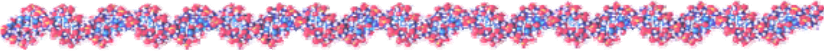


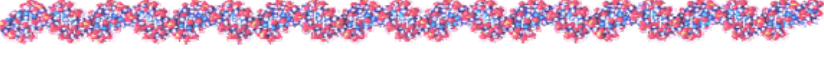
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Campus Education Week

The Journey of Lifelong Learning



Uses and Abuses of Modern DNA Science



John M. Butler, PhD

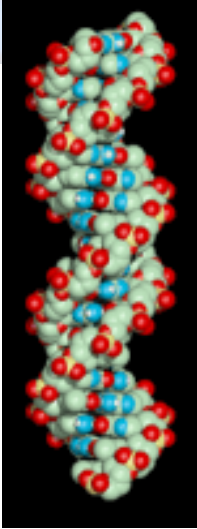
BYU Campus Education Week
August 19-22, 2008

BRIGHAM YOUNG UNIVERSITY

Uses and Abuses of Modern DNA Science

Campus Education Week

John M. Butler, PhD August 18–22, 2008



- Tuesday, August 19
 - **DNA and the Book of Mormon**
- Wednesday, August 20
 - **Genetic Genealogy**
- Thursday, August 21
 - **Forensic DNA Testing**
- Friday, August 22
 - **Science and Religion**

3:10 – 4:05 p.m. de Jong Concert Hall, HFAC

Please Write Down Questions...

If I have not
answered your
question by the
end of my
presentation...



*Pass them in and I will address them
in tomorrow's presentation*

Uses and Abuses of Modern DNA Science

BYU Campus Education Week 2008

**DNA and the Book of Mormon:
What Does the Record Itself Say
about the Genetics of Its People?**

John M. Butler, PhD

August 19, 2008



President Hinckley's Challenge to Read or Reread the Book of Mormon

"A Testimony Vibrant and True," *Ensign*, Aug 2005, pp. 2–6

- **"I offer a challenge to members of the Church throughout the world and to our friends everywhere to **read or reread the Book of Mormon**.**
- "Very near the end of its 239 chapters, you will find a challenge issued by the prophet Moroni as he completed his record nearly 16 centuries ago. Said he:
- "And I exhort you to remember these things; for the time speedily cometh that ye shall know that I lie not, for ye shall see me at the bar of God; and the Lord God will say unto you: Did I not declare my words unto you, which were written by this man, like as one crying from the dead, yea, even as one speaking out of the dust? ...
- **"And God shall show unto you, that that which I have written is true" (Moroni 10:27, 29)."**



President Hinckley's Promise When We Read the Book of Mormon

"A Testimony Vibrant and True," *Ensign*, Aug 2005, pp. 2–6

There will come into your lives and into your homes

- (1) an added measure of the Spirit of the Lord,
- (2) a strengthened resolution to walk in obedience to His commandments, and
- (3) a stronger testimony of the living reality of the Son of God.

**Did you meet that challenge and finish the
Book of Mormon by December 31, 2005?**

Los Angeles Times

fourth-most widely distributed U.S. newspaper

Front Page Article

Feb 16, 2006

Bedrock of a Faith Is Jolted:

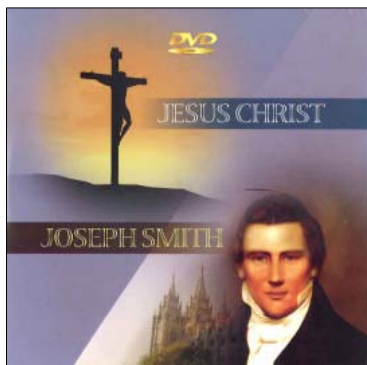
DNA tests contradict Mormon scripture. The church says the studies are being twisted to attack its beliefs.

By William Lobdell, Times Staff Writer

“...For Mormons, the lack of discernible Hebrew blood in Native Americans is no minor collision between faith and science. It burrows into the historical foundations of the Book of Mormon...”

“...Officially, the Mormon Church says that nothing in the Mormon scriptures is incompatible with DNA evidence, and that the genetic studies are being twisted to attack the church...”

About a Year Later (March 2007)...



<http://en.fairmormon.org/images/8/8d/FrontSearchDVD.png>

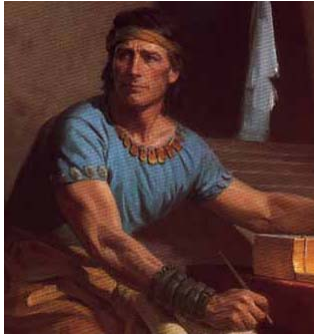
- On March 25, 2007, an Anti-Mormon DVD entitled “**Jesus Christ/Joseph Smith: Search for the Truth**” was distributed to thousands of homes throughout Utah and other parts of the U.S.
- One section entitled “DNA” makes the claim that modern science renders the Book of Mormon a fraud

Is what the critics are saying true or not?

Is it possible for DNA evidence to prove or disprove the Book of Mormon?

