



An Introduction
Your DNA
and Your Family Tree
(Autosomal DNA)

Presentation by:

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Coffey Surname, y-DNA Project

We're now ready to move on and look at the type of results you can get from one more type of DNA test, autosomal DNA. This is intended to look for matches to ALL of your DNA, EXCEPT the sex chromosomes. And yes, it may reveal "Coffey" relationships that are NOT through the male line. And the time horizon is relatively short range.

"AUTOSOMAL DNA": Looking for Other Ancestors?

YOU HAVE:

2 PARENTS

4 GRANDPARENTS

8 GREAT-GRANDPARENTS

16 GREAT-GREAT-GRANDPARENTS

Leo Frederick COFFEY
b. 8 Jan 1942, Garden Grove, Iowa

Leo Newton COFFEY
b. 22 Jul 1901, Nr Humeston, Iowa
d. 26 Oct 1998, Lamoni, Iowa
m. 6 Jan 1925, Cambria, Iowa

Newton COFFEY
b. 23 Sep 1875, Indiana (Terra Haute?)
d. 26 May 1969, Leon, Iowa
m. 10 Mar 1897, Cambria, Wayne Co., Iowa

Adelia Gertrude ROBINSON
b. 12 Sep 1878, Wayne County, Iowa
d. 16 Jan 1973, Leon, Iowa

Elsie Maureen WALKER
b. 20 Nov 1903, Nr Van Wert, Iowa
d. 12 Mar 1983, Leon, Iowa

Everett Elmer WALKER
b. 6 Feb 1882, Near Van Wert, Iowa
d. 1948
m. 5 Apr 1903

Linnie Ellen MACHLAN
b. 30 Sep 1884, Near Leon, Iowa
d. 7 May 1974

William COFFEY
b. 27 Oct 1848, Sagamon County, Illinois
d. 16 Mar 1896, Wayne County, Iowa

Malcena BARBRE
b. 28 Mar 1855, Vigo County, Indiana
d. 12 May 1920, Wayne County, Iowa

Moody ROBINSON
b. 11 Dec 1850, Knox County, Illinois
d. 22 Mar 1938, Fullerton, California
m. 13 Nov 1873, Decatur County, Iowa

Ellen Arminda ATEN
b. 17 Dec 1849, West Jersey, Stark Co, Illinois
d. 6 Mar 1919, Fullerton, Orange Co, California

Cyrus WALKER
b. 7 Jan 1847, Knox Co., IL
d. 4 Sep 1925, Long Beach, California
m. 16 Jun 1872, Franklin Twp, Clark Co, Iowa

Laura Etta MYERS
b. 4 Jul 1853, Smith Twp, Mahoning Co., Ohio
d. 28 May 1902, Van Wert, Iowa

Joshua Newton MACHLAN
b. 17 Oct 1859, Iowa
d. 8 May 1936
m. 19 Dec 1880

Mary Ellen ARNEY
b. 24 Apr 1861, Davis County, Iowa
d. 9 Sep 1935, Fairview, Decatur County, IA

Newton Eli COFFEY
b. 2 May 1823, Russell Or Barton or Adair County, Kentucky
d. 13 Jan 1890, Stonington, Illinois
m. 13 Apr 1843, Russell County, Kentucky

Martha Louise VERMILLION
b. 4 May 1827 (1826?), Russell County, Kentucky
d. 27 Mar 1904, Wayne County, Iowa

Jesse BARBRE III
b. 25 Aug 1814, Indiana
d. 4 Apr 1870, Sullivan Co., Indiana
m. 7 Jun 1836, Vigo County, Indiana

Susan WEEKS
b. 24 Apr 1818, Kentucky
d. 11 Jan 1872, Sullivan Co., Indiana

Moody ROBINSON
b. 2 May 1811, Sullivan Co., Tennessee
d. 10 Mar 1881, Victoria Twp, Knox Co., Illinois
m. 28 Feb 1833

Mary "Polly" KIVET
b. 26 Nov 1815 (or 26 Mar 1813?), Randolph County, North Carolina
d. 1 Nov 1867, Victoria Twp, Knox Co., Illinois

Aaron Kimble ATEN
b. 18 Feb 1812, Erie Co, Pennsylvania
d. 9 Sep 1901, Garden Grove, Iowa
m. 2 May 1833

