

2/14/2021 Non-matching variants between David Maxwell and Bert Maxwell, FTDNA matches:

 Mr. Larry A Maxwell II	 	8775214, 9782193
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Checking both David and Bert's Big Y Data files, you can search on a chromosome position number (if the SNP is unnamed) or on the SNP name. The two position numbers are 8775214 & 9782193:

682832_BigY_Data_20190817

David Maxwell is positive for 8775214

	A	B	C	D	E	F	G
1	Type	Position	SNPName	Derived	OnTree	Reference	Genotype
420754	Novel Variat	8775214				G	T

David has no result for 9782193

942876_BigY_Data_20210214

Bert Maxwell is negative for 8775214:

	A	B	C	D	E	F	G
1	Type	Position	SNPName	Derived	OnTree	Reference	Genotype
546383	Novel Variat	8775214				G	G

And positive for 9782193 (the reference or archetypal value is G and his value is A):

3902	Novel Variat	9782193				G	A
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When I looked at each of their private variants, I noticed that David and Bert share the private variant 10093098, also known as SNP FT361807 (as found on ybrowse.org) which may create a new branch on Alex Williamson's Big Tree. I thought it would create one on the FTDNA tree, as FTDNA is the one who named the SNP—the prefix "FT" indicates that FTDNA named this SNP:

David Maxwell Private Variants

Position	Reference	Genotype
<input type="text" value="Position Search"/>	<input type="button" value="Show All"/>	<input type="button" value="Show All"/>
10093098	C	T
3127073	A	T
8775214	G	T

Bert Maxwell Private Variants

Named Variants Private Variants Matching		
Position	Reference	Genotype
<input type="text" value="Position Search"/>	<input type="button" value="Show All"/>	<input type="button" value="Show All"/>
10093098	C	T
9782193	G	A

They both share the private variant, Y chromosome position number 10093098, change from the ancestral, or reference value of C to the genotype, or mutation of T.

I typed the Y chromosome position number, 10093098, into the ybrowse.org search to see if that might be a named SNP and it was; the following came up: <https://ybrowse.org/gb2/gbrowse/chrY/>

The screenshot shows the ISOGG YBrowse website interface. At the top, there is a navigation bar with the ISOGG logo and the text "International Society of Genetic Genealogy ISOGG YBrowse Human Y Chromosome Browser (based on hg38)". On the right, there are links for "ISOGG Resources", "Y SNP-Tree", "Speakers List", "Meetings/Events", and "Ybrowse Raw Data". Below the navigation bar, there is a search bar with the text "Human Y Chromosome: 1 bp from chrY:10,093,098..10,093,098". The search results show a "Search" section with a "Landmark or Region" field containing "chrY:10,093,098..10,093,098". Below this, there are "Examples" and "Data Source" information. The "Overview" section shows a genomic track with a red vertical line indicating the SNP position. The "Region" section shows a zoomed-in view of the SNP. The "Details" section shows the SNP name "FT361807" and its position "chrY:10093098..10093098 (+ strand)".

I clicked on the name of the SNP (see FT361807 in tiny letters/numbers near the bottom of the screen capture immediately above the red line) and the following came up:

