Brooks Families of New England Y-DNA Project

January 11, 2012

TMG ID [NP]	Pass (NP)	Name	Kit #	ySearch ID	Descendant of …	through his son …	Haplogroup (Predicted / Confirmed)	Branching SNP ("shorthand")
51037	Z6058	**MOB**	42857	DDQC9	Henry/1 (Woburn)	John/2	R1b1a2a1a1a4	R-L48
35664	X8387	**HLB**	90157	YC8FN		John/2	R1b1a2a1a1a4	R-L48
34027	L6250	**LEB**	81368	222C3		John/2	R1b1a2a1a1a4	R-L48
67788	V9784	**MDB**	100257	4T8KB		John/2	R1b1a 2a1a1a4	R-L48
75849	ADB74F	**RiWB**	195298	B9S3V		John/2	R1b1a2a1a1a4	R-L48
68378	V5553	**WHB**	95962	UBN2S		Timo/2	R1b1a2a1a1a4	R-L48
75861	B52448	**RoWB**	196467			Timo/2	R1b1a2a1a1a4	R-L48
						Woburn line modal		
4102	C6934	**CMB**	51227	DN5BN	Thomas/1 Concord	Joshua/2	R1b1a2a1a1a4	R-L48
1	A9563	**CHB**	57184	PXGCB		Joshua/2	R1b1a2a1a1a4	R-L48
51677		**JDB**	76692	XZWSK		Joshua/2	R1b1a2a1a1a4	R-L48
75853	83090B	**JMB**	195277	QFP2E		Joshua/2	R1b1a2a1a1a4	R-L48
28122		**WAB**	88124	2VU22		Caleb/2	R1b1a2a1a1a4	R-L48
						Concord line modal		
60532	K7798	**PCB**	86694	EWW99	William/1 (Springfield)	Benj/2	R1b1a2	R-M269
65967	A9563	**RLB**	91726	8ZG4N		Benj/2	R1b1a2	R-M269
75847	819AC8	**EAB**	196565		Unknown	Unkn.	R1b1a2	R-M269
						Springfield line modal		
37694	6A96E3	**WBB**	196525		Henry/1 Cheshire	Thomas/2	R1b1a2a1a1a	R-U106
75867	222A8C	**LEB**	196557			Thomas/2	R1b1a2a1a1a	R-U106
						Cheshire line modal		
77569	15153D	**CHJB**	208878		John/1 (Kittery)	William/2	R1b1a2a1a	R-L51
						Kittery Line modal		

OUTLIERS

TMG ID [NP]	Pass (NP)	Name	Kit #	ySearch ID	Descendant of …	through his son …	Haplogroup	Branching SNP
73686		**ERH**	19472	ER659	Surname Holland		R1b1a 2a1a1a4	R-L48
73685	F3878	**BGB**	44638	QMJ6M	Unknown		R1b1a2a1a1b5	R-P312

PRELIMINARY MODAL COMPARISON: Woburn, Concord, Springfield, Cheshire, Kittery (rows below)

MARKERS (y-chromosomal locations tested)

ALLELES (number of base pair repetitions found at each designated locus or marker)

Panel 1 (1-12) and Panel 2 (13-25)

