

# Chapter 14

## Deep Triangulation Confirms our *Oakley* Lineage

[Updated 22 February 2019]

### *Introduction*

My paternal grandparents, Ray Miller Oakley (1876-1948) and Kate Cameron Burks Oakley (1873-1954), were the first generation of the ***Oakley*** family to settle in Quincy, Illinois, and to raise their children there. Multiple generations of the descendants of Ray and Kate have their roots in Quincy, and while descendants of this couple now live literally from coast-to-coast, I refer to the extended group of ***Oakley*** descendants as the “Quincy Oakleys”.

Over the past few years, I have conducted research on the genealogy of the “Quincy Oakley” family. On the ***Oakley*** line, we are descended from what is known as the “Westchester Branch” of the ***Oakley*** family, which can trace its roots to Miles Oakley (1645-1682), an immigrant from England who settled in Westchester County, New York, in the 1650’s.

I have been using DNA analysis to assist with my genealogical research. I have my DNA profile on the Ancestry.com website, but this site only informs users that they have a DNA match with someone – it doesn’t provide any details about the DNA match itself. I have DNA matches with some people where we have as many as four couples in common in our pedigrees. Which family line is responsible for the DNA match?

The free GEDmatch.com website has very powerful tools that allow users to examine DNA matches at the chromosome level. Unfortunately, very few people have taken the simple steps of downloading their DNA profiles from Ancestry.com, 23andme.com, or FamilyTreeDNA.com, and then uploading them to GEDmatch.com. I have been contacting a number of my DNA relatives and encouraging them to put their DNA profiles on the GEDmatch.com website, so that we can learn additional details about our DNA matches.

In this chapter, I present some of my findings from the GEDmatch.com website, which shed new light on my DNA matches with some of our distant ***Oakley*** cousins and help to confirm our lineage back to the “Westchester Branch” of the ***Oakley*** family.

## Oakley DNA Matches – Mark and Elizabeth Workman

One of the first **Oakley** family DNA matches that I found on the Ancestry.com website was with Mark Workman. I subsequently found that I also had a DNA match with his daughter, Elizabeth Workman. The following chart shows how my branch of the “Quincy Oakley” family is related to the **Workman** family:



Both our families are descended from Miles Oakley III (1696-1763) and his wife Sarah Tippetts (1700-1800). Miles Oakley III was a grandson of the immigrant, Miles Oakley Sr. According to this chart, my younger daughter, Amy Oakley, is a seventh-cousin of Mark Workman, and therefore a seventh-cousin once-removed of Elizabeth Workman.

I exchanged e-mails with Mark's wife Leslie (who is the genealogist in the family), and I informed her about the free GEDmatch.com website. She subsequently uploaded Mark and Elizabeth's DNA profiles to that site. I found that Mark, Elizabeth, my daughter Amy, and I all share a common DNA segment on Chromosome 15.

This figure shows that Mark (*\*Mark628*) and Elizabeth (*\*EBW91*) have a significant match with me on Chromosome 15:

Chr 15

Match ID	Type	Name	Matching segments on Chromosome 15	Overlap with previous match
1	F2	*Mark628 ( <a href="#">A171585</a> )	43243486 - 75534924 (36.1591 cM)	New Root
2	F2	*EBW91 ( <a href="#">A127417</a> )	43243486 - 71891648 (34.2316 cM)	43243486 - 71891648



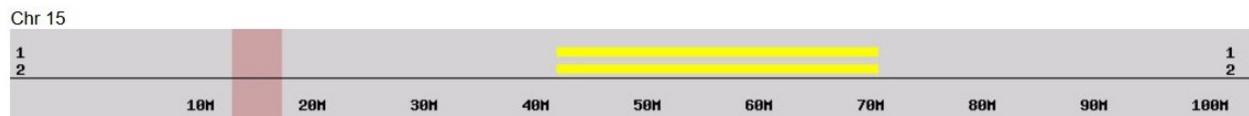
Mark and Elizabeth compared with Burks on Chr. 15

The yellow bars show the location of the match on Chromosome 15. The size of each match (36.2 cM and 34.2 cM) is rather large.<sup>1</sup> [Note that since the comparison is with my DNA, my segment isn't shown – the graph just shows where Mark and Elizabeth match my DNA. So I can infer that my matching segment must be the size of Mark's yellow bar.]

The next figure shows that Mark and Elizabeth also match my younger daughter, Amy Oakley, at essentially the same location on Chromosome 15:

Chr 15

Match ID	Type	Name	Matching segments on Chromosome 15	Overlap with previous match
1	F2	*Mark628 ( <a href="#">A171585</a> )	43250028 - 72006635 (34.3088 cM)	New Root
2	F2	*EBW91 ( <a href="#">A127417</a> )	43250028 - 71980525 (34.2897 cM)	43250028 - 71980525



Mark and Elizabeth compared with Amy on Chr. 15

Another way to look at this is to see how Amy (*\*a-oakley*) and I match Mark:

<sup>1</sup> In genetics, a centimorgan (abbreviated cM) is a unit for measuring genetic linkage. It is often used to infer distance along a chromosome. One centimorgan corresponds to about 1 million base pairs in humans on average. So a match that is 35 cM in size means that the matching segment is about 35 million base pairs in length.

Chr 15

Match ID	Type	Name	Matching segments on Chromosome 15	Overlap with previous match
1	F2	Burks Oakley II (A122463)	43243486 - 75534924 (36.1591 cM)	New Root
2	V3	*a-oakley (M383845)	43250028 - 72006635 (34.3088 cM)	43250028 - 72006635

Chr 15



Burks and Amy compared with Mark on Chr. 15

And finally, how Amy and I match Elizabeth:

Chr 15

Match ID	Type	Name	Matching segments on Chromosome 15	Overlap with previous match
1	V3	*a-oakley (M383845)	43250028 - 71980525 (34.2897 cM)	New Root
2	F2	Burks Oakley II (A122463)	43243486 - 71891648 (34.2316 cM)	43250028 - 71891648

Chr 15



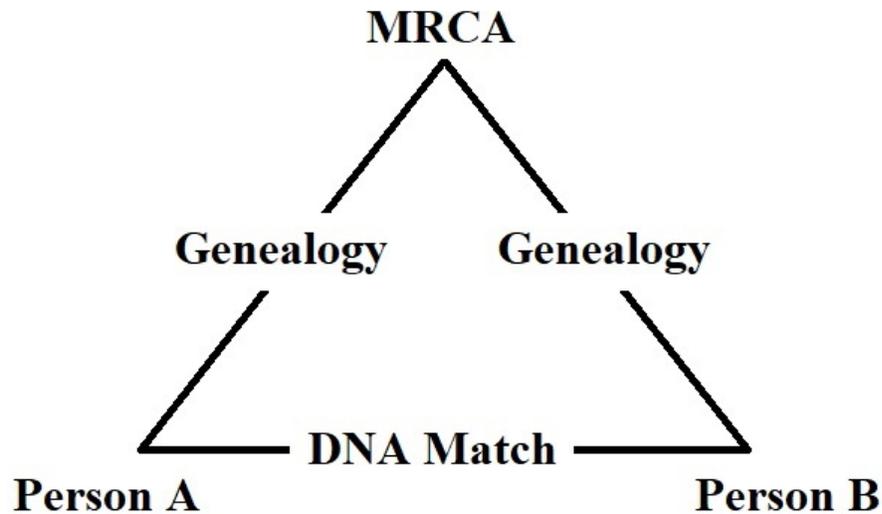
Amy and Burks compared with Elizabeth on Chr. 15

So we now know that Mark, Elizabeth, Amy, and I all share essentially the same segment of DNA on Chromosome 15. Since all four of us are descended from Miles Oakley III and his wife Sarah Tippetts, it is possible that this DNA segment was inherited from that couple.

