we know they most likely came as an offshoot of the Aghaderg Todds in southern County Down.

iii. The third of these subbranches was the **Washington County New York Todds**. These results indicate they are not a direct offshoot of the Somerset County New Jersey Todds, but rather a possible subbranch of the Aghaderg County Down Todds or the ancestors of the Aghaderg Todds. Records of Asa Fitch 1809-1879 discovered in 2021 revealed that this family was from County Monaghan.

Group 2 Todd Origins

One of the results of the Big Y 700 test is a genetic tree back to the genetic Adam – the ancient ancestor of Homo sapiens about 240,000 years ago from which all present day humanity descends. Figure 3 is a map that uses data from FTDNA Big Y testing. This map shows the migrations of the ancient male ancestors of one our Todd groups, which includes the Todds of Somerset Co NJ, Washington Co NY, Loudon Co VA, Aghaderg, Co Down, and one of the Co Down to Laurens Co SC families. The map shows the emergence of the family from Central Africa, into the Middle East, into central Europe, into Scandanavia, back down into central Europe, then westward into the British Isles. All locations are proximate and not to be taken precisely.

The SNP common to these families (I-BY7003) occurred in SE England about 1300 years ago according to the map. It also shows SNP I-FT309172, the most recent SNP common to Todds of Somerset Co NJ, Washington Co NY, Loudon Co VA, and Aghaderg, Co Down located in Ireland sometime between 200 and 600 years ago, i.e. 1420 to 1820. This is a very wide range! But it suggests that these families have a common ancestor after the time that surnames became common and possibly (though not necessarily) after the family came to Ireland.

But what about our Scottish connections? Gilbert et al. (The Genetic Landscape of Scotland and the Isles, 2019, www.pnas.org/cgi/doi/10.1073/pnas.1904761116) established the strong genetic connection between southwest Scotland and Ulster, Ireland. The study analyzed 341,924 SNPs from 2544 individuals. They identified six genetic clusters in Scotland - the northeast, the southwest, the Borders, the Hebrides, Orkney, and Shetland. Of interest to Group 2 Todds is the southwest region, which is mostly Lanarkshire and Ayrshire. On the map (Figure 4) this cluster's symbol is the blue square outlined in yellow. The study calls this cluster SCO-IRE. It is marked off in the red circle. Notice that the other significant concentration of SCO-IRE is in the north of Ireland. There is a strong genetic connection between southwest Scotland (Lanarkshire and Ayrshire) and Ulster. The study explains:

"The distribution of Irish members of SCO-IRE appears to be limited to regions of north Ireland which saw substantial plantation of British migrants in the 17th century."

This makes sense if you know the history of the Ulster plantation. These regions are some of the Ulster counties that we have identified with our Irish Todds - Down, Antrim, Derry, Tyrone, along with our identified Scottish relatives from Ayrshire.

Future Research

It takes an enormous amount of time and effort to raise the funds to pay for these expensive tests and a similarly enormous amount of time to recruit new samples to expand our understanding.

However, if at some point in the future, someone wishes to take this to the next level, here are some avenues of research that would be worthwhile to pursue.

1. Do a thorough survey of the Ayrshire Todd families using the 37 marker Y-DNA test to determine the geographic boundaries of the Group 2 DNA pattern and to determine the variability of DNA patterning within Ayrshire.
2. Conduct Big-Y testing on a second sample from the Fenwick, Ayrshire family and the Ninety-six District/Edgefield Co SC Todds to see if this reveals more detailed branching.
3. Conduct Big-Y testing on Group 2 families that have not been sampled, e.g. the Todds of County Sligo and Dublin; Todds of Hunterdon County NJ (Charles Todd b 1795); John Todd md 1868 Louisa Deane in Tynan, Co Armagh; John Todd of Coleraine bc 1800; Todds of Derrykeighan; Andrew Todd b 1806 Co Tyrone, to Philadelphia c 1825; Robert Todd bc 1790s of Ardstraw Parish, western Co Tyrone.
4. Identify and conduct Big-Y testing on Todds in Ayrshire and Lanarkshire, Scotland. We have established many of the Ulster, Ireland Todd origins. There is a strong genetic relationship between Ulster and southwest Scotland (Figure 4) and it is a natural place to begin to deepen Todd Scottish roots.
5. Research the County Monaghan Todds to see if there are descendants who migrated to America or elsewhere in the 1800s.

