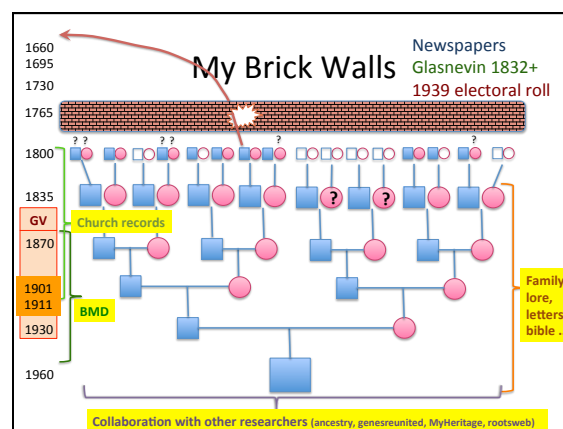


DNA & Genealogy
Everything you wanted to know
but were afraid to ask

Maurice Gleeson
BIFHSGO, Ottawa
9th Sep 2016

www.dnaandfamilytreereasearch.blogspot.com
YouTube: DNA and Family Tree Research

© Maurice Gleeson 2016



FamilyTreeDNA
84 euro = \$89
65 euro = \$69
122 euro = \$129

23andMe
169 euro = \$180

GENOGRAPHIC PROJECT
140 euro = \$149

ancestryDNA
142 euro = £99 + P&P +/- annual fee

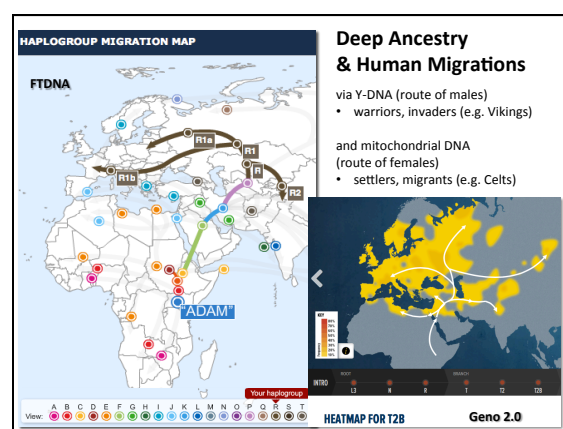
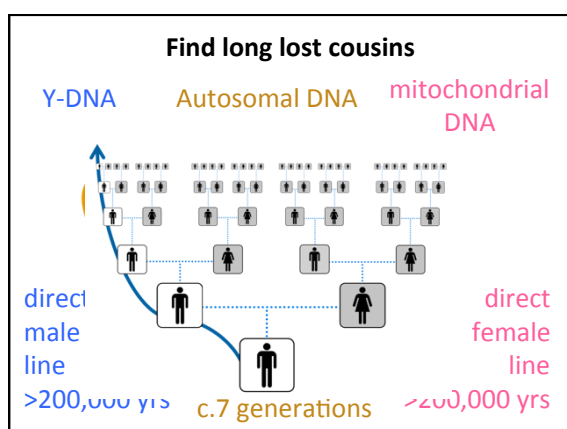
309/269 euro = \$330/287

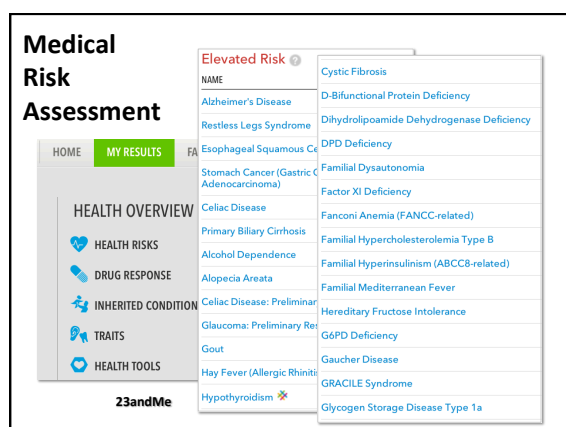
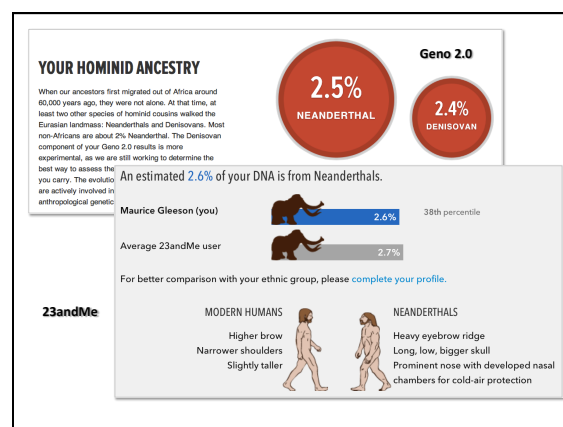
Ireland's DNA
Britain's DNA
Scotland's DNA


See also
http://www.isogg.org/wiki/Y-DNA_testing_comparison_chart
http://www.isogg.org/wiki/MtDNA_testing_comparison_chart
http://www.isogg.org/wiki/Autosomal_DNA_testing_comparison_chart

What can you get from a DNA test?

