

6 DNA AND ETHNICITY

Melungeon DNA Study by Jones with MHA Response

Kevin Jones was a professor of biology at the University of Virginia's College at Wise who used DNA to study the Melungeons. Here is the press release from June 2002 that shocked many Appalachians and threw the Melungeon mystery into high gear.

KINGSPORT, Tenn.—Some of the veil of mystery surrounding the "mysterious" Melungeons was lifted today when the results of a two-year DNA study were announced. New questions have been raised, however, concerning females potentially from Turkey and northern India who are a part of the Melungeon ancestry.

The Melungeons are a group of people of unknown origin first documented in the mountains of Appalachia in the early 19th century. Many believed they were of mixed racial ancestry, and the Melungeons faced legal and social discrimination. As a result, they tended to live in remote areas, most notably Newman's Ridge in Hancock County, Tennessee. In the 1940s and 1950s, sociologists and anthropologists labeled the Melungeons and other similar groups as "tri-racial isolates."

Over the years, numerous myths, legends, and theories evolved to explain the Melungeons' mysterious origins. These legends often involved sailors and explorers from Spain, Portugal, Carthage, or Phoenicia who were stranded on the American continent and intermarried with Indians. The Melungeons themselves often claimed to be "Portyghee."

Most researchers believed they were a product of intermarriage between English and Scots-Irish settlers, Indians, and free African-Americans, and discounted their claims of Mediterranean origin. The DNA results announced today confirmed that the Melungeons have European, African, and Native American ancestry, as well as genetic similarities with populations in Turkey and northern India.

More surprising, however, is the fact that some of these Turkish- and northern Indian-like sequences have been passed through the Melungeons' maternal lines, indicating that their overseas ancestors included not only male sailors and explorers, but females as well.

The results were announced today at Fourth Union, a Melungeon conference in Kingsport, Tennessee, sponsored by the Melungeon Heritage Association (MHA). MHA is a nonprofit organization dedicated to promoting research and understanding about Melungeons and other multiracial groups in the United States. Dr. Kevin Jones, a biologist at the University of Virginia's College at Wise, conducted the study.

The presence of Turkish and northern Indian haplotypes within the mitochondrial DNA samples taken from modern-day Melungeons indicates that women of European/Asian origin were a part of the original mixture that made up the Melungeon ancestry. Mitochondrial DNA comes from the female side of an individual's ancestry.

Previous researchers had assumed that European males intermarried with Native Americans and African-Americans to produce the Melungeons. Although Native and African genes are definitely a part of the Melungeon genetic mix, women were among the overseas settlers who contributed to the Melungeon gene pool.

Dr. N. Brent Kennedy speculated that the Melungeons were of Mediterranean and Middle Eastern ancestry and published his theories in a book titled *The Melungeons: The Resurrection of a Proud People*, published in 1994 by Mercer University Press.

Dr. Jones, a native of London, England, studied at the University of Reading, and did post-doctoral research at Louisiana State University. He is currently a professor of biology at UVA-Wise, teaching courses including cell biology and genetics.

Dr. Jones undertook this DNA study in 2000 at the suggestion of Dr. Kennedy, then vice-chancellor at the University of Virginia's College at Wise. Kennedy asked Jones to analyze DNA samples taken from

members of known Melungeon families. Such a study would utilize technology not available to earlier researchers.

"Brent Kennedy ... explained the controversy that surrounded the origins of the Melungeons (and) realized that I had the DNA expertise to look at that," Jones related in an interview with Wayne Winkler, president of the Melungeon Heritage Association and author of an upcoming book about the Melungeons. "The subjects were largely chosen by Brent Kennedy on the basis of pursuing as many of the known Melungeon lineages that existed in the area and taking advantage of his genealogical expertise. People were then asked to donate samples to the study, and in the majority of cases they kindly did so.

"Single hairs were taken to study the mitochondrial DNA which traces the maternal lines of the subject. In other words, the samples represented DNA, which could be traced to the subject's mother, grandmother, great-grandmother, and so on. We also have a smaller number of samples which are cheek cells for looking at male inheritance," said Jones.

"What we get from those is a DNA sequence which we can think of as being about an 600-long letter code, and we can take that string of 600 letters and compare those to what now is literally thousands of samples from around the world. We're interested both in the number of different sequences that we get from the population and also how they appear to relate to other samples worldwide."

About 100 hair samples were studied for mitochondrial, or maternal, DNA, and about 30 samples of cheek cells were taken to study the Y-chromosome, or male, DNA. While more samples might have been taken, Jones said, "That's the beauty of science: One can always subsequently refine and extend the analyses."

The technology available to Jones allowed him to study only the mitochondrial DNA samples; the Y-chromosome samples were sent to University College in London, England, for study. "The 'Y' is technically far harder to do, and indeed, relies on expertise in some other labs in the world to do it, so we're partly dependent on their cooperation and collaboration."

Such testing is not perfect, of course, and does not tell researchers everything about an individual's inheritance. For example, neither test will give genetic information about a subject's paternal grandmother. However, the study was not particularly concerned with individual

genealogies.

"We're looking for patterns that exist in the population as a whole," according to Jones. "Now, obviously, each individual sample contributes to that, but I think that for an individual you can say relatively little. Looking at the patterns that occur throughout the population becomes important. And that means the number of samples that are looked at is also significant, and we've tried to do as many as is reasonably possible."

Jones compared these samples to the thousands available through GenBank, an international genetics database, published scientific literature and the Mitochondrial DNA Concordance, databases containing DNA sequence information.

Looking at the maternal lines of the Melungeons who were tested, Jones found considerable variation in ethnicity among the samples.

"It's comparatively straightforward to link particular sequences to particular ethnic groups and different continental areas of the world," he noted, "and the majority of those Melungeon-derived sequences were European in origin. Within those European samples, though, there is significant diversity, and some seem to reflect areas outside the traditional northern European sphere. The ability to tie a sequence to a particular area is dependent upon the historical occurrence of any given haplotype somewhere, and the places that are easy to track are where we've had populations existing for a long time, and not being affected by a lot of different people coming in. So some, perhaps more-isolated, areas of Europe are easier to track than more cosmopolitan (areas)."

While the Melungeons are predominantly European in their genetic backgrounds, they are indeed tri-racial.

"There appears to be a small percentage of both Native American and African-American sequences in there, too," Jones stated, "although they are certainly both in the minority. They're both in there in about equal levels of representation as well."

The long-held belief that the Melungeons originated in Portugal is neither borne out nor negated by Jones' research.

"To date we've found no sequences that can be definitively traced back to uniquely Portuguese sequences. That doesn't mean that they don't exist. A large number of the European sequences are now widely spread throughout Europe, and if one of those genetic sequences happened to come from Portugal, we would not detect that. We can't dismiss that

theory at the moment, but we can't provide additional support for it."

Jones finds a stronger possibility for a Turkish or Middle Eastern ancestry for the Melungeons.

"The relatively unusual European-type sequences seem to reflect, perhaps, areas around northern India. It's very hard to say, back in time, what that would have been classified as, and I think one of the problems here is that we tend to think of 'Turkish' in terms of the dimensions of modern Turkey, not of the original scale of people of Turkish origin who, in essence, were spread throughout the European world. Perhaps the best I can say is that some of those sequences are a little more 'exotic' than Anglo-Irish sequences, and some of those could reflect, perhaps, populations that were associated with or moved through Turkey."

The Portuguese and Spanish explorers and early American settlers may well be the key to discovering how these people wound up in America. The Portuguese, in particular, were involved in wide-ranging trade in the 15th and 16th centuries, and had many interests in places such as northern India and the area occupied by present-day Turkey. Both Spain and Portugal had very cosmopolitan populations, with large numbers of people from many parts of the world living within their borders. And Dr. Kennedy and others have suggested the Spanish and Portuguese fort at Santa Elena (in present-day South Carolina), along with a series of frontier outposts, as a possible source for Melungeon ancestry.