Row	393	390	19 or 394	391	385a	385b	426	388	439	389-1	392	389-2	458	459a	459b	455	454	447	437	448	449	464a	464b	464c	464d
MOB	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15c	15c	17g	19c
HLB	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	16	17	19
LEB	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	16	17	19
MDB	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	16	17	19
RiWB	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	23	15	19	29	15	16	17	19
WHB	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	15	17	19
RoWB	13	24	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	16	17	19
Woburn line modal	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	16	17	19
CMB	13	23	14	11	11	14	12	12	12	13	13	29	15	9	9	11	11	24	15	19	29	15	16	17	19
CHB	14	23	14	11	11	14	12	12	12	13	13	30	15	9	10	11	11	24	15	19	29	15	16	17	19
JDB	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	30	15	16	17	19
JMB	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	16	17	19
WAB	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	16	17	19
Concord line modal	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	16	17	19
PCB	13	24	14	11	11	14	12	12	11	13	13	29	17	9	10	11	11	25	15	19	30	15c	17c	17c	17g
RLB	13	24	14	11	11	14	12	12	11	13	13	29	17	9	10	11	11	25	16	19	29	15	17	17	17
EAB	13	24	14	11	11	14	12	12	11	13	13	29	17	9	10	11	11	25	15	19	29	15	17	17	17
Springfield line modal	13	24	14	11	11	14	12	12	11	13	13	29	17	9	10	11	11	25	15	19	29	15	17	17	17
WBB	13	24	14	10	11	14	12	12	12	13	13	30	18	8	10	11	11	25	15	19	31	13	14	17	17
LEB (75867)	13	24	14	10	11	15	12	12	12	13	13	30	18	8	10	11	11	24	15	19	31	13	14	17	17
Cheshire line modal	13	24	14	10	11	??	12	12	12	13	13	30	18	8	10	11	11	??	15	19	31	13	14	17	17
CHJB	13	25	14	10	11	14	13	12	13	12	13	28	17	9	10	11	11	24	15	19	30	15	15	18	19
Kittery Line modal	13	25	14	10	11	14	13	12	13	12	13	28	17	9	10	11	11	24	15	19	30	15	15	18	19
ERH	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	16	17	19
BGB	13	24	14	11	11	14	12	12	12	13	13	29	17	9	10	11	11	25	15	19	29	15	17	17	17
Woburn	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	16	17	19
Concord	13	23	14	11	11	14	12	12	12	13	13	29	15	9	10	11	11	24	15	19	29	15	16	17	19
Springfield	13	24	14	11	11	14	12	12	11	13	13	29	17	9	10	11	11	25	15	19	29	15	17	17	17
Cheshire	13	24	14	10	11	??	12	12	12	13	13	30	18	8	10	11	11	??	15	19	31	13	14	17	17
Kittery	13	25	14	10	11	14	13	12	13	12	13	28	17	9	10	11	11	24	15	19	30	15	15	18	19

Panel 3 (26-37)

Row	460	GATA H4	YCA II a	YCA II b	456	607	576	570	CDY a	CDY b	442	438
MOB	11	11	19	23	15	15	17	17	38	38	12	12
HLB	11	11	19	23	16	15	17	17	38	38	12	12
LEB	11	11	19	23	15	15	17	17	37	38	12	12
MDB	11	11	19	23	15	15	17	17	38	38	12	12
RiWB	11	11	19	23	15	15	17	17	38	38	12	12
WHB	11	11	19	23	15	15	18	17	38	39	13	12
RoWB	11	11	19	23	15	15	17	17	37	38	12	12
Woburn line modal	11	11	19	23	15	15	17	17	38	38	12	12
CMB	11	11	19	23	15	15	17	17	37	38	12	12
CHB	11	11	19	23	15	15	17	17	38	38	12	12
JDB	11	11	19	23	15	15	17	17	38	38	12	12
JMB	11	11	19	23	15	15	17	17	38	38	12	12
WAB	11	11	19	23	15	15	17	17	38	39	12	12
Concord line modal	11	11	19	23	15	15	17	17	38	38	12	12
PCB	11	11	19	23	15	15	18	17	37	39	12	12
RLB	11	11	19	23	15	15	20	16	37	39	12	12
EAB	11	11	19	23	15	15	19	16	38	39	12	12
Springfield line modal	11	11	19	23	15	15	??	16	37	39	12	12
WBB	11	11	19	23	15	14	16	19	38	38	12	12
LEB (75867)	11	11	19	23	15	14	16	19	38	39	12	12
Cheshire line modal	11	11	19	23	15	14	16	19	38	??	12	12
CHJB	11	11	19	23	15	15	17	18	37	39	12	12
Kittery Line modal	11	11	19	23	15	15	17	18	37	39	12	12
ERH	17	11	19	23	15	15	17	17	38	38	12	12
BGB	11	11	19	23	15	15	19	16	39	40	12	12
Woburn	11	11	19	23	15	15	17	17	38	38	12	12
Concord	11	11	19	23	15	15	17	17	38	38	12	12
Springfield	11	11	19	23	15	15	??	16	37	39	12	12
Cheshire	11	11	19	23	15	14	16	19	38	39	12	12
Kittery	11	11	19	23	15	15	17	18	37	39	12	12

