

## Robert Stubbs on our FTDNA Tests

### And Our Viking Connections

March 23, 2019

I will try and summarize the Y-DNA male line test results for both of you and the other members of the Stubbs DNA Project :

<https://www.familytreedna.com/public/Stubbs?iframe=yresults>

These descend from your shared Stubbs ancestry in NC, MA and Cheshire, England.

There are two types of Y-DNA testing:

1. Y-DNA STR tests shown in the Stubbs DNA Project,
2. Y-DNA SNP tests which both have participated in by the Big Y DNA tests.

In general, the STR tests are used to compare more recent ancestry, while the Big Y SNP tests enable comparison for much older matches. Of course there can be overlap between the two tests.

In general SNP mutations are much more stable than STR mutations and therefore are less ambiguous in interpretation.

In looking at your Y DNA STR results at the Stubbs DNA Project there are many matches with other Stubbs testers. Because of the closeness of the matches as well as the shared Stubbs surname, it is likely that they all share your common Stubbs ancestry in NC, MA, and Cheshire England.

In addition, there are a few non-Stubbs matches which are also close to the Stubbs matches. These include those who are members of the Stubbs DNA Project. It appears to me that these close non-Stubbs matches are likely also descended from the NC Stubbs group, i.e., descended from Thomas Stubbs (1695-1738) and Mary Everett.

Looking at the other Y-DNA STR matches for Rodney Stubbs and Irving Stubbs, there are additional matches at 67 and 111 markers which are somewhat more distant than those in the Stubbs DNA Project. These are shown at the R1b-U106 Y-DNA Haplogroup Result page;

<https://www.familytreedna.com/public/U106?iframe=yresults>

Results for Mottershead, Stubbs, Bell and Vaughan are shown on adjacent lines on the first page. These results also show the Haplogroup, defined by SNP mutations for each of them. The closest match to Stubbs is Motterhead, kit #321670. His terminal SNP, which defines his Haplogroup, is R-BY50010. This SNP is also carried by both Rodney (kit #104166) and Irving Stubbs (kit #62678). Rodney and Irving also have additional more recent SNPs including R-BY94080 which defines their shared Haplogroup.

Motterhead and Vaughan are also shown as Y DNA matches in the STR match page for both Rodney and Irving Stubbs. Based on the STR matches, Mottershead and Vaughan also appear to share a common ancestry with Stubbs.

Mottershead, Stubbs, Bell, and Vaughan also have terminal SNPs determined by their Big Y tests. These enable a more accurate estimate of the age of their most recent common ancestor (MRCA). The Haplogroups, as defined by their terminal shared SNPs are:

Mottershead: U106>Z2265>BY30097 > S18632>S11320>S23562>**S16818**>**BY50010**

Stubbs: U106>Z2265>BY30097 > S18632>S11320>S23562>**S16818**>**BY50010**>**BY94080**

Bell: U106>Z2265>BY30097 > S18632>S11320>S23562>**S16818**>BY61415

Vaughan: U106>Z2265>BY30097 > S18632>S11320>S23562>**S16818**>BY98083

As seen above all four share the SNP **S16818**

However, only two, Stubbs and Mottershead share the more recent downstream SNP **BY50010**.

Finally, Both Rodney and Irving Stubbs share the most recent SNP **BY94080**.

It is possible that further SNP testing of more distant Cheshire Stubbs may set the Stubbs Haplogroup further back in time towards an earlier shared Stubbs ancestor.

Considering the somewhat older SNP BY50010, it would be very helpful to determine the age of the most recent common ancestor (MRCA) of Stubbs and Mottershead. Intriguingly, both Stubbs and Mottershead share ancestry in Cheshire, England.

The age of this shared ancestor can be estimated from the number of unshared SNPs. Between Irving Stubbs and Mottershead there are 8 nonmatching, unshared variant SNPs. These are SNP mutations acquired in the Stubbs line since the time of the MRCA Stubbs Mottershead shared SNP BY50010.

Note: The time interval between SNPs is not exact. It is not like the precise ticking of a clock. It is more like estimating when a throw of a single die will give a result of 6. On average, after several throws the number of times getting a 6 will be close to 1 in 6 times. However, with only a very few throws it may deviate from this average.

It has been estimated\* that, *“We can expect one SNP mutation every 125 years or so in a BigY test. We can expect one STR mutation every 140 years or so in a Y-111 test. It is very difficult to get a date for an MRCA that is more accurate than this, and impossible with only two tests.”*

The age of the MRCA between Mottershead and Stubbs is clearly much older than between those Stubbs having a much more recent common ancestor within the surname Stubbs such as Rodney and Irving Stubbs.

#### **Calculation of MRCA from SNP Big Y test\*\***

Using the SNP method the estimated date of the MRCA for Irving and Rodney to the shared Mottershead ancestor is 803-942 A.D.

#### **Calculation of MRCA from 111 STR results \*\*\***

Using the STR method, the estimated date of the MRCA for Irving and Rodney to the shared Mottershead ancestor is 662-968 AD

#### **Average of estimates**

Average MRCA SNP method= 873 AD

Average age MRCA Y 111 STR method=815 AD

The estimated date of the most recent common ancestor (MRCA) between Mottershead and Stubbs is in approximately the same time period as the Viking invasions of England.

While this does not prove a shared Viking ancestry, it is certainly very consistent with the period of the Viking invasion and the time before surnames were adopted.

The much earlier shared ancestral SNP, U106, which is estimated to be about 5 thousand years old (<http://www.jb.man.ac.uk/~mcdonald/genetics/u106-age.html>) is commonly believed to be Germanic in origin and is commonly found in Germany and Scandinavia.

