

9 DNA AND GENEALOGY

California's Mission Indians

Reclaiming a neglected part of California's past, historians Monday unveiled an immense data bank that for the first time chronicles the lives and deaths of more than 100,000 Indians in the Spanish missions of the 18th and 19th centuries.

In an eight-year effort, researchers at the Huntington Library in San Marino used handwritten records of baptisms, marriages and deaths at 21 Catholic missions and two other sites between 1769 and 1850 and created a cross-referenced computerized repository that is now open to public access.

The database should be a big boon to families researching their Southwest Indian ancestor who was adopted.

August 8, 2006

Basketmakers and Cannibals

Why You Don't Have (and Don't Want) Enemy Ancestors

When I first visited Chaco Canyon in northern New Mexico, I got a creepy feeling. Who were these people? The park staff, mostly Navajo and not descendants of the original inhabitants of the site, said they were the Anasazi, a Navajo term meaning "enemy ancestors." When I pressed for more answers, I learned only they belonged to the Chaco Culture.

They were Chacoans.

Anthropologists are used to calling people they don't understand a culture, but as I learned more of this one I don't think they had much of it. The culture of the Anasazi turns out to be one of head-hunting, terrorizing human slaves, drug use and cannibalism.

In a book subtitled *A History Forgotten*, George Franklin Feldman dispels the parlor concepts and sanitized history surrounding Native American practices and pieces together the frightful truth. It is the only book on its topic: *Cannibalism, Headhunting and Human Sacrifice in North America* (Hood: Chambersburg, 2008), and the author's work was an uphill battle against political correctness.

Forget about the Donner Party. When anthropologists and explorers first encountered the monuments and ruins of the people politely called the Ancestral Pueblo they found widespread evidence of a cannibalistic society that had gotten out of control and succumbed to its own inhumanity.

"The best documented indication that the Basketmakers were headhunters is ... Kinboko Canyon, evidence discovered by archeologist Samuel J. Guernsey of the Peabody Museum of Harvard in 1915, and reported in a 1919 publication of the Smithsonian Institution's Bureau of American Ethnology," writes Feldman in the chapter on the Anasazi. He goes on to describe this and other early excavations in the Four Corners area that were quickly hushed up and reburied in horror, including Battle Cave in Canyon del Muerto, now part of the Canyon de Chelly National Monument inside the Navajo Indian Reservation. We read now of flesh-stripping, bone crushing, roasting pits, and sliced off mastoids.

Around 950 A.D., 11 persons, including women and children, were killed and butchered, cooked, and eaten on Burnt Mesa in New Mexico north of the San Juan River. At a site near the Hopi villages in Arizona, a group of 30 individuals, 40 percent under the age of 18, were slaughtered and eaten. In a Colorado rock shelter, a large jar was found filled with splintered human bones. ...

The grisly record goes on and on. Feldman writes that by the year 2000 the number of such sites in the San Juan drainage where the Chaco Culture was centered had risen to 40 (p. 136).

To their credit, the Indians who were the Chacoans' food supply eventually overthrew their masters and left the area to settle far away, on

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the three Hopi mesas in Arizona and along the Rio Grande in new pueblos that survive today such as Taos and San Juan. We suggest that the aristocrats of Chaco may have been subject to degenerative neurological disorders like kuru or mad cow disease. But whether they self-destructed or were destroyed by their subject population, it doesn't seem to make a lot of sense to claim them as ancestors.

June 18, 2010

They Probably Always Talked Like That

One of the startling revelations by Stephen Oppenheimer is that a form of English was probably spoken from the beginning of the colonization of the British Isles. Just as genetic bedrock was laid down by the earliest inhabitants, to persist relatively unchanged through subsequent invasions by other peoples like the Romans, the English tongue has been dominant as the language of the land, admitting little admixture with Anglo-Saxon and Celtic. (See Stephen Oppenheimer, *The Origins of the British*, pp. 303ff.)

Pretty heady stuff, but Mick Harper, author of *The Secret History of the English Language* (Hoboken: Melville 2008), goes Oppenheimer one better by proposing that it was not proto-Anglo Saxon that the Ice Age inhabitants of Britain spoke but something very like Chaucer's pilgrims, only lacking, clearly, later invasive elements due to the Celts, Belgae, Romans and Normans.

Harper compares a sample of Old English (which we are taught is the same as "Anglo-Saxon") with Middle English and Modern English to show that Anglo-Saxon does not appear to be the same language as English—something all English graduate students suspect from the moment they are forced to read *Beowulf* for their comps. In the Anglo-Saxon epic (which survives in a single copy turning up in suspicious circumstances in Tudor England and is set in Sweden and never mentions England), "virtually every single word is *incomprehensible* except by translation," while in "the early English poetry of Chaucer and *Piers Plowman* ... virtually every single word is *comprehensible* except for spelling."

In case you do not believe it, here are the samples:

Nu scylun hergan hefaenricaes uard,
 Metudaes maeti end his modgidanc,
 Uerc uuldurfadur, sue he uundra gihuaes,
 Eci dryctin, or astelidaes.
 (Caedmon, ca. 8th cent.)

A swerd and bokeler bar he by his side...
 A whit cote and a blew hood wered he.
 A bagpipe wel koude he blow and sowne,
 And therwithal he brought us out of towne.
 (Chaucer, The Prologue, 14th cent.)

You cannot say, or guess, for you know only
 A heap of broken images, where the sun beats,
 And the dead tree gives no shelter, the cricket no relief,
 And the dry stone no sound of water.
 (T. S. Eliot, 20th cent.)

