

Rayburn DNA Project Genetic Distance Analysis at 12 Alleles on 15 March 2009

	48244	44852	35306	31798	27904	35307	92364	102642	123203	89991	123425	12744	N22625	32963	N28261	30949	Rathbone-2	80580	80582	97122	64587	55635	51571	64834	64837	1E+05	35196	36595	1E+05
48244		0	0	0	0	0	0	0	0	1	1	1	1	1	4	3	3	3	3	3	4	4	4	4	4	6	3	3	4
44852	0		0	0	0	0	0	0	0	1	1	1	1	1	4	3	3	3	3	3	4	4	4	4	4	6	3	3	4
35306	0	0		0	0	0	0	0	0	1	1	1	1	1	4	3	3	3	3	3	4	4	4	4	4	6	3	3	4
31798	0	0	0		0	0	0	0	0	1	1	1	1	1	4	3	3	3	3	3	4	4	4	4	4	6	3	3	4
27904	0	0	0	0		0	0	0	0	1	1	1	1	1	4	4	4	4	4	4	3	4	4	4	4	6	3	3	4
35307	0	0	0	0	0		0	0	0	1	1	1	1	1	4	3	3	3	3	3	4	4	4	4	4	6	3	3	4
92364	0	0	0	0	0	0		0	0	1	1	1	1	1	4	3	3	3	3	3	4	4	4	4	4	6	3	3	4
102642	0	0	0	0	0	0	0		0	1	1	1	1	1	4	3	3	3	3	3	4	4	4	4	4	6	3	3	4
123203	0	0	0	0	0	0	0	0		1	1	1	1	1	4	3	3	3	3	3	4	4	4	4	4	6	3	3	4
89991	1	1	1	1	1	1	1	1	1		1	2	2	2	5	4	4	4	4	4	5	5	5	5	5	7	4	4	5
123425	1	1	1	1	1	1	1	1	1	1		2	2	2	5	4	4	4	4	4	5	5	5	5	5	7	4	4	5
12744	1	1	1	1	1	1	1	1	1	2	2		2	2	5	4	4	4	4	4	5	5	5	5	5	7	4	4	5
N22625	1	1	1	1	1	1	1	1	1	2	2	2		2	3	2	2	2	2	2	3	3	3	3	3	5	2	2	3
32963	1	1	1	1	1	1	1	1	1	2	2	2	2		5	4	4	4	4	4	5	5	5	5	5	7	4	4	5
N28261	4	4	4	4	4	4	4	4	4	5	5	5	3	5		3	3	3	3	3	4	4	4	4	4	6	3	3	4
30949	3	3	3	3	3	3	3	3	3	4	4	4	2	4	3		0	0	0	0	1	1	1	1	1	3	4	4	3
Rathbone-2	3	3	3	3	3	3	3	3	3	4	4	4	2	4	3	0		0	0	0	1	1	1	1	1	3	4	4	3
80580	3	3	3	3	3	3	3	3	3	4	4	4	2	4	3	0	0		0	0	1	1	1	1	1	3	4	4	3
80582	3	3	3	3	3	3	3	3	3	4	4	4	2	4	3	0	0	0		0	1	1	1	1	1	3	4	4	3
97122	3	3	3	3	3	3	3	3	3	4	4	4	2	4	3	0	0	0	0		1	1	1	1	1	3	4	4	3
64587	4	4	4	4	4	4	4	4	4	5	5	5	3	5	4	1	1	1	1	1		0	0	2	2	2	5	5	4
55635	4	4	4	4	4	4	4	4	4	5	5	5	3	5	4	1	1	1	1	1	0		0	2	2	2	5	5	4
51571	4	4	4	4	4	4	4	4	4	5	5	5	3	5	4	1	1	1	1	1	0	0		2	2	2	5	5	4
64834	4	4	4	4	4	4	4	4	4	5	5	5	3	5	4	1	1	1	1	1	2	2	2		0	4	5	5	4
64837	4	4	4	4	4	4	4	4	4	5	5	5	3	5	4	1	1	1	1	1	2	2	2	0		4	5	5	4
108277	6	6	6	6	6	6	6	6	6	7	7	7	5	7	6	3	3	3	3	3	2	2	2	4	4		7	7	5
35196	3	3	3	3	3	3	3	3	3	4	4	4	2	4	3	4	4	4	4	4	5	5	5	5	5	7		0	1
36595	3	3	3	3	3	3	3	3	3	4	4	4	2	4	3	4	4	4	4	4	5	5	5	5	5	7	0		1
128659	4	4	4	4	4	4	4	4	4	5	5	5	3	5	4	3	3	3	3	3	4	4	4	4	4	1	1		

Genetic distance is FTDNA's method used to most accurately describe the relationship between 2 people.

The matrix above compares each participant with every other participant in the project.

The common rule for the 12 allele test is that you cannot prove that two people are related, but you can prove that they are not.

FTDNA strongly believes that a pair with a Genetic Distance of 3 or more at 12 alleles are not related.

With the results back from the first 27 participants, we can see a separation into at least 3 and probably 4 families. We measure the Genetic Distance between each individual and every other individual in the project. If we use the FTDNA "rules" about Genetic Distance (http://www.ftdna.com/gdrules_12.html), we can separate the participants into family groups.

I have identified the "yellow" group above as family group #1. They are closely defined with a maximum genetic distance of 2. Each and every individual in this group lives in the southern United States and several of them claim descent from Richard Raibone (d. abt 1732) of Varina, Henrico Co, Virginia. Many are also identified with the Rabons of Horry Co, SC

I have identified the "Blue" group as family group #3. This group is also a separate and distinct group that has a maximum genetic distance from each other of 2. It is very distinct (higher Genetic Distance) from the other family groups. Most of the participants in this group are known to be descendants of William Rabun of Montgomery Co, Kentucky (c1725-1793).

The "green" group is also very tightly related. I have designated them as Family Group #4. They are probably descended from the same person and the immigrants that came to America stayed in the same area of SouthWestern Virginia.

The final "group" is N28261. With only 12 alleles, it is impossible to place this participant with any of the established family groups. Additional testing might prove a relationship with one of the established groups or the establishment of a new Rayburn Family Group.

There are several kits (N22625, 30949, 80850, 80582, 35196 and 36595) that show a Genetic Distance from each other of 2 even though they are members of "other" family groups. This close Genetic Distance disappeared with additional testing.

DNA analysis is not full of hard and fast rules. We think in terms of probability not absolute fact. use terms like "more likely" and "less likely" to describe our findings.

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If you have any comments, questions or suggestions, please feel free to contact me.

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