

DONALD N. YATES and TERESA A. YATES

8 DNA AND FAMILY

A Moral Imperative

Genealogists Have Responsibility to Communicate with Other Family Members: Genetic Disease Experts

Communicating Genetic Information in Families—A Review of Guidelines and Position Papers

Laura E Forrest et al.

European Journal of Human Genetics 15 (March 2007) 612-618.

According to genetics educators at Royal Children's Hospital in Australia, you have a moral responsibility to let other family members know of any genetic risks or predisposition to disease you have learned about in your genealogy research. The study is the first to assemble guidelines for genetic genealogists in this area.

March 30, 2007

Acadian Anomalies

Anomalous Native American Lineages Now Identified in Micmac

After posting "Anomalous Mitochondrial DNA Lineages in the Cherokee," and after being interviewed on the subject by an Internet radio show host, I was contacted by participants in the Amerindian Ancestry out of Acadia Project who were struck by similarities in results for the two groups.

Established in 2006, the Amerindian Ancestry out of Acadia DNA Project mission is to research and publish the mtDNA and Y chromosome genetic test results of site participants who descend from persons living in Nova Scotia and surrounding environs in the 17th and 18th centuries, focusing specifically upon the early population of l'Acadie. As part of the mission, the Project develops a database of published mtDNA and Y Chromosome test results and encourages the sharing of this information among other similarly focused studies for the purposes of comparison and the advancement of science and research.

According to Project Administrator Marie A. Rundquist, "We descend from both Amerindians (mostly Mi'kmaq) and the early French settlers who arrived in Port Royal in the 1600s, many of them single French men who married Amerindian wives, whose families would become pioneers of the New World. Our family lines have extended well-beyond the original boundaries of what was known to the French as Acadia, but to our AmerIndian ancestors as Mi'kma'ki, as our ancestors settled the outer-reaches of Nova Scotia, including Cape Breton, Newfoundland, New Brunswick, Prince Edward Island and Quebec. Our family lines continue to extend, traversing the entire North American continent and beyond."

She adds, "Many who live in the United States trace their genealogies back to the first Acadian AmerIndian immigrants who arrived in Louisiana after being deported from Nova Scotia by the British in 1755 (in the Grand Deportation)—and belong to a 'Cajun' community known worldwide for its food, flair, fun, and love of all things French."

Several members belong, as it turns out, to rare haplogroups X, U, and other "anomalous types" as compiled by me for DNA Consultants customers and reported in the previous blog post. Some highlights from the study of Cherokee descendants are:

- H, the most common European type today, is virtually absent, demonstrating lack of inflow from recent Europeans
- J present in lines explicitly recognized to be Cherokee
- X the signature of a Canaanite people whose center of diffusion was the Hills of Galilee, hypothetically correlating with Jews and Phoenicians
- U suggesting Eastern Mediterranean, specifically Greek

- K also suggesting Eastern Mediterranean or Middle Eastern, hypothetically correlating with Jews and Phoenicians
- T reflecting Egyptian high frequencies found almost nowhere else

According to Elizabeth Caldwell Hirschman, the Cumberland Gap mtDNA Project with overlapping territory with the Cherokee and Melungeon homelands in the Southern Appalachian Mountains also shows elevated frequencies of T. Project administrator Roberta Estes recently published the results of a large study of Native American Eastern Seaboard mixed populations “in relation to Sir Walter Raleigh’s Lost Colony of Roanoke” in the online *Journal of Genetic Genealogy*, 5(2):96-130, 2009.

Estes is a board member of the Melungeon Historical Society and has an introduction with links to the study and its data on the society’s blog, titled, unfortunately, “Where Have All the Indians Gone?” The Indians are not themselves aware of having gone anywhere but are still here, Roberta. ...

Harvard University professor Barry Fell in his book *Saga America* first published in 1980 presented historical, epigraphic, archeological and linguistic evidence suggesting links between Greeks and Egyptians and the Algonquian Indians of Nova Scotia, Acadia and surrounding regions around the mouth of the St. Lawrence Seaway, particularly the Abnaki (“White”) and Micmac Indians. He noted as early as 1976 in his previous study *America B.C.* that the second century C.E. Greek historian Plutarch recorded “Greeks had settled among the barbarian peoples of the Western Epeiros (continent).” Fell inferred from Plutarch’s passage “these Greeks had intermarried with the barbarians, had adopted their language, but had blended their own Greek language with it.”

In an appendix, he assembled extensive word-lists comparing Abenaki and Micmac vocabulary in the areas of navigation, fishing, astronomy, meteorology, justice and administration, medicine, anatomy, and economy with virtually identical terms in Ptolemaic Greek. One example is Greek *ap’aktes* Abenaki/Micmac *ab’akt* English “a distant shore.” Fell’s work was significantly corroborated and expanded by John H. Cooper, “Ancient Greek Cultural and Linguistic Influences in Atlantic North America,” *NEARA Journal* 35/2.

Acadia project's website is: <http://www.familytreedna.com/public/AcadianAmerIndian/default.aspx>.

November 30, 2009

Melungeon Riddle Solved by Autosomal DNA

After many years in development, the results of a DNA ancestry project enrolling 40 Melungeons were published and made public, marking the end of an attempt to solve the mystery of a Southern U.S. ethnic group with autosomal DNA.

Seeming to lay to rest an old controversy in American history about Melungeons, the scientific data supporting a genetic mixture of white, American Indian and Sub-Saharan African were placed online today by the organizers of DNA Consultants' Melungeon DNA Project.

The data report a sample of 40 Melungeons' DNA fingerprints. Population analysis of the participants' DNA fingerprints was used in an article for *Appalachian Journal*. Titled "Toward a Genetic Profile of Melungeons in Eastern Tennessee," the study was co-authored by Donald N. Yates, principal investigator of DNA Consultants, and Elizabeth Caldwell Hirschman, a professor at Rutgers University in New Brunswick, N.J.

"This is a giant stride forward in understanding the mixed ancestry of Melungeons," said Donald Yates, co-author. "Never before has autosomal DNA been used in attacking the problem."

The 40 participants' names were: Anonymous, Mabel Bentley, Judy Douglas Bloom, Leah Laura Bulgariev, John (Dick) Caldwell, John R. Caldwell, Sr. (deceased), Virginia Caldwell, William Collins, Mary Goodman, Floyd Milton Grimwood (deceased), Ann Reagan Haines, Linda Barnett Hall, Nancy E. Hammes, Elizabeth Caldwell Hirschman, Pat Goin Jones, Brenda LaForce, Everett LaForce, Jessica Kiely Law, Bonnie J. Lyda, N. Brent Kennedy, Richard Kennedy, Margaret E. Kross, MeriDee Orvis Mahan, Karen Mattern, Sebenia Ann Milbacher, Nicolas J. Millington, Holli Starnes Molnar, Nancy Sparks Morrison, Teresa Panther-Yates, Billy Starnes, Julia Starnes, Keely Starnes, Phyllis Starnes, Richard Stewart, Doretha J. Thornton, Kaye M. Viars, Celia Wyckoff, Wayne Winkler, Betty Yates Adams, Donald N. Yates.

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Participants were qualified by their genealogies and included many names familiar to those who follow Melungeon genealogy discussion groups on the Internet, including Brent Kennedy, author of the 1996 book that started the Melungeon Movement, his brother Richard Kennedy; Elizabeth Hirschman, a native of Kingsport, Tenn., along with several members of her family; Wayne Winkler of the Melungeon Heritage Association and author of *Walking Toward the Sunset*; and Nancy Morrison, creator of the online Melungeon Health referral service.

