

Ashley and Notts DNA Results

Background

There are three BigY-700 DNA results, one from the Ashley and Morley Clan, one from the Nottinghamshire Clan and one from the descendants of Samuel of Western Australia, which match. There are additional matching Y37 results from the Nottinghamshire Clan, and the Ashley and Morley Clans, and one unmatched Y37 result from the Ashley and Morley Clan.

There is an objective to determine Samuel's parentage/ancestry.

Boundaries

Existing knowledge of the clan trees can provide boundaries for dates derived using DNA to date common ancestors.

The Nottinghamshire clan includes the descendants of William Warburton who was born in Nottinghamshire in 1665. Even if it was William's father John who migrated to Nottinghamshire, a common ancestor with the Ashley clan can be no later than William's grandfather, and therefore born not much after 1600. The BigY-700 result (David), and the additional Y37 result (Adrian) share a common ancestor in Joseph (1771-1856).

The Ashley and Morley clan comprises the descendants of Josiah Warburton (died 1764) and Martha Bradley. The only matching baptism of a Josiah was the son of John baptised at Northenden in 1715, but because of the association of the name Josiah with the Presbyterian movement in Hale, Josiah's baptism record may be lost.

Josiah and Martha had one child baptised at Mobberley in 1739, and six baptised at Bowdon from 1747 to 1756 when their abode was Ashley. In addition an infant daughter was buried at Bowdon in 1745 indicating there may be other baptisms, probably at Hale Chapel where there are no existing records prior to 1752. Two probable sons were also baptised in this period, based on age at death, one also called Josiah.

The association of the name Josiah with the Hale Presbyterian movement led to a belief that this clan was linked to the Hale Barns clan which also sees the regular use of the name Josiah, following my 6x great grandfather Josiah, who was a leader in the movement. DNA now disproves this link, but the name Josiah can still be seen as a glue that links Ashley and Morley families.

The BigY DNA result (Martin) is from a descendant of Josiah's son William. The family remained in the Morley/Wilmslow area until the early 20th century, so are unlikely have a direct link to Samuel of Western Australia.

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Three of William's brothers had children baptised at Manchester Cathedral, and two of them married there. They had 15 sons between them, baptised between 1772 and 1804. A matching Y37 result is from a descendant of Samuel, William's youngest brother, and one of the two who married at Manchester Cathedral. He had 7 sons but a link to Samuel of Western Australia has not yet been found. It remains possible that Samuel's father is a son, or grandson of Josiah, born either in or out of wedlock. The Genetic Distance between the 2 Ashley and Morley results, and between each of Ashley and Morley results and that from Samuel's family implies a common ancestor who lived 10 generations ago, or circa 1595, but the possible variation is quite wide, so this doesn't determine if Samuel was a descendant of Josiah, or one of Josiah's ancestors.

The Ashley and Morley clan also has an unmatched result amongst the descendants of Josiah, son of Josiah. Josiah junior's son William moved to Bolton, a link supported by further uses of the name Josiah as well as the presence of William's family in the 1841 census, and William's age at death. This mismatch is either the result of a non paternal event, or an error in the tree. Josiah junior is only linked to Josiah senior based on his age, common name, and that he was from Hale at the time of his marriage.

SNP Matches and Dating

The three BigY-700 results show a common ancestor which is identified by the SNP FT162667. This is one of a block of 5 SNPs shared by the three results, but not by the next nearest match. The Ashley (Martin) and Western Australia (William) results share a further 2 SNPs (FT163961 and FT164274), and have an average of 3 private variants (unmatched SNPs). This average of 3 is the average of 1 and 5 showing extreme variability in the frequency of SNPs, and therefore in age calculations. I suspect William's large number of private variants might be a consequence of Samuel being over 60 when his first son was born.

The Notts result (David) has 6 private variants. The nearest match to the three results is also from the UK, and has 12 private variants. The next nearest after that is at an average of about 20 SNPs ago, though the origin of the result is unknown.

The time to the most recent common ancestor is calculated using an average of 83 years per SNP, and counting back from 1950. The results will have a large probability range:

For the common ancestor of William and Martin this is $1950 - (3 \times 83) = 1701$.

For the common ancestor of all three results this is $1950 - (5.5 \times 83) = 1494$.

For the common ancestor of the nearest non-Warburton match this is $1950 - (11.5 \times 83) = 996AD$.

