DNA analysis: Ancestry.com and GEDMatch

STEVE SWINFORD

APRIL 8, 2017

Ordering a kit

Order Summary

Item	Quantity	Price
AncestryDNA Kit	− 1 +	$99.00
SAVE NOW. Add more kits to your order for only $89/ea		
Shipping		$9.95
Total		$108.95

Have a coupon?

Shipping Information

Shipping Address

Steven Swinford
1107 South Third Avenue
Bozeman, Montana 59715
United States of America

EDIT

Shipping Method

Standard - Usually 7-10 business days,
$9.95 for first kit; $4.95 each additional kit.

Expedited - Usually 2-3 business days,
$24.95 for first kit; $12.95 each additional kit.

Once kit(s) arrive

You have the option to link specific kits (by using serial number of kit) to individuals in your tree.

If you opt not to link a kit to an individual, you will only receive the ethnicity assessment.

Why type of test is this?

Microarray-based DNA test (autosomal)
-22 pairs (not the X or Y)

Looks at over 700,000 locations

Both women and men can take this test

Saliva-based

Other information

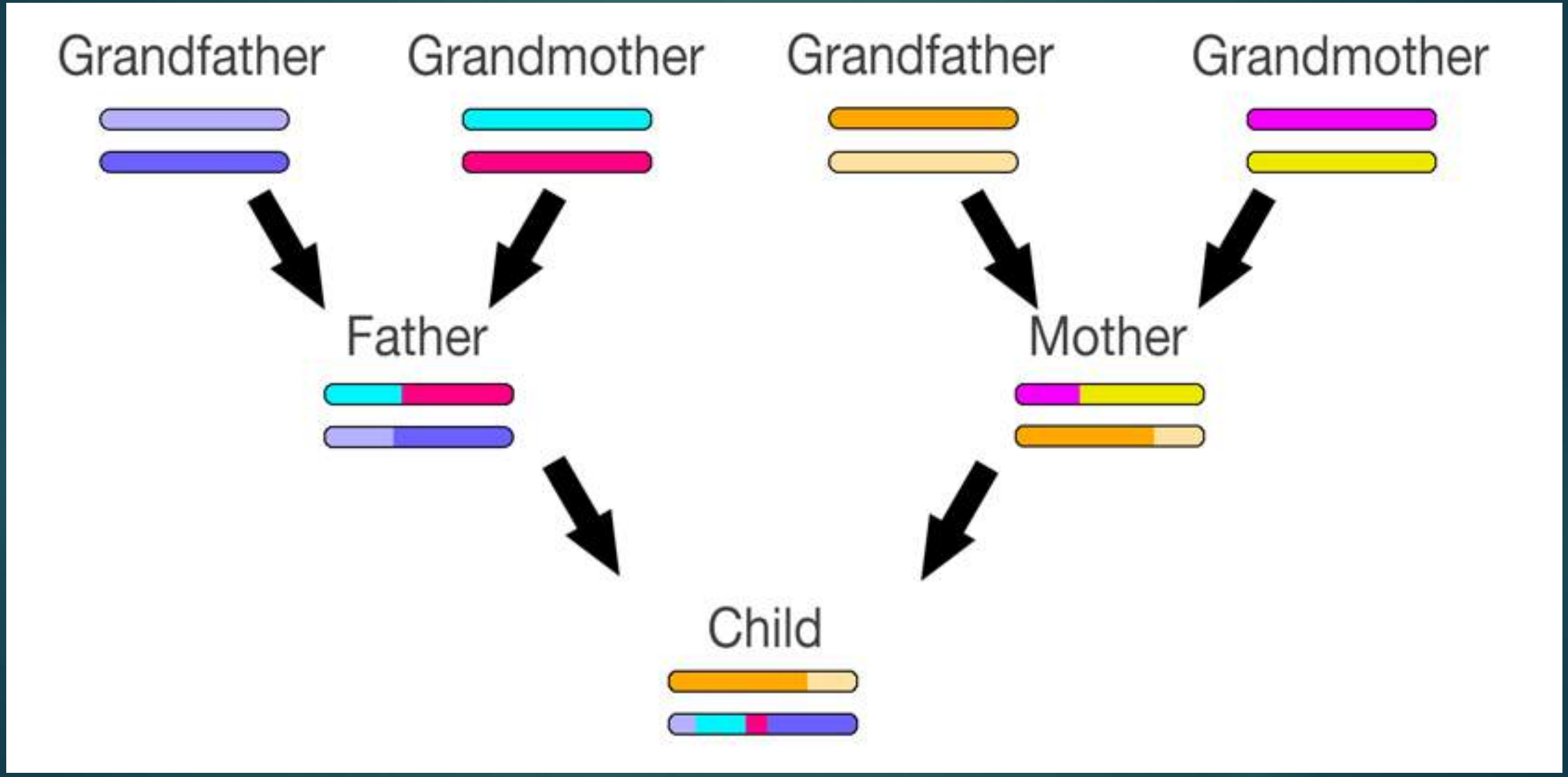
Takes about 6-8 weeks to receive results

See results in ancestry.com account

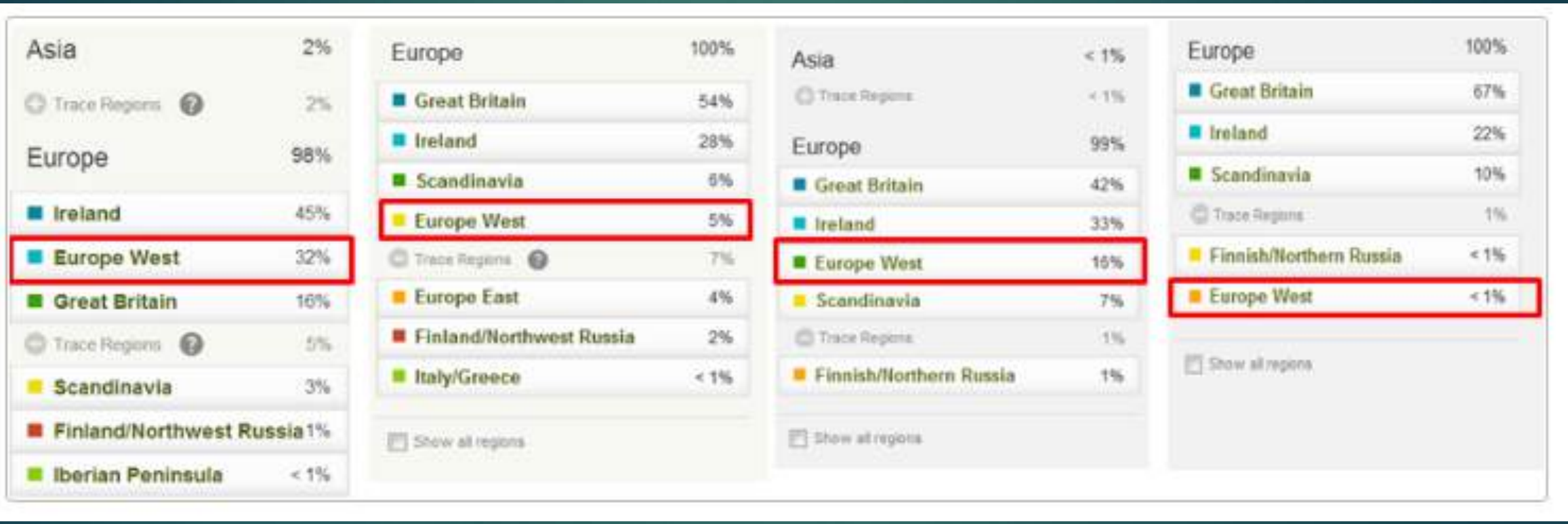
You can download results (raw data)

