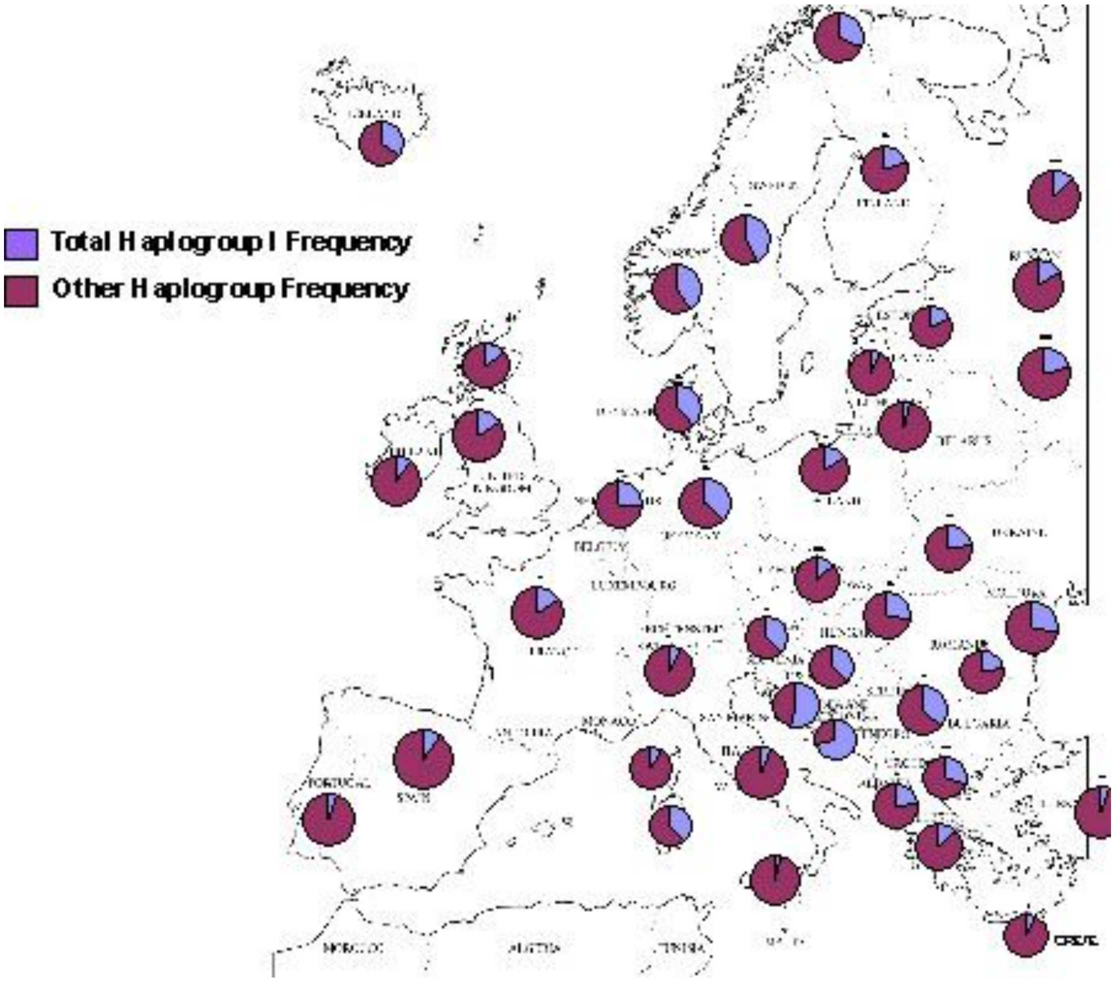
Deep Ancestry of the Morkels

André T. Morkel. July 2011, Revised April 2014

My y-DNA test show (1):