Harper's comment is: "If Anglo-Saxon/English is one language, it's unique in the entire annals of languages on this our Earth, since it changes every goddamn word of itself" (p. 44). (Yes, he writes like that, too.)

The Anglo-Saxons were a small, obscure and illiterate tribe from, well, no one is quite sure, but perhaps northeast Germany, who arrived in waves after the Romans abandoned Britain in the fifth century, and who conquered most of the land and held it until the Danes and Norse (ca. 900) and Normans (1066) replaced them as rulers.

In Harper's view, they were just like the previous invaders, the Romans, Belgae and Celts, in having little effect on the language and customs of the populace. Just as there are only a handful of Celtic words in the English language, there was little impact on the linguistic bedrock of the kingdom the Anglo-Saxons carved out before they too had had their day. The fact that they left few monuments is unsurprising.

Which brings us to questions about the depth and breadth of Celtic heritage in Britain. If you are a Celtic fan (I'm not referring to the basketball team) you will not want to read *The Secret History of the English Language*. This book will disabuse you of many cherished

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notions. In Harper's view, the Celts were just one of the alternating foreign conquerors of the long-suffering English-speaking peoples. Their numbers were few, even on the Continent, and they left little genetic or cultural footprint except on the "Celtic fringe" where they were squeezed in their final days.

England has always been England. It's always spoken English. And France has always spoken French. "But that was in another country, and besides, the wench is dead. "We will have to save the French linguistic heresy for another post.

If you like the unusual and provocative ideas of M.J. Harper, who lives in London, check out the community of people who have bid farewell to the dunciad of academic research and unleashed their own personal pursuit of truth on a variety of intellectual topics at The Applied Epistemology Library. You can browse on the sly but must register (for free) to post your own comments and questions on threads.

June 30, 2010

Shot across the Bow of the Good Ship Mayflower

Jews and Muslims in Colonial America

More than eight years after starting the project, Elizabeth Caldwell Hirschman and Donald N. Yates won a book contract for their collaborative study of crypto-Jews and crypto-Muslims in the settlement of British North America. Titled *Jews and Muslims in British Colonial America, a Genealogical History*, the work will be published next year by McFarland, a leading U.S. publisher of scholarly, reference and academic books.

Among original investigations by the authors are genealogical studies of the West Country Gentlemen and others who proposed and promoted England's first colonies. From Sir John Hawkins (Sephardic Jewish surname Haquines, "physician" in Arabic) and Sir Francis Drake (whose family coat of arms bore a six-pointed star until it was air-brushed out by later historians) to Stephen Parmenius (a Jew from Turkish-held Hungary) and Captain John Smith, the principal players in England's colonization efforts are revealed to be far different from the white Anglo-Saxon Christian buccaneers American schoolchildren are taught about.

"England's reliance on Iberian Jews to promote its interests abroad

goes back as far as the Tudors," according to the book.. "Henry VIII used Spanish Jewish lawyers to justify his divorce from Catherine of Aragon. One of them, an Italian banker tapped for his shrewdness and knowledge of international law, was the ancestor of Oliver Cromwell, Protector of the Commonwealth."

The book presents a series of colonial documents, contemporary firsthand accounts, records, portraits, family genealogies and ethnic DNA test results that fundamentally challenge the national storyline depicting America's first settlers as white, British and Christian. The authors postulate that many of the initial colonists were of Sephardic Jewish and Muslim Moorish ancestry, usually arriving as crypto-Jews or crypto-Muslims.

Names Ordinary and Illustrious

The footnotes in the study document origins and meanings of over 5,000 surnames previously assumed to be sturdy English ones of ancient bearing. The authors' research casts a sidelight on celebrated Jewish Americans who can trace back to colonial forebears. These range from the Massachusetts Kennedys to the Byrds of Virginia, from actors Johnny Depp and Adrien Brody to actresses Roseanne Barr and Gwyneth Paltrow, from writers Louise Glück and Neil Simon to politicians Barbara Boxer and Bernie Sanders and jurists Stephen Breyer and Elena Kagan.

"We hope that the remarkable stories of the men, women and families in *Jews and Muslims* will serve as a reminder of America's early diversity and stimulus for rewriting some of the inaccurate and injudicious portions in the country's history," said Yates.

Among the famous colonial figures discussed (and usually illustrated with a portrait) are William Byrd II, Patrick Henry, William Bradford, William Penn, George Mason, George Washington, Richard Lee II, Thomas Paine, Paul Revere, Peter Stuyvesant, Luis Gomez, Jacob Troxell, Anthony Ashley Cooper Lord Shaftesbury, Tench Tilghman, Christopher Gist, John Skeen, Sir Philip Sidney, Walter Raleigh, Humphrey Gilbert, Virginia Dare, Don Luis de Carvajal, Daniel Boone, William Cooper, the Salem Witches, Christopher Gist, Lord Saye and Sele, and various Lowells, Cabots, Lodges, Livingstones, Delanceys and

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Roosevelts.

Chapter 2, "Sephardim in the New World" is a survey of Jews and crypto-Jews in North America, especially the Caribbean and Atlantic Islands. It includes autosomal DNA data proving the Melungeons are probably descended from Jews mixed with American Indians, Africans and Gypsies/Romani, as recently reported in this blog.

There are chapters and name-lists devoted to each of the original colonies. The book contains over 50 illustrations.

November 9, 2010



English navigators and explorers included many West Country gentlemen. Most were from intermarried crypto-Jewish families. New York Public Library.