- more on this later

Breakdown


Grandfather
Grandmother
Grandfather
Grandmother
Father
Mother
Child

Four siblings example



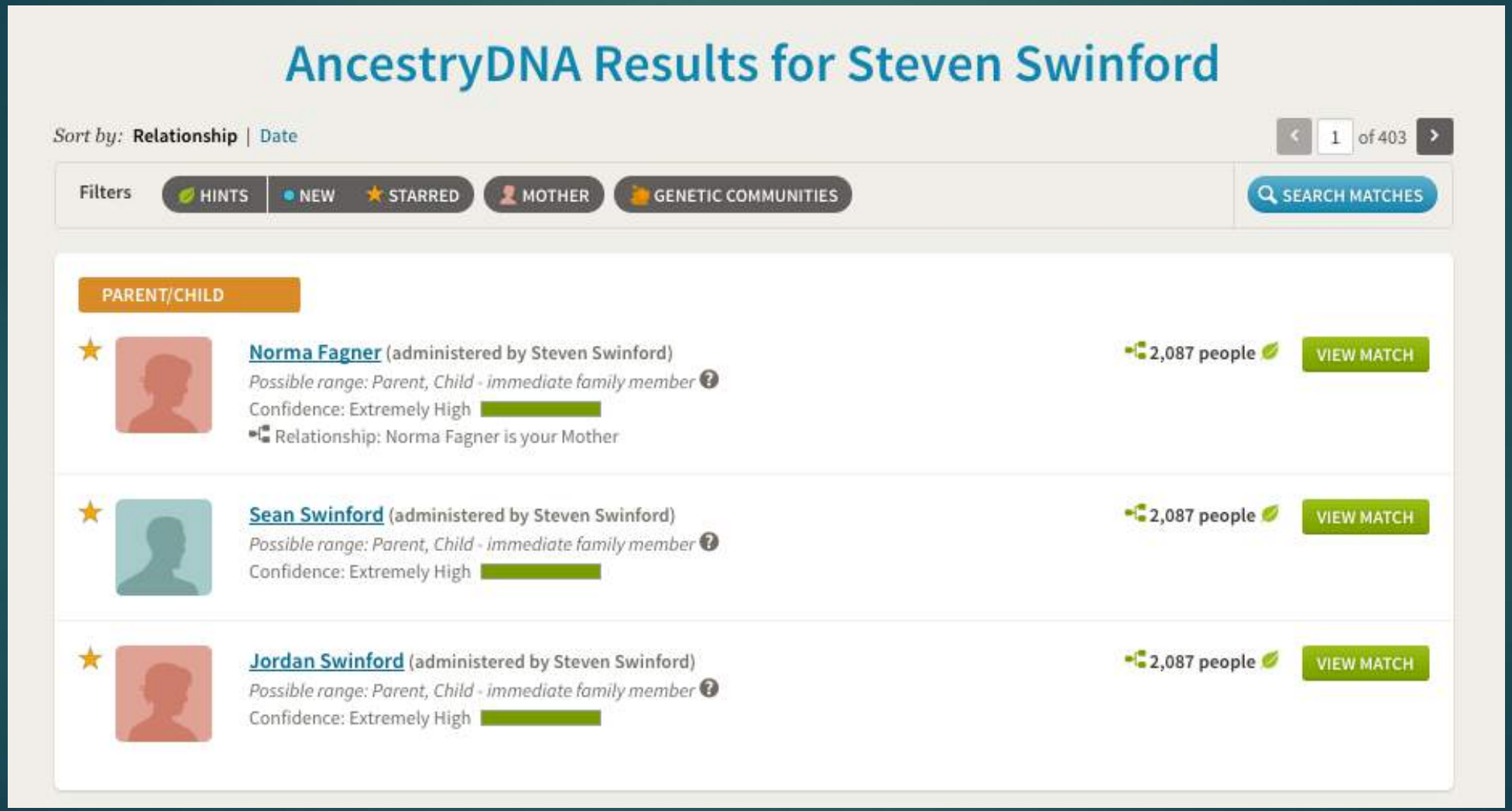
Asia	2%
Trace Regions	2%
Europe	**98%**
Ireland	45%
Europe West	32%
Great Britain	16%
Trace Regions	5%
Scandinavia	3%
Finland/Northwest Russia	1%
Iberian Peninsula	< 1%

Europe	100%
Great Britain	54%
Ireland	28%
Scandinavia	6%
Europe West	5%
Trace Regions	7%
Europe East	4%
Finland/Northwest Russia	2%
Italy/Greece	< 1%
Show all regions	

Asia	< 1%
Trace Regions	< 1%
Europe	**99%**
Great Britain	42%
Ireland	33%
Europe West	16%
Scandinavia	7%
Trace Regions	1%
Finnish/Northern Russia	1%
Show all regions	

Europe	100%
Great Britain	67%
Ireland	22%
Scandinavia	10%
Trace Regions	1%
Finnish/Northern Russia	< 1%
Europe West	< 1%
Show all regions	