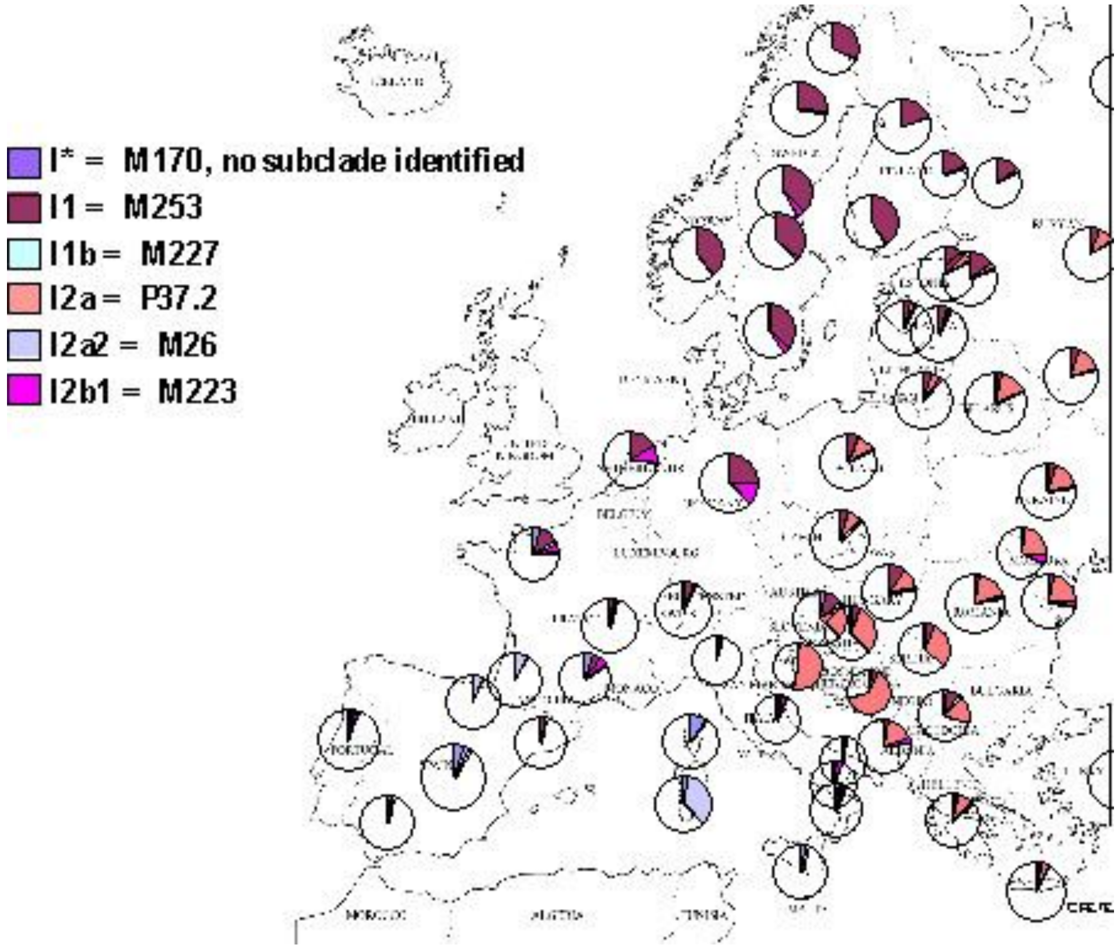
Paternal y-DNA: Haplogroup I Subclade I1 (M253+)

y-DNA Chromosones are handed down from father to son, and my haplogroup I would be common to the whole Morkel family. This haplogroup has been called "Europe's Native sons" (1), because it is not found outside Europe, except for recent (past 400 years) migrations to the colonies such as South Africa, Australia and the Americas. Further tests showed that I am subclade I1.