Helaman 16:22

Mormon teaches us...



http://feedbackofmormon.files.wordpress.com/2008/07/306-mormon_plates.jpg

“...Satan did stir them up to do iniquity continually; yea, **he did go about spreading rumors** and contentions upon all the face of the land, **that he might harden the hearts of the people against that which was good and against that which should come...**”

With alliteration...

Servants of Satan are seeking to seduce the Saints with sinister sophistries and **subtle pseudoscience not sound science!**

DNA and the Book of Mormon:
***What Does the Record Itself Say about
the Genetics of Its People?***

- Who are the critics raising this issue and what are their contentions?
- How has the Church responded to these attacks on the Book of Mormon?
- What can we infer from the Book of Mormon about the genetics of its people?

The Critics



Thomas W. Murphy

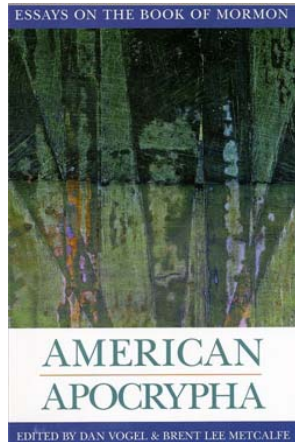
Less active member for >10 years
Wrote anti-Mormon article in 2002
Received Ph.D. in 2003 (Anthropology)
Now silent about the topic



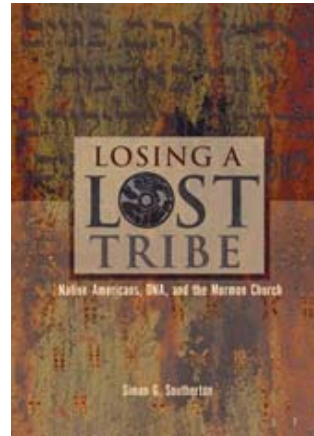
Simon G. Southerton

Former bishop in Australia
Left Church in 1998
Ph.D. in Plant Genetics
Wrote anti-Mormon book in 2004
Excommunicated in 2005 for adultery

Writings of Murphy and Southerton



May 2002
Signature Books

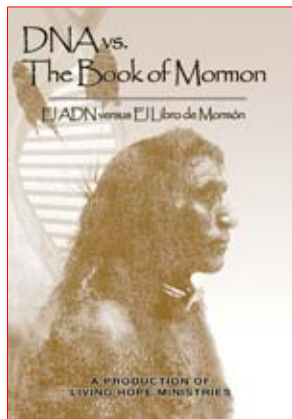


Aug 2004
Signature Books

Living Hope Ministries Video

<http://www.mormonchallenge.com/dnachal.htm>

48 minute video
released in March 2003



Both Murphy and Southerton
appear in this film
and present their views
against the authenticity
of the Book of Mormon...

Why are the critics attacking the Book of Mormon?



The Prophet Joseph Smith
(April 1834; *TPJS*, p. 71)

**Take away the Book
of Mormon and the
revelations, and
where is our religion?
We have none.**


What Are the Critics of the Book of Mormon Arguing?

- **Native Americans living today have DNA that most closely resembles Asian DNA** which “proves” that Book of Mormon is not true since Lehi was from the Middle East and “Jewish DNA” has not been found in modern Native Americans.
- DNA is used in courts of law. Thus, DNA results from modern Native Americans could be considered “evidence” against the statement found in the Introduction to the Book of Mormon that the **Lamanites are “the principal ancestors of the American Indians.”**


This is not really a “new” issue as many battles have been fought over the previous six years in intellectual circles prior to becoming more visible with the L.A. Times article in Feb 2006.

The Church's Response to the Feb 16, 2006 *L.A. Times* Article

The day the *L.A. Times* article came out I received emails from Kent Brown and Dan Peterson of BYU asking for my help in responding to the article.




From <http://www.hughhewitt.com>



- **Hugh Hewitt Radio Show**
 - Nationally syndicated radio show out of Southern California
 - Positive towards the Church due to a friendship with Elder Neal A. Maxwell
 - Covered the *L.A. Times* story on his show the day it came out with the reporter
 - Permitted response by Church experts one week after the *L.A. Times* article

- **Postings on LDS.org Website**
 - Multiple articles available since Nov 2003
 - Direct response article written by John Butler



http://www.radioblogger.com/archives/february06.html#001411


Radio Blogger

February 22, 2006 transcript from Hugh Hewitt radio show broadcast out of Southern California

We were given almost 30 minutes to respond to the *L.A. Times* article

The other side of the Book of Mormon DNA debate.