With regard to the male lineages investigated, the Y chromosome data also suggests a multiracial origin, including Sub-Saharan African and European components. Of particular interest are Y haplotypes of established Melungeon male lines that possibly reflect Mediterranean and/or Near Eastern populations. This finding indicates that the overseas ancestors of the Melungeons may have come to these shores as part of a male-female family unit, or formed such family units shortly after arrival. Such family units came to America as part of a Spanish/Portuguese colony at Santa Elena in present-day South Carolina.

Theories about when people with this genetic background first came to America are speculative at this point.

"Dr. Jones' work has answered many questions," said Wayne Winkler, president of MHA, "but those answers have raised many more questions. These questions will keep historians busy for some time to come, and we

may never have definite answers. The Melungeons may remain one of the mysteries of history."

Statement by Wayne Winkler, President of the Melungeon Heritage Association

The Associated Press mistakenly released the story of the DNA study a day early. We regret that, after two years of hard work, Dr. Kevin Jones was not permitted to break the news of his study himself. The story by Chris Kahn also contained a few inaccuracies. First, the hair samples taken to study mitochondrial DNA, tracing the maternal lines, were taken from men as well as women, contrary to the statement in the story. Secondly, Brent Kennedy was quoted out of context in saying that Melungeons weren't much different from other Americans. In context, he was saying that ALL Americans are mixed to some degree, although not necessarily as much as are Melungeons. And finally, I think the story missed the important news: that women were a part of the original Turkish, Mediterranean, and northern Indian population that came to America. We've always heard the stories about shipwrecked sailors or explorers being the source of our overseas genes; it's now obvious that these genes came, at least in part, from family units of men and women who were attempting to establish themselves in a new land. As the DNA study shows, they succeeded.

June 21, 2002

Ancient Chickens Come Home to Roost

Biological anthropologist Elizabeth Matisoo-Smith of the University of Auckland in New Zealand has come up with proof, in the form of chicken bones, that shows Polynesians were in America long before Christopher Columbus showed up.

Her dating of chicken bones found in Chile, shows before the Spanish arrived, Polynesians had gone there, had given the American Indians chickens and probably got sweet potato in exchange.

An article about the discovery appears in *Nature* 447/7145:620, "DNA Reveals How the Chicken Crossed the Sea," by Brendan Borrell.

The origins and travels of the Polynesians were the lifelong study of

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Harvard biologist Barry Fell, a native New Zealander who was widely shunned by other academicians for his theories of diffusion across the Pacific. As early as the 1970s, geographer George F. Carter offered evidence the Polynesians brought chickens to South America and took away sweet potatoes, among many other exchanges of culture.

In 1992, Oxford geneticist Bryan Sykes disproved the theory put forth by Thor Heyerdahl with the balsam boat called Kon-Tiki that American Indians sailed across the Pacific from East to West to found Polynesia. The chicken bones support what diffusionists have maintained for decades, that cultural influences ran in the opposite direction.

June 6, 2007

Double Helix Maelstrom

DNA Pioneer Rebuked For Racist Remarks

BBC News, October 20, 2007

DNA helix co-discoverer James Watson was suspended from the board of the Cold Spring Harbor Laboratory after making disparaging remarks in the *Independent*, a British newspaper, about the intelligence of Africans.

Watson said he was "inherently gloomy about the prospect of Africa because all our social policies are based on the fact that their intelligence is the same as ours—whereas all the testing says not really." He added that people who have to deal with black employees find it is not true that everyone is equal.

Later, Watson, qualified his remarks.

"The overwhelming desire of society today is to assume that equal powers of reason are a universal heritage of humanity," he said. "It may well be. But simply wanting this to be the case is not enough. This is not science. To question this is not to give in to racism."

With Francis Crick and Maurice Wilkins in 1962, Watson received the Nobel Prize in Physiology and Medicine for their discovery of the double-helix structure and nature of DNA, often referred to as "the code of life."

October 20, 2007

Possible Egyptian, Greek, Phoenician and Hebrew Origins of Cherokee

Abstract. A sample of 52 individuals who purchased mitochondrial DNA testing to determine their female lineage was assembled after the fact from the customer files of DNA Consultants. All claim matrilineal descent from a Native American woman, usually named as Cherokee. The main criterion for inclusion in the study is that test subjects must have obtained results not placing them in the standard Native American haplogroups A, B, C or D. Hence the use of the word "anomalous" in the title of a paper prepared by chief investigator Donald N. Yates, "Anomalous Mitochondrial DNA Lineages in the Cherokee." Most subjects reveal haplotypes that are unmatched anywhere else except among other participants, and there proves to be a high degree of interrelatedness and common ancestral lines. Haplogroup T emerges as the largest lineage, followed by U, X, J and H. Similar proportions of these haplogroups are noted in the populations of Egypt, Israel and other parts of the East Mediterranean.

The Cherokee and Admixture

According to a 2007 report from the U.S. Census Bureau, the Cherokee are the largest tribal group today, with a population of 331,000 or 15 percent of all American Indians. Despite their numbers, though, the Cherokee have had few DNA studies conducted on them.

I know of only three reports on Cherokee mitochondrial DNA. A total of 60 subjects are involved, all from Oklahoma. Possibly the reason the Cherokee are not recruited for more studies, I would suggest, stems from their being perceived as admixed in comparison with other Indians.

Accordingly, they are deemed less worthy of study.

In the past, whenever a geneticist or anthropologist conducting a study of Native Americans has encountered an anomalous haplogroup, that is, a lineage that does not belong to one of the five generally accepted American Indian mitochondrial DNA haplogroups A, B, C, D and X, it has been rejected as an example of admixture and not included in the survey results. This is true of the two examples of H and one of J

reported by Cherokee descendants by Schurr (2000:253). Schurr takes these exceptions to prove the rule and regards them as instances of European admixture.

The governing logic of population geneticists seems to go as follows: Lineage A, B, C, D and X are American Indian. Therefore, all American Indians are lineage A, B, C, D and X.

The fallacy in such reasoning is apparent. It could be restated as: "All men are two-legged creatures; therefore since the skeleton we dug up has two legs, it is human." It might be a kangaroo.

"The geneticists always seem to cry 'post-Columbian admixture,' " says Stephen C. Jett, a geographer at the University of California at Davis, "but fail to take into account that there are no plausible post-Columbian sources for the particular genetic mix encountered."

"Anomalous Mitochondrial DNA Lineages in the Cherokee" concentrates on the "kangaroos"—documented or self-identifying Cherokee descendants whose haplotypes do not fit the current orthodoxy in American Indian population genetics. Here are some highlights, organized by haplogroup.

Haplogroup H

Although this quintessentially European haplogroup would seem to be the most likely suspect if admixture were responsible for the anomalous haplogroups, there are but four cases of it.

Haplogroup X

Haplogroup X is a latecomer to the "pantheon" of Native American haplogroups. Its relative absence in Mongolia and Siberia and a recently proven center of diffusion in Lebanon and Israel (Brown et al. 1998, Malhi and Smith 2002; Smith et al. 1999; Reidla 2003; Shlush et al. 2009) pose problems for the standard account of the peopling of the Americas. DNA Consultants Cherokee-descended customers include seven instances of haplogroup X. David E. Lewis (whose Cherokee name is Wayauwetsi) traces his unmatched X haplotype back to Seyinus, a Cherokee woman of the Wolf Clan born on or near the Qualla Boundary in North Carolina in 1862. Two cases represent descendants (unknown to

each other, incidentally) of the Cherokee woman called Polly who was the namesake for the Qualla reservation (the sound p lacking in the Cherokee language and being rendered with qu).

