

New Approaches to Y-DNA Testing in the Warburton One-Name Study

In Volume 12 Issue 11 of the Journal Charles Acree shared his thoughts on Y-DNA testing. He emphasised Single Nucleotide Polymorphism (SNP)¹ testing in preference to the Short Tandem Repeat (STR)² tests that were the mainstay of DNA projects in recent years. His thoughts chimed with thoughts and experiments I have been developing for the Warburton One-Name study. However the Warburton project is bigger, with a wider range predicted haplogroups³ so I believe I still have some need for STR tests, at least in the short term.

Before I share my thoughts on a strategy for moving my project forward I will give an overview of the Warburton project so far, and recount some of the more interesting discoveries.

The Warburton DNA Project

Over the last 11 years or so I have collected results from 48 Warburtons, varying from 12 STR marker tests to BigY⁴ tests. I began testing with the now defunct **DNA Heritage** and have a number of 43 marker tests which only overlap with 32 of the 37 markers in the **Family Tree DNA** test I have used more recently. The majority of results predict a haplogroup of R-M269, but I also have predictions of I-M253, I-P37, J-M172, and G-P303. Some of these are known, or suspected to be due to non-paternal events, but Warburton is a locative name and a series of articles in this journal 3 years ago by Dr John and Professor Richard Plant showed that very few 14th century men will have large numbers of descendants today. Over 90% will have no descendants at all, so it is likely that some Middle Age adopters of the Warburton name will have a small number of present day descendants. A single, unmatched DNA result does not necessarily mean there was a non-paternal event.

Having said that I have two large groups that could represent a third to a half of the estimated 15,000 Warburtons living today. Warburton Village was founded in the 10th century as a Saxon (Mercian) fortified settlement guarding a ford in the river Mersey. In the 11th century the land was acquired by the descendants of a Norman knight, and his descendants took the village name when they built a manor house there around 1260 AD. The manor house no longer exists. Two centuries later the main line of this family moved to Arley Hall, near Northwich, Cheshire. They died out in the male line in 1813 AD though the current occupant

of the Hall is a direct descendant through the female line (twice). However my largest DNA group (I call them the Cheshire Group) almost certainly consists of cadet branches of this family. The other group (the Lancashire Group) are descendants of the Saxon Inhabitants of Warburton village. Both are in haplogroup R1b-U106⁵.

The Cheshire Group

The Cheshire Group is linked to the Norman Lords of the Manor by SNP FGC13446 which is shared with a number of Duttons and dated to the 12th century. It falls under SNPs DF98 and S1911. The Norman ancestor of the Warburtons was Odard, styled Odard de Dutton after the location of his main residence. It was his great grandson Adam who acquired the land at Warburton, and Adam's great grandson Piers or Peter who was the first Warburton. This is the most likely explanation for the Warburton-Dutton DNA match.

SNP FGC13446 is one of over 2 dozen SNPs discovered by Warburton, Dutton (and a couple of other) BigY tests, but not found anywhere else. This implies roughly 3,000 years when there were no branches that have left evidence today. One explanation for this is that they are living where there is little DNA testing and this is true of France, where it is discouraged. Thus Odard was not a Norseman (though his mother was related to Duke Rollo of Normandy) but descended from the original population of north-west France.

The Lancashire Group

The Lancashire Group is identified by SNP S6881 which is dated to the beginning of the Saxon period in England and appears typically in north-west England, particularly the industrial belt of south Lancashire. In fact there are two parts of the Lancashire group. All results bar one are A11376 and A11378, but one is negative for these, but positive for A11377, and A11379. The common ancestor of these two branches must have lived long before surnames were introduced, but could have lived shortly before, or just after the founding of Warburton village. So two related Warburton villagers seem to have independently adopted the Warburton name.

The Lancashire Group has been the subject of my experimentation with new DNA testing approaches. Its STR results were quite volatile but characterised by rare alleles on some of its markers. I therefore believed I could spot a group member from a 12 marker test. When I tried it the telltales were there, but there were four other differences from the group's mode, though two of them had appeared in the group before. Still I was rather surprised when I did a SNP test on Z343 (the most recent, known SNP at the time) and got a match.

More recently I have had two BigY results from the group. I chose the two most distantly related, based on STR results, so it was logical that they revealed the two separate but related founders. My next step was to develop a 7 SNP panel at YSEQ⁶ based on the unique SNPs from the BigY from the larger group. Seven is the minimum for a panel and there were 6 usable uniques so I added A11378 as a control.

I have family trees for all but one of the 7 matched result owners. My objective with the panel was to be able to create a tree of trees which showed how they all linked together. I have tested 3 of the original participants. Of the others one declined, one has died, and I've lost touch with the other. The results were unexpected. All three were positive for A11378, including my dodgy 12 marker participant. However all three were positive for just one of the other SNPs (A15056), and negative for the rest, which are therefore unique to one of the trees. So I didn't get the definition I was looking for and now need another BigY to try and improve the SNP panel.

Other Interesting Stories

As well as my two big groups I have three small groups, a couple of unusual non-paternal events, and a large family tree that is split between two haplogroups. None of these participants have done any SNP testing.