A community of avid genetic genealogists (ISOGG)
Deep Ancestry & Human Migration Pathways
Ethnic make-up
Long lost cousins
% Neanderthal
Medical risk assessment







INTERNATIONAL SOCIETY OF GENETIC GENEALOGY

The first society founded to promote the use of DNA testing in genealogy

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a community of avid genealogists

HOME

RESOURCES

FOR NEWBIES

FAMOUS DNA

Y2NP TREE

SUCCESS STORIES

SPEAKERS LIST

MEETINGS/EVENTS


Mission Statement

"The mission of the International Society of Genetic Genealogy is to advocate for and educate about the use of genomics as a tool for genealogical research, and promote a supportive network for genetic genealogists."

Website – www.isogg.org

Mailing Lists –

- groups.yahoo.com/group/DNA-NEWBIE
- groups.yahoo.com/group/ISOGG







ISOGG wiki

[English](#)
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
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Welcome to the **ISOGG Wiki**
a free genetic genealogy encyclopedia





with 488 articles and growing

Welcome to the **ISOGG Wiki**
edit



What is ISOGG?

The International Society of Genetic Genealogy (ISOGG) was founded in 2005 by DNA project administrators who shared a common vision: promotion of and education about genetic genealogy. Our mission is to advocate for and educate about the use of genetics as a tool for genealogical research, and promote a supportive network for genetic genealogists.

This Wiki was established for the benefit and education of the genetic genealogy community. To contribute to this

Genetic Genealogy Resources
edit

- Autosomal
 - DNA
 - 23andMe
 - MyHeritage
 - Y-DNA
- DNA Projects
 - Genetic
 - Resources
 - Project
 - Admins
- Genealogy
 - DNA Tests
 - All portals

Comparison Charts of DNA Testing Companies

- Autosomal DNA testing comparison chart
- mtDNA testing comparison chart
- Y-DNA STR testing chart
- Y-DNA STR testing chart

Historical Timeline of Genetic Genealogy

- History of genetic genealogy
- Statistical summary of DNA projects
- Flourish surname projects (before 2002)

ISOOG Facebook group
 Other DNA Facebook groups

International Society of Genetic Genealogy (ISOOG)

Maurice Gleason
 Edit Profile

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YOU
 mtDNA
 mtDNA
 mtDNA
 G
 Est. 2005
 Joined + Share Notifications

International Society of Genetic G...
 Members Events Photos Files Search this group

Write Post **Add Photo / Video** **Ask Question** **Add File**

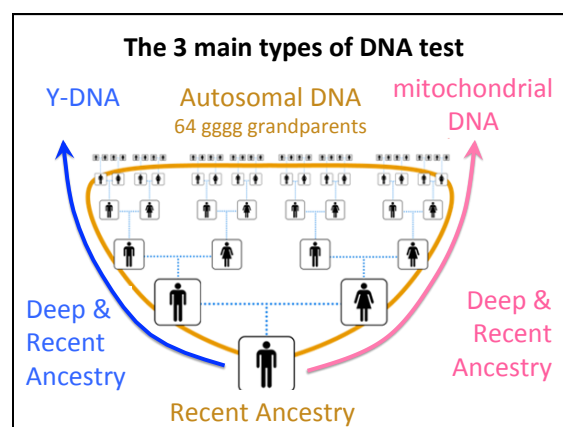
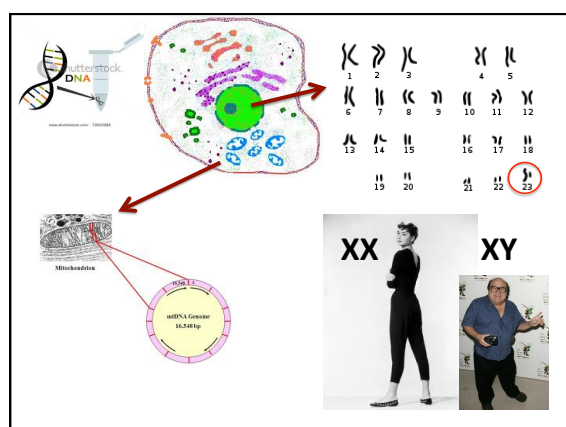
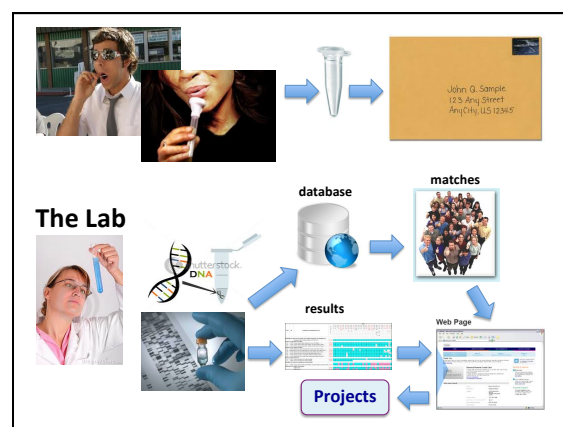
ABOUT 5,569 members
 @ World Group
 "The mission of the International Society of Genetic Genealogy is to advocate for and educate ab... See more
 5,569 members (77 new) Invite by Email
 Add People to Group
 CREATE NEW GROUPS
 Chat (20)

POSTED ACTIVITY
Maurice Gleason
 17 March 11:48 AM
 Making the most of your Y-DNA... John Cleary discusses how joining

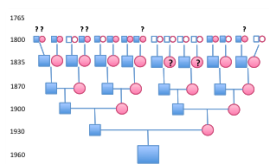
Free DNA tests – sponsored by Project Admins

