

GENEALOGY -- THE BASICS

Documentation



FAMILY TREES

1. Do your own research

- Other's family trees may not be correct
- Lots of trees with same people doesn't make it right
- Doing your own research sometimes finds more and better info
- Only use others' trees as "hints"

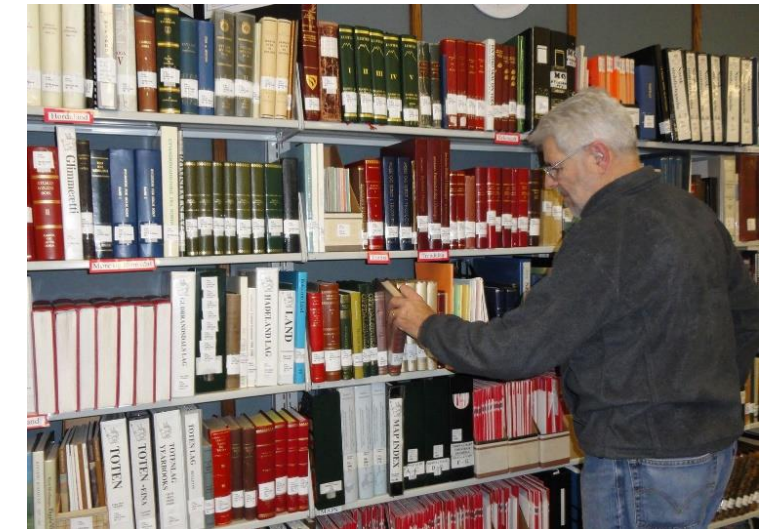
2. Does it make sense?

3. Find source material to supplement and support your documentation

4. Don't wait – Record your sources and citations when you find them

GENEALOGY -- THE BASICS

Libraries for Local History



- 1. Most libraries have some form of local history records**
- 2. Collections are usually specific to their town or county**
- 3. Small town libraries have lots of info that has never been digitized**
- 4. Very helpful staff because they are enthusiastic about the subject matter**
- 5. Enthusiasm for the subject is reflected in their knowledge base**

GENEALOGY -- THE BASICS

Websites



Examples:

1. Family history for-profit sites: Ancestry, MyHeritage, FindMyPast
2. Non-profit family history sites: FamilySearch, many state and county websites
3. International: PRONI (Public Record Office of Northern Ireland), GRO (General Record Office)

