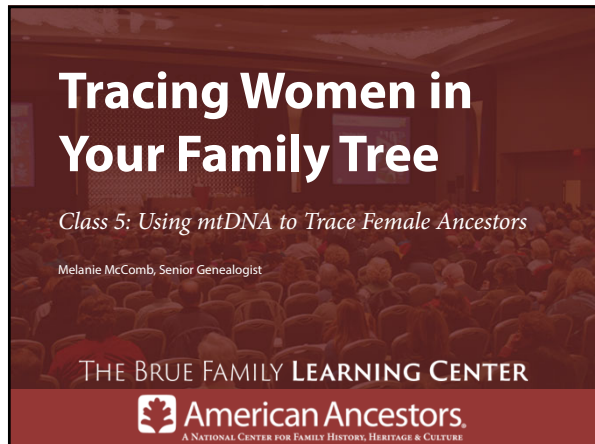
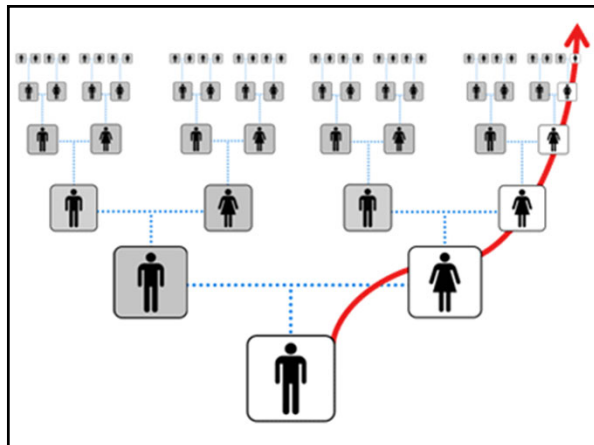








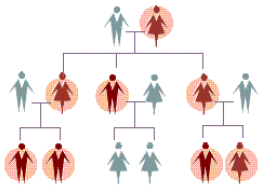
Basics of mitochondrial DNA



Mitochondrial DNA

- Small, circular pieces of DNA located inside the mitochondria of a cell
- Mitochondria are responsible for producing energy within the cell (known as the "powerhouse")

Basics of mtDnA

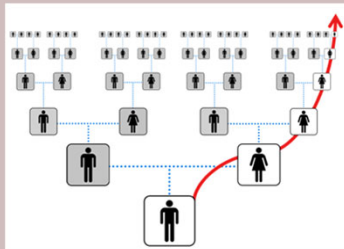


- Inherited from mother to child
- Males inherit mtDNA, but do not pass mtDNA to their child

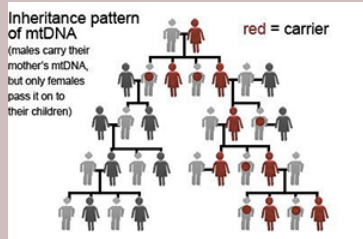
Basics of mtDNA Cont'd

- Matrilineal-related people (even several generations back) share the same mtDNA markers
- People who do not share the same markers are not matrilineally related within recorded history (a few centuries)
- Most cases involve the solicitation of many people and existing descendants who have already participated

Examples of Inheritance



mtDNA (descendancy)



mtDNA is Best for:

- Researching your maternal ancestry
- Comparing to see if two people have the same mother or maternal grandmother
- Comparing female immigrants to the new world (to the 1600s)

Examples of Genealogical Uses for mtDNA

- Identifying the maternal lineage of an ancestor
- Determining the correct wife a child descends from
- Forensic genealogy cases

[e]