September 16, 2010

Surprises in English and Irish DNA

Over a year ago, there appeared one of the few studies of autosomal DNA in Ireland and Britain. If you have English/Welsh, Irish, northern Irish, Highlands Scottish, Lowlands Scottish or Swedish matches, you will want to read this post. Here is the original article and abstract.

C. T. O'Dushlaine, D. Morris, V. Moskvina, G. Kirov, Consortium IS, M. Gill, A. Corvin, J. F. Wilson, G. L. Cavalleri
Population Structure and Genome-wide Patterns of Variation in Ireland and Britain
European Journal of Human Genetics 2010 Nov;18(11):1248-54.
Epub 2010 Jun 23.

Abstract. Located off the northwestern coast of the European mainland, Britain and Ireland were among the last regions of Europe to be colonized by modern humans after the last glacial maximum. Further, the geographical location of Britain, and in particular of Ireland, is such that the impact of historical migration has been minimal. Genetic diversity studies applying the Y chromosome and mitochondrial systems have indicated reduced diversity and an increased population structure across Britain and Ireland relative to the European mainland. Such characteristics would have implications for genetic mapping studies of complex disease. We set out to further our understanding of the genetic architecture of the region from the perspective of (i) population structure, (ii) linkage disequilibrium (LD), (iii) homozygosity and (iv) haplotype diversity (HD). Analysis was conducted on 3,654 individuals from

Ireland, Britain (with regional sampling in Scotland), Bulgaria, Portugal, Sweden and the Utah HapMap collection. Our results indicate a subtle but clear genetic structure across Britain and Ireland, although levels of structure were reduced in comparison with average cross-European structure. We observed slightly elevated levels of LD and homozygosity in the Irish population compared with neighbouring European populations. We also report on a cline of HD across Europe with greatest levels in southern populations and lowest levels in Ireland and Scotland. These results are consistent with our understanding of the population history of Europe and promote Ireland and Scotland as relatively homogenous resources for genetic mapping of rare variants.

Though the focus was on genome-wide association studies (GWAS) and linkage disequilibrium, or medical aspects of DNA, this study was groundbreaking in using supercomputing and has enormous implications for the history of the British Isles. It used data from over 3,000 individuals from seven populations:

1. Ireland/Dublin
2. Scotland/Aberdeen
3. Bulgaria
4. Portugal
5. Sweden
6. South/Southeast England
7. Utah

Data came from several sources: the International Schizophrenia Consortium, Wellcome Trust Cast Control Consortium 1958 Birth Control Data set, Utah European ancestry population (CEU) and HapMap project.

The study aimed to describe, statistically, four measures of the Irish and English populations:

1. Population structure
2. Linkage disequilibrium, with consequences for the study of common Irish and English genetic disorders
3. ROH, or runs of homozygosity, essentially a reflection of

inbreeding and the remoteness of a population

4. Haplotype diversity (based on SNPs in atDNA)

The main conclusion was that Irish/English forms a separate and unique population since the Ice Age very different from either Bulgarian (SE Europe) or Portuguese (SW Europe), with great affinities to Sweden or Scandinavian populations (p. 1250). For instance, "the breakdown and patterning of LD (linkage disequilibrium) ... is virtually indistinguishable among the Irish, Scottish, southern English, Swedish..." (p. 1250).

"Diversity across Britain and Ireland is reduced in comparison with mainland European populations, with Scotland and Ireland having lower levels than southern England (p. 1251)."

The study postulates that Irish and English linkage with genetic disease came about as a result of population stasis or unchanging conditions. The agricultural revolution swept in a lot of additions to the gene pool in most of Europe, including Southeast England, but in areas like Ireland, Scotland and Sweden the same population stayed on the land with little increase. There was a negative effect on population size during the Norse migrations of the 10th century and in the Irish Potato Famine of the 19th century. The study mentions a "kinship effect" apparent in Irish and Scottish clan histories (p. 1254).

The surprising suggestion is that there may now be a groundswell of research into "Irish" and "Scottish" and "English" diseases comparable to the attention devoted to Jewish diseases.

A related study is: A. Auton, K. Bryc, A. Boyko, K. Lohmueller, J. Novembre, A. Reynolds, A. Indap, M. H. Wright, J. Degenhardt, R. Gutenkunst, K. S. King, M. R. Nelson and C. D. Bustamante, "Global Distribution of Genomic Diversity Underscores Rich Complex History of Continental Human Populations." It appeared in *Genome Research*, February 2009.

May 22, 2011

More Light on the Melungeons

Phyllis Starnes drew together many threads of Melungeon research when she delivered her presentation on autosomal DNA validation studies at the Fifteenth Melungeon Union, held at Warren Wilson College, Swannanoa, N.C., July 15-16, 2011. Sponsored by the Melungeon

Heritage Association of Kingsport, Tenn., the conference was appropriately titled, "Carolina Connections: Roots and Branches of Mixed Ancestry."

Starnes, who is administrator of DNA Consultants' Melungeon DNA Studies as well as an assistant investigator responsible for authoring reports, began her presentation by telling her own story. In 2002, she read an article about the occurrence of familial Mediterranean fever in Appalachia, where she grew up.

"This article was the catalyst for me to address my own health and ancestry," she told participants.

She had met N. Brent Kennedy, author of the touchstone book *The Melungeons: The Resurrection of a Proud People*, and soon became acquainted with both Elizabeth Hirschman (*Melungeons: The Last Lost Tribe in America*) and Donald Panther-Yates, both speakers at Melungeon Fourth Union in Kingsport. The resources she needed for understanding her peculiar heritage were coming together.

Starnes summarized the Hirschman-Yates study of Melungeon DNA results published last December in *Appalachian Journal* and went on to reveal the results of a validation study of the Melungeon data in which the DNA profiles of the 40 participants were fed back into the database atDNA, expanded to reflect the world's only autosomal DNA Melungeon sample.

Many Melungeon DNA project participants, not surprisingly, had Melungeon as their No. 1 match, including Starnes.

In 1990, physical anthropologist and chemist James Guthrie analyzed blood sampled from 177 Southern Appalachian people identifying as Melungeon tested by Pollitzer and Brown in 1969. Guthrie's analysis was consistent to a remarkable degree with the Hirschman-Yates study.

All studies to date have verified and confirmed repeatedly that Melungeon descendants carry an unusual mix of Jewish, Mediterranean, Turkish, Iberian, Native American and African DNA. They also inherit genetic predispositions toward developing familial Mediterranean fever and other disorders.

This overarching thesis explaining what makes Melungeons different was advanced over 20 years ago by Brent Kennedy. It has now been re-examined, probed, tested and validated by unimpeachable follow-up studies. Little has turned up to change Kennedy's original thinking. It

would be wrong to say that Melungeon origins today are controversial or mysterious. There is much we do not know about them, but their genetic and medical profiles are clear.

August 30, 2011

Peter McCormick, Cultural Geographer

Describing himself as "a cultural geographer by training," Peter McCormick contributed an interesting chapter mentioning Melungeons to a recent volume of political science and anthropological essays. Titled *Border Crossings: Transnational Americanist Anthropology*, the collection is edited by Kathleen Sue Fine-Dare and Steven Rubinson and published by the University of Nebraska Press (2009). It may be the first time a practicing academic historian has committed to a considered opinion on the subject since Melungeons first appeared on the radar of Americanists with Price's "tri-racial isolate" definition in the 1950s.