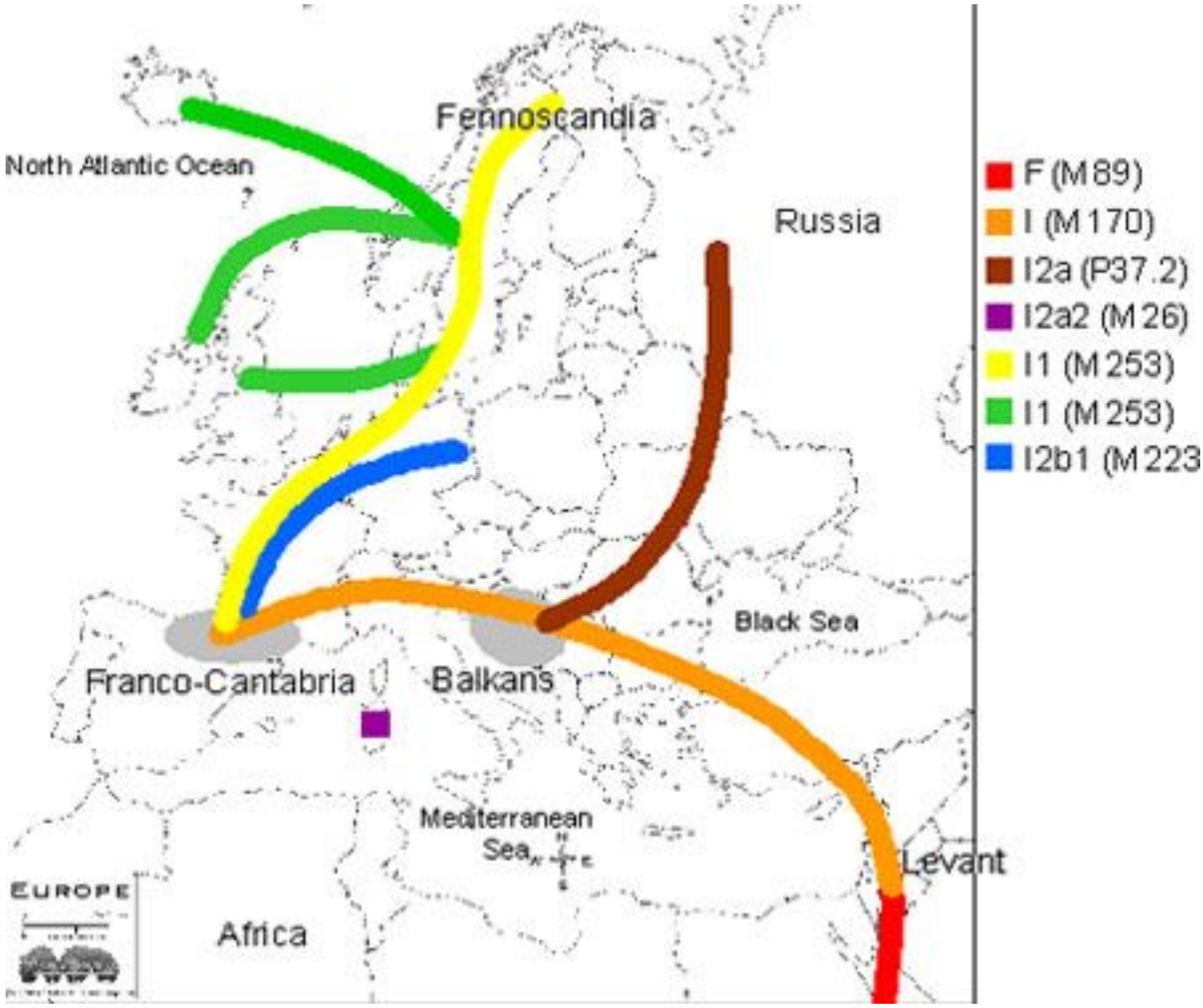


A map illustrating the phylogeography of Y-chromosome haplogroup I in Europe. The frequency of haplogroup I is shown as the blue portion of the pie charts distributed over different locations. (1)

There are two main concentrations of I – Scandinavia/Germany/Netherlands (Fennoscandia) for subclades I1 and I2b1, and Balkans (Bosnia and neighbouring countries) for sublade I2a. There is also a small pocket in Sardinia for subclade I2a2.