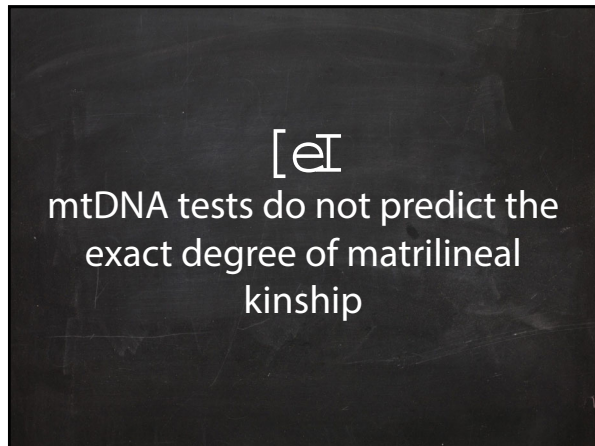
mtDNA research will not be applicable for many challenges involving female ancestors (or your own is “useless”)

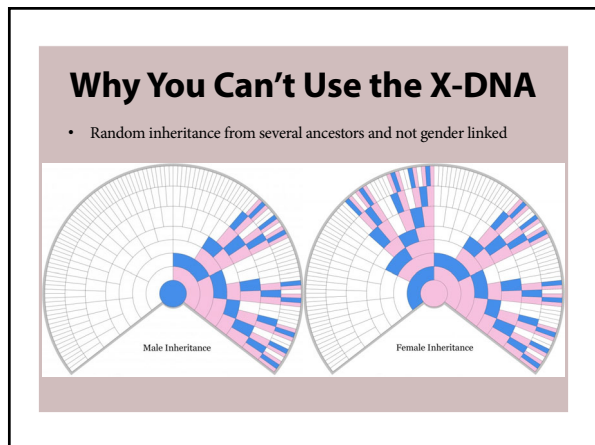
Companies That Offer mtDNA Tests

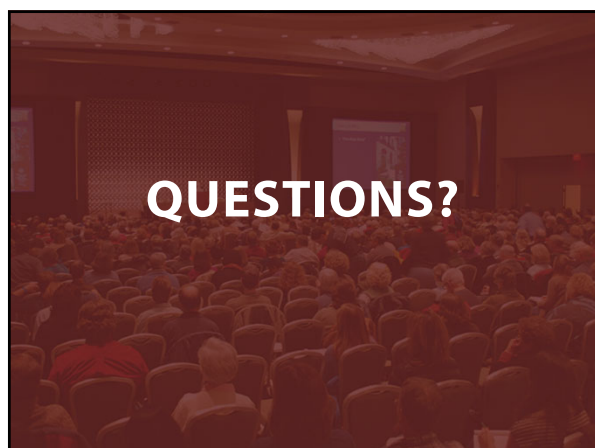
- FamilyTreeDNA is largely the only option for meaningful mtDNA analysis, offering mtDNA Full Sequence (\$159)
- Living DNA also offers mtDNA test – smaller database of matches
- 23andme's test will indicate the mtDNA haplogroup only

What is a full sequence mtDNA test?

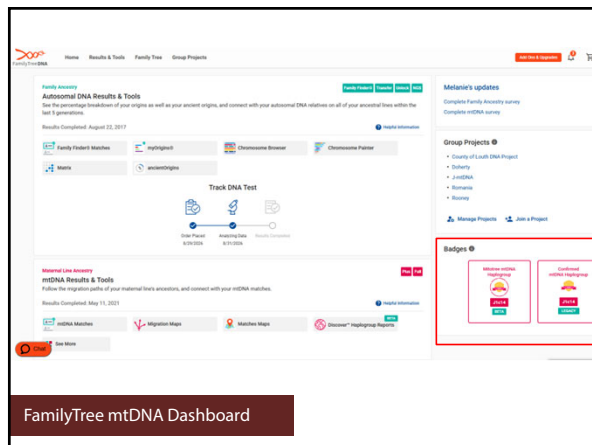
- Sequences all 16,569 base pairs of the mitochondrial genome
- This covers the hypervariable regions (HVR1 and HVR2) and the large central coding region
- HVR1 & HVR2 have fast-mutating sections
- Coding region is slower-mutating