Thanks to all who contributed samples or funds to make these discoveries possible!!! Without your support, this effort would not have been possible.

Figure 1. Block diagram of Big Y results from Family Tree DNA for Group 2 Todds. Men in the lower white boxes share a common SNP (Single Nucleotide Polymorphism), given at the top of the box. For example, Gareth, Peter R., Morris and Robert Samuel have the SNP I-FT309180 in common and this “terminal SNP” currently defines that branch of the Todd genetic tree. Testing more Todd men will further refine relationships and identify new branches.

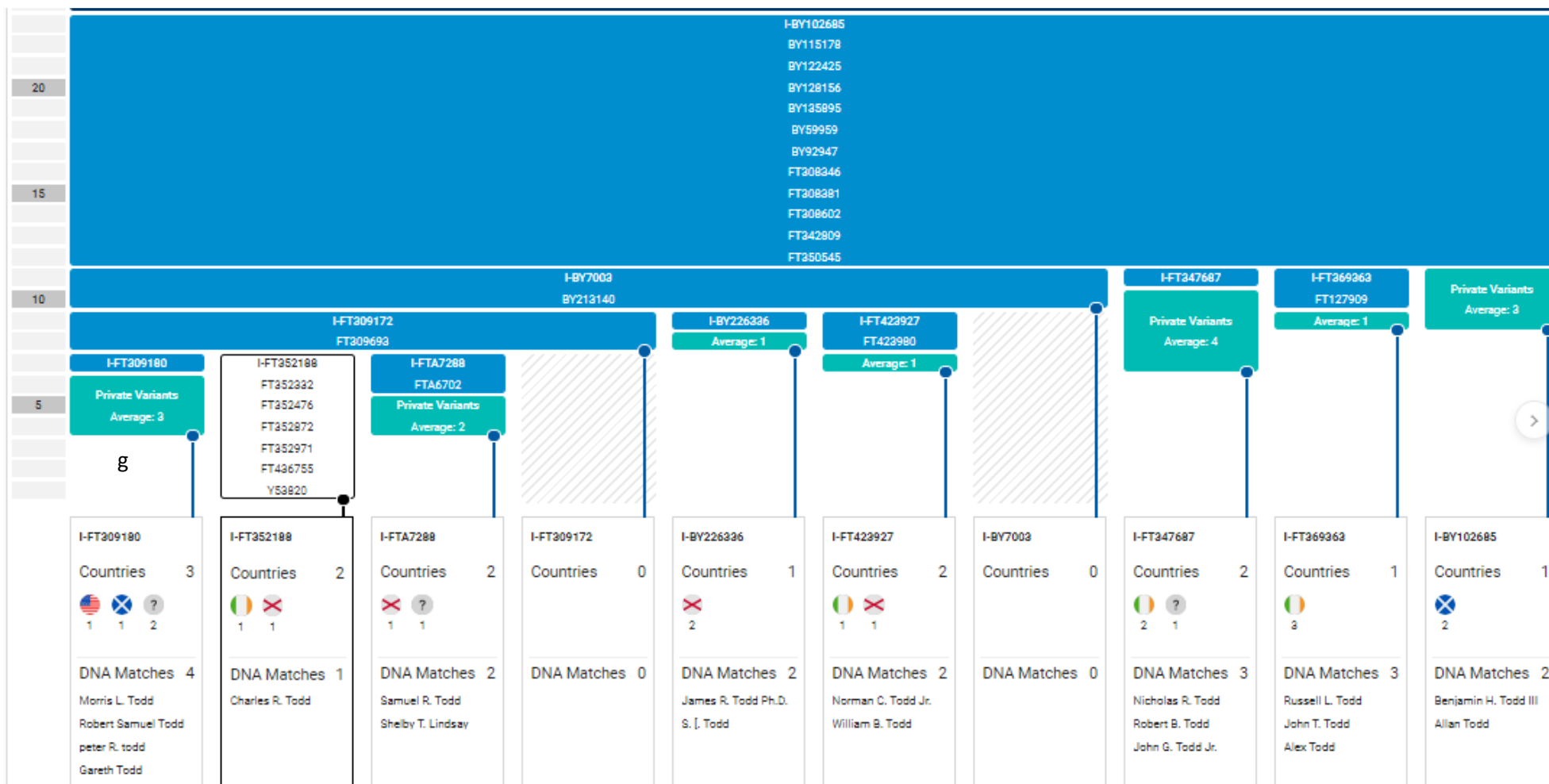
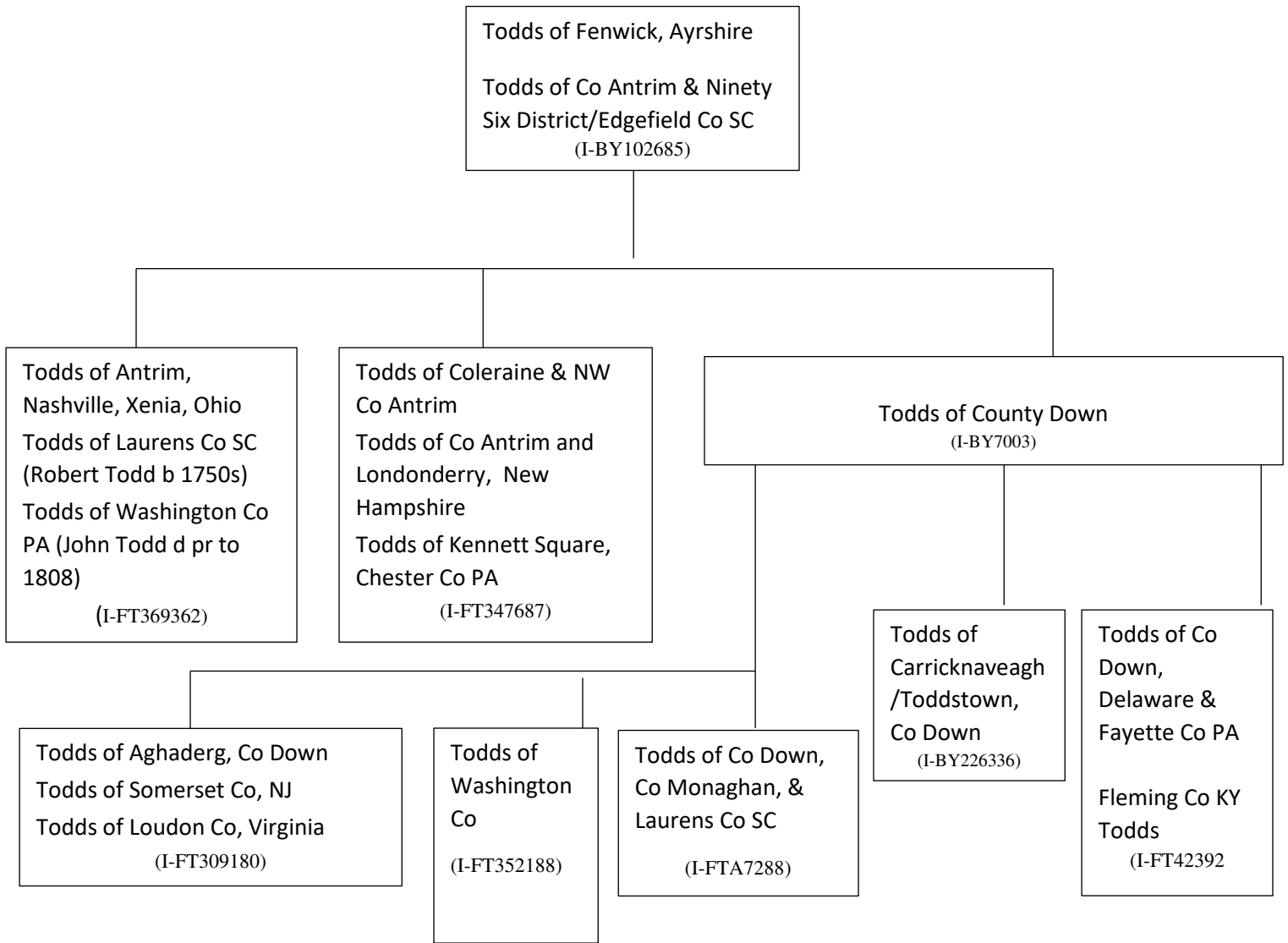


Figure 2. Hypothesized Group 2 Todd genetic tree.



