

CHEROKEE DNA STUDIES II

More Real People Who Proved the Geneticists Wrong



Donald N. Yates and Teresa A. Yates

PRAISE FOR CHEROKEE DNA STUDIES II

In Cherokee DNA Studies II, Don and Teresa Yates have used their wealth of genetic, historical and linguistic expertise to introduce an intriguing new theory regarding the origins of the Cherokee people. Their detailed analysis of genetic haplotypes revealed previously unknown ancestries, including Melungeon, Seminole, Romani and African lineages within my own family. Subsequent research has confirmed the validity of this admixture in my own case and I expect the same result will occur with respect to the theory presented in Cherokee Studies II. If you are willing to set aside old assumptions and approach Cherokee history with an open mind, I highly recommend reading this publication.

Brenda Murphy

Boulder, Colorado

I am confident that this new publication by DNA investigators Donald N. Yates and Teresa A. Yates will prove a valuable resource for cultural communities that have been misrepresented and/or marginalized in some of the scientific literature on ethnohistory. I am not a geneticist; however, I have learned from experience how important it is to work with such citizens to correct previous mischaracterizations and public policy decisions regarding their history and heritage. The authors have assembled a monumental collection of historical discoveries, genetics research, and real-life stories among reportedly Cherokee descendants; and this material boldly challenges prevailing orthodoxy about the Cherokee Nation. Of course, I expect this book will generate strong reactions from the professional community. However, many readers will cheer and cherish this collaborative, empathic analysis as they pursue their quest for identity and belonging.

Glen Browder, Ph.D.

Professor Emeritus of Political Science and American Democracy, Jacksonville State University, Former Member U.S. Congress, and co-author South Carolina's Turkish People: A History and Ethnology.

As a trial lawyer for 40 years, I learned early to let only the facts and supporting evidence direct your search for the truth. If these lead to

conclusio
conceive
bad resul
For
notions a
and Tere
is nothin
genetics
personal

This
Jaco
Inter

Today, y
box"—ti
more "in
thinking
old, sam
multidisc

Ever
read *Wh*
The Early
those cla
Elizabeth
research
history.

This
subtitled
brilliant
beliefs a
truth is
heritage
the insig
and me
intellectu

Tho
DNA re

used their wealth
an intriguing new
detailed analysis
stries, including
within my own
his admixture in
ect to the theory
o set aside old
a mind, I highly

ators Donald N.
orce for cultural
alized in some of
; however, I have
such citizens to
cisions regarding
a monumental
real-life stories
boldly challenges
erse, I expect this
onal community.
orative, empathic
g-

y, Jacksonville State
South Carolina's

ly the facts and
f these lead to

conclusions that are not popular or are even counterintuitive so be it. Pre-conceived notions and "assumed logical sequences" usually lead to error and bad results. This is true in many sciences and social arts.

For years, Dr. Yates has waged a battle of facts against preconceived notions about Native Americans. In this second groundbreaking volume he and Teresa Yates score a resounding victory for all Cherokee descendants. It is nothing less than a shocking indictment of false science, robotic big-box genetics companies and cozy governmental relations. *More Real People* is personal, persuasive and powerful.

This is history as it should be written and taught.

Jacques Soiret

Internationally Recognized Trial Lawyer

Today, you can hardly avoid hearing the tiresome cliché "think outside the box"—tiresome because in my estimation there's never been a time with more "in the box" thinking. From where I sit, not many "thinkers" are thinking, and blind acceptance is on the rise. A notable exception to the same-old, same-old in public discourse is Donald N. Yates, historical researcher, multidisciplinary writer and DNA pioneer.

Everything I thought I knew about Jewish history was shattered when I read *When Scotland Was Jewish, Jews and Muslims in British Colonial America* and *The Early Jews and Muslims of England and Wales*. Logically and methodically in those classic treatments of genetics and genealogy, Yates and his co-author Elizabeth Caldwell Hirschman weave together up-to-the-minute scientific research with a creative vision of the place of Jews and Crypto-Jews in world history.

This sequel to Donald and Teresa Yates' study of Cherokee DNA, subtitled "More Real People Who Proved the Geneticists Wrong," is another brilliant sneak attack on received history. Assumptions are squashed and beliefs are unmasked, with wildly unpredictable outcomes. More long-buried truth is unearthed and excavated. Whether you have American Indian heritage or not, you will be fascinated by the investigative scope and rigor, the insights into pre-Columbian societies and the emotional quest for identity and meaning. Join the Yateses and their sixty DNA customers in an intellectual adventure of high color and importance!

Though this work addresses a particular group of people with perplexing DNA results, it is highly instructive to anyone who has found a surprise in

their DNA report!

Dr. Douglas Schar

Medical botanist, ethnobotanical researcher and author of Thirty Plants That Can Save Your Life, Backyard Medicine Chest and Adaptogens in the Eclectic Materia Medica.

The Yateses' DNA findings are revolutionary . . . the ages, diversity and uniqueness of certain lineages among the Cherokee strongly suggest significant pre-1492 genetic inputs from the Old World.

Stephen C. Jett

Professor Emeritus of Geography, Textiles and Clothing, University of California, Davis; Editor, Pre-Columbiana: A Journal of Long-Distance Contacts; Author, Ancient Ocean Crossings: Reconsidering the Case for Contacts with the Pre-Columbian Americas.

About thirty years ago, a series of angry letters to me about the fake Native American academicians and state Constitution had created a living as far south as Savannah. My grandmother exclaimed, "fix up this mess."

How times had changed! My grandmother attend public school, my mother attended the University in the 1940s and graduated with a Degree and become State Historian, the state history curriculum of the fake history being pumped into the schools.

I am certain that my grandmother is now standing up in her grave, accomplished in this outrageous task.