Two of my small groups are each a pair of family trees linked by a DNA match. The third small group is three results within a single tree. They triangulate back to the earliest ancestor, a Richard Warburton who appeared in Dublin in the 1630s and subsequently had three sons, two of whom became landowners in Ireland, and have modern day descendants. Members of the family were politicians, soldiers, and protestant churchmen. They claimed kinship with the family at Arley Hall and this was accepted by the main line. Indeed at one point in the 19th century they even challenged them for primacy, and an erroneous pedigree used to support this claim can still be found in Burke's Landed Gentry⁷.

The family produced a number of significant characters, including Alexander Bannerman Warburton, Premier of Prince Edward Island, Dame Anne Warburton, Britain's first female Ambassador, and Colonel Robert Warburton who survived the 1st Afghan War and returned with an Afghan Princess as his bride, and two sons who became Colonel Sir Robert Warburton, for 18 years the Political Agent on the Khyber Pass, and John Paul Warburton, or Button Sahib, the Controller of Devils⁸, a famous Punjabi detective. Officially John Paul was only adopted, though the family believe he was indeed Colonel Robert's son. These characters

have been the subject of a number of articles in my newsletters, The Button Files, which can be found on my study website at warburton.one-name.net.

Despite the claimed link to the Arley family this Irish family are haplogroup J-M172. No other Warburtons belong to this group. I can only presume they descend from the illegitimate son of a daughter of one of the branches of the Arley family. He went to Ireland to escape his origins and make his fortune.

One of my two unusual non-paternal events also comes from Ireland. The London Gazette of 22nd May 1792, page 334 stated that: "*The King has been pleased to grant to the Reverend Charles [Mongan], Master of Arts, Rector of Loughgilly, in the County of Armagh, and Dean of St Patrick's Cathedral, Ardagh, in the Kingdom of Ireland and his issue, his Royal Licence and Authority to assume and take the Surname of Warburton only, in pursuance of the desire of his maternal cousin-german, Miss Alicia Warburton, spinster, sister of the late William Warburton, of the City of London Esq, deceased.*"

Charles was born a Catholic but became a Protestant churchman. His Catholic name was holding him back. He subsequently became Bishop of Cloyne. I have no idea who Alicia Warburton was but it would seem likely that she belonged to the Irish family described above.

My other interesting non-paternal event produced Bancroft Warburton who had numerous descendants and was a successful farmer and landowner in the Warrington area. His father was John Bancroft who farmed land in Sinderland, part of Dunham in Bowdon parish, Cheshire. His first wife, Mary Warburton died, leaving him with a young family. Eighteen months later, on November 2nd 1738, Bancroft was baptised at Bowdon, mother Elizabeth Warburton. I have not identified Elizabeth. She wasn't Mary's sister but she was most likely a relative. Unfortunately many Warburtons of the period were nonconformists baptised at chapels whose records no longer exist. However the curious aspect of the story is that 10 years later, in 1749, Elizabeth and John finally got married. I can only assume they were waiting for John's young family to grow up.

My last DNA story concerns my largest family tree. It originates in the village of Warburton in the 16th century and rent rolls put them at the top of the list of tenants of the Warburtons of Arley Hall. Some sources⁹ suggest that a minor branch of the family remained in the Warburton manor house when the main family moved to Arley Hall, so I expected results from the tree to match the DNA of the Cheshire Group. I have had four results, two matching R-M269 results, and two matching I-M253 results. One of these is obviously a non-paternal event, and possibly both are. Unfortunately the two profiles cover all known modern day

descendants of the family. Furthermore the earliest ancestors of the two groups are cousins who lived in the early eighteenth century. There are just four occasions where the non-paternal event could have occurred. All four baptisms are recorded at Bowdon naming both parents, and they all occurred at least 2 years after the parents married. But not everything can be as it appears.

A Suggested Y-DNA Strategy

I now believe the objective of Y-chromosome testing is to determine your most recent, shared SNP. This will determine all your previous SNPs, and hence your ancient history. For example if you have the SNP FGC13446 you are part of the Cheshire group and share its Norman ancestry and the story of the King's Cluster¹⁰ within the U106 haplotree dating back to roughly 3000BC. SNP A11378 would indicate membership of the main Lancashire Group which is also part of the U106 haplotree, but arrived in England with the Saxon migrations.

How do you find your most recent, shared SNP? You could take a chance and test for FGC13446 or A11378, as it only costs \$18 at YSEQ. However if the test turns out negative you are no wiser.

Because of the variety of Warburton haplogroups it is impossible to know where to start with a SNP only testing strategy. I therefore draw on my experience with 12 marker testing and suggest an initial STR test to discover a predicted haplogroup. This will narrow the search down and enable more targeted SNP testing. The cheapest way to do this I can see is the YSEQ STR-Alpha 18 marker test which costs just \$58.

SNP Testing

Appropriate SNP testing will depend on circumstances. I am confident the proposed STR test will indicate whether there is a probable match with any previous Warburton test. If the match is with the Lancashire or Cheshire Groups testing a single SNP will confirm membership of the group as described above.

