

The Campbell DNA Project – An Update

by Kevin Campbell

“My mother,” answered Telemakhos, “tells me I am son to Odysseus, but it is a wise child that knows his own father. ... And Athena said, “There is no fear of your race dying out yet, while Penelope has such a fine son as you are.” from Homer’s Odyssey.

The Campbell DNA Project has been underway since October 2002. The project was profiled in the CCSNA Journal in the Spring of 2003 in an article that described the project goals and the basics of DNA testing and analysis. In addition, there was an excellent article in the CCSNA, Winter 2003 edition by Duncan Beaton accurately pointing out the limitations and some misunderstandings concerning DNA testing in general.

The purpose of this article is to provide an update on the project -- including some very interesting results --, to summarize several recent DNA developments from other Clans, and to clear up some confusion concerning some DNA myths and misinformation.

Campbell DNA Project Results

Having been underway for about a year and a half, some interesting results are starting to come in. Currently, the project has 25-marker samples from approximately 37 Campbells in the US, Scotland, and Canada. We are particularly fortunate to have received samples from several Campbells who represent well known and documented, historical lines.

Of the 37 samples received, 31 samples have been characterized as to what is referred to as Haplogroup R1b, 3 samples are characterized as Haplogroup I, and 3 samples are undetermined. The definition of these characterizations as follows:

Haplogroup R1b is the most common haplogroup in European populations. It is believed to have expanded throughout Europe as humans re-colonized after the last glacial maximum 10-12 thousand years ago.

Haplogroup I is nearly completely restricted to northwestern Europe. These would most likely have been common within Viking populations. One lineage of this group extends down into central Europe. Shetland and Orkney have a high concentration of these individuals.

These haplogroups are just two of many that exist. Other haplogroups that are not represented in our Clan study are Norse (R1a) and Native American Indian (C3) among numerous others.

In addition, the results have been grouped according to their similarity that has resulted in 11 groupings that represent the best estimate as to the distinct Campbell lines present in our study. The raw study data and groupings are shown in the large table at the end of

this study. (It should be noted here – and cannot be over stressed enough -- that all of these lines represent equally, legitimate Campbell lineages.)

Because of the small sample size and the heavy bias towards North American Campbell's, one is hesitant to draw too many conclusions from this data. On the other hand, the strong affinity of R1b-type samples and the heavy clustering of samples in Group 2 are noteworthy. Group 2 contains two of the historic lines as well as many early Campbells who migrated through Pennsylvania and Virginia. Also included in this group are two samples from participants who claim descendency from John Campbell and Grisel (Grace) Hay.

Of more interest is an analysis of several of the older, historic Campbell lines that have participated in the study. Samples from descendants of the Campbells of Invarawe, Auchinbreac, and Ardkinglas are included in our data. These Campbell lines are very historic and it is speculated that they may share a common ancestor in Sir Gillespic Cambel of Lochawe who lived circa. 1350. Though the exact relationship of these lines is thought to be generally understood, it is difficult to prove hard relationships 650 years ago or what amounts to approximately 20 generations.