My mother and my children

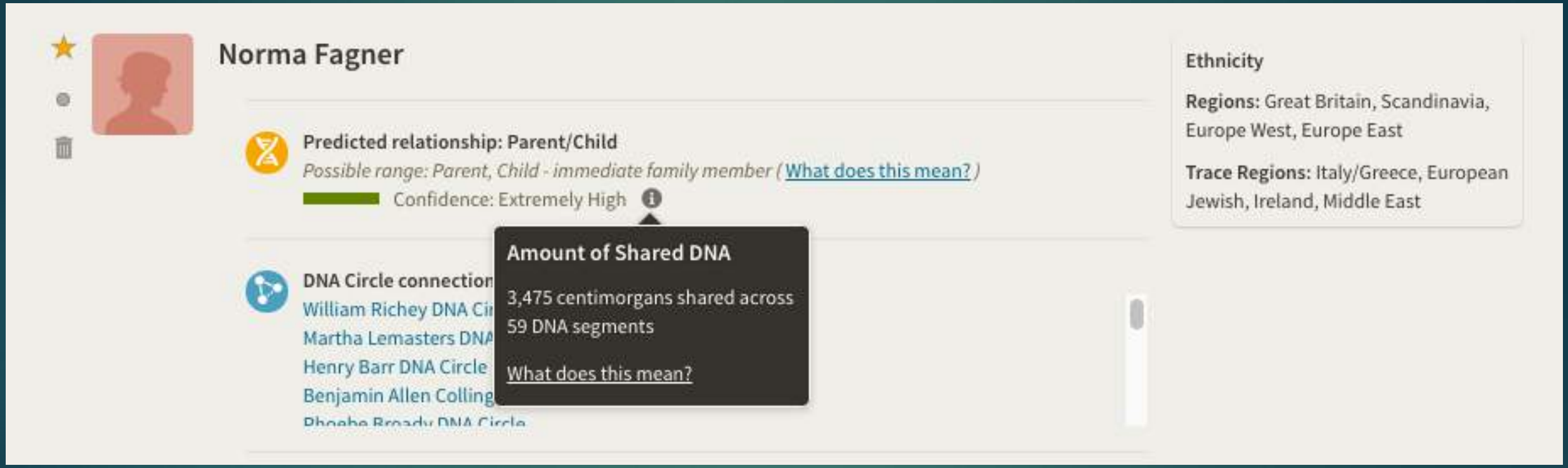


Centimorgans

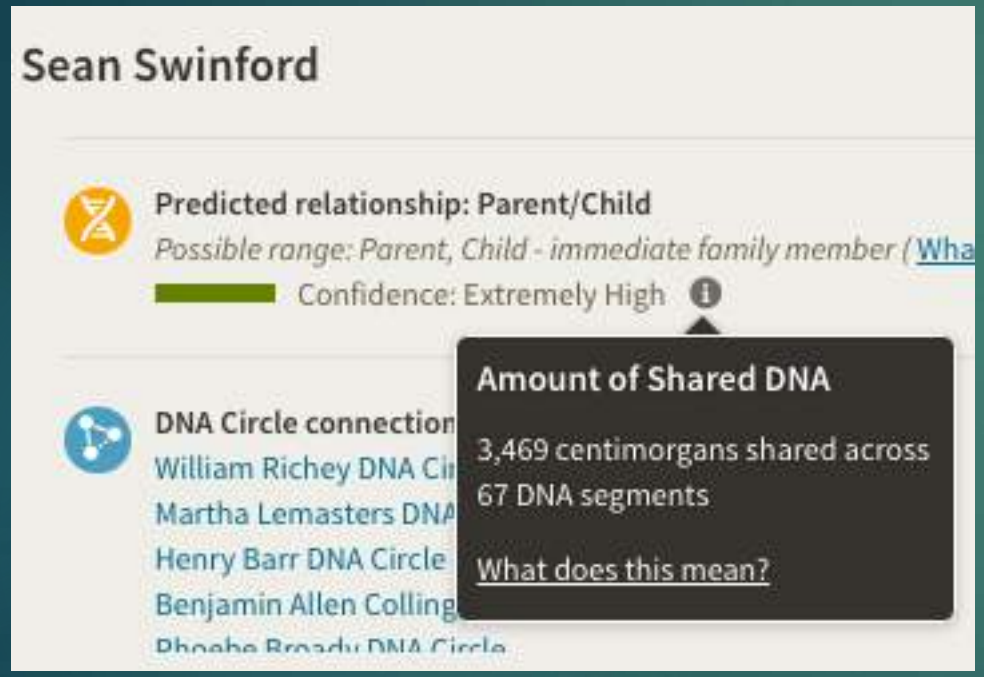
- Identical twin - 6800cM (all chromosomes are identical)
- Parents - 3400cM (50% of the chromosomes are a match)
- Full siblings - 2500cM (37.5% match)
- Grandparents and aunts/uncles - 1700cM (25% match)
- Great-grandparents and first cousins - 850cM (12.5% match)
- Second cousins and first cousins twice removed - 212.5cM (3.125% match)

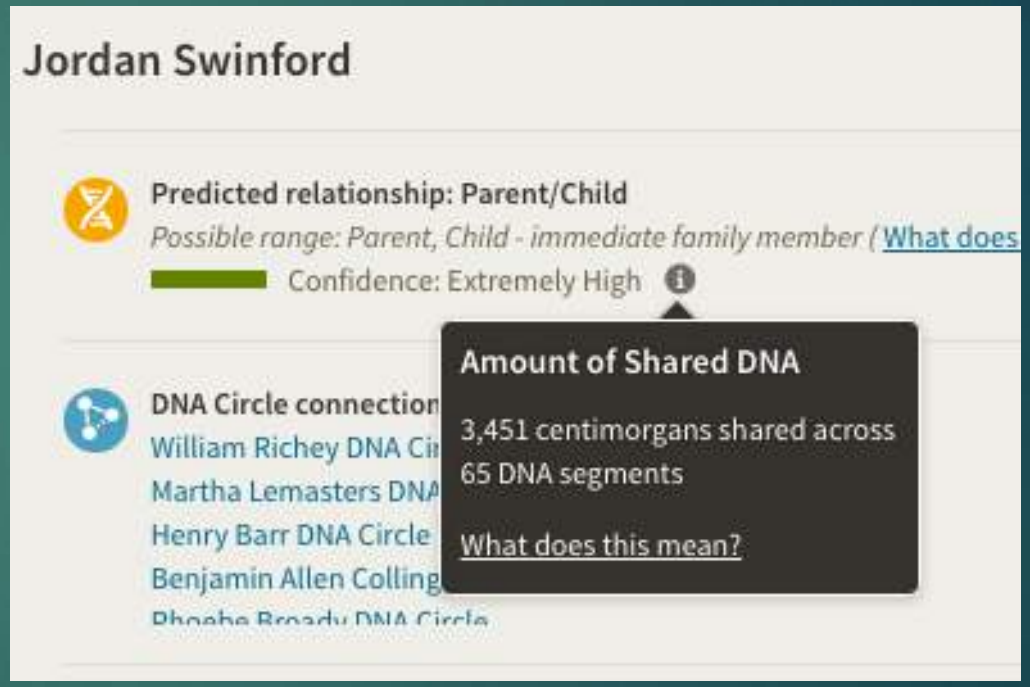
For more technical stuff:
https://isogg.org/wiki/CentiMorgan

My Mother (share with me)