Dorcas GLASS
b. 25 Jan 1814, Pennsylvania
d. 20 Nov 1892, Wayne County, Iowa

Bartlett Yancy WALKER
b. 10 Oct 1819, Surry Co., North Carolina
d. 19 Mar 1912, Weiser, Washington Co., Idaho
m. 20 Feb 1845, Knox Co., IL

Frances Nixon MAXEY
b. 7 Apr 1827, Virginia
d. 19 Apr 1891, Van Wert, Decatur Co., IA

David MYERS
b. 18 Aug 1809, Ohio
d. 12 Sep 1876, Franklin Twp, Clark Co, Iowa
m. 13 Dec 1832, Ohio

Sarah THOMAS
b. 6 Feb 1815, Newbert Twp, York Co., Pennsylvania
d. 20 Dec 1895, Franklin Twp, Clark Co., Iowa

George Washington MACHLAN
b. 13 Nov 1832, Rush Co., Indiana
d. 25 May 1912, Leon, Decatur Co., Iowa
m. 25 Aug 1853, Rush County, Indiana

Elizabeth Ellen MANN
b. 21 Mar 1836, Rush County, Indiana
d. 14 Dec 1906, Leon, Iowa

Jacob Sylvester ARNEY
b. 23 Mar 1839, Nr Urbana, Champaign County, Ohio(?)
d. 13 Feb 1927, Leon, Iowa
m. 1 Mar 1860

Linia Ann BARNES
b. 6 Mar 1840, Park County, IN
d. 5 Apr 1880, Decatur Co., IA

"AUTOSOMAL DNA": Looking for Other Ancestors?

Back to my example tree: We've talked about how DNA can help track the top and the bottom rows of your family tree. Can DNA do anything about all those people in the **middle?** Absolutely!

This is an "autosomal" DNA test. And it can with 90% confidence show my connections to any other descendants of my **sixteen** great-great-grandparents. For me, that would be the sixteen people shown in blue on the right of this chart.


















That would be to the "3rd Cousin" level. But the test can often, but not always, also identify people who are possibly 4th, 5th or more distant cousins.

I've had a number of "Cousins" identified this way. And it's been fun to try to chase down what the actual connection might be. But that's proven to generally be fairly difficult.

The volume of data produced with this test is fantastic. I had a look at my full detail, and it reported results for 726,185 of the base-pair positions on my genome. However the full human genome has more than 3 billion base pairs, so that's still a really tiny percentage.

On average, "third cousins" share only 0.78% of their DNA. So you need a big test to spot the relatively small percentage of matching DNA segments.

AUTOSOMAL DNA: FRED COFFEY TEST

Name	GENEALOGICAL MATCHES BASED ON DNA					KNOWN GENEALOGY
	Match Date	Relationship Range	Suggested Relationship	Shared cM	Longest Block	Known Relationship Ancestral Surnames (Bolded names match your surnames)
 Thomas Robert Luce     Y-DNA111	6/6/2010	2nd Cousin - 4th Cousin	3rd Cousin	58.04	37.19	Hollingsworth (Ireland), Hampton (Virginia - Ohio) , Hounshell (Germany), Messerschmidt (Germany, PA, VA),
 Joshua Ryan Mathews    Y-DNA67	2/20/2012	2nd Cousin - 4th Cousin	3rd Cousin	67.36	37.19	
 Karen Ellen Church  	2/20/2012	2nd Cousin - 4th Cousin	3rd Cousin	56.54	36.55	
 Timothy E. Peterman     Y-DNA111 FMS	5/16/2011	2nd Cousin - 4th Cousin	3rd Cousin	116.96	32.13), Glass (Washington Co., PA; Columbiana Co., OH) , Gunz (Root,

AUTOSOMAL DNA: FRED COFFEY TEST

I arranged for an autosomal test on my father's sister, and on her daughter. The test indeed suggested she might be an AUNT, and her daughter a FIRST COUSIN! Hey, it works!

Looking beyond immediate family, here is what my test showed at a little more distant level. Based on a comparison with many thousands of people, these are people that it says are definitely related to me in SOME way.

Looking at the first one, it says that Thomas Luce looks like a 3rd cousin, but could be anywhere in the 2nd to 4th cousin range. And on the right are a list of names this person reports in his tree. And in BOLD it observes that we both report "Hampton".

I did get in touch with Thomas, and said "Let's talk about our possible common 'Hampton' ancestors!" We did prove it was the right Hampton family, but couldn't narrow our common ancestor down to an individual.