Understanding Your Results at FamilyTree DNA

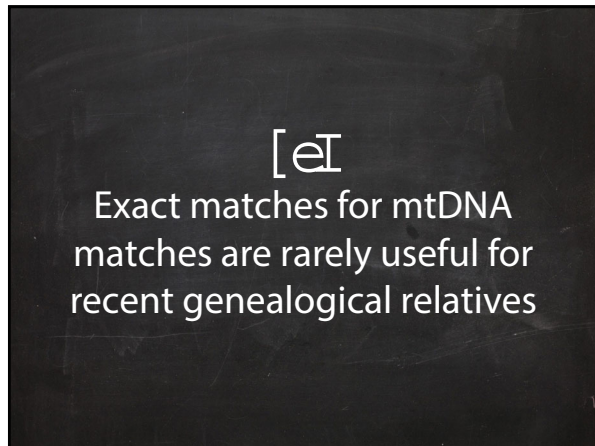


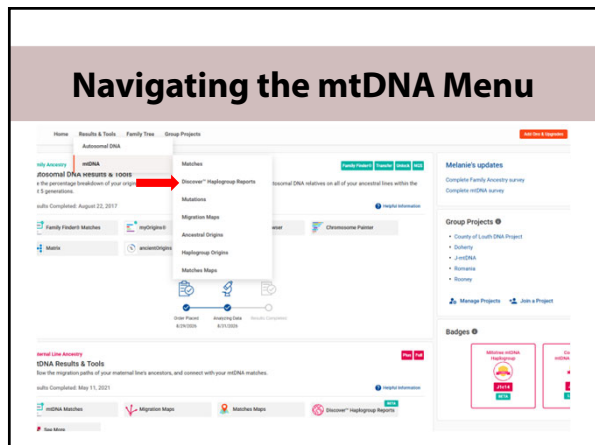
FamilyTree mtDNA Dashboard

Haplogroups

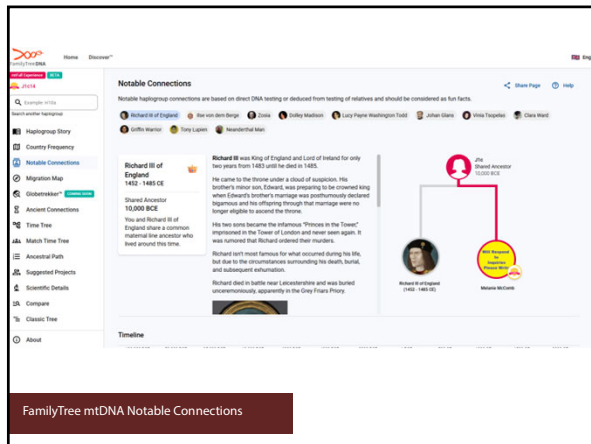
- Y-DNA and mitochondrial tests generate a haplogroup
 - Made up of letters and numbers
- Each haplogroup is associated with an approximate time and place where it arose from
 - Example: Haplogroup J arose 45,000 years ago in the Near East or Caucasus region