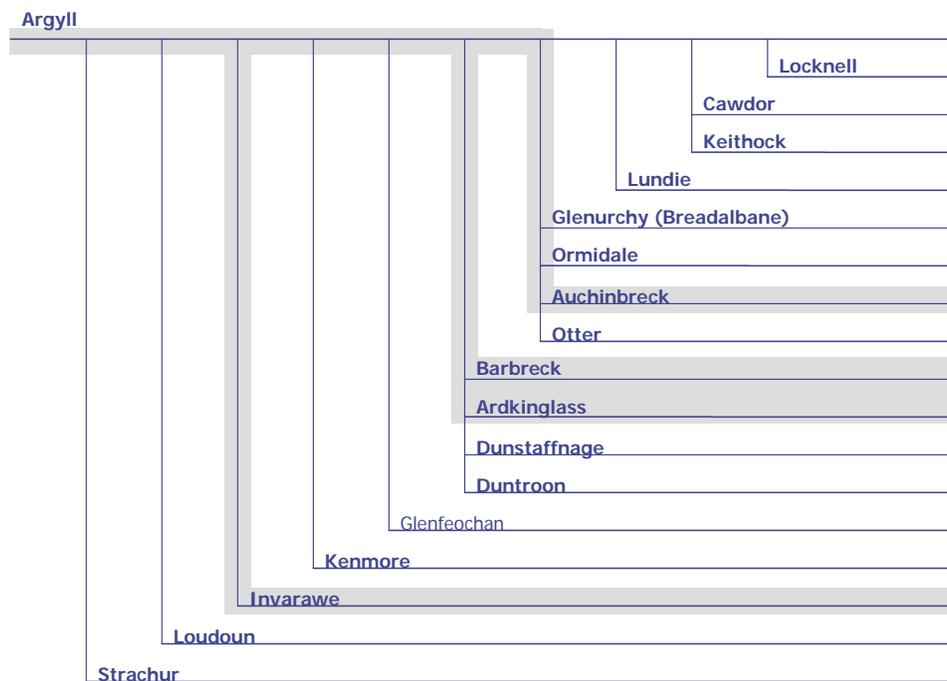


Figure 1 – Major Campbell Houses

Figure 1 shows the major houses of the Campbell's of Argyll and their cadets. This figure was extracted from G. Harvey Johnston's Heraldry of the Campbells. Highlighted in this chart are the lines in question. (Note that both the Ardkinglas and Barbreck lines are highlighted. This is because there is a second theory that our participant's line may have descended from the latter House rather than the former.)

However, an analysis of the raw DNA data for these lines shows that the samples for 2 of the 3 participants to strikingly similar. Analysis of the data show that all three samples share 15 out of 25 common DNA markers, but that the Invarawe and Auchinbreck participants are only a genetic distance of 3 apart. This small difference strongly suggests a recent common male ancestor between these two individuals and almost certainly “conclusively proves” the generally acknowledged historical relationship among these lines.

On the other hand, the participant from the House of Ardkinglas (or Barbreck) is a distance of 12 or more away from the other two participants. This distance indicates that while this individual represents an equally long and storied Campbell lineage, this participant probably doesn't share a common male relative (in the last several thousand years) with the other lines. This difference could result from many different circumstances. It could be that this participant's line (a) adopted the Campbell name at some point in the last several hundred years or (b) was descended from a separate but parallel line that went back to the very earliest Campbells. If this participant had a rigorous genealogy that claims descendency from the Chiefly Line (which he does not) then the difference could also be explained through adoption or infidelity.

Figure 2 shows the potential Campbell descendency and DNA results for these Campbell lines. Clearly while Figure 2 shows some variation due to DNA mutations, the similarity of these samples is evident. When augmented with additional samples from well-documented lines, this analysis could form the basis for determining which “branch of the Campbell tree” a current day Campbell is descended from.

The Campbell DNA Project looking participants who have a documented Scottish lineage (i.e., the Campbells of ...) or who are descended from a Campbell line documented in Burke's Peerage.