HH: Last week, on February 16, to be exact, I opened up not a can of worms, but a can of chromosomes by getting on my program [William Lobdell, Los Angeles Times reporter](#), who that day had a Page 1, above the fold story, *Bedrock of a Faith Is Jolted: The DNA tests contradict Mormon scripture*. The Church says the studies are being twisted to attack its belief. There ensued three wonderful segments of controversy and a mountain of e-mail. So with the help of some Mormons out there, I've located a couple of specialists to come on from the perspective of the Church, and I'm pleased to welcome Dr. Daniel Peterson. He's a native Southern Californian, ne got his undergraduate degree in Greek, and philosophy from BYU. He got his PhD from the University of California, Los Angeles. He teaches at BYU now, where he's an associate professor of Islamic studies and Arabic. And he's also a member of the Center For the Preservation of Ancient Religions Texts, CPART, which has produced a computer digitized version of the Dead Sea Scrolls. I'm also joined by Dr. John Butler, who is a project leader at the Human Identity DNA Technologies Group, Biotechnology Division for the National Institute



http://ferms.byu.edu

I finished writing this article following the Hugh Hewitt radio show and it was posted on the BYU site the next day with a link from the LDS.org site

Addressing Questions Surrounding the Book of Mormon and DNA Research
By John M. Butler*

On February 16, 2006 the Los Angeles Times ran a front page article questioning the authenticity of the Book of Mormon based on studies of human DNA. Citing DNA "evidence" that suggests an Asian ancestry for people native to the Americas, critics of the Church of Jesus Christ of Latter-day Saints have for the past several years claimed these DNA studies demonstrate that the Book of Mormon account of a group of colonists coming from the Middle East in 600 B.C. cannot be authentic.

<http://www.newsroom.lds.org/ldsnewsroom/eng/commentary/dna-and-the-book-of-mormon>

<http://www.lds.org>

- » Home
- » News Releases & Stories Archives
- » Commentary
- » Statistical Information
- » Background Information with Photo, Video & Audio
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12 response articles listed on the Church website

DNA and the Book of Mormon

« BACK

Unfortunately many of the links to other articles are no longer active

Los Angeles Times | 16 February 2006 | The Book of Mormon: Another Testament of Jesus Christ is exactly what it claims to be — a record of God's dealings with peoples of ancient America and a second witness of the divinity of the Lord Jesus Christ. The strongest witness of the Book of Mormon is to be obtained by living the Christ-centered principles contained in its pages and by praying about its truthfulness.

Recent attacks on the veracity of the Book of Mormon based on DNA evidence are ill considered. Nothing in the Book of Mormon precludes migration into the Americas by peoples of Asiatic origin. The scientific issues relating to DNA, however, are numerous and complex. Those interested in a more detailed analysis of those issues are referred to the resources below.

The following are not official Church positions or statements. They are simply information resources from authors with expertise in this area that readers may find helpful:

- « "Addressing Questions Surrounding The Book of Mormon and DNA Research" By: Dr. John Butler
- « "The Other Side of the Book of Mormon DNA Debate" Hugh Hewitt radio interview with Dr. Daniel C. Peterson and Dr. John M. Butler 23 February 2008
- "DNA and the Book of Mormon" By: David M. Stewart, MD

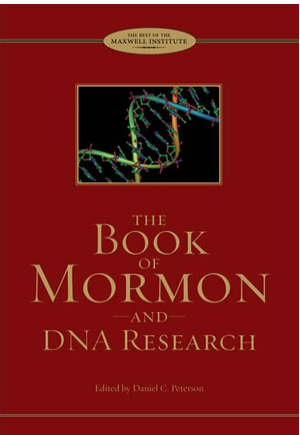
<http://farms.byu.edu/publications/review/?vol=18&num=1&id=601>

ADDRESSING QUESTIONS SURROUNDING THE
BOOK OF MORMON AND DNA RESEARCH

John M. Butler

What is DNA?
Our cells contain DNA. It is the extent of our physical genetic code from which we see among people the building blocks of life. Because of the mutations of the human genome, with the passage of time on a genetic level...

How are DNA and the Book of Mormon related?
Examining the DNA of those who descend from the Book of Mormon genealogists contributes to our understanding of genetic markers. Genetic markers are inherited from the maternal lines of mitochondrial DNA. On 15 February 2006, the publication of the Book of Mormon and DNA Research was published.



<http://www.byubookstore.com>

Originally written at the request of the *Ensign* (Fall 2003)
pulled from planned Apr 2004 issue

Revised and put on Internet (Feb 23, 2006)
Posted on farms.byu.edu with a link from the LDS.org website
(original link is no longer active)

Published in *The FARMS Review*
Volume 18 (1), pp. 101-108 (2006)

Republished in new FARMS book
The Book of Mormon and DNA Research (2008)

What Data Exists from DNA Studies?

- **Hundreds of scientific articles** published over the last 18 years have demonstrated that maternal and paternal **genetic lineages of present-day Native Americans correspond most closely to those found in Asians today**
- These data are used to support the theory that the Americas were populated ~15,000-30,000 years ago by groups traveling **across the Bering Strait from Siberia** into North America

These scientific studies will be discussed in greater detail in tomorrow's presentation.