Haplogroup J

Two other cases, both J's, are related to Polly, tracing their lines back to Betsy Walker, a Cherokee woman born about 1720 in Soco (One-Town). A descendant was the wife or paramour of Col. Will Thomas, the first chief and founder of the Eastern Band of Cherokee Indians located today on the Qualla Boundary. Views about J are still evolving, but it seems to have originated in present-day Lebanon approximately 10,000 years before present. It is a major Jewish female lineage (Thomas 2002).

Haplogroup U

This haplogroup has never been reported in American Indians to my knowledge. In our sample it covers 13 cases or 25 percent of the total, second in frequency only to haplogroup T. One of the U's is Mary M. Garrabrant-Brower. She belongs to U5a1a* (all U5a1a not matched or assigned) but has no close matches anywhere. Her great-grandmother was Clarissa Green of the Cherokee Wolf Clan, born 1846. Mary's mother Mary M. Lounsbury maintained the Cherokee language and rituals. One of the cases of U2e* is my own. This line evidently arose from a Jewish Indian trader and a Cherokee woman. My fifth-great-grandmother was born about 1790 on the northern Georgia and southwestern North Carolina frontier and had a relationship with a trader named Enoch Jordan. The trader's male line descendants from his white family in North Carolina possess Y chromosomal J, a common Jewish type. Some Jordans, in fact, bear the Cohen Modal Haplotype that has been suggested to be the genetic signature of Old Testament priests (Thomas et al. 1998). Enoch Jordan was born about 1768 in Scotland of forbears from Russia or the Ukraine. My mother, Bessie Cooper, was a double descendant of Cherokee chief Black Fox and was born on Sand Mountain in northeastern Alabama near Black Fox's former seat at Creek Path (and who was Paint Clan). All U2e* cases appear to have in common the fact that there are underlying Melungeon, Cherokee and

Jewish connections.

Haplogroup T

"Tara," as she was named by Bryan Sykes, is believed to have originated in Mesopotamia approximately 10,000 to 12,000 years ago and to have moved northwards through the Caucasus and westwards from Anatolia into Europe. The closer one goes to its origin in the Fertile Crescent the more likely T is to be found in higher frequencies. The haplogroup includes slightly fewer than 10 percent of modern Europeans, but accounts for 28 percent of people in the DNA Consultants study. The great-great-grandmother of Linda Burckhalter was Sully Firebush, the daughter of a Cherokee chief who married Solomon Sutton, the stowaway son of a London merchant, in what would seem to be another variation of the "Jewish trader marries chief's daughter" pattern. Three T1*'s are perfectly matching individuals completely unknown to one another before testing who are clearly descended from the same woman. Two of them claim Melungeon ancestry.

The many interrelationships noted above reinforce the conclusion that this is a faithful cross-section of a population. No such mix could have resulted from post-1492 European gene flow into the Cherokee Nation. So where do our non-European, non-Indian-appearing elements come from? The level of haplogroup T in the Cherokee (26.9 percent) approximates the percentage for Egypt (25 percent), one of the only lands where T attains a major position among the various mitochondrial lineages. In Egypt, T is three times what it is in Europe. Haplogroup U in our sample is about the same as the Middle East in general. Its frequency is similar to that of Turkey and Greece. J has a frequency not unlike Europe (a little less than 10 percent). The only other place on earth where X is found at an elevated level apart from other American Indian groups like the Ojibwe is among the Druze in the Hills of Galilee in northern Israel and Lebanon. The work of Shlush et al. (2009) demonstrates that this region was, in fact, the center of the worldwide diffusion of haplogroup X.

On the Y chromosome side of Shlush et al.'s study, male haplogroup K was found to have a relatively high frequency of 11 percent in the Galilee region (2008:2). K (renamed T in the revised YCC

nomenclature) has long been suspected to be the genetic signature of the Phoenicians. A TV show by *National Geographic* appeared about a year ago titled "Who Were the Phoenicians?", in which Spencer Wells of the National Genographic Project, unveiled this theory.

Paint Clan and Phoenicians

Without a doubt it was the Phoenicians, whose name among themselves was Cana'ni or KHNAI 'Canaanites', not Phoenikoi 'red paint people' (Aubert 2001:9-12; cf. *Oxford Classical Dictionary* s.v. "Phoenicians"), who are referenced by James Adair when he observes that "several old American towns are called Kan'ai," and suggests that the Conoy Indians of Pennsylvania and Maryland were Canaanites and their tribal name a corruption of the word Canaan. The Conoy Indians are the same Indians William Penn around 1700 described as resembling Italians, Jews and Greeks. By about 1735 they had dwindled to a "remnant of a nation, or subdivided tribe, of Indians," according to Adair (1930:56, 67, 68).

One of the oldest Cherokee clans is called Red Paint Clan (Ani-wodi). So do the two subclades of X and other haplogroups represent Old World and New World branches diverging from each other as long ago as 30,000 years, or do the Native American "anomalous" haplotypes come more recently (but not as late as Columbus) from the same source in the East Mediterranean? The answer probably depends on how open one is to new evidence and revisionary thinking.

According to Jett, "The splits may have taken place well before transfer, with one only or both being transferred to a new place and then one dying out in the home area (and the other in the new area, if both were transferred)." The distinction, at any rate, is irrelevant to the Cherokee who exhibit these not-so-rare haplogroups, although to those denied authenticity on the basis of anthropologists' hardened ideas about the genetic composition of American Indians, it is welcome vindication either way.

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August 31, 2009

Does Not Compute

Past Human Migrations in East Asia. Matching Archeology, Linguistics and Genetics, ed. Alicia Sanchez-Mazas et al. London: Routledge Taylor & Francis, 2008

According to the reviewer of this compilation of interdisciplinary studies, Frank Roels, writing in *European Journal of Human Genetics* 18:262f., the three approaches are incommensurate because of differing time frames and rates of change. Their models cannot be harmonized with sufficient reliability to write a comprehensive, persuasive history of human migrations and settlements in East Asia.

February 3, 2010

Customs and Beliefs of the Roma and Sinti

Some of our customers have been surprised to get Gypsy/Romani population matches in their results for the DNA Fingerprint Test. Typically, these are combined with Middle Eastern and Indian matches due to the Gypsies' historical migrations. Other customers were not surprised at all and called to tell us about the fortuneteller great-grandmother or mysterious ancestor who traveled with the circus. Gypsy heritage is not unheard of among Melungeons. So, for those who think they may have Roma/Sinti or Romechal (the term used in the British Isles), we have compiled the following list of customs and beliefs taken

from an excellent authority.

