News, Updates, & More

Varner Family Genealogy

IN THIS ISSUE:

March 2022

FROM THE ADMINISTRATOR

It has been three years since I stopped creating these newsletters. I have not decided to re-start the column, but thought that the information contained in this issue was worth providing to those still interested.

This special issues is different than others of this series. No new named direct line ancestor information is provided. Instead, the discussion is about discovery of George Varner of Missouri ancient Y-DNA.

The topic is very detailed and specifics are often hard to wrap your head around. I tried to make the article as short and concise as possible, but I am sorry the result is still quite lengthy.

Whether you delve into all the details or not, the results are extraordinary!

Please note that this information applies only to the true George Varner of

Missouri Y-DNA line. Therefore those of us whose direct male line descends from Nancy Varner (And Edmond Riggs) are NOT directly part of the following DNA discussion. We still carry the surname and are descended from Nancy Ann Varner's father George.

I do believe that the information is fascinating and you will find it quite unique.

I apologize in advance for the fact that much of the detail of this article is difficult to understand and decipher. Those details are provided to support the facts listed in bullet points given early on.

As always, old newsletters and much more family genealogy information is still found on the Varner Family website. http://brucevarner.com/VarnerGenealogy.htm

Bruce Varner

The Very Ancient Y-DNA Line for George Varner of Missouri

Let's start off with a specular tidbit of Y-DNA information to get everyone's attention.

The George Varner of Missouri paternal line is descended from the same SNP (Single Nucleotide Polymorphism) as **Ötzi the Ice Man**!

Very-very few people currently DNA tested can make this claim. As you may recall Ötzi the Ice Man is the well preserved glacier mummy from the Copper Age (3,300 BCE), who was discovered accidentally by hikers in 1991, together with his clothing and equipment, on the Schnalstal/Val Senales Valley glacier, South Tyrol, Italy. He has been the subject of intensive research ever since. It is a fascinating read. More on Ötzi can be found here: https://www.iceman.it/en/the-iceman/

This story must start at the beginning. Last year I upgraded both my Varner/Riggs and Billy Joe Varner's Y-DNA samples to what is currently the most advanced and detailed Y-DNA test available. Named by FamilyTree DNA as the Big Y-700.

The results on our Riggs line is helping to further refine and confirm exactly where our Nancy Varner line fits into the Riggs ancestry. But much is already known and studied on the Riggs side, so this writing is not about that.

The Big Y-700 results for our Varner line (Billy Joe Varner) by contrast produced interesting information, even if no helpful surname results. So this article will not give you any new known ancestors who lived within the timeframe of surnames. What it did produce however is almost mind blowing.

The Big Y-700 testing produces results that are twofold. First, it significantly increases the number of detailed SNP's and STR's read from the sample DNA. This allows a much more accurate reading of close relationships with other matches already tested. Secondly, it delves much farther back into all SNP's and STR's. This second path is what has produced such surprising results for the true George Varner of Missouri Y-DNA line. I will go over the results at a high level first, then cover the additional detail needed to understand just how these result were determined.

The High Level Results:

- The true George Varner of Missouri line is Haplogroup G. G Haplogroup is carried by only 3%-5% of the living population of the world.

- The subclades (Downstream break downs) that further denote our Varner Y-DNA is very uncommon itself within the small G Haplogroup community.

- This lines most recent or newest SNP, called the Terminal SNP, identified via the Big Y-700 test for our Varner line is still a mutation around 5,100 years old.

- Therefore, of everyone Y-DNA tested to the level of BIG-Y the world over, none are a direct MRCA (Most Recent Common Ancestor) who lived less than about 5,100 years ago. Think of that. William Virgil Varner of Oklahoma has only completed testing to Y-111 and therefore any more recent Terminal SNP's are unable to be determined. Completion of the Big Y-700 test by William Virgil Varner is coming and will likely provide significant new details to help produce a new/closer Terminal SNP.