One of the Very First Native American DNA Studies
 Published by Doug Wallace's Group at Emory University in 1990

Am. J. Hum. Genet. 46:613-623, 1990

American Journal of Human Genetics (1990)

Amerindian Mitochondrial DNAs Have Rare Asian Mutations at High Frequencies, Suggesting They Derived from Four Primary Maternal Lineages

Theodore G. Schurr,* Scott W. Ballinger,* Yik-Yuen Gan,‡ Judith A. Hodge,*
 D. Andrew Merriwether,§ Dale N. Lawrence,†¹ William C. Knowler,#
 Kenneth M. Weiss,|| and Douglas C. Wallace*

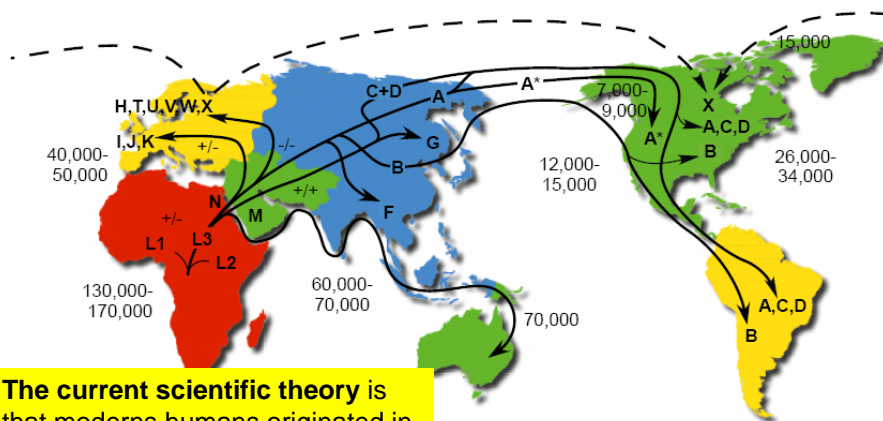
*Departments of Biochemistry and Anthropology, Emory University School of Medicine; and †Division of Host Factors, Center for Infectious Diseases, Centers for Disease Control, United States Department of Health and Human Services, Atlanta; ‡Department of Biotechnology, University of Agriculture, Serdang, Selangor, Malaysia; §Department of Biology and Graduate Program in Genetics, and ||Department of Anthropology and Graduate Program in Genetics, Pennsylvania State University, University Park; and #Diabetes and Arthritis Epidemiology Section, National Institute of Diabetes and Digestive and Kidney Diseases, Phoenix

These four maternal lineages (groups) were designated "Haplogroups" A, B, C, and D.

Human Migration Model

Human mtDNA Migrations

<http://www.mitomap.org/mitomap/WorldMigrations.pdf>
 Copyright 2002 © Mitomap.org



The current scientific theory is that modern humans originated in central Africa more than 100,000 years ago and migrated at various times across the globe

Both Y-chromosome and mitochondrial DNA (mtDNA) studies are used to show that North and South America were populated 15,000-30,000 years ago

INTRODUCTION

The Book of Mormon is a volume of holy scripture comparable to the Bible. It is a record of God's dealings with the ancient inhabitants of the Americas and contains, as does the Bible, the fulness of the everlasting gospel.

The book was written by many ancient prophets by the spirit of prophecy and revelation. Their words, written on gold plates, were quoted and abridged by a prophet-historian named Mormon. The record gives an account of two great civilizations. One came from Jerusalem in 600 B.C., and afterward separated into two nations, known as the Nephites and the Lamanites. The other came much earlier when the Lord confounded the tongues at the Tower of Babel. This group is known as the Jaredites. After thousands of years, all were destroyed except the Lamanites, and they are the principal ancestors of the American Indians.

The crowning event recorded in the Book of Mormon is the personal ministry of the Lord Jesus Christ among the Nephites soon after his resurrection. It puts forth the doctrines of the gospel, outlines the plan of salvation, and tells men what they must do to gain peace in this life and eternal salvation in the life to come.

After Mormon completed his writings, he delivered the account to his son Moroni, who added a few words of his own and hid up the plates in the hill Cumorah. On September 21, 1823, the same Moroni, then a glorified, resurrected being, appeared to the Prophet Joseph Smith and instructed him relative to the ancient record and its destined translation into the English language.

In due course the plates were delivered to Joseph Smith, who translated them by the gift and power of God. The record is now published in many languages as a new and additional witness that Jesus Christ is the Son of the living God and that all who will come unto him and obey the laws and ordinances of his gospel may be saved.

Concerning this record the Prophet Joseph Smith said: "I told the brethren that the Book of Mormon was the most correct of any book on earth, and the keystone of our religion, and a man would get nearer to God by abiding by its precepts, than by any other book."

In addition to Joseph Smith, the Lord provided for eleven others to see the gold plates for themselves and to be special witnesses of the truth and divinity of the Book of Mormon. Their written testimonies are included herewith as "The Testimony of Three Witnesses" and "The Testimony of Eight Witnesses."

We invite all men everywhere to read the Book of Mormon, to ponder in their hearts the message it contains, and then to ask God, the Eternal Father, in the name of Christ if the book is true. Those who pursue this course and ask in faith will gain a testimony of its truth and divinity by the power of the Holy Ghost. (See Moroni 10: 3-5.)

Those who gain this divine witness from the Holy Spirit will also come to know by the same power that Jesus Christ is the Savior of the world, that Joseph Smith is his revelator and prophet in these last days, and that The Church of Jesus Christ of Latter-day Saints is the Lord's kingdom once again established on the earth, preparatory to the second coming of the Messiah.