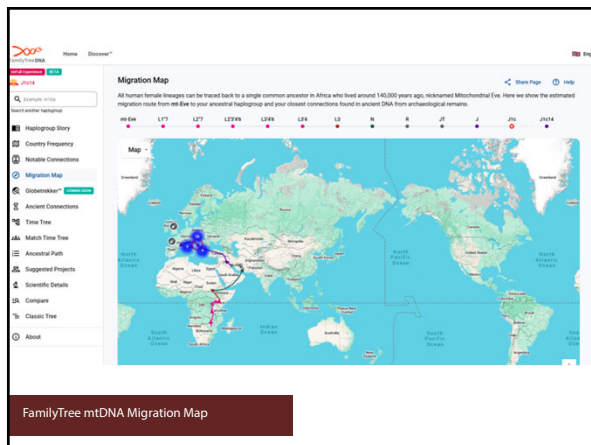






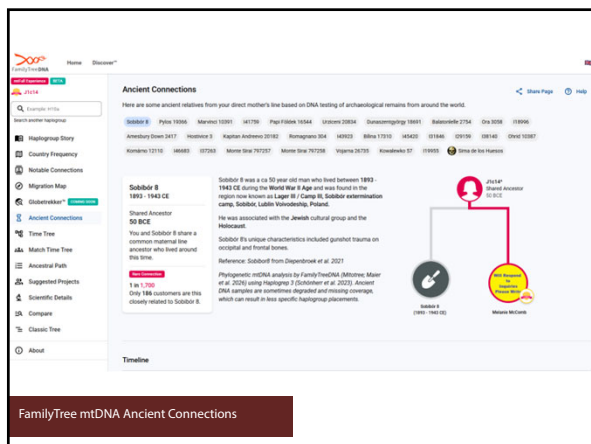
The screenshot shows the 'Notable Connections' page on the FamilyTree mtDNA website. The page features a sidebar on the left with navigation options like 'Home', 'Discover', 'Search', 'Example Y-DNA', 'Haplogroup Story', 'Country Frequency', 'Migration Map', 'Notable Connections', 'Global Explorer', 'Time Tree', 'Match Time Tree', 'Ancestral Path', 'Suggested Projects', 'Scientific Details', 'Compare', 'Classic Tree', and 'About'. The main content area is titled 'Notable Connections' and includes a list of notable figures with their mtDNA haplogroups and a brief description of their historical significance. A prominent example is 'Richard III of England' (1452 - 1485 CE), who is noted as the last Plantagenet king of England. The page also features a 'Timeline' section at the bottom.

FamilyTree mtDNA Notable Connections



The screenshot shows the 'Migration Map' page on the FamilyTree mtDNA website. The page features a sidebar on the left with navigation options like 'Home', 'Discover', 'Search', 'Example Y-DNA', 'Haplogroup Story', 'Country Frequency', 'Migration Map', 'Notable Connections', 'Global Explorer', 'Time Tree', 'Match Time Tree', 'Ancestral Path', 'Suggested Projects', 'Scientific Details', 'Compare', 'Classic Tree', and 'About'. The main content area is titled 'Migration Map' and includes a world map showing the estimated migration routes of human females from Africa to the rest of the world. The map is color-coded by haplogroup, and a legend at the top explains the color coding. The page also includes a 'Timeline' section at the bottom.

FamilyTree mtDNA Migration Map



The screenshot shows the 'Ancient Connections' page on the FamilyTree mtDNA website. The page features a sidebar on the left with navigation options like 'Home', 'Discover', 'Search', 'Example Y-DNA', 'Haplogroup Story', 'Country Frequency', 'Migration Map', 'Notable Connections', 'Global Explorer', 'Time Tree', 'Match Time Tree', 'Ancestral Path', 'Suggested Projects', 'Scientific Details', 'Compare', 'Classic Tree', and 'About'. The main content area is titled 'Ancient Connections' and includes a list of ancient figures with their mtDNA haplogroups and a brief description of their historical significance. A prominent example is 'Subbotin I' (1893 - 1943 CE), who is noted as a Jewish man who lived in the region now known as Lager III / Camp III, Subbotin extermination camp, Subbotin, Lublin Voivodeship, Poland. The page also features a 'Timeline' section at the bottom.