- From the Oct. 16, 2013 issue of Discovery magazine[1]: **Ötzi the Ice Man** "*DNA was still found lurking in the genomes of Austrians alive today. Ötzi and his long-lost relatives fall into a rare European haplogroup and sub category (known as G-L91). Each haplogroup represents an isolated population of ancient people whose unique genetic mutations can tie them to a particular geographical location—the Öztal Alps in this case—and early migratory routes.*"
  Our George Varner of Missouri and his male descendants are this G-L91 subclade.

- The George Varner of Missouri *"Haplogroup G formed approximately 50,000 years ago……., but seems to have had a slow start, evolving in isolation for tens of thousands of years, possibly in the Near East, cut off from the wave of colonization of Eurasia."*[2]
  Ötzi the Ice Man's ancestors had developed two additional subclades

[1] https://www.discovermagazine.com/planet-earth/living-relatives-of-otzi-the-iceman-mummy-found-in-austria

[2] https://www.eupedia.com/europe/Haplogroup_G2a_Y-DNA.shtml

below the G-L91 level before Ötzi died that are different than ours. So, we are not direct descendants. Rather distant cousins, but still closer in ancestry than almost all others human beings on the planet.

Let's now go into the details about the particulars explaining the above given information.

Big Y-700 Testing Details[3]:

The basics of human genes is very simple. To know the subject well is very hard. So to dip your toe in the subject just enough to do genealogy is easier if you remember how the basics work. Here it is.

As taught in high school science:

< Humans each have twenty-three pairs of chromosomes. (Therefore each human has 46 chromosomes)

< In each pair one chromosome of the pair is inherited from your biological father and one from your biological mother.

< Men have an X and a Y chromosome.

< The biological mother has and can only only pass down X chromosomes.

< A biological father has and can passes down either X or Y.

< If father passes X on the 23rd chromosome the child is a girl. XX

< If father passes Y on the 23rd chromosome the child is a boy. XY

Simple!

< Y-DNA testing looks at only one male chromosome, the Y in the 23rd pair. This can only be tested in a male because only males have this Y chromosome.

< mt-DNA testing on the other hand looks at only one female chromosome, the X also in the 23rd pair. This can be tested in either a male or female because males also have this X chromosome directly from their mother.

< Autosomal DNA tests measure the other 22 pairs of chromosomes called the autosomes.

OK.

< Y-DNA stays with the direct male line forever.

< mt-DNA stays with the direct female line forever. (Plus, although the mothers mt-DNA is also in her son, males do not pass it on down to their offspring.)

< There are approximately 3 billion base pairs inside the humans 23 chromosome pairs.

Great! Now the harder details.

The discussion here is only about Y-DNA testing. With the above covered, let's define **Haplogroup** one more time so that everyone has those details.

[3] **Alleles**: One of two or more alternative forms of a gene that arise by mutation and are found at the same place on a chromosome

SNP: A DNA sequence variation that occurs when a single nucleotide (adenine, thymine, cytosine, or guanine) in the genome sequence is altered and the particular alteration is present in at least 1% of the population. Also called single nucleotide polymorphism.

STR: "A short tandem repeat (STR) in DNA occurs when a pattern of two or more nucleotides are repeated and the repeated sequences are directly adjacent to each other" or repeat.

A haplotype is inherited from a single parent, and a **haplogroup** is a group of similar haplotypes that share a common ancestor with a single mutation and is defined by mutations that are unique to it.

Genetic material is made of only four molecules called "nucleotides" or "bases" that join in pairs and are combined in many various sequences to form the genetic blueprints.

Mutations called STR's (Serial Tandem Repeats) are areas of a chromosome where base pair combinations repeat. STR's are used for genealogical study of our DNA as it has evolved over the period of history, and Y-STR's are useful for tracking male lines. Other mutations called SNP's (Single Nucleotide Polymorphisms) are areas of the chromosome where one individual base has changed. SNP's are much more rare and stable than STR's and are used to study our deep genetic roots. When a new SNP happens at the conception of a male, all of his direct male descendants will have that same mutation.

Where the Y-111 test compares 111 DNA markers, the Big Y-700 test currently compares 700 markers. It is likely that in time this number will increase. In addition there was another major advantage to the Big Y-700 test, YFull.