DNA -- THE BASICS

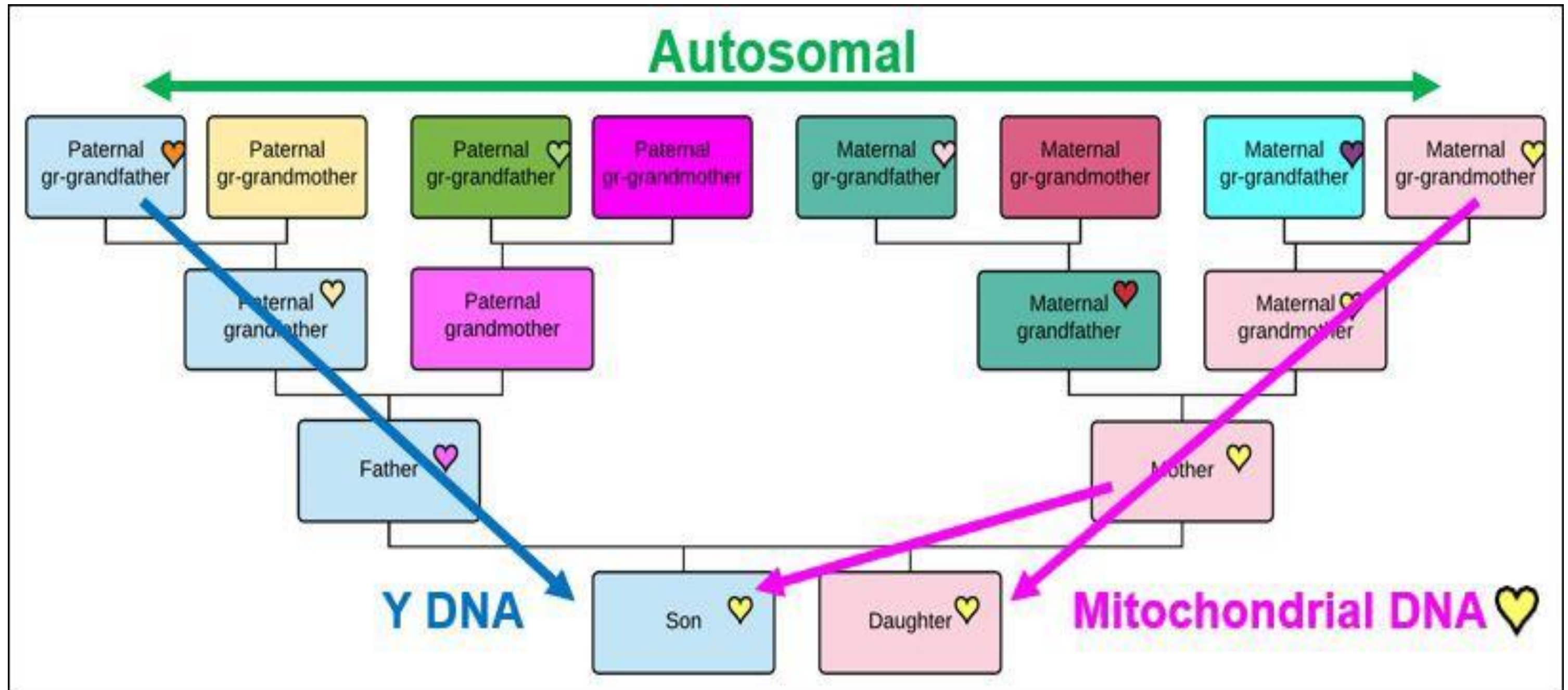
Types of DNA Testing -- Overview



- Autosomal DNA (atDNA) - somewhat useful
- Y-DNA - most useful for genealogy/surname studies
- Mitochondrial DNA (mtDNA) - not useful for genealogy
- Testing considerations - NPEs and Ethnicity Estimates
- *Note: Clan MacAulay Association isn't a testing company, doesn't sell tests, and doesn't store test results. However, we have volunteers who can help guide your testing and help with interpretation of your results.*

DNA -- THE BASICS

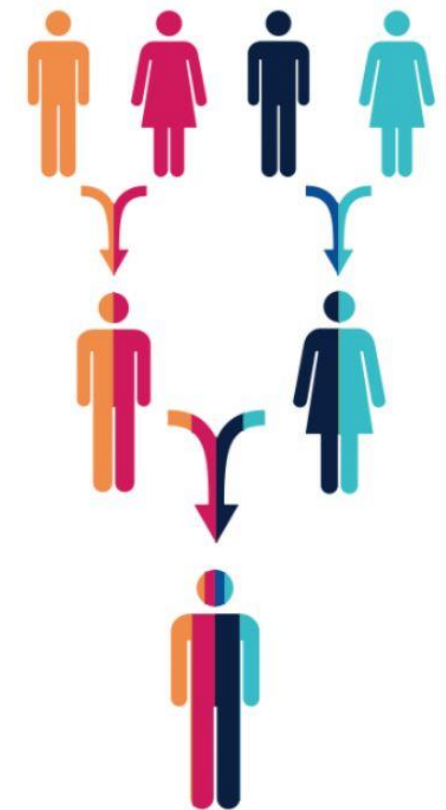
Comparison of different types of DNA tests



DNA -- THE BASICS

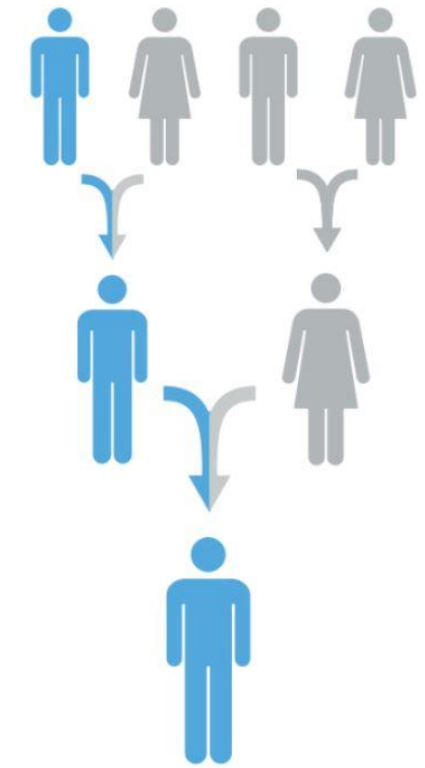
Types of DNA Testing - Autosomal

- Both males and females have atDNA from 22 pairs of chromosomes + the X chromosome
- One set of 22 chromosomes inherited from each parent (i.e., 50% of your DNA from each parent)
- atDNA matches can be related on any family line
- As far back as 4-6 generations (~200-250 years)
- Autosomal DNA tests are available from: AncestryDNA, Family Tree DNA, MyHeritage, and 23andMe