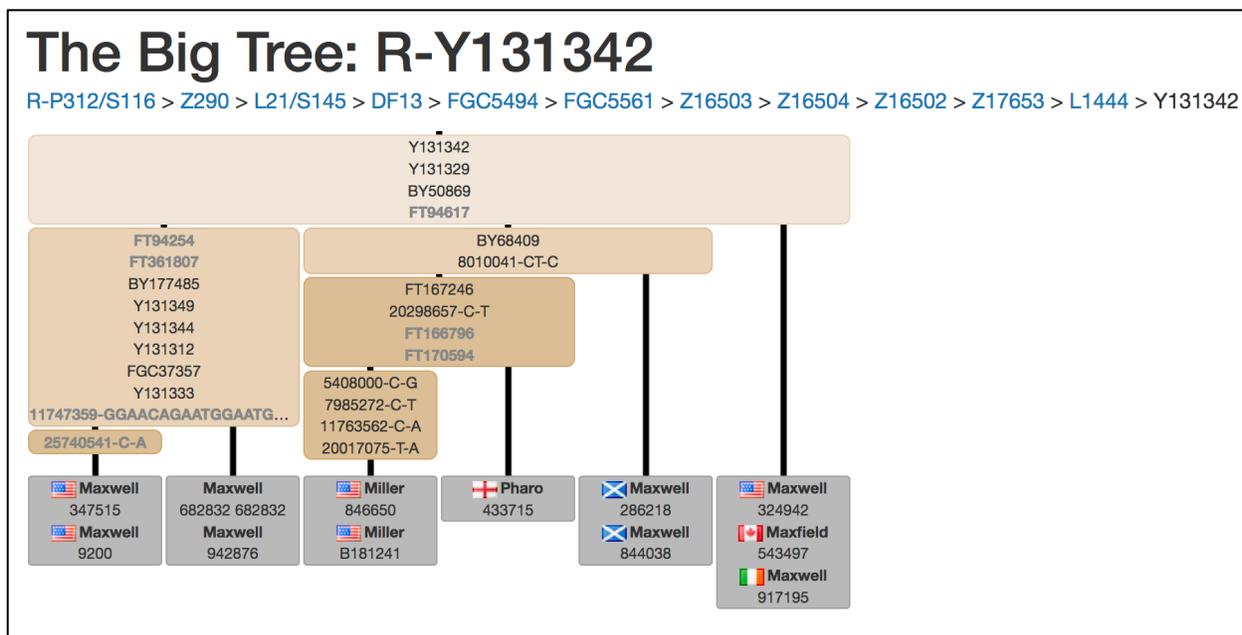
The screenshot shows the "FT361807 Details" page. The details are as follows:

Name:	FT361807
Type:	snp
Source:	point
Position:	chrY:10093098..10093098 (+ strand)
Length:	1
allele_anc:	C
allele_der:	T
comment:	.
count_derived:	0
count_tested:	0
isogg_haplogroup:	unknown
load_id:	FT361807
mutation:	C to T
primer_f:	TBD
primer_r:	TBD
ref:	FTDNA (2020)
ycc_haplogroup:	unknown
yfull_node:	Not found on the YFull Ytree
primary_id:	1189626
gbrowse_dbid:	chrY:database

https://ybrowse.org/gb2/gbrowse_details/chrY?ref=chrY;start=10093098;end=10093098;name=FT361807;class=Sequence;feature_id=1189626;db_id=chrY%3Adatabase

Alex Williamson has placed David and Bert together (the complete analysis of Bert's kit is not finished yet and may take a few more days; anyone who has completed a Big Y can click on his name on the Big Tree and see the detailed analysis for your particular kit).

The branch that David and Burt is on is shown below, second from the far left hand side):



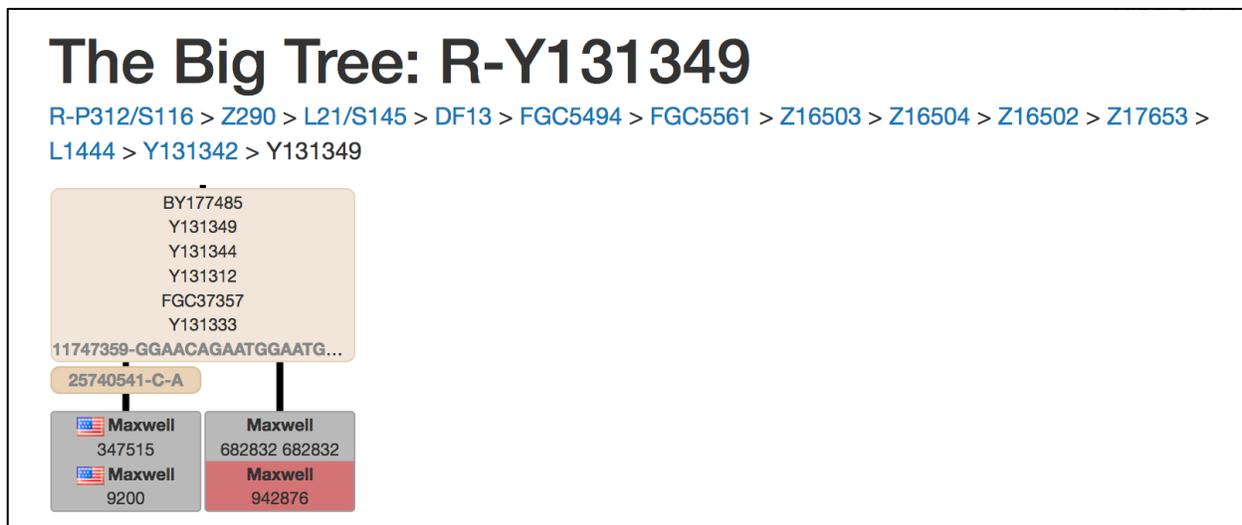
<https://www.ytree.net/DisplayTree.php?blockID=3793&star=false>