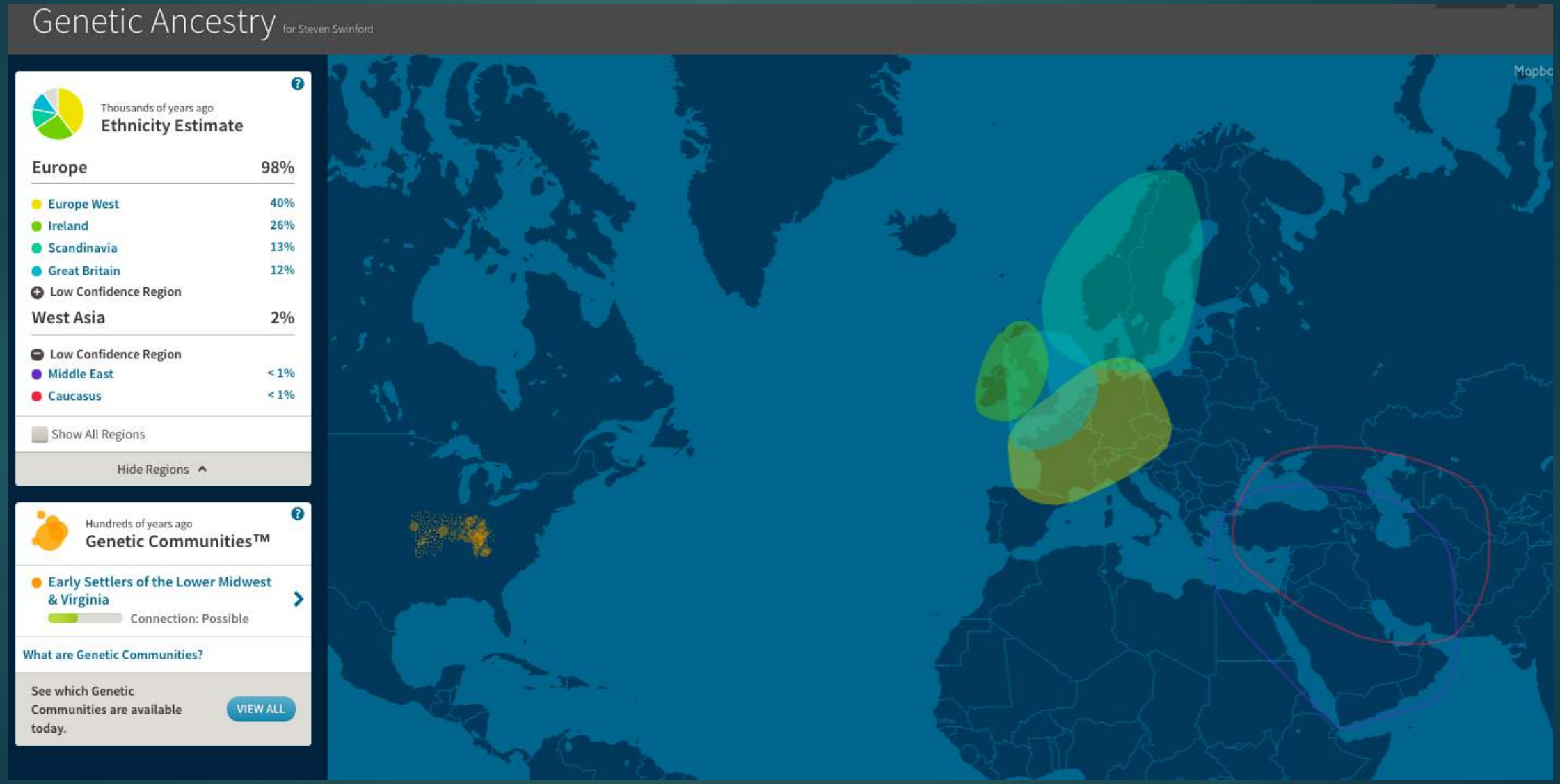


My children (share with me)





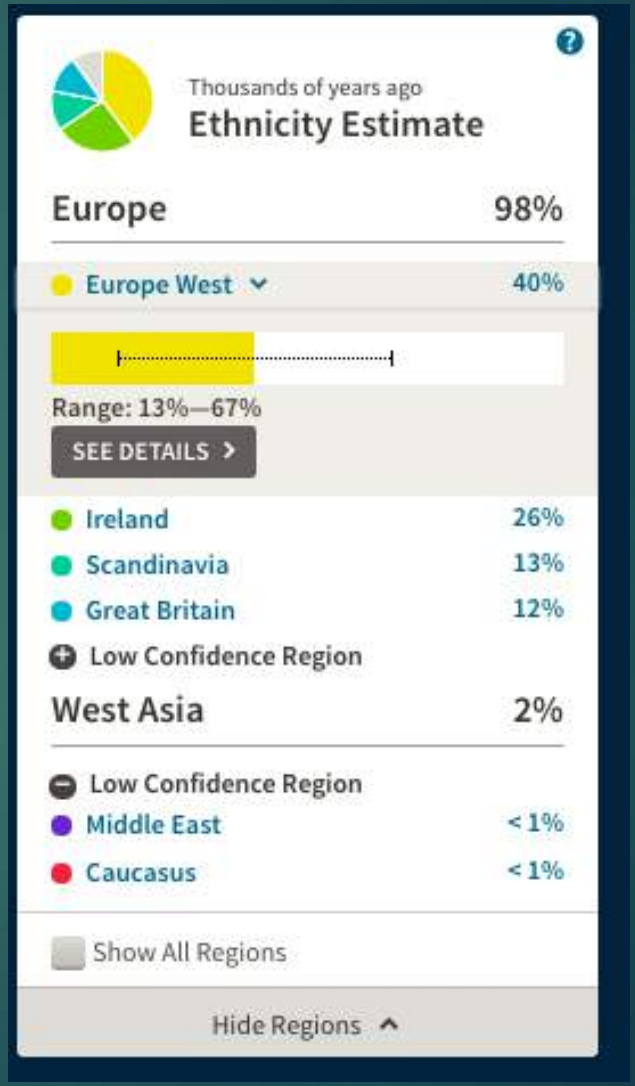
Ethnictiy


Genetic Ancestry for Steven Swinford
Thousands of years ago
Ethnicity Estimate
Europe 98%
Europe West 40%
Ireland 26%
Scandinavia 13%
Great Britain 12%
Low Confidence Region
West Asia 2%
Low Confidence Region
Middle East < 1%
Caucasus < 1%
Show All Regions
Hide Regions
Hundreds of years ago
Genetic Communities™
Early Settlers of the Lower Midwest & Virginia
Connection: Possible
What are Genetic Communities?
See which Genetic Communities are available today.
VIEW ALL