Strict monotheism similar to Jews
 Keeping the seventh day holy
 Lighting candles on the evening of Parashat (Friday)
 Blasphemy a sin, as is cursing an elder
 Beng (Satan) the enemy of God and of the Roma people
 The Evil One called bivuzhó (impure) and bilashó

Code of Law

No social classes, only a division into Roma and Gadge (non-Roma)
 A court of justice called Kris (Judiciary Council), composed of clan
 representatives as judges
 Both men and women serving on Kris
 Issues between Roma to be judged only by the Kris, not by Gadge
 All Roma equal before the eyes of the Kris
 Belief in blood revenge and compensatory payment for clan of
 victim
 Banishment from territory of victim's clan for wrong doing
 Forfeiture of protection if banished offender re-enters
 Roma not even to acknowledge or greet one who is banished
 Accursed or banished called mahrimé (impure)
 Roma not to ask interest for loans to other Roma, only from Gadge

Sexuality, Marriage and Childbirth

Nudity taboo, allowed only with a husband and wife
 Showing naked legs before an elder disrespectful
 Homosexuality an abomination
 Not allowed to wear clothes of the opposite sex, even as a joke or
 disguise
 Virginity before marriage essential
 Tokens of virginity shown to the assembly after wedding
 Prostitution strongly condemned
 Incest taboo, defined in the same way as Mosaic law (including
 step-siblings and in-laws)
 Permissible to marry your cousin
 Members of the Kris must be married

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Lack of a spouse makes a man or woman incomplete
Groom's family pays dowry to the bride's family
Dowry for a widow amounts to half that for a virgin
A man dishonoring a woman should pay the dowry to her family
 anyway
Runaway couples considered legitimately married
Marriage endogamic, even within the same clan
Clan recognized by a common ancestor within a few generations
Divorce admitted: Husband sends wife out or she leaves
Remarriage expected after divorce
Levirate law practiced (Deut. 25:5-6)
Childbirth impure, must take place outside the home
Mother giving birth isolated with baby for seven days strictly,
 followed by 33 days of less strict isolation (cf. Lev. 12:2, 4-5)
New mother cannot show herself in public or attend religious
 services
Both sexes marrying very young (child marriage)

Funeral and Mourning Rituals

Dead to be buried intact (autopsy or cremation sacrilegious)
Close relatives of the dead impure for seven days
Not to touch a dead body
Family and relatives of deceased forbidden to bathe, comb their
 hair, cut their nails for three days
On third day after a death, relative must wash thoroughly, and then
 not again until seventh day
All food in house where a person died is thrown away as defiled
On third day after a death, the house is purified ("the ashes of the
 burning of the sin") and a virgin sprinkles running water
The same ceremony repeated on the seventh day after a death, with
 food brought to the mourners from another dwelling place
Mourners stay at home
Sitting on low stools
Covering mirrors
Not using oils or perfumes or cosmetics
Not wearing new clothes
Not listening to loud music

Not taking photographs or watching television
Not painting, cooking, and cannot greet people
Day mourning extended after seventh day, remembrance ceremony
until 30th day
Another remembrance ceremony on 30th day, closing the strict
mourning period

Beliefs in Afterlife

Death is final, no reincarnation or return
Soul goes to Paradise or Hell

Purity and Impurity

Concept of marimé (similar to kashrut)
Lower body and things associated with it impure
Sleeping regarded as an impure state
Not to greet anyone upon waking until washed
Disrespectful to greet anyone in an impure state
Dogs and cats impure
Horses, donkeys or riding animal impure
Carnivorous animals impure
Avoidance of horseflesh
Shoes, pants, hose, skirts, trousers, etc. impure
The camp pure
Restrooms built outside the home
Clothes for the lower body and menstruating women washed
separately
Dishes washed in a different place from clothes

Other Practices

Custom of mangel, asking for favors from Gadge
Painting doorposts of dwelling with animal blood to protect against
angel of death
Invoking the Prophet Elijah, particularly when seeing lightning or
hearing thunder
Firstborn son considered a special blessing to the family
Wearing of whiskers
Left hand related to the public domain (Gadge), impure

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Separate dishes and cups for Gadje
Only eating ritually slaughtered animals
Slander considered very, very serious offense, worth taking to Kris
Lack of belief in divination (contrary to general view of Gypsies)
Practice of Tarot cards and crystal balls for Gadje only
Having a Gypsy name besides a civil name
Names that are Hebrew, Greek, Russian, Spanish, Hungarian,
Persian, never Indian or Hindu
Beef a favorite food
Interest in bullfighting
Middle Eastern music and dance with zithers, etc. (Flamenco in
Spain)
Fingernails and toenails filed with an emery board, not a clipper
Going to a church called Filadelfia (Brotherhood)
Claiming to be Egyptian in origin
Making pilgrimages to the burial places of your ancestors

Source: Abraham Sándor, "Comparison of Romany Law with Israelite Law and Indo-Aryan Traditions."

September 12, 2010

Autosomal Testing for Native Americans

Reference: Wang, S. et al. (2007). "Genetic Variation and Population Structure in Native Americans." *PLoS Genetics* 3/11 (with good bibliog.) <http://www.plosgenetics.org/article/info:doi/10.1371/journal.pgen.0030185>.

If you think haplogroup testing for Native American DNA is in a backward condition, you should look at autosomal testing. It has been practically nonexistent. Even the major 2007 study by Wang et al. has glaring gaps and methodological quandaries.

DNA Consultants' newest autosomal product is the Native American DNA Fingerprint Plus, based on 21 published studies of Native American population groups as well as informal customer data. Results for many individuals were validated and cross-referenced with older haplotyping methodology.

There were data for 3,583 Native Americans available in development of the product.

These test results came from articles published between 1997 and 2009. They included individuals identifying with tribes or nations as follows:

Apache	Lumbee
Athabaskan	Navajo
Huichol	Salishan
Inupiat	Yupik
Kichwa	

The following geographical areas were represented:

Alaska	Ecuador	Minnesota
Arizona	Florida	North Carolina
Brazil	Guatemala	Oklahoma
British Columbia	Mexico	Ontario
Colombia	Michigan	Saskatchewan

No data specifically labeled as Cherokee—the largest Native group in the U.S., with more than 400,000 representatives—have ever been published. In our company database, people of Cherokee descent often receive matches to North Carolina or Michigan Native Americans. The reason for the latter matchup is obscure. North Carolina as the Cherokee's original homeland makes a lot more sense.

May 10, 2011

SNPs and the Emerging Prehistory of Ethnic Groups

No scientific work, to our knowledge, has ever hazarded a guess on what the mutation rate for autosomal CoDIS-type markers might be. Is it like mitochondrial DNA, which has a molecular clock measured in the thousands or tens of thousands of years, or is it like STRs on the Y chromosome, with its much shorter time frame? The question is important if you are trying to extrapolate the history of the human race from today's autosomal population statistics.

From what we can see, putting on diachronistic lenses, the mutation

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rates for the DYS values on what are commonly called CoDIS markers or the DNA profile for individuals are very small. The values appear to have been set from the beginning of mankind and to have mutated little in the past 100,000 years.

If this is true—and it cannot be a very big "if" or we would have more diversity between populations than what is known—the oldest markers are Sub-Saharan African and the newest European. Statistical divides bear out this reading of the human genetic record, as shown now in our updated map included with the DNA Fingerprint Plus.

We will try to make some notes on the individual markers in future posts.

June 16, 2011

American Indians and Turkic People Share Deep Ancestry

We've known or suspected it for a long time. American Indians and Turkic peoples of the Altai region of southern Siberia share common ancestors. American scientists Thomas Jefferson and Constantine Rafinesque were the first to demonstrate this genetic similarity, long before the days of DNA. Now an article in *American Journal of Human Genetics* has clenched the argument with mitochondrial and Y chromosomal DNA studies.

The groundbreaking citation is: Matthew C. Dulik et al., "Mitochondrial DNA and Y Chromosome Variation Provides Evidence for a Recent Common Ancestry between Native Americans and Indigenous Altaians," *AJHG* 90/2, 229-246.

From *Old World Roots of the Cherokee*, a book appearing June 15 by Donald N. Yates:

- Thomas Jefferson thought American Indians were Turks and Tartars coming across the Bering Sea from Asia, while his contemporary John Filson believed them to be Phoenicians. (See Boorstin, Daniel J. *The Lost World of Thomas Jefferson*, Chicago: U of Chicago P, 1993.)
- (quoting Rafinesque) "Many other empires having begun to rise in the vicinity of Aztlan, such as those of Bali (Indonesia, perhaps Oppenheimer's Eden in the East?), Scythia [Russian

steppes], Thibet, Oghuz (Lake Baikal area), the Iztacan were driven eastwards, north of China; but some fragments of the nation are still found in the Caucasus, &c. such as the Abians or Abassans, Alticezecs (Altai Turks), Cushazibs, Chunsags, Modjors, &c.