Richard L. Thornton
Architect & City Planner

About thirty years ago, my Creek Indian grandmother and mother sent a series of angry letters to my farm in the Shenandoah Valley, complaining about the fake Native American history being generated by white academicians and state bureaucrats in Georgia. The Atlanta Journal-Constitution had created a false map of Georgia, which placed the Cherokees living as far south as Savannah, Macon and Columbus for the past 2,000 years. My grandmother even demanded that I return home to Georgia to help "fix up this mess."

How times had changed. The State of Georgia had not let my grandmother attend public schools because she was an Indian. Yet, my mother attended the University of Georgia on a full academic scholarship in the 1940s and graduated Summa Cum Laude. She went on to get a Six Year Degree and become State of Teacher of the Year and then be placed on the state history curriculum committee. Yet, she was not able to stop the flow of fake history being pumped into the new Georgia state history textbook.

I am certain that my grandmother, Mahala, and my mother, Wilma, are now standing up in heaven, applauding for what Don Yates has accomplished in this outstanding book.

Richard L. Thornton

Architect & City Planner; Principal Chief of the Coweta Creek Tribe

ALSO BY DONALD N. YATES

Ancestors and Enemies: Essays on Melungeons

The Bear Went Over the Mountain. Genealogy and Social History of a Southern U.S. Family: the Story of the Native American-English Yates Family, from Colonial Virginia to Twentieth-century Florida

Book of Jewish and Crypto-Jewish Surnames (with Judith K. Jarvis and Susan L. Levin)

Cherokee DNA Studies: Real People Who Proved the Geneticists Wrong (with Teresa A. Yates)

The Cherokee Origin Narrative: Authentic Text of William Eubanks' "Red Man's Origin" with Notes and Illustrations

DNA and You: Blog Posts from the Golden Age of the Human Genome Project (with Teresa A. Yates)

The Eighth Arrow: Wisdom and Storytelling from Tennessee's Tihanama People

Merchant Adventurer Kings of Rhoda: The Lost World of the Tucson Artifacts

Old World Roots of the Cherokee: How DNA, Ancient Alphabets and Religion Explain the Origins of America's Largest Indian Nation, with Introductory Note by Cyclone Covey and Foreword by Richard Mack Bettis

On the Trail of Europa: Travels through Italy, Croatia, Greece and Turkey

Visits to Sacred Sites: Articles and Photography from the Santa Fe Sun-News

Cherokee DNA Studies II

More Real People Who Proved the Geneticists Wrong

DONALD N. YATES

and

TERESA A. YATES



Panther's Lodge Publishers

LIBRARY OF CONGRESS CATALOGUING-IN-PUBLICATION DATA

Yates, Donald N., 1950—author
Cherokee DNA studies II : more real people who proved the
geneticists wrong

Donald N. Yates and Teresa A. Yates

p. cm.

Includes bibliographical references and index

ISBN: 9798542659312

Softcover : acid free paper

1. Cherokee Indians—History 2. Cherokee Indians—Genetics
3. Human population genetics—Mediterranean Region
4. Apalachee Indians—History 5. Creek Indians—History
I. Title II. Series

© 2021 Donald N. Yates and Teresa A. Yates

No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying or recording, or by any information storage and retrieval system, without permission in writing from the publisher.

DNA Consultants Series on Consumer Genetics 4

Panther's Lodge Publishers
P. O. Box 2477
Longmont, Colorado 80502
www.pantherslodge.com

All Rights Reserved.

	Acknowledgments
	Chronology
	Introduction
1	Mixed Results
2	Ragusans, Croats
3	Revisiting Haplogroups
4	Scandinavians, Poles
5	The Ancient Indians
6	Iztacans and Oghuz
7	The Odin Gene
8	Croatian Indians
9	In the Kingdom of the
10	The Jewish Strain
11	The Invention of
12	The Finnish Connection
	Epilogue
	APPENDICES
A	Letter from Abraham
	The Travels of James
	Virginia, the Car

CONTENTS

Acknowledgments	xv
Chronology	xvi
Introduction	1
1 Mixed Results	11
2 Ragusans, Croats and Turks	32
3 Revisiting Haplogroups	55
4 Scandinavians, Polynesians, Phoenicians, Berbers and Egyptians	75
5 The Ancient Indian Nations	96
6 Iztacans and Oghuzians	118
7 The Odin Gene, or Why Some Cherokees Have Blond Hair	137
8 Croatan Indians and Others	159
9 In the Kingdom of the Apalachites	177
10 The Jewish Strain	199
11 The Invention of the Cherokee People	219
12 The Finnish Connection: U5	242
Epilogue	255
APPENDICES	
A Letter from Abraham Wood to John Richards, August 22, 1674 The Travels of James Needham and Gabriel Arthur through Virginia, the Carolinas, Georgia and Beyond	265

B Some Cherokee Genealogies

I. McFarlin Ancestors in North Georgia	274
II. Teresa A. Yates's Matiline (U5b): Lily-white or Whitewashed?	276
III. Dorene Gound Soiret: Ancestry Report to Chief Cornstalk through Bluesky Cornstalk	278
IV. One Moytoy Descendancy	280
V. Donald Neal Yates Stammtafel Approach	281
VI. Two Descents from James Beamer, French Huguenot, English Carpenter and Sephardic Jew, Early Emigrant to South Carolina, to Donald Neal Yates, through Chief Oconostota	284
VII. Sizemore and Brock Descents	285
VIII. Gayl Wilson (C) Female Descent from Nancy Moytoy, Tame Doe and Nancy Ward	287
IX. Tamra Duncan Wolf Clan and Oconostota Descendancy	290
C Phase III Participant Raw Data	296
D Digression Containing a Summary of the Moral and Natural History of the Land of the Apalachites	298
References	312
Index	334

ILLUST

Armenian woman
Cherokee ballplay
Richard Thornton
Earliest depicted S
River of the Toma
Dorene Soiret; Ali
Classic Native Am
Phase III results su
Phase III haplogro
Project haplotype c
Haplogroup frequ
Classic haplogroup
Snapshot of Centra
William V. Adkins
Nancy Buckley
Melungeon haplog
Masks, a Phoenicia
Young Man of Byn
Helen
The Helen Gene
Populations with h
Donald Yates's an