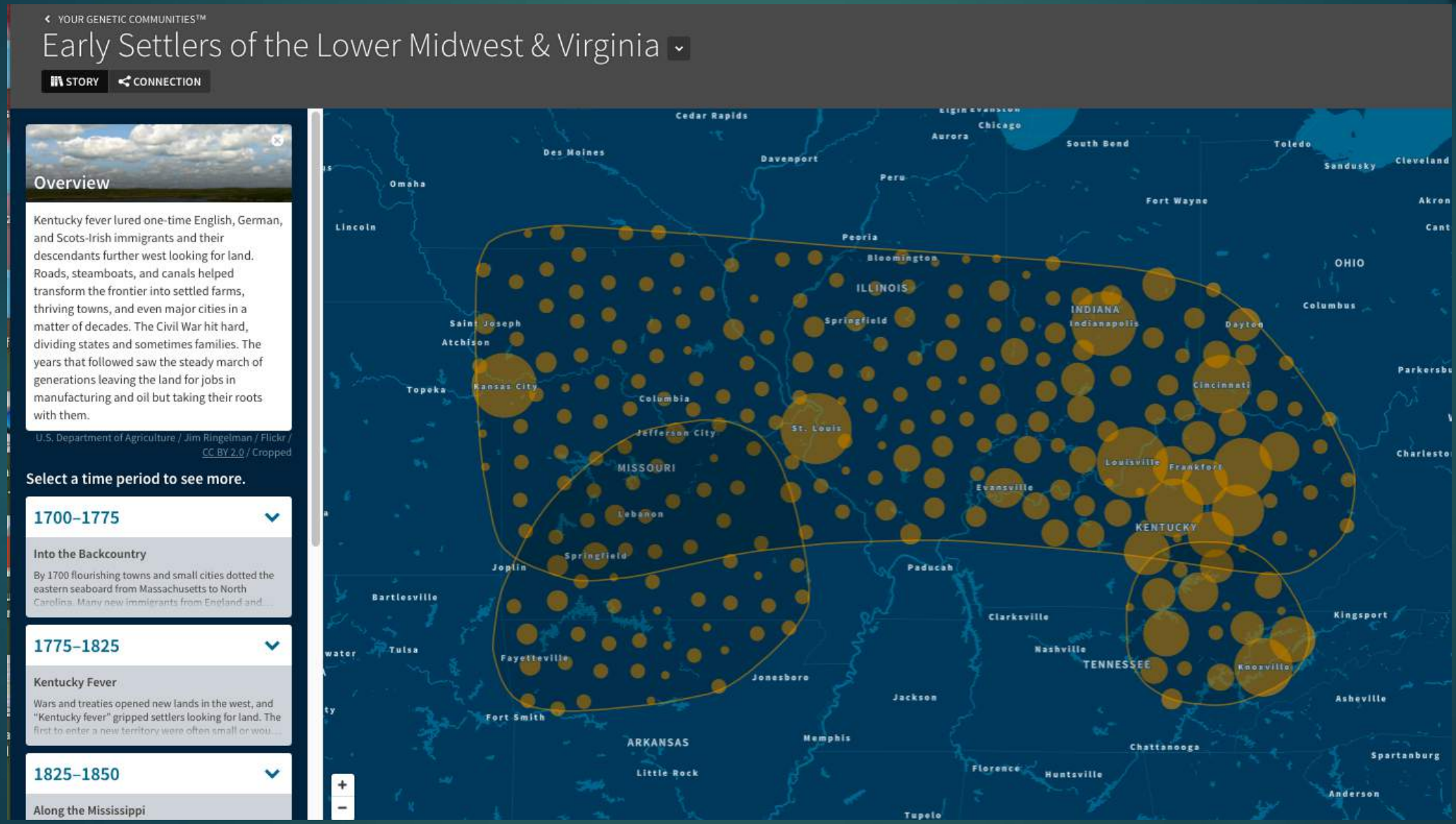
Ethnic Background

You see ranges…click "see details" to see profile of area

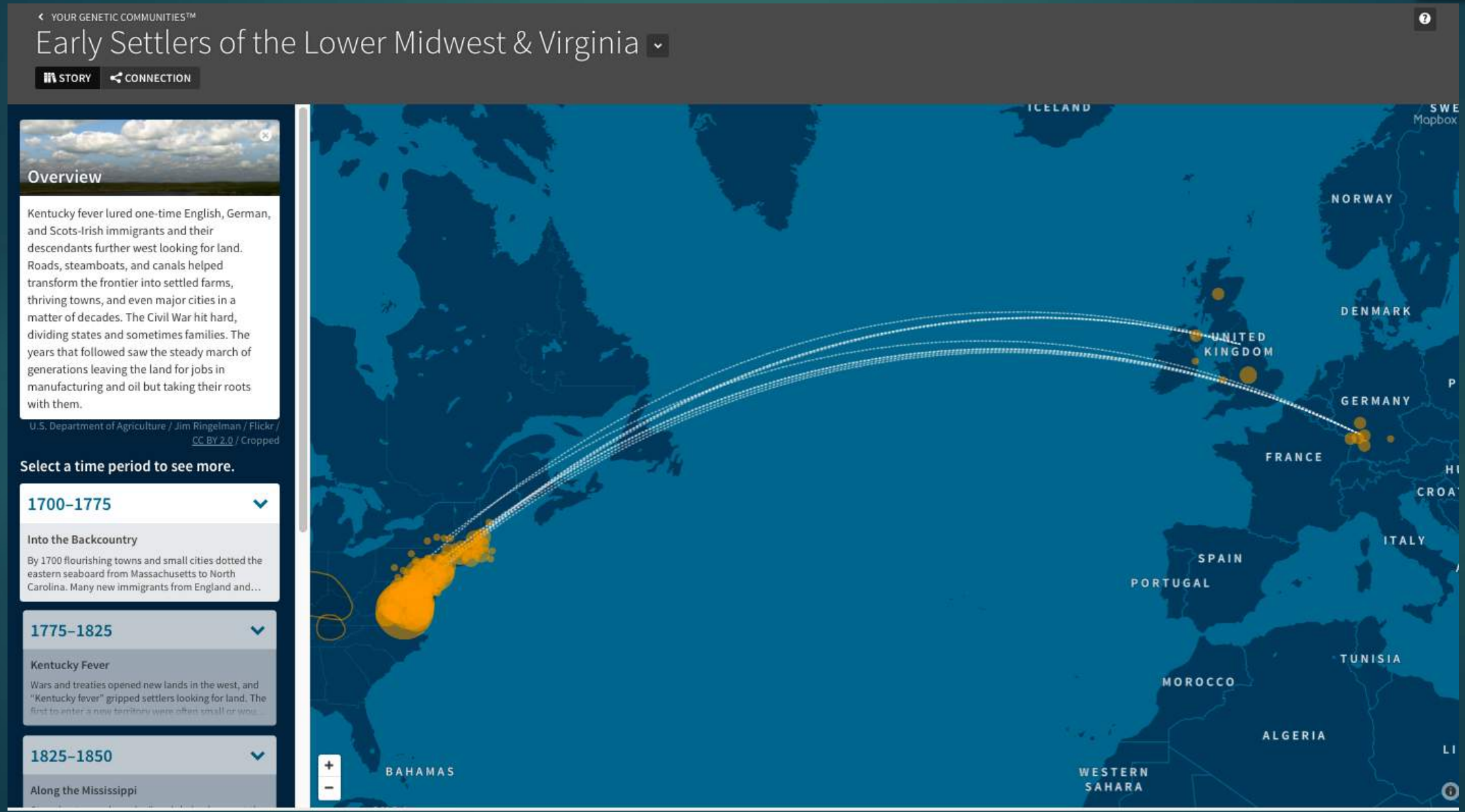
Based on similarities with long-time residents of an area.