BREWERTON	Doolin	Little	REANEY
Barton	Duncan	Machula	Reid
Bonnell	Familton	McCallum/McCollum	Ricketts
Boone	Ferguson	McConnochie	Riddle/Riddell/Ruddell
Bracey	Fleming	Meagher/Maher	Robertson
Brookshaw	Foad	Meates	Rowe
Bunch	Frame / Fremault	Monaghan/Monahan	Scott
Carpenter Cousins	Franklin	Mugford	Smothers/Tribe
Cecil-Cissell	Fraser	Mulvihill	Southwood/Southard
Chichester	GOUGH/GOFF/MCGOUGH	Murtishaw/Mottershaw	Spiering
CLAN DALTON	Graves	Niedzialkowski	Spurlock/Spirlock
Coldwell	Ham	Ogan	Staalabarger
Corson	HENDRICKS	Owston/Ouston	Stroud/Strode
Courtney	Hickson	Page	Talley
Coverly Family Finder	Hollister	Parry	Taylor
Cruse/Cruise/Cruwys	Huntsman	Pask	Trout
Curd	KNOWLES (Noles)	Phillips	Uridge
Dalton	Land	Pike	Walker
Danko	Laughlin	Pitts	Wheaton
Daw	Lay	Proctor	Willing
	LE GALL	Reams/Reames	

www.isogg.org/wiki/Free_DNA_tests

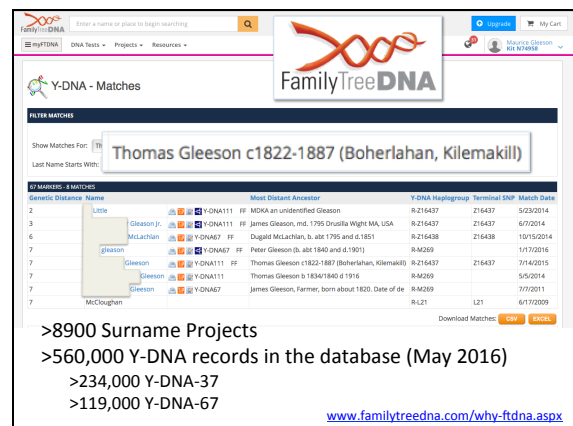
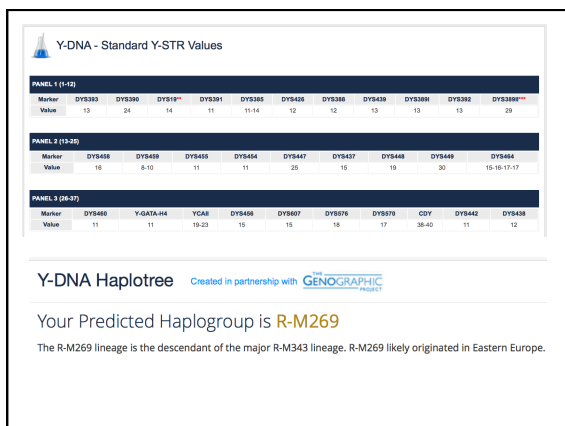
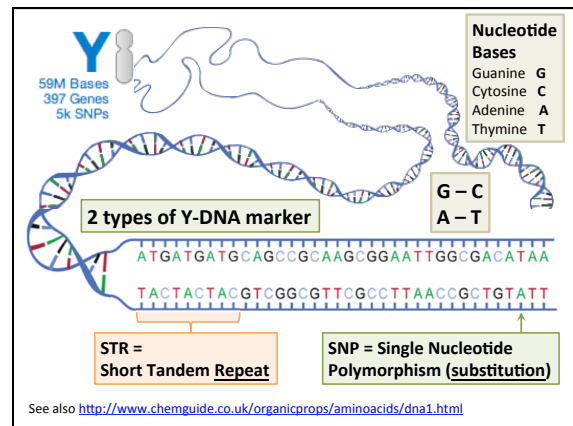
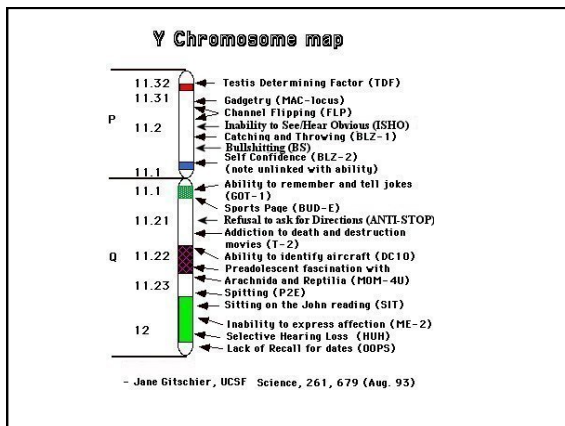
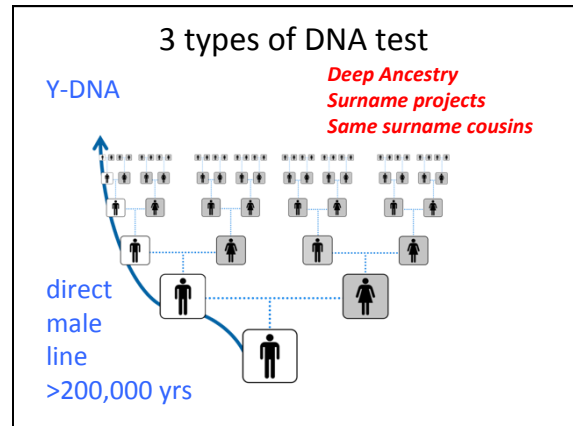
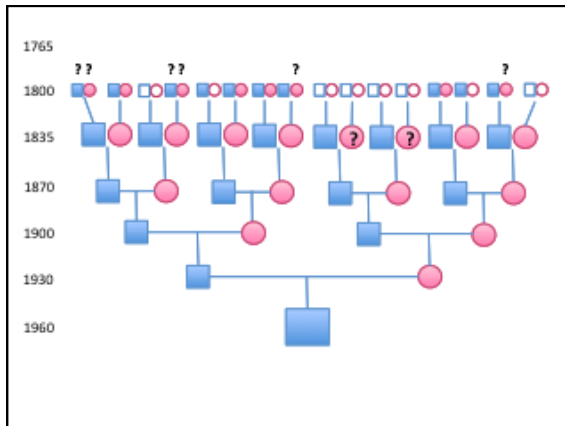