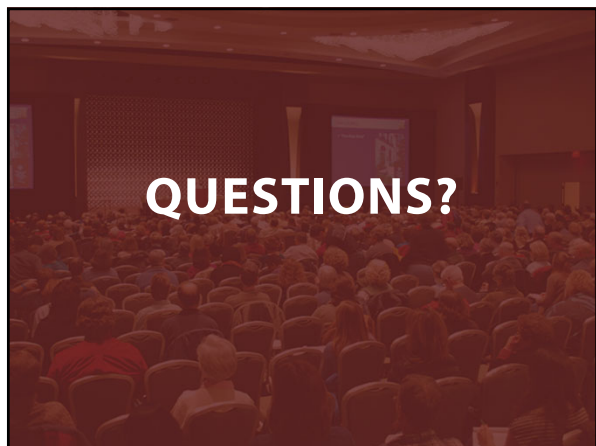
FamilyTree mtDNA Ancient Connections

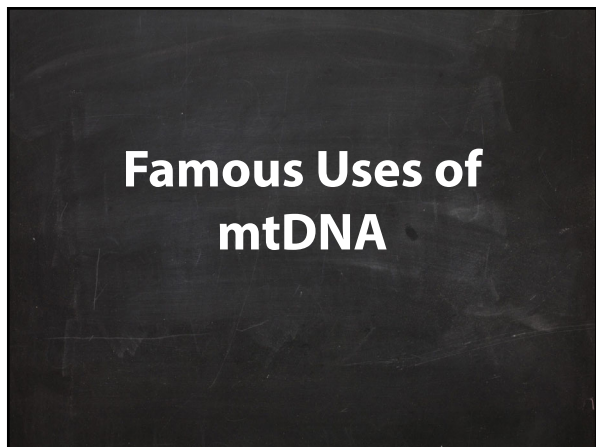


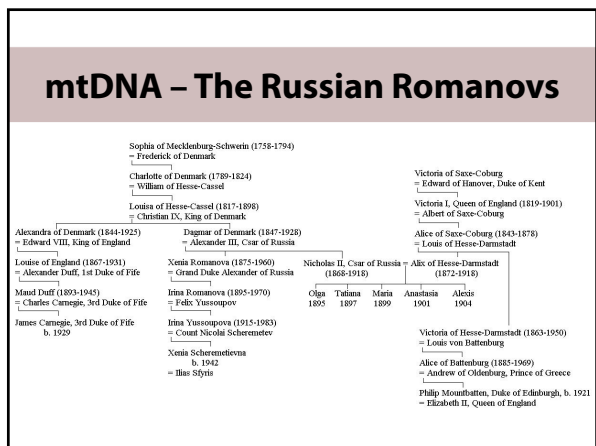
FamilyTree mtDNA Project Test Results

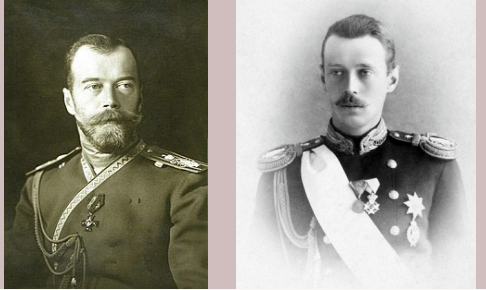
FamilyTree mtDNA Project Test Results

FamilyTree mtDNA Project Test Results







mtDNA mismatch - heteroplasmy

Tomb of Estrid Svensdatter

- Buried near son Sven II, one of the last Danish Viking Kings who died 1074
- Died around 70 years old
- Was this her tomb or one of Sven's daughters-in-law?
- Body was about 35 years old



Louis XVII, Titular King of France

- Died of Tuberculosis in 1795 (parents guillotined two years earlier)
- Doctor who performed autopsy smuggled heart away from Paris in a handkerchief
- Stolen by a student
- Returned to the Spanish Bourbons
- In 1975 given to Basilica of Saint-Denis, home of the royal Bourbon crypt
- DNA tests done in 2004



Heart gets Royal Funeral



Richard III, Leicester

- Killed at Battle of Bosworth 1485
- Buried beneath by Church of the Grey Friars, Leicester
- Church demolished during Henry VIII's dissolution of monasteries
- Remains found under car park

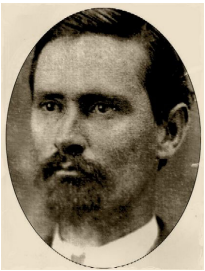


Eighteen matrilineal generations!

