## **Mormon**Times

## DNA doesn't prove Book of Mormon historicity, either

Author: Michael R. Ash 17 May 2010 12:23am



The past several issues have established that DNA studies do not refute the historicity of the Book of Mormon. The flip side to this issue is the erroneous claim made by some Latter-day Saints that DNA studies prove the Book of Mormon.

Because the pro-DNA argument is closely tied to a specific geographical model, I'd like to reiterate that there is no official geography for Book of Mormon events. Eventually, I'll discuss the various geography hypotheses and will offer the reasons why I believe that the

Mesoamerican model fits best.

But for now it's important to understand that believing Latter-day Saints can respectfully disagree as to where the events described in the Book of Mormon took place.

Elder Dallin H. Oaks, speaking of those who participate in non-official venues wherein church-related topics are discussed, observed that sometimes "a volunteer will step forward to present what he or she considers to be the church's position. Sometimes these volunteers are well-informed and capable, and they contribute to a balanced presentation. Sometimes they are not, and their contribution makes matters worse. When attacked by error, truth is better served by silence than by a bad argument."

I wish to "liken" Elder Oaks' comment to the arguments made by those who claim that DNA studies offer evidence or proof for the historicity of the Book of Mormon. Briefly outlined, here is the position taken by those who make such a claim:

- DNA evidence for the Lehites should be discernible in modern DNA studies.
- All Native Americans belong to one of the following five mitochondrial lineages (haplogroups): A, B, C, D and X.
- Haplogroup X, the least common of the five groups, appears to be traceable to the ancient Middle East.

• Ergo, haplogroup X provides evidence for the existence of Lehites.

The first part of this argument is based on the faulty assumption (as pointed out in the past several issues) that we should expect to find Lehite DNA. The second and third parts of the argument are somewhat accurate (with some caveats). The fourth part, however, is a faulty conclusion unsupported by what we actually know about the origin and distribution of haplogroup X.

Not long after the initial haplotypes A-D were identified in Native American populations, a fifth and more rare haplotype (dubbed "X") was also found among some Native Americans. Sister lineages to the American haplogroup X are found at low frequencies in many geographic regions of the world including Western Europe, North Africa, East Asia and the Middle East. The presence of haplogroup X in the Americas in primarily limited to the Great Lakes area (which is one of the proposed models for Book of Mormon geography), but it is also found to lesser extents in other parts of North America.

Thanks to an improved analysis of mitochondrial DNA genomes and a greater number of samples available, the Native American haplogroup X is currently termed X2a, a lineage that is not found anywhere else in the world.

As noted in past articles, mtDNA mutations are measured by molecular clocks used to calculate age estimates of the different branches in the mtDNA tree. Currently, there are five different molecular clocks that have been proposed using all or a considerable section of the mtDNA genome. All five clocks provide close estimates for haplogroup X2a indicating that it pre-dates the Lehites' arrival to the Americas by several thousands of years. (For more depth on the measurement of these molecular clocks, see Ugo Perego, "The Book of Mormon and the Origin of Native Americans from a Maternally Inherited DNA Standpoint.") In reality, based on current DNA science and the lack of additional evidence, X2a cannot be linked to the Lehites.

The irony for many of those who attempt to use DNA studies to buttress a belief in the Book of Mormon is that all respectable DNA studies accept (as a fundamental part of DNA science) the principle of evolution and that humans came to the New World over 12,000 years ago. Those who attempt to argue that DNA studies prove the Book of Mormon, however, typically reject the principle of evolution and the early age of man.

Basically, when it comes to DNA science they want to have their cake and eat it too.

I accept the current state of DNA research by those who are experts in the field, adding that it is premature, at best, and irresponsible, at worst, to claim that DNA research may be employed to prove or disprove the authenticity of the Nephite scripture.

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