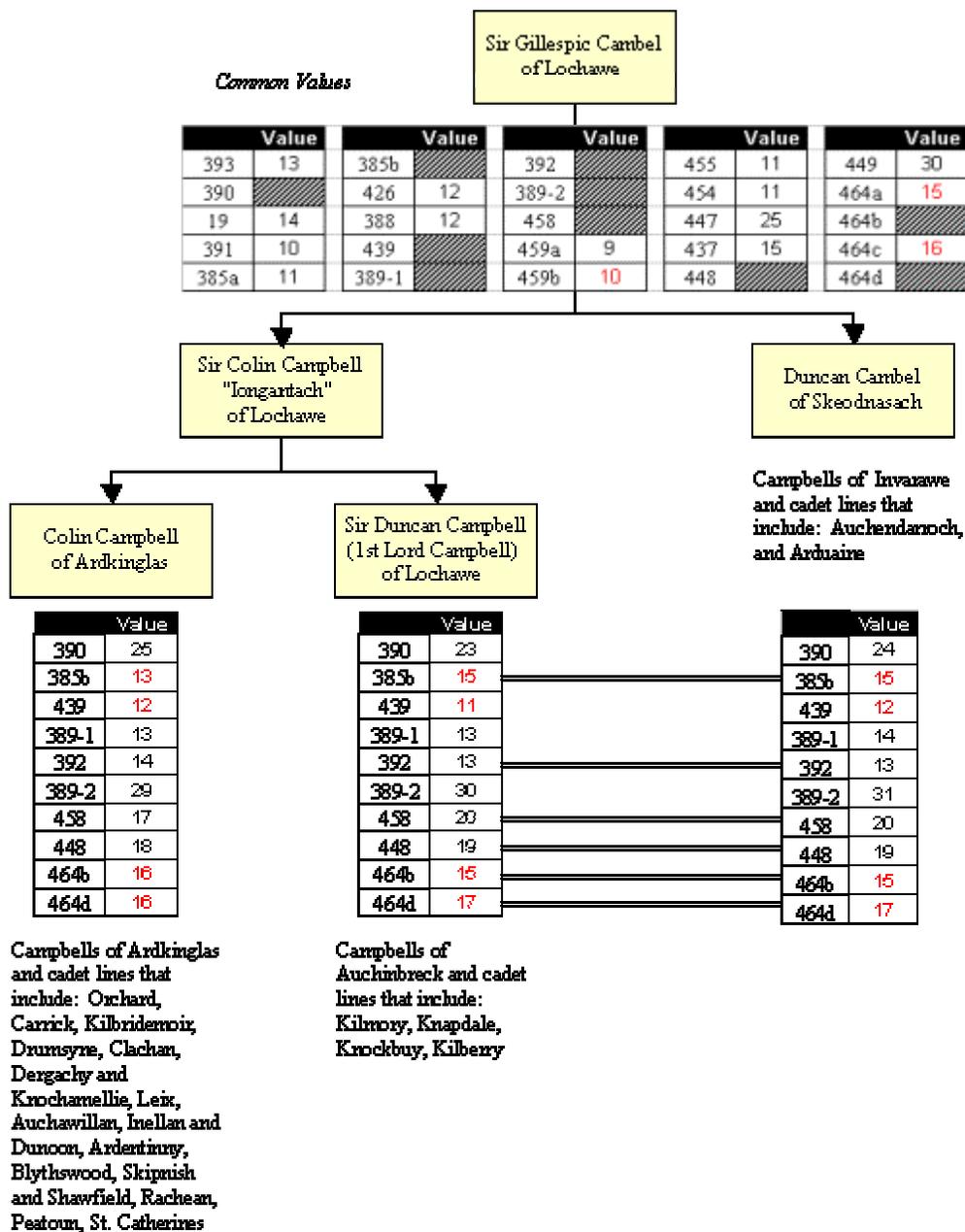


Figure 2 – Speculative Campbell DNA Lines

Other Clan Results

The Campbell DNA Project is also collaborating with other Clan projects and monitoring their results.

One result of this collaboration is the hypothesis that marker 392 with a value of 14 is the distinguishing marker of Irish Clans. This seems to hold true for some of the Campbell and the MacDonald samples.

Also, based upon some level of analysis, Clan Donald USA in February distributed a rather speculative press release claiming to have identified the genetic signature of Colla Uais, father of Dalriada. The press release recounted mythical lore that Colla was High King of Ireland who seized Ulster and then took his followers to Scotland around 325AD. It stated that Colla's descendants Fergus, Loarn and Angus (sons of Erc) were the principal foundation lines reestablishing the Scottish kingdom of Dalriada around 465AD. Colla was believed to be a great great great grandson of Conn of the Hundred Battles, High King of Ireland circa 150AD.