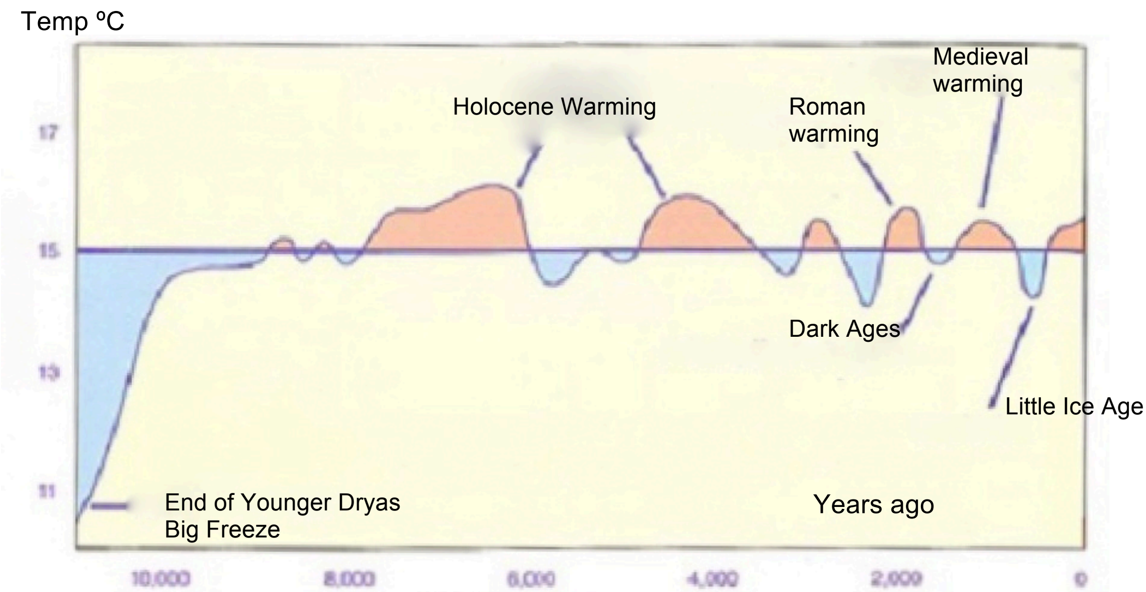
A map illustrating the phylogeography of the subclades of haplogroup I in Europe. The frequency of six different subclades is shown by color in the pie charts. No color indicates the portion of haplogroups other than I observed for each location. The results illustrate a peak of subclade I1 around Scandinavia and I2 around Southeastern Europe. Note also the unique peak of subclade I2a2 in Sardinia. (1)



Proposed scenario of the movements of human populations bearing haplogroup I. The figure shows likely origin of haplogroup I from the Middle East via the Levantine corridor and its residence in two pockets (gray ovals) during the last glacial maximum in Europe. Subclades of haplogroup I are color coded and corresponding SNPs listed in the legend. The routes and locations are based on evidence from several studies of Y-DNA I haplogroups and haplotypes. (1). The Morkel subclade is in yellow –I1.

Timeline for Haplogroup I .

50kya	**Migration ex Africa.** About 50,000 years ago, migration of suprahaplogroup F out of Africa to the Levant (1)
28 - 24kya	**Haplogroup I spins off.** About 24 to 28,000 years ago the haplogroup I formed as a distinct group on its own and spread into southern Europe. It is associated with Gravettian and Aurignacian cultures (1). Upper-paleolithic characterized by a stone-tool industry with small pointed blades used for big-game hunting of bison, horse, reindeer & mammoth. People in the Gravettian period also used nets to hunt small game (3).
20-18kya	**Ice sheets and glaciers.** About 18 to 20,000 years ago. A period of extreme cold during the Late Glacial Maximum, with ice sheets and glaciers spreading over northern Europe. Two significant pockets of refuge from the glacial reach existed, one associated with subclade I2a in the Balkans, and one associated with I1 and I2b1 in the Franco-Cantabria region both sides of the Pyrenees (1). Haplogroup R co-existed with I in these refuge areas.
16kya	**Climate warming**. Northwards migration into central Europe (4).
13-11.5kya	**Younger Dryas Big Freeze.** About 13,000 years ago the climate changed abruptly with intense freezing weather for about 1,300 years, causing hardship and interrupting human progress. (5)
11kya	**Holocene warming commences.** Shrinking ice sheets and glaciers allowed human migration northwards eventually reaching Scandinavia. Mesolithic stone tools used (6). Human civilization begins with a transition from hunter-gathering to farming and settlements (7).
4kya	**Bronze age** tools introduced into Europe (8). Megaliths 6kya – 3kya.
3kya	**Iron age** in Europe (9).