### **Triangulation**

My DNA match with Mark Workman, combined with our family trees, is an example of genetic triangulation.

- Genetic triangulation is rather simple. Think of a triangle. /\_\
- Person A and Person B match genetically and that forms the base of the triangle. \_
- Person A has a paper trail (genealogy) that goes back in time. /
- Person B has a paper trail that goes back in time. \
- The top of the triangle is the Most Recent Common Ancestor (abbreviated MRCA).



The basics of genetic triangulation.

If the genetics of Person A and Person B match and both paper trails go back to a common ancestor (the MRCA), then this helps prove these two people are related both genealogically and genetically. This is a goal of genetic genealogy – to have the genetics confirm the paper trails (genealogy) back to the MRCA. Of course, if one could also find Person C and Person D, such that they all share the same DNA segment with Persons A and B, and if they all have a paper trail back to the same MRCA, then the argument would be made even stronger.

### ***Oakley DNA Matches – Kathy Hill Orr***

I searched my DNA matches on the AncestryDNA website for people having the surname ***Oakley*** in their family trees. One of my distant ***Oakley*** cousins is Kathleen “Kathy” Hill Orr. I contacted her via e-mail, and she responded:

“Thanks for contacting me regarding the DNA match. I haven’t taken the time to look through all of the matches, but it is always interesting to find new relatives. My grandmother was an Oakley (Iola May Oakley), her father was William Edmund Oakley. He was originally from Reynoldsburg, Ohio.”

In looking at Kathy’s pedigree, I found that she and I share Miles Oakley Jr. (1671-1743) and his wife, Mercy Gardner (1673-1773), as common ancestors. Miles Oakley Jr. and Mercy Gardner Oakley were my 6<sup>th</sup>-great grandparents. They also were Kathy’s 6<sup>th</sup>-great grandparents.



In July 2016, Kathy uploaded her DNA profile to the GEDmatch.com website. She also has a very significant match with Amy and me on Chromosome 15, and it has a considerable overlap with the exact segment we share with Mark and Elizabeth. The following figure shows how Mark, Elizabeth, and Kathy all match me on Chromosome 15:

Chr 15

Match ID	Type	Name	Matching segments on Chromosome 15	Overlap with previous match
1	F2	*Mark628 (A171585)	43243486 - 75534924 (36.1591 cM)	New Root
2	F2	*EBW91 (A127417)	43243486 - 71891648 (34.2316 cM)	43243486 - 71891648
3	F2	Kathy Hill Orr (A657657)	36792158 - 62058807 (26.1097 cM)	43243486 - 62058807

Chr 15



Mark, Elizabeth, and Kathy compared with Burks on Chr. 15

And the next figure shows how Amy, Kathy, and I match Mark:

Chr 15

Match ID	Type	Name	Matching segments on Chromosome 15	Overlap with previous match
1	F2	Burks Oakley II (A122463)	43243486 - 75534924 (36.1591 cM)	New Root
2	V3	*a-oakley (M383845)	43250028 - 72006635 (34.3088 cM)	43250028 - 72006635
3	F2	Kathy Hill Orr (A657657)	30096476 - 34960671 (12.3242 cM), 40402784 - 63042757 (22.4503 cM)	43250028 - 63042757

Chr 15



Burks, Amy, and Kathy compared with Mark on Chr. 15

The figure above shows that Kathy matches Mark on two different segments (green, yellow) on Chromosome 15.

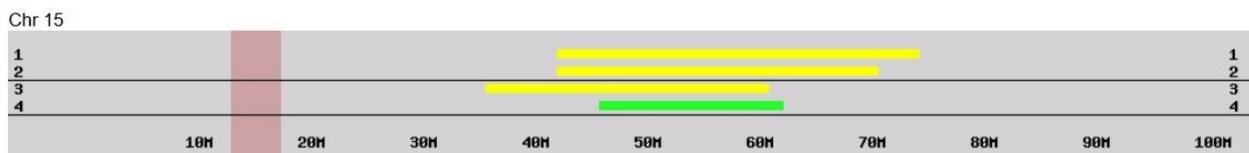
We now have three separate lines that go back to the “Westchester Branch” of the **Oakley** family, and all three lines share a common segment of DNA on Chromosome 15. So the triangulation is getting more solid. But wait, there is still more. In fact, a lot more!

## Oakley DNA Matches – Ginny Fossa

I used a software tool on the GEDmatch.com website to see which people in their database have a match with **both** Mark and me; one of these matches was a woman named Virginia “Ginny” Fenn Fossa. Here is a figure showing how Mark, Elizabeth, Kathy, and Ginny (\*VMF) all match me on Chromosome 15:

Chr 15

Match ID	Type	Name	Matching segments on Chromosome 15	Overlap with previous match
1	F2	*Mark628 ( <a href="#">A171585</a> )	43243486 - 75534924 (36.1591 cM)	New Root
2	F2	*EBW91 ( <a href="#">A127417</a> )	43243486 - 71891648 (34.2316 cM)	43243486 - 71891648
3	F2	Kathy Hill Orr ( <a href="#">A657657</a> )	36792158 - 62058807 (26.1097 cM)	43243486 - 62058807
4	F2	*VMF ( <a href="#">A869209</a> )	46994194 - 63379498 (17.0697 cM)	46994194 - 62058807



Mark, Elizabeth, Kathy, and Ginny compared with Burks on Chr. 15

And here is a figure showing how Amy, Kathy, Ginny, and I match Mark:

Chr 15

Match ID	Type	Name	Matching segments on Chromosome 15	Overlap with previous match
1	F2	Burks Oakley II ( <a href="#">A122463</a> )	43243486 - 75534924 (36.1591 cM)	New Root
2	V3	*a-oakley ( <a href="#">M383845</a> )	43250028 - 72006635 (34.3088 cM)	43250028 - 72006635
3	F2	Kathy Hill Orr ( <a href="#">A657657</a> )	30096476 - 34960671 (12.3242 cM), 40402784 - 63042757 (22.4503 cM)	43250028 - 63042757
4	F2	*VMF ( <a href="#">A869209</a> )	46994194 - 64173271 (18.2333 cM)	46994194 - 63042757



