DNA Text

Until recently, family historians had to rely on written documents and word of mouth, to piece together the story of a family. Science now provides us another tool, and I've been amazed at what we've learned from Yoder DNA testing over the past 5 years. This presentation is intended to give you a bit of an overview. Has anyone here been a part of the testing?

BACKGROUND

I'll begin by trying to explain how DNA testing works and how it is interpreted. Then I'll share some of the results from the Yoder tests… including the standard profile of our Steffisburg ancestors; the "Amish mutation" to this profile; what the 100 marker profile looks like for our most recent common ancestor, who was Karl Joder born in 1548; and some of the "surprises" which have greeted us through the testing.

DNA Testing

The Y chromosome is handed down from father to son and determines that a child will be male. It is passed down with very little change over hundreds of years. Markers on the chromosome can be measured and give it a unique fingerprint. People with a matching DNA fingerprint may have a common male ancestor, almost certainly if they share the same surname. We partnered in our Yoder DNA testing with a firm called "Family Tree DNA" which is the company that worked with the National Geographic Society on their "Human Genome Project".

Vocabulary

Here's some of the vocabulary I'll use. First- DNA - deoxyribonucleic acid- this is the material in our cells that contains our genetic make-up. Genes, which are the basic unit of inheritance, are found on strings called chromosomes. Humans have 23 pairs of chromosomes, one of which is the sex determinant pair. XX for women and XY for men. Specific physical locations on the chromosome are called Markers… and these can be measured and give a numeric value. The combination of marker values at selected locations is called a "profile", and you'll see examples of these.

Lastly Haplogroup- which is a family grouping of humanity into ancient tribal origins. People can be placed into a Haplogroup because of features appearing within their DNA profile.

Male Line testing

In Surname DNA testing we test, measure and compare the Y chromosome, so we are only testing male Yoders. As I said…the exact features of this chromosome and handed down from father t o son to son with very little change. So a test of someone today reflects the "profile" of a male ancestor hundreds of years before, and men with a common male ancestor will match to one another.

Marker Compare

You can think of the comparison of the markers to these strings of bead. When the measurement at selected location on one persons Y chromosome is equal to that of another, they are consider as "match" to one another. The larger the number of markers measured and the higher the percent of them matching, the greater the likelihood that two individuals have a common male ancestor within a certain number of generations.

In any generation, there is about a 2 percent chance of a mutation- which would be a slight change in measured value.

Common Ancestor- Cht1

But it is possible to test living people and learn the exact profile of their ancestor who lived 300 or more years before. You do this by being able to identify a living descendant of two of the sons of the common ancestor. If each are tested… those markers that match can be assume to have been unchanged from the common ancestor.

Common Ancestor- Cht1

If there is a variation at one marker, then if you find a descendant of a third son and test him… the odd-man-out can be considered the mutated value.

Test Kit

Here's what the test kit looks like…the person being tested just scrapes the tooth brush like instrument over the inside of his cheek to get some dead cells, and mails it into the test lab for measurement.

Summary

Since we began testing 5 years ago, we have completed tests on 95 gentlemen. The Yoder Newsletter has paid for many of these tests from our kitty, but individuals and both Oley and NC Yoder family groups have paid for the rest.

Findings-Haplogroup

The first finding is that the Yoders belong to a specific Haplogroup (or tribe of ancient humanity) which is believed to have originated in South eastern Europe between 15 and 17 thousand years ago. Although it is a minority within Europe, it peaks in central Germany.

67 Marker profile

This is the Common Yoder Y DNA profile measured at the 67 marker level. You can see here the name of a marker location, and then the measured value for that marker. For example: 393……. 19……. A full stratification of the test results can be found on the Yoder Newsletter web page.

First Major Discovery - Amish Profile

The first item which became apparent in testing from our initial 12 marker tests was that there was a difference (a mutation) at marker 19 which appeared in the testing of Amish Yoder descendants. The Amish immigrants of 1742, and of the 19th century have a 16.