McCormick has a Ph.D. from the University of Oklahoma and is an associate professor of Southwest studies and Native American and indigenous studies at Fort Lewis College in Colorado. His most recent work has been on the autogeography and autohistory of his extended family in the Plains, Southwest, Appalachia, Iberia, South America and Mediterranean.

Here's how he describes Melungeons (p. 286): *The Melungeon population of Appalachia has been the subject of a tremendous amount of interest and controversy lately. A consensus appears to be building that this population, once thought to be small, is rather large and is a result of the mixing of Iberian and Middle Eastern settlers who had been part of Spanish and English trading parties with the indigenous population of the American Southeast. Later migrations into the Piedmont and upper South by refugees of the Inquisition (Sephardic Jews and Moors) in the seventeenth and eighteenth centuries supplemented this population (see Hirschman 2005; Kennedy and Kennedy 1997). Our families were of this mixture.*

Professor McCormick goes on to write about his personal Melungeon genealogy: *Sephardic names include Cuba, Pillo Monnis Callahin, Jorgas, Nassi, Khanadi, Rosa, David, Baez, Santos and Gascon. The families that were at one point crypto Jews include Kieffer, Mayabb,*

Dula D'Aultun, Baigne and Ball. Our Melungeon families are Sizemore, Yates, Brashears, Collins, Lucas, Noel, Bass, Kennedy, Davis, Nash, Mullins, Center and Carrico. The family names on the Miller-Guion and Dawes rolls include Tunnell, Mabe, Waller, Yates and Doolin.

McCormick's testimony and evaluation of the evidence, together with his willingness to name names and self-identify as a Melungeon in academia, are important signs that the Melungeon thesis advanced by Kennedy and further documented by Hirschman and others is winning the day.

We thank McCormick for his part in bringing the true story of Jewish and Middle Eastern ancestry in Appalachia to wider attention.

February 15, 2012

Reconstructing Your Parentage

Every year in the United States about half a million paternity tests are performed proving or disproving whether an alleged father is the true parent of a child. Sometimes there is a court order to do this; at other times, it is sheerly for personal information. The determination of parentage is made based on a simple comparison of a small rock-hard number of genetic markers in the DNA fingerprint of the child and alleged father.

Samples are extracted from a 30-second cheek swab and processed at any of an estimated 2,000 forensic labs across the country. The standard in place since about 1997 has been a set of 30-32 biallelic or double values each person carries on loci spread across their chromosomes, making for a virtually unique identification signature that reflects the equal DNA input of mother and father (and, in fact, all grandparents and all ancestors).

Often termed CoDIS markers (standing for Combined DNA Identification System), these alleles or variations are the magic numbers underlying the popularity of paternity tests as well as the national passion for jailing or exonerating crime suspects. If a value is found in the DNA profile of the child and is not present in the two observed values of the alleged father on the same locus, this constitutes what is known in the paternity business as an exclusion: The alleged father is almost certainly *not* the true father. Conversely, if *all* the alleged father's values can be

detected in the child's on each location, one after another, that male is judged to be the child's biological father to a 99.999 percent certainty. Paternity tests are simple math.

A famous paternity test involved proving who was the true father of the baby born to Anna Nicole Smith in 2006. After her death in early 2007, several men came forward claiming to be the father, including a European prince, Anna Nicole's bodyguard and a convict who had been a former boyfriend. Larry Birkhead pressed his case. When the results came in, he was declared by Bahamian court to be the baby's biological father. The child's original birth certificate was amended to show this.

Can paternity testing be used in a reverse process to establish the identity of a father, given only the child's DNA profile? No, but with enough DNA profiles available for comparison the missing member of a family group can be reconstructed by comparing alleles they must share, called obligate. Doing so is a matter of logic and statistics, mostly just either-or, deductive logic.

I became interested in reconstructing a parent's profile after many of DNA Consultants' customers inquired if such a calculation or estimate was even possible. Some were adopted persons who had no recourse to testing their parents, some knew one parent but not the other, and some had no access to parents. They were either uninterested or unavailable. In a special category were females who were only-children with both parents deceased who wanted to know something about their father, but who could not take a Y-chromosome haplotyping test, as they did not carry a copy of their father's male DNA. In this respect, autosomal DNA testing is the great equalizer.

My father, Lawden Henry Yates, died in 1978. My mother, Bessie Cooper Yates, lived to the advent of DNA tests, but I failed to obtain any sample from her before her death in 2006. I had siblings and half-siblings still living, however, so in 2010, I constructed a family group autosomal DNA study with the help of Crystal Wagner at Chromosomal Laboratories/Bode Technology. The results were very satisfying. This paper and blog post will serve as a report to those who are interested.

Step One. I was fortunate to have the participation of three half-sisters by my father, along with his second wife, their mother. Comparing mother and daughters I was able to verify the obligatory alleles each daughter *must* have received from the mother.

Autosomal alleles are fixed in our genealogy, have little or no mutations (unlike YSTRs, which mutate from generation to generation, as do mitochondrial nucleotide positions, though more gradually over time) and derive from both parents equally by recombination at the moment of conception. They are copied and preserved without change in every cell of our bodies. The mother is responsible for half of the equation. By a process of elimination the other number on each row of the lab report *must* represent the father's contributions. This method is completely logical and unequivocal. There can be no other answer to the problem. No studies suggest these pieces of our double helix DNA change significantly in transmission from one generation to the next or mutate over time in genealogies. Their values and patterns are strictly attributable to heredity.

Step Two. The father's alleles are confirmed by a comparison with three children by his first wife, my mother.

Step Three. By the same process we can now reconstruct the mother's DNA profile. In it, we can expect to visualize the final piece of the puzzle, proceeding from the known to the unknown according to the immutable laws of autosomal DNA and genetic inheritance.

We have arrived at my mother Bessie Yates' DNA profile by a multistep process of extrapolating it using three of her children and three children by her husband's second marriage, along with the test results of my half-sisters' mother. Seven tested profiles yielded two reconstructed ones. In the process, we have also recovered my deceased father's DNA profile.

Separating Mother and Father's Contributions

Having overcome these hurdles, I was most interested in the utility of the results. I felt confident about the method. But what excited me most was to see how my own autosomal ancestry results might be, respectively, apportioned in my parents. For this, I ran a DNA Fingerprint Plus on them both. The findings were very satisfying to me personally, helping solve many questions I had always had about what ancestry I got from my father, what from my mother and what from both.

Let's start with American Indian admixture. My own DNA Fingerprint Test, as well as percentage tests through another company, suggested a

relatively large amount, perhaps one-quarter all told by various measures, but family tradition had placed Native American heritage solely on my mother's side. To be sure, my mother gave me a Native American mitochondrial haplotype, indicating a female line going back to a Cherokee woman in Georgia, traced as far back in records as 1790. Extensive genealogy research showed, however, that my father's great-grandmother was also a Cherokee with the surname Thomas from North Carolina. What did the new autosomal DNA profiles say?

On a rough measure, I have received a "double dose" of Native American II, a marker co-relating with 80 percent of 24 tested American Indian populations in the atDNA 4.0 database. (Two siblings and one half-sibling received only single doses.) This seemed to indicate that I had some degree Native American (not possible to say how much) from both parents. True enough apparently, judging from the top world matches for my mother and father. I give here the top ten for comparison.