Workshop exercise



Frame your question exactly

- What test will show me my ethnic makeup?
 - How precise will the results be?
- What test will show me where my direct male/female line came from?
 - How precise will the results be?
- How do I break thru a particular Brick Wall in my family tree?
 - Which person/people do I need to test?
 - What test do I need to do?
- How do I prove Person A is related to Person B?
 - Which person/people do I have to test?
 - What test do I use?
- My grandfather was adopted - how do I find out who his parents were?
- How do I prove that my grandmother was Jewish?



DNA can identify a persons ancestor

Lineage IV US group, J2, NPE

Ungrouted (for now)

Cockfield, Suffolk, England

West Clare

North Tipperary

FamilyTreeDNA DNA TESTS PROJECTS LEARN ABOUT

Recent Ancestry & Surname Studies

We have **672,703** records -- the largest ancestry DNA database in the world!

Search for your name via the Home Page

How can a DNA test help with my genealogy?

Our DNA tests can help you find family, break through brick walls and trace your lineage through time. We are the only company with a comprehensive testing suite that can take you on this journey.

- Family Tree DNA has the largest ancestry database in the world
- We'll put you in contact with your closest genetic matches
- Share stories and work together to connect the dots on your family tree

Or simply Google FTDNA and your surname

Have a question? Read our FAQ

Connect with the community! Join our forums

We are here to help. Contact Us

www.familytreedna.com

FamilyTreeDNA Enter a name or place to begin searching

<https://www.familytreedna.com/groups/gleason/about> SIGN IN TO MYFTDNA

The FTDNA Holiday Sale is BACK!! Visit our **Products** page for discounted sale prices, then log into your account to view your **Mystery Reward Coupon** - our gift to you!

Gleason/Gleeson
120 members

THE GLEASON / GLEESON DNA PROJECT
Using modern genetics to reveal the origins and history of the Gleason / Gleeson surname.

Tuesday, 21 July 2015 <http://gleasondna.blogspot.ie>

THE GLEASON NAME IN SURNAME DICTIONARIES

If you want to get some idea about the possible origin of a particular surname, a Surname Dictionary is a good place to start. There are several surname dictionaries that address the topic of Irish surnames, and perhaps the most well-respected are those of *Woulfe and MacLurg*. But do they

Gleason Genealogy Forum

Discussion Members Events Photos Files

Write Post Add Photo / Video Create Poll Add File

Write something...

217 Members

Gleason/Gleeson DNA Project:
With related surnames: Gleason, Glezen, Gleason, Gyleson, Leeson, O'Gleason

Project Home Patritarchs y-Results Join Project Archived Patritarch Page Help Order Test

Lineage III

Cornelius Gleeson b c1812 Coore or Connolly, County Clare, Ireland; m Mary Meade - [WJGleeson AT aol.com]
2 John Gleeson b 1842 Connolly, County Clare, Ireland; d 1901-1910; m Catherine Sexton
3 John (Jacky) Gleeson b 1889 Connolly, County Clare, Ireland; m Anne Dillon
4 Patrick Gleeson b 1922 Connolly, County Clare, Ireland; d 1978 Hammersmith, UK; m Susan Reidy

G-36

Michael Gleeson b c1825 Coore or Connolly, County Clare, Ireland; m Margaret McCarthy - [WJGleeson AT aol.com]
2 Patrick Gleeson b 1849 Coore, County Clare, Ireland; d 1914 East Haddam, Connecticut
3 James F Gleeson b 1882 East Haddam, CT; d 1942 East Haddam, CT; m Anna Schroeder
4 Eugene F Gleeson b 1912 Brooklyn, New York; d 1992 CT; m Gertrude Bonsing

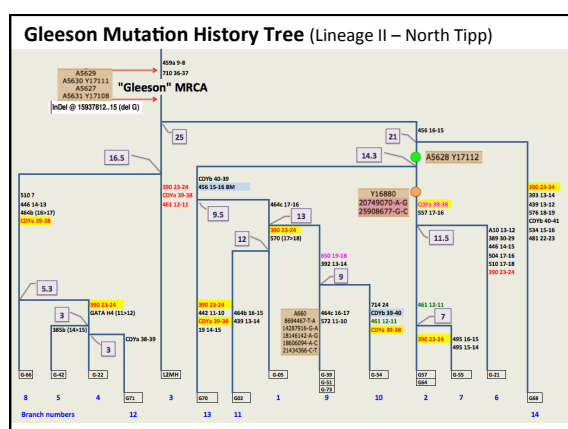
G-33

Matthew Gleeson b c1830 prob Coore or Connolly, County Clare, Ireland; m Sarah (Sally) Walsh - [WJGleeson AT aol.com]
2 Cornelius Gleeson b 1886 Coore, County Clare, Ireland; d 1938 Coore, Co Clare, Ireland; m Margaret Sexton
3 Matthew Gleeson b 1898 Coore, County Clare, Ireland; d 1978 Coore, County Clare, Ireland; m Bridget Cleary

