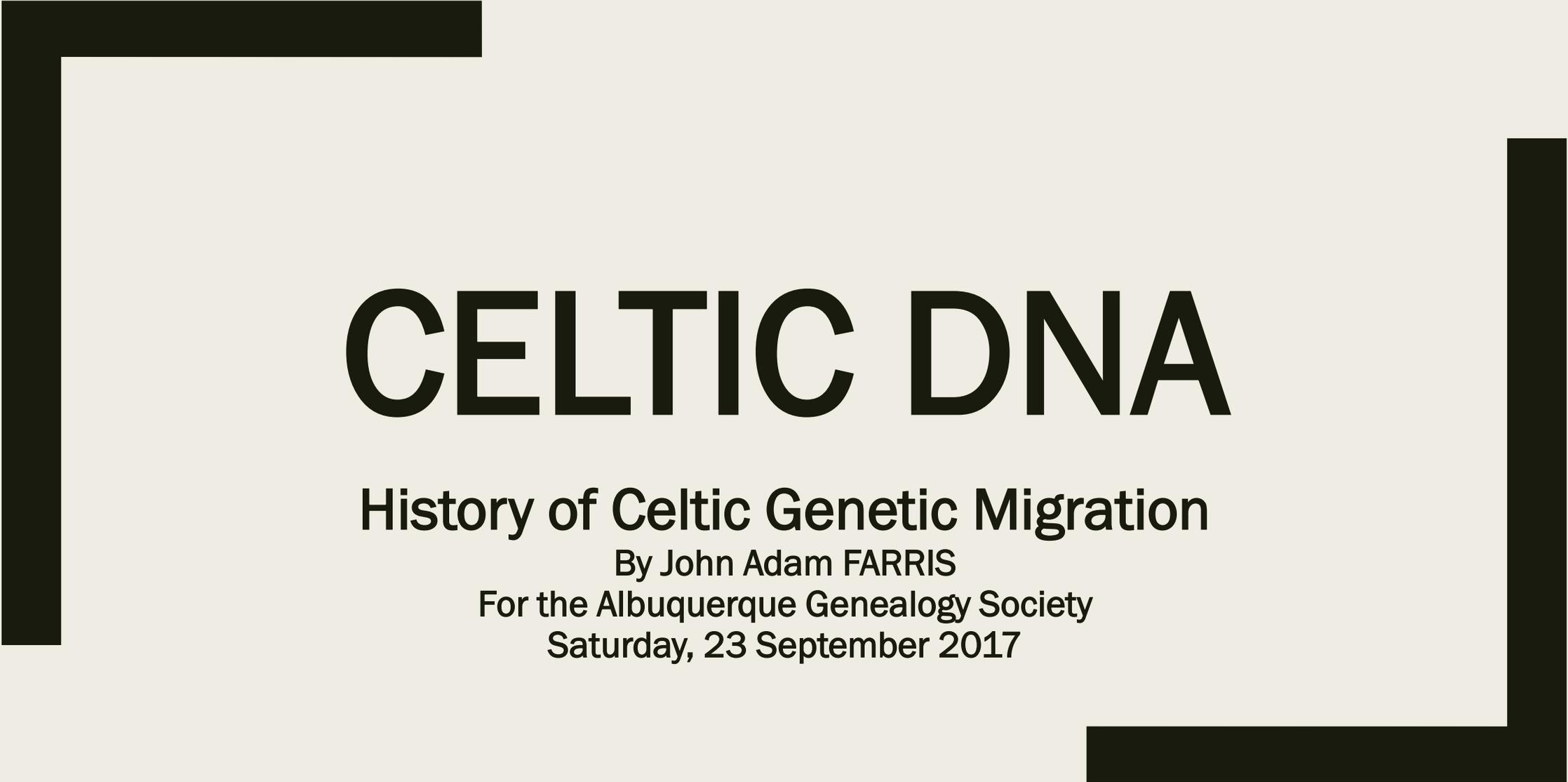


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www.glasbergen.com



“You don’t look anything like the long haired, skinny kid I married 25 years ago. I need a DNA sample to make sure it’s still you.”



CELTIC DNA

History of Celtic Genetic Migration

By John Adam FARRIS

For the Albuquerque Genealogy Society

Saturday, 23 September 2017

Who is John Adam FARRIS?

- I have been DNA tested by 7 companies. Four good labs, one a fraud & two no longer in business (DNA Heritage & Sorenson).
- My first DNA test was a Y-DNA test in 2004 (13 years ago).
- I have had autosomal DNA (atDNA) tests done by Ancestry, Family Tree DNA (FTDNA), MyHeritage & 23andMe. I have transferred all of these results to GEDmatch.com
- I have had mtDNA (full) and Y-DNA (111 Markers & BigY) done by FTDNA.
- From FTDNA I know my deep root Haplogroups as:
 - *Maternal: H2a2b*
 - *Paternal: R1b1>R-M269>R-L23>R-L51> R-L11/P310>R-P312/S116>*
 - *R-S245/Z260>R-L21/M529>R-BY10339*

I have done every possible known DNA test except the Whole Genome.

I am the volunteer administrator for the FARRIS Surname Group Site @ FTDNA.