MOTHER

Rank World Population Matches

- 1 **Russia - Chukchi** (n = 15)
- 2 White - Maine (n = 151)
- 3 **Native American - Athabaskan** (n = 101)
- 4 Swedish (n = 311)
- 5 Hispanic - U.S. (n = 199)
- 6 El Salvadoran (n = 296)
- 7 **Native American - Choles - Chiapas** (n = 109)
- 8 Portuguese - Azores (n = 100)
- 9 Argentinian - Patagonian - Chubut (n = 320)
- 10 Korean - Western U.S. (n = 63)

FATHER

Rank	World Population Matches
1	Melungeon (n = 40)
2	White - Canadian (n = 164)
3	Belgian - Flemish (n = 231)
4	Native American - Saskatchewan (n = 1)
5	India - Indo-Caucasoid - Brahmin (n = 11)
6	Native American - Minnesota (n = 191)
7	India - Indo-Caucasoid - Kayastha (n = 11)
8	Japanese - Central (n = 164)
9	Argentinian - Santa Fe (n = 562)
10	Brazilian - Sao Paulo (n = 113)

My mother's Native American population matches were slightly higher and more numerous than my father's, including more peoples like the Chukchi and Mongols, but my father's were not inconsiderable in their own right. Here's how their two megapopulation rankings look:

MOTHER

North Asian	1 in 35 billion
Northern European	1 in 632 billion
Central Asian	1 in 747 billion
American Indian	1 in 827 billion
European American	1 in 856 billion
Iberian American	1 in 1 trillion
Iberian	1 in 1 trillion
Central European	1 in 2 trillion
Melungeon	1 in 2 trillion
Mediterranean European	1 in 2 trillion

FATHER

European American	1 in 20 trillion
Northern European	1 in 185 trillion
Jewish	1 in 204 trillion
Iberian	1 in 274 trillion
Iberian American	1 in 728 trillion
Central European	1 in 919 trillion
Middle Eastern	1 in 924 trillion
American Indian	1 in 1 quadrillion
East European	1 in 2 quadrillion
Mediterranean European	1 in 2 quadrillion

These results confirmed that my father did have some Native American, although evidently not as much. They also suggested that although both bore about the same mixture of European and Native American ancestry (including high matches to Melungeon), my mother had a more pronounced Native American cast, her highest match being to North Asian, one of the supposed Asiatic feeder populations of Native Americans, whereas my father's top match was European American. Based on profile frequencies, my father was five times more likely to be European American than American Indian if subjected to forensic profiling, whereas my mother was 18 times more likely to come out as a Siberian Native than Northern European. Sometimes, it seems, exotic ancestry rises to the top. My overall conclusion was that my mother probably had 3/8 and my father 1/8 Native American heritage, which corresponds to their proved genealogies.

In my own profile, combining those of my parents, here are my megapopulation results:

SELF

North Asian	1 in 3 billion
Central Asian	1 in 12 billion
American Indian	1 in 25 billion
East Asian	1 in 42 billion
European American	1 in 42 billion

Northern European	1 in 44 billion
Iberian American	1 in 50 billion
Central European	1 in 70 billion
Iberian	1 in 75 billion
Melungeon	1 in 103 billion

According to these frequencies, my mother and father's Native American ancestry reinforced each other in me to make my top four matches Native American (or Siberian-Mongol-Turkic), so that I am about twice as likely to be graded into the Native American category by population statistics than the European. Similar conclusions emerged from my siblings' tests, and a diminished presence of Native American indicators was confirmed in my half-siblings, although their mother seemed to evince some Native American as well as my father, the shared parent. All participants in this study had grandparents born in North Alabama.

Further observations are possible. For instance, I was surprised to see a large indication of Jewish ancestry in my father's profile. Genealogy confirms as much, as the family surname is Hebrew (an anagram of Ger Tzedek similar to Katz, Kohen Tzedek). The emigrant Yates figure was reportedly an English Jew in 17th-century Virginia. My mother also showed Jewish ancestry. Both parents matched Melungeons, an Appalachian ethnic type suspected to have Sephardic Jewish forebears. My father's family included uncles named Josephus, Manaen, Irbin, Azariah, Lazarus and Sherith—apparently his Middle Eastern matches were truthful to a partial Muslim background. My mother's mother was named Palestine, and the names Isaac and Jacob were ubiquitous in her family tree. But neither side of the family claimed any Jewish heritage. It was left to autosomal DNA to reveal that hidden inheritance.

Although never performed before to my knowledge, this method of reconstructing autosomal profiles can be useful to others seeking to recover unavailable relatives' genetic fingerprints and to separate parents' contributions to their children's ethnic and ancestral stories. Since it is based on immutable markers in DNA, it rests on more solid ground than Y chromosome alleles or mitochondrial mutations. The challenge in exploiting the method is to have enough subjects in your family group study. In my case, I was fortunate to have a prolific father

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with six living children. I would like to conclude by thanking all my siblings, half-sisters and my father's widow. Their participation made it possible to present a true first in DNA genealogy.

March 14, 2012

Melungeons Forever

As the sponsor of the only published study to date on the genes of Melungeons, "Toward a Genetic Profile of Melungeons in Southern Appalachia," by Donald N. Yates and Elizabeth C. Hirschman, the owners of this blog naturally have an interest in Melungeons, a controversial American ethnic type.

Imagine our surprise at coming upon "Melungeons, A Multiethnic Population," put online by the International Society for Genetic Genealogy in their *Journal of Genetic Genealogy*. The authors are Roberta J. Estes, Jack H. Goins, Penny Ferguson and Janet Lewis Crain. It appeared ... well, we're not really sure when it appeared.

Roberta J. Estes, the lead author of the new article about Melungeons, was honored with the Prestigious Paul Jehu Barringer, Jr. and Sr. Award of Excellence in grateful recognition of her Dedication and Devotion to Preserving and Perpetuating North Carolina's Rich History. This award was conferred for her academic research paper, "Where Have All the Indians Gone? Native American Eastern Seaboard Dispersal, Genealogy and DNA in Relation to Sir Walter Raleigh's Lost Colony of Roanoke," published by the *Journal of Genetic Genealogy*. It can be read here: <http://www.jogg.info/52/index.html>.

We are glad to see Melungeons receiving long-overdue attention on the Internet but cannot recommend the new "review."

"Where have all the Indians gone"?! We're all still here, thank you very much.

But consider this excerpt from the "review": "Furthermore, as having Melungeon heritage became desirable and exotic, the range of where these people were reportedly found has expanded to include nearly every state south of New England and east of the Mississippi, and in the words of Dr. Virginia DeMarce, Melungeon history has been erroneously expanded to provide "an exotic ancestry ... that sweeps in virtually every olive, ruddy and brown-tinged ethnicity known or alleged to have

appeared anywhere in the pre-Civil War Southeastern United States."

Concerning Melungeon heritage becoming "desirable and exotic," Estes et al., and our readers, may wish to consult the more recent study by Elizabeth Hirschman and Donald N. Yates:

"Suddenly Melungeon! Reconstructing Consumer Identity across the Color Line," *Consumer Culture Theory* (Research in Consumer Behavior, Volume 11), ed. Russell W. Belk and John F. Sherry, Jr. Amsterdam: Elsevier, 2007. Pp. 241-59.