I was a bit surprised that FTDNA did not make a new branch as they are they are the ones who named that SNP in 2020. I checked YSEQ's "wish-a-SNP" list of the areas that YSEQ does not provide primers for: "sections of the Y chromosome [that] suffer from frequent recombination events and are therefore not useful for phylogenetic studies." (https://www.yseq.net/product_info.php?products_id=108)

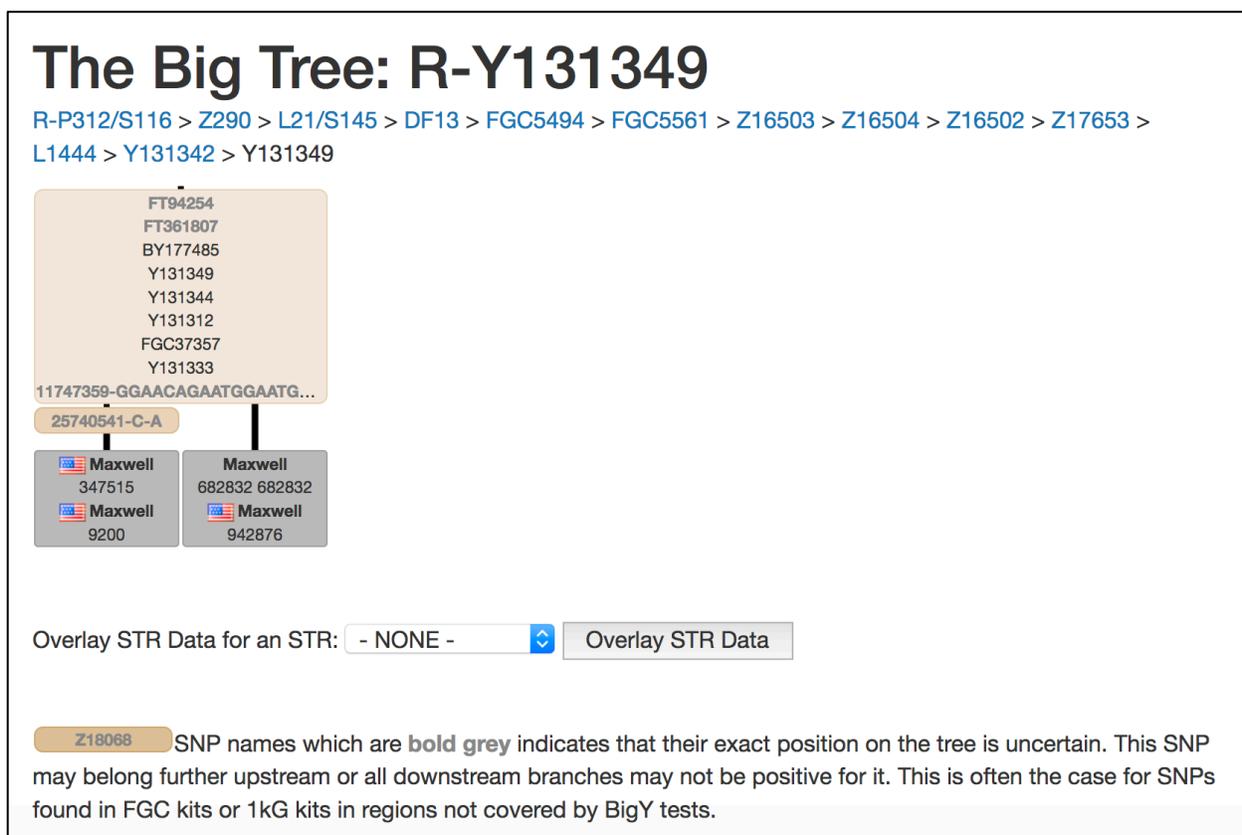
SNP FT361807 (10093098) is in one of these sections: "chrY:10072350..11686750 [are in the] synthetic assembled centromeric region [or] CEN" region. I had guessed that might have been why that SNP was not used to label the branch.