I man the DNA desk at the monthly AGS Research Day = last Tuesday 10:00 to 2:00

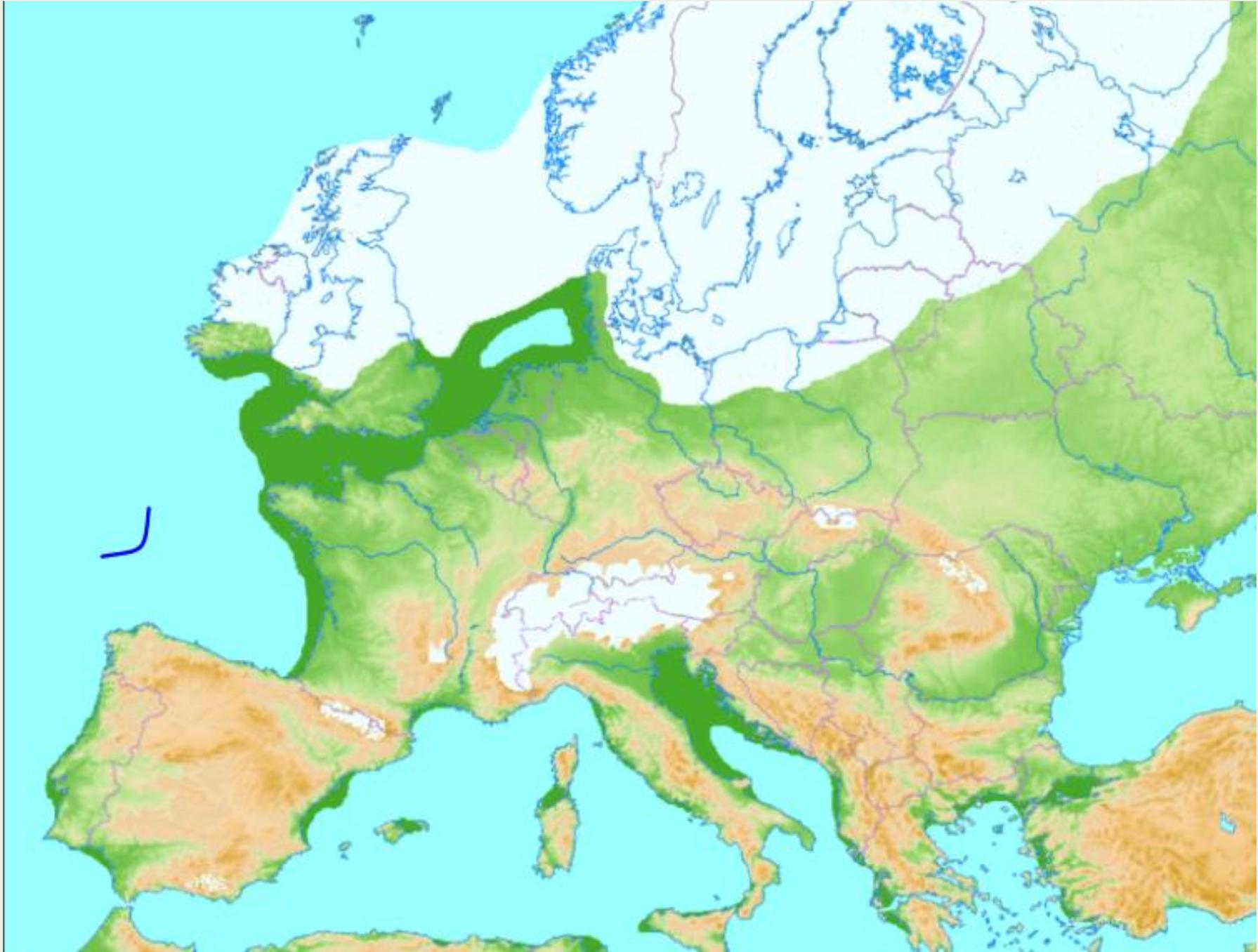
I enjoy helping people with their DNA problems & questions.

Time Line for Humans = Homo Sapiens

- Oldest Human Fossils Found in AFRICA:
 - *Morocco, Jebel Irhoud ~300,000 ya (years ago)*
 - *South Africa ~260,000 ya*
 - *East Africa ~ 195,000 ya*
- Humans first entered Europe ~45,000 ya
- Humans first mated with Neanderthals in Europe ~45,000 ya
- During last ice age (see next two slides) humans hunkered down in the Iberian Peninsula (Spain & Portugal), Italy, Greece, Turkey & the Balkans.
- As the ice started to melt most of these hunter-gatherers followed the herds North. Some, like the Basques, stayed where they were.
- Farming migrated from the Middle East to Europe ~8,500 ya.

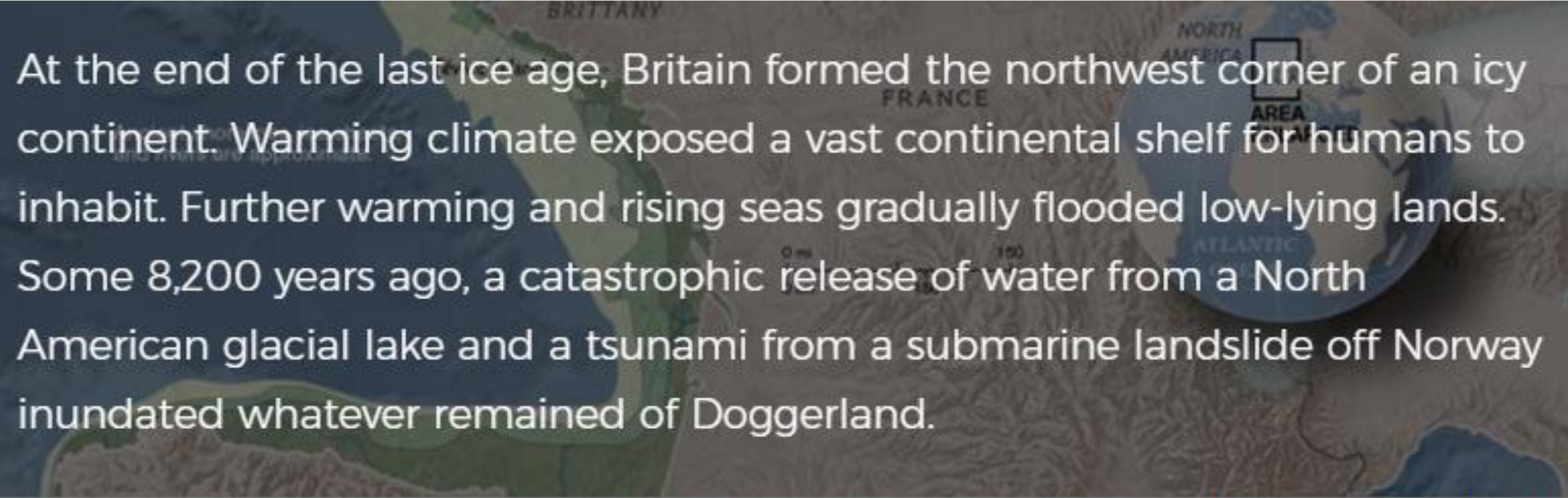
Impact of Last Ice Age on Western Europe

- Start Date: ~32,000 ya (years ago)
- Peak Date: 25,000 to 19,000 ya
- Covered almost all of the British Isles & Northern France.
- Sea Level was about 300 feet lower than now.
- Warming Started: ~14,000 ya
- End Date: ~12,000 ya





DOGGERLAND MAP & TITLE BELOW FROM: NATIONAL GEOGRAPHIC



At the end of the last ice age, Britain formed the northwest corner of an icy continent. Warming climate exposed a vast continental shelf for humans to inhabit. Further warming and rising seas gradually flooded low-lying lands. Some 8,200 years ago, a catastrophic release of water from a North American glacial lake and a tsunami from a submarine landslide off Norway inundated whatever remained of Doggerland.