Panel 4 (38-47), Panel 4 (48-60), Panel 4 (61-67)

Row	531	578	395S1a	395S1b	590	537	641	472	406S1	511	425	413a	413b	557	594	436	490	534	450	444	481	520	446	617	568	487	572	640	492	565
MOB	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	12	12	16	8	11	22	20	14	12	11	13	11	11	14	12
HLB	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
LEB	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
MDB	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
RiWB	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
WHB	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
RoWB	10	9	15	16	8	10	10	8	10	10	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
Woburn line modal	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
CMB	11	9	15	16	8	10	10	8	10	11	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
CHB	11	9	15	16	9	10	10	8	10	10	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
JDB	11	9	15	16	8	10	10	8	10	10	12	23	23	17	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
JMB	11	9	15	16	9	10	10	8	10	10	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
WAB	11	9	15	16	8	10	10	8	10	10	12	23	23	17	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
Concord line modal	11	9	15	16	8	10	10	8	10	10	12	23	23	16?	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
PCB	11	9	15	16	8	10	10	8	10	10	12	20	23	16	10	12	12	16	8	11	22	21	13	12	11	13	11	11	12	12
RLB	11	9	15	16	8	10	10	8	10	10	12	20	23	16	10	12	12	16	8	11	22	21	13	12	11	13	11	11	12	12
EAB	11	9	15	16	8	10	10	8	10	10	12	20	23	16	10	12	12	17	8	11	22	21	13	12	11	13	11	11	12	12
Springfield line modal	11	9	15	16	8	10	10	8	10	10	12	20	23	16	10	12	12	16	8	11	22	21	13	12	11	13	11	11	12	12
WBB	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	13	12	15	8	13	24	20	14	12	11	13	12	11	13	12
LEB (75867)	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	13	12	15	8	13	24	20	14	12	11	13	12	11	13	12
Cheshire line modal	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	13	12	15	8	13	24	20	14	12	11	13	12	11	13	12
CHJB																														
Kittery Line modal																														
ERH	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
BGB	11	9	15	16	8	10	10	8	10	10	12	20	23	16	10	12	12	16	8	11	22	21	13	12	11	13	11	11	12	12
Woburn	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
Concord	11	9	15	16	8	10	10	8	10	10	12	23	23	16?	10	12	12	16	8	12	22	20	14	12	11	13	11	11	14	12
Springfield	11	9	15	16	8	10	10	8	10	10	12	20	23	16	10	12	12	16	8	11	22	21	13	12	11	13	11	11	12	12
Cheshire	11	9	15	16	8	10	10	8	10	10	12	23	23	16	10	13	12	15	8	13	24	20	14	12	11	13	12	11	13	12
Kittery																														

Additional Markers (67 - 111): Panel 5 (68-75), Panel 5 (76-85), Panel 5 (86-93), Panel 5 (94-102), Panel 5 (103-111)