ILLUSTRATIONS AND TABLES

274	Armenian woman, Cher	15
276	Cherokee ballplay team 1913	31
278	Richard Thornton	43
280	Earliest depicted Southern Indians	46
281	River of the Tomahitans (map)	51
284	Dorene Soiret; Alice Calle Bland	55
285	Classic Native American haplogroups in U.S.	56
287	Phase III results summarized	58
290	Phase III haplogroup results pie-chart	60
296	Project haplotype distribution	61
298	Haplogroup frequency comparisons	61
312	Classic haplogroup distribution in Eastern Tribes	62
334	Snapshot of Central Band haplogroup distribution	65
	William V. Adkins III	69
	Nancy Buckley	70
	Melungeon haplogroups	71
	Masks, a Phoenician specialty	84
	Young Man of Byrsa	88
	Helen	89
	The Helen Gene	90
	Populations with high frequencies of Phoenician DNA	90
	Donald Yates's ancestry according to HomeDNA	92

Phoenix, shown on a Greek coin	93
<i>Atala</i> by Chateaubriand	102
Greenstone Goddess	107
Bell-shaped Goddess	109
Carthaginian coin with Sea Goddess	110
Infrared image of Fritchey Mound and reconstruction	112
Brent Gorman and Warner Stone in 1972	126
Runestone from Arkansas; Walam Olum Lenape sachem	127
Stony tribe chief; two others with hoplite crests	128
Distribution of the Aztlan Gene	134
Chicomoztoc Land of Seven Caves	135
Populations with high frequencies of the Aztlan Gene	136
Distribution of the Odin Gene	138
Pat Hooks (U3)	141
Annie McQuade; Cherokee woman 1888	142
Doryphorus, Far-off Warrior	145
Iron furnaces under Indian mounds (Mallery)	147
Sea Peoples sketched by Champollion	151
Replica of ancient ship	155
Bronze statuette of one of the Sea Peoples	157
Croats: C. D. Brewington, Aloysius Stepinac, Tathtowe	161
Icon of Manteo and Virginia Dare	166
Merchant's cloak	167

Dare stone
Melilot in 1653
Burial of Atala
Kinglet
Tallulah Gorge
Mimosa
Carolina by Hermann
James B. Yates
Thruston Stone b
Mixed bloods: Ad
Seven Cherokees i
Greek words in C
Attakullakulla, Tis
Moses Looney
Russell Ruck Sizer
Outacite, or Mank
Red Bird Cave ins
Possum Creek Sto
Friendship of Hig
Portraits of Chero
Thruston Tablet
Sun chief; snake c
Background panel

93	Dare stone	172
102	Melilot in 1653	178
107	Burial of Atala	182
109	Kinglet	185
110	Tallulah Gorge	188
112	Mimosa	189
126	Carolina by Hermann Moll (map)	193
127	James B. Yates	197
128	Thruston Stone bonding ceremony	204
134	Mixed bloods: Adair, Downing, Smith, Boudinot	205
135	Seven Cherokees in London 1730	208
136	Greek words in Cherokee	212
138	Attakullakulla, Tistoe, Clogoitah, The Raven and others	213
141	Moses Looney	215
142	Russell Ruck Sizemore	216
145	Outacite, or Mankiller, or Ostenaco	218
147	Red Bird Cave inscriptions	221
151	Possum Creek Stone	224
155	Friendship of Highland Scots and Georgia Indians	227
157	Portraits of Cherokees	231
161	Thruston Tablet	234
166	Sun chief; snake chief; ship	235
167	Background panel with Chinese writing	237

Joan Bennett, Bruce Dean	242
The Crazy Horse Gene	246
Conceptualization of Kivutkalns skeleton	246
Haplogroup U5 in Europe (Eupedia)	247
Shatri Compton Breshears, U5a	248
Sally Littleton, U5b	251
Modal profile of Enrolled Cherokee	255
Modal Cherokee megapopulations	260
World ancestry of Enrolled Cherokee	260
Enrolled Cherokee European population matches	261
Enrolled Cherokee submodal European matches	261
Donald Neal Yates, age 59	281
J. W. Cooper family 1918	282
Title page of Rochefort's work 1681	298

Matthew Adams, Donna
Barrington, Tonya Battin
F. Brown, Julie Burton
Windell Cummings, Am
Dawson, Kristine Marie
Mitzy Annett Gann, Kare
D. (Ellison) Henderson,
Beth Katehis, Robin E
Littleton, Lynda S. Logan
Robert McFarlin, Victoria
William Nader, Barbara
Ringwalt, Andrea Robins
Donald Sims, Dorene D.
Richard Terpe, Ruth Mar
Woodrum, Teresa Wood

ACKNOWLEDGMENTS

Look! We have come through.

—Geoffrey Chaucer

Matthew Adams, Donna Atkins, Peter Lyle Atkins, Marcy Barrington, Don Barrington, Tonya Battin, Sharri Compton Breshears, Linda Brittan, James F. Brown, Julie Burton, Rebecca Lipscomb Byrum, Debra Day Cluiss, Windell Cummings, Amanda Curless, Marshall Dean Daugherty, W. Susan Dawson, Kristine Marie Dupuis Harrison, Ava June Fink, William Forsyth, Mitzy Annett Gann, Karen E. Garruto, Ramona George, Monica Hall, Holly D. (Ellison) Henderson, Sidney Patrick Hooks, Gary James, Judith K. Jarvis, Beth Katehis, Robin Edward Hughes Kelly, Carole Kincaid, Sally A. Littleton, Lynda S. Logan, Lisa Loving, Wendee Lowe, Diana L. McDargh, Robert McFarlin, Victoria Dian McFarlin, Elizabeth McKay, Ann W. Mikell, William Nader, Barbara Roasting Ear Oliver, Marilyn Anita Rae, Barbara Ringwalt, Andrea Robinson, James Sens, Diana L. Shadley, Patricia Sheain, Donald Sims, Dorene D. Soiret, Audalene Mays Adkins Starr, Carol Sutton, Richard Terpe, Ruth Marie Tolman, Deborah Elaine Adkins Vance, Ramona Woodrum, Teresa Woodward.