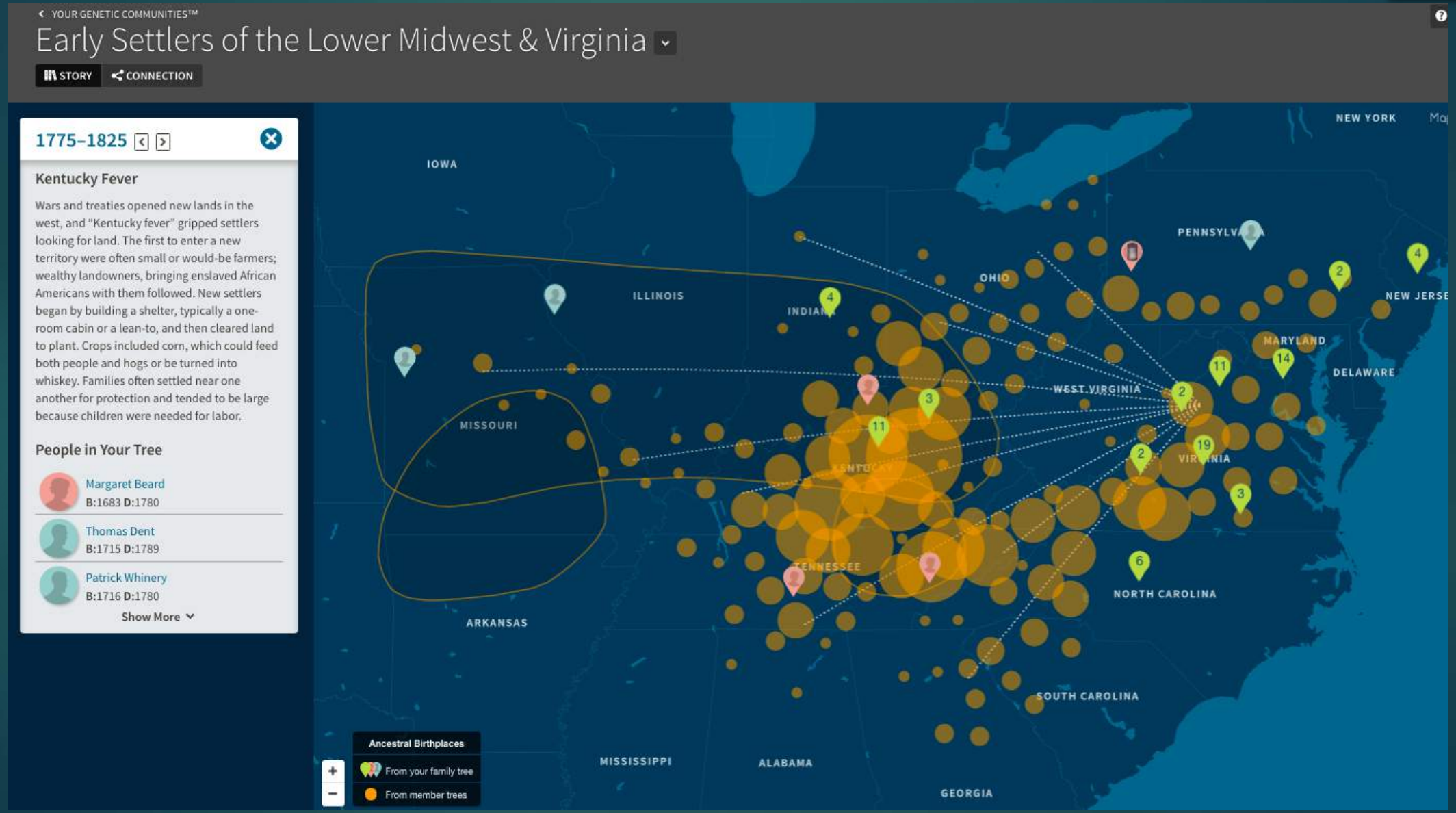
New DNA feature on Ancestry



Hover over date range…



Click on date range



DNA Circles

DNA Circles BETA

21 DNA CIRCLES

These are people who **are** already in your family tree (Swinford/Fagner/Genovese/Fenn Family Tree)

William Richey DNA Circle
4th Great-Grandfather
(1810-1874)
35 MEMBERS

Benjamin Allen Collings DNA Circle
5th Great-Grandfather
(1792-1862)
29 MEMBERS

Phoebe Broady DNA Circle
5th Great-Grandmother
(1794-1874)
29 MEMBERS

Benjamin Franklin Richey DNA Circle
3rd Great-Grandfather
(1839-1896)
10 MEMBERS

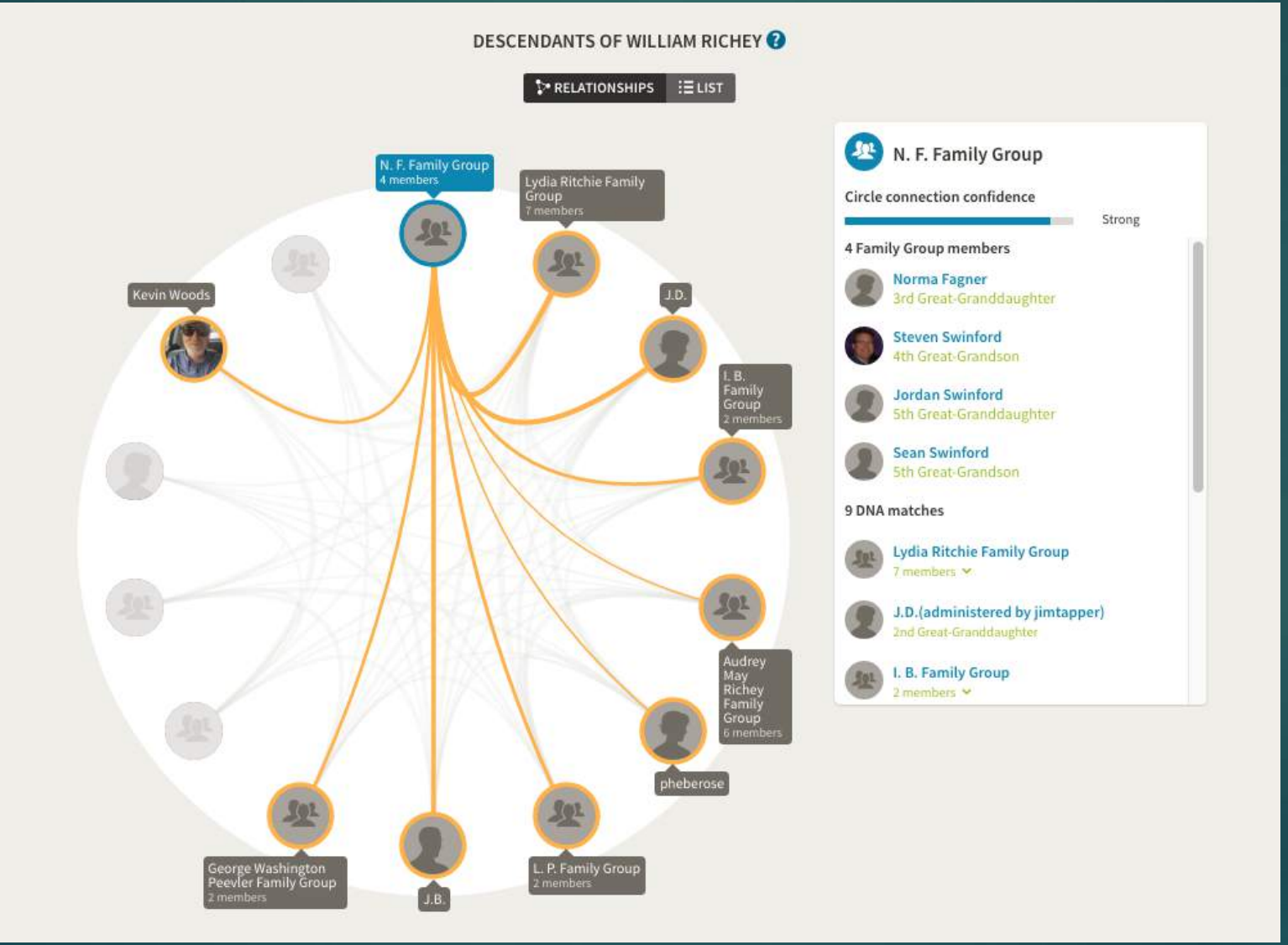
Abraham Richey DNA Circle
5th Great-Grandfather
(1784-1846)
20 MEMBERS

Martha Lemasters DNA Circle
5th Great-Grandmother
(1795-1877)
30 MEMBERS

Henry Barr DNA Circle
5th Great-Grandfather
(1792-1876)
25 MEMBERS

Jonathan Nixon DNA Circle
5th Great-Grandfather
(1753-1799)
25 MEMBERS

Specific DNA circle



Bottom of DNA page…

NEW ANCESTOR DISCOVERIES BETA

These are potential new ancestors or relatives who **are not** already in your family tree (Swinford/Fagner/Genovese/Fenn Family Tree)

Melissa Jane Bigler
(1825-1899)

Thomas Day
(1814-1893)

Charlotte Ann Clark
(1837-1887)

Samuel Martin Smith
(1827-1886)

Sena Minerva Lee
(1834-1909)

Sarah M Postlethwaite
(1843-1918)

GED match

Gedmatch.com

Create account – upload your DNA file

(instructions on both websites - zipfile)