DNA -- THE BASICS

Types of DNA Testing - Y-DNA



- Only males have Y-DNA. The Y chromosome is passed from father to son directly without any female input
- Matching indicates two males have a common paternal ancestor at some point in time, before or after surnames were established (in the UK and Ireland, this is between ~1200s-1700s depending on region).
- Family Tree DNA does >95% of the Y-DNA testing in the world and is the only company which has a matching database for all levels of testing offered. They store DNA samples for ease of future testing.

DNA -- THE BASICS

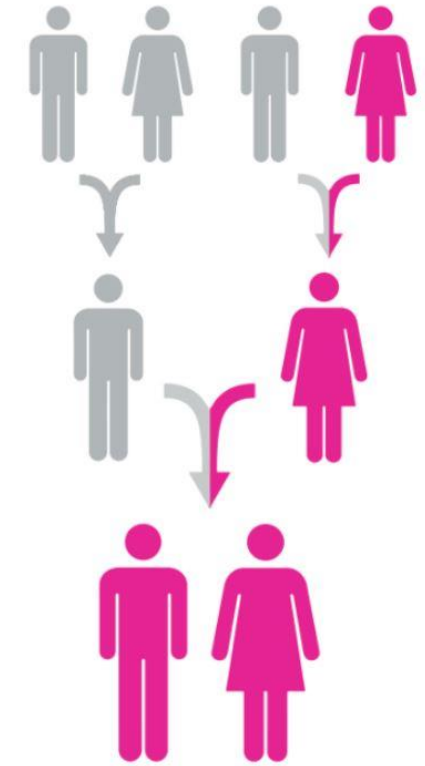
Comparison of Y-DNA Testing Levels

3 Different Levels currently offered by FamilyTreeDNA

| Y37 (STR test) | Y111 (STR test) | Big Y700 (SNP Discovery test) |
|---|---|---|
| <ul style="list-style-type: none">- scans 37 regions of the Y chromosome- most matches within the last~2,000 years but some (up to 30-40%) can be much further back- mainly used as an initial test to check if a male is a match at all- cannot tell you how you are related to a match | <ul style="list-style-type: none">- scans 111 regions of the Y chromosome (includes Y37)- most matches within the last 1,000 years- refines matches that have also tested at Y111- can give some hints at how two males are related but isn't always clear | <ul style="list-style-type: none">- scans ~16 millions positions on the Y chromosome (includes Y111)- identifies single-letter mutations (SNPs) that have occurred in this line- SNPs identify family branches in genealogical time as well as ancient/pre-surname origins going back many thousands of years |

DNA -- THE BASICS

Types of DNA Testing - mtDNA



- Both males and females have mtDNA (mitochondrial DNA)
- Passed from mothers to their children, so follows a direct female line over multiple consecutive generations
- A match between 2 people indicates they have a common maternal ancestor but even near or exact matches can be thousands of years away
- mtDNA rarely mutates and therefore is rarely useful for genealogical research (as opposed to Y-DNA)

DNA -- THE BASICS

DNA Testing Considerations

- 1. NPE = “Non-Paternal Event” (or “Not Parent Expected”) usually found/confirmed with Y-DNA testing**
 - **Illegitimate births (most common)**
 - **Adoptions (official and unofficial)**
 - **Widow remarries and children take their step-father’s surname**
 - **Hidden relationships during marriage**
- 2. Ethnicity Estimates**
 - **DNA does not adhere to modern geo-political boundaries**
 - **Estimate is dependent upon the database your DNA is compared against**

Strategies for DNA Testing

Cousins via Most Distant Known Ancestor (MDKA)

- Test yourself to BigY (previous Y37, 111 and other retired STR tests can be upgraded to BigY at a discounted price)
- Use traditional genealogy to identify your most distant cousin:
 - ✓ Trace back to your most distant known (and documented) male-line ancestor
 - ✓ Trace down the male-only line through another son of this ancestor until you can identify one of more living males
- Have one of these most distant cousins test Y37 to check they actually match (in case of hidden NPE), then have them upgrade to BigY
- Resulting branch will show mutations common ancestor was born with