YFull is a second separate well respected company. They do not do DNA testing. Instead what they do is additional simulation, collation, and comparisons of already completed Big Y results. Your FamilyTree DNA results for the Big Y-700 test are submitted, obtained, and must be downloaded from FamilyTree, and can then be uploaded to YFull. For a $25 fee YFull re-analyzes the already sequenced FTDNA test results using a slightly different algorithm and several additional types of processes. The results produced are often more detailed then those provided by FamilyTree DNA.

The benefit is that comparisons not available through FTDNA allow for discoveries unavailable previously.

Image 1 below is a copy of one chart found on the Eupedia G2a website. I have added (In Red) where our George Varner of Missouri line splits off from others into our subclade. Understand that those subclades: L91, Z42732, Z42571 will not be the only subclades in our line. There will be additional ones newer then these. They are just the only ones currently proven by comparison in our line.

History of Our Haplogroups Subclades:
The G Haplogroup became a distinct group from Haplogroup F approximately 50,000 years ago. G "*seems to have had a slow start, evolving in isolation for tens of thousands of years, possibly in the*

Near East, cut off from the wave of colonization of Eurasia.[4]

"Haplogroup G broke into sub-groups G1 and G2 around 11,500 years ago. "G2 (Our line) appear to have been closely linked to the development of early agriculture in the Fertile Crescent…… The G2a branch (A further breakdown) expanded to Anatolia, the Caucasus and Europe……. The highest genetic diversity within haplogroup G is found in the northern part of the Fertile Crescent, between the Levant and the Caucasus, which is a good indicator of its region of origin. It is thought that early Neolithic farmers expanded from northern Mesopotamia westwards to Anatolia…"[5]

These G's were the original occupiers of the Steppe[6] region. First as pastoralists[7] and later as producers of eatable grains.

Y-DNA tests indicate our early subclade of ancestors migrated into Anatolia during Neolithic[8] times and then on to the area of Neolithic time Croatia[9].

Matches?:

YFull did produce 2 very distant Y matches to Billy Joe Varner. While nothing to write home about, it is better than before as up to now Billy Joe and William Virgil have had NO Y matches of any kind, even distant.

This is one of the benefits of the YFull website. Where FamilyTree only provides you with matches that might be within the genealogic timeframe (Since surnames were in use), YFull provides almost any matches even those in the very distant past.

The first match is to a male living in Chile. There is no simple number of deviations distant, because this "match/MRCA" could have been 6,500 years ago!

The second match is to a male living in Germany. Again no number of

[4] https://www.eupedia.com/europe/Haplogroup_G2a_Y-DNA.shtml

[5] IBID

Anatolia, also known as Asia Minor, is a large peninsula in Western Asia and the westernmost protrusion of the Asian continent. It constitutes the major part of modern-day Turkey.

Caucasus, or Caucasia, is a region between the Black Sea and the Caspian Sea, mainly occupied by Armenia, Azerbaijan, Georgia, and parts of Southern Russia. The Caucasus Mountains, including the Greater Caucasus range, have historically been considered a natural barrier between Eastern Europe and Western Asia.

Levant historically, the region along the eastern Mediterranean shores, roughly corresponding to modern-day Israel, Jordan, Lebanon, Syria, and certain adjacent areas.

[6] **Steppe**: a large area of flat unforested grassland in southeastern Europe or Siberia.

[7] **Pastoralist**: early sheep or cattle farmer.

[8] **Neolithic**: Is the final division of the Stone Age, with a wide-ranging set of developments that appear to have arisen independently in several parts of the world.

[9] Croatia: A country at the crossroads of Central & Southeast Europe. Shares coastline along the Adriatic Sea, & borders Slovenia to the northwest, Hungary to the northeast, Serbia to the east, Bosnia & Herzegovina & Montenegro to the southeast, & shares a maritime border with Italy to the west & southwest.

deviations, but this match is a more recent 950 years ago. Certainly not close! I have emailed that individual and am waiting on a response. Maybe we could be lucky and he has some Varner-Warner-Werner surnames in his ancestry?