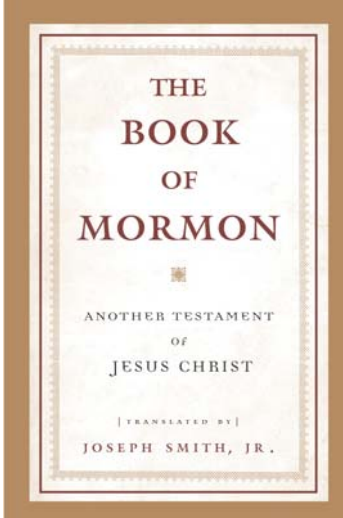
- **Written for the 1981 edition by Elder Bruce R. McConkie** (Quorum of the Twelve Apostles)
- "[The Lamanites] are the **principal ancestors** of the American Indians"
- Critics contend that DNA matching present-day Jews is not found in Native Americans and therefore Book of Mormon is a product of the 19th Century rather than of ancient Israelite origin

Previous Book of Mormon editions did not have this introduction:

1830, 1837, 1840,
1841 (B), 1849 (B), 1852 (B),
1879, 1920, **1981**

Doubleday 2nd Edition

Published in October 2006



http://www.amazon.com

INTRODUCTION

Introduction changed in future editions to "**...the Lamanites, and they are among the ancestors of the American Indians**"

The Book of Mormon is a volume of holy scripture comparable to the Bible. It is a record of God's dealings with the ancient inhabitants of the Americas and contains the fulness of the everlasting gospel.

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In due course the plates were delivered to Joseph Smith, who translated them by the gift and power of God. The record is now published in many languages as a new and additional witness that Jesus Christ is the Son of the living God and that all who will come unto him and obey the laws and ordinances of his gospel may be saved.

Change to the Introduction of the Book of Mormon

- **“Principal” to become “among”** (Doubleday, future editions)
- Not scripture – simply introductory information

The Salt Lake Tribune

**My writings are quoted but I
never talked to a reporter**

November 8, 2007

“Single word change in Book of Mormon speaks volumes”

By Peggy Fletcher Stack

Deseret News

November 9, 2007

“Intro change in Book of Mormon spurs discussion”

By Carrie A. Moore



<http://www.ldscas.org>

Elder Bruce R. McConkie stated
in *Mormon Doctrine* (1966), p.33

“The American Indians...as Columbus found them also **had other blood than that of Israel in their veins**. It is possible that isolated remnants of the Jaredites may have lived through the period of destruction in which millions of their fellows perished. **It is quite apparent that groups of orientals found their way over the Bering Strait...**”

Remember that Elder McConkie is the author of the “principal ancestor” statement included 15 years later in the Introduction of the 1981 edition

What Does the Book of Mormon Say About the Genetics of Its People?

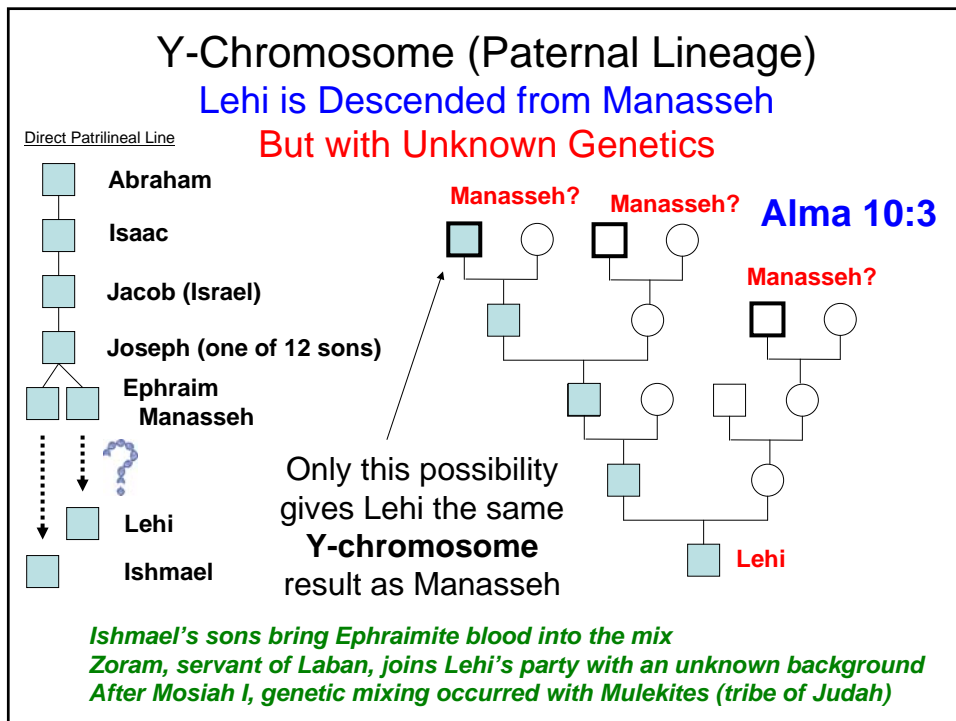
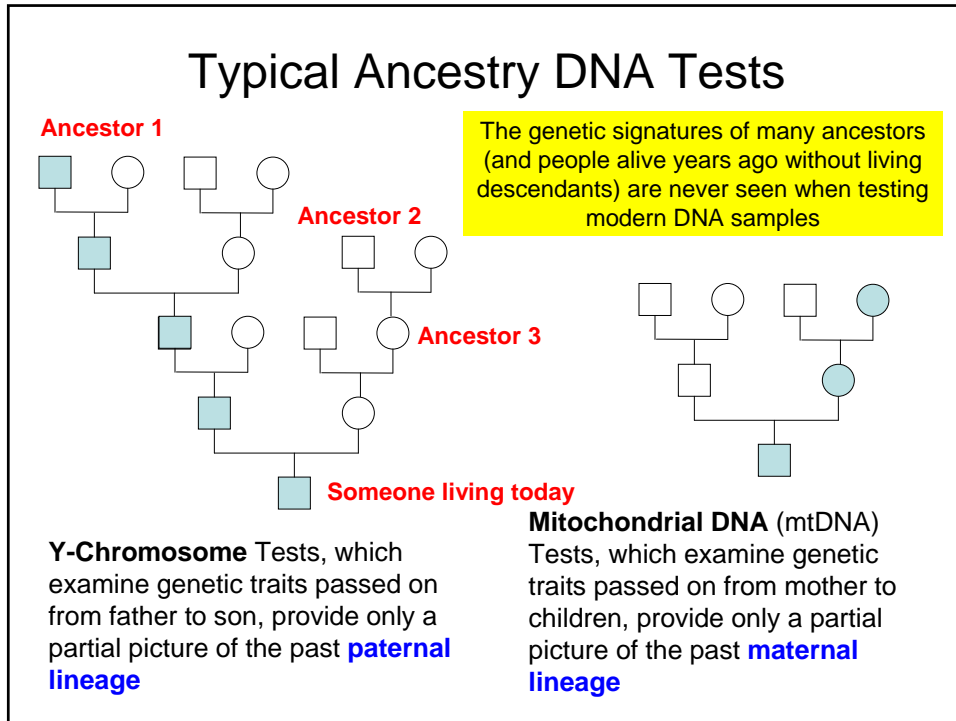
Three separate groups are described:

- Jaredites (Ether 6) – multiple families; unknown origin
- **Lehites** (1 Nephi 18) – tribe of Joseph
– divided into **Nephites** and **Lamanites** (2 Nephi 5)
- Mulekites (Helaman 6:10) or people of Zarahemla –
tribe of Judah and others?

Lehi's Genealogy and Genetics

- Descended from Joseph of Egypt (**1 Nephi 5:14**) through Manasseh (**Alma 10:3**) – but on a direct male line?
- Mormon is a pure descendant of Lehi (**3 Nephi 5:20**) – why use that phrase unless others are there?

Apostle Erastus Snow in 1882 stated that **Ishmael**, who left Jerusalem with Lehi's family, was "**of the lineage of Ephraim**" and "thus these descendants of Manasseh and Ephraim grew together upon this American continent, with a sprinkling from the house of Judah, from Mulek...for aught we know, the remnants of some other tribes that might have accompanied Mulek" (*Journal of Discourses* 23:185-186).



Mitochondrial DNA (Maternal Lineages)

How many different lineages could be expected?

Lehite Colony Female Lines

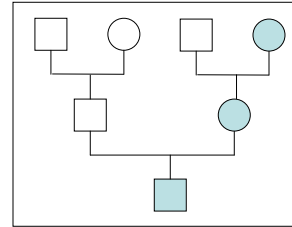
Sariah (her daughters – 2 Nephi 5:6)

Ishmael's wife

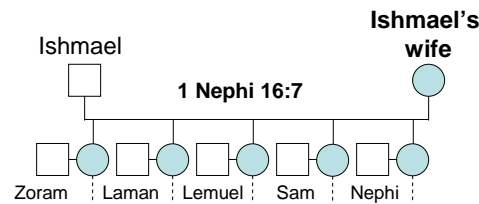
(her daughters marry Lehi's sons)

Wife of Ishmael's son #1

Wife of Ishmael's son #2



Nothing is known about their genetic backgrounds



All children of Nephi and his brothers as well as Zoram would have the mitochondrial DNA of Ishmael's wife (only mentioned in 1 Nephi 7:6, 7:19)

Relative Numbers of People

- **Mosiah 25:1-3**
- Nephites in minority compared to Mulekites (people of Zarahemla)
- Combination of Nephites and Mulekites was less than half the number of Lamanites

Why would the Lamanite population be so much larger? Did they conquer local, native populations?

Were Other People There?