Burks, Amy, Kathy, and Ginny compared with Mark on Chr. 15

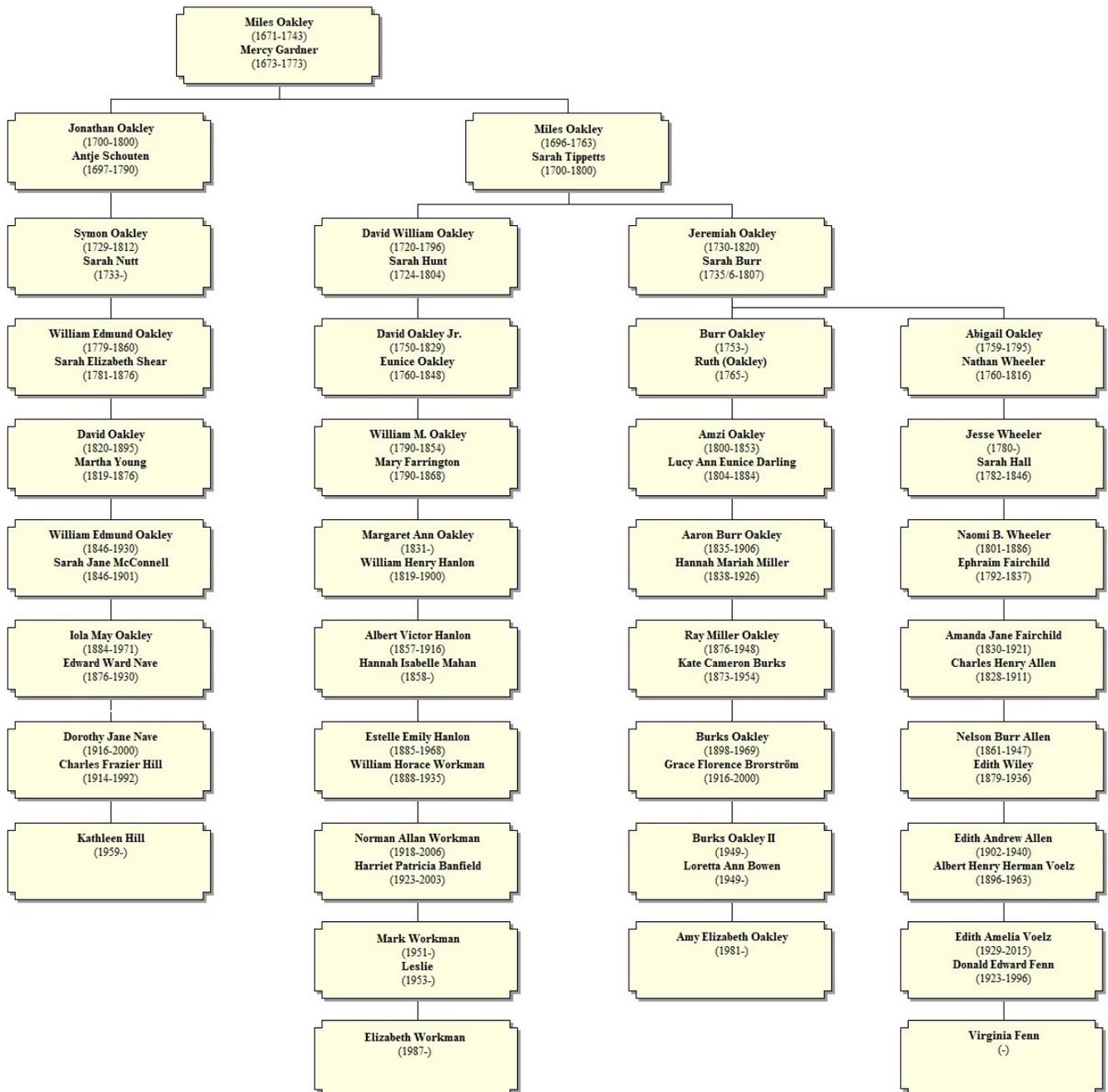
While Ginny’s matching segment is somewhat smaller than the others, it still is quite significant in size (17-18 cM), and it is located squarely in the middle of the other matching segments on Chromosome 15.

I mention Ginny Fossa in several other chapters – we have a common **Burr** ancestor and a common **Hall** ancestor. But the fact that she has this segment from the “Westchester Branch” of the Oakley family led me to re-examine her family tree. Sure enough, Ginny is descended from Jeremiah Oakley (1730-1820) and his wife Sarah Burr (1735/6-1807). Jeremiah Oakley was an ancestor of the “Quincy Oakleys”; he was married to Sarah Burr (a cousin of Aaron Burr, the third Vice President of the United States). Jeremiah Oakley was a son of Miles Oakley III and his wife Sarah Tippetts. My relationship to Ginny is shown in the following diagram:



While Ginny and I share a number of common ancestors, given that our DNA match is on Chromosome 15, which matches with other **Oakley** lines, I conclude that our DNA match results from our common **Oakley** ancestors.

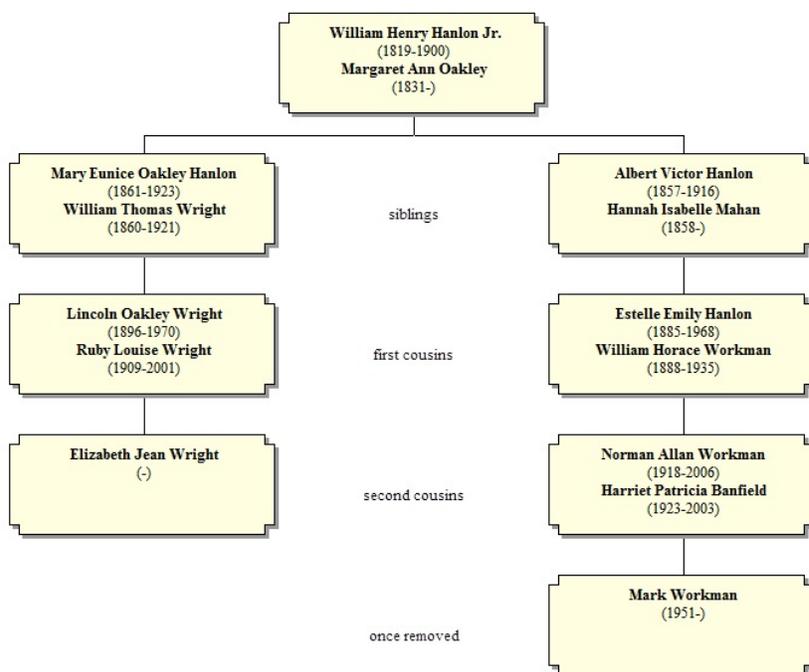
So we now have **FOUR** independent lines that go back to the “Westchester Oakleys”, and the four-way triangulation is very solid. It turns out that all four of these family lines go back to a single couple, Miles Oakley and Mercy Gardner:



## ***Oakley DNA Matches – Elizabeth JeanWright - aka Jeani Trana***

I continued to search my DNA matches on the Ancestry.com website for individuals having the surname **Oakley** in their pedigrees. One such person has the username of ***rjtrana50*** – I subsequently found that her birth name was Elizabeth Jean Wright; she is married to Roger Trana, and she goes by the name Jeani Trana. I exchanged several e-mails with her, and eventually examined her family tree. I learned that she is descended from Margaret Ann Oakley (1831-?), who was married to William Henry Hanlon (1819-1900). Their daughter was Mary Eunice Hanlon (1861-1923), who married William T. Wright. And *their* son was William Oakley Wright, and he was Jeani’s father.

Well, Margaret Ann Oakley and William Henry Hanlon were Mark Workman’s 2<sup>nd</sup>-great grandparents. This means that Jeani was a second-cousin to Mark’s late father, Norman Allan Workman. These relationships are shown in the following chart:

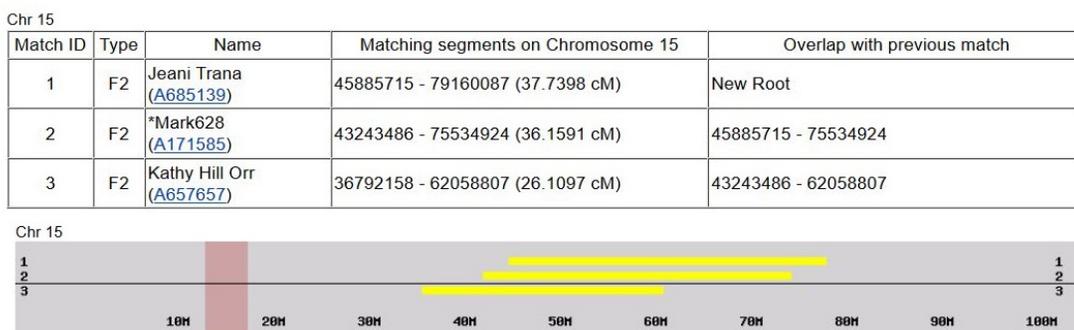


Given that I have a DNA match with Jeani Trana, and given that she is descended from Miles Oakley and Sarah Tippetts, I predicted that she would match me on the “Oakley-Gardner” segment of Chromosome 15.