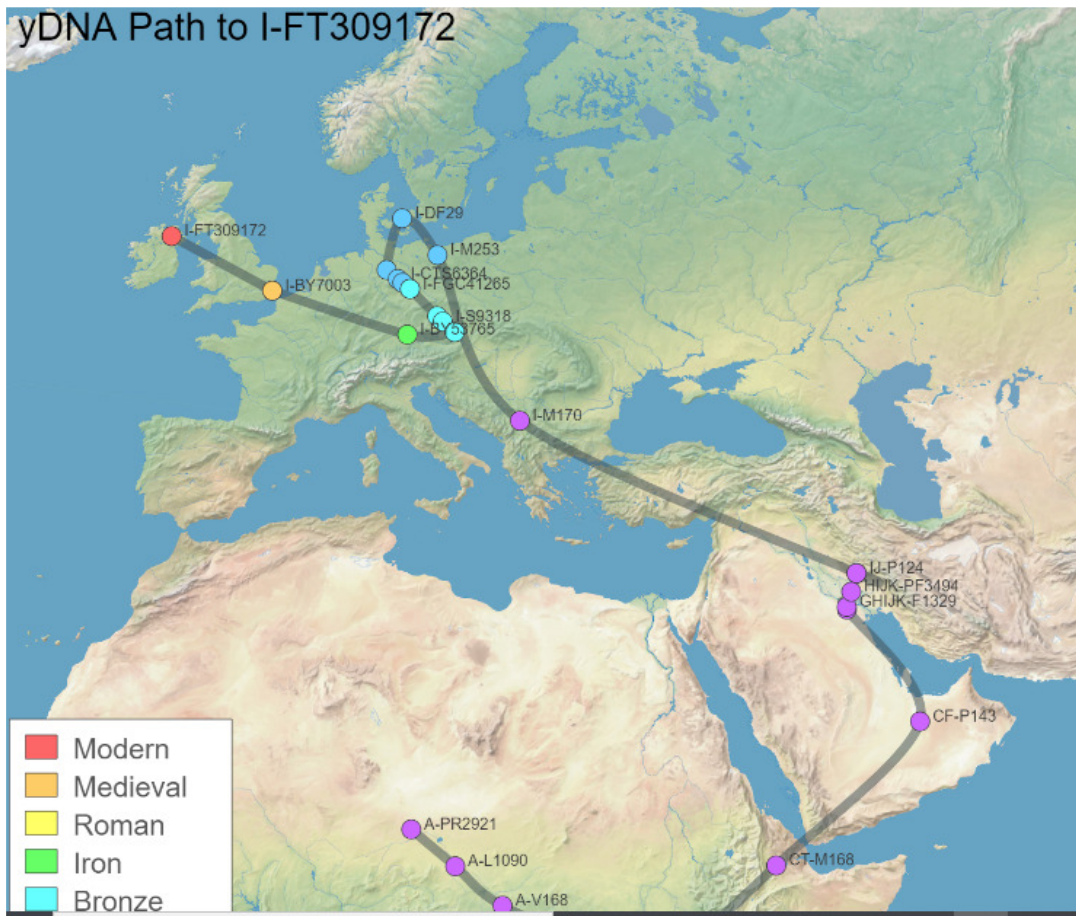


Figure 3. Conceptual migration of the male ancestors of the Todds of Somerset Co NJ, Washington Co NY, Loudon Co VA, Aghaderg, Co Down, and one of the Co Down to Laurens Co SC families. Locations are proximate, and are not to be taken precisely.