Now, the fourth person here, Tim Peterman, is someone I know very well! And the test result says he looks like a "Third Cousin".

Actually, he's my "Quadruple Third Cousin Once Removed". But if you recognize that "quadruple" cancels out "once removed", calling him a "Third Cousin" is remarkably accurate! (And NO. "quadruple" does not imply incestuous relationships.)

The autosomal test has become popular with adopted persons, who are trying to discover their biological parents by looking for promising names out to the 3rd cousin level. I've seen no statistics on how successful they have been. However there was one Coffey success, see next chart:

AUTOSOMAL DNA: COFFEY DNA SUCCESS STORY

> MAN WITH NAME "WILSON" TESTED

< Only knew his ancestry out to "grandfather"

> GOT Y-DNA TEST

< Proved "Coffey" male line ancestry, "Hugh" Group

> GOT AUTOSOMAL (FAMILYFINDER) DNA TEST

< Found two matches to people with a "Coffey" ancestor

< That ancestor was a KNOWN person on the "Hugh" group line

< Proved "Hugh" line connection within two generation range

> MAJOR AUTOSOMAL STUDY UNDERWAY ON HUGH LINE

AUTOSOMAL DNA: COFFEY DNA SUCCESS STORY

Through a rather amazing set of coincidences, we were recently able to use a combination of y-DNA and autosomal DNA testing to prove a non-surname, previously unknown family connection:

Several years ago a man named "Wilson", who did not know his ancestry any farther back than his grandfather, got both a y-DNA and a "Family Finder" (autosomal) test. Because he was looking for "Wilson", non-surname matches were ignored. Likewise, the Coffey side ignored anybody named "Wilson".