DNA Studies Mature

Then: *Genes of Old Testament Priests (Cohanim)*

Now: *Genetic Traces of Religions in Lebanese and Iranians*

Then: *Rare Genetic Disorders in Finnish Mitochondrial Haplotypes (U)*

Now: *Genome-Wide Association Studies in Saami*

The whole business of direct-to-the-consumer DNA tests was founded upon the revelation in 1997 that Jewish men with the last name Cohen ("priest" in Hebrew) or something similar often preserved the genetic signature of Old Testament priests in the Y chromosome type handed down from father to son. Last year at long last, the so-called Cohen Modal Haplotype was completely pinned down and defined to everyone's satisfaction ("Does He or Doesn't He?"). Now similar genetic traces are being sought, and found, for other religions from the Middle East.

In response to customers asking whether being a Jew was a matter of ancestry or culture, genes or religion, I used to say, "Genes don't have religion, genes are older than religions, your DNA doesn't know what religion you are." But the increasingly adept methods of populations genetics are changing that pat response. The key tool is a program that uses advanced statistics to estimate population differentiations, BATWING. Standing for Bayesian Analysis of Trees With Internal Node Generation, this software can calculate the effective population sizes and growth rates from microsatellite data, assuming there was a split into several populations in the past. It is a little over 10 years old. The following article is likely to become a classic in this regard: "Influences of History, Geography, and Religion on Genetic Structure: the Maronites in Lebanon," by Marc Haber et al., *European Journal of Human Genetics* (2011) 19, 334–340; doi:10.1038/ejhg.2010.177; published online 1 December 2010.

Abstract. Cultural expansions, including of religions, frequently leave genetic traces of differentiation and in-migration. These expansions may be driven by complex doctrinal differentiation, together with major population migrations and gene flow. The aim of this study was to explore the genetic signature of the establishment of religious

communities in a region where some of the most influential religions originated, using the Y chromosome as an informative male-lineage marker. A total of 3,139 samples were analyzed, including 647 Lebanese and Iranian samples newly genotyped for 28 binary markers and 19 short tandem repeats on the non-recombinant segment of the Y chromosome. Genetic organization was identified by geography and religion across Lebanon in the context of surrounding populations important in the expansions of the major sects of Lebanon, including Italy, Turkey, the Balkans, Syria, and Iran by employing principal component analysis, multidimensional scaling, and AMOVA. Timing of population differentiations was estimated using BATWING, in comparison with dates of historical religious events to determine if these differentiations could be caused by religious conversion, or rather, whether religious conversion was facilitated within already differentiated populations. Our analysis shows that the great religions in Lebanon were adopted within already distinguishable communities. Once religious affiliations were established, subsequent genetic signatures of the older differentiations were reinforced. Post-establishment differentiations are most plausibly explained by migrations of peoples seeking refuge to avoid the turmoil of major historical events.

Meanwhile in Autosomal DNA

A like expansion and intensification of research interests have also transformed the field of Finnish DNA. In the old days it was well appreciated, through the work of Finnila and others, that the people of Finland, Estonia, Sweden and neighboring regions in Russia had a peculiar genetic history. Strangely, at least on the basis of mitochondrial DNA, they were more closely related to the Berbers of North Africa than the neighboring Swedes, Poles, Lithuanians and Russians. Female haplogroups UK were associated with a risk of occipital stroke, migraine and other neuro-deficiencies. On another level, their unique genetic history was approached through the study of male haplogroup N, common among Laplanders and Saami.

The focus has now shifted from haplotyping and sex-linked genes to population genetics and autosomal DNA just as it has in consumer tests. After 10 years, an important autosomal study of the Saami has

revolutionized the subject and shows promise of becoming the pilot to a new series of genome-wide disease association studies:

Jeroen R Huyghe et al. "A Genome-wide Analysis of Population Structure in the Finnish Saami with Implications for Genetic Association Studies." *European Journal of Human Genetics* (2011) 19, 347–352; doi:10.1038/ejhg.2010.179; published online 8 December 2010.

Abstract. The understanding of patterns of genetic variation within and among human populations is a prerequisite for successful genetic association mapping studies of complex diseases and traits. Some populations are more favorable for association mapping studies than others. The Saami from northern Scandinavia and the Kola Peninsula represent a population isolate that, among European populations, has been less extensively sampled, despite some early interest for association mapping studies. In this paper, we report the results of a first genome-wide SNP-based study of genetic population structure in the Finnish Saami. Using data from the HapMap and the human genome diversity project (HGDP-CEPH) and recently developed statistical methods, we studied individual genetic ancestry. We quantified genetic differentiation between the Saami population and the HGDP-CEPH populations by calculating pair-wise F_{ST} statistics and by characterizing identity-by-state sharing for pair-wise population comparisons. This study affirms an east Asian contribution to the predominantly European-derived Saami gene pool. Using model-based individual ancestry analysis, the median estimated percentage of the genome with east Asian ancestry was 6% (first and third quartiles: 5% and 8%, respectively). We found that genetic similarity between population pairs roughly correlated with geographic distance. Among the European HGDP-CEPH populations, F_{ST} was smallest for the comparison with the Russians ($F_{ST}=0.0098$), and estimates for the other population comparisons ranged from 0.0129 to 0.0263. Our analysis also revealed fine-scale substructure within the Finnish Saami and warns against the confounding effects of both hidden population structure and undocumented relatedness in genetic association studies of isolated populations.

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The key to emerging triumphs of research here is the international HapMap project.

On two fronts—religious history and rare diseases—genetics has brought more advances in the past decade than in the previous century before that. That consumers can take part in these exciting developments by ordering an affordable autosomal analysis of their entire ancestry or confirming the paternity of their child with a simple test purchased at their local drugstore is a tribute to the present golden age of American science and industry.