G-35

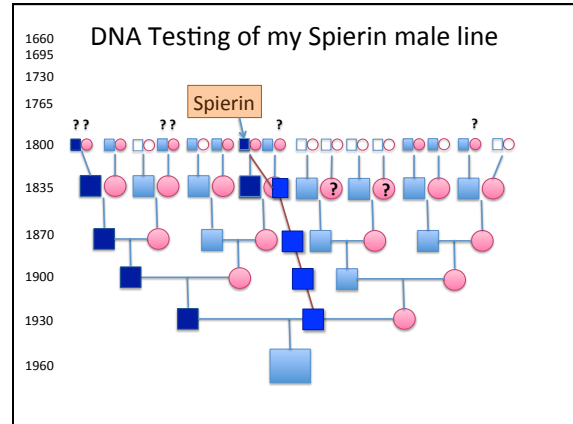
Michael Gleeson b c1831 Coore or Connolly, County Clare, Ireland; d 1896 Corbally (Kilkee), Ireland; m Bridget Moloney - [WJGleeson AT aol.com]
2 Matthew Gleeson b 1879 Mountscott, County Clare, Ireland; d 1955 Kansas City, Missouri; m Elizabeth Moran
3 James Gleeson b 1912 Kansas City, MO; d 1996 Kansas City, MO; m (1) Margaret Sullivan **G-43** (2) Julia Drago


G-32



Spearin Surname Project

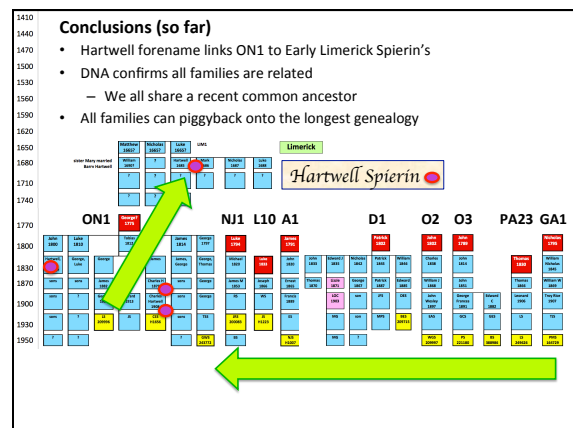
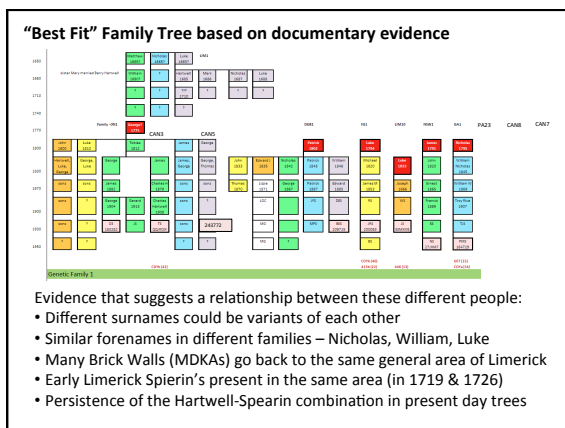
Tracing an Irish family back to the 1400's?





Spearin Surname Project - Y-DNA Colorized Chart

Kit Number	Haplogroup	DYS393	DYS391	DYS394	DYS398	DYS434	DYS438	DYS454	DYS456	DYS457	DYS458	Y-GEN TAIM	Y-GEN TAIM	Y-GEN TAIM
Genetic Family 1 - I2b1														
H1172	I2b1	Spearing, Luke Spearing, 1784-1860 (see 200063)	20	27	11	14	14	15	11	9	19	21	14	12
<p>Lesson 1 You are all closely genetically related!</p> <p>Lesson 2 Beware of surname spelling – it is misleading</p> <p>Lesson 3 You are on the right track – keep going</p> <p>Lesson 4 Any Spearin(g) who can trace their ancestry back to Limerick is probably a close genetic match to everyone in Genetic Family 1</p>														
http://en.wikipedia.org/wiki/List_of_YIS_markers (and mutation rates)														



- Haplogroup projects
 - Use SNP testing (e.g. Big Y) to define smaller branches
 - Subgroups may eventually be associated with specific clans, tribes, and ethnic groups
 - R1b & subclades project signposts to smaller projects
 - R-L21, R-M222, R-Z255, R-L226
- Geographical projects
 - Ireland Y-DNA, Munster Irish, Ulster Heritage
 - Cornwall, Devon, Northumberland, Essex, Wessex, Anglo-Saxon, Bristol Channel, Isle of Man ...
- Heritage Projects
 - Scottish Prisoners

- Deep Ancestry, human migration path, Haplogroup
- May eventually link up to the Ancient Annals
- Useful for confirming a relationship between two men on their direct **male** lines
- >8000 surname projects on FTDNA
 - can tell you which branch you belong to?
- Geographic Projects elucidate the relationship of your surname to others in the same area
- Haplogroup Projects tell you what SNP to test next
- Heritage Projects – what happened to a particular group
- Project Admins are a source for advice and support

\$129 = £98

Deep Ancestry
Recent Ancestry

↑



EXPANSION TIMES (years ago)