Cooling and Warming 12,000 years to Present (14)

It is somewhat surreal to think of our ancestors using stone tools and hunting bison, reindeer and mammoth, but that is what they did.

La Gravette Point from Gavaudun, France – ca 22,000 years ago. Three views of the same tool. (10)

Mesolithic Flint Knife. ca 8,000 years ago (11)

Sources and Notes:

1. Learn about Y-chromosome Haplogroup I. *Genebase Tutorials*. from http://www.genebase.com/learning/article/12
2. http://www.kerchner.com/haplogroups-mtdna.htm
3. http://en.wikipedia.org/wiki/Gravettian
4. http://en.wikipedia.org/wiki/Late_Glacial_Maximum
5. http://en.wikipedia.org/wiki/Younger_Dryas
6. http://www.stoneagetools.co.uk/mesolithic-gallery.htm
7. http://www.wisegeek.com/what-is-the-holocene.htm
8. http://www.unr.edu/sb204/geology/europe.html
9. http://en.wikipedia.org/wiki/Iron_Age
10. http://en.wikipedia.org/wiki/Gravettian
11. http://www.stoneagetools.co.uk/mesolithic-gallery.htm
12. http://www.scs.illinois.edu/~mcdonald/worldmtdnamap.pdf
13. http://www.eupedia.com/europe/neolithic_europe_map.shtml
14. David Archibald, 2010. *The Past and Future of Climate*

Appendix 1

Test Results for André Morkel

Source: Genebase.com

The DNA Ancestry Project

Certificate of Y-Chromosome DNA Testing for Genetic Genealogy

Based on PCR testing of STR Loci in the Y-Chromosome, we hereby certify that

Andre Morkel

has the following ancestral Y-DNA markers

DYS19 / 394 = 14	DYS385a = 13	DYS385b = 14
DYS388 = 14	DYS389i = 12	DYS389ii = 28
DYS390 = 22	DYS391 = 10	DYS392 = 11
DYS393 / 395 = 13	DYS426 = 11	DYS436 = 12
DYS437 / 457 = 16	DYS438 = 10	DYS439 / GATA A4 = 11
DYS442 = 12	DYS444 = 13	DYS445 = 11
DYS446 = 13	DYS447 = 24	DYS448 = 20
DYS449 = 30	DYS452 = 31	DYS453 = 11
DYS454 = 11	DYS455 = 8	DYS456 = 15
DYS458 = 14	DYS459a = 8	DYS459b = 9
DYS460 / GATA A7 1 = 11	DYS461 / GATA A7 2 = 12	DYS462 = 12
DYS463 = 21	DYS464a = 12	DYS464b = 14
DYS464c = 15	DYS464d = 16	DYS468 = 31
DYS472 = 8	DYS481 = 25	DYS484 = 13
DYS511 = 9	DYS518 = 21	DYS520 = 21
DYS522 = 11	DYS527a = 20	DYS527b = 20
DYS531 = 11	DYS537 = 11	DYS557 = 15
DYS570 = 19	DYS576 = 17	DYS588 = 19
DYS590 = 8	DYS607 = 13	DYS612 = 38
DYS614 = 28	DYS644 = 17	DYS710 = 13
DYS724a = 34	DYS724b = 36	GATA A10 = 14
GATA C4 = 21	GATA H4 = 11	YCA IIa = 19
YCA IIb = 21		

All markers are derived through PCR analysis of STR loci on the Y-Chromosome. Marker value designations are for DNA Ancestry Project database use. As the allelic nomenclature changes, all affected markers will be converted automatically to ensure continuing compliance with DNA Ancestry Project database compatibility requirements.