- "The six Iztacan nations being still pressed upon by their neighbours the Oghuzians (Uigur Turks), Moguls (Mongols), &c. gradually retreated or sent colonies to Japan, and the islands of the Pacific ocean; having discovered America at the peninsula of Alasca (Alaska, a Chinese word), during their navigations, the bulk of the nation came over and spread from Alasca to Anahuac, establishing many states in the west of America, such as Tula [Toltec], Amaquemeca, Tehuajo (Tewa, Tiwa, Tawa), Nabajoa (Navajo), Teopantla, Huehue, and many others.
- "After crossing the mountains, they discovered and followed the Missouri and Arkanzas rivers, reaching thus the Mississippi and Kentucky (26-27)."

How long will it take American history textbooks to catch up to this new proof? Never. A jingoistic Smithsonian has its own version of things, one ingrained in anthropological dogma as deeply as Manifest Destiny. Interestingly, Turkish and Muslim historians have long embraced this finding as a basic fact of history. They have long claimed American Indians as genetic cousins.

June 6, 2012

Anonymous commented on 11-Jun-2012

The people of Iran already have known for eons that the ancestors of the Navajo came from that general area originally. For simple comparison, the similarities between the design elements of Navajo vs. tribal rugs and weavings from Iran, Turkey, Afghanistan, The Caucasus and other areas cannot be simply a "coincidence"; and therefore cannot be summarily ignored. Now, DNA evidence speaks loudly in favor of what has already been known for millennia.

Brian Costello commented on 21-Jul-2012

The ancestors of the American Indians came from Siberia. However,

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most of Siberia is Yenesian and Tungus not Turkic. Turkic peoples arrived in Siberia very late. The Yakuts were not Turkified until the 15th century A.D.

Elfiya Marat commented on 06-Dec-2013

Brain Costello my friend you are wrong. The first homeland of all Turkic peoples was in southern Siberia, which would be around Lake Baikal. The Yakuts went up north after 10th century. After 10th century millions of Turkic people migrated out of southern Siberia into parts of Russia, central Asia, parts of Middle East and Europe. Remember the word "RUS" comes from Viking Varangians, not indigenous Slavic tribes in Caucasus region. Russia is in Asia.

Ronald Best commented on 31-Mar-2014

I am so surprised. The Phoenicians were famous ancient sailors. Should it really be a surprise there could be ancient land migrators? They really haven't considered the other possibility that Native Americans were in the new world much earlier and simply migrated back towards the middle east. This is still very closed-minded thinking. Native Americans should be claiming that we migrated as far as the Middle East or Siberia.

Identifying by Ethnicity in 2012

Genetics has transformed many of our notions of race, ethnicity and identity. How do *you* report your ancestry when checking off ethnic options on an official form? How do you identify yourself informally with friends and family? Have you ever "changed" ethnic self-identification because of a DNA test? These and related questions were the topics discussed at a 90-minute colloquium at the 12th Annual International Diversity Conference, held on the campus of the University of British Columbia in Vancouver, Canada, June 12.

The title of the panel discussion was "Perspectives on Ethnic Identity: Epigenetics, Marketing, DNA and Genealogy." It was organized by Donald Yates and moderated by Gregory Baskin. Presenters included: Dr. Anne Marie Fine, Scottsdale, Arizona naturopathic physician, who spoke on the emerging field of epigenetics,

the multigenerational factors that "turn on and turn off" your genes; Wendy Roth, University of British Columbia, author of the just-published book *Race Migrations: Latinos and the Cultural Transformation of Race*, who presented the results of ongoing surveys of consumers of DNA testing, with an emphasis on changing notions of ethnic identification; Donald Yates, who presented a paper on overlapping ethnic identity in Bernard Malamud's *The People*, George Tabori's "Weisman and Copperface: A Jewish Western" and three early 20th-century poets writing in Modern Hebrew—Benjamin Nahun Silkiner, Israel Efros and Ephraim E. Lisitzky. Yates' paper was titled "Dying Campfires: Jews, Indians and Descendant Organizations" and included a comparison of Marranos (Sephardic crypto-Jews) with so-called Wannabe Indians (descendants of Indians who want to join a Federally recognized tribe but are barred from applying for membership for various reasons). Both categories of ethnic belonging, Yates showed, are often rejected by official authorities like rabbinical courts and the Bureau of Indian Affairs because adherents are seen to be only selectively practicing the group's customs and traditions.

Of the Marranos, for instance, Benzion Netanyahu wrote, "The Marranos ought to be treated realistically according to what they actually were—not *unwilling*, but *willing* converts, and consequently traitors to the Jewish religion and enemies of the Jewish people." In other words, Conversos chose to practice some Jewish, some Christian customs, or to hide their true beliefs with an insincere profession of Christianity.

In the same way, Cherokee and other Indian descendant organizations were criticized by William Quinn in an article that served as a sort of legal brief on the subject of Wannabe Indians published in 1989 in *American Indian Quarterly*. "Wannabe Indians are scorned by 'real' Indians because they pick and choose what customs they will adopt, because they have a 'distorted notion of the way in which Indians live and behave,'" Yates concluded.

June 14, 2012

Anonymous commented on 04-Jul-2012

I think many people tend to lose touch with reality. Ethnicity is and has never been a strictly biological- or genetic-based identity. Rather, it is based on sociocultural upbringing. What so happens to be is that there

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are some ethnicities that have formed from racial perception and segregation, thus ethnicity is often correlated with the concept of race in this country.

Anonymous commented on 04-Jul-2012

On the whole Jewish/Indian hidden descendant issue. There are crypto-Jews who would probably still be considered Jewish, they seem to have merely "passed", indicating they still considered themselves as Jewish but chose not to admit it to outsiders and also adopted a somewhat syncretic form of Catholicism, resulting from this trying to blend in. Conversos, however, are not Jewish, as they willingly converted and probably never looked back. The whole Tribal enrollment/citizenship in Indian tribes is more political than anything and really doesn't necessarily correlate very well with ethnicity, As there are identifiably ethnic Cherokees who may not be enrolled versus Cherokee citizens who aren't ethnically Cherokee. Just thought I'd clarify.

New Evidence for Old Lines

Old World Roots of the Cherokee Describes 'Anomalous' Haplotypes

Before the DNA Consultants Blog published "Anomalous Mitochondrial DNA Lineages in the Cherokee" in October of 2009, a mere 60 samples, all Oklahoma Cherokee, spoke for the country's largest and "best-known" Indian nation.

Now, the stories of 52 "anomalous" descendants who flesh out the record of Cherokee DNA are available in *Old World Roots of the Cherokee*, a new book by DNA Consultants' founder Donald Yates, with a foreword by Richard Mack Bettis. The 200-page reference work from McFarland is the result of more than 10 years' research and overturns a number of stereotypes about Cherokee history and genetics.

One of the published stories is that of Mary M. Garrabrant-Brower, part of the 13 U haplogroup subjects who had been told by other DNA testing companies they were plainly *not* of Cherokee descent because they didn't have the right haplogroup. "My great-grandmother was Clarissa Green of the Cherokee Wolf Clan," said Garrabrant-Brower, as reported in Yates' book (p. 54). "Her grandfather was a Cherokee chief and my mother maintained the Cherokee language and rituals, even

though we moved to the Northeast."

U5 is usually presented as a Eurasian haplogroup. It is among the oldest mtDNA haplogroups found in *Homo sapiens* in Europe including Cheddar Man, the oldest remains of anatomically modern humans in Britain, with an estimated age of 30,000-50,000 years. Stephen Jett, a geographer who edits *Pre-Columbiana*, maintains if any U haplogroups were to be verified in the New World it would probably be U5.