Source: SNP Tracker, Scaled Innovations:
<http://scaledinnovation.com/gg/snpTracker.html>

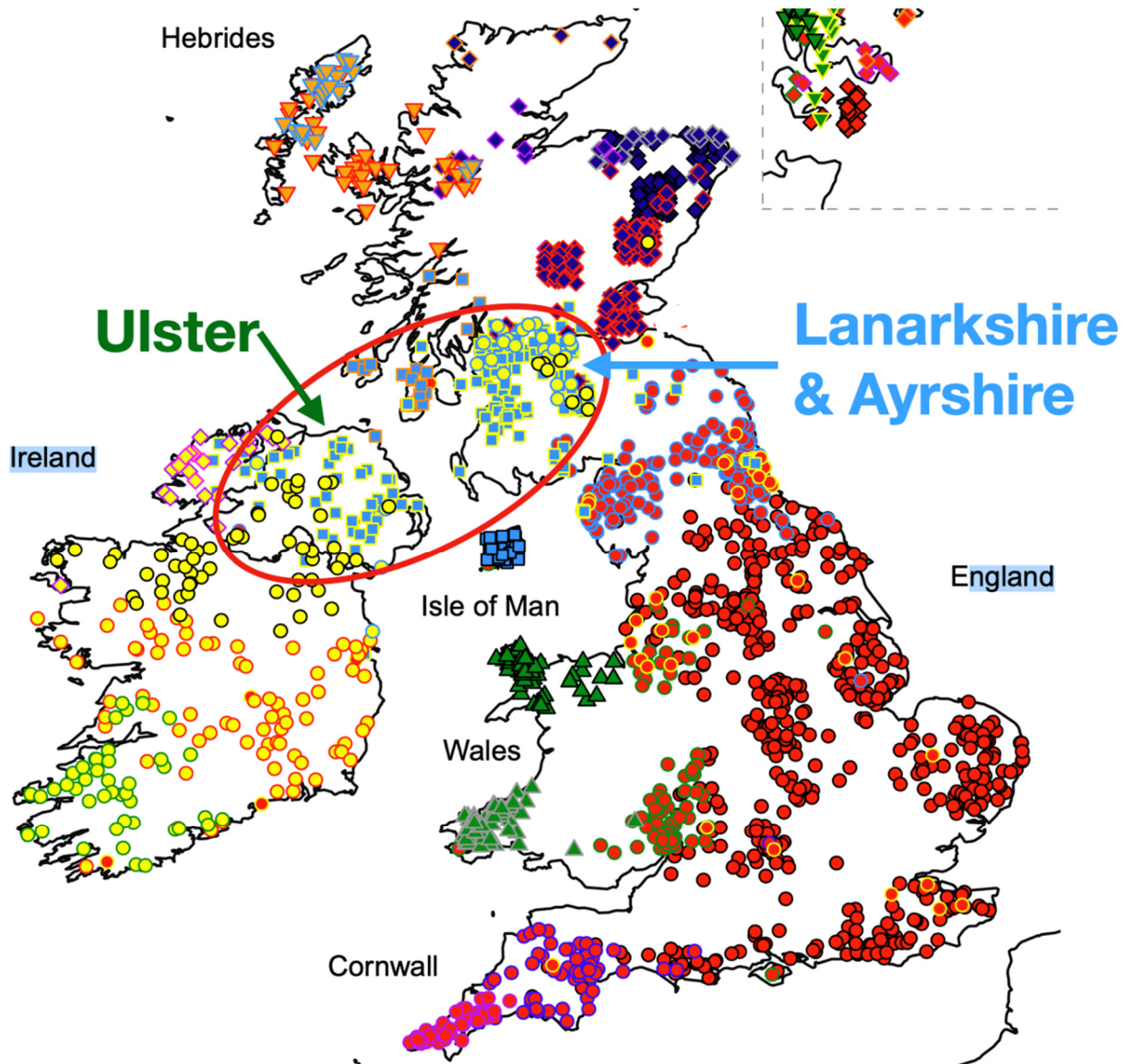


Figure 4. Adapted from Figure 1 of Gilbert et al. (2019), “The genetic landscape of Scotland and the Isles” (PNAS 116 (38) 19064-19070; <https://doi.org/10.1073/pnas.1904761116>). The blue square outlined in yellow within the red circle is the symbol for the study’s SCO-IRE cluster. The distribution of SCO-IRE shows the strong genetic connection between southwest Scotland (Lanarkshire and Ayrshire) and Ulster, Ireland.