This study interpreted the notion of "slightly mixed" differently from Virginia DeMarce in the 1990s.

But the co-authors and Virginia DeMarce are seriously mistaken if they think any marginalized or disadvantaged members of society go around trying to prove themselves outcasts. They've got the shoe on the other foot. Their language with its condescending mention of color tones is offensive. I, for one, am offended, and any sponsoring or supporting organization, ought to be. In fact, they ought not to allow such views to be published.

And that's my two cents' worth on Melungeons writing about Melungeons who don't believe they or anybody else is Melungeon.

Melungeons—real people in history—suffered enough to have their memory dishonored by lies and falsehoods hundreds of years later. I believe the same about Native American peoples and the descendants of slaves. No one should be able to write the history of other people for them. Let them speak in their own voices.

Anonymous commented on 26-May-2012

I don't know about the researchers' methodology, but I do not agree with the conclusion. Or I think they have it backwards: The Melungeons are Iberian/North African with possibly sub-Saharan as well. For example, one of my 5cM segments at 23andMe is Melungeon (Collins identified as a name). On this same segment is a distant cousin with four Greek grandparents. This is clearly a Sephardic segment. My question for the researchers is: Why are so many Melungeon descendants testing positive with obvious ties to the Iberian Peninsula and Hispanic territories? Please tell me if I can help your studies further. Ellin

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Joseph commented on 16-Jul-2012

If you compare the melungeon dna projects to the portugesse dna protects ... you shall see a nearly 75 percent match to then projects ... compare this with the portugesse ancestry the melungeosn stated ... you have a match. <http://www.ourfamilyorigins.com/portugal/dna.htm>
<http://www.familytreedna.com/group-join.aspx?Group=portugal>

May 23, 2012

Much Ado about Melungeons

Mountains are in labor, and an absurd mouse is born.

In a previous post, we drew attention to "Melungeons, A Multiethnic Population," published by the International Society for Genetic Genealogy in *Journal of Genetic Genealogy*, its authors Roberta J. Estes, Jack H. Goins, Penny Ferguson and Janet Lewis Crain.

The article is a bit forbidding at some 100 pages, and it fairly bristles with self-importance and personal DNA results, but we will review it.

Here are some highlights from the article, misspellings and all, with our comments in *italics*.

Summary: Many sources exist where the Melungeons identify themselves variously as Indians and Portuguese. Only one family, the Goins, are identified orally as having negro heritage. Given the physically dark appearance of the Melungeons, they have unquestionable heritage other than European.

This seems to be an unsurprising conclusion, until you realize that after limiting their sights to Melungeons who called themselves Portuguese, preferably only those in the 37869 ZIP code, and Goins who already identified themselves as having Sub-Saharan African (please, not the n-word in 2012, or at least capitalize it), the authors are going to draw a further veil on proceedings and deepen the mystery. Read on.

Every Melungeon core family is identified in multiple records as being "of color."

We won't comment on the equivocation going on here. Please read on.

DNA evidence identifies several lines conclusively as having African roots, specifically, Bunch, Collins, Goins (3 separate lines), Minor and possibly Nichols. Gibson has one line who has tested and shows

haplogroup E1b1a, but they also match another Louisa County affiliated family, Donathan.

Of these families, the Collins family has four different haplogroups within the same family group, a situation not unexpected based on the commentary by Will Allen Dromgoole wherein she states that of the Collins that while "they all were not blood descendants of Old Vardy they had all fallen under his banner and appropriated his name."

The Collins and Gibson founding lines, meaning Vardy Collins and Shephard "Buck" Gibson were said to be Cherokee and stole the names of white men in Virginia. Their DNA indicates that if they were Native, it was not via their paternal line.

Comma splice. Hate to be petty. How do you steal a white man's name? I certainly hope no Melungeons are going to steal mine. This is one of the funniest conclusions I have read so far. But do continue, Gentle Reader.

Dromgoole reportedly stayed with Calloway Collins who stated that his grand-father (sic) was a Cherokee Chief. His Collins grandfather was Benjamin Collins who lived on Newman's Ridge and did not remove in 1835. There are no known Cherokee who lived on Newman's Ridge. The Cherokee Nation was significantly further south prior to removal in 1835, as shown in Figure 12.

After making fun of other people who claim Cherokee chiefs and princesses in their family tree, the authors seem willing to entertain an exception with their own relatives, or friends. We will not quibble with their Cherokee history but would have said "farther" rather than "further." Maybe that is a regionalism.. Don't give up yet.

The Mullins line was reputed to be Irish and is confirmed genetically to be European. However, "Irish Jim", the progenitor is listed as a "free person of color", a very unusual classification for an immigrant from the British Isles. Dromgoole (sic) states that the Mullins will "fight for their Indian blood." No Indian heritage is evident in historical records or DNA.

We would like to remark that Irish, like other undesirables in early America, were often considered non-white and persons of color. Please recommend the book by Nell Irvin Painter titled The History of White People to the Hancock County Public Library.

The Denham line was said to be Portuguese and oral history indicates

that the line originated "further south" or possibly from a shipwreck, yet the Revolutionary War pension application of David Denham says he was born in Louisa County, Virginia. The Denham line may connect with the Gibsons as early as 1627 in Charles City County. The Denham DNA is European and the Denham descendant who DNA tested has no Spanish or Portuguese matches. Denham is not Portuguese on the paternal Y-line.

Watch that distinction between "further" and "farther." The latter is to be used of distance; the former of degree or depth. I was born pretty far south but not fur.

A significant amount of oral history regarding Portuguese heritage exists, but no historical, genealogical or genetic evidence has been discovered to corroborate the oral history. Some historical information refutes the oral history.

Really? Who have you been talking to?

Claims of Portuguese ancestry are a pattern that stretches beyond the Melungeon families and is found explaining a "dark countenance" across the eastern half of the U.S., providing a European answer to the question of why.

Oh, no. Now we have "dark countenances." Please get your hands on that book I mentioned.

One possible source of the pervasive Portuguese oral history is that the Portuguese were heavily involved prior to 1642 in the early importation of African indentured servants, some of whom would eventually become free and some of whom would become slaves.

So that's it!

On the 1880 census, several Melungeon families claimed Portuguese as their race. An analysis of the families so claiming reveals that none of them were descended from the Denham line. Some, but not all were descended from the Sizemore and Riddle Native families. Of the 22 adults listed initially as Portuguese, more than half, 12 are descended from either the Goins or Minor families with African haplogroups, 11 are descended from the Sizemore family, 4 from the Riddle family, 4 are not descended from any of the above and 3 are unknown.

Tsk, tsk. The word "none" requires a singular verb. You should write, "None of them is..." I am not even going to attempt to straighten out your punctuation or sentence predication. Gentle Reader, please persist. The

best is yet to come.

Ironically, the Sizemore family is not identified as Melungeon in Hancock/Hawkins Counties, but is ancestral to many Melungeon families and settled there are well. The Sizemore family is proven genetically to be Native, haplogroup Q1a3a. Furthermore, there are two Native Sizemore lines, although only one is known to be ancestral to the Melungeon families. A European Sizemore line also exists, and the Bolins match the European Sizemore lines, suggesting that these families may have had a common genesis or that these Sizemores may in fact be Bolins. Both families are found in early Virginia along the North Carolina border.

I always wondered about that. Now I know less than I thought I did before.