A second U5 Cherokee in the study is a Scottsdale, Ariz., doctor, who matches only one other person in the world according to the databases available for searching, a descendant of Marie Eastman, born 1901 in Indian Territory. "Because of the precision of the match, he and the descendant of Marie Eastman who was tested are almost certainly cousins in a genealogical as well as genetic sense," reported Yates in *Old World Roots of the Cherokee*. "His own descent is documented from Jane Rose, a member of the Eastern Cherokee Band. Her family is listed on the Baker Rolls, the final arbiter of enrollment established by the U.S. government (p. 54)."

Teresa Panther-Yates, a third U5, of the U5b subclade, has a type that is unique in the world, only found in her own case. "She traces her maternal line back to Isabel Culver, the second wife of Levin Ellis in Hancock County, Georgia. Isabel died about 1838 at the time of the Trail of Tears. There is a tradition in Teresa's family that this line was Cherokee (p. 54)."

An Epochal Shift

As with U, so with T, J and other haplotypes. Whereas the Cherokee descendants who carried these types had been "rejected" by orthodox science and DNA companies who tow the line on such matters, they were vindicated in the new study, often matching other Cherokee and even other participants (previously unbeknownst to them).

Of Yates' findings about the anomalous DNA data, Wake Forest professor Cyclone Covey writes in an introductory note:

Donald Yates burst onto the scene clarifying Melungeons and went on to explain many more peoples via pioneering researches in DNA. A classically grounded scientist who is

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conversant with Hebrew, he detected Cherokee as Greek in what can only be called an epochal shift of thinking, posing the historical challenge of getting Alexandrine and Mediterranean *koine* to Tennessee ahead of Hernando De Soto (p. viii).

Old World Roots of the Cherokee appeared on July 11 and is available from booksellers. Copies signed by the author may be obtained on the DNA Consultants company site.

August 1, 2012

A Red-Hot Tale from the Nation's Capital

By Monica R. Sanowar

I took my first test with Family Tree in 2006. This test showed my mtDNA as L3e2b2 and it went like this:

52% West African
39% European
9% East Asian
0% Native American

I could not believe the East Asian part, and I shrugged it off and thought—that has to be Native American.

So, fast forward—I took another test with Ancestry.com. This was autosomal and showed:

48% West African
44% European
8% Unknown

How can you be unknown?

Neither of these tests really breaks down what country your people may have originated from. So, then I tried 23andMe, their autosomal offering.

49% West African
48.3% European - Central - Northern - Non-specific
and the leftovers were 0.7 East Asian & Native (although the NA

box did not turn red)
and 1.4% unspecified

I knew from family history that NA was on both sides of my fence. I also was aware that I had four of the traits Melungeon people have. I have the ridge in the back of my head that you can lay your finger in; I have ridges on the teeth and I can make the clicking sound on the shovel teeth; I have the Asian eye-fold, and the very high arches. Can't get my foot inside of a boot and if I do, I can't get it off. I was amazed that I got my results in less than two weeks!

Finally, I tried DNA Consultants. Its test was the very first that didn't show "unknown" or nonspecific. Everything was accounted for, although I did find a few shocks. No one told me about Sephardic Jews or the Portuguese. At last, a test verified my Native roots with valid matches to tribes or nations and confirmed Native American autosomal markers—from both parents, as I had been told.

I got into Native culture back in 1983 when I started to go to powwows. I finally felt at home. I enjoyed seeing people that looked like me, mixed. My great-great-great-grandmother was listed on the FREE NEGRO LIST where it asked How Freed? And it was written BORN FREE. Then came a description— a light-skinned black, with long straight black hair and a small scar on her hand. I have a picture of her daughter, Alethea Preston Pinn. Alethea's father was a white man named Allen Preston. Alethea had seven children with James E. Colvin, who was white, and all of their children were put on Walter Plecker's list of "mongrels" not allowed to vote or go to school. That was 1943. Not that long ago.

So, I got a second cousin to take the test with 23andMe who comes directly from Sarah Pinn (the alleged light-skinned black woman). My cousin's haplogroup came in A2N—Native American.

I know that some things may show and some not, but DNA Consultants' test knocked the East Asian right off the page. I've learned a lot of different things with DNA testing, but their test is the best one I have seen and is well worth the money.

I love it when these geneticists and genealogists out there decide what you do or do not have in your family tree, especially the Indian part of the tree. As if this just could not have happened . . . I am proud of all of

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it. I can just about hang up a flag from everywhere.

I can't praise the DNA Fingerprint Plus enough and wish I'd known about it years ago. I really appreciate all of the knowledge and insight Dr. Yates has about genealogy and history that I was totally unaware of. I actually spoke to him on the phone at length, and he truly made my day. I highly recommend DNA Consultants' service to people who are looking for the truth about their genealogy.

And speaking of spicy mixtures, check out my hot-sauces at Sun Pony. They've got secret, all-natural ingredients just like the family!

July 12, 2013



Elizabeth Colvin, a granddaughter of Alethea Preston Pinn. "Contrary to the belief and convictions of many people, long hair really does exist in my family," says Monica Sanowar. "It isn't a made-up fantasy and this was long before hairweaves. My cousin's hair was down to her calves."

Guest blog author Monica Sanowar is the founder of Sun Pony Distributors Inc., makers of a line of all-natural, wholesome condiments and energy supplements found in stores up and down the East Coast. Her

first hot-sauce was Yellow Thunder and her Native name is Sundancer. SunPony's D.C. Redbone Hot Sauce is the official hot-sauce of the Anacostia Indians, D.C.'s little-known indigenous people, who were first recorded by Capt. John Smith in 1608. Sanowar lives in Washington, D.C., not far from the Anacostia's village site, now a national historical landmark. On YouTube you can watch grassdancer Rusty Gillette in a video about D.C. Redbone hot-sauce.

July 12, 2013

Native Americans Traced to Eastern Europe and Northwest Asia, Not Siberia or Mongolia, with Fossil Evidence

Autosomal DNA Set to Rewrite 'Peopling of the Americas'

"In my opinion, the genetic story of the Americas has been botched. Not only are samples flawed but geneticists' times to coalescence are forced into the Procrustean bed of outdated theory." —Donald N. Yates in *Old World Roots of the Cherokee*

A scientific bombshell was dropped at the recent conference on "First Americans Archeology" in Santa Fe, New Mexico. Danish geneticist Eske Willerslev announced that his team had completed the fullest sequencing of ancient human DNA to date—two 24,000-year-old Siberian skeletons. The results showed that the people who lived near Lake Baikal at the dawn of human civilizations and who later expanded as the Native Americans or American Indians of the New World came from Europe, not Asia.

Native Americans today have one-third European genes in their makeup.

"The west Eurasian signatures that we very often find in today's Native Americans don't all come from postcolonial admixture," said Willerslev at his talk, "Some of them are ancient." See the Smithsonian's blog, "The Very First Americans May Have Had European Roots."

See our blog post "Native Americans Have Deep Ancestry in Europe: Yes, It's Official" (October 30, 2013).

Until now it was widely believed that America's First Nations were people like modern-day Mongolians and Eastern Siberian tribes who

crossed a hypothetical Bering land-bridge. Study after study has stressed the small number of founder types. With the new revelation of European roots and lack of relatedness to East Asians, however, geneticists are going to have to play catchup with those (including Native Americans themselves) who have insisted all along on diversity and complexity in New World populations rather than sameness and simplicity. The Danish-U.S. team's paper is in final editing by the journal *Nature* and expected to appear very shortly.

DNA Consultants offers a test called Rare Genes from History that will tell you if you have the Lake Baikal Gene, First People's Gene, Cochise Gene or Amerind Gene, all of which are centered in their historical distribution on the motherland of Mongolians and Native Americans in South Siberia. There are also the following specifically European genes: Helen, Circassian, Europa and Scythian. With the tables turning, you can now legitimately have both European and American Indian markers and it may not be a case of admixture.