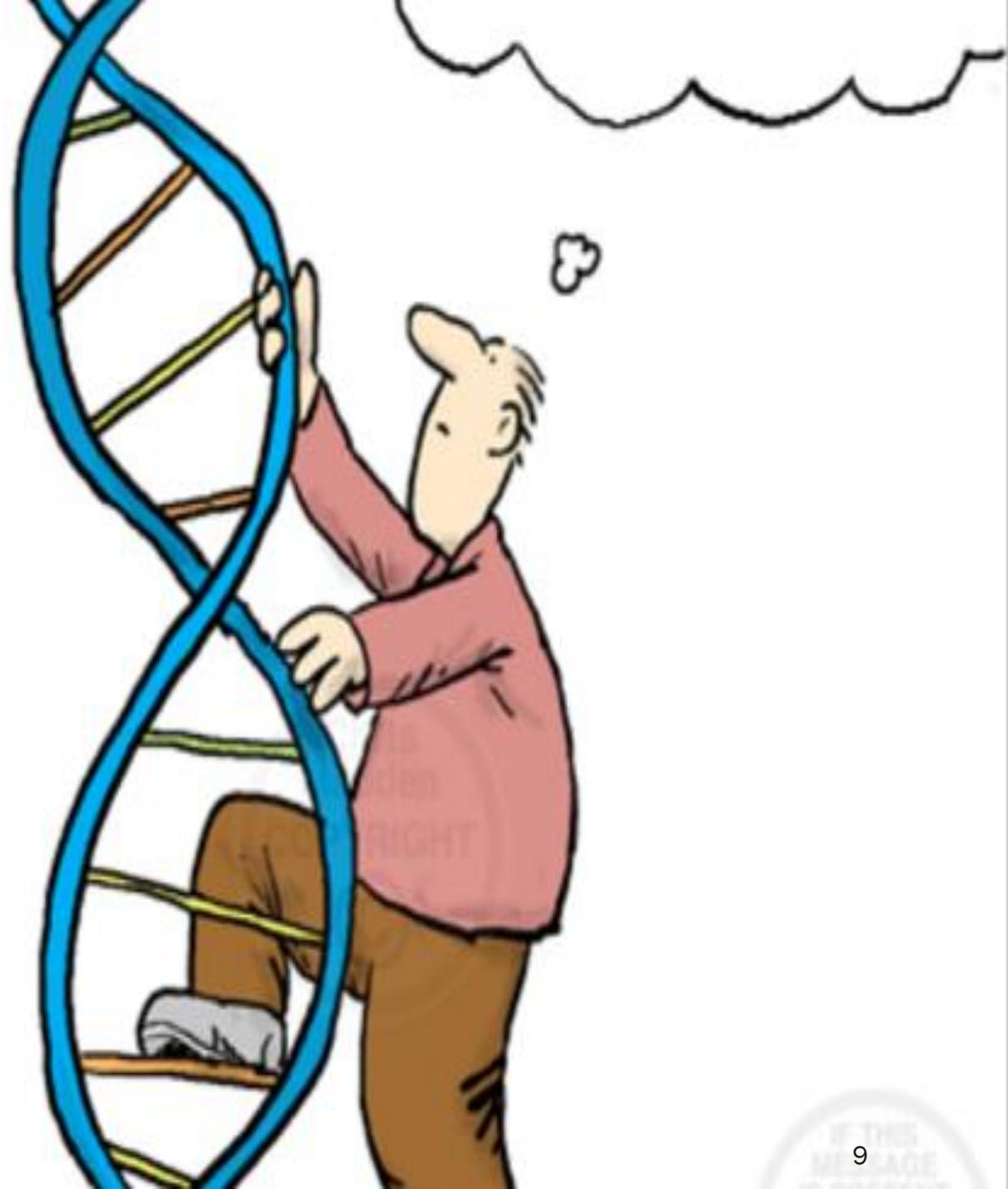
Map by William F. McNulty and Jerome N. Coakley, National Geographic Magazine

I'm going to climb this DNA ladder & see where it leads me.

What is DNA?

How is it used?

How does it relate to the Celts?



WHAT IS DNA?

- Deoxyribonucleic Acid – Molecule, with two long chains with a double-helix structure containing the genetic information of life: Discovered 1953 by Crick & Watson.
- It contains millions of base pairs (A, C, G & T).
- In the nucleus of almost every cell in all living things.
- Not in human RED BLOOD cells, but is in WHITE cells.
- DNA analysis has proved to be very useful in medicine, archaeology & genealogy.

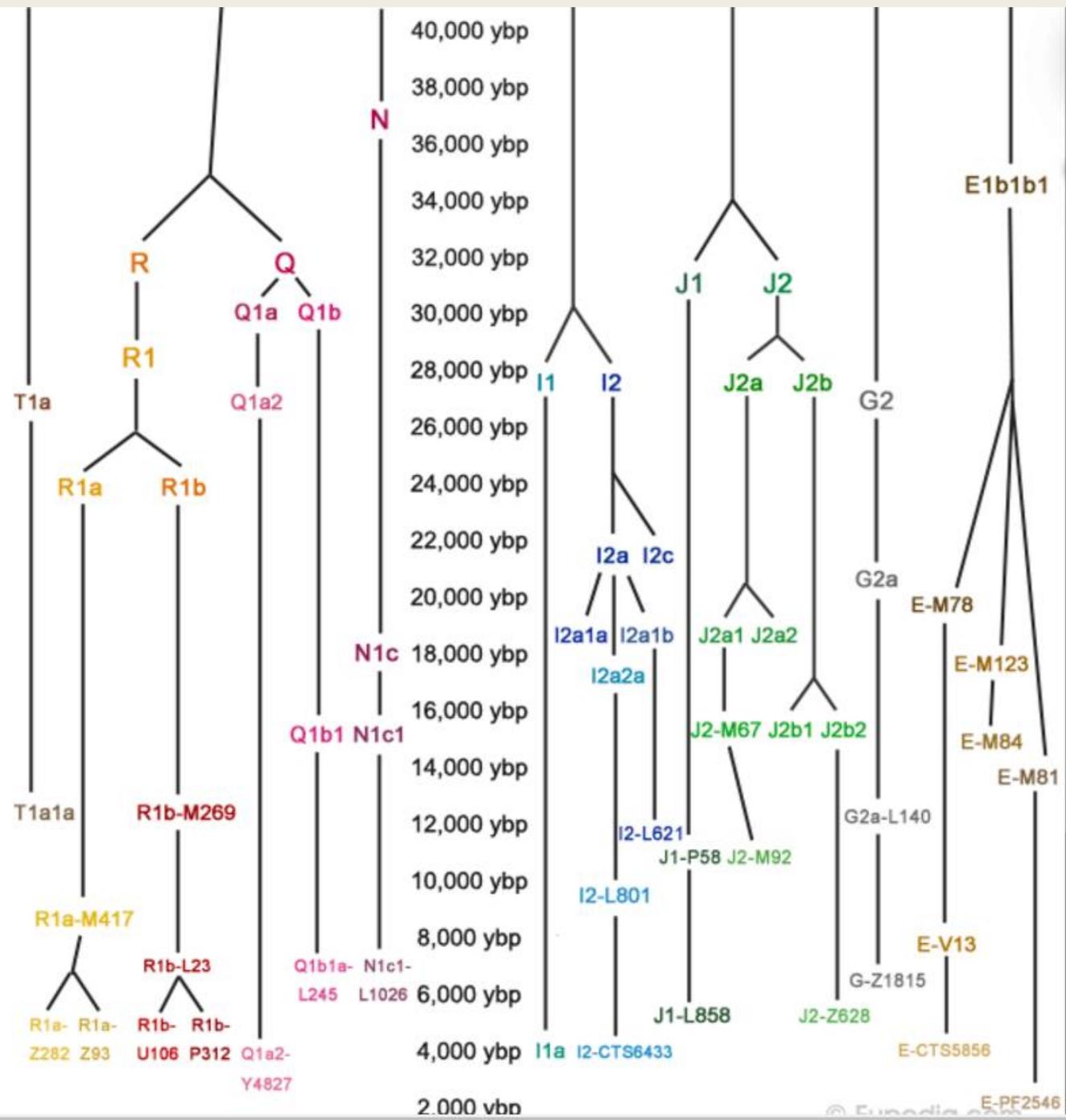
FAMILY DNA PATTERNS:

- All of their sons share their father's "Y" sex chromosome. Thus the "Y-DNA" traces the paternal line which usually tracks a surname.
- All of their children share their mother's "mt-DNA" & her "X" sex chromosome. Thus the "mtDNA" traces the maternal line.
- All of their daughters share their father's "X" sex chromosome. Thus all daughters always have two "X" sex chromosomes, whereas all sons have an "X" and a "Y".
- At conception all of the 22 chromosomes (excluding mt, X & Y) are scrambled (recombined) so that each child get a different combination of at-DNA from their parents. This is why children of the same family will show some strong similarities, but each will look different (except for identical twins) & act different. They can even have different at-DNA matches & slightly different ethnic % predictions.

Importance of Haplogroups

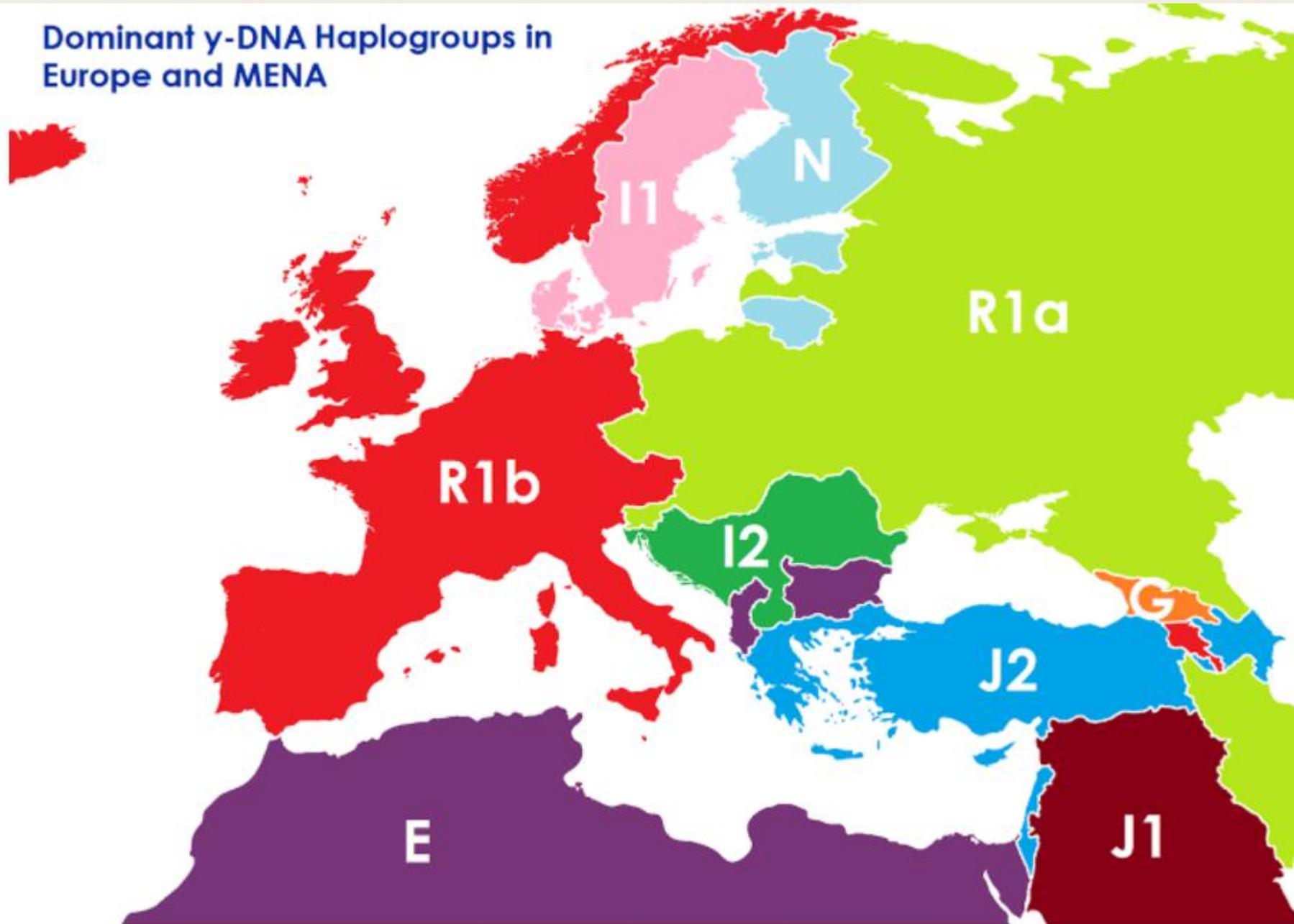
It Determines Your Deep Heritage

- The male Haplogroup is determined by the Y-DNA analysis.
- The female Haplogroup is determined by the mtDNA analysis.
- A Haplogroup is designated by a series of letters & numbers, such as **R1b1** (my male) or **H2a2b** (my female).
- All males who match **R1b1** descend from a **SINGLE MAN** who first had that mutation. Scientists have calculated the age of each mutation branch & have created dated Haplogroup trees.
- The migration path of a particular Haplogroup can be traced by the analysis of living people supplemented by Ancient DNA.