A link has been found through the Goins family to the Lumbee. The "Smiling" Goins family was not thought to be an original Lumbee family, but subsequent research has shown that even though the group in 1915 was thought to be an "outside" group, the ancestors of this group were found in 1770 with other founding Lumbee families. The Moore and Cumberland County Pocket Creek Goins groups have always claimed kinship with the Lumbee. Other links to the Lumbee have not yet been found. The Lumbee Tribe has been reticent to support DNA testing and common surnames between the Lumbee and the Melungeon Core group have not all been tested.

I don't blame the Lumbee tribe for being reticent to support DNA testing. Most folks I know are pretty reticent about DNA. A better word would have been "reluctant."

The Riddle family who is also ancestral to the Melungeon families is genetically European, haplogroup R1b1b2, but is documented historically to be Indian from a 1767 tax list where they are noted as such. Furthermore, they are found in other "Indian Communities" such as Pocket Creek in Moore County, N.C., tied to the Goins family. In 1820 several Riddle families are found beside a Goins family whose first name is illegible. In 1830 in Moore County, William Riddle is found beside both Levy and Edward Goins, believed to be the Goins family of the Lumbee.

That Riddle family! And now we find out they are living next to "Smiling" Goins.

Edward Goins is later found in Sumter County, S.C., a progenitor of one the Smiling Indian families in Sumter County, S.C., also known as Red Bones. This Goins family moved from Sumter County and settled in Robeson County, N.C. in 1907. The progenitor of this line, Frederick Goen, is found with the Lumbee much earlier, on the 1770 Bladen County tax list. Testimony regarding this family in 1915 states that the father's line is Melungeon.

Are you sure this is the summary?!

The Goins family is found in multiple locations in Virginia, North Carolina, South Carolina and Tennessee, several of which are involved with legal proceedings relative to their race. There are three genetic Melungeon Goins family lines, two E1b1a and one haplogroup A, all three being of sub-Saharan African origin.

Wait a minute. Aren't we just talking about male lines, and only one family at that, and only three cases at that. That doesn't seem like a fair summary.

In Hawkins/Hancock County, Tennessee, Sumter County, S.C., and Spartanburg District (Georgetown County), S.C., these Goins families are referred to as Melungeon. Genetically, they share a common ancestor, probably John Goins found in Hanover County in 1735.

Indeed! So to carry this to its logical conclusion, Jack Goins is descended from John Goins. John Goins was a white man. So is Jack Goins. Did I miss anything?

The Sumter County, S.C., Goins family is found in Bladen in 1770 ... where Louisa County families later settled. *(several paragraphs omitted for brevity's sake)*

Turning to autosomal genetic testing, no Native heritage was found using marker D9S919, although this finding does not disprove Native heritage.

Absence of evidence does not mean evidence of absence. That's what my father always told me.

It is possible in some cases that haplogroup E1b1ba could be found in rare instances in Europe through historical invasions such as the Roman Legions. However, given the Louisa County cluster, it's unlikely that a large cluster of haplogroup E1b1a of European origin would be coincidentally found together in the colonies. It's much more likely that this cluster is a result of people with a common bond living in close

proximity and intermarrying. Furthermore, if haplogroup E were to be found in Europe, it's much more likely to be E1b1b, the Berber haplogroup, not E1b1a. No Melungeon families are found with haplogroup E1b1b or subclades.

Thank goodness those Roman legions didn't make it to Tennessee. But it seems like no North Africans did either, which is strange. See our post "Right Pew, Wrong Church."

Marriage partners in colonial Virginia were legally restricted beginning in 1691 with the passage of a law that forbid the English intermarriage with Indians, mulattoes and negroes. Prior to that, interracial marriages and encounters outside of marriage occurred regularly. This restriction, along with increasingly severe penalties in the event that the intermarriage did occur was repeated in various laws in 1705, 1753 and 1792 in Virginia and in 1715 and 1741 in North Carolina, in essence, requiring anyone who was other than white to intermarry within their own group or groups of racially similar individuals, meaning others "of color." Legal marriages between whites and other races would have had to predate 1691, although illegitimacy certainly knew no boundaries. In marriages occurring after 1691 in Virginia, in couples where one individual was "other than white," both partners could be presumed to have at least some recognizable non-European heritage.

This is one of the most hilarious and bigoted parts of this article, so be sure you read it several times to absorb it in all its unintended humor.

Given the proven Native ancestral families to the Melungeons combined with cultural styles that are perhaps suggestive of a maternal culture, Native or African, via illegitimacy, one would expect to find Native or African mitochondrial DNA. However, all mitochondrial DNA to date has been European. This was not expected given the very high levels of consanguinity and intermarriage within this group from at least the mid- 1700s through the mid-1900s. However, Heinegg's analysis of mixed race families in early Virginia and his discovery that the predominant pattern of African or mixed men fathering children with white indentured female partners may explain these findings.

Typo: consanguinity. And sorry, but we don't buy your and Heinegg's theory about African men "fathering children with white indentured female partners." Those weren't African men, for one thing. But that is a

DONALD N. YATES and TERESA A. YATES

whole other story, and it happened in Spain, and besides the wench is dead.

No evidence, historical, oral, genealogical or genetic has been found to support a Turkish, Middle Eastern, Jewish or Gypsy heritage.

Paydirt! The end! So what are they? You're not going to cop out and tell me they are just plain old folks. Or are you? Shucks, I guess that would make sense, though. Start out with a bunch of plain old folks, test them, and you can prove they are plain old folks. Your conclusions come from your premises. And your premises come from your conclusions.

I am normally all in favor of any DNA test or genealogy subscription or genealogical resource that can help the family researcher discover their ancestors. But "Melungeons, A Multiethnic Population," published by the International Society for Genetic Genealogy in *Journal of Genetic Genealogy*, by Roberta J. Estes, Jack H. Goins, Penny Ferguson and Janet Lewis Crain is without doubt one of the most pretentious, portentous and poorly conceived articles I have ever read in just about any field, and I will read almost anything. If you want a laugh, though, check it out. You may find out why Smiling Goins is smiling.

May 24, 2012

I Found My Grandmother's People

I grew up thinking I was English on my father's side and French-Cherokee on my mother's. But I also knew there was a mystery in my Southern Gothic family. And no one was talking about it. It took me most of my life to document my Melungeon and Jewish ancestry. I learned a lot on my journey through perseverance, but I learned the most from the DNA Fingerprint Plus. That journey has been a long one.

Our family reunions were bizarre. Grandmother, named Etalka Vetula, and my Aunt Elzina would arrive from an obscure town in Alabama looking just like two witches from Oz. At least that is what I thought when I was 6. They wore clothes from another time and place. Sweeping black Victorian dresses with high collars, long sleeves and black lace-up boots in the heat of summer. It was the 1950s. No jewelry adorned their necks, and no smiles appeared on their faces.

It was especially discomfiting since my mother looked and acted like an early Cher, wearing flamboyant Spanish skirts and always tossing out witty and outrageous remarks. The witches and she did not get along.

Whispers about "Black Dutch" circulated around the dinner table with slivers of pecan pie. Fried chicken was the main dish with tall, silver candles at the center lighted at dusk. We never ate ham. We never went to church.

If it was Christmas, it was spelled Xmas. There was no mention of the Baby Jesus. Ornaments, songs, and holiday cards were generic and dissembling. My mother once shooed away carolers singing "Silent Night." Her favorite holiday tune was "Rockin Around the Xmas Tree," although we did not sing this around my severe aunts. The tree was decorated with redbirds and popcorn. My father would use the comics to wrap presents, not because we were poor. He was a doctor.