CHRONOLOGY

1658 BCE	First colony of Sea Peoples in Hispaniola
1646	Thera erupts, end of Minoans, rise of Mycenaeans
1155	Ramesses III defeats Sea Peoples
814	Traditional date of founding of Carthage
500	Zapotecs begin to build Monte Alban
234	Ptolemy III sends ships to circumnavigate the world
146	Romans destroy Carthage
120	Teotihuacan is laid out in Mexico (burnt CE 550)
1 CE	Algonquians, Iroquois and Cherokee cross Mississippi
117-138	Reign of Hadrian, high point of Rome
558	Toltec Empire in Mexico; Xicallans invade Mississippi, Ohio
947	Mayapan founded in Yucatan
985	Norse begin to settle in North America
1105	Inca Empire founded in Peru
1175	Aztecs first arrive in Mexico
1322	Foundation of Tenochtitlan (Mexico City)
1428	Aztec Empire (till 1520)
1453	Fall of Constantinople to Turks
1492	Columbus' first voyage
1540	Hernando de Soto's entrada in Southeast
1670	Kingdom of Apalache; British settle Charleston
1702	French enter Southeast (cede New France to England 1763)

Genetics w

Cherokee history is a l
than the outside. Like t
British red telephone
seems to cover a multi

We all think we kn
with the broad outline
Appalachian homelan
that united them into
along the Trail of Tear

Everywhere we se
unproved. The popula
accepted motifs usua
genealogies published
over again.

Ironically, it has tal
people" who joined
companies had failed
couldn't be who they
genetic genealogy to i

How are we to d
puzzled cultural anthr
genomic study of a C
Echota Cherokees of
of the Centre for Geo
and African admixtur
ancestry. Shocking? E

INTRODUCTION

Genetics will make liars of historians. —Anonymous

Cherokee history is a lot like Dr. Who's spaceship. It's bigger on the inside than the outside. Like the Tardus, which outwardly resembles a conventional British red telephone box, it has surprising room in its interior. Cherokee seems to cover a multitude of sins.

We all think we know about them. From schooldays on we are familiar with the broad outlines of their story—their rapid acculturation in a remote Appalachian homeland, Sequoyah's invention of a phonetic writing system that united them into one nation, and their forced removal to Oklahoma along the Trail of Tears.

Everywhere we search, we find that even the "hard science" part is unproved. The popular storyline has never been critically examined. Long-accepted motifs usually turn out to be long-standing myths. Cherokee genealogies published online are mostly false, full of errors repeated over and over again.

Ironically, it has taken outsiders to discover the truth. These are the "real people" who joined our DNA project. Experts and officials at the big companies had failed them. Geneticists and others had told them they couldn't be who they knew they were. But they were insistent. They took genetic genealogy to its limits and opened a new frontier of knowledge.

How are we to define or describe the Cherokee? The answers have puzzled cultural anthropologists and geneticists for years. In the only known genomic study of a Cherokee tribe, based on a very small sample from the Echota Cherokees of Alabama, J. Victor Moreno-Mayer and Eske Willerslev of the Centre for GeoGenetics in Denmark found high levels of European and African admixture and a typical result of less than 1% Native American ancestry. Shocking? Even so, Echota Cherokees have more Cherokee blood

than those in the West. Some studies of "citizen enrollees" in Oklahoma cannot point to *any* Native American ancestry. According to Joel K. Harris, Sr., "The Cherokee Nation terminated the use of Degree of Indian Blood because they do not have it."¹

Creek historian and architect Richard Thornton has built a damning case that the Cherokee did not even exist as a tribe before 1720. British Indian policy invented them out of convenience and gave them land in North Georgia taken from the Creeks. Certainly, if we look at the official websites of the Cherokee Nation, United Keetoowah Band of Cherokee Indians and Eastern Band of Cherokee Indians—the three federally recognized groups in Oklahoma and North Carolina—there is virtually *no* sound information dating to before the 1830s. And yet the adjectives "proud," "ancient," and "rich" are liberally sprinkled about, as they are in standard accounts such as those by John Finger, Michael Wallis and Robert Conley.² Encyclopedia articles read like puffery. Few Cherokee genealogies are credible, and they are copied and pasted ad infinitum. Not a single indigenous studies or linguistics expert is on record as stating with certainty what the tribal name, Tsalagi, means, where it came from or when it was first used.

If we turn to archeology for answers we soon learn that even the authors of the Cherokee articles in the *Handbook of North American Indians*, an admired sourcebook, couldn't find a *single* prehistoric site or stratigraphic layer associated with the Cherokee.³ It's as though the Cherokee did not exist until they turned up on the British colonial frontier about 1720 begging for guns and ammunition. Indeed, there are some scholars who believe they were nothing more than a band of mixed blood outlaws in French Canada until the late seventeenth century when they moved southward to take advantage of the slave trade. The Pisgah and Qualla Phases of Southern Appalachian chronology (1000-1500 CE) do not divulge the slightest evidence of Cherokee burials or their material remains. The mounds investigated in Western North Carolina by enthusiastic academic teams with government and tribal grants can't be Cherokee: The Cherokee did not build mounds and they avoided settling on them. A Cherokee chief told the Indian agent Benjamin Hawkins that the mounds in North Georgia were created "not by the people before us but the people before them" (which seems to point to

¹ DNA Calculator for Gene Pools," webpage accessed at http://www._Cherokeeindiansofalabama.com/DNA-CALCULATORS-GENE-POOLS.html.