February 17, 2011

Two New Population Studies

Two reports in the *European Journal of Human Genetics* underline how specific autosomal DNA can be in revealing the geographical structure among populations. One uses genome-wide data from the Illumina Human Hap300 project to predict the village of origin of a person's four grandparents given European origins. The other used genotyping from 3,367 individuals from seven different European, mostly British Isles populations to lay bare the detailed population structure and linkage disequilibrium patterns of Ireland, England, Scotland and Wales.

Both studies have Colm O'Dushlaine of Trinity College, Dublin as their lead author and highlight how genotyping with autosomal DNA dominates genetics today (and DNA testing), eclipsing in many respects the older style of tests known as sex-linked haplotyping or lineage analysis, which focused on the male Y chromosome and female mitochondrial lines only.

Colm O'Dushlaine et al., "Genes Predict Village of Origin in Rural Europe," *European Journal of Human Genetics* 18 (2010), 1269-1270.

Colm O'Dushlaine et al., "Population Structure and Genome-Wide Patterns of Variation in Ireland and Britain," *European Journal of Human Genetics* 18 (2010) 1248-1254.

April 14, 2011

A Country Built on People

Not everything you were told in school about the Pilgrims, George Washington and the other brave, white Christian Founding Fathers of America is true. In fact, according to Elizabeth Caldwell Hirschman and Donald N. Yates' new book, some of the familiar figures were not even Christian. Appearing last month, *Jews and Muslims in British Colonial America* offers a fresh perspective on the early American experience, with chapters and emigrant lists on all the original colonies, from Virginia to Georgia. Here are "tweetable" excerpts with some of the study's surprising Hebrew, Arabic, Turkish and Jewish names.

From the Introduction

"American genealogies rarely jump the Atlantic, and in Norman pedigrees there seems always to be a disconnect between the invasion of 1066 and sudden appearance of the family's supposed ancestor on, say, the Pipe Rolls from the reign of Henry II or Magna Carta of 1215. In America we sometimes have the ship's passenger list mentioning our ancestor but then a maddening interval of silence before a reliable nexus of birth, marriage and death records can be established. Oral traditions fill in the breach.

"The first president of Nigeria, Nnamdi Azikiwe, once remarked America 'is a country built more on people than on territory.' He saw Jews as the ingredient that gave Americans their characteristic distinctiveness and diversity, saying they 'will come from everywhere: from France, from Russia, from America, from Yemen. ... Their faith is their passport.'

"We have made an effort to bring to life some of the forgotten women who shaped the Colonial American experience. These include the ancient Ur mother of European royalty, the Occitan Jewish Queen Itta, Charlemagne's great-great-great-grandmother; Mary Lago, the Sephardic Jewish mother of the Quakers' founder George Fox; and Malea Cooper, the Jewish Mulatto wife of Daniel Boone's guide (whose Hebrew name is the same as one of President Barack Obama's daughters). Some of their stories will surprise readers, running counter to traditional historical accounts. Few people realize that one of the Salem witches mounted a

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legal defense using the family's professional connections and wealth. Sarah Town(e) Cloyes (or Clayes) fought her accusers and lived to become a founder of the town of Framingham, Massachusetts. The mother of Patrick Henry according to diarist William Byrd was 'a handsome woman of the Family of Esau' whose first husband in Aberdeen, Scotland, was 'of the Family of Saracens.' The Cherokee Beloved Woman Nancy Ward bore an Arabic name. One of the subthemes of the present study is the interaction between immigrants and American Indians. Readers will find Cherokee, Creek, Choctaw and other genealogies that reflect intermarriage between Jews or Muslims and America's indigenous inhabitants, believed in the thinking of the day to be Abraham's children.

"On a different level, an interlocking Presidential dynasty has been suggested with twelve patrician families at its core—Adams, Bayard, Breckbridge, Harrison, Kennedy, Lee, Livingston, Lodge, Randolph, Roosevelt, Taft and Tucker—most of which we will have recourse to mentioning in the chapters of this book.

"The footnotes in this study are intended not only to document origins and surname histories in unequivocal fashion but also to cast a sidelight on celebrated Jewish Americans who can trace back to colonial forebears and their relatives in European Jewry."

March 4, 2012

Melungeon Revelation

By Kari Carpenter

Thank you to Donald Panther-Yates and the DNA Consultants staff for the prompt return of my Melungeon DNA Fingerprint results. Several weeks ago, I had never even heard the word "Melungeon." In preparation for an upcoming genealogy research trip, I just happened to go on amazon.com and read the introduction to Dr. Yates' book: *Old World Roots of the Cherokee*. I was tremendously excited to see a description of the terms "Black Irish" and "Black Dutch." Up until this time, I had been unable to find a satisfactory definition of these terms. My maternal grandmother had always stated that she was "Black Irish." Another maternal great-grandmother reported her lineage as being "Black Dutch." None of my family members seemed to know what those terms meant.

Needless to say, I quickly ordered the above-mentioned book, as well as other books by N. Brent Kennedy, Elizabeth Caldwell Hirschman and Wayne Winkler. It took me no time at all to realize that much of the family tree that I have diligently put together (over the last six years) was/is profoundly Melungeon. If I have accurately understood the information I have rapaciously absorbed over the last few weeks, and responsibly documented my family lineage, the following facts and information support this conclusion.