In early August 2016, Jeani uploaded her DNA profile to the GEDmatch.com website, and I learned that.....

[drumroll please....]

Jeani does indeed share this same identical segment of DNA on Chromosome 15. The following figure shows how Jeani, Mark, and Kathy all match me on Chromosome 15:

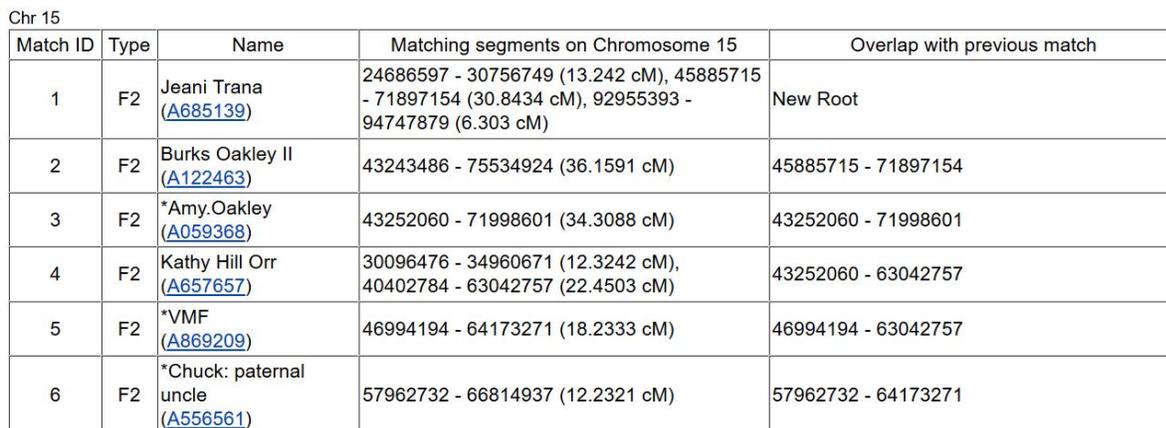


Jeani, Mark, and Kathy compared with Burks on Chr. 15

One-to-one comparisons of the DNA profiles of Jeani and Mark are consistent with them being second-cousins once-removed. [Second-cousins once-removed average 129 cM of shared DNA, and Jeani and Mark have 126 cM – right on the money!]

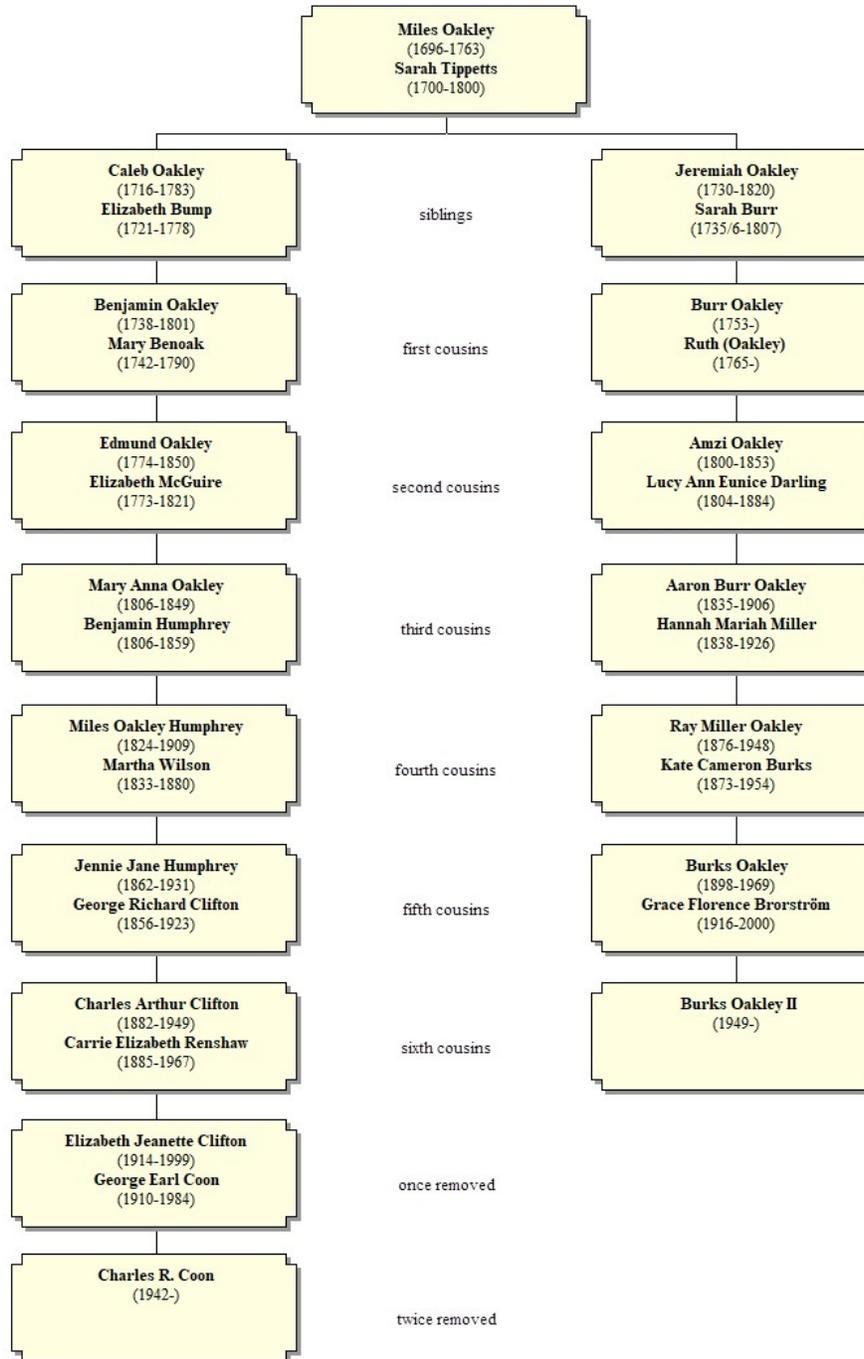
### ***Charles Coon – Yet another DNA match on Chromosome 15***

In searching on the GEDmatch.com website for people who match both Mark Workman and me on Chromosome 15, I found a person named “\*Chuck: paternal uncle”, whose DNA match is shown in row 6 in the figure below:



Jeani, Burks, Amy, Kathy, Ginny, and Chuck compared with Mark on Chr. 15

I subsequently learned that this person is Charles “Chuck” Coon, and his DNA profile is managed by his niece, Lori Margarita Coon y Sotomayor de Torres. And wouldn’t you know it? He is descended from Miles Oakley (1696-1763) and his wife Sarah Tippetts (1700-1800), as shown in the following relationship chart.