For an easy way to absorb the latest research on Indians and Mediterranean/Jewish people, listen to the narration by Jack Chekijian for Donald N. Yates' *Old World Roots of the Cherokee*. It is available on Amazon, Audible and iTunes.

October 30, 2013

The Indians Came from Europe

American Indians are now known to have deep roots that are roughly one-third European, genetically speaking. There have always been a few hardy souls that did not swallow the bedtime story that all Native Americans came across the Bering Land Bridge and their oldest origins were thus from East Asia. Now there will be more dissenters.

The "peopling of the Americas" used to be a sacred cow. Anyone who veered from it was seen as stepping into "fringe" science. He or she may as well be discussing UFOs. Nevertheless, genetic testing has now proven that fully one third of Native Americans have deep West Asian and European genetic genealogy roots, and the latter does not just stem from the time of the colonists' arrival. There is an amazing story here.

First, how do we know it? We have long since witnessed that Native Americans have "unexpected" European genes when we do DNA testing,

but it has been assumed that this could only be because of trysts between Native Americans and colonists in modern times (Michael Balter, *Science*, "Ancient DNA Links Native Americans With Europeans").

Perhaps that is why so many Cherokee princesses fell at the feet of rugged mountain men in our family history. While I am not discounting this scenario as a possibility in your family tree, it looks like there is a larger story here that has been revealed by DNA testing.

The autosomal DNA testing results of the entire genome of a young Siberian boy who died some 24,000 years ago are revolutionary. What do his DNA testing results show? He is, as is expected, most closely tied genetically with Native Americans. In fact, a portion of his genome only connects with this group.

What was not expected is that his Y haplogroup matches populations "almost exclusively" in Europe and West Asia. Moreover, East Asia, thought previously to be the deepest ancestral link for Native Americans, is not found to be a genetic link in the analysis of his genome. It is now believed that this was an admixture later painted onto this now more-complex genetic picture (Balter).

American Indians have European ancestry? Oh, this will cause consternation in several elite quarters.

August 16, 2014

Shocking Revision

The ecstatic waters ...

Through their ancestral patterns dance.

— William Butler Yeats, "News for the Delphic Oracle"

We've been saying it all along, but it looks as though geneticists may be forced by new findings in ancient DNA to admit that early Siberian people and present-day Native Americans both have strong roots in Europe, only secondarily in Asia. The nuclear genetic bomb was dropped by Danish geneticist Eske Willerslev at a conference on "First Americans Archeology," held October 16-19, 2013, at Santa Fe, N.M. The city that gave birth to the original atom bomb hosted a glittering roster of speakers in a venue better known for its turquoise jewelry, fry bread and avante

garde art, including big draws Achilli, Adovasio, Dillehay, Gonzalez and Schurr.

The paradigm-shifting conference program will be commemorated with a book *Paleoamerican Odyssey* (\$56) to be published by Texas A&M Press later this year.

Leaked reports in the news media focused on Willerslev's paper, "Genetics as a Means for Understanding Early Peopling of the Americas," which concerned the genetic sequencing of two ancient Siberians' bones discovered in the 1920s and now in the Hermitage Museum in St Petersburg. Analysis of a bone in one of the arms of a boy found near the village of Mal'ta close to Lake Baikal yielded the oldest complete genome of a modern human sequenced to date.

Of the 24,000-year-old skeleton that was Exhibit A, Willerslev was quoted in *The Siberian Times*, as saying, "His DNA shows close ties to those of today's Native Americans. Yet he apparently descended not from East Asians, but from people who had lived in Europe or western Asia." He added, "The finding suggests that about a third of the ancestry of today's Native Americans can be traced to 'western Eurasia.'"

The 4-year-old boy, who died 24,000 years ago in a homeland previously assumed to account for all the Indians who crossed a theoretical Bering land-bridge and founded the First Americans, had a male Y-chromosomal haplogroup of R1b, the most common lineage in modern Europe, and a female mitochondrial lineage of U, the dominant prototype in pre-historic Europe. As it happens, I am the same combination, R1b for male and U for female, as are innumerable others in our in-house study on Cherokee DNA, published, lo, some five years ago.

Whereas previous "peopling of the Americas" stuff has clung to and recycled haplogroup studies (sex-lines), the new shock research relies on autosomal DNA, total genomic contributions from all ancestral lines, not just male-only, not just female-only descent. The title of a blog from Eurogenes rightly emphasizes this: "Surprising aDNA (autosomal) results from Paleolithic Siberia (including Y DNA R)."

When we introduced the 18-Marker Ethnic Panel as an enhancement for our main autosomal product, DNA Fingerprint Plus, lo, again, these five years now and counting, we presented a map of prehistoric human migrations showing without any equivocation that "Native Americans,"

even as Cavalli-Sforza demonstrated two decades ago, were closer in genetic distance to Europeans than Asians. In fact, we claimed, on the basis of autosomal DNA, that having Native American I or Native American II was a result discrete and separate from East Asian, since Native Americans obtained frequencies of its occurrence as high as 80 percent, and Asians were on the polar opposite of the scale, at the bottom for carrying it. Other methods frequently confused Native American and East Asian to the point of invalidity, particularly those products claiming to arrive at racial or ethnic percentages.

The moral is that autosomal DNA trumps Y chromosome and mitochondrial evidence, and only ancient autosomal DNA can truly explain modern DNA. Even one of the most antipathetic students of American Indian DNA, Theodore G. Schurr, seems to be rethinking the rigid definitions that have built careers and won tenure for geneticists and anthropologists for decades. For the fanatics who have been toeing the party line on haplogroup Q, as set down by Schurr's company, Family Tree DNA, and its followers, we note the following statement of recantation or at least qualification, taken from the Santa Fe program.

Tracing Human Movements across Siberia and into the Americas:
New Insights from Mitochondrial DNA and Y-Chromosome Data

In this paper, I present genetic data from native Siberian and indigenous populations of North America that help to address questions about the process and timing of the peopling of the Americas. These new genetic data indicate that Eskimoan- and Athapaskan-speaking populations are genetically distinct from one another, as well as each to Amerindian groups, and that the formation of these circumarctic populations was the result of two population expansions that occurred after the initial expansion of settlement of the Americas. Our high-resolution analysis of Y chromosome haplogroup Q has also reshaped the organization of this lineage, making connections between New World and Old World populations more apparent and demonstrating that southern Altaians and Native Americans share a recent common ancestor. The data also make clear that Y-chromosomal diversity among the first Native Americans was greater than previously recognized.

Overall, these results greatly enhance our understanding of the peopling of Siberia and the Americas from both mtDNA and Y-chromosome perspectives.

"Genetic genealogy" has become a fashionable buzzword, but to my knowledge few research studies or blogs and hardly any commercial tests authentically combine the two concepts. According to genealogy, I myself am about one-quarter Choctaw-Cherokee and three-quarters European. But genetics says my mitochondrial line (U2e) is Eurasian, even though I have traced it to a Cherokee woman who married the Indian trader Enoch Jordan about 1790 in north Georgia. Estimates from other "genetic genealogy" companies for my Native American ancestry, and I've taken them all, range from 0 percent (23andMe) to 8 percent (Family Tree DNA, AncestryByDNA).

DNA Consultants, the company I founded in 2003, does not give percentages of ancestry by policy, but half my top matches in our autosomal analysis are Native American, and North Asian/Siberian is No. 1 in my megapopulation result, followed by Central Asian and Native American (and only distantly by Northern European). On an autosomal approach, if not haplogroup basis, my genes are Native American, which is how I self-identify. If I were to be pulled over for being a brown person in the state of Arizona, where I currently reside, and Sheriff Joe ran my DNA profile numbers through the system he would find that I am 15 times more likely to be North Asian than Northern European, and twice as likely to be American Indian than East Asian, European American or Iberian American (Hispanic).