Africa	120,000 - 150,000
Out of Africa	50,000 - 70,000
Asia	40,000 - 70,000
Australo/PNG	40,000 - 60,000
Europe	30,000 - 50,000
Americas	15,000 - 20,000
N. Amer./E./Alutia	8,000 - 10,000

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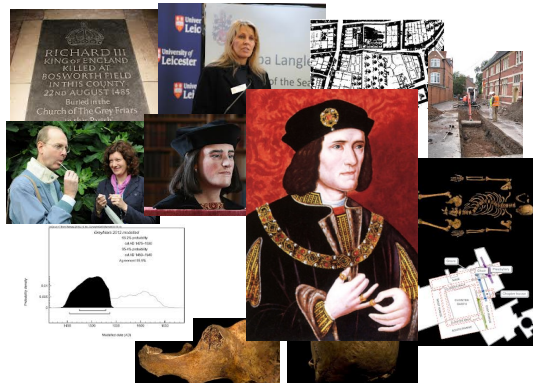
mtDNA Migrations Map

EXPANSION TIMES (years ago)	
Africa	120,000 - 150,000
Out of Africa	55,000 - 75,000
Asia	40,000 - 70,000
Australia/PNG	40,000 - 60,000
Europe	35,000 - 50,000
Americas	15,000 - 35,000
Na-Dene/Esk/Aleuts	8,000 - 10,000



FamilyTreeDNA
mtDNA Migrations Map

Richard III
the hunchback king



Family connection

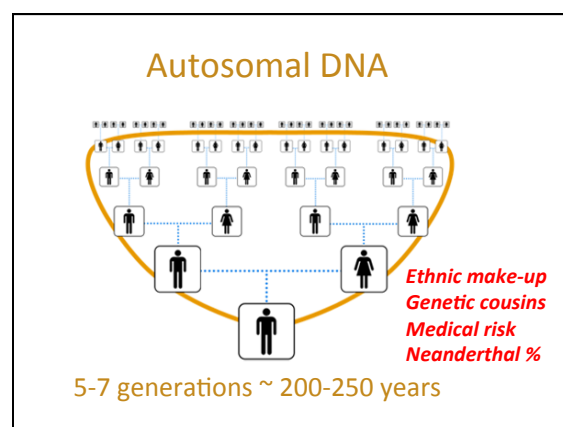
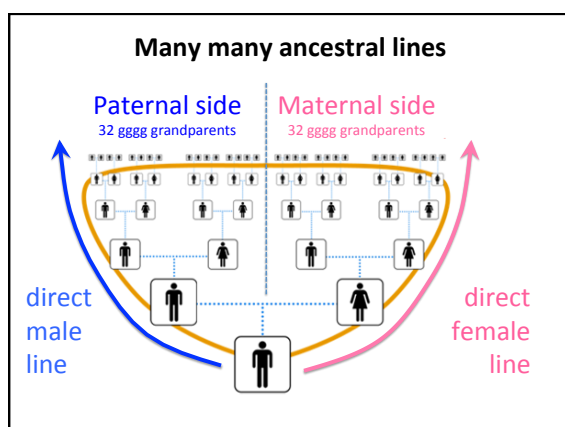
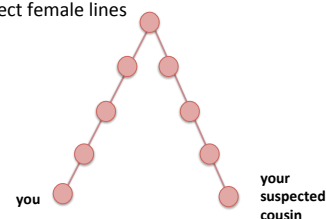
Unbroken Female line from Richard III's mother to Michael Ibsen
A match on the DNA test is only one piece of evidence
The totality of the evidence suggests ... this is Richard III

www.thestar.com/news/world/2013/02/05/Richard-III-family-tree.html

So is a mt-DNA test the best test for you?

- Deep Ancestry, Haplogroup
- Useful for confirming a relationship between two people on their direct female lines
- Project Admins are a source for advice and support

\$69 = £45



Y-DNA
R-M222
NOTNH
35%

mtDNA
European
10%

Prof Henry Louis Gates

http://www.theroot.com/articles/history/2013/02/how_mixed_are_african_americans.html

<https://www.youtube.com/watch?v=OhppMV6YPj0>

FamilyTreeDNA

NATIONAL GEOGRAPHIC THE GENOGRAPHIC PROJECT

AFRICANDNA

ancestryDNA

23andMe

AFRICAN ANCESTRY
TRACE YOUR DNA. FIND YOUR ROOTS.

Ireland's DNA
Britain's DNA
Scotland's DNA

See also
http://www.isogg.org/wiki/Y-DNA_testing_comparison_chart
http://www.isogg.org/wiki/MtDNA_testing_comparison_chart
http://www.isogg.org/wiki/Autosomal_DNA_testing_comparison_chart

GEDmatch

Tools for DNA & Genealogy Research

Upload Data from your testing company

Learn More

Analyze Your Data

DNA raw data

- 'One-to-many' matches
- 'One-to-one' compare
- 'X' 'One-to-one'
- Admixture
- Phasing
- Predict Eye Color
- Are your parents related?
- Find people who match with you on a specified segment
- People who match one or both of 2 kits
- 3D Chromosome Browser
- NEW
- Analyze DNA file upload for potential problems. NEW

Genealogy

- 1 GEDCOM to all
- 2 GEDCOMs
- GEDCOM + DNA

Your 'Matches' file

- Triangulation
- Chromosome Browser

SNP analysis utilities

- These utilities require that you have joined the 'Open sharing' group on the left of the bottom of the 'Check Resources' box on this page to 20%
- Rare SNP (minor alleles)
- SNP comparison search
- Utility BETA TEST