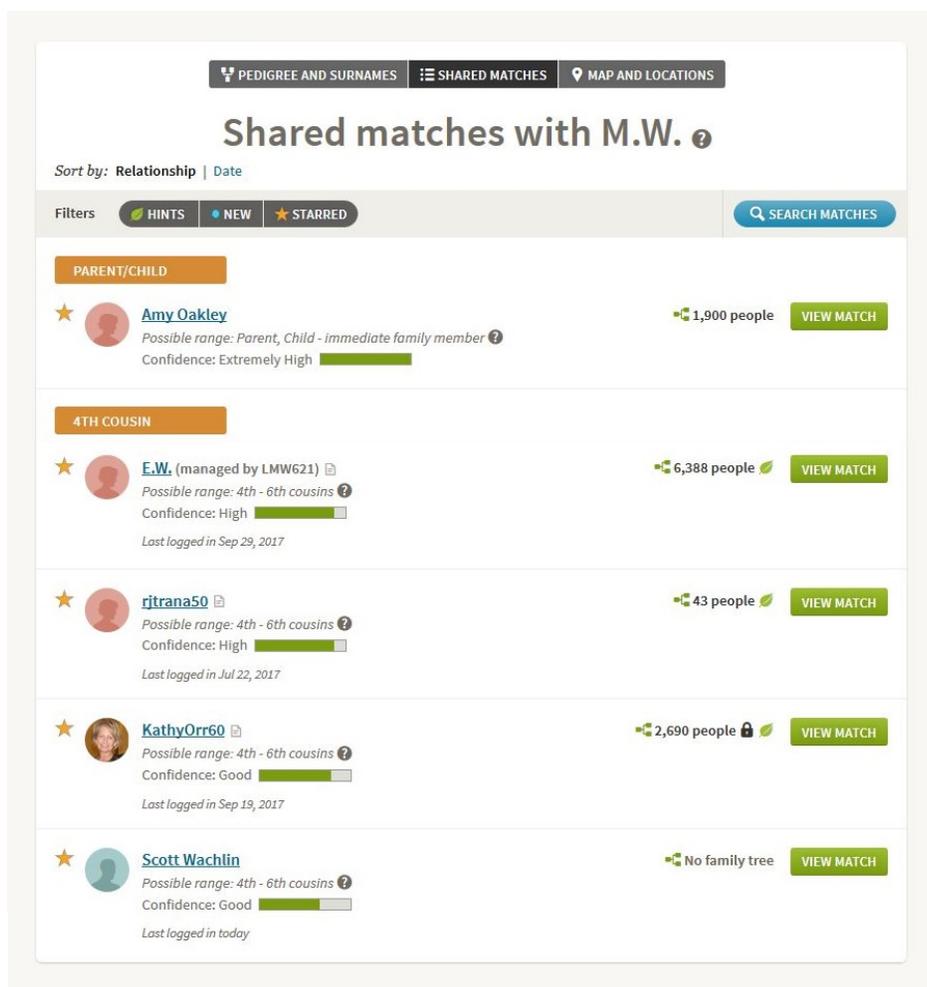
Charles Coon is descended from this couple through their son Caleb Oakley (1716-1783), while I am descended from this couple through their son Jeremiah Oakley (1730-1820).



In the chart on the previous page, all six lines go back to Miles Oakley (1671-1743) and his wife Mercy Gardner (1673-1773), and the terminal person (or persons) in each line all share a DNA segment on Chromosome 15. This really is an amazing finding (at least I think it is)! [A PDF with a much larger version of this chart is available on the web.<sup>2</sup>]

### ***And Yet Another One – Scott Wachlin***

In the early fall of 2017, I re-examined my DNA match with Mark Workman on the Ancestry.com website. I looked to see who else in the Ancestry.com database has a DNA match with both Mark and me (the “Shared Matches” tab at the top center of the following screenshot):

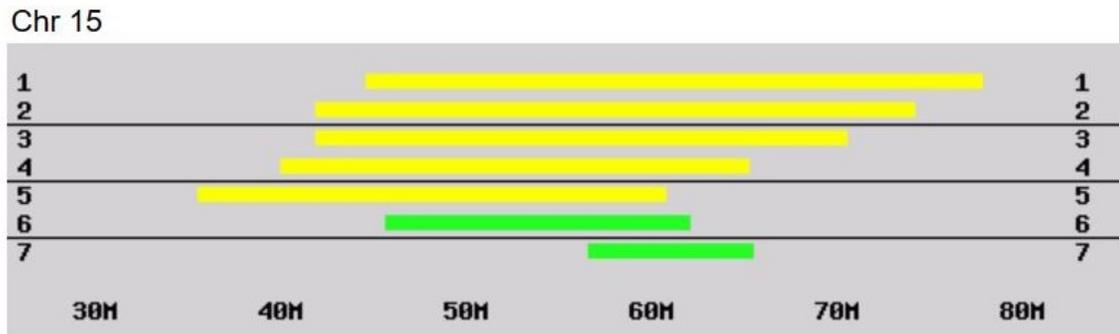


I learned that our “Shared Matches” included Amy, Elizabeth, Jeani, and Kathy, which is consistent with everything I knew about our DNA match. But it also listed a man named Scott Wachlin. Well, if Scott matches all of us, then he is

<sup>2</sup> [http://www.burksoakley.com/QuincyOakleyGenealogy/OakleyGardnerRelationships\\_21Feb19.pdf](http://www.burksoakley.com/QuincyOakleyGenealogy/OakleyGardnerRelationships_21Feb19.pdf)

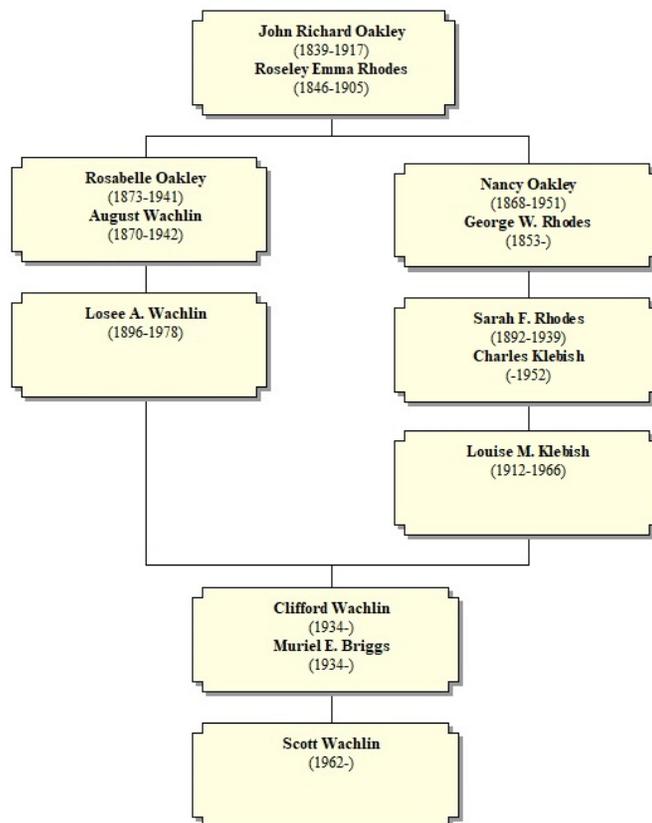
likely to have the “Oakley-Gardner” segment on Chromosome 15 and be descended from an Oakley line.

I contacted Scott through the Ancestry.com message system and told him about GEDmatch.com. In mid-October 2017, Scott uploaded his DNA profile to this site, and sure enough, he has the “Oakley-Gardner” matching segment on Chromosome 15 (Scott is shown in row 4 in the following chart):



1-Jeani, 2-Mark, 3-Elizabeth, 4-Scott, 5-Kathy, 6-Ginny, and 7-Chuck compared with Burks on Chr. 15

Scott sent me his family tree, which shows that he is descended from John Richard Oakley (1839-1917):



This diagram needs a slight explanation. Scott's paternal grandparents, Losee A. Wachlin (1896-1978) and Louise M. Klebish (1912-1966), were first-cousins, once-removed; that is, Losee was a first-cousin of Louise's mother. So John Richard Oakley is Scott's 2<sup>nd</sup>-great grandfather and also his 3<sup>rd</sup>-great grandfather, depending on which line you go back on.