The press release claimed that the Scottish and Irish clans historically descended from Colla Uais include the Campbells as well as: (a) Scotland: MacDonald, MacGregor, MacGillivray, MacEachern, MacMillian, MacKinnon, MacQuarrie, MacPhee, MacInnes; (b) Ireland: Maguire, MacMahon, MacManus, Agnew, Alexander, Boylan, Cassidy (who were chiefs of Coole), Connolly (chiefs in Fermanagh), Duffy, Hale, Hanratty (anglicized Enright), Keenan of Fermanagh, Leahy in Galway, MacCabe of Monaghan and Caven, MacCann of Clan brassil, MacEvoy, MacVeagh, MacVeigh (anglicized form of MacUais) in West Meath, Magee in Down and Antrim, MacKenna in Monaghan, MacOscar (anglicized MacCusker), MacTully, and MacGrath in Fermanagh, MacNeny (anglicized Bird), MacRory (anglicized Rogers), MacSheehy, Madden, Norton, O'Carroll, O'Flanagan, O'Hanlon, O'Hart in Tara, and MacQuillan in Antrim.

The announcement was doubly interesting since it was proposed that Colla Uais DNA Haplogroup was R1b while the MacDonald Chiefly line that is supposedly descended from Somerled has been documented as Haplogroup R1a.

Current Campbell historical research suggests that we are descended from Clan O'Duine - originally from people speaking a language similar to modern Welsh. Historical-genealogical analysis traces us back to the district of the Lennox, just east of Argyll and linguistic analysis indicates that the Campbells are of a style compatible with the 'Welsh' linguistic influence, rather than Erse (Irish) Gaelic. This suggests that there is not a direct link between our O'Duine origins and those of the descendants of Conn as claimed in the MacDonald Press Release.

But conjecture can be harmless and fun. At the risk of further propagating speculative information, below if the hypothesized values attributed to Colla Uais and the average values of our historic lines presented earlier in the paper. It should be noted that these DNA signatures of the older Campbell lines and the hypothesized Colla Uais line show a genetic difference of only 3 (i.e., 22/25) that could indicate support for the MacDonald genetic theory.

		393	390	19	391	385a	385b	426	388	439	389-1	392	389-2	458	459a	459b	455	454	447	437	448	449	464a	464b	464c	464d
Ancient Campbells	R1b	13	24	14	10	11	15	12	12	12	13	13	30	20	9	10	11	11	25	15	19	30	15	15	16	17
Colla Uais	R1b	13	24	14	10	11	14	12	12	12	13	13	30	18	9	10	11	11	25	15	19	30	15	15	17	17
Somerled	R1a	13	25	15	11	11	14	12	12	10	14	11	31	16	8	10	11	11	23	14	20	31	12	15	15	16

Exciting work is also being performed attempting to identify a common Gaelic DNA signature (R1b) for Scottish Clans (Campbells, MacDonalds, MacGregors, MacKean, Livingstone, etc.) and Irish Clans (e.g., MacDonald, Guinness). This work is utilizing a

large set Irish Clan data being compiled by Trinity College in conjunction with the Guinness Clan. Hopefully both studies will publish their findings in the next several months and further analysis of this data can result.

Common DNA Myths

Because of the cutting edge nature of “genetic genealogy”, it is frequently difficult to separate fact from fiction. To wrap up this article, I would like to address two common DNA myths.

Myth: *DNA testing will help me crash through my genealogical brick wall.* – **Fact:** There is a strong tendency to over-interpret and over-anticipate DNA evidence in this manner - to use it as 'proof' of distant ancestors, which it cannot possibly provide. DNA testing shows that people are related, but not how they are related. It is only evidence of that a common descent exists. Only traditional genealogy can give name to the common ancestor, and such conclusions must be evaluated with the same stringent criteria used in the absence of DNA evidence. DNA testing is better for proving that two people probably aren't related, and for suggesting possible avenues for further research (i.e., South Carolina Campbells might better research New Jersey rather than Pennsylvania.).

Myth: *DNA Testing may show that I'm related some Campbell Lord and qualify me to receive obscene amounts of wealth.* – **Fact:** Yes and No, DNA testing will show that you are related to some Campbell Lord! It will also show that you are related to the George Washington, George Bush, and Tony Blair since everyone is related to everyone. The power of DNA testing is that it shows how closely you are related – a perfect match may indicate that you have a common ancestor 300 years ago or a distant match may indicate that you have a common ancestor 5,000 or 10,000 years ago. As for turning this into a claim on an inheritance

Disclaimer: The Campbell DNA Project is an independent effort that is not affiliated with the Clan Campbell Society of North America.