1. After reading *Old World Roots of the Cherokee*, I realized that I am a distant Ramey/Reamy cousin of Teresa (Grimwood) Panther-Yates. My paternal grandmother was born a Reamy in Texas. Although I had known that the Reamys had been French Huguenots, I had no clue about their Sephardic ancestry until I read this book. Similar to the Grimwood/Rameys (in Chapter 9) my Reamy people also have a variety of unusual and distinctive first names: Othera, Vida, Vita, Orvia (male), Olive (male), Rozella, Oleta, etc.

2. The name of my fourth great-grandmother (paternal side) was Margaret Anna Goins. Her granddaughter, Margaret Ann England married my second great-grandfather, Olive Nathaniel Reamy. Margaret Anna Goins and her husband, William James Morris, resided in Tennessee and Alabama before moving to Texas after the Civil War (with their daughter's family).

3. My great-grandfather Orvia N. Reamy consistently reported that his grandmother was of Cherokee ancestry. (He did so delightedly and repeatedly because it upset many other family members who would have much rather maintained a complete silence regarding their "less-than-white" ancestry.) This woman would have been Elmina C. (Morris) England—daughter of Margaret Anna Goins. In addition to Goins being a major Melungeon surname, I believe that the inter-related Englands, Morrises, and Barnes of this branch of my family are also probably of Cherokee ancestry. Elmina Morris and husband Landy England gave their sons rather distinctive names of certain military generals prominent in the Creek/Redstick War.

4. My great-grandmother Jesse Alice Ketchand (my mother's father's mother) stated that she was Black Dutch. Family pictures show that Jesse Alice and her mother, Martha Ann Cammack, had Asian eye folds. This evidence and the family lore regarding Jesse Alice's grandfather William

Peterson Ketchand, strongly support Melungeon ancestry. It is said that sometime around 1834, "W.P." got into some kind of trouble in Virginia, whereupon he and his new bride rapidly left the area. W.P. subsequently made up a new surname: "Ketchand". (The only people you will find in the U.S. today with this particular surname are descendants of W.P.). I have a very strong hunch that my family is probably connected and/or related to "Sister Kitchen" and "them melungins" mentioned in the Stony Creek Primitive Baptist Church records of 1813. I have researched and found that after leaving Virginia, W.P. and his family lived for some time in Georgia before moving on to southeastern Arkansas, where he was a minister of a Primitive Baptist Church in Ashley Co., Arkansas. I have visited this church building—it looks exactly like those described by Elizabeth C. Hirschman in *Melungeons: The Last Lost Tribe in America*. W.P. and his son Jesse Enos Ketchand were listed as white on 1850 and 1860 U.S. Federal Census documents. However, in the 1870 Ashley County Arkansas U.S. Federal Census, Jesse Enos Ketchand and his family (including my great-grandmother Jesse Alice) were labeled "mulatto."

5. My mother's mother—Anna Laura Williams, stated that she was of "Black Irish" ancestry. I have traced her maternal line only as far back as Anna's great-grandmother: Cynthia/"Sinthy" Love in Lawrence County, Alabama, in the 1820s/1830s. Lawrence County seemed to be a gathering spot for a large mixed race community, and the surnames that "Sinthy" was linked/married to appear to have connections with the Chickasaw and Cherokee tribes (Love, Rodgers/Rogers, Carpenter). I also received a fairly rare mtDNA haplogroup (W6) from this woman.

6. My various immediate family members exhibit numerous examples of Anatolian bumps and ridges, Mongolian Blue Spots/Birthmarks, Asian Shovel Teeth, palatal torus and missing wisdom teeth/molars (one of my nephews has complete hypodontia; i.e. no adult molars).

7. Before my "Melungeon Revelation," I had researched that I was a descendant of Bacon's Rebellion co-leader James Crewes and his Pahmunkey/Powhatan "wife." Although colonial law did not allow his half-breed daughter Hannah any legal recognition or rights as his heir and daughter, James did his best to write a will bequeathing much of his estate to Hannah and her husband, Giles Carter, (shortly before he was hanged by Governor Berkeley for his part in the 1676 uprising). I have

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two family images of their descendants (my second and third great-grandmothers) that show features of their Native American heritage.

Given all the above details, I expected that my DNA results would reveal a wonderfully diverse Melungeon-American background. Thanks again to DNA Consultants for both the expected and unexpected ethnic details. The Romani element was a bit of a surprise, and I'll admit that I was disappointed to see that I did not inherit a Native American marker from either parent. (I have no doubt that one of my siblings probably did.) These results will greatly aid me as I continue my genealogical research.

July 15, 2013

Shawn

My journey into DNA testing began with my desire to expand my known heritage, while clarifying debated Jewish ancestry. What I have found in return is that my ancestral paper trail only uncovers a small portion of the blood that runs through my veins.

My DNA Consultants results, for the most part, were quite surprising. My European matches were fairly consistent with my country origins on paper and surrounding areas. The major surprise, however, was that my No. 1 European match was Romani/Gypsy and my No. 10 match was Czech Republic. ...

Things became much more interesting with my World Population Matches. My scores (in order) were Romani/Gypsy, Middle Eastern, African, Iberian, Central European, African-American, Jewish, Mediterranean European, European American and Eastern European. I also came up with Native American admixture to top it off. These results are causing me to believe that there may be a line or more of family lineages that I have yet to tap.

I have received comments from others concerning my phenotype such as "I'm not sure what you are," "You don't look Irish" and "You must have some Black ancestry." Some have even just assumed I was Hispanic or Caucasian. Almost all acknowledge they see my Italian/Spanish phenotype, while a few also see slight Native American.