Scott is descended from John Richard Oakley (1839-1917). Unfortunately, nobody on Ancestry.com seems to know anything about John Richard's ancestors. Here is a screenshot showing all the family trees that include John Richard Oakley, but have "Name Unknown" for both of his parents:

Member Tree	Name	Parents
Results 1-20 of 2,288		
Hallock-Diffenderfer Ancestry	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 - USA Death: 31 Oct 1917 Marriage: 1863 Spouse: Roseley Emma Rhodes	
Smith Family Tree	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 5/2/1839 (5 Feb 1839) - Germany Death: 10/31/1917 (31 Oct 1917) - Sayville, Suffolk County (Suffolk), New York, USA Marriage: 1862 Spouse: Rosaline Emma Rhodes	
Moore/Schmidt	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 - Suffolk, United States Death: 31 Oct 1917 - Sayville, Suffolk, New York, United States Marriage: 24 Sep 1862 - New York, United States Spouse: Roseline Rhodes	
Tichy	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 5/21/1839 (21 May 1839) Death: 10/31/1917 (31 Oct 1917) Marriage: 9/24/1862 (24 Sep 1862) Spouse: Roseley Emma Rhodes	
Sullivan Family Tree	John Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 Death: 31 Oct 1917 - Central Islip, NY (New York) Marriage: 24 Sep 1862 - New York, USA Spouse: Rosely Emma Rhodes	
Briggs & Wachlin	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 - USA Death: 31 Oct 1917 - Sayville, Suffolk, New York, USA Marriage: 24 Sep 1862 - New York, USA Spouse: Roseley Emma Rhodes	
Nicole Smith Family Tree	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 Death: 31 Oct 1917 - Sayville, Suffolk, New York, United States Marriage: 24 Sep 1862 - New York, United States Spouse: Roseley Emma Rhodes	
my ever growing tree	John Richard Oakley	F: David G Oakley M: Nancy M Albin
Public Member Tree	Birth: 21 May 1839 Death: 31 Oct 1917 - Central Islip, NY (New York) Marriage: 24 Sep 1862 - New York, United States Spouse: Roseley Emma Rhodes	
L'Hommedieu Family Tree	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 - USA Death: 31 Oct 1917 - Central Islip, NY (New York) Marriage: 24 Sep 1862 - New York, United States Spouse: Roseley Emma Rhodes	
Wachlin Family Tree	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 Death: 31 Oct 1917 Marriage: 24 Sep 1862 Spouse: Roseley Emma Rhodes	
Simons Family Tree	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 - USA Death: 31 Oct 1917 - Sayville, Suffolk, New York, United States Marriage: 24 Sep 1862 - New York, United States Spouse: Roseley Emma Rhodes	
Driscoll/King Family Tree	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 Death: 31 October 1917 (31 Oct 1917) Marriage: 24 September 1863 (24 Sep 1863) Spouse: Roseley E Rhodes	
Charlie's Family Tree	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 - USA Death: 31 Oct 1917 - Sayville, Suffolk, New York, United States Marriage: 24 Sep 1862 - New York, United States Spouse: Roseley Emma Rhodes	
My DNA Matches Family Tree	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 Death: 31 Oct 1917 Marriage: 24 Sep 1862 Spouse: Roseley Emma Rhodes	
Misino Family Tree	John Richard Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 5/21/1839 (21 May 1839) Death: 10/31/1917 (31 Oct 1917) Spouse: Rosely E Rhodes	
alldata(1)	John R Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: May 1839 Death: 31 Oct 1917 - Central Islip, NY (New York) Spouse: Rosalie Emma Rhodes	
alldata	John R Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: May 1839 Death: 31 Oct 1917 - Central Islip, NY (New York) Spouse: Rosalie Emma Rhodes	
De La Vergne Family Tree	John R Oakley	F: (Name Unknown) M: (Name Unknown)
Public Member Tree	Birth: 21 May 1839 Death: 31 October 1917 (31 Oct 1917) Marriage: 1863 Spouse: Roseley E Rhodes	

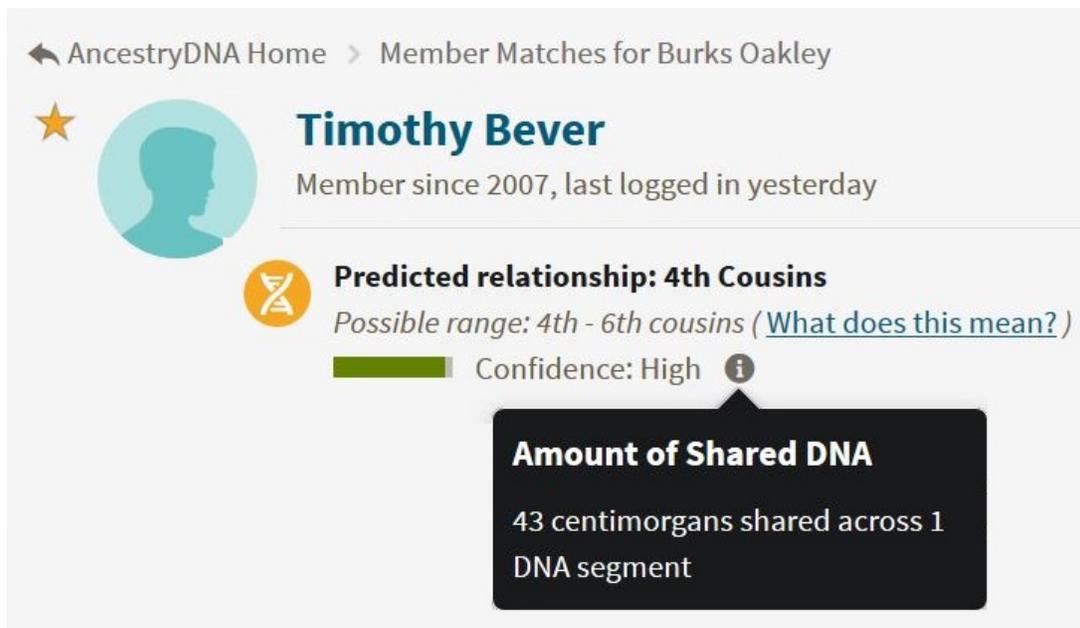
One person has a guess that John Richard Oakley's father was David G. Oakley, but that clearly is marked as just a guess.

Given that Scott has the Oakley-Gardner segment on Chromosome 15 and can trace his ancestry back to John Richard Oakley, it is tempting to conclude that John Richard Oakley is descended from the Oakley-Gardner couple (or one of their ancestors).

### ***Fast-Forward to 2019 and Rev. Timothy W. Bever***

In mid-February 2019, I searched my DNA matches on Ancestry.com for people having Oakley ancestors. This turned up Brenda Klennert Coleman, and one of the DNA matches I share with Brenda is with Timothy W. Bever (see Chapter 41). I later found that Tim is the pastor at Wesley United Methodist Church in Parsons, Kansas.