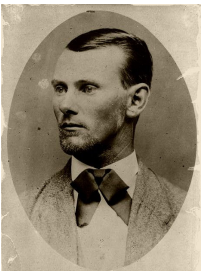
Anne of York, Duchess of Exeter, 1439-1476, mother of
 Anne St Leger, 1476-1526, mother of
 Catherine Manners, c.1500-?, mother of
 Barbara Constable, c.1525-?, mother of
 Margaret Babthorpe, c.1550-1628, mother of
 Barbara Cholmley, c.1580-1618, mother of
 Barbara Belasyse, 1609-1641, mother of
 Barbara Slingsby, c.1637-?, mother of
 Barbara Talbot, 1665-1763, mother of
 Barbara Yelverton, 1687-?, mother of
 Barbara Calthorpe, c.1716-1782, mother of
 Barbara Gough-Calthorpe, 1744-1826, mother of
 Anne Spooner, 1780-1873, mother of
 Charlotte Vansittart Neale, 1817-1891, mother of
 Charlotte Vansittart Frere, 1846-1917(?), mother of
 Muriel Stokes, 1884-1961, mother of
 Joy Brown (Ibsen), 1926-2008, mother of
 Michael Ibsen¹¹

**Jesse James, J. Frank Dalton,
James LaFayette Courtney**



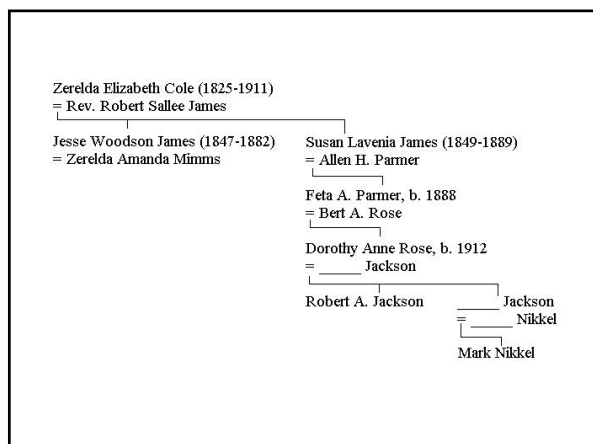


James LaFayette Courtney



Jesse James

Anne
= Edward Dorsey (1615-1659) of Anne Arundel Co., Maryland
Anne Dorsey (ca. 1649-1698)
= Nicholas Greenbury
Katherine Greenbury (1672-1703)
= John Howard, Jr.
Katherine Howard
= Orlando Griffith
Sara Griffith
= Nicholas Dorsey, Jr.
Rachel Dorsey
= Anthony Lindsay, Jr.
Sallie Lindsay
= James Cole
Zerelda Elizabeth Cole (1825-1911)
= Rev. Robert Sallee James
Jesse Woodson James (1847-1882)
= Zerelda Amanda Mimms



Could More Be Done?

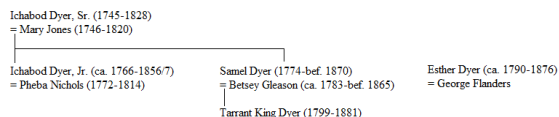
- Y-DNA analysis was not undertaken, but is possible
- Y-DNA analysis was done on the Courtney-Haun family, despite members of that family disagreeing with results

New England Examples

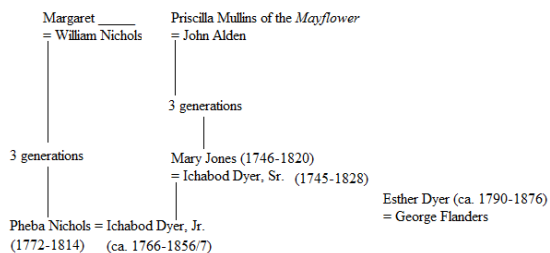
Esther Dyer of Braintree, Vermont

- Born Vermont, about 1790
- Married Braintree, Vermont, 1814, George Flanders, and moved to New York
- In later censuses, Esther lived with Tarrant Dyer, a grandson of Ichabod Dyer, Sr. of Braintree, Vermont
- Based on the 1800 censuses, Esther could be a daughter of Ichabod Dyer, Jr., or his eldest son Ichabod Dyer, Jr.