- The Book of Mormon is a religious record that **provides only a partial picture** of events usually within the confines of the recording prophet's family lineage. **It is silent on other people being present.**
- John Sorenson (BYU) argues that a large, local population base can be assumed based on the numbers described early in the Book of Mormon

John Sorenson (1992) When Lehi's party arrived in the land, did they find others there? *Journal of Book of Mormon Studies* 1:1-34

Jacob 5 May Have a Deeper Significance

- The placement of Zenos' allegory of the tame and wild olive trees by Jacob in the small plates of Nephi **may have additional meaning in terms of the genealogy and genetics of Jacob's people**...(v. 25,43,45,48)
- **Wild root (native people; Gentiles) are grafted with tame branches (Nephites; house of Israel)...**
 - Note Jacob 7:1 – “there came a man among the people of Nephi, whose name was Sherem...” (he had never met Jacob)
 - Amulek on meeting Alma states: “I am a Nephite” (Alma 8:20)

John Sorenson and Matt Roper (2003) Before DNA.
Journal of Book of Mormon Studies 12(1): 6-23

The Jaredites

Did they have Asian ancestry?

- Jaredite nation existed >1,500 years before the Lehiters and Mulekites arrived in the New World
- Most likely came from central Asia to northeast Asia and then by barge down the West Coast to west central Mexico
- **Genetically, their path of travel would have seemed much like land passage across the Bering Strait**
- Spanned at least 29 generations (Ether 1:6-33) – hundreds of years with combinations of marriages between people we know virtually nothing about
- May not have been completely annihilated – Ether’s prophecy was that all of Coriantumr’s household would be destroyed (Ether 13:20-21)
- Hugh Nibley argues for interaction and influence between Jaredites and Lehiters because of continuation of Jaredite names such as Korihor (Alma 30; Ether 7:3) and Coriantumr (Helaman 1:15; Ether 13)

J.M. Butler (2003) Journal of Book of Mormon Studies 12:36-37



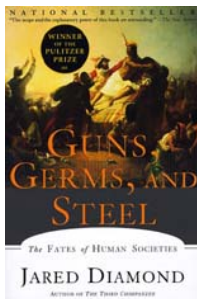
Anthony W. Ivins of the First Presidency
(General Conference April 1929)

“We must be careful in the conclusions that we reach. The Book of Mormon teaches the history of three distinct peoples, or two peoples and three different colonies of people, who came from the old world to this continent. **It does not tell us that there was no one here before them. It does not tell us that people did not come after.** And so if discoveries are made which suggest differences in race origins, it can very easily be accounted for, and reasonably, for **we do believe that other people came to this continent**” (*LDS Conference Report*, April 1929, p.15).

The Book of Mormon Record Closed Almost 1600 Years Ago...

- When Moroni is closing his record in 400 A.D. he records in **Moroni 1:2** that Nephites are being hunted down and the Lamanites are fighting among themselves
- 400 A.D. is over 50 generations ago – **plenty of time for Asian lineages to mix** with individuals containing the blood of Lehi (if they had not already mixed...)

Impact of Disease with European Invasion





“But weapons alone can't account for the **brehtaking speed with which the indigenous population of the New World were completely wiped out.**

Within just a few generations, the continents of the Americas were virtually emptied of their native inhabitants – some academics estimate that **approximately 20 million people may have died in the years following the European invasion – up to 95% of the population of the Americas.**

No medieval force, no matter how bloodthirsty, could have achieved such enormous levels of genocide. Instead, Europeans were aided by a deadly secret weapon they weren't even aware they were carrying: **Smallpox.**”

<http://www.pbs.org/gunsgermssteel/variables/smallpox.html>

Michael Crawford
(University of Kansas)

“This population reduction [due to disease] has forever altered the genetics of the surviving groups, thus complicating any attempts at reconstructing the pre-Columbian genetic structure of most New World groups”.

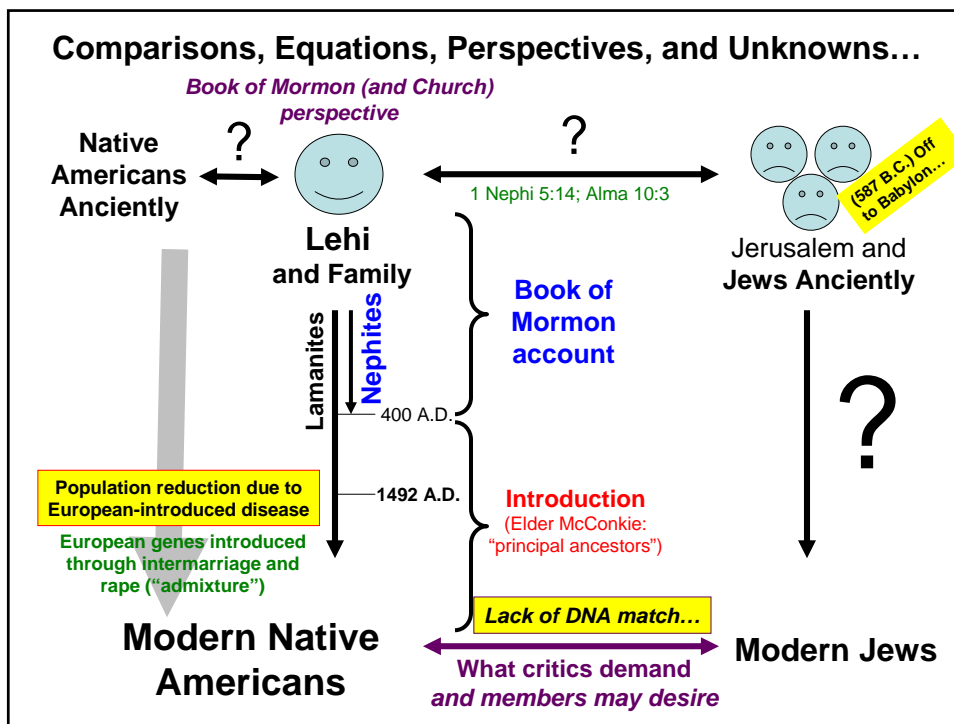

-- *The Origins of Native Americans* (p. 261)