According to Ancestry.com, Tim and I share 43 cM on a single DNA segment:



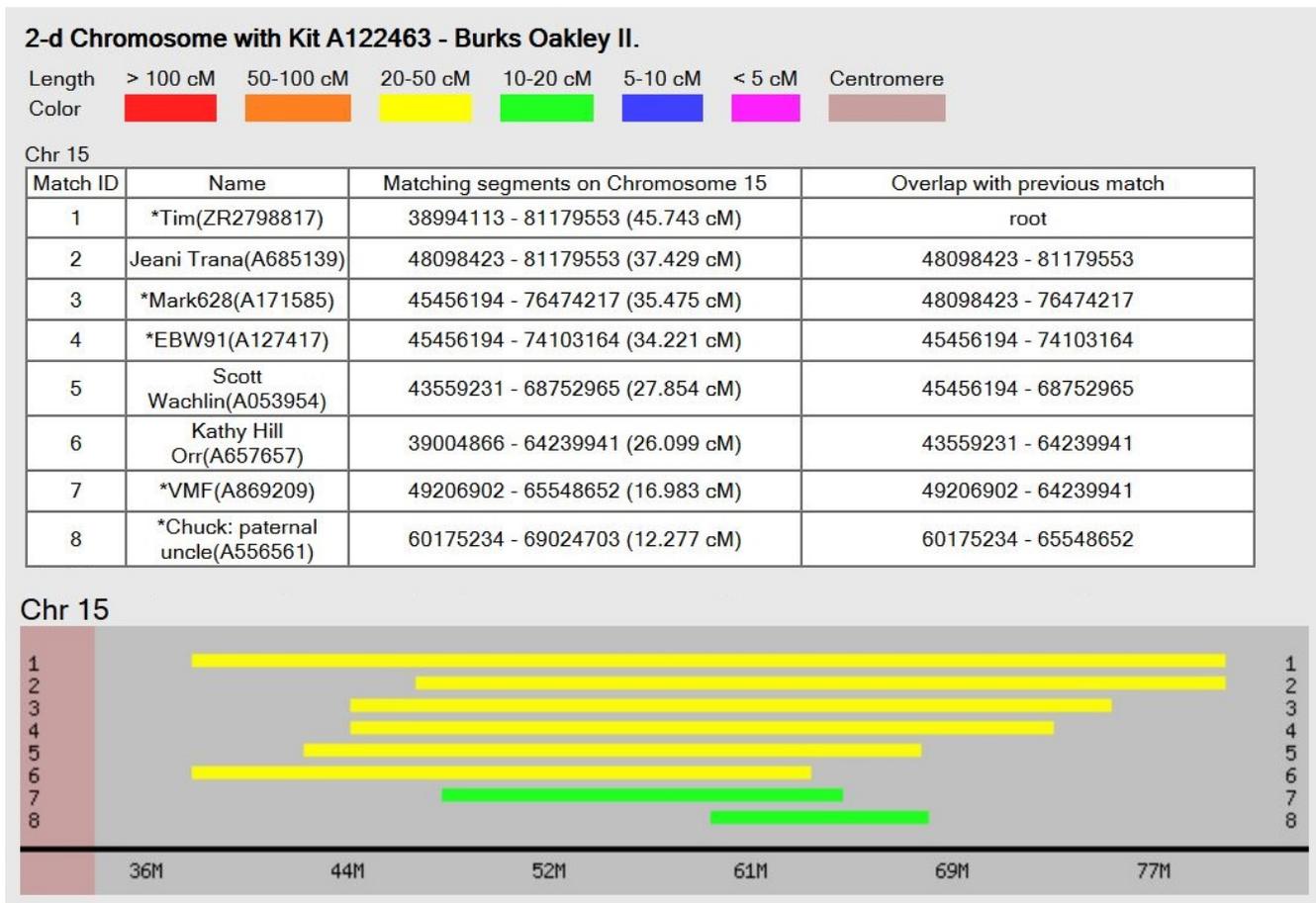
The screenshot shows the AncestryDNA interface for a match with Timothy Bever. At the top, it says "AncestryDNA Home > Member Matches for Burks Oakley". Below that is a profile for Timothy Bever, a member since 2007, last logged in yesterday. The predicted relationship is "4th Cousins" with a possible range of "4th - 6th cousins" and a link to "What does this mean?". A green bar indicates "Confidence: High". A callout box titled "Amount of Shared DNA" shows "43 centimorgans shared across 1 DNA segment".

Tim is descended from Miles Oakley and Mercy Gardner, as shown in the following chart:



In looking at the DNA matches that Tim and I share on Ancestry.com, I found that the list includes Mark and Elizabeth Workman, Jeani Trana, Brett Struck (descended from Amzi Oakley), Kathy Hill Orr, and Scott Wachlin. Is it possible that Tim also has the “Oakley-Gardner” DNA segment on Chromosome 15? I contacted him through the Ancestry.com message system, and told him about the free GEDmatch.com website. He immediately uploaded his DNA profile to GEDmatch, and the result was that ...

Tim does indeed have this exact segment on Chromosome 15! The following screenshot shows a subset of the people who have DNA matches with BOTH Tim and me:



The subset includes Jeani, Mark, Elizabeth, Scott, Kathy, Ginny, and Chuck. My DNA match with Tim is larger than my DNA match with any of the others. GEDmatch.com found that this match was 45.743 cM (somewhat larger than the 43 cM reported by Ancestry.com).

I constructed a chart showing how all of us are descended from Miles Oakley and Mercy Gardner, but the chart is too large for this document. I put it on my website at:

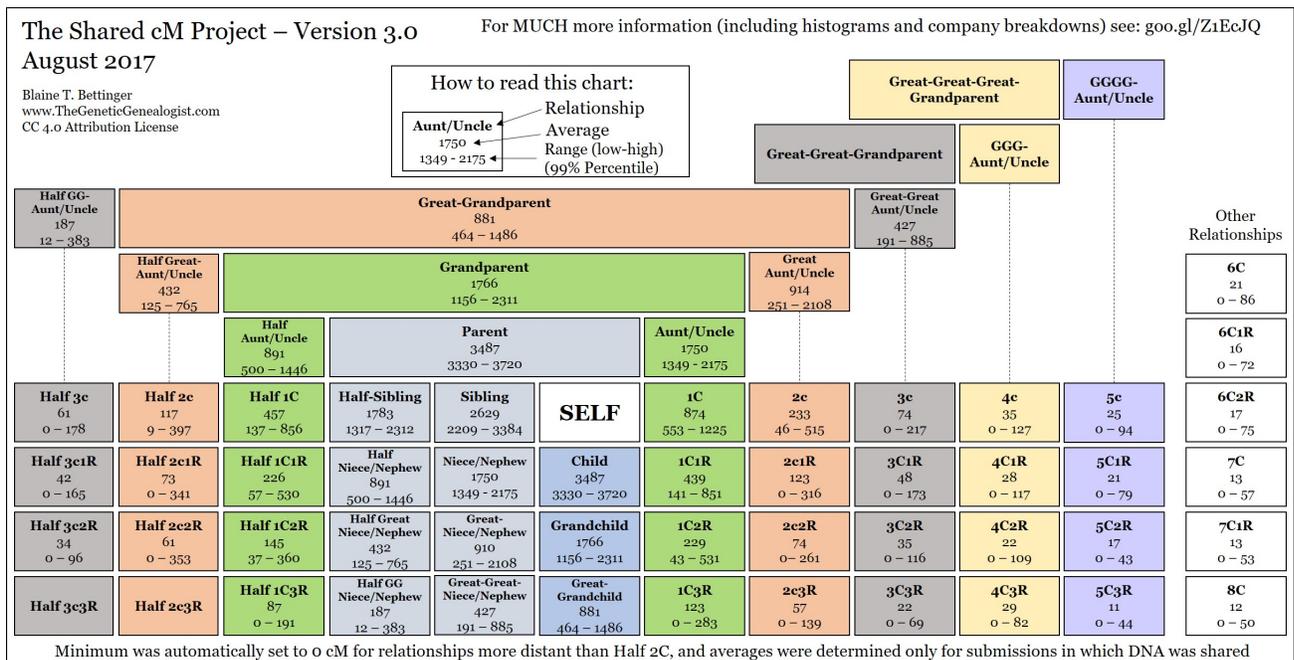
[http://www.burksoakley.com/genealogy/OverallChart-OakleyLines\\_20Feb19.pdf](http://www.burksoakley.com/genealogy/OverallChart-OakleyLines_20Feb19.pdf)

Note that this chart can be enlarged when viewed using a web browser.