Ashley and Notts DNA Results STR Dating Table

					Notts 1							Notts 2						
	Probability		16%		50%		84%				16%		50%		84%			
	Markers tested	Genetic Distance	TMRCA (gens)	Date	TMRCA (gens)	Date	TMRCA (gens)	Date	GD	TMRCA (gens)	Date	TMRCA (gens)	Date	TMRCA (gens)	Date			
Notts 1 (Adrian)	37	x	x	x	x	x	x	x	1	3	1840	8	1665	15	1420			
Notts 2 (David)	111	1	3	1840	6	1735	13	1490	x	x	x	x	x	x	x			
WA (William)	111	2	5	1770	10	1595	18	1315	7	9	1630	14	1455	20	1245			
Ashley 1 (Martin)	111	1	3	1840	6	1735	13	1490	6	6	1735	12	1525	17	1350			
Ashley 2 (Michael)	37	2	5	1770	10	1595	18	1315	1	3	1840	6	1735	13	1490			
					WA							Ashley						
	Probability		16%		50%		84%				16%		50%		84%			
		Genetic Distance	TMRCA (gens)	Date	TMRCA (gens)	Date	TMRCA (gens)	Date	GD	TMRCA (gens)	Date	TMRCA (gens)	Date	TMRCA (gens)	Date			
Notts 1 (Adrian)	37	2	6	1735	12	1525	21	1210	1	3	1840	8	1665	15	1420			
Notts 2 (David)	111	7	9	1630	14	1455	20	1245	6	8	1665	12	1525	17	1350			
WA (William)	111	x	x	x	x	x	x	x	3	4	1805	7	1700	11	1560			
Ashley (Martin)	111	3	4	1805	7	1700	11	1560	x	x	x	x	x	x	x			
Ashley 2 (Michael)	37	2	5	1770	10	1595	18	1315	2	5	1770	10	1595	18	1315			
				Dates calculated as 1945 - (35 * No of generations).														

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The most likely cause of the introduction of R-DF27 into the UK is the Celtic trading association with the Iberian peninsular that existed before the Roman conquest of Britain. These results are consistent with the arrival of the shared R-DF27 branch in Britain in those times.

STR Dating

The following STR Dating Table shows the results of calculation to determine the time to the most recent common ancestor for all combinations of the four STR results.

The calculation was done using the McGee TMRCA (Time to Most Recent Common Ancestor) Calculator at mymcgee.com/tools. I used the McDonald mutation rates and calculated the number of generations for 16%, 50%, and 84% probability (1 standard deviation range). Dates were then calculated using the formula $1950 - (\text{generations} * 35)$.

The BigY-700 results also include an additional 600+ STR results. The genetic differences are very small: Martin to William = 5 out of 638 bases they both tested, William to David = 3 out of 626, David to Martin = 3 out of 624. Apart from confirming a close relationship, these do not add any useful information.

Discussion

The results show that the Ashley and Morley clan, and the Nottinghamshire clan share an early common ancestor. As seen in **Boundaries** above, the presence of Warburtons in Nottinghamshire in the 17th century means the common ancestor cannot have been born much after 1600.

The STR dating calculation for David and Martin has a date of 1525 (1350-1735). The common ancestor of William and David should be the same but the calculation results in a date of 1455 (1245-1630). Comparisons between Adrian (Nottinghamshire) and William and Martin give slightly later dates, and a wider range due to Adrian only testing 37 markers.

The SNP calculation for the 3 BigY results gives a date for their common ancestor of 1494. I'm not sure what the error range should be.

However all the results are consistent with a common ancestor born before 1600, and possibly a century or two earlier. The results are also consistent with the Warburton name being adopted in the Middle Ages, when surnames

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were first widely adopted, though they don't preclude it being introduced by a non-paternal event in the first few centuries following their adoption.

The STR calculation for David and Adrian is 1665 (1420-1840) compared with the known date of birth for their common ancestor of 1771.

The STR dating calculation for Martin and William is 1700 (1560-1805) compared with the birth date of Josiah, their probable common ancestor, of circa 1715. The date from the SNP calculation is 1701. These results would suggest the assumption that Josiah is the common ancestor for William and Martin is correct, and William is connected via one of the many grandsons of Josiah who were baptised in Manchester, or whose family is known to have moved to Manchester after their birth.

Outstanding Issues

The obvious outstanding issue is identifying the parents of Samuel of Western Australia. There is no obvious record that fits, and no confidence in the veracity of any information provided by Samuel. Unfortunately these grandsons have not been explored in detail, and it is not easy to piece together families in the period when there were no censuses or registrations, and parish records could be very cryptic. The only one of the grandsons I have details of was uncovered by accident when working backwards to find his parents.

Additional Y-chromosome DNA testing would only be of benefit if the person tested shared a more recent common ancestor with Samuel. Therefore he would have to be descended from Samuel's brother or first cousin. Finding such a person would be very hit and miss, and if we knew he was a brother or first cousin, we would have solved the problem anyway.

An alternative (and cheaper) approach would be to use autosomal DNA. If William were to do the AncestryDNA test, it is likely that should any descendant (male or female) who was descended from a sibling, or cousin (male or female) of Samuel's, also take the test they would probably show up as a match.