My maternal grandmother, Luta Mae, would have had taken me out of the Indian calico floral dress before my aunts arrived, putting on a black velvet one, to my dismay. I was the very picture of Wednesday from the Addams Family.

Of course, my family seemed normal to me. I did not know why most mothers I knew looked more like Doris Day, or why they shunned my beautiful, dark-olive skinned mother at the country club, or why their children would not play with me. This was the South in the '50s before integration. Wasn't I white? I was confused.

When I married Don, we became very interested in our genealogy and would spend many weekends researching in archives and libraries, trying not to go blind looking at microfiche. On one of these weekends, we visited my Aunt Elzina. I have six Elzinas in my family. As amiable as ever, she jeered, "You will never discover the truth about my mother's people."

She did let slip an interesting story about Great-grandmother Redema. When Redema was a young girl they "arrived on a rich man's farm to train his horses." Afterward they managed to buy the farm. Were they Gypsies? Aunt Elzina's arrogant challenge made me the more determined. There were several clues that I began to add up. I remembered that my mother took me aside when I was 12 (the age when a young girl is given a bat mitzvah in the Jewish faith). Did I know I was named after a little Sephardic Jewish girl "running around in the Arizona

desert"? I thought it an odd remark, as I did not know any Jews.

We read Brent Kennedy's book and discovered many of our ancestors were Melungeon. Don looked up the name Etalka and determined it was Hungarian and Yiddish. My father gave me two paintings of my great-great-great-grandparents. I said, "Dad, these people are not English or French. They are too dark. What are they?" He said, "You ask too many questions. If you keep digging, you will find people you do not want to be related to."

A second cousin sent me a fragment of a letter she discovered a great-granduncle of mine had written. It was in Demotic Egyptian. After my Aunt Elzina died, I discovered from documents my father shipped on to me in cardboard boxes that before my line of Rameys were in France, they were in Egypt.

Before I got these records, we had just started the business DNA Consultants. Don ran my profile. Egyptian was at the top. I laughed, "This has got to be wrong!" But DNA doesn't lie.

I got expected information as well as some surprises. Melungeon was near the top. My grandfather had always told me he was part Cherokee. I got a Native American marker. But I also got things that threw me. My mother probably loved Spanish skirts for a reason. I have a lot of Iberian results. I did not know I had Turkish ancestry. This is a common match for anyone with Melungeon ancestry. And English? Near the bottom! It turns out I have more Mediterranean and Eastern European ancestry, as well as Jewish. I have two out of three Jewish markers, one a Sephardic Jewish marker, confirming my mother's talk to me, and proving one of the reasons that led to my open return to Judaism. I do have Hungarian matches as well as Romanian/Transylvanian matches (originally Hungarian territory), which confirmed Don's suspicion that Etalka was Hungarian. It turns out to be a diminutive of Adele, a Hebrew name.

So, I found my grandmother's people, despite Aunt Elzina and other naysayers.

September 22, 2013

Roberta commented on 04-Oct-2013

You wrote of your "open return to Judaism". If you don't mind my asking, does this mean that you were accepted by the religion as Jewish because of your DNA and didn't have to convert?

Donald Yates replies: No, not really. The rabbi said DNA didn't matter and he wasn't quizzed about it anyway. The important thing was that my immediate ancestors were practicing Jews, some buried in the Jewish cemetery. And that I wanted to re-embrace Judaism. He said other rabbis might require that I "convert" instead of return. His name is Rabbi Arnold Mark Belzer, now retired.

You Will Never Discover the Truth

"You will never discover the truth." That is what my Aunt Elzina told me as we sat in her Victorian parlor when I asked her about my Grandmother Etalka Vetula. I was determined that I would.

My family was a mystery. And I only had a few pieces to the jigsaw puzzle. For many years, I settled with those pieces instead of real answers. First, I dabbled in genealogy. I did find some answers. After reading about the Melungeons, I thought this might explain some of the mystery around my family. But my family wasn't talking. And my family tree was lined with dead ends at every turn. And I only added more pieces to my jigsaw pile. One great-aunt of mine in Alabama hung up when I asked her what she could tell me about her line. And my father said, "If you keep digging, you might find people you don't want to be related to."

Next, I thought I would turn to science and get more complete and reliable answers by purchasing a DNA test.

After all, DNA holds the answers to our entire genetic code. We are our DNA. John Wilwol, in his recent NPR article, "A 'Thumb' on the Pulse of What Makes Us Human," quotes Sam Kean, author of *The Violinist's Thumb And Other Lost Tales of Love, War, and Genius, As Written by Our Genetic Code*, that DNA is what makes us who we are. Wilwol also quotes Kean in helping us understand what DNA is and how it differentiates from genes: " 'While DNA is a *thing*—a chemical that sticks to your fingers, he writes, genes are more conceptual in nature, ... 'like a story with DNA as the language the story is written in.' " So if DNA holds some keys to discovering who I am ... why not get it analyzed? And see if I can better understand the story? But how?

At first, I considered getting one of the haplotype sex-linked tests. These are known as maternal or paternal tests and examine the parts of

our DNA known as Y- DNA and MtDNA. This type of test analyzes either your biological father's direct male line—his father's father's father, and so on, all the way back—or your biological mother's direct line—her mother's mother's mother, all the way back by testing the variations or mutations in her mitochondrial DNA. A male can take either the male or female test, but a female can only take the female test. She must conscript a male relative, such as a brother, father, or uncle, if she wants a male haplotype test. These tests are good for assisting with genealogy and finding male and female cousins. But it wasn't what I was looking for. I wanted more information than just one line. Was that possible?

Finally, I discovered autosomal DNA, and I was amazed! Wow! Autosomal DNA is the new wave of science. The second generation of DNA testing. I could have never found all the answers without using autosomal DNA. Why? Autosomal DNA tests reflect the entire spectrum of ALL your ancestral lines. Not just one line at a time.

How is that possible? All parts of our genetic code are readable and meaningful. Your marker locations (loci) are spread across your entire genome, not confined to your male (Y chromosome) or female (mitochondrial) DNA. That means there is no junk DNA after all, according to Rose Elvereth's recent Smithsonian blog post, "Junk DNA Isn't Junk and That Really Isn't News." It also means DNA is an important key to your discovering you.

September 22, 2013

Digging Up Jesse James

Any outlaw skeletons playing a Tennessee jig in your ancestry closet? We are always looking for famous people—in our ancestry or in the news. But there are other ways to get famous. So, you might find both. And you might find a DNA mystery. Many hope to find royalty. But some of us have some unusual branches to our family tree. Like Jesse James. Jesse James was a mystery in life and remains a mystery in death. We can't decide whether we should honor him or curse him, and we can't decide where he is buried (*San Antonio Express-News* columnist Roy Bragg). We can only agree that he was a man of mystery.

And I know someone, a Jon Watkins, who is related to Jesse James.

A Southerner who resembles James somewhat, Watkins says as a kid he played and crawled in Jesse James' getaway tunnels under a house James lived in in Tightwad, Missouri. This was long after the shoot-out in front of the white, two-story house where his grandfather told him Jesse and his gang surrounded four marshals and hanged them in a tree in the front yard. He says his grandfather cut the tree down, stacked it into pieces, and burned it—refusing to use it for firewood because it was “blood money.” Jesse James was his great-uncle on his maternal (mother's) side. “My grandmother might have even met some of the family,” he says in a faraway voice, seeming to waver for a moment, as we all do, from thinking of Jesse James as something of a thug to someone like Robin Hood.