While my results provided insight into how diverse my blood really is, they also put an end to an age-old family debate as to our Jewish ethnicity. One of my relatives from a few generations past would

passionately defend her position that our family line was indeed Jewish, while another family member would vigorously put forth his position that we were not Jewish. He would try to prove our non-Jewishness any time he could. I also had another family member in that family line say that he almost did not get hired for a job because the hirer thought he was Jewish. I always believed these accounts, especially since from as far back as I can remember I have found this side of my family (Italian and German) to phenotypically look Italian and/or Jewish.

Where does this leave me now? My results show my blood is much more than simply Italian, French, Irish and German. They confirm family testimony of Spanish/Portuguese/Iberian and Jewish ancestry. Perhaps more interestingly, my results leave me reassessing my ethnicity or multi-ethnic heritage, end years of family verbal passages or debates, and leave me with intriguing new ancestries that are waiting to be discovered.

July 22, 2013

Maria O'Connor commented on 23-Jul-2013

Shawn: Countries' frontiers are artificial. For example, there are people of Celtic heritage in northern Spain, northern Portugal, all over Ireland, all over England, all over Scotland, all over Wales, Southern Germany, northern France, Northern Italy, etc. All of them, even considering they come from different places, have the same Celtic DNA. So, if you have an ancestor from Spain or Portugal, that person could be of Celtic origin, or Mediterranean origin. If a person has Jewish Sefardi DNA, it could be from southern Spain, southern Portugal, North Africa, Middle East, etc. Also, in South America there are great numbers of people of European ancestry, including non-Hispanic, non-Portugue ancestry, like Irish, German, Italians, etc. It's quite complicated, due to ancient and new migrations.

Phyllis Starnes: Designer Genes

We interviewed Phyllis E. Starnes, assistant investigator, to find out what fascinates her about the field of DNA testing. Her story is the first in a series titled "Behind the Numbers" about the workers behind the scenes

in our industry, from lab technicians to statisticians.

Interviewer: How did you first get interested in DNA?

PES: I went to the Melungeon Union in Kingsport (Tennessee, in 2002). Beth Hirschman had her "stalk," a diagram of her Melungeon family tree with all the names in her genealogy, many of which were also my surnames. I heard Dr. Yates speak at that meeting. They had their lines all pinpointed, thanks to DNA studies.

Interviewer: What was your next step after that?

PES: I came home and did a lot of genealogy research on the computer.

Interviewer: And then?

PES: The first year DNA Consultants opened for business, which was 10 years ago, I ordered a Y chromosome test for my husband, Billy. Other companies were offering the same product, but DNA Consultants was the only one to give you a full analysis and customized explanation of things. Then I ordered my own mitochondrial DNA test.

Interviewer: Any surprises?

PES: Billy's top matches for his male line, the Starnes surname line, were Macedonia and Albania. My mitochondrial mutations matched Native Americans. I became the first of the "Anomalous Cherokees" whose female lineages didn't fit in the traditional scheme of "Indians out of Asia." In fact, my Hypervariable Region 2 mutations matched only one other sample in the world, and that was Dr. Yates, who is Cherokee in his direct female line.

Interviewer: What did your husband and the rest of your family think?

PES: Some were excited, as I was, but most were just not interested. My kids thought the strong Native American matches were very interesting.

Interviewer: What other family members did you test?

PES: As soon as autosomal testing arrived, with the DNA Fingerprint Test, I did Billy and myself, of course, Julia, Kiely and Holli (our three daughters), our granddaughter Keely, my dad's sister and mother's sister, an uncle and his wife, a niece and a cousin.

Interviewer: What did you find out?

PES: Within the immediate family, it was obvious who got which ancestry and trait from whom, and how they all resonated. One of the big surprises was my father's side, which proved to have quite a bit of Native American and Iberian. The "First Peoples" gene came from his side and

passed on down through our girls. On my mother's side, 11 out of 20 matches was India.

Interviewer: India!?

PES: Yes, it appears we were finally seeing the extensive Romani/Gypsy heritage in her family. People had always told me I was like a Gypsy, from my clothes and jewelry to my attitude and outlook. When Billy was in the Navy, I told him one day, "I'm tired of being a Gypsy." I said I wanted to settle down in one place.

Interviewer: Did you settle down?

PES: Yes, we've lived in a small town in East Tennessee for almost 40 years. We moved here in 1973.

Interviewer: Any other surprises in your DNA?

PES: If you were to chart our geographical matches, both in terms of autosomal DNA as well as the female and male lines, it would surround the Mediterranean. That's where familial Mediterranean fever comes in.

Interviewer: Who has FMF in your family?

PES: Billy, myself, Julia, Holli and a cousin. I'm sure others have it but it has not been diagnosed and they may call it instead fibromyalgia. Brent Kennedy (author of a book on Melungeons and their genetics) is a cousin many times over.

Interviewer: What do you enjoy about your job?

PES: It's like a holiday every day. With customers coming out of North Carolina or East Tennessee, I see a lot of the same matches and genealogy I have personally encountered in my own experience with DNA testing. I recognize a lot of genetic cousins.

Interviewer: When did you first hear the word "Melungeon"?

PES: I grew up in Southwest Virginia in the little town where the Stony Creek Church is located. The church minutes contain the first written instance of the word. The register is all of mine and Billy's ancestors, and part of Beth's (Elizabeth Hirschman, author of books on Melungeons).

Interviewer: What do you see in the future of DNA testing?

PES: I think we've only glimpsed the tip of the iceberg so far, even though it's been 10 years. We'll continue to have new knowledge, new products. I highly recommend our customized approach.

Interviewer: Any parting shots?

PES: I've worked in sales all my life—jewelry management and design,

my own interior decorating shop, running my own hair salon—but I have found something to be truly excited about in DNA. Funny I couldn't get this excited about selling diamonds! If you think about it, your genes are the ultimate design for living.