Upload your data to GEDmatch

who matches your DNA

the Triangulation utility

the Chromosome Browsers

matches to your genealogy

the Admixture utilities

use policy

of GEDmatch batch processing times

asked Questions (FAQ)

here first if you have problems using GEDmatch

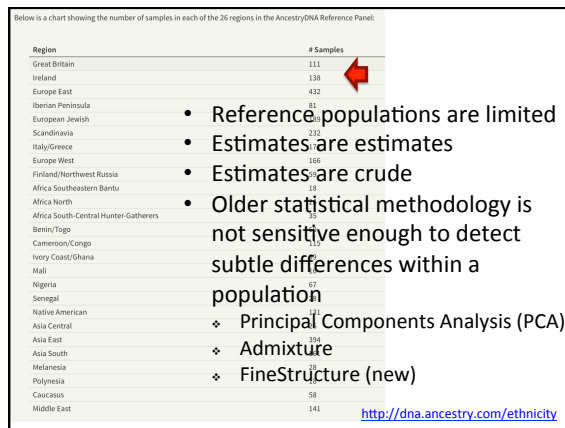
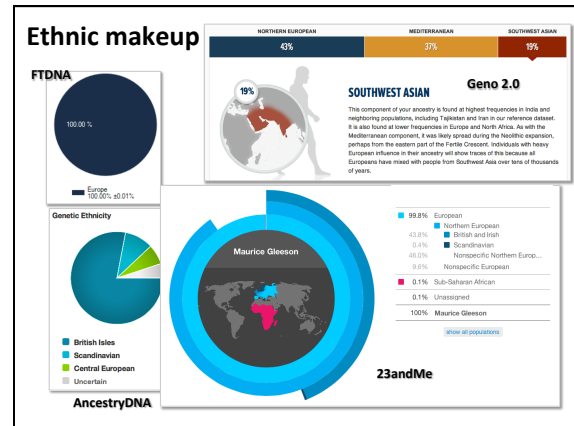
experiencing issues after having read the FAQ, please

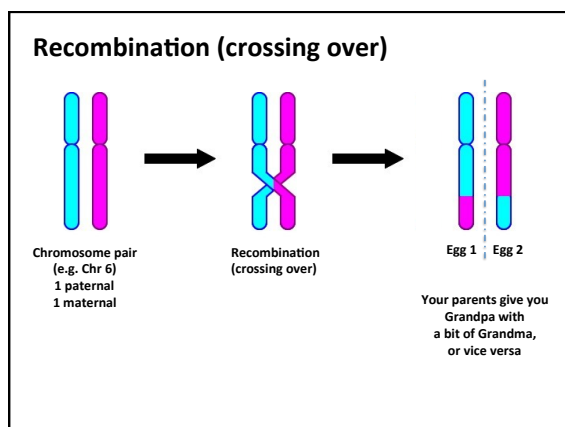
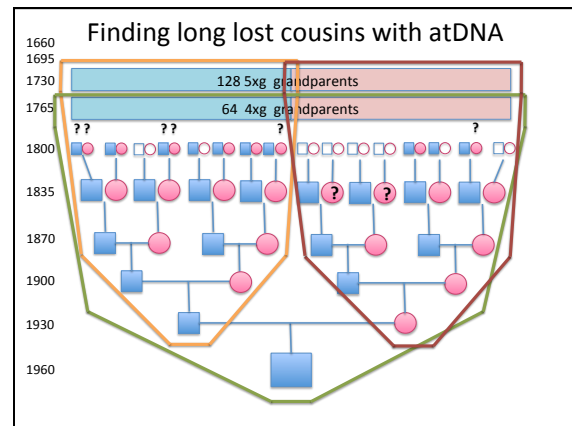
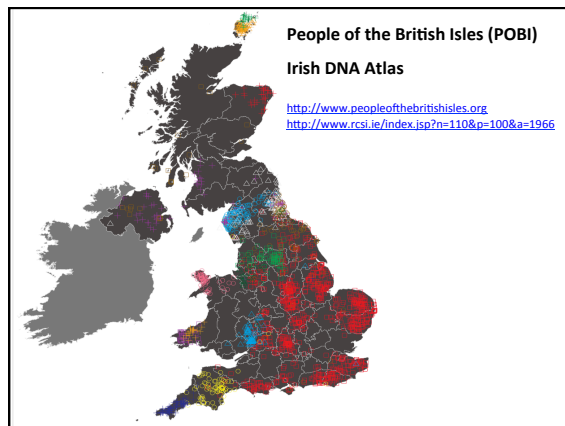
EDmatch@gmail.com. Please remember we're just a

