

THE Y-DNA PROJECT

October 2013

Quarterly report from Elizabeth O'Donoghue/Ross, the Society's Group Administrator

This quarter we have three new members, one in the Breifne Group A, a second placed in the Unaffiliated R1b1a2 and a 12-marker result that matches exactly with one of our Ia2 participants.

In addition, an increasing number of participants are choosing to test for other types of DNA, such as mtDNA (mitochondrial) to trace their female lineage and atDNA (autosomal) to test for possible relations from all branches of their family tree. The ladies can avail of these tests as well. You can find out more about these choices by going to <http://www.familyreedna.com/products.aspx>. The price for Family Finder, which tests atDNA, has recently dropped considerably to \$99 in order to compete with other testing companies. If you have a comprehensive recorded pedigree for all grandparents going back several generations, Family Finder may be of interest to you. You need to keep in mind, though, that without knowing the names of your ancestors for at least 2-4 generations back (ideally more) even if you do find matches, it would be impossible to determine where you and a 'match' have a common relative.

Unfortunately, my own expertise in the areas of mtDNA and atDNA is quite limited, so I couldn't be of much help to any participants who take these tests. Such test results will cross surnames almost immediately, so there is not such a clear picture like the Y-DNA which consistently follows the male line.

In the realm of Y-DNA, with the extensive SNP testing via the Geno 2.0 test through National Geographic and even more comprehensive tests available at companies such as Full Genomes at <https://www.fullgenomes.com/>, the number of SNPs being discovered is increasing dramatically. Example are the several SNPs now identifying the South Irish haplotype of the Glens tribe as well as the increasing number of SNPs downstream of DF21, which can be found in some of the members of the Mór tribe. The Northwest Irish/M222 subclade (which defines the Breifne Group A) is now being divided further, with new SNPs downstream of M222 beginning to appear.

This increases the likelihood that other SNPs may apply to other groups who have not yet been identified with a defining SNP. If any participants are interested in testing further, let me know and I can advise if I am aware of SNPs that relate to the variety of haplotype they have, or I can inquire or make suggestions on how to find out. There are a number of very competent citizen scientists with impressive credentials of their own doing much work in researching the various subclades that have been discovered and searching for more by analyzing the results of these extended SNP tests mentioned. They have assisted the academic scientists in their researches and have even begun to be included in formal papers being published about their findings.

Practically speaking, as a result of all this activity, we have to admit that those assigned to the Mór tribe are a loose confederation, insofar as the different clusters have different terminal SNPs (the furthest downstream SNPs present as currently tested). Even ignoring

the difference in SNPs, the TMRCA (Time to Most Recent Common Ancestor) between the different clusters in the Mór group is overall considerably greater than the Glens tribe. This is hardly surprising, for the patrimony of the Glens tribe is of relatively recent origin and dramatically so when comparing them to the Mór tribe, which has truly ancient progenitors.

One of the earliest discoveries made through the Y-DNA project while Prof. Tom was its administrator is that the Mór and Glens lines did not have a common ancestor in Awly Mór as some of the histories suggested. Intense research established the explanation for that. Prof Tom recognized that the Glens lineage had matches with McCarthys, which indicated that their heritage was Eoghanacht Cashel, to which both families belonged. Close scrutiny of the annals clarified how this was the case. Though many historians don't recognize it, the annals make clear there were progenitors of two different O'Donoghue lineages in the Eoghanacht, one Cashel and one Raithlind.

The O'Donoghues of the Glens, along with many McCarthys are of the South Irish haplotype. Historically, they descended from Conor (presumably a scion of the Cashel dynasty who lived in the 12th century). He in turn is presumably descended from Fingin, a 7th century king of Cashel. The other Cashel Eoghanacht have origins of a comparable time frame. But all the Eoghanacht are supposed to have a common ancestor in Eoghan Mór. However, based on our research in the Munster Irish DNA Project, this is proving not to be the case. It's possible that the South Irish haplotype may have its origins in Ireland and may be a subclade which developed perhaps roughly 2000+/- years ago. However, it is reasonable to believe that these peoples allied themselves with the incoming eastern Gaels, intermarrying with those warrior clans, which can explain the fact that the O Mahonys, who are mainly South Irish, are traditionally cousin tribes within the Eoghanacht Raithlind.

The O'Donoghues Mór have a different background from that of the Cashel/Glens, and if our assumptions are correct and if Cathann Ui Duinnin can be at all trusted in his recorded genealogy of 1320, the Mór tribe (the western Eoghanacht Raithlind, who predate the appearance of the eastern Eoghanacht Cashel) goes back much longer in time. It is no wonder that the Mór has a greater variety of clusters, if there is any credence in the *Leabhar Gabala* (Book of Invasions) and the tale of their Milesian progenitors, who supposedly originated amongst the Celts of the western Atlantic who had travelled to the east to the Scythian region of the Black Sea before returning to the Atlantic and thence to the south of Ireland.. It's even possible that these Gaels could have originated on the Steppes of Central Asia, perhaps as far back as the time of the Tokarian culture of the famous mummies of Urumchi - 4-5000 years ago.