## How Can DNA Last for so Many Generations?

My DNA match with Tim Bever is 45.7 cM, and we are seventh-cousins (7C). Interestingly, my daughter Amy's match with Tim is 45.6 cM. Why has this segment persisted for so long? Based on the size of this match, GEDmatch estimates an MRCA of 4.1 generations for Amy and Tim, yet their actual MRCA is 8.5 generations.

In 2017, the noted genetic genealogist Blaine T. Bettinger published the results of his ongoing study of the amount of DNA shared between people with known relationships. These results are summarized in the following chart:



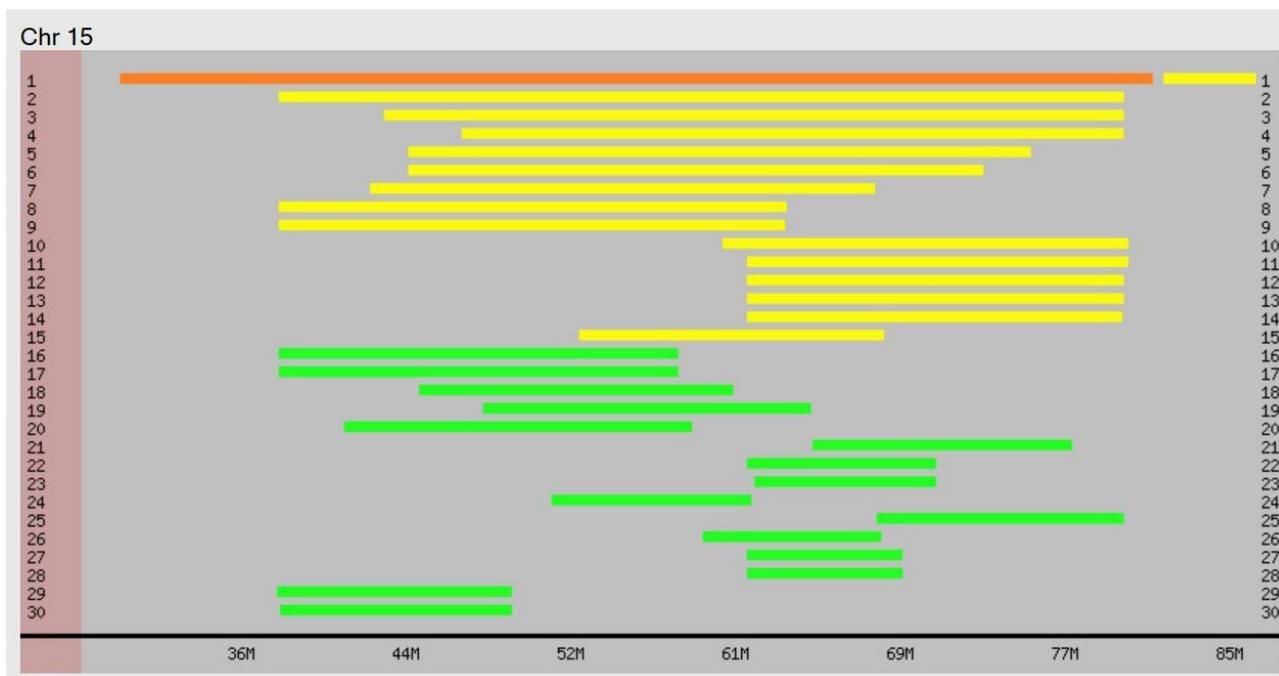
[https://thegeneticgenealogist.com/wp-content/uploads/2017/08/Relationship\\_Chart\\_FINAL\\_August\\_2017.jpg](https://thegeneticgenealogist.com/wp-content/uploads/2017/08/Relationship_Chart_FINAL_August_2017.jpg)

According to Bettinger's study, 7C average only 13 cM, with a range of 0 to 57 cM, while 7C1R average 13 cM, with a range of 0 to 53 cM. So the DNA matches that Amy and I have with Tim are very much at the upper end of the range, but importantly, these matches are within the range he observed.

This is pretty incredible to me – that we all share a large segment of DNA on Chromosome 15 that goes back to Miles Oakley (1671-1743) and Mercy Gardner (1673-1773).

## ***Are there Others?***

From time to time, I check the GEDmatch.com website to see if there are other people who match the “Oakley-Gardner” segment on Chromosome 15. As of mid-February 2019, there are thirty people who share this segment (matching both Tim and me), as shown in the following diagram:



Comparison with Burks on Chr. 15 – Row 1-Amy, 2-Tim, 4-Jeani Trana, 5-Mark Workman, 6-Elizabeth Workman, 7-Scott Wachlin, 9-Kathy Hill Orr, 19-Ginny Fossa, 26-Chuck Coon

Eight of the matches in the above figure are known to be “Oakley-Gardner” descendants. Scott Wachlin is a probable. That leaves another twenty-one. Of this group, a number have not responded to my e-mail or letters, several do not have family trees going back to the late 1600’s, and several have gaps in their family trees and cannot rule out Oakley-Gardner ancestors. But I’m 99.9% confident that they are Oakley-Gardner descendants.

## ***Concluding Remarks***

First of all, it would be nice if more of the “Quincy Oakleys” would have their DNA tested. I am sure that we would find additional DNA matches, since I don’t have the complete set of “Quincy Oakley” DNA. To emphasize this point, I will add that my first-cousin once-removed, Mark Cameron Eidem (the son of Mary Cameron Oakley and the grandson of William Burr “Bill” Oakley), does NOT have the “Oakley-Gardner” DNA segment on Chromosome 15. When I compared his DNA

profile with that of Mark Workman on the GEDmatch.com website, the result was “No shared DNA segments found.”

Next, the results presented in this chapter provide compelling evidence that the “Quincy Oakleys” are descended from the “Westchester Branch” of the Oakley family. The triangulation with other lines confirm that we are descended from Miles Oakley and Mercy Gardner, Miles Oakley III, and Jeremiah Oakley. My Y-DNA analysis in Chapter 17 also shows this to be the case.

Finally, let me address why I call this a “deep triangulation” – and that is because the Most Recent Common Ancestors (MRCA) described in this study are so deep in our past. It isn’t very likely to have a matching segment of DNA that is as large as 35 cM between seventh-cousins (Burks and Kathy), or seventh-cousins once-removed (Amy and Elizabeth), or sixth-cousins once-removed (Amy and Ginny). It is absolutely amazing that DNA could last this long without being “diluted” by a spouse’s DNA. I should add that the term “deep triangulation” was first used in a blog posting “A deep DNA triangulation success story”, by the noted genetic genealogist Kitty Cooper.<sup>3</sup>

It is my impression that deep DNA matches are not at all typical. I note that a direct comparison of Amy and Elizabeth found the large 34.3 cM matching segment of DNA on Chromosome 15, and based on the size of this segment, the software on the GEDmatch.com website found that the “estimated number of generations to MRCA = 4.4”. But the actual MRCA (Most Recent Common Ancestor) is 8.0 generations for Amy and 9.0 generations for Elizabeth, so their shared MRCA is 8.5. Based on the size of the DNA match, we all appear to be closer genetically than we are genealogically.

Furthermore, a direct comparison of Amy and Kathy Hill Orr found a 27.9 cM match on Chromosome 15, and the software estimated an MRCA of 4.5. Amy and Kathy are seventh-cousins once-removed, so their actual MRCA is 8.5. Again, we appear to be much closer genetically than we really are.

So this must be a lucky finding – not that I am complaining.

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<sup>3</sup> <http://blog.kittycooper.com/2014/01/a-deep-dna-triangulation-success-story/>