DNA Testing Require References

- **DNA results from one sample are always measured relative to other samples** (called **references**) examined at the same sites along the DNA molecule
 - **Forensic casework:** evidence compared to suspect(s)
 - **Paternity testing:** child compared to alleged father(s)
 - **Airplane crash:** victim remains compared to living relative(s)
 - **Genetic genealogy:** Y-chromosome results compared between two or more relatives

No reference sample = no association or match!

What population living today could serve as the reference sample for Lehi and his descendants?

Photographer: Mark A. Philbrick
http://www.lightplanet.com/mormonism/mormonism/Basic/BOM-Studies_4.jpg

Professor Hugh Nibley (1967)

“The normal way of dealing with the Book of Mormon ‘scientifically’ has been first to attribute to the Book of Mormon something it did not say, and then to refute the claim by scientific statements that have not been proven.”

- Hugh Nibley, *Since Cumorah*, 2nd ed. (Salt Lake City: Deseret Book and FARMS, 1988), 214. The first edition appeared in 1967.

Why What the Critics Are Saying Is Not True

- We are unsure of the Book of Mormon people's detailed lineage and relationship to other peoples anciently
- The gene pool of today in the Middle East is vastly different than 2600 years ago when Lehi left Jerusalem
- There were probably other groups of people present in the Americas that are not referred to in the text
- **No reference samples means no reliable conclusion**

Journal of Book of Mormon Studies Nov. 2003, 12:36-37

A FEW THOUGHTS FROM A BELIEVING DNA SCIENTIST

John M. Butler

Without reference samples and a full understanding of the genetic past, no valid comparisons on this issue can be made through testing modern human groups.

While it is possible to speculate endlessly about scenarios that would make Book of Mormon story lines compatible with current DNA evidence, the record itself is simply not descriptive enough to provide definitive calibration points with which to make confident scientific conclusions.

Thus, we are left where we started (and where I believe the Lord intended us to be)—in the realm of faith. A spiritual witness is the only way to know the truthfulness of the Book of Mormon. Although DNA studies have made links between Native Americans and Asians, these studies in no way invalidate the Book of Mormon despite the loud voices of detractors. ■

LDS Newsroom

DNA and the Book of Mormon

- **Los Angeles Times** | 16 February 2006 | *The Book of Mormon: Another Testament of Jesus Christ* is exactly what it claims to be — a record of God's dealings with peoples of ancient America and a second witness of the divinity of the Lord Jesus Christ. The strongest witness of the Book of Mormon is to be obtained by living the Christ-centered principles contained in its pages and by praying about its truthfulness.
- Recent attacks on the veracity of the Book of Mormon based on DNA evidence are ill considered. **Nothing in the Book of Mormon precludes migration into the Americas by peoples of Asiatic origin.** The scientific issues relating to DNA, however, are numerous and complex. Those interested in a more detailed analysis of those issues are referred to the resources below.

<http://www.newsroom.lds.org/ldsnewsroom/eng/commentary/dna-and-the-book-of-mormon>



President Gordon B. Hinckley
(*Ensign* Feb 2004, p. 6)

Originally in October 1984 General Conference
"The Cornerstones of Our Faith," *Ensign*, Nov 1984, 50-53

"The evidence for [the Book of Mormon's] truth, for its validity in a world that is prone to demand evidence, lies not in archeology or anthropology, though these may be helpful to some. It lies not in word research or historical analysis, though these may be confirmatory..."



President Gordon B. Hinckley
(*Ensign* Feb 2004, p. 6)

Originally in October 1984 General Conference
"The Cornerstones of Our Faith," *Ensign*, Nov 1984, 50-53

"...The evidence for its truth and validity lies within the covers of the book itself. **The test of its truth lies in reading it.** It is a book of God. Reasonable people may sincerely question its origin; but those who have read it prayerfully have come to know by a power beyond their natural senses that it is true, that it contains the word of God, that it outlines saving truths of the everlasting gospel..."



President Gordon B. Hinckley
(*Ensign* Feb 2004, p. 6)

Originally in October 1984 General Conference
"The Cornerstones of Our Faith," *Ensign*, Nov 1984, 50-53

"[The Book of Mormon] is here. It must be explained. **It can be explained only as the translator himself explained its origin.** Hand in hand with the Bible, whose companion volume it is, it stands as another witness to a doubting generation that Jesus is the Christ, the Son of the living God. **It is an unassailable cornerstone of our faith.**"

The Book of Mormon Testifies of Jesus Christ and His Visit to Ancient America



Thank you for your attention...



***Please write down questions and I will
address them in tomorrow's presentation***