worked volunteers, and we may not be able to respond to

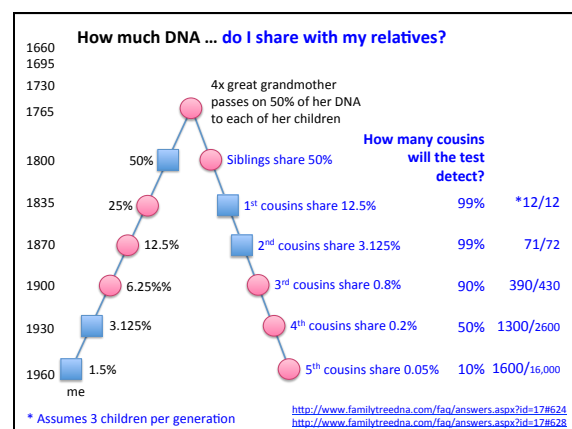
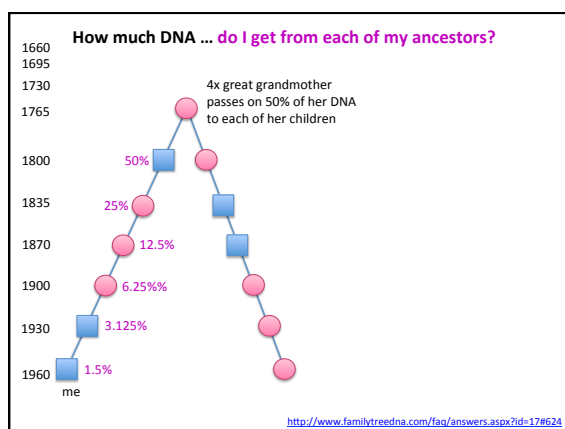
timely fashion.

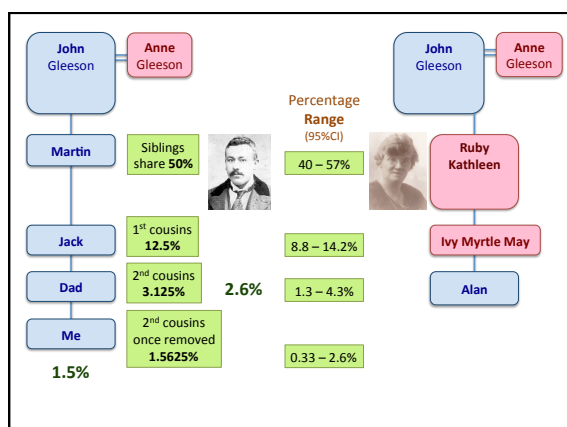
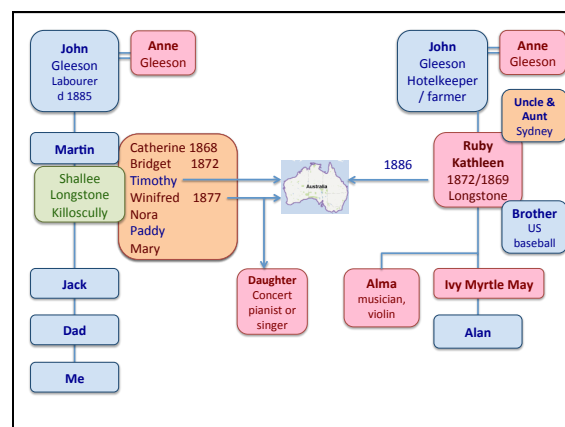
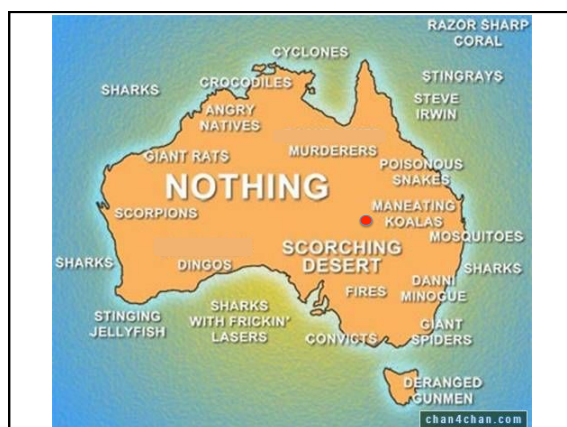
www.gedmatch.com





- The Genetic Lottery**
- **Independent Assortment** shuffles up whole chromosomes
 - Only half get passed on to an egg or sperm cell
 - **Recombination** breaks up individual chromosomes and recombines them to form new chromosomes that are completely different to those of the parent
 - You get Grandpa with a bit of Grandma (or vice versa)
 - Both processes start from scratch each time an egg is formed
 - Each cell division produces a completely new random assortment of DNA – this is why siblings are not the same
 - X gets shuffled (only with another X), Y does not





What has autosomal DNA testing told us?

- Dad & Alan are definitely (genetically) related - "Best Fit" is 2nd cousins
- It has confirmed a suspected relationship (~99% probable)
- Many unanswered questions remain => DNA helps focus further research
 - Which of the sisters became Ruby Kathleen? Was there another sister?
- Ruby Kathleen has been saved from the shoebox of obscurity!
- We have new cousins in Australia (& vice versa)

Autosomal DNA can ...

- answer specific questions
- confirm 2 people related
- help focus research
- be a useful extra tool

The diagram illustrates the results of autosomal DNA testing for a family. It shows a family tree on the left, a central table of genetic relationships, and a family tree on the right.

Left Family Tree:

- John Gleeson (blue box) and Anne Gleeson (pink box) are parents of Martin (blue box).
- Martin is the father of Jack (blue box).
- Jack is the father of Dad (blue box).
- Dad is the father of Me (blue box).

Central Genetic Relationships Table:

Relationship	Percentage Range (95%CI)	Value
Siblings share 50%	40 – 57%	
1 st cousins	12.5%	8.8 – 14.2%
2 nd cousins	3.125%	1.3 – 4.3%
2 nd cousins once removed	1.5625%	0.33 – 2.6%
		2.4%

Right Family Tree:

- John Gleeson (blue box) and Anne Gleeson (pink box) are parents of Ruby Kathleen (pink box).
- Ruby Kathleen is the mother of Ivy Myrtle May (pink box).
- Ivy Myrtle May is the mother of Alan (blue box).

Switch to atDNA MASTER slides