This data was analyzed using GB Version 3.5. When the allele numbers are assigned to the results, the values are assigned according to a Version number. When comparing two or more individuals,

Haplogroup Predictor Analysis for André Morkel

Source: http://www.hprg.com/hapest5/

Enter any combination of one or more markers, *or* use the string entry form below

Area Selection: Northwest Europe

Reset

393	390	19	391	385a	385b	426	388
13	22	14	10	13	14	11	14
439	389I1	392	389I2	458	459a	459b	455
11	12	11	28	14	8	9	8
454	447	437	448	449	464a	464b	464c
11	24	16	20	30	12	14	15
464d	460	H4	YCAIIa	YCAIIb	456	607	576
16	11	0	0	0	15	0	0
570	CDYa	CDYb	442	438	531	578	395a
0	0	0	12	10	0	0	0
395b	590	537	641	472	406	511	425
0	0	0	0	8	0	9	0
413a	413b	557	594	436	490	534	450
0	0	0	0	12	0	0	0
444	481	520	446	617	568	487	572
13	25	21	13	0	0	0	0
640	492	565	461	462	A10	635C4	1B07
0	0	0	12	12	0	0	0
441	445	452	463	485	495	505	508
0	11	31	21	0	0	0	0
522	532	533	540	556	643		
11	0	0	0	0	0		

Results Table

Haplo-group	Fitness score	Proba-bility (%)
E1b1a	21	0.0
E1b1b	21	0.0
G2a	13	0.0
G2c	2	-
H	7	0.0
I1	81	100.0
I2a (xI2a1)	26	0.0
I2a1	8	0.0
I2b (xI2b1)	13	-
I2b1	22	0.0
J1	24	0.0
J2a1b	24	-
J2a1h	11	-
J2a1 x J2a1-bh	27	-
J2b	12	0.0
L	42	0.0
N	8	-
Q	22	0.0
R1a	13	0.0
R1b	8	0.0
T	17	-

Subclade Test for André Morkel

Source: Genebase.com

The DNA Ancestry Project

Certificate of Y-Chromosome DNA Testing for Genetic Genealogy

Based on single base extension testing of the Y-DNA I Subclade Panel, we hereby certify that

Andre Morkel

is a confirmed member of Y-DNA Subclade **I1 (M253+)**.

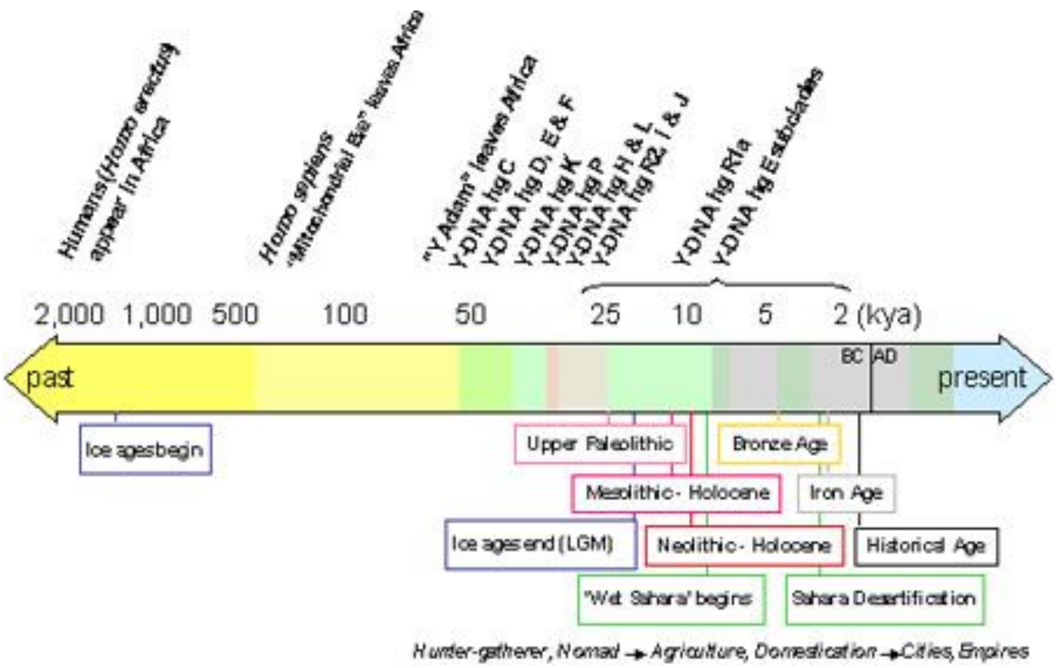
Subclade classification based on Y-DNA naming nomenclature as of Dec 15, 2012