² John R. Finger, *Cherokee Americans: The Eastern Band of Cherokees in the Twentieth Century* (Lincoln: U of Nebraska P, 1993). Michael Wallis, *Mankiller: A Chief and Her People* (New York: St. Martin's Griffin, 2000). Robert Conley, *The Cherokee Nation: A History* (Albuquerque: U of New Mexico P, 2005).

³ William C. Sturtevant, gen. ed., *Handbook of North American Indians*, vol. 14: *Southeast*, ed. Raymond D. Fogelson (Washington: Smithsonian Institution, 2004).

Adena and Hopewell they gave refuge in introduced ceramic tr

The Skinny on I

Genetic markers a chromosomes and as are polymorphic, me these markers in dif random, sporadic mu and does not change a painstaking proce individuals or people which could be used looking for changes determine when new time, often over 10,00 two DNA samples w ago. Few differences

DNA markers th group of individuals mutations represent similar germline of d

A population's s different haplotypes mitochondrial haplo populations is H. A found 38% H (of w 10% J, 6.5% T, 20% U5), 13% K, 6% X2

The difference between a branch at the tree. The mtDN estimated to be on calibration of the America by proto-It

⁴ Mariana Yaneva, "Country of Bulgaria: Ethnicity," p. 5.

⁵ P. Soares et al, "Mitochondrial Molecu 740-59.

Adena and Hopewell Era Moundbuilders). Nor did they make pottery until they gave refuge in the eighteenth century to some of the Catawba, who introduced ceramic traditions.

The Skinny on DNA Tests

Genetic markers are patterns of DNA traced to specific locations on the chromosomes and associated with particular traits, such as eye color. They are polymorphic, meaning they occur in variations. The DNA sequences of these markers in different individuals are slightly different as a result of random, sporadic mutations over time, though in general, DNA is very stable and does not change much as it is handed down. Identifying new markers is a painstaking process. Scientists analyze DNA samples from related individuals or people with the same genetic conditions to find commonalities which could be used to pinpoint particular traits. Markers are derived by looking for changes in sequences with specific mutations that help to determine when new lineages may have begun. Since changes build up over time, often over 10,000 years or more, a large number of differences between two DNA samples would indicate that the two lineages diverged long, long ago. Few differences would indicate a more recent divergence.

DNA markers that tend to be inherited together form a haplotype. A group of individuals with similar haplotypes having the same polymorphic mutations represent a haplogroup, most likely with common ancestors and a similar germline of descent.

A population's structure can be expressed as the relative frequencies of different haplotypes. For instance, today's Egyptians have T as a leading mitochondrial haplotype, while the most common haplogroup in European populations is H. A recent survey of the distribution of Bulgarian mitotypes found 38% H (of which 10% are in the subclades H1 and H3 combined), 10% J, 6.5% T, 20% U (of which 10% are in U3, 6.5% in U4, and 3.5% in U5), 13% K, 6% X2, and 6.5% other haplogroups.⁴

The difference between a haplogroup and haplotype is the same as between a branch and twig, while mutations can be compared to leaves on the tree. The mtDNA mutation rate has been recently revised and is now estimated to be on average 9.8×10^{-8} nucleotide changes a year.⁵ Such a calibration of the mitochondrial clock places the settlement of North America by proto-Indians from Siberia in a time frame of 15,000 years ago,

⁴ Mariana Yaneva, "A Genetic Analysis of the People Currently Inhabiting the Country of Bulgaria: A Biological Perspective of the Origin of the Bulgarian Ethnicity," p. 5.

⁵ P. Soares et al, "Correcting for Purifying Selection: an Improved Human Mitochondrial Molecular Clock," *American Journal of Human Genetics* 84/6 (2009), pp. 740-59.

a date that is supported by archeological finds.

Mitochondrial DNA is a circular DNA molecule present only in the mitochondria, sub-cellular organs found in almost every human cell. This DNA is inherited by both male and female children but only from the mother. Thus, males do not pass it, only females. The higher mutation rate of some parts of the mtDNA compared to the DNA in the nucleus, together with other characteristics such as a limited number of genes, small size and lack of recombination makes it possible to detect any gradually accumulated differences in its sequence during the entire maternal lineage history. This analysis allows us to establish the origin only from the maternal side.

Mitochondrial analysis is an ideal guide to female-only ancestry. Along with Y chromosome studies, it is part of uniparental inheritance. Testing is done mostly by automated sequencing of the hyper-variable segments of the D-loop region, namely HVRI and HVRII, where the stable mutations are usually accumulated. Most companies "round off" mutational matches and report a consensual result. A strict identical-by-descent reading for mtDNA haplotypes requires a complete across-the-board match, with no missing or extra mutations.⁶ Only then can two people be said to descend from the same ancient female.

Y-chromosome DNA is DNA carried only by males and is inherited only from their fathers. Y chromosomes are small and their DNA has a very low recombination activity; the non-recombining regions are the loci for the Y-DNA haplogroups. These mutations are usually single nucleotide polymorphisms or SNPs meaning only one nucleotide is changed in this DNA region. These are the genetic systems analyzed in paternity and genealogical tests. The Y-DNA haplogroups are determined by biallelic (double) polymorphisms reflected mostly by SNPs. Another test for Y-chromosomes are the so-called Short Tandem Repeats or STRs, a short DNA sequence that is repeated numerous times as a result of duplications of sequence during the DNA replication or (self-)recombination process. These hypervariable STRs have the fastest mutation rate— 2.7×10^{-5} mutations a year, or 6.9×10^{-4} every generation of 25 years.⁷ In laboratories, haplogroup analysis is performed using specific biallelic DNA markers determined directly by DNA sequencing or indirectly using polymerase chain reactions.

⁶ H. Bandelt et al, "The Case for the Continuing Use of the Revised Cambridge Reference Sequence (rCRS) and the Standardization of Notation in Human Mitochondrial DNA Studies," *Journal of Human Genetics* 59 (2014), pp. 66–77.

⁷ L. A. Zhivotovsky et al, "The Effective Mutation Rate at Y chromosome Short Tandem Repeats, with Application to Human Population-Divergence Time," *American Journal of Human Genetics* 74/1 (2004), pp. 50–61.