Row	710	485	632	495	540	714	716	717	505	556	549	589	522	494	533	636	575	638	462	452	445	GATA A10	463	441	GATA1B07	525	712	593	650	532	715	504	513	561	552	726	635	587	643	497	510	434	461	435
MDB	37	15	9	15	12	26	26	19	12	11	13	12	10	9	12	12	10	11	11	31	12	14	24	14	10	10	20	15	19	13	23	14	12	15	24	12	22	18	11	15	17	9	12	11
WHB	38	15	9	15	12	26	26	19	12	11	12	12	10	9	12	12	10	11	11	30	12	13	25	14	10	10	20	15	19	13	23	14	12	15	24	12	22	18	11	15	17	9	12	11
Woburn line modal	??	15	9	15	12	26	26	19	12	11	??	12	10	9	12	12	10	11	11	??	12	??	??	14	10	10	20	15	19	13	23	14	12	15	24	12	22	18	11	15	17	9	12	11
JMB	37	15	9	15	12	26	26	19	12	11	12	12	10	9	11	12	10	11	11	30	12	14	24	14	10	10	20	15	19	13	23	14	12	15	24	12	22	18	11	15	17	9	12	11
Concord line modal	37	15	9	15	12	26	26	19	12	11	12	12	10	9	11	12	10	11	11	30	12	14	24	14	10	10	20	15	19	13	23	14	12	15	24	12	22	18	11	15	17	9	12	11
PCB	31	15	9	16	12	25	26	19	12	12	13	12	10	9	13	12	10	11	11	30	11	12	24	12	10	10	19	15	19	15	25	17	12	15	24	12	24	18	10	14	17	9	13	11
Springfield line modal	31	15	9	16	12	25	26	19	12	12	13	12	10	9	13	12	10	11	11	30	11	12	24	12	10	10	19	15	19	15	25	17	12	15	24	12	24	18	10	14	17	9	13	11
BGB	31	15	9	16	12	25	26	19	12	12	13	12	10	9	12	12	10	11	11	30	11	12	24	12	10	10	19	15	19	15	25	17	12	15	24	12	24	18	10	14	17	9	13	11
Woburn	??	15	9	15	12	26	26	19	12	11	??	12	10	9	12	12	10	11	11	??	12	??	??	14	10	10	20	15	19	13	23	14	12	15	24	12	22	18	11	15	17	9	12	11
Concord	37	15	9	15	12	26	26	19	12	11	12	12	10	9	11	12	10	11	11	30	12	14	24	14	10	10	20	15	19	13	23	14	12	15	24	12	22	18	11	15	17	9	12	11
Springfield	31	15	9	16	12	25	26	19	12	12	13	12	10	9	13	12	10	11	11	30	11	12	24	12	10	10	19	15	19	15	25	17	12	15	24	12	24	18	10	14	17	9	13	11

ADVANCED TESTS

DEEP CLADE (SNP)

Row	L1	L2	L4	L6	L20	L21	L44	L46	L47	L48	L51	L96	L144	L148	L159.2	L164	L165	L176.2	L188	L193	L196	L217	L226	L257	L325	M18	M37	M65	M73	M126	M153	M160	M173	M207	M222	M228.2	M269	M343	P25	P66	P89.2	P107	P310	P312	SRY2627	U106	U152	U198
MOB																										-	-	-	-	-	-	-	+	+	-		+	+	+	-					-			
LEB																			-							-	-	-	-	-	-	-	+	+	-		+	+	+	-		-			-	+	-	-
MDB										+									-																											+		
WHB							-	-	-	+				-		-			-							-	-	-	-	-	-	-	+	+	-		+	+	+	-		-			-	+	-	-
Woburn line modal							-	-	-	+				-		-			-							-	-	-	-	-	-	-	+	+	-		+	+	+	-		-			-	+	-	-
CHB						-	-		-	+				-		-			-	-																	+											
Concord line modal						-	-		-	+				-		-			-	-																	+											
PCB																			_																													
RLB	-	-	-	-		-	-		-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-														-			
LEB (75867)	-			-	-					-												-		-	-											-					-	-		-		+		-
Cheshire line modal	-			-	-					-												-		-	-											-					-	-		-		+		-
CHJB	-	-	-	-	-	-	-		-	-	+		-	-	-	-	-	-	-	-	-	-	-	-	-			-		-	-	-									-	-	-	-				
Kittery Line modal	-	-	-	-	-	-	-		-	-	+		-	-	-	-	-	-	-	-	-	-	-	-	-			-		-	-	-									-	-	-	-				
ERH																										-	-	-	-	-	-	-	+	+	-		+	+	+	-		-			-	+	-	-
BGB						-											-	+									-	-			-				-		+			-				+	-	-	-	
Woburn							-	-	-	+				-		-			-							-	-	-	-	-	-	-	+	+	-		+	+	+	-		-			-	+	-	-
Springfield	-	-	-	-		-	-		-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-														-			
Cheshire	-			-	-					-												-		-	-											-					-	-		-		+		-
Kittery	-	-	-	-	-	-	-		-	-	+		-	-	-	-	-	-	-	-	-	-	-	-	-			-		-	-	-									-	-	-	-				