SNP Location	SNP Identity	Result	Mutation
M258	T > C	**C**	**Positive**
M253	C > T	**T**	**Positive**
M21	A > T	A	Negative
M72	A > G	A	Negative
P109	G > A	G	Negative
M227	C > G	C	Negative
P259	T > G	T	Negative
L69.2(=T)	G > T	G	Negative
L38	A > G	A	Negative
L22	A > C	A	Negative
P95	G > T	G	Negative
M423	G > A	G	Negative
M438	A > G	A	Negative
P41.2	T > C	T	Negative
M436	G > C	G	Negative
M161	C > A	C	Negative
M26	G > A	G	Negative
P37.2	T > C	T	Negative
P78	C > T	C	Negative
M284	ACAA del	No ACAA del	Negative
M379	GT del	No GT del	Negative
M223	C > T	C	Negative

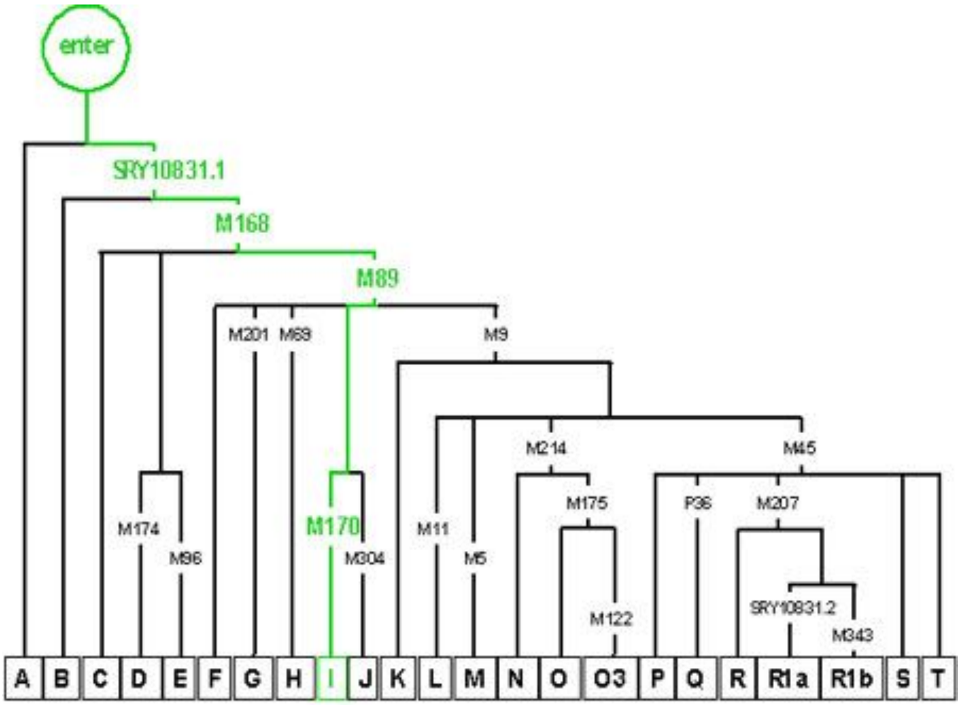
Appendix 2

More on the y-DNA Haplogroups of Europe

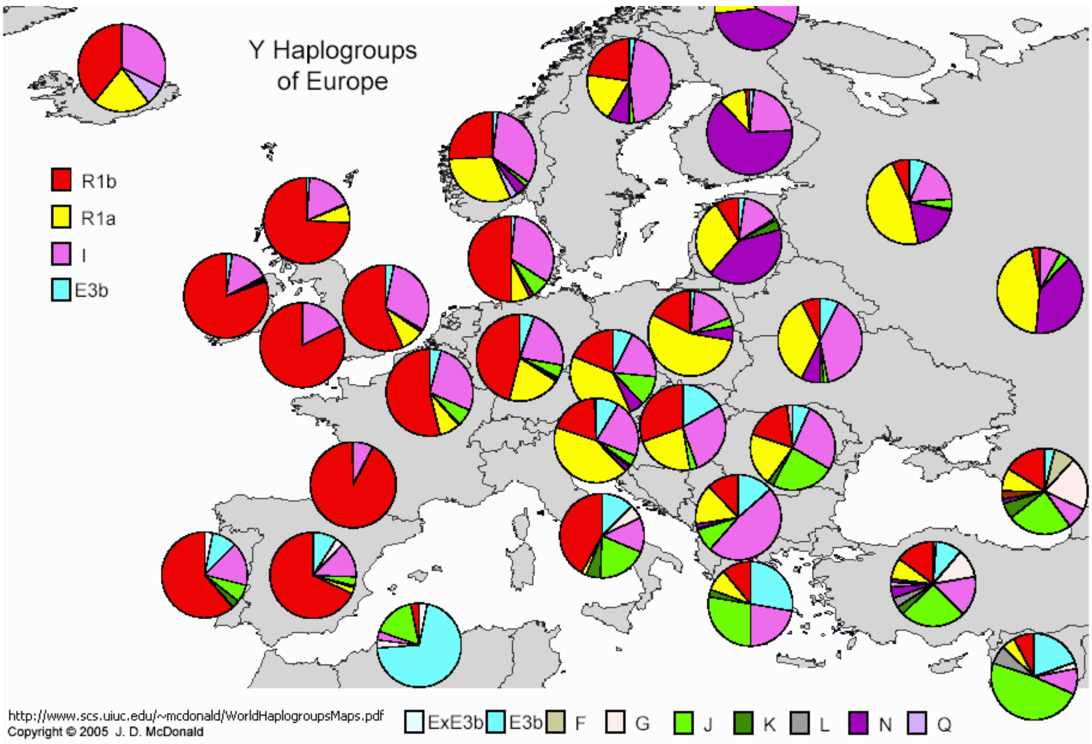
Most Europeans are either I or R haplogroups. It seems that the R group came somewhat later to Europe than I. About 25,000 years ago the R group were in the area of present day Iran and spread into Northern and Western Europe around 5,000 to 3,000 years ago(13). This contradicts another source (1) that have them sharing with the in the refuges mentioned during the late glaciation period of 20,000 to 18,000 years ago.



The emergence of modern humans. A schematic timeline is shown with the approximate appearance of Homo sapiens, with particular attention to the estimated origins of different ancestral Y-chromosomal haplogroups. Below the timeline is shown key geological and anthropological events. Kya = thousand years ago, hg = haplogroup, LGM = last glacial maximum (1).



This phylogenetic tree of the Y-DNA haplogroups is presented in a more typical inverted fashion below, with the A-T haplogroups defined by SNP markers as they branch from the root. In order to identify your personal haplogroup, simply follow the branches from the 'enter' point with the SNPs identified, here exemplified for haplogroup I with the green highlighting (1).



Y-Haplogroups in Europe (12)