You will be assigned a Kit Number for each DNA sample you upload

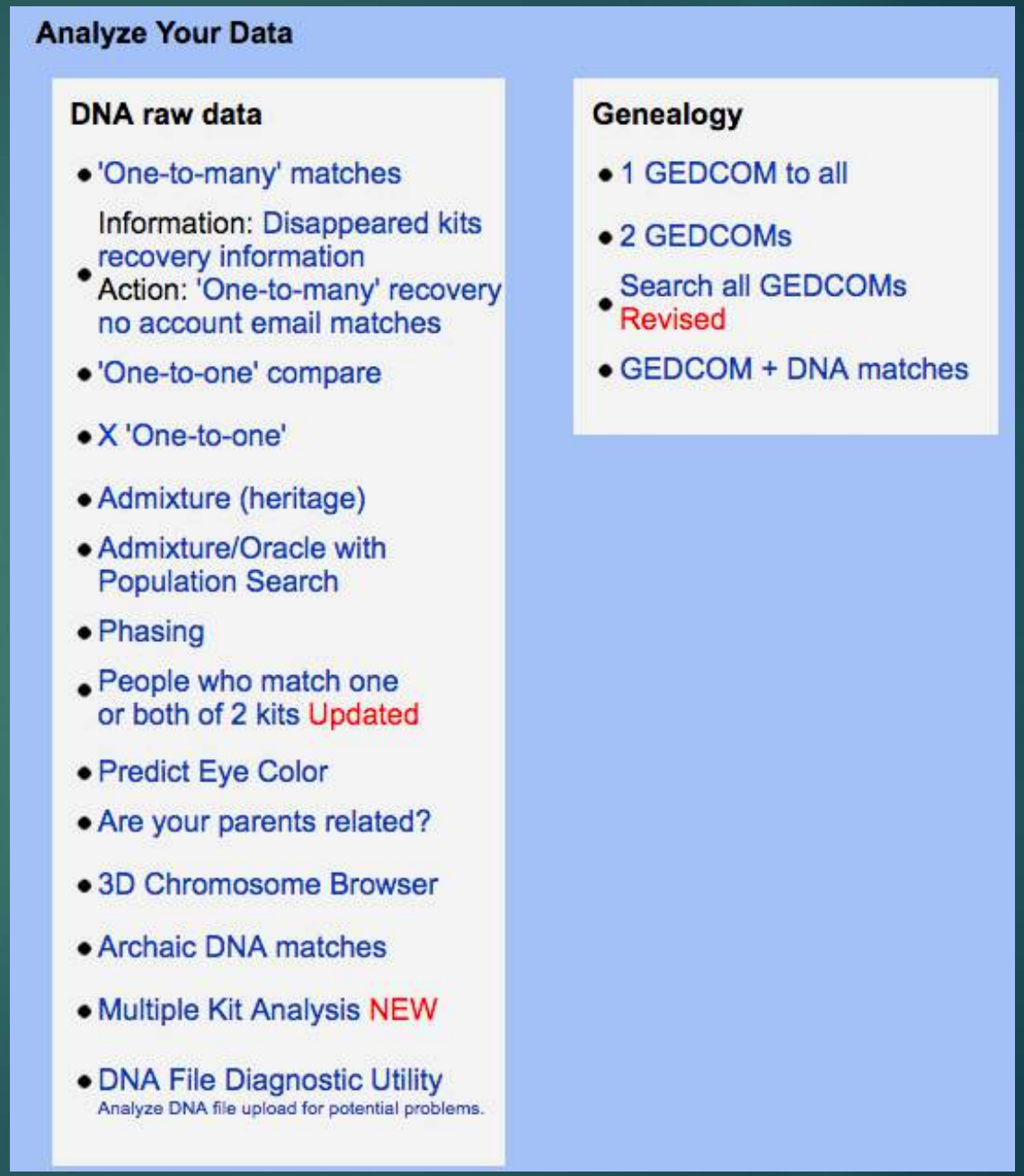
GED match

Allows you to compare DNA across platforms and vendors.

Levels of analysis not available elsewhere

Some of the things you can do

…Eye color

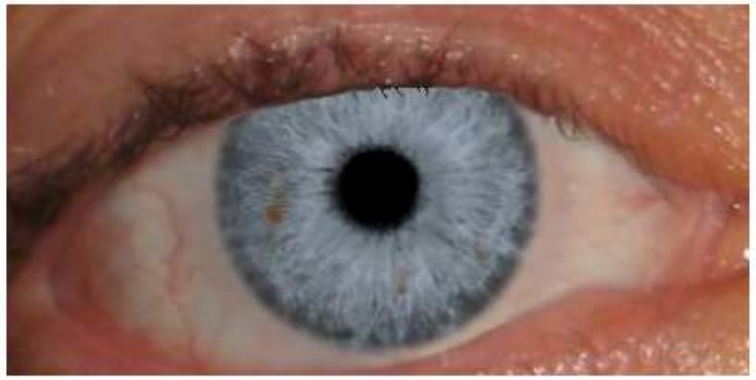


My eye color results

Predicted Eye Color for Kit A657223 (F2)

/opt/gedmatch/databases/kits/V0A657223.bin Resource id #5
1323980
Read rules from top to bottom. In some cases, a rule cancels out results from rules above it.

CT at: rs17762363 - Increased melanin production. Adds yellow, amber, or brown. Some darkening. Contributes to brown.
CC at: rs1847134 - Deep Brown
CC at: rs3794604 - Blocks some melanin. Often gives light colored eyes.
GG at: rs7174027 - Blocks some melanin. Often gives light colored eyes.
CC at: rs4778241 - Low Melanin. Basis for Gray, Blue, Green, or Yellow Eyes if no other pigmentation is present.
CC at: rs9782955 - Blocks some melanin. Often gives light colored eyes.
TT at: rs1129038 - Penetrance modifier. Blue.
GG at: rs12906280 - Gray ring around outer edge
TT at: rs1667394 - Starburst (Collarette)
CC at: rs12203592 - No pigmented Collarette.
AG at: rs11634406 - Flecks (Nevi).



11 rules were used to make this prediction. There are 61 active rules in our evaluation model, utilizing 41 SNPs

One-to-many analysis

This is the one that ranks by cM overlap

					Haplogroup		Autosomal			
Kit Nbr	Type	List	Select	Sex	Mt	Y	Details	Total cM	largest cM	Gen
A130821	F2	L	☐	M			A	3586.9	281.5	1.0
A497367	F2	L	☐	F			A	3586.9	281.5	1.0
A489754	F2	L	☐	F			A	3586.9	281.5	1.0
M793434	V4	L	☐	F	U4b1a3		A	68.7	44.0	3.9
A849943	F2	L	☐	F			A	57.1	35.1	4.0
M210747	V3	L	☐	F	V		A	55.4	47.2	4.0
M124523	V3	L	☐	F			A	55	47.4	4.0
A389329	F2	L	☐	M			A	53.6	31.4	4.0
A626020	F2	L	☐	F	J1c2b		A	50.5	26.9	4.1
A349803	F2	L	☐	M			A	49.6	49.6	4.1
A214725	F2	L	☐	F			A	46.7	24.1	4.1
A478983	F2	L	☐	M			A	44.8	22.2	4.2
A634364	F2	L	☐	U			A	43.8	43.8	4.2
A568353	F2	L	☐	F			A	43.5	32.0	4.2
A019932	F2	L	☐	F			A	42.7	21.2	4.2
T778526	F2	L	☐	M		R1b1a2	A	41.1	41.1	4.2
A777659	F2	L	☐	F			A	40.8	34.0	4.2
M936616	V3	L	☐	F	K2a		A	39.1	33.9	4.3
M527349	V4	L	☐	F	K1c1		A	38.4	38.4	4.3
A071910	F2	L	☐	M			A	37.7	16.3	4.3