Row	DYS 464X				DYS 725				DYS 385		DYF 397				DYF 401		DYF 408			
MOB	15c	15c	17g	19c	31	31	31	32												
LEB					31	31	31	32												
WHB					31	31	31	32			11	13	14	15	15	17	188	188	8	14
Woburn line modal	15c	15c	17g	19c	31	31	31	32			11	13	14	15	15	17	188	188	8	14
CMB									11	14	11	13	14	15	15	17	188	188	8	14
Concord line modal									11	14	11	13	14	15	15	17	188	188	8	14
PCB	15c	17c	17c	17g	31	31	31	32			11	14	15	15	15	17	188	188	9	9
Woburn	15c	15c	17g	19c	31	31	31	32												
Concord									11	14	11	13	14	15	15	17	188	188	8	14
Springfield	15c	17c	17c	17g	31	31	31	32			11	14	15	15	15	17	188	188	9	9

COLOR KEY

- 12 12 12 — Modals converge
- ?? — Awaiting modal determination
- 12 — Allele values differ by 1 step
- 12 — Allele values differ by >1
- 12 — RecLOH (suspected or proven), which occurs on the volatile …
- × — Palindromic region markers (chrome yellow label background)

ACRONYMS and DEFINITIONS

Marker	A specific DNA molecule location containing a **Short Tandem Repeat (STR)** segment, where a short DNA code repeats itself.
Allele	The number of times the DNA code repeats within a particular STR.
RecLOH	Recombinational loss of heterozygosity (recombinational mutation in a palindromic region)
Haplotype	A person's (or small group's) sequence of genetic markers. Each horizontal row of results above is a haplotype.
Haplogroup	A collection of closely related individual haplotypes. We're all in haplogroup R1b1a2.

A MODAL, as used above, contains the most prevalent value at each marker for a group. It theoretically represents the most recent common ancestor (MRCA)'s genetic profile. How do we know this? Well, the Y-chromosome is passed down from father to son unchanged, save for the occasional mutation. By definition, then, all mutations (variant alleles) which have passed down to a living descendant have occurred subsequent to the MRCA. Scientists work back up the tree and mutations to estimate the MRCA's haplotype. As we collect more samples, the pattern of mutations will show us how this Brooks population has evolved over the centuries.

For a gentle, easy-to-follow, wonderfully illustrated **introduction to DNA and Y-DNA testing**, see The Genographic Project's interactive tutorial at **http://tinyurl.com/px7xv**. Don't overlook the up/down arrows, which scroll down to reveal more text, the numbered buttons, which advance page by page through each section, or the two rows of menu tabs at the top. The Population Genetics page is particularly helpful in understanding mutation.

Dr. Thomas Krahn, founder of DNA Fingerprint, and now with FTDNA, visually explains **recLOH** at **http://tinyurl.com/2tosba**. RecLOH is probably what's going on in the cells above filled with a brick red background.