Autosomal DN

Autosomal DN
22 pairs of chrom
chromosomes label
no Y chromosome
parents in various r
are at a single nu
(SNPs). To determin
or populations, sign
Companies or me
GEDmatch and Far
up to 800,000 nu
predicting values, a
Consultants has an
on STR frequencies
across your chromo

The significant
assignment or refer
of an individual's an
realize. New metho
and extraction of D
preserved, minimall
from old skeletal re
context. Ancient D
historical and b
anthropology and s

Cherokee Unli

Cherokee desce
between 400,000
Cherokees the most
Have they forgotte
toward collective a
memories, and a hu

There are genet
people as well as m
Who Proved the
volunteers in Phase
female line was C
mitochondrial DN
not have any of the
A,B,C,D "and som
"non-Indian" linea

Autosomal DNA and CoDIS Markers

Autosomal DNA (atDNA) is represented by the DNA molecules of all 22 pairs of chromosomes in human cells; the 23rd of the pairs are sex chromosomes labeled XY (in males) or XX (in females). Thus, females have no Y chromosome in their DNA. Autosomal DNA is inherited from both parents in various ratios. Most frequently analyzed mutations in this DNA are at a single nucleotide level, called single nucleotide polymorphisms (SNPs). To determine genetic admixtures or relatedness between individuals or populations, significant overlaps in the determined SNPs must be present. Companies or methods that emphasize autosomal results are 23&me, GEDmatch and Family Tree DNA. These "next generation" services screen up to 800,000 nucleotides genome-wide, partially observing, partially predicting values, and report the raw data as a genomic "build." DNA Consultants has an autosomal test, but it differs from others' in that it is based on STR frequencies in populations, or forensic profiles of 16 key locations across your chromosomes (standard CoDIS markers).

The significant mixing of peoples over time means that a haplogroup assignment or reference population match may only provide a rough estimate of an individual's ancestral diversity. Most people are more mixed than they realize. New methodologies are being developed to allow better preservation and extraction of DNA from archeological specimens. These usually are well preserved, minimally contaminated with modern DNA bones, teeth or hair from old skeletal remains that have been dated within a certain archeological context. Ancient DNA analysis is a multidisciplinary endeavor involving historical and biological disciplines, genetics, molecular biology, anthropology and statistics.

Cherokee Unlike Other Indians

Cherokee descendants constitute America's largest Indian group, with between 400,000 and 4 million people claiming that ancestry. So, are Cherokees the most "diluted" Indians? Are they the most culturally deprived? Have they forgotten most of their history? We did find a strong tendency toward collective amnesia. But we also encountered widely divergent tribal memories, and a hugely diversified genetic makeup.

There are genetic oversimplifications and stereotypes about the Cherokee people as well as misunderstandings about their history. "More Real People Who Proved the Geneticists Wrong" summarizes the records of 56 volunteers in Phase III who had cogent genealogical claims that their direct female line was Cherokee (or at least American Indian) and took a mitochondrial DNA test. As in the prior two phases, most participants did *not* have any of the "standard" American Indian mitochondrial haplogroups A,B,C,D "and sometimes X." They ended up showing a large assortment of "non-Indian" lineages, with T (Middle Eastern) and U (Old Europe) leading

the list.

Indeed, in the Cherokee study overall, expected Native American haplogroups (A-D) account for only 7.4 percent of the lineages claimed to be Cherokee.

Mutations characterizing these anomalous types match for the most part only other American Indians of the Eastern United States. Data presented in Appendix C are discussed in chapters 3 and 4 and referred to throughout the work. They appear to be deep rooted. The haplogroups that stand out usually do not seem to represent the effect of admixture in recent historical times. Only large-scale Jewish admixture seems of the sixteenth through eighteenth century and can be tracked in historical records (see Chapter 10, "The Jewish Strain"). The reasoning for an older pattern set long before colonial times goes as follows: If these lines *had* traced back to European females rather than Indian females the distribution of haplogroups would be different, with H, the haplogroup carried by almost fifty percent of Europeans, enjoying the largest showing rather than U and T.

Perhaps the low amount of American Indian admixture reported in academic studies and consumer testing is misleading? Over a hundred "real people" in our project since 2007 believe it is. It seems to be dawning on genealogists that Eastern U.S. Indians are radically different from Western U.S. Indians in origins, age, population structure and affinities. Scientists and commercial companies can't identify Cherokee, Shawnee, Creek and certain other eastern or southeastern tribes. That is due to preconceived notions and limited knowledge about the peopling of the Americas.

Armenians, Jews and Others

Chapter 1 starts us on our time travels with a conundrum. Why do so many Cherokees get matches to Armenians? Conversely, how can true Armenians with zero New World ancestors get matches to Cherokees? The pattern is clear with the autosomal test DNA Fingerprint Plus. Our forensic database now has over 520 reference populations (effectively, every ethnic group in the world), including all the countries of Europe, diaspora groups like Israeli Jews, Romani, Melungeons and Sephardim and 62 Native American tribes/nations. The backbone of DNA Consultants' practice since 2006, this database captures virtually every single published study of STR (short tandem repeat) frequencies worldwide. It continues to grow. The gem in the crown of our research collection is published STR frequencies for enrolled members of the Eastern Band of Cherokee Indians (U.S. – Enrolled Cherokee, n=33).⁸ In contrast, companies that use genomic algorithms

⁸ J. Ng et al, "Native American Population Data Based on the Globalfiler® Autosomal STR Loci," *Forensic Science International: Genetics* 24 (2016), e12-e13. Online,

instead of forensic
None has Cherokee

Downstream

Another myster
men reported by
Tomahitans anyw
Wood to John F
(transcribed in Ap
in North Carolina
or Holsten. We est

Autosomal an
chromosomal hap
anomalies like Ar
Results"). The n
casework, haplog
geneticists that yo
Indian haplogrou
are those of partic
and Julie Burton
Atkins and Linda
the Cherokee Nat

It depends on
in the New World
World. In almost
at all or only oth
and a one-off er
Cherokee origin
Waters," and go
Eshelokee.⁹ The
frame. It left des
same gene pool.
Eastern Mediter

see abstract and
30115-6/fulltext.