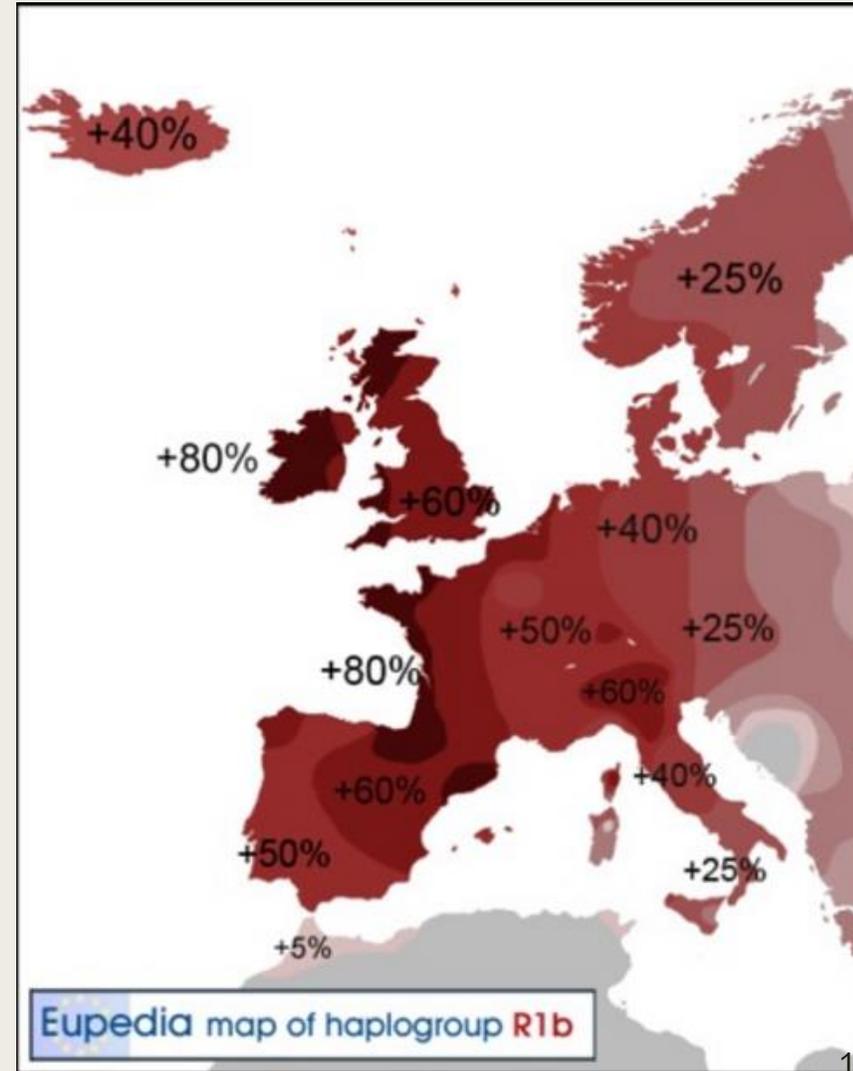
- Homo sapiens start colonising Europe
- Oldest musical instrument in Europe
- First domesticated dogs (in Belgium)
- Neanderthals become extinct
- Last Glacial Maximum (LGM)
- End of Ice Age
- Neolithic starts in the Near East
- Neolithic reaches Northern Europe
- Bronze Age starts in Europe

Dominant y-DNA Haplogroups in Europe and MENA



It is Always Worthwhile to Google Your Haplogroup to get Narrative & Maps:

- **Haplogroup Rib Map Distribution.**
- **R1b** is the most common male Haplogroup in Western Europe.
- Many call it the **CELTIC SIGNATURE.**
- Rib1a1a2 = Old Designation.
- **R-M269 = New Designation.**
- M269 Designates the Terminal Snip.