Other Warburton STR results have not yet been followed up with SNP tests so it would be necessary to start with a basic SNP panel for that haplogroup, as well as identifying the relevant FTDNA Haplogroup Project to learn the current knowledge of its history.

New Warburton DNA Strategy

My strategy has two aspects, the first reflecting the objectives of a single tester, and the second reflecting my objectives for the project.

A single tester will be motivated to understand where he and his family fit into the Warburton landscape. To do this he should:

1. Explore whether he needs a test. If a link can be established to a previous result a test might be unnecessary.
2. If a test is needed he should take the YSEQ STR Alpha test and share his results with me. I will compare the results with previous Warburton results to determine if a match is likely.
3. If the likely match is with the Cheshire or Lancashire Groups then confirm this with a single SNP test.
4. If the likely match is with another of the Warburton result this will either extend one of my small groups or create a new one. A SNP strategy for the new group will be needed. A first step is for one member of the group to take a basic SNP panel for the groups haplogroup, and for the other members to test the most recent positive SNP to confirm the match.
5. If there is no match the tester may wish to explore his SNPs to determine relevant non-Warburton matches.

My Warburton project objectives are as follows:

1. I am working to develop SNP panels for the Cheshire and Lancashire Groups based on unique SNPs from Warburton BigY tests in order to show the relationships between the Groups' various clan trees. This would be presented as a tree of trees. To this end I used the FTDNA summer sale to get a BigY for the Cheshire Group, and I am planning to use the Xmas sale to get another BigY for the Lancashire Group. When I get the results I will develop SNP panels for each group at YSEQ.
2. I have a number of Warburton family trees that have no associated DNA result, or a single unmatched results. A couple of the trees, and some unmatched results are known to be the result of non-paternal events but others could be of ancient origin. I am keen to get results from all the untested trees, and from suitable candidates that might triangulate, or bypass the unmatched results. Hopefully the new cheaper STR option will encourage this.
3. My smaller groups need to uncover their more recent, shared SNPs so I will be recommending basic haplogroup SNP panels in these cases.

My Warburton DNA project began 11 years ago and has uncovered some fascinating results. The possibilities for the next few years would appear to be equally exciting and I will pursue them as quickly as finances, and the identification of test subjects will allow.

Footnotes

1. A Single Nucleotide Polymorphism (SNP) is a change to a single base pair of DNA. DNA is a string of billions of base pairs which each consist of two molecules. Four types of molecule make up DNA and a SNP is a change in the types of molecules that form that base pair. SNPs occur rarely and are not normally reversed. For each SNP the human population can be divided into those who have inherited the SNP, and those who haven't.
2. A Short Tandem Repeat is a short sequence of DNA, comprising several base pairs, which is repeated several times. The number of repeats can change. These changes occur more frequently than SNPs, but can occur in either direction. An STR test covers a number of markers, or places where STRs occur. A match can indicate recent common ancestry, or a chance convergence of the numbers of repeats. Another factor, such as a shared surname, is needed to indicate a match.
3. Haplogroup is a term that describes the group of people who share a particular SNP (though usually reserved for a large group who share an ancient SNP).
4. BigY tests are provided by Family Tree DNA. It is an example of a Next Generation Sequencing (NGS) test which scours a large proportion of the Y-chromosome to uncover new SNPs. This compares with the much cheaper SNP tests for the presence of one or more known SNPs.
5. R1b-U106 is a project at **Family Free DNA**, that includes a **Yahoo Group** (full name R1b1c_U106-S21 Haplogroup) with a Forum and File repository. It covers the history, geography, and structure of the haplogroup and includes over 1000 BigY results.
6. YSEQ is a provider of DNA tests located at YSEQ.net.
7. The error is in the second edition of **Burke's Landed Gentry** (1847). When a promised correction failed to materialise the case was written up in an article in **The Cheshire and Lancashire Historical Collector** dated February 1st 1854. The subject is addressed by an article in Issue 12 of **The Button Files**, my Warburton newsletter which can be found on the Warburton One-Name website <http://warburton.one-name.net/>.
8. **Controller of Devils** by G. D. Martineau is the story Button Sahib, aka John Paul Warburton, India's greatest detective, written by his grandson. Although now out of print it is presented as four PDF files on the Warburton One-Name website <http://warburton.one-name.net/> under **Papers**.
9. Thomas Newton's **The Story of Warburton and its Old Church** (1939) says a branch of the family continued to live in the Warburton Manor House until the latter part of the 17th century. However Norman Warburton in **Waburton: The Village and the Family** (1970) could find no evidence to support this statement and notes that rentals suggest Warburton Park had been divided into a number of farms before the main family moved to Arley Hall. Warburton tenants are recorded in Warburton in 1520, 1572 (when first in the list of tenants), and 1581.
10. King's Cluster is a name given to a haplogroup within U106. It is defined by SNP DF98 and is so named because it includes the House of Wettin, and hence several European Royals including our own Queen Elizabeth.