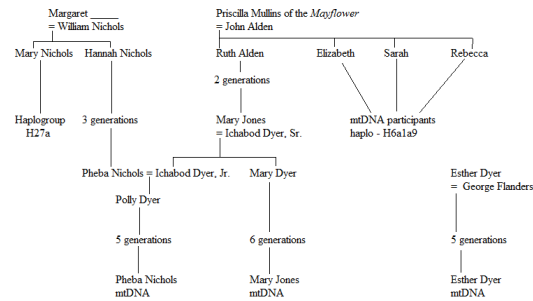
Which family does Esther belong to?



Matrilineal descendants



Matrilineal descendants

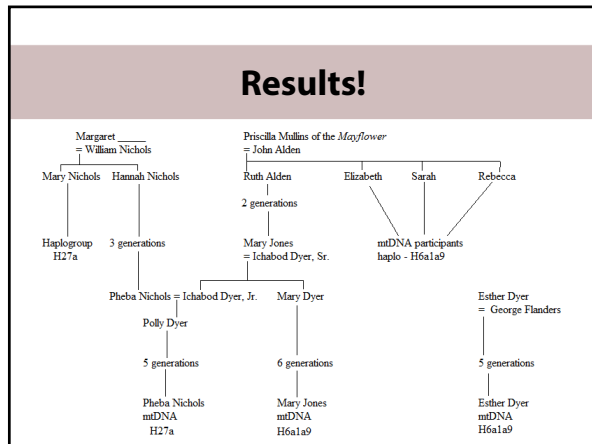


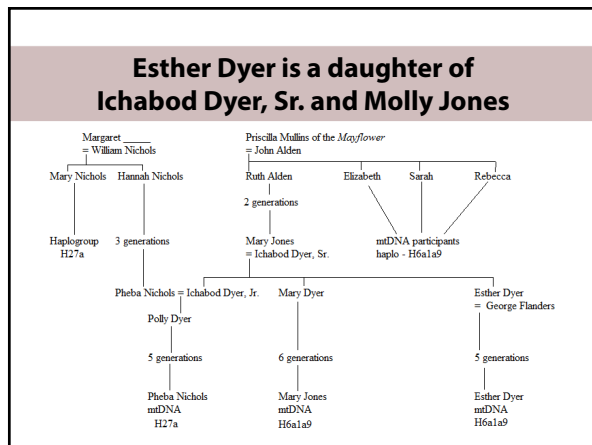
Expected Conclusions

- Matrilineal descendants of Phebe Nichols should match descendants of Margaret (_____) Nichols
- Matrilineal descendants of Mary Jones should match descendants of Priscilla Mullins
- Matrilineal descendants of Esther Dyer should match one of these two groups
- If Esther's descendants match the Nichols bunch, she was a daughter of Phebe Nichols and Ichabod Dyer, Jr.
- If Esther's descendants match the Mullins/Alden bunch, she was a daughter of Mary Jones & Ichabod Dyer, Sr.

Results

Genetic Distance	Name	Earliest Known Ancestor	mtDNA Haplogroup	Match Date
0	Dawn	FMS	H6a1a9	8/4/2017
0	Leonard Maurice Bartley	FMS FF	H6a1a9	5/26/2017
0	Judith	FMS FF	H6a1a9	5/26/2017
0	Lillian	FMS FF	H6a1a9	5/26/2017
0	Ms. L.	FMS FF	H6a1a9	5/26/2017
1	Nick	FMS FF	H6a1a9	11/8/2017
1	Alan	FMS FF	H6a1a9	5/26/2017
1	Mrs. .	FMS FF	H6a1a9	5/26/2017
1	Angelia	FMS FF	H6a1a9	5/26/2017
1	Ms.	FMS FF	H6a1a9	5/26/2017





QUESTIONS?

Schedule a consultation
consultations@americanancestors.org

Hire Research Services
research@americanancestors.org