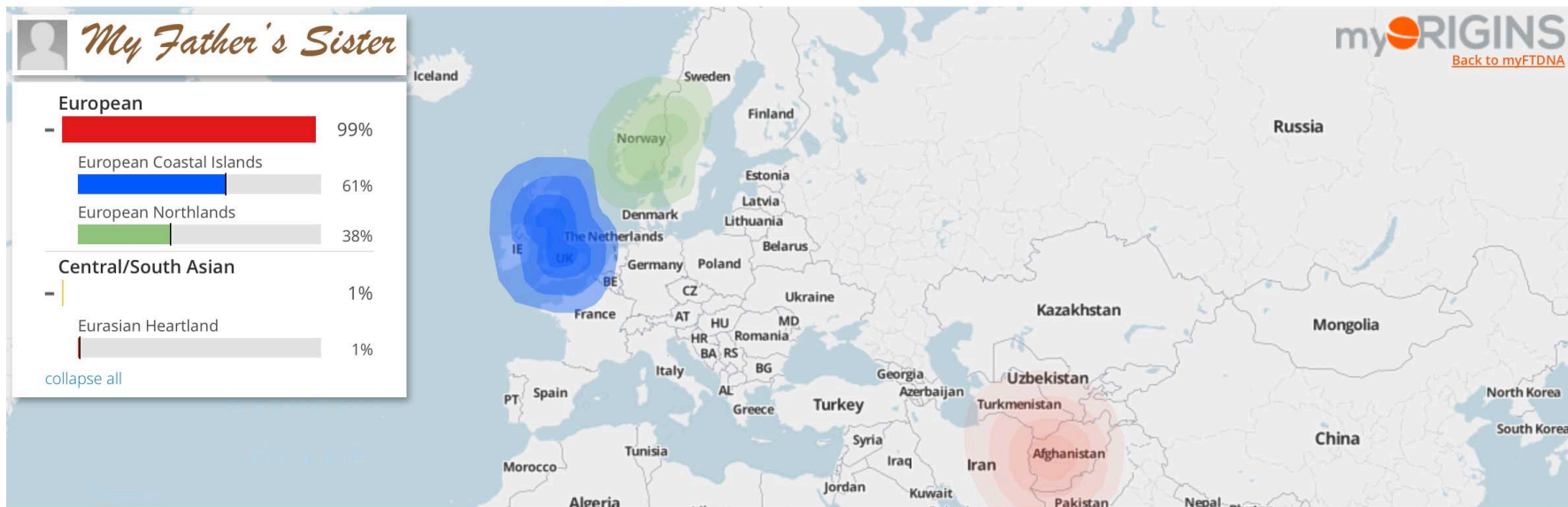
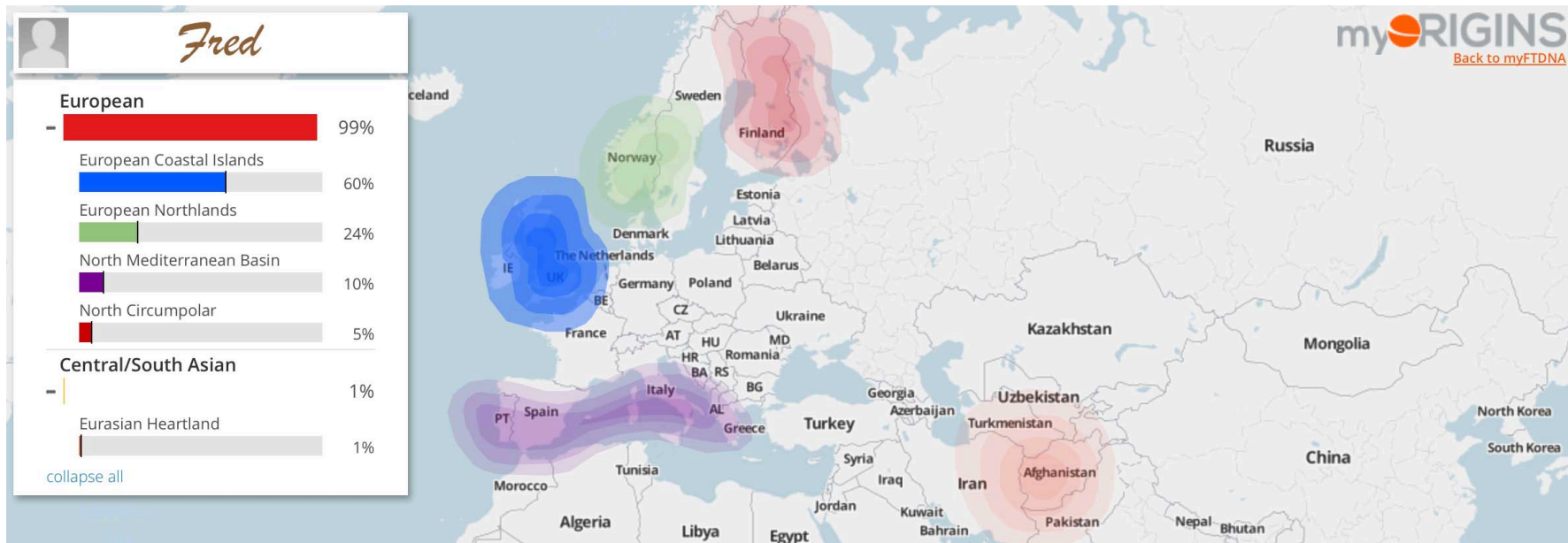
However it was finally noticed that he had y-DNA matches to "Coffey", specifically to our "Hugh" group. This proved that somewhere back in time, perhaps as far as 16 generations, he had Coffey ancestry.

That prompted a closer look at his autosomal DNA test matches, and two of those matches had "Coffey" ancestors. And a closer examination showed that those Coffey lines included a man who was named in one of our "Hugh Coffey" lines.

Since the autosomal test is short-range, the test proved the Wilson/Coffey connection within 2 generations.

There is now a major atDNA study underway on the Hugh line. And since atDNA is not constrained to the male "Coffey" line, there are a large number of participants who do NOT have the Coffey name.

ETHNIC ORIGINS (FROM AUTOSOMAL TEST)



ETHNIC ORIGINS (FROM AUTOSOMAL TEST)

There's one more thing you can get from an autosomal test that's interesting: It can give you an estimate of the total source mix of your genome. For myself, it says I am 99% European.

And the first picture here shows that my European DNA is made up of 60% "European Coastal Islands" (England and Ireland), plus 24% European Northlands, plus 10% North Mediterranean, plus 5% North Circumpolar.

The second picture shows the source for my father's sister. There are similarities, but it leaves out the North Mediterranean and North Circumpolar. So I MUST have gotten THOSE from my mother's side?

This sort of test could be of interest, for example, if any of you believe you have Native American ancestry. I believe a lot of Americans think, or hope, they might descend from an Indian princess. No such luck for either side of my family.