This is speculation, of course, but genetics is not an exact science. No one knows for sure how long ago genetic Adam lived, and unless artefacts associated with a tribe/civilization can be carbon dated, and are without doubt related to it, the ages of any of the societies/cultures being researched can only be estimated. And if you recall the old adage coined by Mark Twain, there are... 'lies, damned lies, and statistics'.

The statistics we provide in the TMRCA spreadsheets on the Society website are just probabilities, so must be viewed with caution. The genetic genealogy community criticize the mutation rates that Family Tree uses in their calculations for TMRCA since they create a more recent time to a common ancestor than the pedigree rates generally used by the citizen scientists, as well as a growing number of the scientific community. I use Family Tree's

rates in our calculations so that the data will be similar to what participants will see on their own personal pages at Family Tree. It's possible, if not probable, that all the dates suggested are underestimated, particularly for those with higher genetic distances between them. The only sure facts are those genetic distances between participants – but that is simply counting the number of differences between the marker values. That alone can't give us any dates to a common ancestor.

In actual fact, belonging to different subclades by definition means that a common ancestor must be further back than the STR comparisons suggest. Tighe and his close match, John Roger, have marker values that coincide separately with the other clusters currently placed in the Mór group, which appeared to be a bridge between them in early days, before SNPs became a significant development in the study of Y-DNA. But this increased knowledge has changed things.

While Prof Tom's cluster is DF21+/DF25+, Tighe's being in a further downstream subclade with DF5+ indicates that it's improbable there could have been a familial connection within the roughly thousand years plus suggested in the TMRCA spreadsheet (Sheet B on the Society website on the Results page). This does not preclude that there is a tribal connection, since as mentioned above, the Eoghanacht Raithlind ultimate beginnings date back long before the time of Awly Mór O'Donoghue to the earliest days of the Eoghanacht, if not before the mythical time of Eoghan Mór, the purported progenitor of all the Eoghanacht tribes.

While it is possible, as suggested previously, that there was a back mutation in Rod's group, who are DF21- (and by default also DF25- and DF5-) the relationships between Prof. Tom's, Tighe's and Rod's groups are uncertain based only on comparing the STR haplotypes. At this point in time, the research currently underway for all these different subclades can only provide tenuous possible dates for common ancestors, if any suggestions are made at all. And those would only be for the common ancestors themselves, not the later descendants, of which all the Mór participants would be.

This does not mean that these clusters were not related at all. These tribal affiliations could have originated with the appearance of the Eastern Gaels who most certainly did arrive on the island at some point in the past. They could not conceivably all have been related family members at that time. There could have been a number of independent groups of cousins loyal to their leader. By the nature of things, there would have been continual intermarriage between these tribal members as a matter of course. Families tended to stay within the tribal territories into which they were born. They received protection from the chief of the territory, something which they would lose if they moved or travelled into a different territory. That was the way of it in those tribal days. The similarities in physical characteristics in Kerry/Cork O'Donoghues, the similarities in geographic origins of their families and ancestors, all tell us they are related.

But it's even more than that. The two O'Donoghue families surely intermarried between themselves as well, and likely with some regularity. Even here in Glenflesk, I know of at least three married couples who are both O'Donoghues (and not all Glens). And Tighe has a cousin in New York who even managed to find another O'Donoghue to marry. There must be a special simpatico between them all! While Tighe (with his artist's eye) can see a

different physiognomy in the Mór and Glens lines, there are instances when appearance would indicate that an O'Donoghue with the DNA of one looks a bit like the other.

Beyond the Kerry/Cork borders, the different groups within the Cavan sept of Donohoes is another example of more than one genetic cluster within the larger clan. There are even more separate groupings in the Breifne Clans project than we have represented in our Society project, but they still retain a sense of oneness.

And we are all O'Donoghues/Donohoes, whatever the spelling of the name or the male DNA that we (not personally for me, of course ☺) share. This is discussed further in our 'The Future...' article in the current Journal.

Let's find out more!

I would like to remind everyone again that the spreadsheet at the Family Tree website is now accessible and you can see all the results as soon as they arrive at the link - <http://www.familytreedna.com/public/ODonoghue/>. This is posted on the Y-DNA pages on the Society website as well. The Society website address is still the formal one given on the Family Tree website, and all details regarding the project are presented exclusively on the Society website.

The Spreadsheets, Results and Interpretations pages will be updated later this month on the Society website and Rod will let you all know when they are ready.

I would also like to mention that I will be presenting a talk, along with my co-administrators, Nigel McCarthy and Finbar O Mahony, about the Munster Irish DNA Project which we began early last year, at the upcoming Genetic Genealogy Ireland 2013 conference in Dublin, where the O'Donoghues will receive a mention. We will also participate on a panel discussion of Ireland's genetic history with Trinity's Dr. Dan Bradley and other members of the genetic genealogy community in Ireland.

You can see more about it at <http://ggi2013.blogspot.co.uk/2013/08/elizabeth-odonoghueross-munster-irish.html>. If any of you are in Dublin the 18th – 20th of October, you are more than welcome to stop by. Family Tree are sponsoring the presentations and will have a booth there as well, as part of the Back to Our Past exhibition at the RDS. There is a Prize Draw for free DNA tests for anyone who will be attending the conference – see <http://ggi2013.blogspot.co.uk/p/sponsored-dna-tests.html>. So anyone intending to come and hasn't yet been tested, do enter!