Read the whole analysis of my personal genetics, with actual reports from various companies, in the Cherokee Results pages on the DNA Consultants website. You may also find an extended study showing what autosomal DNA can do at: "Reconstructing Your Ancestry and Parentage" (blog post, March 14, 2012).

If and when geneticists get serious about identifying the European sources of the American Indian gene pool, and hopefully they will round up not just one suspect (Denmark?), I would like for those who get paid and promoted to study us to please consider the following points:

— First New Cherokee Data Published in More Than Ten Years

(announcement, August 1, 2012)—in-house study described numerous instances of U, findings published in Donald Yates' *Old World Roots of the Cherokee*.

- Stephen C. Jett, who taught geography at The Ohio State University 1963-1964 and then at the University of California, Davis, serving thrice as geography chair and becoming emeritus in 2000, current editor of *Pre-Columbiana*, has frequently pointed out that just because Native American haplogroups match Siberian haplogroups it doesn't mean the population of either Native America or Siberia was the same in remote history as today. He considered this a big fallacy of Big Science.
- Constantine Rafinesque, whose *History of the American Indians* was the first and most comprehensive treatment of the subject, believed all the early settlers of the Americas came "through the Atlantic," and only beginning about 1000 B.C.E. did the Iztacans and Oguzians (Central Asian Turkic peoples) arrive. See our blog: "American Indian and Turkic People Share Deep Ancestry" (June 6, 2012).
- Canadian environmentalist Farley Mowat, the author of thirty-seven books, has constantly challenged the conventional knowledge that Vikings were the first Europeans to reach North America. In *The Farfarers* he describes the Alban people of Old Europe as visitors and colonists from the time when walrus hunters discovered the sea routes to the West before the Bronze Age. America's original name of the White (or Beautiful) Land is mentioned by Rafinesque and in Hindu, Greek, Egyptian, Mesopotamian, Arabic, Algonquian Indian, Irish, Norse and Chinese accounts. See "An Interview with Farley Mowat" on YouTube.
- Cyclone Covey of Wake Forest University, among other historians, has noted that Clovis Culture appears fully formed without any antecedents in America, with the most perfect examples of Clovis points traced in a cline of occurrence in archeological sites to the Atlantic Coast.
- The earliest Americans clearly practiced the same Mother Goddess religion elaborately documented in the east Mediterranean and Old Europe by Marija Gimbutas. Their ideas

of matriarchy or gylany (in Riana Eisler's coinage) did not come from Asia. See "Archeologist of the Goddess" (webpage) and "Syncretism, Not Animism" (PPT), a presentation given at the Sandy, Utah, conference, March 29, 2011.

- When customers of DNA Consultants with various degrees of Native American admixture have their European population matches analyzed, a frequent top result is Finland or Finno-Ugric or Uralic. This "false match" could be explained by shared ancestry between the present-day Finns (where U is a common haplogroup) and ancestors of Native Americans coming from Europe.
- John L. Sorenson and Carl L. Johannessen in *World Trade and Biological Exchanges before 1492* (2009) document several plants that originated in the Eastern Hemisphere (not Asia) and traveled early by human hand to the Americas. For instance, *Cannabis sativa* (marijuana) moved from Western Asia or Europe to Peru by 100 C.E., and mugwort (*Artemisia vulgaris*) was brought to Mexico from across the Atlantic Ocean by 1500 B.C.E. Both grow in profusion in Europe and temperate parts of Central Asia. Goosefoot (an important Ohio Valley Moundbuilder staple), cotton, coconuts, bananas, turmeric and North American myrtle likely took the same route. In the opposite direction, Mexican agave spread to the Mediterranean world by 300 B.C.E.

Archeologists described the recent news from Santa Fe as jaw-dropping. We expect that when the definitive report on the Siberian boy's 24,000-year-old genome appears in the journal *Nature*, where it is at press, their hair may fall out! At any rate, the European origins of Indians is going to be a game changer not only in genetics, but anthropology, archeology, government and, perhaps most significantly, in the self-awareness of millions of Americans who count Native Americans among their ancestors.

October 30, 2013

Who Are the Cherokee?

My Cherokee grandfather was a jack-of-all trades my grandmother told me. I thought he was about as tall as God.

The Cherokee are the New York Jews of the Native Americans. They are proud, intelligent, rich and worldly. Think Cher (Turkish/Cherokee). Some sent their daughters to Paris to attend universities. According to the Cherokee National Historical Society, after the Civil War, the Cherokee government "operated its own legislature, court system, jails, newspapers, an orphanage, and schools including seminaries of higher learning for both men and women." Living in cabins and often intermarrying with whites, they lived in a westernized fashion—modern for the time.

The story of their origins depends on who you ask. It is common knowledge that the Cherokee have a mixed ancestry because they intermarried with whites. And they have been mixed for some time.

However, the theory has long been that the First Americans all decided to cross the Bering Land Bridge walking out of Siberia, hunting Ice Age elephants, and trekking across the tundra to people the new world some 13,000 years ago or more. This theory still holds sway over most scientists. It was taken for granted in a recent *Nature* article, "Reconstructing Native American Population History" by Harvard's David Reich.

Despite this, not everyone thinks this is the story. Melissa Ludwig, in her article, "Bering Land Bridge Theory Disputed," quotes Michael Collins, an archaeologist with the Texas Archaeological Research Laboratory at the University of Texas at Austin, as saying there is mounting evidence otherwise. Ludwig writes that, "for more than 20 years, Collins and other scientists have been digging up artifacts from Chile to Texas that convince them the first Americans didn't walk here at all, but came by boat, and arrived much earlier than thought."

"The Bering Land Bridge theory has held sway for 70 years or so," Collins says, "But a few of us for the last 25 years have come to seriously doubt that theory." If this is correct, the Cherokee as well as other American Indians must have come by a different route to the Americas. Did they?

Much of what we now take for granted in science has had to fight for recognition against what was once considered the established science of the day in Galileo fashion. Some historians and others have suggested that the origins of the Cherokee (and other Native Americans) might not be explained by just the Bering Land Bridge theory. If this is true, their

ancestry could indeed be very different.

What do the Cherokee say about their own origins? Vine De Loria, in the book, *Red Earth, White Lies*, asserts that the Cherokee—if not from America—must have come from across the ocean as their creation stories suggests.

And science is beginning to suggest they did just that. Though DNA is an evolving science, through a combination of autosomal DNA studies and historical analysis some have suggested possible Mediterranean, European, and Mid-Eastern connections. (See Dr. Yates' book *Old World Roots of the Cherokee*.)

Two leading anthropologists, Michael Collins and Bruce Bradley, in the book, *Across Atlantic Ice*, conclude that some of the earliest inhabitants to America came from the Mediterranean (Spain) and other parts of Europe by boat.

The *Smithsonian* article, "New Book Reveals Ice Age Mariners from Europe were America's First Inhabitants," (March 2012), quotes Bradley as saying, "We now have really solid evidence that people came from Europe to the New World around 20,000 years ago. Our findings represent a paradigm shift in the way we think about America's early history. We are challenging a very deep-seated belief in how the New World was populated. The story is more intriguing and more complicated than we ever have imagined."

There is now clear evidence of other routes as well.

"There are more alternatives than we think in archaeology and we need to have imagination and an open mind when we examine evidence to avoid being stuck in orthodoxy," Dennis Stanford of the Smithsonian's National Museum of Natural History adds. "This book is the result of more than a decade's work, but it is just the beginning of our journey."

The origins of the Cherokee—and other Native American peoples—seems to be a more complex story than is generally assumed.

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