Why do we feel so conflicted about Jesse James? In his article, “The Afterlife of Jesse James,” Bragg quotes Martha Grace Duncan, a law professor at Emory University, who wrote the book *Romantic Outlaws, Beloved Prisons: The Unconscious Meanings of Crime and Punishment* (which analyzes why some outlaws are treated with reverence in folklore) as saying “he fits the mold of the noble bandit.”

Throughout history, according to Bragg, some have viewed James as a “murderous, bank-robbing thug. Others, however, speak of him as (a) hero who never surrendered after the Civil War. To them, he fought the institutions—banks and railroads—that ran roughshod over the common man.” Some of us are torn. But Bragg quotes Duncan as saying his “die-hard fans” overlook the fact that “James was no Robin Hood” and kept the loot for himself and his gang and gunned down innocent people who got in his way. But there are those of us who overlook that.

Why? Duncan explains, “For some Southerners ... there was a situation of moral inversion. The legal government, after the war, was in the wrong in their minds.” Moreover, Duncan says, even though “we may not want to be revolutionaries or rebels or criminals,” we are “fascinated with those who do step over the line and succeed in hiding out (from the law). A part of us is attracted to this.” In fact, many of us are so attracted to it, he has become part of our culture and seems to be part of all of our families.

Beyond the myth and mystique of Jesse James and his “Mission Impossible” ability to hide from the law, Jesse James remains mysterious after death. History says that James was buried in Kearney, Mo., after

being gunned down on April 3, 1882, in his St. Joseph, Mo., home by fellow gang member Bob Ford. But not everyone buys that story. In Elvis style, there are those who believe Jesse James hid out and faked his death leaving some to question the DNA analysis of his remains. How can this be? According to an AP article, "Jesse James Museum in Wichita Claims Proof That Outlaw Faked Death," a Ron Pastore claimed he "... can prove through DNA tests that James died in Kansas in 1935."

"Pastore, who has opened the Jesse James Museum in Wichita, has had a Kansas man exhumed in his quest to prove that James faked his death and lived under the alias of Jeremiah M. James in Neodesha, where he was buried in 1935."

Bragg writes, "A Texas woman says James lived and died here, 30 miles south of Waco. He faked his death in Missouri, she says, and lived out his days here as a gentleman farmer. He died peacefully in 1943 and is buried under the name James L. Courtney in a family plot overlooking Deer Creek in Falls County."

The story most commonly heard is that it might have been one of his cousins that was shot in his place, and he was living underground with an assumed name. But the director of the Kearney museum, Elizabeth Gilliam Beckett, says, "Our (DNA) test was 99.7 percent accurate, but that 0.3 percent is what people are grasping to (sic).

"We have the real deal," says Beckett.

However, it makes it more problematic that the official story is that James did use an assumed name and was living under the name of Thomas Howard for a time in St. Joseph with his wife, Zerelda, and their two children. The body of "Thomas Howard" was buried as "Jesse James" after Howard's death in the front yard of the James family farm (Bragg).

And the remains were in poor condition. According to Anne C. Stone, Ph.D, James E. Strauss, L.L.M, and Mark Stone King, Ph.D., in the 2001 *Journal of Forensic Science* article, "Mitochondrial DNA Analysis of the Presumptive Remains of Jesse James," the remains of Jesse James from exhuming him in 1995 from Mount Olivet Cemetery in Kearney, Missouri, were "... poorly preserved, presumably due to wet and slightly acidic soil conditions, and insufficient DNA from analysis was obtained from two bone samples."

What did they rely on instead? Teeth and hair recovered in 1978 from

the original burial site on the James farm. Using mitochondrial DNA analysis (mother's line) they did manage to match the teeth and the hair to Jesse James's sister. Do the mitochondrial results prove that the exhumed remains are those of Jesse James? Stone et al. say that there is a "remote" possibility that the remains are from "a different maternal relative," but "there is no scientific basis whatsoever for doubting that the exhumed remains are those of Jesse James . . . the burden of proof now shifts to those, who, for whatever reason, choose to still doubt the identification."

So we await the next chapter in the DNA mystery of Jesse James.

Jesse James remains part of our folklore of "romantic outlaws," and for some people, like Jon Watkins, he is distant kin.

September 24, 2013

It's a Wonderful Snowstorm

Genealogy is the grandfather of DNA ancestry testing, especially the latest state-of-the-art, autosomal tests. Some might wonder why not just focus on their family trees and what they know of their family history. While that is interesting, and definitely worth knowing as part of your family history, it is only hearing part of the story, like falling asleep in the middle of watching *It's a Wonderful Life*. It is time to wake up because there is a lot more to discover from your DNA beyond your genealogy. We have entered the Genomics Age.

However, there are still some true genealogy aficionados who are as yet unconvinced. It is an interesting hobby, but it not only is incomplete, it can also be rife with errors if one is not careful. How? It is only accurate if all the names have additional sourced information from archives.

Years ago, one actually went to archives and libraries and looked up the census or death records. Those records are now online, but all that takes work, and we live in a fast-paced world. As a result, in the world of genealogy, many share their family trees with others, but how many have made sure their information is correct? A lot of people have not and have incorrect information they pass on to others.

But how can one's genealogy be incomplete? No matter how careful you are, or how much time you take with a family tree, you cannot

discover all that a DNA test can. Why not? Most people only concentrate on one or two ancestral lines at the most and often ignore the female side of much of their genealogy as it is difficult to discover much information if a maiden name is unknown. Also, there can be name changes, unknown adoptions or other non-paternity events. It seems that most genealogists believe all their ancestors were faithful, and while that is commendable, it might not be realistic. If you go back 50 generations, you probably have a non-paternity event somewhere. An adoption or some hanky-panky. One mistake like this can completely change the outcome of your known family history. Even the best genealogies like royalty have been proven to be fake and manipulated to be more prestigious than they are. None of the kings of England has a direct male descendant today. Many lines have died out. And many that are not royalty make assumptions because of what other people have "discovered" without doing real research because it takes time and effort. It is a fun game people have played for centuries, but how much of it is truth?

How can you find the truth? Haplotype tests are just one little step beyond genealogy as they still narrowly focus on the mother's or father's line. There is so much more to discover.

We are all more mixed than we realize. We are also unique in singular ways, like snowflakes.

October 25, 2013

All in the Family

Is it all in your genes? Sometimes it is, and sometimes it is not. Your ancestry is all in your genes. No matter what you do, you will always have the same family and set of ancestors, as Reese Witherspoon discovers in *Sweet Home Alabama*. There is nothing you can do to change that, and a DNA ancestry test will reflect your genetic connections to populations or people depending on the type of test you take.

However, genetic risk factors are not exactly the same. These are possibilities that depend on other epigenetic factors such as lifestyle and environment. Carl Zimmer, a famous geneticist, says as much.

We are just at the brink of the Genomics Age. DNA testing started

with paternity testing and forensic testing back in the '90s and has now expanded to DNA testing for ancestry, advanced genetic screening for infants, and more. Perhaps, personal at-home genetics testing for medical risk factors needs more thought.

In concern for the consequences of public health, the FDA has pulled the plug on 23andMe. Is there a future for at-home medical DNA testing, or no?

November 22, 2013