25-Marker

The standard value, present with the Oley, the Mennonite, the North Carolina Yoders, the Melchior line and even the Steffisburg Joders today is a "15". In fact, when you expand the testing to 25 markers, you can see an exact match with no variations between living members of each of these lines.

What We Know Today-Our Family Tree

Compare that chart to what the recently established links are….you'll see that our descendants of Nicholas… and the line that stayed in Steffisburg are all "15"s. The two established descendants of his brother Jost, and the other Amish immigrants who are as yet unlinked to one of his other sons, all share the 16.

It's almost like when Jost was conceived in 1607, God knew that his descendants would stop baptizing their infants in churches and leave few records. So he left this clue for us in Josts DNA 404 years ago, knowing that today we would be able to see it.

100 Marker Test

Over the past 5 years, Family Tree DNA has offered more and more specific testing, and we've kept up by upgrading samples already taken. I don't expect that you can read this chart, but it shows results for each of the family lines, and also, where it can be determined, the profile for the Most Recent Common Ancestor.. that Karl Joder born in 1548.

100 Markers- Chrt 2

Surprises- Oley

We found a number of surprises in our testing. First a big surprise in the Oley branch. John Yoder, born c1700, was the son of Hans the immigrant. He had a family of 4 boys. The first son passed along the ancestral Joder profile. Another son had girls and could not be tested. But two other sons, Samuel and Peter Yoder, turned out to not be sons at all. Each had a completely different profile from the ancestral Joder line and neither matched to one another. So John was not their father, and each had a different father.

As confusing as this situation has been, it's been helpful in our genealogical research. It's helped us identify the ancestry of previous "unlinked" lines of Yoders in the 19th century.

The Yetters

Another Surprise was the finding that a number of early lines of Yetters/Yeaters/ Yaters DO NOT match to the Joders, but that they do match

to one another.. supporting the speculations in that family that they may have descended from a Juettter immigrant who came from around Stuttgart, Germany.

Andrew Yetter

An Andrew Yetter/Yoder family which grew out of Lycoming Co, PA and used a variety of spellings, has been confirmed as our cousins… matching exactly to the Steffisburg ancestral profile. It's early generation links remain a mystery at this point.

New Jersey Yetters

In the most recent discovery, we were able to find for testing a 90 year old male descendant of a Yetter line which came from Northampton Co Pa to Sussex Co, NJ. I expected that they would perhaps test to the German Juetter line. They surprised me by matching to the Amish profile! So we have another mystery needing to be figured out.

Yorty

The Name Jorde appears in some of the Swiss immigrant communities of Alsace and the Palatinate. This name became Yordy, Yorty, and Yotty as the family moved to America. The first immigrants were Peter and Ulrich Yorde who came to Lancaster Co, PA in the early 1700s.

A test by a descendant of Peter matched at 23 of 25 markers….according to Family Tree a 99 Per cent likelihood of a common ancestor to our Yoders. A test by a descendant of a 19th century Yorty immigrant also matches.

So it seems likely that in the distant past there is a common ancestor, and the name evolved. So we can say that the first Yoder to run for president of the US has already done so, and he was Los Angeles Mayor Sam Yorty who ran in 1972.

Zimmerman

Surnames did not start to be used in Europe until around the year 1200 . About a year ago, a man named Carpenter, who was a descendant of the Zimmerman family of Steffisburg (Zimmerman means Carpenter in German), asked to be a part of the Yoder project. He is several mis-matched

markers off from what Family Tree would mathematically compute as a match, but he is CLOSE to the Yoder profile. It is very possible that we share a common male ancestor at some point, perhaps 800 to 1000 years ago, or more.

The End

In conclusion, these tests have proved a useful tool in mapping the Yoder ancestry. Thanks to those who have taken part, and to those who have donated to the effort.

And once again, thanks so much to the NC Yoders for making these wonderful past few days possible.