This is additional evidence of the scarcity of this line of Varner Y-DNA. At YFull going back 6,500 years they could still only find two living tested people that in any way matched our Varner line. Even then they are only very distant matches.

Our Varner G-Z42570 Terminal SNP:
The history of this line is Ancient. In fact this SNP is ancient. Not enough tests on this SNP have been conducted yet to determine an age, however the SNP in line just previous to this one is aged a about 8,900 years ago. So the G-Z42570 is most likely somewhere in the 8,000-6,500 years ago range. That is a long time ago!

This is another obvious indication as to the rarity of our Varner line. It may be found to be all but extinct! Just a few left. We don't know yet.

Also below as Image 2 is a chart copied and modified from FamilyTree DNA of Billy Joe's Big Y-700 results that include all known positive G Haplogroup subclades in our line. I have added the estimated years in the past that the common ancestor who first exhibited that particular mutation lived. As you can see the timeframes are mind blowing.

What Does It All Mean?:
I do not know. The above information is wonderful and very fascinating, but does it help in any way to trace further back our ancestors within a geological timeframe? That timeframe in which surnames have been used.

There are some things we might extrapolate from this information. I now feel that Varner or one of its variations may not likely our original surname.

While I do still believe that George Varner of Missouri came from Georgia and was raised by Fredrick Varner of George. I am not as sure that genetically Fredrick is our George's biologic father. He may well have been, but it is to me not as sure as before. Why?

Because with the shear lack of genetic G-Z42570 people on the planet, it seems unlikely that our Y genes came from a long line of Varner's. If so, than it would seem logical that there would be more living Y-DNA matches.

I now think that the more likely scenario is that a very few genetic G-Z42570 males made it to the United States. Maybe only two? And those two found themselves adopted by a Varner family, thereafter adopting that surname.

I could be entirely wrong. I will no longer even say that time will tell. Time may not tell. With so few living people of this small ancient genetic line, there may never be an answer?

More to come when results are available from William Virgil's new testing.