However, the actual answer is that the kits closest to David and Bert—kits 347515 and 9200—don't have any results for that SNP, which is one of the dilemmas in comparing the Big Y 500 tests to Big Y 700 tests. Alex Williamson explained that without knowing the status of that SNP in kits 347515 and 9200, the FT361807 SNP can only be placed as an equivalent to SNP Y131349 and the other SNPs in that block (tan block above kits 347515, 9200, 682832 and 942876). Perhaps YSEQ or FTDNA might be persuaded to make a primer for SNP FT361807 so that we could test kits 347515 and 9200 to see if they had this mutation or not.

Narrowing in on this smaller section of Alex Williamson’s Big Tree, you can see the speed at which he completed this analysis. He received Bert’s kit yesterday. The screen capture below shows where Bert’s in-progress placement was when I saw it at 12:30 pm (the red background indicates that the placement is in-progress):



An hour later, the section looks like this:



SNP FT94254 (one I had not noticed) and SNP FT361807 (the one I’ve been writing about) have been added to the top of the tan block.

I looked up SNP FT94254 on ybrowse.org:

The screenshot shows the ISOGG YBrowse website interface. At the top, there is a navigation bar with the ISOGG logo and the text "International Society of Genetic Genealogy ISOGG YBrowse Human Y Chromosome Browser (based on hg38)". On the right, there are links for "ISOGG Resources", "Y SNP-Tree", "Speakers List", "Meetings/Events", and "Ybrowse Raw Data". Below the navigation bar, the main content area displays "Human Y Chromosome: 1 bp from chrY:3,127,073..3,127,073". There are tabs for "Browser", "Select Tracks", "Snapshots", "Custom Tracks", and "Preferences". A search bar contains the text "chrY:3,127,073..3,127,073". Below the search bar, there are examples of search terms: "chrY, chrY:15000000..15000100, L21, DYS437, DYZ19". There are also buttons for "Download Decorated FASTA File", "Configure...", "Go", "Save Snapshot", and "Load Snapshot". The main content area shows a chromosome overview with a zoomed-in region of 10 cbp. The details section shows the SNP FT94254 with its position on the chromosome and various tracks for SNPs, DNA, InDels, and STRs.

FT94254 Details

Name: FT94254
Type: snp
Source: point
Position: chrY:3127073..3127073 (+ strand)
Length: 1
allele_anc: A
allele_der: T
comment: .
count_derived: 0
count_tested: 0
isogg_haplogroup: unknown
load_id: FT94254
mutation: A to T
primer_f: TBD
primer_r: TBD
ref: FTDNA (2019)
ycc_haplogroup: unknown
yfull_node: Not found on the YFull [Ytree](#)
primary_id: 1242760
gbrowse_dbid: chrY:database

```
>FT94254 class=Sequence position=chrY:3127073..3127073 (+ strand)
A
```

FT94254 (3127073) is not on YSEQs list of primers they do not make and therefore should be fine to request a primer for:

Please do *not* suggest SNPs in the following hg38 regions:
chrY:1..2781479 (pseudo autosomal region 1, PAR1)
chrY:10072350..11686750 (synthetic assembled centromeric region, CEN)
chrY:20054914..20351054 (DYZ19 125 bp repeat region)
chrY:26637971..26673210 (post palindromic region, actually gradual start of Yq12 repetitive region)
chrY:56887903..57217415 (pseudo autosomal region 2, PAR2)
 Those sections of the Y chromosome suffer from frequent recombination events and are therefore not useful for phylogenetic studies. Unfortunately we can't provide primers for those regions.

We will design primers for your SNP and contact you by e-mail as soon as the SNP becomes available for purchase.

Checking the Big Y Data files, David is positive for the FT94254 (3127073) mutation (meaning there is a change from A to T. The FTDNA website is having scheduled maintenance, and once it is up and running again, Bert can check on his Y DNA results and type in 3127073 to see if he can see from the chromosome viewer whether he also has the A to T mutation that David has. Kits 347515 and 9200 were not tested for it; hence it is not in their Big Y data files when viewed in Microsoft Excel.

David	Novel Variants	3127073				A	T
Bert	Novel Variants	3127073				A	?

347515 and 9200

Microsoft Excel cannot find the data you're searching for.
 If you are certain the data exists in the current sheet, check what you typed and try again.

If anyone has done a Big Y and want to compare your results with another kit, click on your name on Alex Williamson's Big Tree <https://www.ytree.net/DisplayTree.php?blockID=266> and you will find the detailed analysis on your kit. Click on any other kit and you can see their analysis too. This is a level of analysis that is beyond my abilities, but it is useful to be able to see, and invaluable for someone adept at Y DNA analysis.