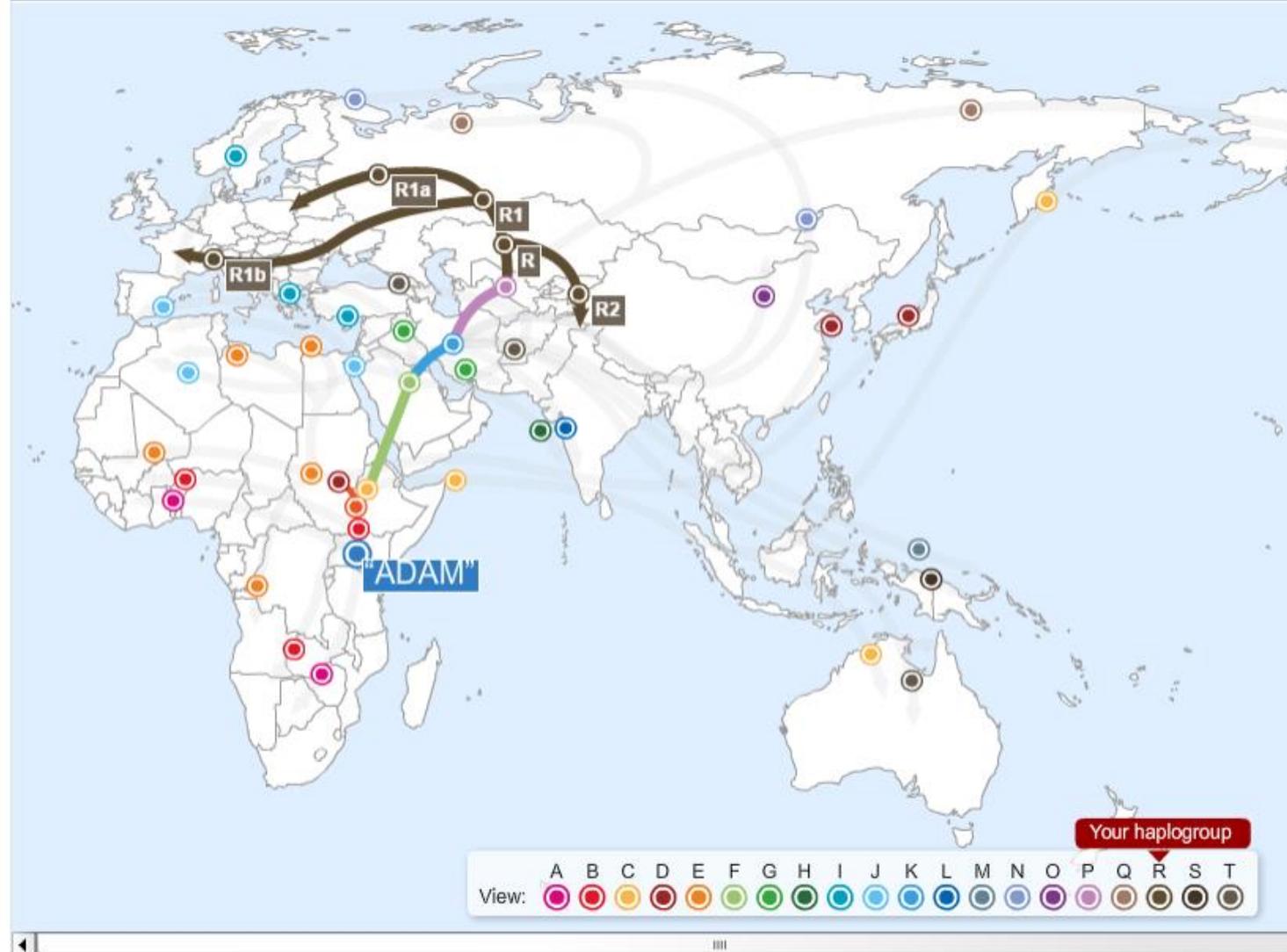


Y-DNA - Migration Maps

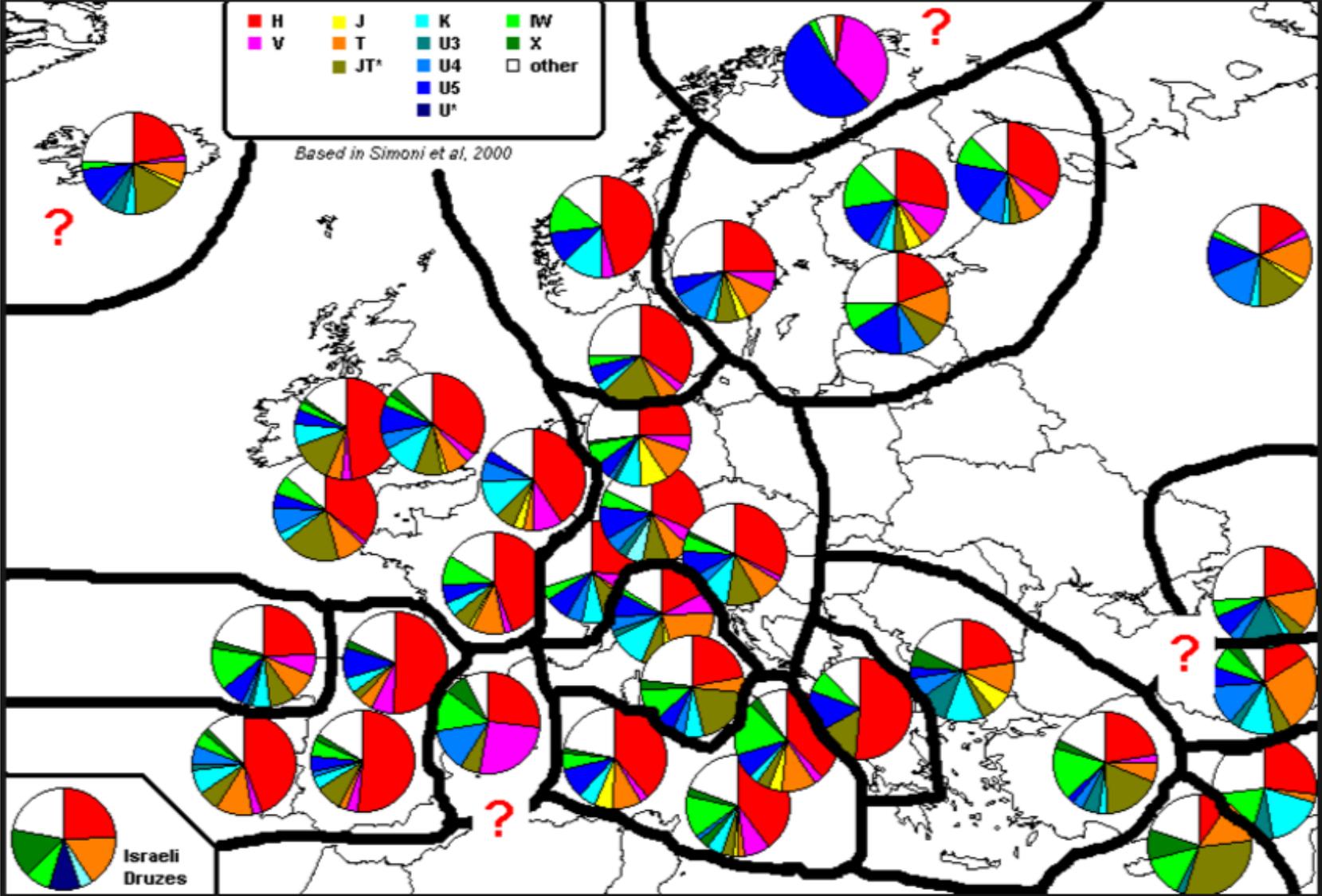
Migration Map

Frequency Map

HAPLOGROUP MIGRATION MAP



mt-DNA (Female) Haplogroup Distribution of Europe:



Migration of Male Haplogroup R1b

- When I was asked to take on this task of talking about the R1b Celtic migration, I thought, this is easy!
- I had several reports all saying that during the last ICE AGE that our (my) R1b Celtic ancestors resided in the Iberian Peninsula (now Portugal & Spain) until the ice started to melt.
- Indeed, my last talk to AGS on 10 May 2017 on “I Tested My DNA, Now What? I included this as *fact*.
- Until I started to review all of the latest reports on Ancient DNA, I was unaware of how much the history of Europe has been changed by DNA analysis.
- Some of these Ancient DNA reports were only published within the last two years & some were only published this summer.
- **Hang on as I share this new information!**

The Study of Ancient DNA

- First Used in 1984 on a 150 year old animal bone.
- Became internationally popular when a 5300 year old ancient human was discovered in an ice melt in the Alps & the Tyrolean Iceman was extensively DNA analyzed & reported on in 1994.
- In the last 7 years, new ancient DNA analysis techniques have been developed to minimize sample contamination by bacteria, poor sample handling, etc.
- The Journal NATURE published 02 May 2016 the analysis of 51 ancient Eurasian humans with a date range from 7,000 to 45,000 years ago using these new techniques.
- Their conclusions altered our understanding of the migrations of humans into Europe both before & after the last ice age.

CONCLUSIONS from 02 May 2016

Journal Nature:

- No evidence of the earliest modern humans in Europe arriving ~45,000 years ago contributing to the genetic composition of present-day Europeans.
- ~37,000 years ago they were a homogeneous founder population of hunter-gatherers.
- They reappeared in Europe during the last ice age starting ~19,000 years ago, perhaps emigrating from Spain.
- After ~14,000 years ago a new population (R1b) from the Turkey & Greece started to populate all of Europe.