⁹ *The Cherokee Orig
Notes and Illustrati
Panther's Lodge,
Abstammung der C
Überlieferungen: Ne
2017), also availab
version narrated b
and Italian audiob*

instead of forensics typically feature between 40 and 60 world populations. None has Cherokee data.

Downstream and Down the River

Another mystery people our Tardus pays a visit to are the whiskered white men reported by the Tomahitans down the Coosa river. Who are the Tomahitans anyway? They are the main players in a letter from Abraham Wood to John Richards, dated August 22, 1674. This critical source (transcribed in Appendix A) has been tampered with by academic historians in North Carolina to document Cherokee settlements on the Tennessee River or Holsten. We establish its true context and significance for the first time.

Autosomal analysis supplements and confirms mitochondrial and Y chromosomal haplotyping. Autosomal tests are used to explain forensic anomalies like Armenians and Croatsians and Jews in chapter 1 ("Mixed Results"). The next two chapters take a deep-dive into mitochondrial casework, haplogroup by haplogroup. There is still an ingrained belief among geneticists that you can't be an American Indian without having an American Indian haplogroup. Proof positive of Cherokee lines that violate this "rule" are those of participants Dorene Soiret and Karen Garruto (H1z1), Ava Fink and Julie Burton (J2b1's), Don Barrington and Donna Atkins (J1a's), Peter Atkins and Linda Sponenburg (W's) and Barbara Oliver, a citizen enrollee of the Cherokee Nation, and Robert McFarlin (H's).

It depends on whether the rare haplotype matches only other Cherokees in the New World or has narrowly defined, numerous analogues in the Old World. In almost all instances, the mutational set either matches no one else at all or only other participants. This suggests an interbreeding population and a one-off entry across the waters, just as the one described in the Cherokee origin narrative that begins "When we lived beyond the Big Waters," and goes on to describe the creation of the seven clans of the Eshelokee.⁹ The rare lineage in question came over with others in a deep time frame. It left descendants in a particular tribe who intermarried within the same gene pool. Afterwards, the lineage died out in the Old World (Egypt, Eastern Mediterranean, North Africa, Greece, Anatolia etc.). Only similar

see abstract and references: [https://www.fsigenetics.com/article/S1872-4973\(16\)30115-6/fulltext](https://www.fsigenetics.com/article/S1872-4973(16)30115-6/fulltext).

⁹ *The Cherokee Origin Narrative: Authentic Text of William Eubanks' Red Man's Origin with Notes and Illustrations*, by Donald N. Yates, Cherokee Chapbooks 1 (Longmont: Panther's Lodge, 2017), translated with foreword by Christine Pellech, *Die Abstammung der Cherokee-Indianer: Eine Spurensuche auf der Basis traditioneller Cherokee-Überlieferungen: Neue Ausgabe des Klassikers der Cherokee* (Longmont: Panther's Lodge, 2017), also available in Italian and Spanish versions as well as an English audiobook version narrated by Jacob Phillips (2018), German audiobook by Richard Heinrich and Italian audiobook by Christian Vivi.

(but not exactly matching) forms survived in the Old World.

All these participants have lines that track back to an ancient female founder who lived in the Old World about 2,000 to 10,000 years ago and migrated in a cohesive colony to seed the Cherokee people in America. *Old World Roots of the Cherokee* proposed that a major founding event was tied to a trans-Pacific expedition of twelve ships of Greek "Volunteer Settlers" (Etheloikioi, Eshelokee) from Ptolemaic Egypt in 230 BCE.¹⁰ Egypt seemed to be at the heart of the expedition, because of the high level of haplogroup T, but Jews and other Levantines appear to have been on board as well, to judge from old and extinct types of J and K. It was suggested that these Jews came from ancient Cyrene.

The Helen Gene and the Odin Gene

Chapter 3, 4 and 12 tackle the great diversity of U haplotypes in the Cherokee. First, however, we touch on the V haplotypes of Diana McDargh (Sami?) and Gene Ponder (Long Hair Clan?). We also discuss briefly the rarest of the rare, haplogroup R0a-60.1T of Ramona Woodrum, which, strangely, seems to have originated in a female living thousands of years ago on the tiny South Arabian island of Socotra. The U's include Patrick Hooks (U3), Teresa Woodward and Robin Hughes Kelly (U4), Ramona George, Sally Littleton and Gary James (U5b) and Lynda Logan (U5a1). Phoenician connections and haplogroup X are discussed, along with the Tuareg in the Carthaginian interior, Minoans and other Aegean seafarer peoples.

By autosomal measures, Phoenician descent in both European and American populations is quite substantial. Migration maps such as those developed by Family Tree DNA, HomeDNA and other "big box" companies are not capable of tracking the movement of peoples across the water. The Odin Gene, a marker that emanates from "pre-Viking" Norway and "pre-Celtic" Britain and Brittany is found selectively in North and South America, particularly in the so-called Votanic Empires of Central America. Additionally, it is thought to be prominent in the background of many Canadian Metis. In one case discussed below, a man's maternal line goes back to a seventeenth century Fille du Roi native woman, but the type is T. How could that be? Most people insist that it's a contradiction. Like other T's, K's, U's, X's and J's among the Acadians, such an ancestress is non-native, the effect of post-1500 admixture. One company, Family Tree DNA, even shut down an Acadian Metis project because it was finding the "wrong" type of mitochondrial DNA! But it may well be that the type has been a native lineage thriving for hundreds or thousands of years with thousands of descendants

¹⁰ Donald N. Yates, *Old World Roots of the Cherokee: How DNA, Ancient Alphabets and Religion Explain the Origins of America's Largest Indian Nation* (Jefferson: McFarland, 2012).