In contrast, the ancient Britons, before the invasion by the Anglo Saxons in the 5<sup>th</sup> century and in the 9<sup>th</sup> century by the Vikings, likely contained very little U106.

While not confirming in all cases, it is certainly likely that most U106 in England originated with these invasions by the Anglo Saxons and later the Vikings. It is also interesting to note that the locations of the Stubbs surname are more predominate in northern England in areas once part of the Danelaw.

The following while not proof, I believe are consistent with and supportive of Germanic, Anglo Saxon, or Viking ancestry for Stubbs in Cheshire.

1. R U106 Germanic ancestral haplogroup
2. Location of ancestral Stubbs and Mottershead in former Danelaw area of northern England
3. Date of MRCA for Stubbs and Mottershead in approximately 9th century

### **Early locations of Stubbs, Mottershead and Vaughan.**

The Stubbs name occurs very early in Cheshire. The Mottershead is also found early in Cheshire. Vaughan is found in Shropshire the adjoining county to the south of Cheshire. Gordon Mottershead shows his pedigree as descended from a female Mottershead in Cheshire. He doesn't identify the paternal line of her sons who are also named Mottershead. However, it seems reasonable to conclude that the unknown male ancestor was also from a Cheshire family.

The surname Vaughan is derived from the Welsh words fychan, vychan, and bychan, which all mean small or little.

### **Vikings in Cheshire**

<http://www.cheshiretrove.com/current/history/vikings/index.html>

*The history of Cheshire, and the Wirral peninsula in particular, is strongly connected to that of the Norwegian people. Norwegian Vikings arrived here at the end of the ninth century and recent DNA tests show that their offspring are still going strong in the Wirral today.*

*Britain was invaded by southern Scandinavians, who hit the country along its eastern coast. The invaders were Angles (Anglii to the Romans), from what is now southern Denmark, Saxons from Saxonia (Old Saxony' in northern Germany), and Jutes (northern Denmark). The Saxons settled in the south of the island and became the West Saxons, East Saxons, Middle Saxons and South Saxons.*

*These areas eventually became Wessex, Essex, Middlesex and Sussex. The Jutes had Kent and Hampshire. The Angles took East Anglia, where they became the North Folk and the South Folk (now Norfolk and Suffolk), and then ventured west and north to become the Mercians, south of the Humber, and Northumbrians north of it (surprisingly enough). They got as far as the Firth of Forth.*

*The original British tribes were shifted westwards to the less hospitable terrain of Cornwall, Wales and Cumbria. And also Cheshire and Lancashire.*

*The Danish route to England, thirty years earlier, was simpler: straight across the North Sea to the east coast. The Danes had invaded Britain in 866AD, led by Ivar the Boneless (you couldn't make it up), which resulted, essentially, in the country being divided in two, the Danes taking the eastern side of the country, an area called Danelaw (where Danish law is in operation), and Saxons retaining the north-east part of Northumbria, south-west Mercia, Wessex and Kent.*

*The dividing line ran fairly straight from the Thames estuary, north-west to a point that seems to be near Helsby on the River Mersey. The last part of the border with the Danish land is north to south along what looks (in the north, anyway) uncannily like the line of the River Gowy, while the western border with Wales is the River Dee, leaving a thin pan-handle through West Cheshire and North Shropshire from about Newport, through Whitchurch along the present-day A41 to Chester and the Wirral.”*

In summary, it seems that the ages of the MRCA for Stubbs-Mottershead, from the DNA evidence, the location of these matches in the Cheshire area, and the historical connection to the Vikings in this area, while perhaps not conclusive, are strongly supportive of the early Stubbs family being descended from the Viking invasions.

The DNA of the Vikings and the Anglos Saxon invaders of the 5<sup>th</sup> century are very similar since they both come from the Scandinavian areas particularly the Jutland peninsula of Denmark (where the place name Stubbe still exists).

As described above, in a general sense, the Anglo-Saxon invaders were primarily in the eastern and south eastern parts of England. The later Viking invasions included northern and western counties, including Cheshire and the Wirral peninsula.

Future additional DNA testing, particularly by persons with a known history in Cheshire, may help to further refine /confirm the details of the Cheshire connection. In addition, the estimated age of the Stubbs-Mottershead MRCA may be more accurately determined by submitting Big Y BAM files from Stubbs and Mottershead to YFull\*\*\*\* for analysis.

## Footnotes

\* Iain McDonald [gubbins@talk21.com](mailto:gubbins@talk21.com) [R1b1c\_U106-S21] 2016

[R1b1c\\_U106-S21@yahoogroups.com](mailto:R1b1c_U106-S21@yahoogroups.com)

\*\* As stated, we can expect one SNP mutation about every 125 years or so in a BigY test.

Irving Stubbs est b date=1928

SNPs not shared by Gordon Mottershead =9

At 125 years per SNP gives estimated age of MRCA=1928-9\*125=803 AD

Rodney Stubbs est b date=1942

SNPs not shared by Gordon Mottershead =8

At 125 years per SNP gives est age to MRCA =1942-8\*125=942 AD

Estimated age to MRCS = 803-942 AD

\*\*\* Using one STR mutation every 140 years or so in a Y-111 test

Rodney Stubbs and Gordon Mottershead at 111 STR markers

GD=7

Est MRCA = 1942-7\*140= 962 AD

Irving Stubbs and Gordon Mottershead at 111 STR makers

GD=9

Est MRCA =1928-9\*140=668 AD

\*\*\*\*YFull order

<https://www.yfull.com/faq/how-do-i-order-yfull-interpretation-my-bigy-or-full-genomes-resu/>