One-to-one

Will show where two people overlap with one another

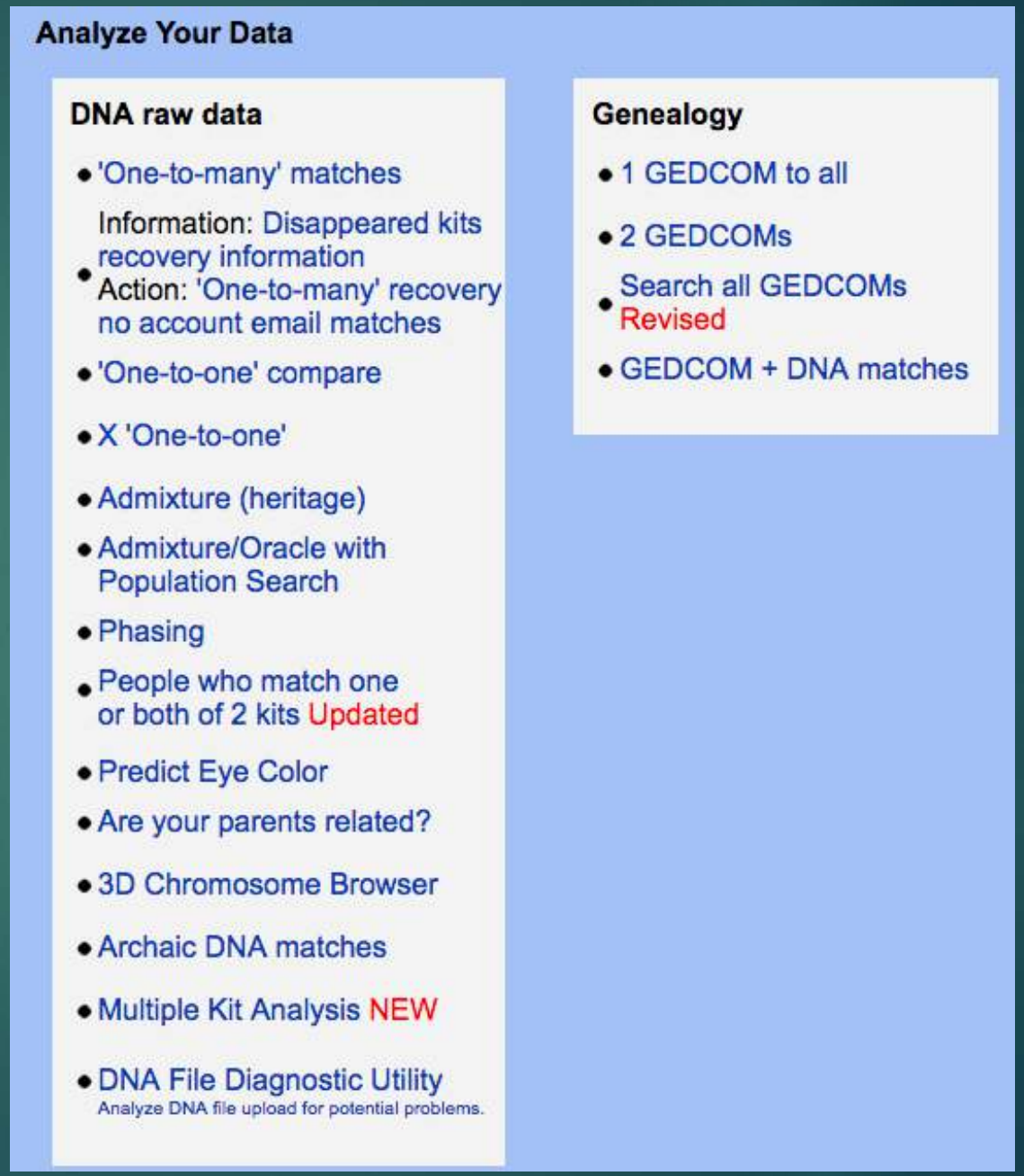
Left – Father/son

Right – Grandmother/ granddaughter

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
1	742,584	247,146,479	281.5	32,118
2	17,572	242,656,041	263.7	32,084
3	36,495	199,302,161	224.2	26,729
4	61,566	191,109,772	214.4	23,752
5	91,139	180,615,468	209.3	24,748
6	148,878	170,693,361	194.1	25,495
7	140,018	158,737,504	187.0	21,824
8	154,984	146,241,933	169.2	21,834
9	36,587	140,128,836	167.2	19,563
10	103,934	135,218,153	174.1	21,935
11	192,856	134,396,557	161.1	19,844
12	61,880	132,218,802	175.9	20,117
13	18,073,279	114,082,644	131.9	15,198
14	18,397,823	106,215,123	125.0	13,377
15	18,331,687	100,198,883	132.4	12,774
16	41,263	88,668,856	133.8	13,654
17	13,546	78,599,676	137.3	11,868
18	102,535	76,092,518	129.5	12,691
19	211,912	63,776,118	111.1	8,252
20	11,799	62,364,868	114.7	11,287
21	13,591,802	46,897,344	70.1	6,266
22	15,437,138	49,524,956	79.1	6,158

Chr	Start Location	End Location	Centimorgans (cM)	SNPs
1	10,946,982	67,035,336	76.3	9,026
1	213,911,770	247,164,683	55.3	6,123
2	17,572	8,484,336	18.9	1,941
2	208,372,497	242,656,041	56.1	6,075
3	36,495	161,894,869	168.1	23,637
4	61,566	191,140,682	214.5	26,000
5	16,679,717	180,615,468	171.5	23,423
6	7,883,772	170,720,718	172.6	26,070
7	140,018	25,641,056	40.3	5,485
7	134,573,946	158,737,504	46.4	4,288
8	16,176,725	146,241,933	139.5	19,105
9	4,020,806	133,158,997	135.8	18,335
10	103,934	63,369,901	78.5	10,970
10	129,256,548	135,218,153	16.4	1,581
11	189,256	20,118,489	37.2	4,396
11	82,856,844	134,410,875	67.2	9,332
12	61,880	27,539,678	52.5	5,881
12	27,557,525	132,218,802	123.5	16,434
13	97,642,475	114,082,644	38.6	3,875
14	18,397,823	106,305,044	125.2	14,645
15	18,331,687	100,206,215	132.4	14,072
16	37,354	9,210,189	23.9	2,736
16	45,446,855	88,668,856	74.1	8,919
17	13,546	12,786,712	37.2	3,112
17	20,049,781	51,522,852	32.1	4,238
17	51,530,416	66,998,493	20.9	2,264
18	71,631,024	76,098,043	11.6	976
19	211,912	5,942,710	18.1	1,239
19	5,955,105	16,439,881	21.6	1,839
20	11,799	6,355,642	20.2	1,849
21	19,061,876	46,899,964	55.0	5,759
22	14,884,399	49,524,956	79.1	6,976

Conclusion


Analyze Your Data
DNA raw data
'One-to-many' matches
Information: Disappeared kits recovery information
Action: 'One-to-many' recovery no account email matches
'One-to-one' compare
X 'One-to-one'
Admixture (heritage)
Admixture/Oracle with Population Search
Phasing
People who match one or both of 2 kits Updated
Predict Eye Color
Are your parents related?
3D Chromosome Browser
Archaic DNA matches
Multiple Kit Analysis NEW
DNA File Diagnostic Utility
Analyze DNA file upload for potential problems.
Genealogy
1 GEDCOM to all
2 GEDCOMs
Search all GEDCOMs Revised
GEDCOM + DNA matches