November 20, 2012

DNA and the French Revolution

If you want a good mystery, look at DNA. DNA has all the best stories and tales of murder and intrigue. According to Sam Kean, author of *The Violinist's Thumb: And other Lost Tales of Love, War, and Genius as Told by Our Genetic Code*, "... Somewhere in the tangle of strands are the answers to many historical mysteries about human beings that were once thought lost forever."

Kean says each one of us has "... enough DNA to stretch from Pluto to the sun and back," and "... every human activity leaves a forensic trace in our DNA" and the story that DNA tells, Kean says, "... is a larger and more intricate tale of the rise of human beings on Earth: why we're one of nature's most absurd creatures, as well as its crowning glory." We just have to know how to read the story and solve the mystery. Like the one about the French Revolution and King Louis XVI.

Victor Hugo's classic novel about the French Revolution, *Les Misérables*, has been given a face-lift for a modern audience to ponder over popcorn in the theater. Or discuss at a local café or bookstore over cappuccino. But few of us would imagine that scientists have had any interest in the French Revolution. But we would be wrong. And it is a gruesome tale.

Phillipe Charlier, a forensic scientist, dubbed the "Indiana Jones of the Graveyards," according to the recent *Abroad in the Yard* article, "DNA Analysis Links Blood of Louis XVI, Beheaded in French Revolution, and Mummified Head of His Ancestor Henri IV," by Tom Martin Scroft, has linked blood stains in a decorated squash gourd to the mummified head of King Henri IV. There was once a handkerchief, according to the article, that had been "in the possession of an Italian family for over a century" in an "ornate calabash gourd" that had been "dipped in the (beheaded) blood of King Louis XVI" by a Maximilien Bourdalou.

According to an earlier *Discovery News* article by Jennifer Viegas, "Royal Blood May Be Hidden inside Decorated Gourd," the handkerchief "is now missing." Most certainly it has "decomposed" by now as David Blair suggests in his recent article, "Louis XVI Blood Mystery Solved." Viegas also says the ornately decorated gourd was "dated to 1793" and that the dried squash reads, "Maximilien Bourdaloue on January 21st, dipped his handkerchief in the blood of Louis XVI after his beheading." Why would he have done such a thing? For a bloody relic no doubt. What a coffee table conversation piece. Viegas quotes Carles Lalueza Fox, "lead author of the study and a researcher at Spain's Institute of Evolutionary Biology," as saying that the act was common: "In fact, many people went there to dip their handkerchiefs in the blood." How gruesome. But linking blood found in the Italian family's gourd to King Louis XVI? It took DNA analysis to validate that tale.

How was that done? In careful steps. First, according to Fox (quoted by Viegas) her team had to identify the "brownish substance" inside the squash as "dried blood." Later, Fox remembered that the King had "blue eyes" and he identified the genetic marker for the "blue eyes mutation." But that is a long way off from identifying it as the blood of King Louis XVI. The researchers also analyzed its mitochondrial profile and its Y-Chromosome profile and they found the "DNA profile (before they had a match) ... was rare among Eurasians," which "suggest(ed) that it (might) derive from a royal bloodline." But Fox knew that they had to have "someone" for comparison. They first thought of the "(pickled) heart located in a royal French crypt thought to belong to the King's son, Louis XVII." It is beginning to sound like a tale from Edgar Allen Poe.

But they didn't use the heart after all. They discovered the mummified head of King Henri IV, who ruled France from 1589 until 1610, which had been "shuffled between private collections ever since it disappeared during the French Revolution," according to Marie Cheng's *AP* article, "Scientists ID Head of France's King Henry IV." (According to the article, "Henry IV was buried in the Basilica of Saint Denis near Paris, but during the frenzy of the French Revolution, the royal graves were dug up and revolutionaries chopped off Henry's head which was then snatched.") I don't suppose the head was in such great condition after all this shuffling about, but it still turned out to be useful.

With that mummified head, DNA analysis has “solved a mystery that has lasted for almost 220 years,” according to Blair. He quotes a new study in the current issue of *Forensic Science International* as saying that the comparative analysis with the mummified head of King Henri IV confirms the connection by “... establish(ing) that Henri possessed a rare partial “ ‘Y’ ” chromosome” and Louis, a “direct male-line descendant, separated by seven generations,” (had) this same Y chromosome. Along with “other (genetic) matches,” the study concluded that “... historically speaking, this forensic DNA data would confirm the identity of the previous Louis XVI sample.”

And you thought scientists were boring. Another DNA mystery solved.

December 31, 2012

Wanna Indian Card?

DNA testing for Native American ancestry is the best way to connect to one's past if the genealogy trail has come to an end. But enrolling in a federally recognized tribe is a lot more difficult than taking a cheek swab test. Perhaps there were family stories about having American Indian ancestry in your family history, but there was little way to prove this. Now, anyone can determine whether the family tales were tales or true with an easy cheek swab test. There are now known genetic markers for Native American ancestry that can be revealed in one's DNA testing results. Some autosomal DNA tests will even provide specific matches to Indian tribes like Apache or Cherokee, if the genetic match is strong enough, but that doesn't mean anyone is handing out an Indian card to you like candy. Why not?

For one thing, tribal guidelines aren't that simple. It is, generally, a more complicated process of finding someone you relate to that is in the tribe or on the federal census rolls, like the Dawes roll for the Cherokees. All tribes have different guidelines, but most of them want you to have also figured out your genealogy and how you connect to that specific tribe. However, some of them do accept DNA testing as part of the process though, generally again, DNA testing that shows a specific relationship to a tribal member (BIA, “A Guide to Tracing American Indian and Alaskan Native Ancestry”). There are many ways that can be

proved, depending on the type of DNA testing that is done.