today. When do long-standing "c

The Indians

Chapter 5, "T another body o Algonquian ann Constantine Rafi and succession o taken verbatim f native nations ca from the East M Atlantic-facing W Bronze Age and millennium in Pe greenstone statue

An important beneath three "Inc non-Indians? Do Even for them it s

The Georgia of Iron Age f stratigraphically the Ohio Valley. people before th The subtitle of c identifies the per (and large parts o we can only aw Celts." All this

Chapter 8 as (Venetian) settler members of the s profiled in a fore matches.¹¹ On a Indians, Catalans Jewish. On a sub ancestries as Tur

¹¹ Eleni N. Levelak 1.1 and 2.1 Mult Americans, Hispan Brazil," *Journal of F*

today. When do we speak of recent "admixture" and when do we talk of long-standing "contributions" to tribal DNA?

The Indians Came from Europe

Chapter 5, "The Ancient Indian Nations" takes as its point of departure another body of evidence scorned by twentieth century experts, the Algonquian annals in the *Walam Olum* and detailed historical works of Constantine Rafinesque (1783-1840). A timetable of American Indian history and succession of tribes is presented with narrative excerpts and paraphrases taken verbatim from Rafinesque, who believed "the ancestors of the first native nations came across the Atlantic in ships." He called them the Cutans, from the East Mediterranean (Cherokee Ani-Kutani), and Atalans, from the Atlantic-facing West Mediterranean. We link them to the Sea Peoples of the Bronze Age and place one of the earliest colonies around the mid-second millennium in Puerto Rico and Haiti, as recorded in Taino records and by greenstone statuettes.

An important piece of the puzzle is an Iberian sun-temple discovered *beneath* three "Indian" mounds in North Georgia. Was it built by Indians or non-Indians? Do we reserve the name only for people who came from Asia? Even for *them* it seems a misnomer.

The Georgia Bronze Age sun-temple plays a similar role to the hundreds of Iron Age furnaces surveyed by Arlington Mallery. These occur stratigraphically *beneath* Adena and Hopewell "Indian" mounds throughout the Ohio Valley. The inescapable conclusion is they were built and used by people before the Indians. Are we to call them Indians or something else? The subtitle of chapter 7 is "Why Some Cherokees Have Blond Hair." It identifies the pervasive "country rock" of the DNA landscape when the East (and large parts of the Central Plains) was dominated by European peoples we can only awkwardly name as "pre-Viking Vikings" and "pre-Celtic Celts." All this prior to 500 BCE.

Chapter 8 assesses growing evidence for Croatian, Catalan and Italian (Venetian) settlements in North Carolina before 1500, along with survival of members of the so-called Lost Colony of Roanoke. The Lumbee Indians (as profiled in a forensic study, $n=106$) are analyzed according to their autosomal matches.¹¹ On a modal (average) basis, their top matches are Chippewa Indians, Catalans, Turkish, Melungeon, Colombian Indians and Sephardic Jewish. On a submodal (next most common) basis, they show such minor ancestries as Tunisian and Moroccan (pirates?), Armenian, Sicilian, Polish,

¹¹ Eleni N. Levelakou et al, "Allele Frequencies for 14 STR Loci of the PowerPlex™ 1.1 and 2.1 Multiplex Systems and Penta D Locus in Caucasians, Africans, Americans, Hispanics, and Other Populations of the United States of America and Brazil," *Journal of Forensic Sciences* 46/ 3 (May 2001), pp. 736-61.

Ukrainian, Romanian and Iranian. With the exception of Croatian (and possibly Melungeon), none of these is an ethnicity or heritage recognized by ordinary researchers exploring their North Carolina family trees. They are forgotten genetic roots.

Chapter 9 guides our time machine to the Kingdom of the Apalache Indians, or Apalachites. This is where Eleanor Dare fled after the destruction of the Lost Colony according to reliable evidence. We examine that evidence and its supporters, who include Samuel Eliot Morrison and Robert Wauchope, two unimpeachable witnesses. Recall that the Apalachites were one of the oldest, most powerful of the Atalan tribes discussed in *Rafinesque*. They had by this time absorbed several waves of Caribbean, Maya, Mexican Indian and South American invasions. Their king was Christian. Huguenots and Jews lived among them. Several French-Indians and Mustees crop up with a last gasp in what may be called the "children of Moytoy." But in less than two generations, the Apalache Indians vanish from the pages of history. They leave only a handful of words in their language and the rubble of ruined cities quarried for roadwork in North Georgia.

Appendix D gives readers a "Digression Containing a Summary of the Moral and Natural History of the Land of the Apalachites," an English translation of select passages from Book 2, Chapter 7 and 8, of the second, expanded French edition of *Histoire Naturelle et Morale des Iles Antilles de l'Amerique*. Published by the Huguenot author Charles Rochefort in Rotterdam in 1681, it is one of the most neglected early sources for American Indian history in the Southern Highlands. The language of the Apalachites, oddly, was Ancient Greek.

Chapter 11 is "The Invention of the Cherokee People." It has two aspects, one, the deconstruction of such myths as Sequoyah and Nancy Ward, and two, the continued piecing together of the migrations that form authentic Cherokee history, extending from the Bronze Age to the Age of European Discovery. Cherokee diversity and admixture is real. It's ancient, and it's distinctive, unlike any other Indian nation. The "real people" who said, "Wait a minute, that is not us" and challenged the experts years ago can celebrate the beginning of a new period of embracing their true history and not being misunderstood or dismissed by anyone.

Anthropology
and listen, rec
have been abl
—Margare

The final pha
They came fr
McDargh, a c
first. Since th
wanted to fin
genetics matc
and African
grandmother
specimen to d
their mother's
in the world.

So, do Dia
results indicat
haplogroup. A
matches to C
and African
discussed in t

What's ne
complete pic
autosomal tes
More Real Peop
to make signi
database. In a