Strategies for DNA Testing

Expanded Y-DNA Testing

- **Look for other surname matches at Y37/Y111 levels who haven't upgraded to BigY and contact them to discuss BigY testing (costs are often shared, and projects FT DNA can facilitate this)**
- **Have them (or help) to identify their most distant cousin as outlined previously**
- **Identify males with the same surname who trace back to the same region, island, parish, etc. who may be related but where documentation is lacking and have them do a Y37 test**
- **Work as a team to continue this process as the resulting genetic tree (via BigY testing) expands**

Strategies for DNA Testing

Autosomal + Y-DNA Testing

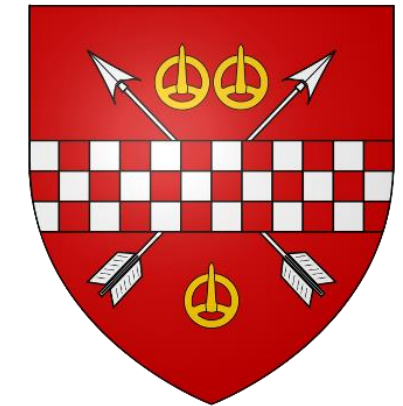
- **Most Y-DNA matches will NOT match each other in their autosomal results due to the different timeframes each test “targets”**
- **On occasion some very distant cousins with the same surname may match each other at the autosomal level**
- **These matches should be contacted**
 - ✓ **If a male, have them do a Y37 test initially, then BigY if a match**
 - ✓ **If a female, see if they have a brother, father, uncle, cousin to do Y37 initially, then BigY if a match**
- **Females with no close male relatives can do autosomal testing to look for potential male cousins of the surname being researched**

ON-LINE RESOURCES (PARTIAL LIST)

- **Y-DNA and autosomal testing**
 - **FamilyTreeDNA - www.familytreedna.com**
 - **Ancestry - www.ancestry.com (there are some international versions of their site)**
 - **23andMe - www.23andme.com**
- **Genealogy sites (free and subscription-based)**
 - **FindMyPast - www.findmypast.com**
 - **FamilySearch (LDS) - www.familysearch.org**
 - **Ancestry (as above)**
- **DNA/Genealogy Blogs**
 - **DNAeXplained (Roberta Estes) - dna-explained.com**
 - **Eastman's Online Genealogy Newsletter - eogn.com**

MACAULAY SURNAME Y-DNA STUDIES

Lewis MacAulays

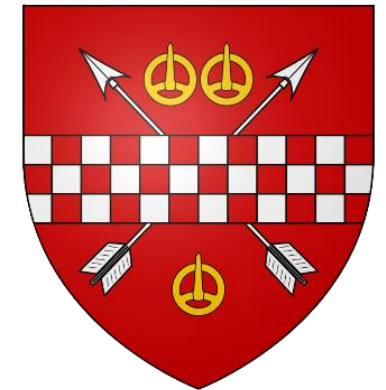


Main aspects of project:

- ~40 men involved currently, most tested to BigY
- Through Y-DNA testing there have been 4 completely distinct and unrelated Macaulay families identified on Lewis
 - ✓ Uig Macaulay family (largest) - trace to a pre-surname ancestor from Ireland who arrived on Lewis around the 1300s
 - ✓ Western Lewis family (originating in Stornoway area, Norse ancestry)
 - ✓ Croir (Great Bernera) family - confirmed as a Macleod of Caithness NPE in the 1600s/1700s (Macaulay female, Macleod male)
 - ✓ Carloway family - doesn't match documentation, possible hidden NPE

MACAULAY SURNAME Y-DNA STUDIES

Antrim MacAulays



Main aspects of project:

- Over 50 men involved currently, with ~50 BigY tested
- Y-DNA testing has shown a common origin point with a MacAulay male living in County Antrim, Ireland (now Northern Ireland) in the 1300s/1400s or slightly earlier
- The closest non-MacAulay match is a McMath, whose family traces back to Ayrshire in southern Scotland. The McMath family held land in the Dumfries-shire area just a bit further south
- Y-DNA proves that a common male ancestor (pre-surname?) came to County Antrim area in the 1300s. One theory is this is connected with Edward Bruce's military campaign in the early 1300s that set out from Ayrshire, Scotland
- Confirms this family is NOT connected with any other Scottish MacAulay family, especially Ardencaple as some have claimed in the past
- Even further back are Y-DNA connections 1,000-1,500 years ago with males who all trace to the Borders region of England and Scotland