From Eupedia.com Genetics June 2017

Report on Haplogroup R1b (Y-DNA) p1 of 3

- **By: Maciamo Hay – June 2017**
- First R Haplogroup appears in South-central Siberia in a tribe of mammoth hunters ~24,000 ya (years ago). R estimated formation ~32,000 ya. “R” is a mutation from Haplogroup “P”
- R1 forms ~28,000 ya. R1a & R1b split ~24,000 ya and R1a remains dominant in Central & Eastern Europe and in Western Asia.
- First R1b appears in SE Turkey & Northern Iraq & cattle are domesticated. This is the original homeland of the CELTS ~10,500 ya
- **This means that our CELTIC ancestors survived the last ice age in the Middle East, rather than in the Iberian Peninsula!**
- England/Scotland & Ireland again becomes Islands ~8,500 ya
- One R1b branch of mostly cattle herders moves North to Pontic Steppe (the fertile plain North of the Black Sea in what is now the Ukraine) ~7,000 ya

From Eupedia.com Genetics June 2017

Report on Haplogroup R1b (Y-DNA) p2 of 3

- There are several major branches of R1b that settled most of Europe (Spain R-DF27 & Northern Italy R-S28 & Germany & West England R-S21), Western Asia (R-P25), Northern & Eastern Africa (R-V88), etc. See list of references.
- Neolithic hunter gatherer tribes return to England/Scotland & Ireland ~6,000 ya. These are NOT our CELTIC (R-M269) ancestors!
- Agricultural reaches Western Europe ~6,000 ya
- Horses domesticated by the Celts plus wagons & chariots appear along with bronze tools & weapons allowing mass migrations along with the ability to defeat any existing foes ~5,500 ya (other sources says tin based bronze ~5,000 ya & horses ~4,500 ya)
- **R1b1a2 = R-M269** becomes the most common in Western Europe = **CELTIC SIGNATURE** ~4,500 ya

From Eupedia.com Genetics June 2017 Report on Haplogroup R1b (Y-DNA) p3 of 3

- Many Celtic societies formed in various areas with different names during this period, but they were all cattle (herder) based societies. The Yamna society was the one to move West as a major migration ~4,500 to 6,000 ya
- The Celts defeat & occupy almost all of Western Europe & replace or minimize almost all existing male Haplogroups (C1a2, E1b1b, F, G2a, H2, I & T1a). The existing men either escaped, were killed or enslaved. The R1b victors mated with the existing women ~3,200 to 4,500 ya
- The Celtic Hallstatt culture was centered in the Alps & quickly spread to France, Britain, Northern Iberia, & Northern Italy 2,700 to 4,200 ya
- Celtic tribes sack Rome 2,407 ya
- Romans occupy England (but not Scotland) 43 – 410 AD = 1,974-1,607 ya
- All of the above is based on known history & very recent DNA analysis of ancient humans.

There are still Settlements with Celtic Roots all over Europe, such as:

- Galicia (Galicja) Eastern Europe = Poland & Ukraine
- Galatia (Galatlar) in Anatolia, Turkey

Remember Saint Paul's letter to the Galatians – same group!

These two are in addition to the better known Celtic groups:

- Brittany, France
- Cornwall, England
- Galicia, Spain
- Ireland
- Isle of Man
- Scotland
- Wales

Analysis of Three Ancient Irish Men from Early Bronze Age by: Professor Daniel G. Bradley & Dr. Lara M. Cassidy, et al of Trinity College Dublin

18 Nov 2015

- Found on Rathlin Island off of NE Coast of Northern Ireland
- Dates of 3 men range from 3,534 to 4,026 ya
- **Male Haplogroups for all three = R1b1a2a1a = R-M269**
- Female Haplogroups = U5a1b1e, U5b2a2 & J2b1a
- All had genetic variants for blue eyes & the mutation C282Y for excess iron disorder (haemochromatosis) called the Celtic disease
- **atDNA showed substantial Steppe (Black Sea) genetic heritage**

What did the CELTS bring to Western Europe?

- Indo-European Languages to all but the Basques, Estonians & the Finns
- Domestication of cattle & horses
- A herding culture with less stress on farming
- Bronze metal working for tools & weapons
- Use of wagons & chariots
- A strong heroic code emphasizing courage & military power
- Individual burials as opposed to cremation or group burials

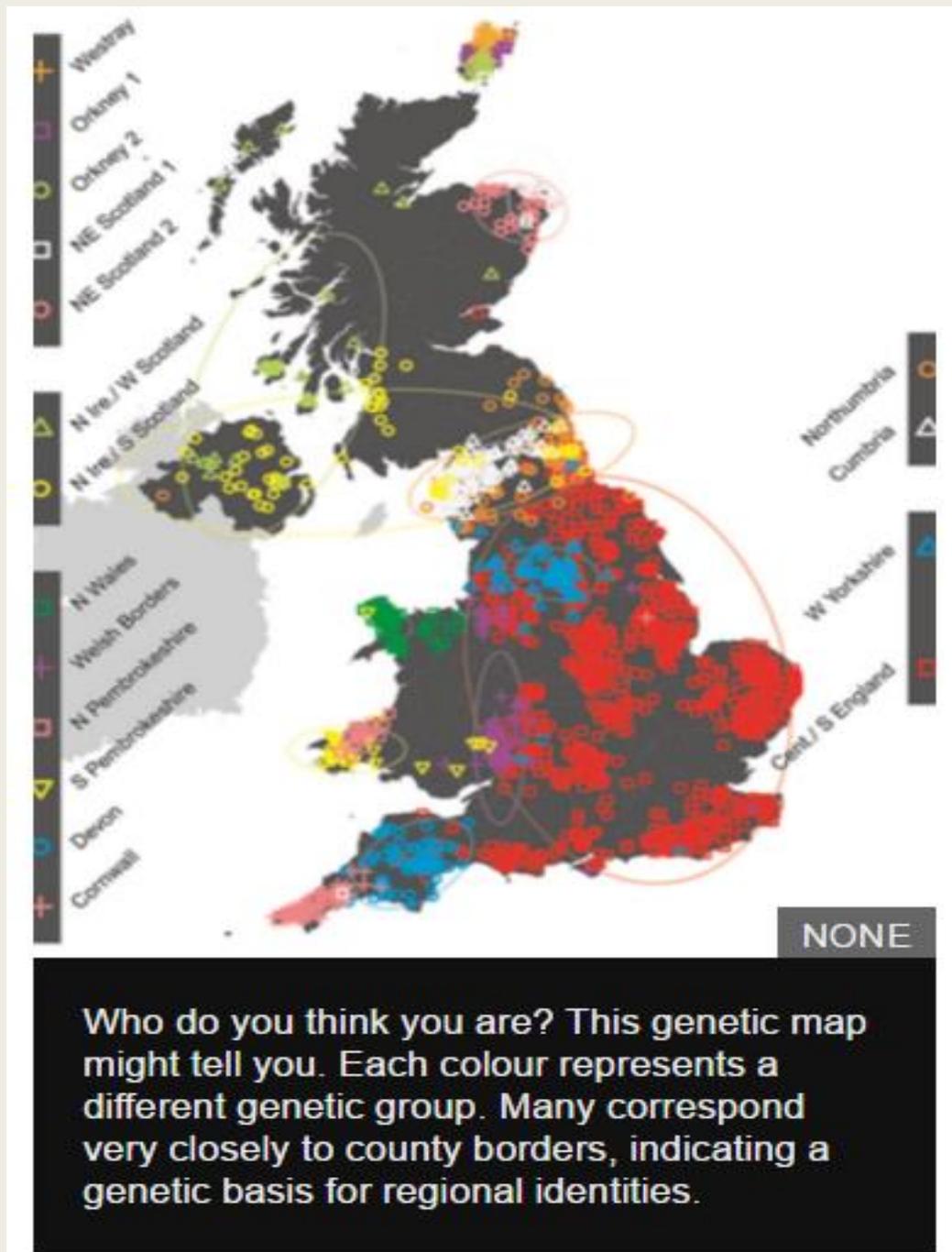
ONE of Many CONCLUSIONS from a Landmark NATURE Study are about the CELTS:

- The Celts are not an ethnic group, but rather a cultural group with many common customs who share an ancient language.
- Except for male Haplogroup R1b, there was no common genetic pattern (atDNA) among the people with a Celtic tradition such as in Cornwall, Northern Ireland, Scotland & Wales.
- Reference: Journal NATURE, 19 March 2015, p309, Vol 519 by Stephen Leslie, et al

Unique SNP Analysis:

2,039 were atDNA tested from rural areas whose 4 grandparents were all born within 80km of each other.

They found 17 genetically distinct clusters of people. Republic of Ireland & Germany are now doing similar analyses.



More CONCLUSIONS from the BBC Summary Based on The Journal NATURE:

- The atDNA results from Wales broke down into two very distinct groupings & both are different from the Scots.
- Northern Ireland also broke into two groups: One connected to the Scottish Highlands (from the clearance - 1739 to 1886 ?) & the other connected to the Lowlands & Northern England (from the Ulster Plantation settlements >1620 ?).
- Many of the atDNA divisions follow ancient land & tribal divisions that existed prior to the Anglo Saxon invasion.
- The Anglo Saxons left a strong DNA stamp – particularly on Central & SE England. However, they didn't wipe out the Britons, but mixed with them over the next 100 or so years. Their Haplogroup was I1 rather than R1b.
- Neither the Normans nor the Vikings left a significant DNA stamp on England.
- In Orkney, the Norwegian Viking DNA is dominant, as would be expected.
- Unfortunately, The Republic of Ireland wasn't part of this study !!!

ARE YOU A CELT?

1 of 6

Broad Versus Narrow Definitions

■ The Broad Definition:

- YES, if you are descended (Maternal or Paternal line or both) from ancestors who were born & lived in a Celtic Language speaking (now or in the past) country/area such as Brittany (France), Cornwall (England), Galicia (Spain), Ireland, Isle of Man, Scotland, Wales, etc.
- YES, if your Celtic ancestors immigrated to the Americas before the Revolutionary War or very recently, OR your Celtic ancestors still live in the “old country”.
- YES, if you have a paper trail based on classic genealogy that establishes the former two points.

The Narrow Definition is Based on DNA:

How Can You Tell if You have Celtic Ancestry? The Answer is Different for Men & Women. 2 of 6

- The most heavily advertised DNA test is an autosomal DNA test (atDNA) offered by Ancestry.com or Family Tree DNA (their Family Finder test) FTDNA.com or MyHeritage.com. They all cost less than \$100.
- These tests will connect you with tested genetic female & male cousins back about five generations, which can sometimes be very useful, but it fails to answer this question: ARE YOU A CELT?
- The test results will also tell you your estimated % ethnicity, which can be fun, but ignores answering this question.
- Why? Because these atDNA results don't provide you with your **Male Haplogroup, where we have already shown that the Celtic Signature is R-M269.**

The Narrow Definition is Based on DNA:

3 of 6

- Two other companies also offer atDNA tests for \$100 or less. They are:
- 23andMe which provides genetic cousin matching as well as % ethnicity. **It is also unique in offering a \$100 option to get your DNA health predictions.**
- 23andMe also provides both your male & female Haplogroups (for males), and ONLY the female Haplogroup (for women).
- National Geographic Geno 2.0 test kit provides % ethnicity, but doesn't provide genetic cousin matching. To match cousins, you have to transfer your results (for free) to Family Tree DNA (FTDNA.com).
- National Geographic also provides male & female Haplogroups (for males), and ONLY the female Haplogroup (for women).
- **Thus, the atDNA test results from only these two companies will tell a male if their male Haplogroup is R-M269 = Celtic Signature**

The Narrow Definition is Based on DNA:
Your Male Haplogroup Must Be R-M269
For MEN it Only Takes a Little Time & \$ to Determine Their
Male Haplogroup 4 of 6

- As an alternate to the previous slide, here are the steps:
- Order a Y-DNA 37 Marker test kit from FTDNA.com = Family Tree DNA for \$169. They are located in Houston & have their own lab.
- If you order through any surname project at FTDNA or any geographic project at FTDNA you will save \$10 to \$20 & will automatically join that project. A surname project could be FARRIS (where I am the administrator) or the Irish Project. There are several thousand projects.
- You will receive a sample kit with very clear instructions. You rub a Q-Tip on the inside of your mouth. Very quick, easy & painless.
- Six to eight weeks after you return your saliva sample, they will post your results, which will look similar to my brothers on the next slide.

R-M269

Y-DNA Haplogroup

Get Yours!

mtDNA Haplogroup

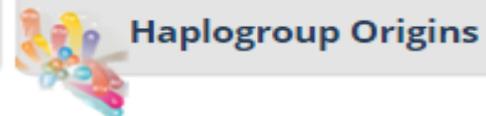
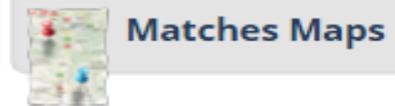
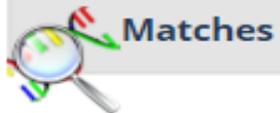
WAMH

Western Atlantic
Modal Haplotype

Family Tree



Y-DNA  Results Completed: 12/9/2013 [Upgrade](#)



[Download SNPs as CSV](#) | [Advanced Matches](#) | [Learn More](#)

The Narrow Definition is Based on DNA:

For Women, it can be a lot more work. You need to show that your Paternal Line is Haplogroup R-M269. **6 of 6**

- Unfortunately, the mtDNA test doesn't relate to Celts.
- Here are some of your DNA testing choices:
 - A. Your Father
 - B. Your full Brother
 - C. Your half Brother if you share the same Father
 - D. Your paternal full Uncle
 - E. Your paternal male full first Cousin
 - F. Your full brother's Son

If you haven't been DNA tested yet, what are you waiting for?

- Please see the **HANDOUTS** which include my DNA testing recommendations for both women & men.
- Also note the list of References, BLOG sites & Facebook sites + info about me
- If you need help interpreting your DNA results, you can see me on our **AGS Research Days** = Last Tuesday of each month 10:30 am to 2:00 pm upstairs on the second floor.

Thank You For Your Time. ANY QUESTIONS?