Bruce Varner

Image 1

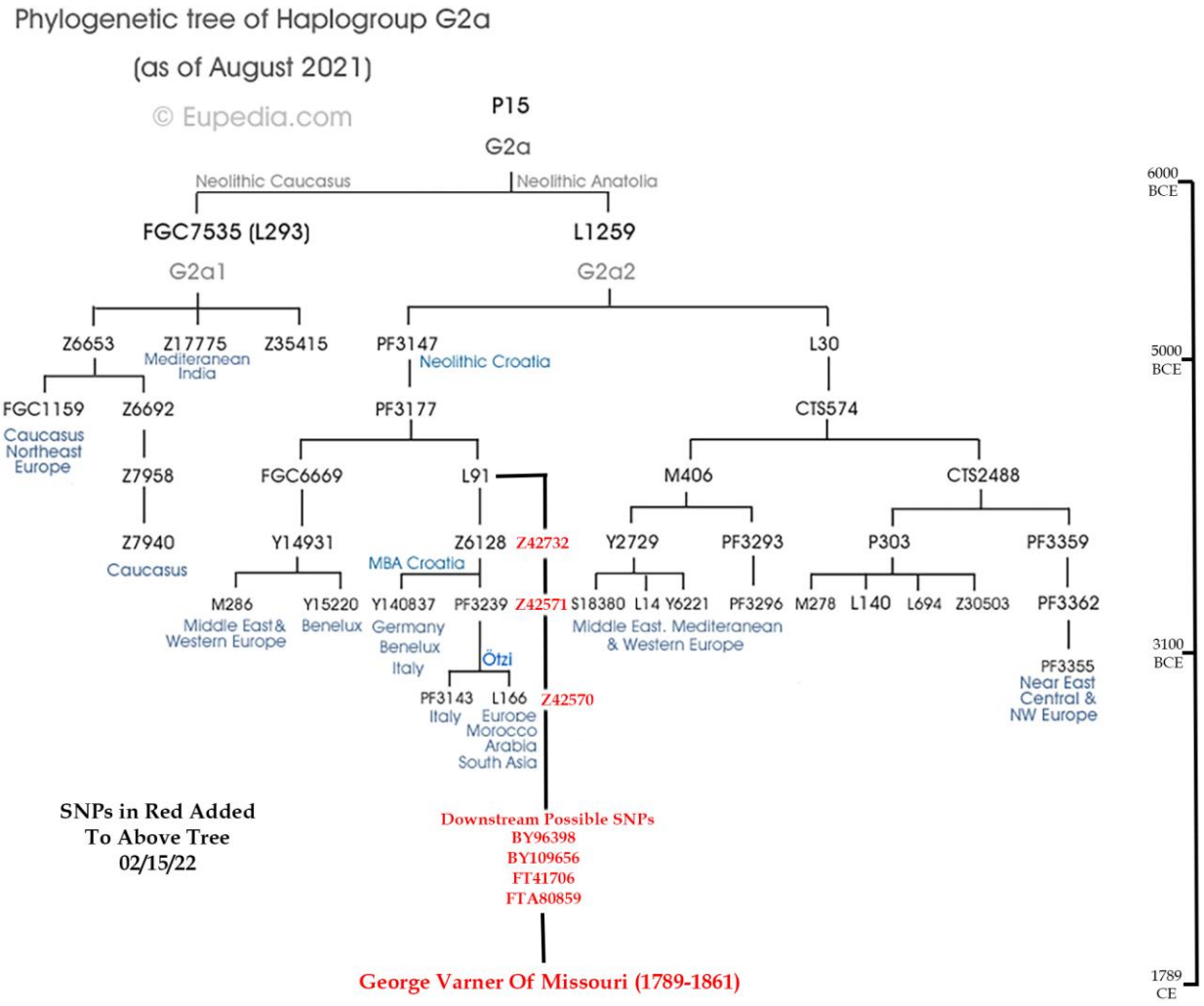
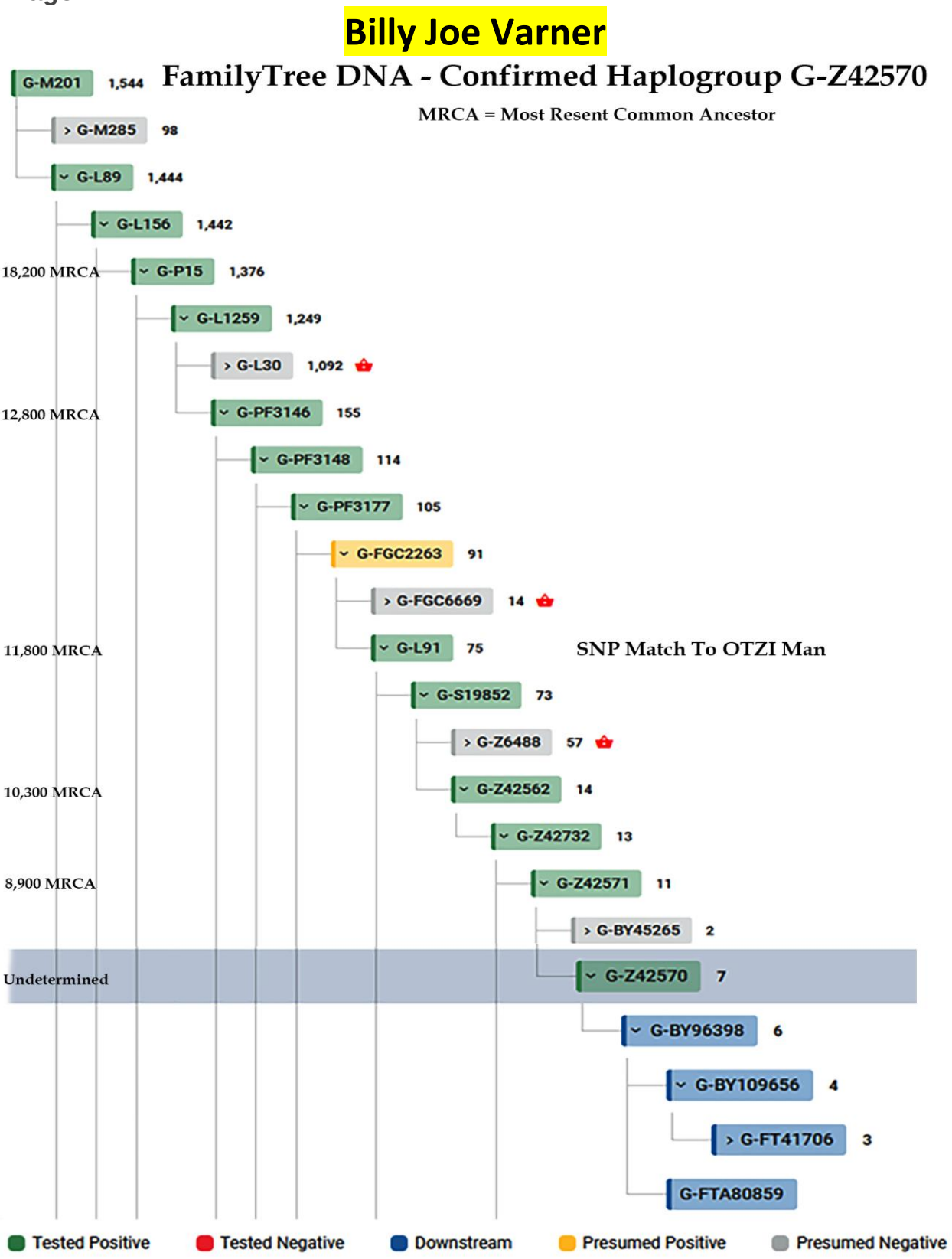
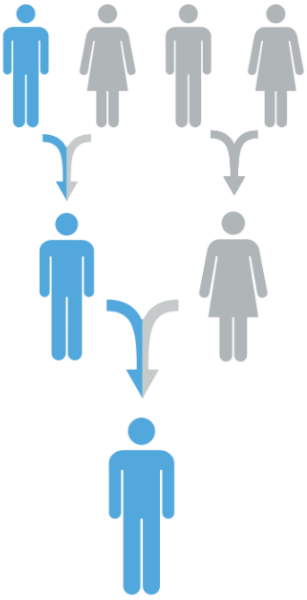