If you have family members in a tribe, or have formed some type of kinship to a tribe, like being adopted, pursuing tribal enrollment could be very important. However, some are looking to enroll because of the “myth of the monthly check,” which they believe they will receive because of a racial identity alone. Nevertheless, these payments have been made according to specific judgments resulting from treaty obligations or settlements of claims, although there are few outstanding payments (BIA, “A Guide to Tracing American Indian and Alaskan Native Ancestry”).

Unfortunately, DNA testing for Native American ancestry will most likely not put a check in the mail for you. However, what it can tell you is the truth. What could be more precious?

January 14, 2013

Skeletons in the Closet

I love genealogy, but it has its pitfalls. Those negatives eventually made me trust in the science of DNA testing more than genealogy. Why? People can lie. And why use old tools? We are now in the Genomics Age. It is time to go beyond interrogating your Hatfield and McCoy relatives. DNA doesn't lie.

I have had a love-hate relationship with genealogy for quite a while now. Genealogy too often has given me the silent treatment and not treated me as well as I had hoped. It was time for a new romance. I used to be a religious believer in the records of genealogy. I paid attention and played by the rules—interviewing family members, filling out family trees, going on genealogy forums, and researching for ancestors properly. My husband and I even trekked hundreds of miles to different library archives and courthouses in the days before public and vital records were assembled and published online.

None of it mattered. There were too many skeletons in my genealogy closet. There were ancestors who skipped across county lines and changed their names. One just disappeared. And no one was talking. One aunt hung up on me, and another told me to give up. It was frustrating trying to unlock my genealogy secrets. My father actually told me, “If you keep digging, you will find people you do not want to be related to.”

But even if you do not have a murky ancestral past, genealogy is not a walk in the park.

Why not? First of all, there can be blind spots and unverified lines—like adoption—in our genealogy research and public records. If we just ignore this, or are unaware of it, that entire line of ancestry is incorrect. This can be multiplied if we then share our family tree. For instance, I have several great-grandmothers far back in some of my ancestral lines who are listed with only the first name. No further information is given or can be discovered. That is a blind spot in genealogy, but it does not mean that “Mary” did not have her own personal family history and story that has added to your story. And genealogy and sex do not mix. In fact, genealogy would have one think that not one woman in all of civilization ever cheated on her husband. However, the further back you follow any line in your family tree increases the odds of a “non-paternity” event of either adoption or an unknown dalliance. No one wants to believe their parents or grandparents had sex, but if they did not, you would not be here, and not all sex that has happened during history is just between the known marriage partners. I have a friend who was told quite late in life that her father was not her father. Why did she ask? Her DNA testing results did not make sense otherwise, and she confronted her mother with them. Soap operas aren’t just on television. Her elderly mother confessed to an affair when her husband was at war.

Also, many people changed surnames when they immigrated to America because of Jewish or other exotic ancestry. That can mean that you do not really understand the ancestry of this line. I have two cases of this in my own family genealogy that I discovered. One was my grandmother’s maiden name. It explains my DNA testing results with the Jewish markers as the original name is Jewish.

Again, genealogy can lie because people can lie. You can get incorrect information from your family about your genealogy as they may not wish to divulge any family secrets, and you can get other incorrect information from genealogy forums from researchers who have not done proper research and/or have unknown errors.

That is not to say genealogy cannot be fun. Just realize it is limited and can be flawed.

February 12, 2013

The Myth of Percentages

It is a delusion that one can take a Native American DNA test and get a card from the federal government. But it is ingrained in popular thinking, like the "fact" that Columbus discovered America. He didn't, of course. The original inhabitants beat him to the punch more than 10,000 years before. Ironically, Columbus believed he had landed in China.

How does one get federal Indian recognition and benefits? One might as well buy a lottery ticket. It is a complex and thorny issue. There are some 700 to 800 American Indian nations, and the requirements for qualifications from the BIA differ. But no federally recognized American Indian tribe will accept just a DNA test. For instance, the Cherokee Nation requires that one be accepted by one's community as American Indian, know of one's American Indian ancestry prior to being 18, and have found a direct ancestor on the federal government's final Indian census rolls, compiled and closed more than a hundred years ago. This not only means one needs to have done in-depth genealogy research but, most likely, have been born and raised on the reservation.

Then why take a Native American DNA test? It is important to know the story of one's ancestry. That story can be a meaningful chapter to pass down as part of one's family history. And DNA testing, especially new autosomal DNA testing based on forensic science, can tell you if you have Native American ancestry in your background. How? New tests provide a comprehensive analysis of all your ancestry in one simple, cheek-swab DNA test. It isn't just a test of one or two ancestral lines but about 1,000 or so.

There are some non-federally recognized state tribes that do accept DNA testing for qualification purposes. It is up to you to go to the tribe and find out their specific qualifications. No DNA testing company can do this for you.

However, an autosomal Native American DNA test will not tell you "how much Indian" you have. Why not? This is a very scientific approach to DNA testing for ancestry. And percentages are not scientific at all. If you are picking up your child's crayons, think of how each color is a blend of other colors. People are blends as well, so there is no "pure" population to use as a reference point. Portuguese or Hispanic means many different things to different people because they are so mixed, but

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all populations are actually mixed because of admixture and intermarriage between populations. Percentages are really just educated guesses—not real science.

Native American DNA testing is an important step, but you have to be in it for more than the money. The odds are against your winning that game.

March 28, 2013