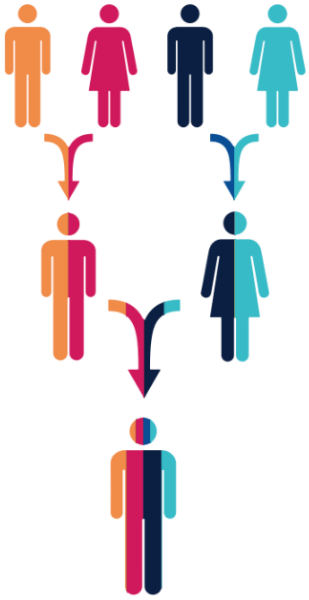
Image 2


Billy Joe Varner
FamilyTree DNA - Confirmed Haplogroup G-Z42570
MRCA = Most Resent Common Ancestor
G-M201 1,544
> G-M285 98
G-L89 1,444
G-L156 1,442
18,200 MRCA
G-P15 1,376
G-L1259 1,249
> G-L30 1,092
12,800 MRCA
G-PF3146 155
G-PF3148 114
G-PF3177 105
G-FGC2263 91
> G-FGC6669 14
11,800 MRCA
G-L91 75
SNP Match To OTZI Man
G-S19852 73
> G-Z6488 57
10,300 MRCA
G-Z42562 14
G-Z42732 13
8,900 MRCA
G-Z42571 11
> G-BY45265 2
Undetermined
G-Z42570 7
G-BY96398 6
G-BY109656 4
> G-FT41706 3
G-FTA80859
Tested Positive
Tested Negative
Downstream
Presumed Positive
Presumed Negative

Y-Chromosone DNA is inherited from your male lineage



Autosomal DNA is inherited from all of your ancestors.



Mitocondrial DNA is inherited from your female lineage